



Paripālanā परपालना

Nurturing



Laporan Keberlanjutan
Sustainability Report

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PT Pertamina (Persero) Sustainability Report, hereinafter referred to as "Report", contains material data and information for stakeholders. In general, the contents of this report come from internal analysis as well as reliable sources of documents and informants. The term "PERTAMINA" as used in the report emphasizes PT Pertamina (Persero). The use of the term "PERTAMINA Group" refers to PT Pertamina (Persero) and its Subsidiaries and affiliates. However, the use of the term "PERTAMINA" does not necessarily eliminate the involvement of a subsidiary or company affiliated with PERTAMINA.

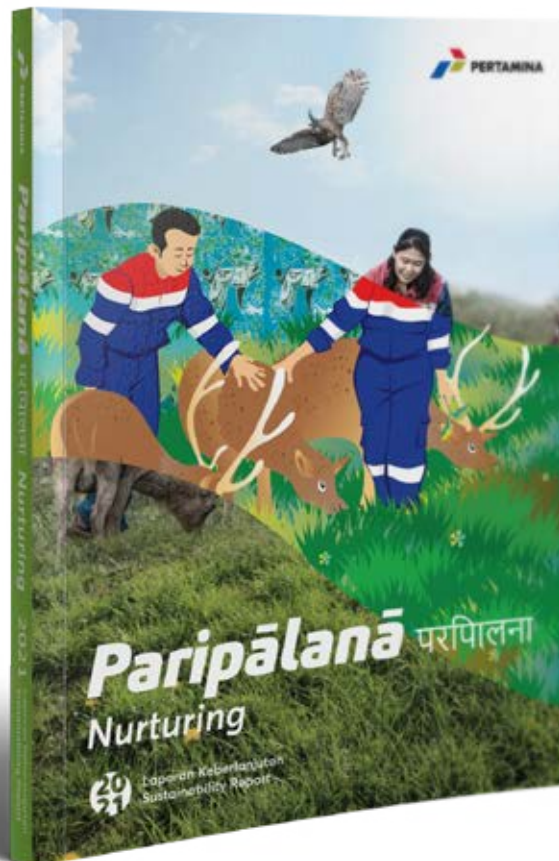
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All tables and graphs presenting numerical data use the English standard. English and Indonesian standards are used respectively where numerical values are presented in text format.

Nurturing, *Paripālanā*

Nurturing, Paripālanā, dalam Bahasa Sanskerta memiliki arti peduli, memelihara, dan melindungi sesuatu agar senantiasa lestari. Kata ini mengandung pula makna menjaga sesuatu agar terus hidup. Kata ini menggambarkan praktik operasional PERTAMINA yang bertujuan pada penyediaan energi dengan tetap melestarikan lingkungan dan dengan penuh tanggung jawab kepada masyarakat dan seluruh pemangku kepentingan.

Nurturing, or Paripālanā in Sanskrit, means caring and protecting so that something will always be sustainable. This word also carries the meaning of keeping something alive. The word describes PERTAMINA's operational practices that aim to provide energy by preserving the environment with full responsibility to the community and all stakeholders.



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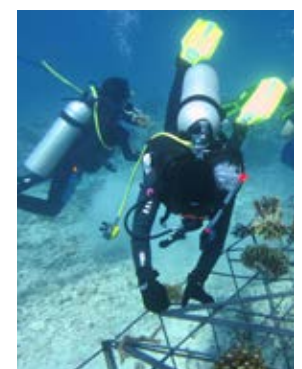
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- Nol toleransi terhadap kecurangan dan korupsi
- Nol insiden praktik bisnis yang tidak etis
- *Zero tolerance on fraud and corruption*
- *Zero incidents unethical conduct of business*



- Implementasi Nilai AKHLAK, PERTAMINA Clean Charter, Kebijakan Antikorupsi, Gratifikasi, serta Pedoman Perilaku dan Etika Bisnis
- Sertifikasi ISO 37001:2016 Sistem Manajemen Anti-Penyuapan (SMAP) untuk lingkup korporat.
- *Implementation of AKHLAK Values, PERTAMINA Clean Charter, Anti-corruption Policy, Gratification Policy, and Code of Conduct*
- *Company-wide ISO 37001:2016 Anti-Bribery Management System (SMAP) Certification.*



- Nol serangan siber
- Pelaporan jelas terkait serangan yang terjadi
- *Zero cyber attacks*
- *Clear reporting on major attacks*



- Transformasi digital mencakup tingkat korporat di seluruh proses bisnis inti
- Pedoman Pengamanan Data dan Pedoman Pengelolaan Keamanan Informasi di seluruh proses bisnis inti
- *Corporate-wide digital Transformation across business processes*
- *Corporate-wide Data Security Guideline and Information Security Management Guideline*



- Peningkatan kesejahteraan komunitas sekitar
- Akses energi bagi seluruh pelosok negeri
- *Improved welfare and wellbeing in surrounding communities*
- *Nationwide access to energy*



- Memastikan ketersediaan energi terjangkau melalui BBM 1 Harga Tahap 2, One Village One Outlet (OVOO), Pertashop, dan Pinky Movement
- Program Tanggung Jawab Sosial dan Lingkungan (TJSL) sebagai investasi sosial dan dukungan pada TPB
- *Ensure the availability of affordable energy through One Price Fuel Policy Phase II, One Village One Outlet (OVOO), Pertashop, and Pinky Movement*
- *Social and Environmental Responsibility Program (SER) as social investment and support for SDGs*



- Inovasi dan penelitian berkelanjutan untuk pengembangan energi baru dan terbarukan (EBT) oleh fungsi khusus: Research & Technology & Innovation (RTI)
- *Continuous innovation and research for new and renewable energy (NRE) development by Research & Technology & Innovation (RTI) function.*



- 134 proyek inovasi baru untuk meningkatkan efisiensi/penelitian dan pengembangan rendah karbon baru
- 79 paten HAKI terdaftar per akhir tahun 2021
- *134 new innovation projects to improve efficiency/new low-carbon R&D.*
- *79 Intellectual Property Rights registered by the end of 2021.*



- Pendekatan yang berorientasi pada pengembangan dan pelatihan
- Target perputaran karyawan di bawah 5%
- Pelatihan untuk seluruh karyawan hingga 2025, termasuk topik keberlanjutan
- *Targeted approach towards development and training*
- *Aim for below 5% employee turnover*
- *Training for all employees by 2025, including sustainability topics*



- Penandatanganan Kebijakan Hak Asasi Manusia
- Deklarasi Komitmen Zero Harassment dan Respectful Workplace Policy.
- *Signing of Human Rights Policy*
- *Zero Harassment Commitment and Respectful Workplace Policy declaration.*

Legenda | Legend



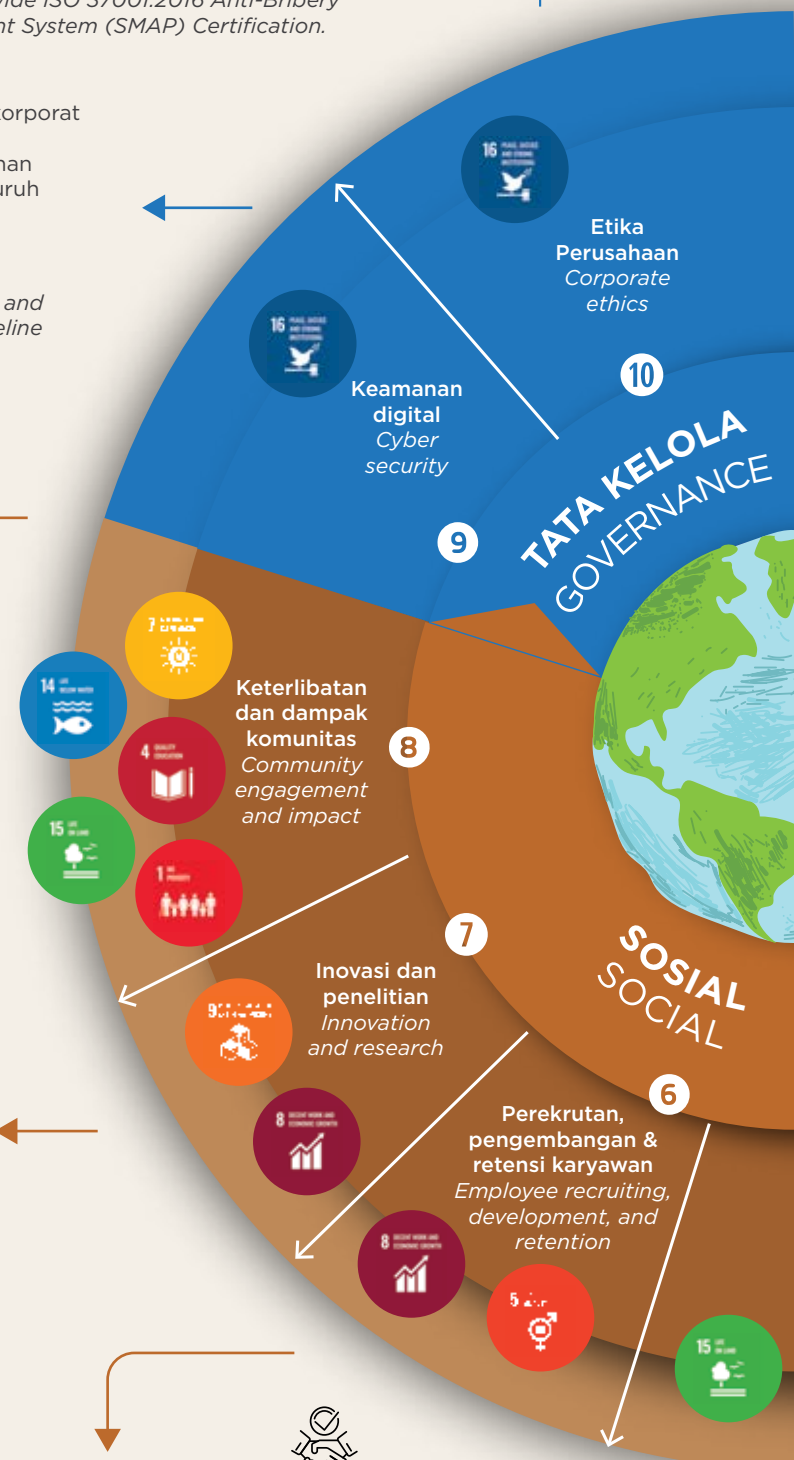
Ambisi dan Target Jangka Panjang
Ambition and Long-Term Target

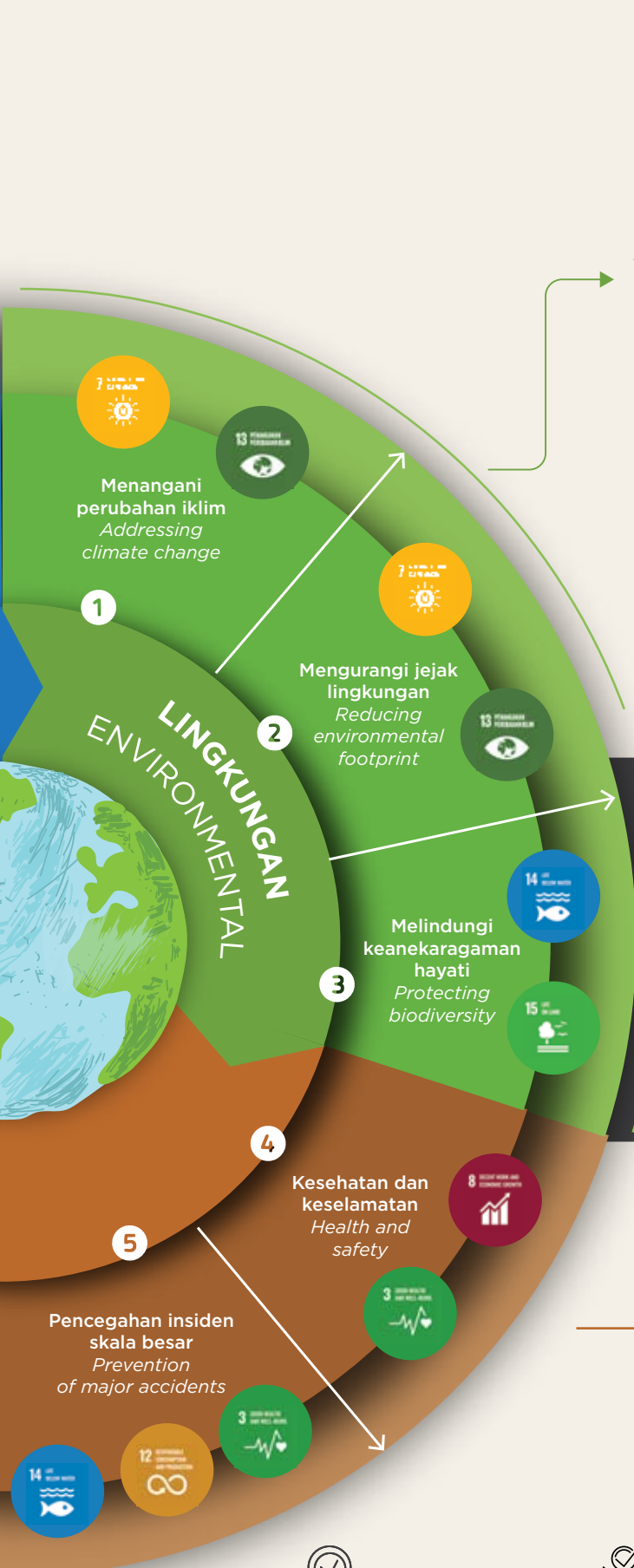


Inisiatif Kami
Our Initiative



TPB Terkait
Related SDGs





Reduksi emisi sebesar 30% pada tahun 2030 (vs baseline 2010)
30% of emission reduction by 2030 (vs 2010 baseline)



- Perencanaan keanekaragaman hayati tingkat asset
- Net positive impact pada keanekaragaman hayati
- *Biodiversity plan in asset level*
- *Net positive impact on biodiversity*



- Target Bauran Energi Nasional 23% pada tahun 2025.
- Target Bauran Energi PERTAMINA 17% pada tahun 2030.
- Mendukung target nasional reduksi GRK pada tahun 2030 sebesar 29% dengan usaha sendiri, dan 41% dengan bantuan internasional.
- *National Energy Mix target of 23% by 2025*
- *National Energy Mix target of 17% by 2030.*
- *Supporting the national GHG emission reduction target of 29% by 2030 (unconditional), and 41% (conditional) with international assistance.*



- Penerapan Pedoman Pengelolaan Keadaan Darurat, Krisis, dan Keberlangsungan Bisnis di PERTAMINA
- Melanjutkan program konservasi air untuk menjaga ketersediaan air dan ekosistem
- *Implementation of Emergency, Crisis, and Business Continuity Management Guideline in PERTAMINA*
- *Continuing water conservation programs to maintain water availability and the ecosystem*

AMBISI DAN TARGET JANGKA PANJANG KESEPULUH FOKUS KEBERLANJUTAN

AMBITION AND LONG-TERM TARGETS FOR THE TEN SUSTAINABILITY FOCUSES



- Nol kecelakaan, nol fatalitas
- Program yang jelas untuk mengimplementasikan 12 life-saving rules
- *Zero accidents, zero fatalities*
- *Clear programs to implement 12 life-saving rules*



- Penerapan berkelanjutan aspek keselamatan untuk peningkatan produksi dan zero accident
- Pembentukan tim Industrial Peace Level untuk mengatur harmonisasi PERTAMINA dengan pekerjaannya, serta memastikan terpenuhinya hak-hak pekerja
- *Continuous implementation of safety aspects to increase productivity and zero accident effort*



- Nol kebocoran di seluruh operasi
- Tidak ada kecelakaan berat
- *Zero loss of primary containment/zero leaks across operations*
- *No major accidents*



- Program Zero Waste melalui penerapan prinsip 5 RTD: reduce, reuse, recycle, replace, return to supplier, treatment, and disposal.
- *Zero Waste Program through the application of 5 RTD principles: reduce, reuse, recycle, replace, return to supplier, treatment, and disposal*

- *Industrial Peace Level team formation to maintain harmonious industrial relation, as well as to ensure the fulfillment of worker's rights*

PERJALANAN KINERJA KEBERLANJUTAN KAMI OUR SUSTAINABILITY PERFORMANCE OVER THE YEARS

Kategori
Category

Nilai Ekonomi Diperoleh dan Didistribusikan
Economic Value Generated and Distributed

Ekonomi
Economy

EBITDA

Realisasi Pendirian Lembaga Penyalur Wilayah 3T
Establishment of 3T Regional Distribution Agency Realization

Pencapaian Peringkat PROPER Emas
Gold PROPER Achievement

Pencapaian Peringkat PROPER Hijau
Green PROPER Achievement

Realisasi Belanja Lingkungan
Environmental Cost Realization

Lingkungan
Environment

Luasan Wilayah Konservasi di Wilayah Operasi PERTAMINA
Size of Conservation Area in PERTAMINA Operating Area

Realisasi Akumulasi Reduksi Emisi terhadap Baseline 2010
Emission Reduction Accumulation Realization against 2010 Baseline

Hasil Survei Budaya HSSE
HSSE Culture Survey Results

Lost Time Incident Rate (LTIR) - per 1.000.000 Work Hour

Total Recordable Incident Rate (TRIR) - per 1.000.000 Work Hour

Sosial
Social

Realisasi TKDN
Local Content Realization

UMKM Naik Kelas
MSME Upscale

Indeks Kepuasan Pelanggan
Customer Satisfaction Index

Indeks Kesetiaan Pelanggan
Customer Loyalty Index

Tata Kelola
Governance

Hasil Penilaian Penerapan GCG
Results of GCG Implementation Assessment



* kumulatif 2017-2019
2017-2019 cumulative

Satuan Unit	2021	2020	2019
USD Juta USD Million	5,929	4,352	3,824
USD Juta USD Million	9,256	7,608	7,922
Jumlah Penyalur Distributors	78	83	160
	23	16	13
	81	64	76
Rp Miliar Rp Billion	1,120.61	1,448.94	1,237.96
Ha	23,685.20	23,038.84	16,113.74
%	27.00	27.00	29.07
Juta Ton CO ₂ MillionTons CO ₂	6.77	6.77	7.40
	4.01 Proactive	4.03 Proactive	3.98 Proactive
	0.01	0.02	0.03
	0.12	0.15	0.19
%	60.00	55.60	
UMKM MSME	558	795	535
	4,28	4.1	3.8
	4,32	4.1	3.9
%	96.94% Sangat Baik Very Good	92.85% Sangat Baik Very Good	92.65% Sangat Baik Very Good

**KOMITMEN DAN STRATEGI
KEBERLANJUTAN** [CCE.C2]
*SUSTAINABILITY COMMITMENT
AND STRATEGY*



Komitmen kami kepada keberlanjutan selaras dengan dinamika global yang mengedepankan integrasi komitmen lingkungan, sosial, dan tata kelola dalam strategi bisnis, serta Tujuan Pembangunan Berkelanjutan/TPB. PERTAMINA percaya bahwa inisiatif-inisiatif strategis keberlanjutan yang dilandasi Nilai-nilai Keberlanjutan Perseroan, akan turut mendorong PERTAMINA menjadi perusahaan energi global yang menciptakan nilai dan komitmen dalam keberlanjutan jangka panjang. [2-22]

Our commitment to sustainability aligns with the global dynamics that put forefront the commitment to environmental, social, and governance in the business strategy, as well as the Sustainable Development Goals (SDGs). PERTAMINA believes that strategic sustainability initiatives based on the Company's Sustainability Values will promote PERTAMINA to be a world-class energy company that creates long-term value and commitment in the long run. [2-22]



Kebijakan Keberlanjutan PERTAMINA
PERTAMINA's Sustainability Policy

Kebijakan Keberlanjutan kami mendorong kepatuhan perundangan dan menciptakan nilai jangka panjang bagi pemangku kepentingan. Ditandatangani oleh Direktur Utama PERTAMINA pada September 2021, Kebijakan ini wajib diterapkan kepada seluruh pekerja, mitra, pelanggan, dan pemangku kepentingan Perusahaan.

Our Sustainability Policy promotes regulatory compliance and long-term value creation for stakeholders. Signed by PERTAMINA's President Director & CEO in September 2021, this Policy applies to all employees, partners, customers, and stakeholders.

Ambisi kami adalah menjadi Perusahaan Energi Global yang terkemuka, dan diakui sebagai perusahaan yang ramah lingkungan, menjunjung tanggung jawab sosial perusahaan, serta menjunjung tata kelola perusahaan yang baik.

Our ambition is to be a leading Global Energy Company and be recognized as a company that is environmentally friendly, upholding corporate social responsibility, and upholding good corporate governance.

Untuk mencapai ambisi tersebut, PERTAMINA berkomitmen untuk:

To achieve the ambition, PERTAMINA is committed to:



KEBIJAKAN KEBERLANJUTAN PERTAMINA



Sejalan dengan tata nilai dan prinsip etika PERTAMINA untuk menjaga keberlanjutan bisnis perusahaan, PERTAMINA menempatkan Kebijakan Keberlanjutan yang merupakan inti dari tanggung jawab sebagai perusahaan energi terintegrasi. Kebijakan Keberlanjutan Pertamina bertujuan untuk mendorong kepatuhan kepada peraturan perundang-undangan dan menciptakan nilai jangka panjang bagi pemangku kepentingan melalui pengembangan praktik keberlanjutan di seluruh bisnis.

Kebijakan ini mencakup inisiatif yang dilakukan PERTAMINA untuk mengintegrasikan strategi dan aktivitas Perusahaan dengan lebih baik dalam konteks Environmental Social Governance (ESG), terutama dengan berkontribusi terhadap sumber daya manusia, lingkungan, ekonomi dan pembangunan sosial. Strategi tersebut dimaksudkan untuk mendorong keberlangsungan, keterbukaan, dan pengembangan pekerja dalam organisasi bisnis. Kebijakan Keberlanjutan ini merupakan komponen yang terintegrasi dari *operational excellence* di PERTAMINA untuk berkontribusi terhadap *Sustainable Development Goals* (SDGs).

PERTAMINA berambisi menjadi Perusahaan Energi Global yang terkemuka dan bereputasi baik serta diakui sebagai:

1. Perusahaan Ramah Lingkungan (Environmentally Friendly Company)

Perusahaan yang menyediakan dan mendukung akses energi dan pengembangan Energi Baru dan Terbarukan untuk mendukung agenda transisi iklim nasional, bertanggung jawab dalam mengatasi masalah perubahan iklim dan sebagai teladan dalam melaksanakan sistem manajemen lingkungan terkait dengan seluruh kegiatannya.

2. Bertanggung Jawab Sosial Perusahaan (Societal Responsible Company)

Perusahaan yang berkomitmen untuk menerapkan standar tertinggi dalam praktik Kesehatan dan Keselamatan secara terus-menerus, menghormati dan melibatkan masyarakat sekitar untuk mendorong pembangunan sosial dan ekonomi yang berkelanjutan, mendukung dan menjunjung tinggi pengembangan karyawan yang berkelanjutan, keragaman, dan prinsip-prinsip Hak Asasi Manusia

3. Memiliki Tata Kelola Perusahaan yang Baik (Good Governance Company)

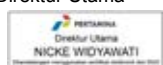
Perusahaan yang memastikan kepatuhan terhadap semua persyaratan hukum yang ditetapkan di wilayah operasinya dan menjunjung tinggi standar tertinggi praktik Tata Kelola Perusahaan yang baik dan menegakkan praktik anti korupsi dan anti-kecurangan untuk semua pemangku kepentingan dalam lini operasional perusahaan.

Untuk mencapai poin-poin tersebut, PERTAMINA berkomitmen untuk:

- 1) Menjamin keamanan pasokan dan akses energi di seluruh negeri.
- 2) Mengurangi emisi gas rumah kaca, emisi gas non-rumah kaca, *releases*, limbah, *effluent*, dan mengatasi masalah perubahan iklim yang lebih luas melalui pengelolaan risiko terkait peraturan, reputasi, dan/atau pasar dari perubahan iklim dengan mengintegrasikannya dalam strategi dan operasi.
- 3) Melindungi dan melestarikan lingkungan, air, sumber daya alam, serta energi melalui sistem pengelolaan lingkungan yang akan dipantau secara terus menerus.
- 4) Pengelolaan dan mitigasi terhadap dampak proyek dan aktivitas terhadap keanekaragaman hayati dengan tujuan '*Net Positive Impact*', dengan menghindari kegiatan operasional di kawasan dengan keanekaragaman hayati tinggi, dan memasukkan aspek keanekaragaman hayati dalam perencanaan dan operasi proyek.
- 5) Merehabilitasi lahan setelah penutupan operasi untuk memulihkan ekosistem, meminimalkan dampak negatif dan memaksimalkan manfaat, dan menyisihkan dana yang memadai untuk penutupan operasi dan rehabilitasi.
- 6) Menerapkan standar tertinggi terkait Kesehatan, Keselamatan, dan Lingkungan untuk menjaga kesehatan, keselamatan, dan keamanan karyawan, pekerja kontraktor, masyarakat, dan pelanggan, serta mempersiapkan dan menanggapi keadaan darurat, serta mencegah kecelakaan besar di seluruh tempat kerja.
- 7) Menjadi lokomotif pembangunan sosial untuk mendorong pembangunan sosial dan ekonomi di tengah masyarakat.
- 8) Berkonsultasi dengan para pemangku kepentingan tentang isu-isu lingkungan dan dengan masyarakat lokal/sekitar tentang pengembangan & pelibatan masyarakat untuk meningkatkan kesejahteraan mereka.
- 9) Menghormati hak-hak masyarakat/komunitas adat di mana perusahaan beroperasi, termasuk mempromosikan pembangunan sosial-ekonomi, mendukung terpenuhinya hak-hak sosial, ekonomi, dan budaya, melindungi situs budaya, dan menghindari pemaksaan dalam pemindahan pemukiman masyarakat/komunitas adat.
- 10) Bekerja dengan mitra dan pemasok menuju pengadaan barang dan jasa yang ramah lingkungan dan berkelanjutan untuk menjamin dampak minimum terhadap lingkungan.
- 11) Mendukung penyediaan produk dan layanan yang sesuai prinsip keberlanjutan kepada pelanggan.
- 12) Mendorong pengembangan karyawan secara berkelanjutan, perlakuan yang adil, dan keragaman di tempat kerja.
- 13) Meningkatkan penggunaan tenaga kerja dan kontraktor lokal sepanjang sesuai dengan kebutuhan operasional, terutama melalui program pelatihan dan dukungan kepada Usaha Mikro Kecil (UMK) dan pelaku ekonomi utama.
- 14) Memastikan kepatuhan terhadap seluruh persyaratan hukum dan menjunjung tinggi Tata Kelola Perusahaan yang baik di seluruh aktivitas.
- 15) Menegakkan penilaian terkait praktik anti-korupsi dan anti-kecurangan di dalam Perusahaan.

Manajemen PERTAMINA bertanggung jawab untuk menerapkan Kebijakan Keberlanjutan ini dan menerapkannya kepada karyawan, mitra, pelanggan, dan seluruh pemangku kepentingan.

Jakarta, September 2021
Direktur Utama



Nicke Widyawati

www.pertamina.com



PERTAMINA SUSTAINABILITY POLICY



In line with the values and ethical principles of PERTAMINA to sustain our Business, PERTAMINA places its Sustainability Policy as a core responsibility as an integrated energy player. Pertamina sustainability policy aims to drive compliance towards stipulated regulation and create long-term value for its stakeholders through building a sustainable practice throughout PERTAMINA business.

This sustainability policy includes initiatives that are undertaken by the PERTAMINA aimed at integrating its strategy and activities better into the context of Environmental Social Governance (ESG), notably by contributing to human, environmental, economic, and social development. The strategy thereof can then foster continuity, transparency, and employee development within business organizations. The Sustainability Policy is an integral component of PERTAMINA Group's operational excellence to contribute to Sustainable Development Goals (SDGs).

PERTAMINA's ambition is to be a leading and reputable Global Energy Company and to be recognized as:

1. Environmentally Friendly Company

A company that provides and promotes access to energy and development of New and Renewable energy to support the national climate transition agenda, responsible for addressing climate change issues and exemplary in conducting environmental management systems related to its activities.

2. Societal Responsible Company

A company that is committed to implementing the highest standards for Health and Safety practices, continuously respects and engages the surrounding community to stimulate sustainable social and economic development, promotes and upholds continuous employee development, diversity, and Human Rights principles

3. Good Governance Company

A company that ensures compliance to all stipulated legal requirements in its areas of operation and upholds the highest standards of good Corporate Governance practices and enforces anti-corruption and anti-fraudulent practices for all stakeholders within the company's operations.

To achieve the above, PERTAMINA commits to:

- 1) Ensure national security of supply and promote access to energy throughout the nation.
- 2) Reduce greenhouse gas emissions, non-greenhouse gas emissions, releases, waste, effluent and address the wider climate change issues through managing regulatory, reputational, and/or market risk of climate change by integrating it in its strategy and operations.
- 3) Protect and conserve the environment, water, other natural resources, and energy through an environmental management system related to its activities that will be monitored continuously.
- 4) Manage and mitigate the impact of our project & activity on biodiversity with a commitment of having 'Net Positive Impact' as a goal by avoiding operation in environmental highest biodiversity value, and incorporating biodiversity requirement in project planning & operation.
- 5) Rehabilitate land upon site closure to restore the ecosystem, minimize negative impacts and maximize benefits, and set aside sufficient funds to cover closure and rehabilitation.
- 6) Implement the highest standards of Health, Safety and Environment practices to safeguard the health, safety, and security of its employee, contractor worker, communities, and consumer, as well as preparing for and respond to emergencies and prevention to major accidents throughout its workplace.
- 7) Become the social development locomotive to stimulate social and economic development in communities.
- 8) Consult with stakeholders on environmental issues and with the local/surrounding community on community development & community involvement issue to improve their welfare.
- 9) Respect the rights of indigenous people/community where the company operates, including promoting their socio-economic development, sponsor full realization of their social, economic, and cultural rights, protect culturally sensitive areas, and avoid involuntary resettlement of indigenous people/community.
- 10) Work with its partners and suppliers towards green and sustainable procurement of goods and services with an objective to ensure minimum impact on the environment.
- 11) Promote the delivery of sustainable products and services to its customers.
- 12) Promote continuous employee development program, equitable treatment, and diversity within its workplace.
- 13) Reinforce the use of local workers and contractors to the extent compatible with operational constraints, particularly through training programs and support to Small-Micro Enterprises (SMEs) and key economic actors.
- 14) Ensure compliance to all stipulated legal requirements and upholds good Corporate Governance throughout its activities.
- 15) Enforce measures related to Anti-corruption and fraudulent practices within the Company.

PERTAMINA Management is responsible for implementing this Sustainability Policy and applying it to employees, partners, customers, and all stakeholders.

Jakarta, September 2021
President Director & CEO



Nicke Widyawati

www.pertamina.com





15

Komitmen PERTAMINA PERTAMINA's 15 Commitments





9

Menghormati hak-hak masyarakat/komunitas adat di mana perusahaan beroperasi, termasuk mempromosikan pembangunan sosial-ekonomi, mendukung terpenuhinya hak-hak sosial, ekonomi, dan budaya, melindungi situs budaya, dan menghindari pemaksaan dalam pemindahan pemukiman masyarakat/komunitas adat.

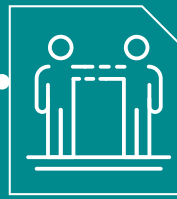
To respect the rights of the indigenous people/ community where the company operates, including promoting their socio-economic development, supporting the compliance of social, economic, and cultural rights, protecting culturally sensitive areas, and avoiding involuntary resettlement of indigenous people/community.



10

Mendukung penyediaan produk dan layanan yang sesuai prinsip keberlanjutan kepada pelanggan.

To promote the distribution of sustainable products and services to its customers.



11

Meningkatkan penggunaan tenaga kerja dan kontraktor local sepanjang sesuai dengan kebutuhan operasional, terutama melalui program pelatihan dan dukungan kepada Usaha Mikro Kecil (UMK) dan pelaku ekonomi utama.

To reinforce the use of local workers and contractors in line with the compatibility with operational needs and constraints, particularly through supports and training programs for the Small-Micro Enterprises (SMEs) and key economic actors.



12

Menegakkan penilaian terkait praktik antikorupsi dan antikecurangan di dalam Perusahaan.

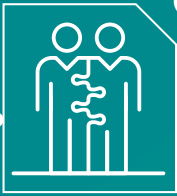
To enforce certain measures related to anti-corruption and fraudulent practices within the Company.



15

Memastikan kepatuhan terhadap seluruh persyaratan hukum dan menjunjung tinggi Tata Kelola Perusahaan yang baik di seluruh aktivitas.

To ensure compliance to all stipulated legal requirements and to uphold a good Corporate Governance throughout its activities.



13

Bekerja dengan mitra dan pemasok menuju pengadaan barang dan jasa yang ramah lingkungan dan berkelanjutan untuk menjamin dampak minimum terhadap lingkungan.

To work with its partners and suppliers towards green and sustainable procurement of goods and services to ensure minimum environmental impact.



14

Mendorong pengembangan karyawan secara berkelanjutan, perlakuan yang adil, dan keragaman di tempat kerja.

To promote continuous employee development programs, equal treatment and diversity support in workplace.



INISIATIF PRIORITAS UTAMA

TOP PRIORITY INITIATIVES

Implementasi program LST di PERTAMINA dijabarkan ke dalam 15 Top Priority Initiatives. Masing-masing memiliki strategi dan target terukur yang melibatkan berbagai divisi di Perusahaan.

PERTAMINA's ESG programs implementation is translated into 15 Top Priority Initiatives. Each initiative has its own strategy and measurable target that involves various divisions across the Company.

Kajian Peta Jalan

Net Zero

Net zero Roadmap

Dekarbonisasi

Decarbonization

Sistem Manajemen Keanekaragaman Hayati

Systemize Biodiversity Program

Pengembangan Kapasitas Energi Terbarukan

Deliver NRE Capacity

Manajemen Air dan Limbah, Mengungguli Standar PROPER

*Water and Effluent
Management, Beyond PROPER*

Meningkatkan Aspek Kesehatan & Keselamatan

*Enhancement of Health
& Safety Aspects*

Manajemen Proses Keselamatan

*Process Safety
Management*

Mendukung Hak Asasi Manusia

Promoting Human Rights

Penelitian dan Inovasi yang Berfokus pada Keberlanjutan

*Sustainability-focused
Research & Innovation*

Meningkatkan Akses Energi untuk Masyarakat

*Improve Accessibility
to Energy for the
Community*

Struktur dan Budaya Keamanan Siber

*Cybersecurity
Structure & Culture*

Meningkatkan Sistem Manajemen Tata Kelola Perusahaan

*Enhance GCG
Management System*

Model Operasional LST

ESG Operating Model

Pendanaan LST

ESG Financing

Komunikasi LST

ESG Communication

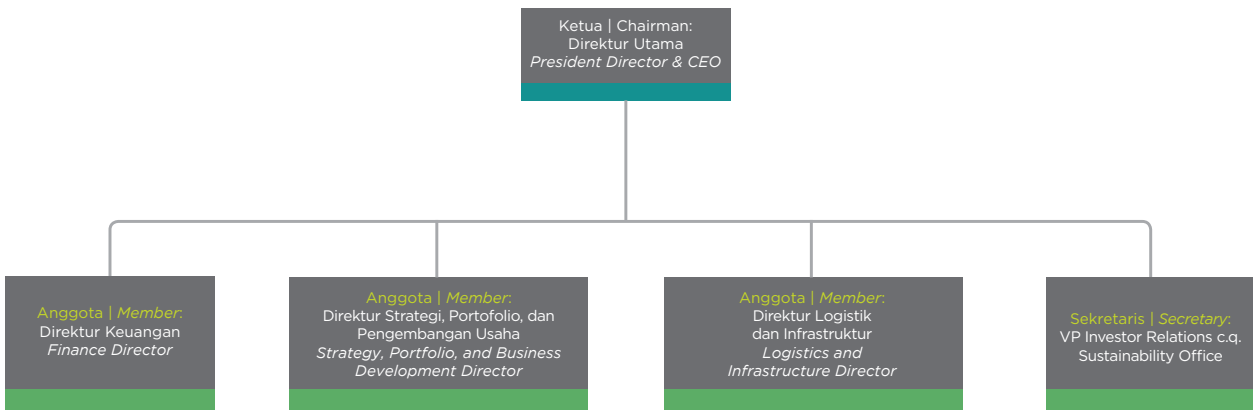


DUKUNGAN MANAJEMEN PADA KEBERLANJUTAN [CCE-1.C2] MANAGEMENT'S SUPPORT FOR SUSTAINABILITY

Pengelolaan keberlanjutan dilakukan bersama-sama oleh seluruh Direksi dan Direktorat sesuai tugas dan tanggung jawab masing-masing, dengan merujuk pada SK Komite Keberlanjutan. SK tersebut mengatur tentang Tugas, Tanggung Jawab, dan Kewenangan Komite Keberlanjutan, baik secara umum maupun khusus. Direksi dapat mendelegasikan pengelolaan keberlanjutan kepada setiap fungsi berkepentingan di *Holding, Subholding,* maupun entitas anak, termasuk mewakili Perseroan berkonsultasi dengan pemangku kepentingan untuk identifikasi serta pengelolaan aspek-aspek keberlanjutan. Uraian lebih lanjut mengenai Komite Keberlanjutan terdapat dalam Bab Tata Kelola Keberlanjutan. [2-23][2-24]

Sustainability management is collegially carried out by all Directors and Directorates according to their respective duties and responsibilities, with reference to the Sustainability Committee Decree. The decree regulates both general and specific Duties, Responsibilities, and Authorities of the Sustainability Committee. The Board of Directors may delegate sustainability management to each relevant function in the Holding Company, Subholding, or subsidiary, including representing the Company in consultation with stakeholders to identify and manage sustainability aspects. Further descriptions of the Sustainability Committee can be found in the Sustainability Governance Chapter. [2-23][2-24]

Struktur Organisasi Komite Keberlanjutan Sustainability Committee Organizational Structure



Standar Target dan Pengukuran Kinerja Keberlanjutan Sustainability Target and Performance Measurement Standard

PERTAMINA menetapkan pengelolaan keberlanjutan sebagai Indikator Kinerja Kunci (KPI) pejabat Perusahaan. Sesuai dengan penetapan KPI, setiap pejabat Perusahaan harus memenuhi target yang ditetapkan. PERTAMINA telah menetapkan beberapa KPI Direksi terkait LST, antara lain:

PERTAMINA has established the sustainability management part of the Key Performance Indicator (KPI) for the Company officials. As determined by these KPIs, each Company official must meet the set-out targets. PERTAMINA has also set several ESG-related KPIs for the Board of Directors.

Pada tahun 2021, PERTAMINA membentuk Komite Keberlanjutan. [2-9]

In 2021, PERTAMINA established the Sustainability Committee.



KPI Direksi & Senior Management terkait LST
ESG-related Board of Director and Senior Management's KPI

KPI KPI	Target 2021 2021 Target	Pencapaian Kinerja 2021 2021 Achievement
Perluasan jaringan ritel (OVOO, LPG PSO/ Non PSO, Pertashop, BBM 1 harga) <i>Retail network expansion (OVOO, LPG PSO/ Non-PSO, Pertashop, One Price Fuel Policy)</i>	100%	100.93%
Rata-rata Penggunaan TKDN <i>Average local content level</i>	30%	60%
Persentase perempuan dalam Nominated Talent <i>Women representation in Nominated Talent</i>	15%	18.92%
Millennial (<40 tahun) dalam Top Talent <i>Millennials (<40 years old) in Top Talent</i>	50%	52.08
Total Recordable Incident Rate (TRIR)	0.66	0.12
Perbaikan Skor LST (Sustainalytics)* <i>ESG Score Improvement (Sustainalytics)*</i>	41.6	28.1
Pencapaian PROPER Emas dan Hijau <i>Gold and Green PROPER Achievement</i>	83	104
Reduksi Emisi Berkelanjutan <i>Sustainable Emission Reduction</i>	100%	100%
Penilaian Skor GCG <i>GCG Score</i>	90%	96.94%

* *Semakin rendah semakin baik*
Lower is more favorable

Inisiatif Keberlanjutan Global
Global Sustainability Initiatives

Ambisi LST global PERTAMINA didasarkan pada benchmark praktik terbaik global berkelanjutan, sejalan dengan semakin meningkatnya perhatian investor terhadap aspek LST.

PERTAMINA's global ESG ambitions are based on global sustainable best practices benchmarks, in line with the increasing investor scrutiny towards ESG aspects.

Prinsip Pedoman
Guiding Principles



17 Tujuan
17 Goals



Kontribusi Nasional yang Ditetapkan
National Determined Contribution



Climate Related
Financial Disclosure



International Association
Oil & Gas Producers

Partisipasi pada inisiatif LST
Participation to ESG Initiatives



Sejak tahun 2021, PERTAMINA telah berkomitmen pada inisiatif tanggung jawab UN Global Compact dan prinsip-prinsipnya di bidang hak asasi manusia, tenaga kerja, lingkungan, dan antikorupsi.

Since 2021, PERTAMINA has been committed to the UN Global Compact corporate responsibility initiative and its principles in the areas of human rights, labour, the environment, and anti-corruption.

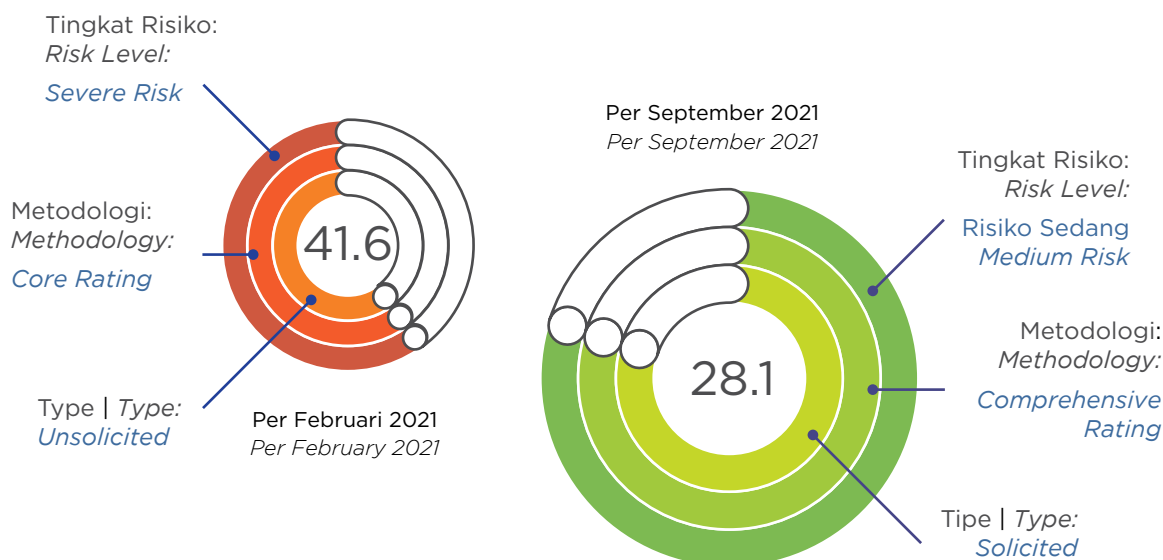
Standar Pengungkapan dan Pelaporan
Reporting Disclosure Standards



Salah satu mekanisme asesmen kinerja keberlanjutan global yang bersifat independen adalah penilaian lembaga rating. Pada September 2021, PERTAMINA mencatat peningkatan signifikan dari hasil *rating* oleh Sustainalytics. Berdasarkan skor ini, per September 2021 PERTAMINA menempati posisi 15 dari 252 perusahaan global di industri minyak dan gas, serta posisi 8 di subindustri *integrated* minyak dan gas.

One of the independent global sustainability performance assessment mechanisms is the rating agency's assessment. In September 2021, PERTAMINA recorded a significant increase in the rating results by Sustainalytics. In September 2021, the rating has led PERTAMINA to rank 15th out of 252 global companies in the oil and gas industry, and 8th position in the integrated oil and gas sub-industry.

Skor Rating LST PERTAMINA (Skor lebih rendah lebih baik)
 PERTAMINA ESG Rating Score (Lower Score is Better)



Kebijakan Transisi Energi
 Energy Transition Policy

Sebagai perusahaan energi dengan ambisi global, tantangan dan konteks tujuan keberlanjutan Perusahaan yang paling relevan adalah penyediaan energi yang lebih ramah lingkungan. Meskipun bisnis utama PERTAMINA masih didominasi oleh minyak dan gas, namun bisnis di sektor energi terbarukan terus dikembangkan. Tujuan ini kami respon dengan inisiatif transisi energi yang diterjemahkan dalam serangkaian target:

As an energy company with global ambitions, the most relevant challenge and the Company's context of sustainable goal is the supply of more environmentally friendly energy. Although PERTAMINA's main business is still predominantly oil and gas, the business in the renewable energy sector continues to be developed. We respond to this goal with energy transition initiatives which are translated into a series of targets:



Target Bauran Energi PERTAMINA 17% pada tahun 2030, dan 23% secara nasional pada tahun 2025.

PERTAMINA Energy Mix Target of 17% by 2030, and 23% national target by 2025.



Mendukung target nasional reduksi GRK pada tahun 2030.

Support the national target of GHG reduction by 2030



Mendukung penurunan emisi GRK sesuai KPI masing-masing Anak Perusahaan, unit operasi dan Kantor Pusat, dari baseline tahun 2020.

Support the GHG emission reduction according to the KPI of each Subsidiary, operating unit and Head Office, from the 2020 baseline.

Kebijakan untuk Menjamin Hak Asasi Manusia dalam Bisnis PERTAMINA *Policy for Assuring Human Rights in PERTAMINA's Business*

PERTAMINA berkomitmen untuk mendukung perlindungan dan menghormati Hak Asasi Manusia (HAM) dalam setiap aktivitas bisnis. Komitmen Perusahaan untuk mewujudkan dan menjamin terlindunginya HAM mencakup seluruh aktivitas bisnis dan seluruh rantai pasokan.

Pada Agustus 2021, Direktur Utama PERTAMINA telah menandatangani Kebijakan HAM yang berdasar pada undang-undang yang berlaku di Indonesia, Konvensi International Labour Organization (ILO), dan Prinsip-prinsip United Nations Global Compact. Upaya-upaya yang tercakup dalam Kebijakan HAM antara lain: 1) mencegah, meminimalkan, mengurangi, atau memperbaiki dampak operasi terhadap HAM, menyediakan sarana pelaporan keluhan terkait HAM, 3) melakukan uji tuntas (*due diligence*) HAM secara berkelanjutan, 4) menumbuhkan budaya penghormatan HAM di lingkungan internal PERTAMINA, termasuk menolak segala jenis diskriminasi, dan 5) menghormati HAM masyarakat adat yang berada di sekitar area operasional Perusahaan.

Salah satu Anak Perusahaan di bawah Segmen Upstream, PT Pertamina Hulu Mahakam, telah melakukan Asesmen Dampak Hak Asasi Manusia (*Human Rights Impact Assessment/HRIA*) pada tahun 2018, dengan validitas yang berakhir hingga tahun 2021.

PERTAMINA is committed to supporting the protection and respect for Human Rights in every business activity. The Company's commitment to realizing and ensuring the protection of human rights covers all business activities and the entire supply chain.

In August 2021, the President Director & CEO of PERTAMINA signed a Human Rights Policy based on the existing laws in Indonesia, the International Labor Organization (ILO) Convention, and the United Nations (UN) Global Compact Principles. The efforts set out in the Human Rights Policy include: 1) preventing, minimizing, reducing, or improving the impact of operations on human rights, providing channel of reporting complaints on human rights, 3) conducting human rights due diligence on an ongoing basis, 4) cultivating a culture of respect for human rights within PERTAMINA's internal environment, including refusing all types of discrimination, and 5) respecting the human rights of indigenous peoples around the Company's operating areas.

One of the Subsidiaries under the Upstream Segment, PT Pertamina Hulu Mahakam, has conducted a Human Rights Impact Assessment (HRIA) in 2018, valid until 2021.

Sistem Manajemen Keberlanjutan *Sustainability Management System*

PERTAMINA telah mengimplementasikan serangkaian sistem manajemen untuk mendukung praktik keberlanjutan:

- ISO 37001:2016 Sistem Manajemen Anti Penyuapan
- ISO 14001:2015 Sistem Manajemen Lingkungan
- ISO 45001:2018 Sistem Manajemen Kesehatan dan Keselamatan Kerja
- ISO 50001:2018 Sistem Manajemen Energi
- ISO 27001:2013 Sistem Manajemen Keamanan Informasi
- ISO 26000:2010 Pedoman Tanggung Jawab Sosial

PERTAMINA has implemented a series of management systems to support sustainability practices:

- *ISO 37001:2016 Anti-Bribery Management System*
- *ISO 14001:2015 Environmental Management System*
- *ISO 45001:2018 Occupational Health and Safety Management System*
- *ISO 50001:2018 Energy Management System*
- *ISO 27001:2013 Information Security Management System*
- *ISO 26000:2010 Social Responsibility Guidelines*

Jejak Langkah Keberlanjutan Tahun 2021 *2021 Sustainability Milestone*

<p>→ 21 April <i>21 April</i></p>	<p>Pembentukan komunitas PERTIWI sebagai bentuk komitmen akan pemberdayaan perempuan, sebagai wadah PERTAMINA untuk meningkatkan kemampuan dan menyiapkan kader pemimpin untuk berkontribusi ke masyarakat lokal dan global.</p>	<p><i>The establishment of the PERTIWI community as a form of commitment to empowering women, which serves as a forum for PERTAMINA to improve capabilities and prepare future leaders who will contribute to the local and global community.</i></p>
<p>→ 29 April <i>29 April</i></p>	<p>PERTAMINA mulai membayarkan kompensasi kerugian kepada masyarakat terdampak insiden kebakaran di RU-VI Balongan. Total terdapat 3.074 rumah yang terdampak di lima desa di Kecamatan Balongan, Kabupaten Indramayu, Jawa Barat.</p>	<p><i>PERTAMINA has begun a compensation payment to communities for the losses incurred during the fire incident at RU-VI Balongan. A total of 3,074 houses were affected in five villages in Balongan District, Indramayu Regency, West Java.</i></p>
<p>→ 4 Mei <i>4 May</i></p>	<p>PERTAMINA meraih sertifikat ISO 37001:2016 Sistem Manajemen Anti-Penyuapan (SMAP) untuk lingkup korporat.</p>	<p><i>PERTAMINA obtained a company-wide ISO 37001:2016 Anti-Bribery Management System (SMAP) Certification.</i></p>
<p>→ 18 Agustus <i>18 August</i></p>	<p>Sejak tahun 2021, PERTAMINA telah berkomitmen pada inisiatif tanggung jawab UN Global Compact dan prinsip-prinsipnya di bidang hak asasi manusia, tenaga kerja, lingkungan, dan antikorupsi.</p>	<p><i>Since 2021, PERTAMINA has been committed to the UN Global Compact corporate responsibility initiative and its principles in the areas of human rights, labour, the environment, and anti-corruption.</i></p>
<p>→ 31 Agustus <i>31 August</i></p>	<p>Deklarasi Komitmen <i>Zero Harassment</i> dengan mencanangkan <i>Respectful Workplace Policy</i>.</p>	<p><i>The Declaration of Commitment to Zero Harassment by the establishment of the Respectful Workplace Policy.</i></p>
<p>→ September <i>September</i></p>	<p>Direktur Utama menandatangani Kebijakan Keberlanjutan PERTAMINA. Kebijakan ini mencakup inisiatif yang dilakukan untuk mengintegrasikan strategi dan aktivitas Perusahaan dengan lebih baik dengan konteks Lingkungan, Sosial, dan Tata Kelola Perusahaan.</p>	<p><i>The President Director & CEO signed the PERTAMINA Sustainability Policy. This policy covers initiatives undertaken to better integrate the Company's strategies and activities in the context of Environmental, Social, and Corporate Governance.</i></p>



Penanganan COVID-19 Tahun 2021
COVID-19 Handling in 2021



Vaksinasi COVID-19 yang diinisiasi PERTAMINA bagi 39.861 pekerja, 43.775 keluarga pekerja, 128,567 kontraktor, pemasok, mitra kerja, serta 9.204 pensiunan PERTAMINA.

COVID-19 vaccination initiated by PERTAMINA for 39,861 employees, 43,775 family members of employees, and 128,567 contractors, partners, and 9,204 retirees of PERTAMINA.



Peresmian Rumah Sakit Modular PERTAMINA Tanjung Duren telah merawat 140 pasien COVID-19 hingga akhir tahun 2021. Tiga RS darurat COVID PERTAMINA lainnya telah merawat 8.135 pasien sepanjang tahun 2021.

Following its inauguration, Tanjung Duren PERTAMINA Modular Hospital has treated 140 COVID-19 patients by the end of 2021. The other three PERTAMINA's COVID emergency hospitals have treated 8,135 patients during 2021.



Rata-rata *positivity rate* pada tahun 2021 PERTAMINA Group sebesar 7.7%, di bawah angka Nasional sebesar 10.6%.

The average positivity rate in 2021 at PERTAMINA Group was 7.7%, which was also below the National rate at 10.6%.

Penghargaan dan Apresiasi
Awards and Appreciations

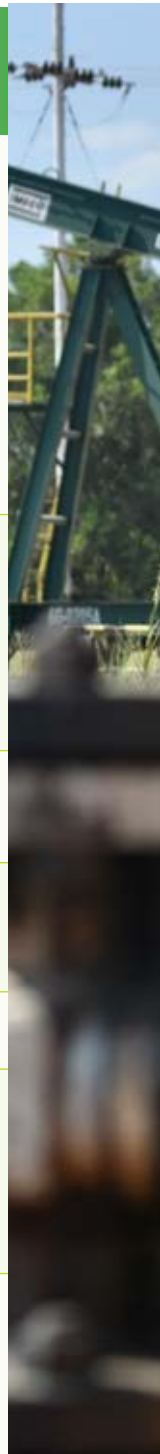
Penghargaan <i>Award</i>	Penyelenggara <i>Organizer</i>	Waktu Pelaksanaan <i>Time</i>
Gold Rating pada Asia Sustainability Report Rating 2021 untuk Laporan Keberlanjutan 2020	National Center of Sustainability Reporting (NCSR)	13 Januari 2021 13 January 2021
IGA Awards RU V Balikpapan:		
<ul style="list-style-type: none"> Sampah Terpadu <i>Integrated Waste</i> Teknologi Menghemat Energi <i>Energy Saving Technology</i> 	RU III Plaju:	
	<ul style="list-style-type: none"> Penanganan Sampah Plastik <i>Plastic Waste Handling</i> Penyelamatan Sumber Daya Air <i>Water Resources Saving</i> 	La Tofi 7 April 2021 7 April 2021

Penghargaan dan Apresiasi

Awards and Appreciations

	Penghargaan <i>Award</i>	Penyelenggara <i>Organizer</i>	Waktu Pelaksanaan <i>Time</i>
Penghargaan Emisi Korporasi 2021: <ul style="list-style-type: none"> Kategori Green Elite untuk Penurunan Emisi Korporasi Sektor BUMN Non-Perbankan; Kategori Gold Plus untuk Transparansi Perhitungan Emisi Korporasi Sektor BUMN Non Perbankan 	<i>Corporate Emission 2021 Award:</i> <ul style="list-style-type: none"> <i>Green Elite Category for Corporate Emission Reduction in the Non-Banking SOE Sector;</i> <i>Gold Plus Category for Transparency in Calculation of Corporate Emissions in the Non-Banking SOE Sector</i> 	Majalah Investor, Berita Satu, PT Bumi Global Karbon <i>Investor Magazine, Berita Satu, PT Bumi Global Karbon</i>	29 April 2021 29 April 2021
President Director & CEO as The Winner Leadership Commitment Category UN Women 2021 Indonesia WEPS Awards	<i>President Director & CEO as The Winner in the Leadership Commitment Category at UN Woman 2021 Indonesia WEPS Awards</i>	United Nation Woman	Mei 2021 May 2021
World Petroleum Council Excellence Award (WPCEA) 2021 Kategori WPCEA for social responsibility: RU III Plaju	<i>World Petroleum Council Excellence Award (WPCEA) 2021 in the category of WPCEA for Social Responsibility: RU III Plaju</i>	World Petroleum Council United Kingdom	19 Juni 2021 19 June 2021
PERTAMINA menjadi BUMN pertama dalam Women Empowerment Principles' (WEP) sebagai wujud komitmen dan pentingnya <i>gender equality</i> (keragaman gender) di PERTAMINA	<i>PERTAMINA became the first SOE to implement the Women Empowerment Principles (WEP) as commitment that underlines gender equality (gender diversity) at PERTAMINA</i>	Women's Empowerment Principles	1 Juli 2021 1 July 2021
14 th Annual Corporate Register Reporting Award (CRRRA) 2021 <ul style="list-style-type: none"> Top 5 Credibility through Assurance; Top 8 Best ESG Report 	<i>14th Annual Corporate Register Reporting Award (CRRRA) 2021</i> <ul style="list-style-type: none"> <i>Top 5 Credibility through Assurance;</i> <i>Top 8 Best ESG Report</i> 	Corporate Register Limited	Juli 2021 July 2021
"AKHLAK Award 2021" kategori BUMN Indeks Keseimbangan Fokus Organisasi dengan nilai "A" (100 persen)	<i>"AKHLAK Award 2021" for the category of SOEs Organizational Focus Balance Index with the score "A" (100 percent)</i>	ACT Consulting Internasional	16 Juli 2021 16 July 2021
Penghargaan kategori BUMN dalam bidang Layanan Teknologi atas Komitmen Implementasi TKDN dalam acara Business Gathering.	<i>SOE Category Award in the field of Technology Services for Commitment to Local Content (TKDN) Implementation in the Business Gathering Event.</i>	Badan Riset dan Inovasi Nasional (BRIN) National Research and Innovation Agency (BRIN)	18 Agustus 2021 18 August 2021
PRIA (PR Indonesia Awards) Kategori CSR untuk Program CSR Community Based Development: Silver - RU IV Cilacap	<i>PRIA (PR Indonesia Awards) CSR Category for Community Based Development CSR Program: Silver - RU IV Cilacap</i>	PR Indonesia	17 September 2021 17 September 2021

Penghargaan <i>Award</i>	Indonesia SDGs Award (ISDA)	Penyelenggara <i>Organizer</i>	Waktu Pelaksanaan <i>Time</i>
<ul style="list-style-type: none"> • Kategori Gold RU II Dumai: Pemberdayaan Ekonomi dan Keuangan Bagi Perempuan • Kategori Gold RU V Balikpapan: Partisipasi Penanggulangan dan Pencegahan Penyakit Menular • Kategori Platinum RU II S Pakning: Mitigasi Perubahan Iklim • Kategori Silver RU V Balikpapan: Konservasi Cagar Budaya bagi Masyarakat 	<p><i>Indonesia SDGs Award (ISDA)</i></p> <ul style="list-style-type: none"> • <i>Gold Category RU II Dumai: Economic and Financial Empowerment for Women</i> • <i>Gold Category RU V Balikpapan: Participation in Tackling and Prevention Infectious Disease</i> • <i>Platinum Category RU II Sei Pakning: Climate Change Mitigation</i> • <i>Silver Category RU V Balikpapan: Cultural Heritage Conservation for Communities</i> 	Corporate Forum for CSR Development (CFCD)	17 September 2021 17 September 2021
Penghargaan Implementasi Tingkat Komponen Dalam Negeri (TKDN)	<i>Local Content Level Implementation Award (TKDN)</i>	Badan Pengkajian dan Penerapan Teknologi (BPPT) Republik Indonesia <i>Indonesian Agency for the Assessment and Application of Technology (BPPT)</i>	18 September 2021 18 September 2021
Rekor MURI RU III Plaju: Penyelamatan Plasma Nutfah Ikan Belida	<i>MURI record RU III Plaju: Saving Belida (chitala lopis) Germ Plasm</i>	Museum Rekor Dunia Indonesia (MURI)	25 September 2021 25 September 2021
ESG Awards 2021 Kategori A	<i>ESG Awards 2021 Category A</i>	<i>Berita Satu & Bumi Global Karbon</i>	27 Oktober 2021 27 October 2021
The 13 th Annual Global CSR Summit & Awards 2021	<i>The 13th Annual Global CSR Summit & Awards 2021</i>	Pinnacle Group	16 November 2021 16 November 2021
Global Corporate Sustainability Awards 2021 - Great Practice Award	<i>Global Corporate Sustainability Awards 2021 - Great Practice Award</i>	Alliance for Sustainable Development Goals (ASDGs) dan Taiwan institute Sustainable Energy (TAISE)	17 November 2021 17 November 2021
Mitra Bakti Husada 2021 - Program Terinspirasi - Kesehatan Ibu dan Anak	<i>Mitra Bakti Husada 2021 - Most Inspirational Program - Mother and Baby Health</i>	Kementerian Kesehatan Republik Indonesia <i>Republic of Indonesia's Ministry of Health</i>	28 November 2021 28 November 2021





PENJELASAN DIREKSI BOARD OF DIRECTORS' REPORT

[2-22]

NICKE WIDYAWATI
DIREKTUR UTAMA
PRESIDENT DIRECTOR & CEO



Para pemangku kepentingan yang terhormat,

Terlebih dahulu mari kita panjatkan syukur ke hadirat Tuhan yang Maha Esa, karena atas perkenan-Nya, PT Pertamina (Persero) mencatatkan sejumlah pencapaian di tengah tantangan yang tidak ringan. Pandemi COVID-19 yang berlanjut masih berpotensi menimbulkan risiko ketidakpastian global, yang dapat mempengaruhi kondisi di dalam negeri. Demikian pula dengan proses restrukturisasi pembentukan *Holding-Subholding* PERTAMINA, yang berimplikasi pada kinerja keberlanjutan dan pengelolaan lingkungan, sosial, dan tata kelola (LST) untuk mendukung aspirasi pemegang saham menjadikan PERTAMINA sebagai perusahaan global energi terdepan dengan nilai pasar USD100 Miliar.

Melalui Laporan ini, kami menyampaikan pengungkapan informasi pelaksanaan prinsip-prinsip keberlanjutan dan penerapan LST selama tahun 2021. Kami berharap Laporan ini menjadi sumber informasi komprehensif terkait komitmen Perseroan memperkuat penerapan LST yang terus menjadi perhatian investor global, serta dukungan pada pencapaian Tujuan Pembangunan Berkelanjutan (TPB).

RESPON TERHADAP TANTANGAN DAN PELUANG KEBERLANJUTAN [POJK51-4.a]

Para pemangku kepentingan yang terhormat,

Komitmen kami kepada keberlanjutan selaras dengan dinamika global yang mengedepankan integrasi komitmen pengelolaan LST dalam strategi bisnis, serta TPB. Perseroan telah merumuskan Nilai-Nilai Keberlanjutan dalam 10 Fokus Keberlanjutan, yang diturunkan dalam 15 Inisiatif Keberlanjutan untuk dijalankan pada tahun 2021-2022. Komitmen pada Nilai-Nilai Keberlanjutan dinyatakan dalam Kebijakan Keberlanjutan PERTAMINA yang ditandatangani Direktur Utama, dan membentuk Komite Keberlanjutan yang diketuai oleh Direktur Utama. [POJK51-4.a.1][POJK51-4.a.2]

Dear stakeholders,

First of all, we would like to express our gratitude to God Almighty, because by His grace, PT Pertamina (Persero) has recorded a number of achievements despite the tough challenges. The ongoing COVID-19 pandemic still has the potential to pose a risk of global uncertainty, which could have implications for domestic conditions. Similarly, the restructuring process to establish the Holding Company and Subholdings of PERTAMINA, affected the sustainability performance and environmental, social and governance (ESG) management to support shareholders' aspiration to make PERTAMINA a leading global energy company with a market value of USD100 billion.

Through this Report, we are delivering information on the implementation of sustainability principles and ESG aspects throughout 2021. We hope that this Report will become a comprehensive source of information regarding the Company's commitment to strengthen ESG implementation, which continues to be of concern to global investors, as well as support for the achievement of the Sustainable Development Goals (SDGs).

RESPONSE TO SUSTAINABILITY CHALLENGES AND OPPORTUNITIES [POJK51-4.a]

Dear stakeholders,

Our commitment to sustainability aligns with global dynamics that emphasize the integration of ESG management commitments in business strategies, as well as SDGs. The Company has formulated Sustainability Values into 10 Sustainability Focuses, which are broken down in 15 Sustainability Initiatives to be implemented into 2021-2022. Commitment to Sustainability Values is stated in PERTAMINA's Sustainability Policy which is signed by the President Director & CEO, and has formed the Sustainability Committee chaired by the President Director & CEO. [POJK51-4.a.1][POJK51-4.a.2]

Kesungguhan Perseroan menerapkan keberlanjutan dinyatakan dalam ambisi untuk menjadi perusahaan ramah lingkungan, bertanggung jawab sosial, serta memiliki tata kelola perusahaan yang baik. Upaya kami menjadi perusahaan ramah lingkungan, diwujudkan dengan menyediakan dan mendukung akses energi dan pengembangan Energi Baru dan Terbarukan (EBT) untuk mendukung agenda transisi iklim nasional, bertanggung jawab mengatasi masalah perubahan iklim, dan teladan dalam melaksanakan sistem manajemen lingkungan. [POJK51-4.a.3]

Sebagai perusahaan yang bertanggung jawab sosial, kami berkomitmen menerapkan standar tertinggi dalam praktik Kesehatan dan Keselamatan, menghormati dan melibatkan masyarakat sekitar untuk mendorong pembangunan sosial dan ekonomi berkelanjutan, mendukung dan menjunjung tinggi pengembangan karyawan yang berkelanjutan, keberagaman, dan prinsip-prinsip Hak Asasi Manusia (HAM). Komitmen pada tata kelola perusahaan yang baik dilaksanakan dengan memastikan kepatuhan terhadap persyaratan hukum yang ditetapkan di wilayah operasi dan menerapkan standar tertinggi praktik Tata Kelola Perusahaan yang Baik (GCG), menegakkan antikorupsi dan antikecurangan untuk semua pemangku kepentingan dalam setiap lini operasional Perseroan. [POJK51-4.a.3]

CAPAIAN KINERJA KEBERLANJUTAN [POJK51-4.a.4]

Para pemangku kepentingan yang terhormat.

Di tengah berlanjutnya pandemi COVID-19, Perseroan tetap konsisten dan berkomitmen menerapkan operasi unggul, sehingga kinerja positif menjadi terjaga selama tahun 2021. Pencapaian PERTAMINA dalam melakukan ekspansi bisnis, dan memasarkan produknya di pasar internasional, membuahkan pengakuan sebagai perusahaan kelas dunia. Hal ini dibuktikan dengan pencapaian PERTAMINA dalam daftar Fortune Global 500 pada tahun 2021. Selain

The Company's determination to implement sustainability is expressed in our ambition to become an environmentally friendly, socially responsible company, which has good corporate governance. Our efforts to become an environmentally friendly company are realized by providing and supporting energy access and the development of New and Renewable Energy (NRE) to support the national climate transition agenda, being responsible for tackling climate change problems, and being an example in implementing environmental management systems. [POJK51-4.a.3]

As a socially responsible company, we are committed to implementing the highest standards of Health and Safety practices, respecting and involving local communities to promote sustainable social and economic development, supporting and upholding sustainable employee development, diversity, and the principles of Human Rights. The commitment to good corporate governance is carried out by ensuring compliance with legal requirements in the area of operation and applying the highest standards of Good Corporate Governance (GCG) practices, enforcing anti-corruption and anti-fraud for all stakeholders in every line of the Company's operations. [POJK51-4.a.3]

SUSTAINABILITY PERFORMANCE ACHIEVEMENTS [POJK51-4.a.4]

Dear stakeholders,

Amidst the ongoing COVID-19 pandemic, the Company remained consistent and committed to implementing operational excellence, therefore positive performance was maintained during 2021. PERTAMINA's achievements in business expansion and marketing its products in the international market, have earned recognition as a world-class company. It was proven by the achievement of PERTAMINA being listed on the Fortune Global 500

itu Direktur Utama PERTAMINA Nicke Widyawati masuk dalam ranking 17 perempuan paling berpengaruh dunia versi majalah Fortune, dan meraih penghargaan Asia-Pacific Women Empowerment Principles (WEPs) 2021 dalam kategori *Leadership Commitment*. Ini bukti komitmen PERTAMINA meningkatkan kiprah dan peran perempuan dalam Perusahaan dan masyarakat mendapat pengakuan internasional. PERTAMINA juga terdaftar dalam United Nation Global Compact sebagai *Participant*, sejak Agustus 2021. [POJK51-4.b.2]

Kinerja unggul juga mencatatkan peningkatan perolehan Nilai Ekonomi yang Dihasilkan, berupa Pendapatan Usaha sebesar USD57.509 juta, atau 138,7% dari tahun 2020 yang mencapai USD41.469 juta. Realisasi Pendapatan Usaha pada periode pelaporan mencapai 98% dari RKAP sebesar USD58.604 juta. Sebagian dari Nilai Ekonomi yang Dihasilkan, distribusikan kepada para pemangku kepentingan, termasuk investasi untuk komunitas dalam bentuk pembiayaan program tanggung jawab sosial perusahaan (TJSL). [POJK51-4.b.1]

Pada kinerja lingkungan, Perseroan telah menginisiasi beberapa inisiatif baru untuk mereduksi emisi gas rumah kaca dari operasi PERTAMINA, dengan total reduksi akumulatif sebesar 641,939-ton CO₂eq* terhadap *baseline* 2010. PERTAMINA terus mendukung upaya Pemerintah menekan perubahan iklim dan pemanasan global melalui pengembangan *Carbon Capture and Storage* (CCS) dan *Carbon Capture, Utilization, and Storage* (CCUS) untuk menekan emisi karbon. Penerapan CCUS dan EGR akan dilakukan di Proyek Lapangan Gundih di Cepu, Jawa Tengah serta Proyek Lapangan Sukowati, Jawa Timur. [POJK51-4.b.1].

Komitmen Perseroan pada pengelolaan lingkungan secara menyeluruh termasuk perlindungan keanekaragaman hayati, telah mendapatkan pengakuan dari Kementerian Lingkungan Hidup dan Kehutanan (KLHK) melalui penilaian PROPER. Kami berhasil meraih 23 penghargaan PROPER Emas 2021

in 2021. In addition, PERTAMINA's President Director & CEO, Nicke Widyawati was ranked 17th most influential women in the world according to Fortune magazine, and won the 2021 Asia-Pacific Women's Empowerment Principles (WEPs) in the Leadership category. The achievements showed PERTAMINA's commitment in increasing women's contributions and roles in the Company and society, which have received international recognition. PERTAMINA has also been registered in the United Nation Global Compact as a Participant, since August 2021. [POJK51-4.b.2]

Our performance excellence also recorded an increase in the Economic Value Generated, in the form of Operating Revenues of USD57,509 million, or increased by 138.7% from USD41,469 million in 2020. The realization of Operating Revenues in the reporting period reached 98% of the WP&B of USD58,604 million. A portion of the Economic Value Generated, was distributed to stakeholders, including investment for the community in the form of corporate social responsibility (CSR) financing. [POJK51-4.b.1]

On environmental performance, the Company has initiated several new emission reduction initiatives from PERTAMINA's operations, with total accumulated reduction of 641.939-tonnes CO₂eq against the 2010 baseline. PERTAMINA continues to support the Government's efforts to mitigate climate change and global warming through the development of Carbon Capture and Storage (CCS) and Carbon Capture, Utilization, and Storage (CCUS) to reduce carbon emissions. The CCUS and EGR will be carried out at the Gundih Field Project in Cepu, Central Java, and the Sukowati Field Project, East Java. [POJK51-4.b.1].*

The Company's commitment to comprehensive environmental management, including the protection of biodiversity, has earned recognition from the Ministry of Environment and Forestry through the PROPER assessment. We have won 23 Gold PROPER awards in 2021 covering all

mencakup seluruh sektor bisnis mulai hulu (*upstream*), hingga hilir (*downstream*). Perolehan PROPER Emas terdiri dari 23 PROPER emas dan 81 PROPER HIJAU. Pencapaian ini menandakan kinerja pengelolaan lingkungan oleh PERTAMINA Grup semakin terukur, objektif dan dapat dipertanggungjawabkan. [POJK51-4.b.1]

Perseroan menyadari untuk terus berupaya meningkatkan penerapan K3 dan keselamatan proses. Hal ini didasarkan terjadinya peristiwa terkait keselamatan proses selama tahun 2021, yakni tiga peristiwa kebakaran di unit kilang, yakni satu kali di RU VI Balongan, dan dua kali di RU IV Cilacap. Seluruh peristiwa tersebut telah ditangani dengan sigap sehingga dapat mencegah kerugian dan dampak lingkungan maupun sosial yang lebih besar. Kami juga telah menindaklanjuti setiap peristiwa yang terjadi sesuai prosedur yang berlaku, termasuk menerbitkan Pedoman Pengelolaan Keadaan Darurat, Krisis, dan Keberlangsungan Bisnis Di PERTAMINA, sebagai pedoman untuk mengatasi kondisi darurat yang terjadi baik terkait K3 maupun keselamatan proses. [POJK51-4.b.1]

Terkait pandemi COVID-19 yang masih berlanjut pada tahun 2021, Perseroan melanjutkan kontribusi bantuan penanganan yang telah dimulai sejak tahun 2020. Selama periode pelaporan kami berkontribusi melalui pembangunan 3 (tiga) Rumah Sakit (RS) Modular Darurat (Patra Comfort, Simprug dan Tanjung Duren), serta pengoperasian RS Ekstensi Asrama Haji Pondok Gede, Indonesia berhasil menambah hampir 1.000 bed perawatan; pengoperasian RS rujukan COVID-19 oleh Pertamina Bina Medika, yang tersebar di seluruh Indonesia; bantuan ventilator dan oksigen medis untuk 504 rumah sakit yang tersebar di 11 provinsi. PERTAMINA juga telah berhasil melaksanakan program vaksinasi COVID-19 sebanyak 212.203 dosis: 39.861 pekerja, 43.775 keluarga pekerja, 128,567 kontraktor, pemasok, mitra kerja, serta 9.204 pensiunan PERTAMINA hingga 31 Desember 2021. [POJK51-4.b.1]

business sectors from upstream to downstream. The PROPER achievements consisted of 23 gold PROPER and 81 GREEN PROPER awards. These achievements indicated that the environmental management performance by PERTAMINA Group has been more measurable, objective, and accountable. [POJK51-4.b.1]

The Company is aware of the needs to continuously improve the implementation of OHS and process safety. It was due to the occurrence of events related to process safety during 2021, including three fires at the refinery units, once at RU VI Balongan, and twice at RU IV Cilacap. All of these incidents have been responded immediately to prevent greater environmental and social losses and impacts. We have also followed up on every incident according to applicable procedures, including the issuance of Guidelines for Handling Emergency, Crisis, and Business Continuity at PERTAMINA, as a reference for dealing with emergency conditions that occur both related to OHS and process safety. [POJK51-4.b.1]

As the COVID-19 pandemic was still occurring in 2021, the Company continued the handling assistance which has begun since 2020. During the reporting period, we contributed through the construction of 3 (three) Emergency Modular Hospitals (Patra Comfort, Simprug and Tanjung Duren), and the operation of the Pondok Gede Hajj Dormitory Extension Hospital, Indonesia managed to provide an additional 1,000 treatment beds; the operation of the COVID-19 referral hospital across Indonesia by Pertamina Bina Medika; ventilator and medical oxygen assistance for 504 hospitals spread across 11 provinces. PERTAMINA has also successfully implemented a COVID-19 vaccination program with 212,203 doses for 39,861 employees and 43,775 employees' families; 128,567 contractors, suppliers, partners; and 9,204 PERTAMINA retirees as of 31 December 2021. [POJK51-4.b.1]

Program sosial kemasyarakatan kami lakukan secara berkesinambungan melalui program tanggung jawab sosial dan lingkungan (TJSL) perusahaan, sesuai Peraturan Menteri BUMN No. PER-05/MBU/04/2021 Tentang Program Tanggung Jawab Sosial dan Lingkungan BUMN. Pada tahun 2021 PERTAMINA merealisasikan biaya TJSL Kontribusi senilai Rp594,33 miliar, atau 120,90% dari RKAP. Penyaluran dana Program Pendanaan PUMK terealisasi senilai Rp213,99 miliar. Program-program TJSL dilaksanakan berkolaborasi dengan seluruh Subholding dan entitas anak mereka. Seluruh program TJSL dijalankan secara berkelanjutan sehingga memberikan manfaat dalam jangka panjang kepada masyarakat. [POJK51-4.b.1]

Kami terus mendorong pelibatan pemasok lokal dalam rantai pasok, dan penggunaan tenaga kerja lokal. Pelibatan pemasok lokal tak terlepas dari pemenuhan komitmen Tingkat Komponen Dalam Negeri (TKDN), dan memberi dampak berganda (*multiplier effect*) bagi pertumbuhan ekonomi nasional yang akan membuka peluang lapangan kerja. Realisasi pencapaian TKDN pada tahun 2021 mencapai 60,36% lebih tinggi dari tahun 2020 yang mencapai 55,60%. [POJK51-4.b.1]

Terkait pengembangan sumber daya manusia, selama tahun 2021 Perseroan menyelenggarakan rata-rata 31,48 jam pelatihan per pekerja, meliputi teknis dan kepemimpinan, serta sertifikasi teknis. Kami berkomitmen mengedepankan penghormatan pada HAM dalam mendorong produktivitas kerja, di antaranya dengan mencanangkan *Respectful Workplace Policy* pada 31 Agustus 2021, sebagai pedoman menghilangkan segala bentuk diskriminasi, pelecehan, dan kekerasan di lingkungan kerja. PERTAMINA terus mendorong peningkatan peran perempuan dengan membentuk komunitas Perempuan Pertamina Tangguh Inspiratif Wibawa Integritas (PERTIWI) yang diresmikan pada 21 April 2021, dan memiliki visi untuk mendorong kesetaraan Perwira perempuan dalam meningkatkan

Our social programs have been carried out continuously through the company's social and environmental responsibility (CSR) program, in accordance with the Regulation of the Minister of SOEs No. PER-05/MBU/04/2021 concerning the Social and Environmental Responsibility Program of SOEs. In 2021 PERTAMINA realized Contribution CSR costs of Rp594.33 billion, or 120.90% of the WP&B. Meanwhile, the disbursement of funds for the Micro and Small Enterprise Funding Program (PUMK) realization was Rp213.99 billion. The CSR programs were implemented in collaboration with all Subholdings and their subsidiaries. All CSR programs have been carried out in a sustainable manner to provide long-term benefits to the community. [POJK51-4.b.1]

We continue to encourage the involvement of local suppliers in the supply chain and the employment of the local workforce. The involvement of local suppliers is closely related to fulfillment of the commitments at the Domestic Component Level (TKDN), and has a multiplier effect on national economic growth that will open up job opportunities. The realization of TKDN 2021 reached 60.36%, higher than 55.60% in 2020. [POJK51-4.b.1]

Regarding human capital development, during 2021 the Company held an average of 31.48 hours of training per employee, both in technical and leadership programs, as well as technical certification. We are committed to upholding respect for human rights in encouraging work productivity, including by launching the Respectful Workplace Policy on 31 August 2021, as a guideline to eliminate all forms of discrimination, harassment, and violence in the work environment. PERTAMINA continues to encourage the improvement of women's role by establishing the Perempuan Pertamina Tangguh Inspiratif Wibawa Integritas (PERTIWI) women community, which was inaugurated on 21 April 2021, with vision to promote equality of female officers in improving their abilities and preparing female cadres of leaders

kemampuan serta menyiapkan kader perempuan pemimpin yang berkontribusi ke sosial masyarakat, perusahaan, dan dunia. [POJK51-4.b.1][POJK51-4.b.2]

Pada penerapan tata kelola, Perseroan telah menuntaskan proses restrukturisasi pembentukan Holding-Subholding, dan selanjutnya mendelegasikan operasional bisnis kepada *subholding*. Tujuannya agar operasional PERTAMINA Group menjadi lebih cepat, efisien, serta meningkatkan kemampuan dan fleksibilitas Group untuk mengejar target nilai pasar USD100 miliar pada tahun 2024. [POJK51-4.b.2]

Secara umum pada tahun 2021, Perseroan telah menerapkan tata kelola perusahaan yang baik (GCG) pada seluruh lini operasional dan bisnis. Hal ini dikuatkan hasil *assessment* yang dilaksanakan berkala, oleh RSM Indonesia dengan hasil 96,94%, meningkat dari hasil *assessment* sebelumnya pada tahun 2020 sebesar 92,85%. Penerapan GCG juga didukung komitmen pada dukungan antikorupsi, yang diwujudkan melalui penerapan ISO 37001:2016 Sistem Manajemen Anti Penyuapan (SMAP) yang telah diterima Perseroan pada tahun 2021, dan menjadi panduan dalam mencegah, mendeteksi, dan merespon tindak penyuapan serta memastikan penegakan aturan anti-penyuapan dalam seluruh kegiatan operasional dan bisnis PERTAMINA Grup. [POJK51-4.b.1][POJK51-4.b.2]

Komitmen penuh dalam penerapan aspek LST telah mendorong peningkatan rating ESG PERTAMINA secara global. Pada September 2021, PERTAMINA menerima LST *Risk Rating* dari Sustainalytics sebesar 28,1 dan dinilai berada pada level *Medium Risk* dalam mengalami dampak keuangan material dari faktor-faktor LST. Pencapaian *Risk Rating* ini mengalami perbaikan signifikan dari sebelumnya hanya mendapatkan nilai 41,6 (*Severe Risk*) pada Februari 2021. Dengan skor 28,1 ini, PERTAMINA menempati posisi 15 dari 252 perusahaan di industri minyak dan gas dunia, serta pada posisi 8 di sub industri minyak dan gas terintegrasi. [POJK51-4.b.2]

who contribute to society, company, and the world.
[POJK51-4.b.1][POJK51-4.b.2]

In terms of the governance implementation, the Company has completed the restructuring process for the formation of Holding-Subholdings, and subsequently delegated business operations to subholdings. It was aimed to make the operations of the PERTAMINA Group faster, more efficient, and increase the Group's ability and flexibility to meet the market value target of USD100 billion by 2024.
[POJK51-4.b.2]

In 2021, the Company has generally implemented good corporate governance (GCG) in all operational and business lines. It was demonstrated by the assessment carried out periodically by RSM Indonesia with a result of 96.94%, an increase from the previous 92.85% in the 2020 assessment. The GCG implementation has also been supported by a commitment to anti-corruption, with the certification of the ISO 37001:2016 Anti-Bribery Management System (ABMS), which was received by the Company in 2021, and serves as a guide in preventing, detecting, and responding to bribery acts as well as ensuring the enforcement of anti-bribery regulations in all PERTAMINA Group's operational and business activities. [POJK51-4.b.1]
[POJK51-4.b.2]

PERTAMINA is fully committed to implementing ESG aspects, which has increased our ESG rating globally. In September 2021, PERTAMINA received an ESG Risk Rating of 28.1 from Sustainalytics which was considered to be at the Medium Risk level in experiencing a material financial impact from ESG factors. The Risk Rating achievement saw a significant improvement from 41.6 (Severe Risk) in February 2021. With this score of 28.1, PERTAMINA is ranked 15th out of 252 companies in the global oil and gas industry, and 8th in the integrated oil and gas sub-industry. [POJK51-4.b.2]

TANTANGAN KINERJA KEBERLANJUTAN [POJK51-4.a.5]

Ada beberapa tantangan yang dihadapi Perseroan dalam menerapkan kinerja keberlanjutan dan pengelolaan LST selama periode pelaporan. Di bidang lingkungan, tantangan yang dihadapi tak terlepas dari kegiatan usaha yang terkait penggunaan sumber daya alam, yang berdampak pada kualitas udara dan lingkungan sekitar. Untuk itu Perseroan harus bergerak mengatasi perubahan iklim, mengurangi jejak karbon yang ada di lingkungan sebagai dampak konsumsi dan intensitas energi, serta melindungi ekosistem dan keanekaragaman hayati di setiap wilayah operasi Perusahaan.

Dalam bidang sosial, Perseroan dituntut meningkatkan dan memperkuat kebijakan kesehatan dan keselamatan kerja (*Health and Safety*) untuk dapat mencapai *zero incident* di masa depan. Sebagai BUMN, PERTAMINA harus dapat memenuhi ketahanan energi dan menyediakan akses energi secara nasional untuk seluruh lapisan masyarakat. Di seluruh wilayah operasi, kami juga dihadapkan pada tantangan untuk turut dapat memperkuat hubungan baik dengan masyarakat, melakukan rekrutmen dan pengembangan karyawan yang mengedepankan kesetaraan dan keberagaman termasuk terhadap para penyandang disabilitas.

Terkait aspek Tata Kelola, tantangan yang dihadapi Perseroan adalah penegakan integritas termasuk menghindari konflik kepentingan, tidak menoleransi suap, menjunjung tinggi manajemen profesional, kepercayaan dan integritas yang pelaksanaannya mengacu pada prinsip GCG yang kuat di seluruh organisasi. Kami terus mendorong Subholding dan entitas anak di dalamnya, untuk menerapkan ISO 37001:2016 tentang Sistem Manajemen Anti Suap. [POJK51-4.c3]

SUSTAINABILITY PERFORMANCE CHALLENGES [POJK51-4.a.5]

There were a number of challenges faced by the Company in implementing sustainability performance and ESG management during the reporting period. In the environmental aspect, the challenges faced were closely related to business activities on the use of natural resources, which have an impact on air quality and the surrounding environment. Therefore, the Company must make a move to tackle climate change, reduce the carbon footprint in the environment as a result of energy consumption and intensity, and protect ecosystems and biodiversity in each of the Company's operating areas.

In terms of the social aspect, the Company is required to improve and strengthen its occupational health and safety policies in order to achieve zero incidents in the future. As an SOE, PERTAMINA must be able to fulfill energy security and provide access to energy nationally for people from all walks of life. In all areas of operation, we are also faced with the challenge of contributing and strengthening good relations with the community, recruiting and developing employees that upholds equality and diversity, including for persons with disabilities.

Regarding the Governance aspect, the challenges faced by the Company were upholding integrity, which included avoiding conflicts of interest, not tolerating bribery, upholding professional management, trust and integrity, which are implemented based on strong GCG principles in the entire organization. We continue to encourage Subholdings and their subsidiaries to implement the ISO 37001:2016 Anti-Bribery Management System. [POJK51-4.c3]

STRATEGI PENCAPAIAN TARGET DAN PELUANG KEBERLANJUTAN [POJK51-4.c]

Para pemangku kepentingan yang terhormat.

Menyadari tantangan yang dihadapi, Perseroan terus membangun mekanisme yang terintegrasi dalam penerapan keberlanjutan dan pengelolaan LST, baik di lingkungan Holding, Subholding maupun entitas anak di dalamnya. Integrasi diperlukan agar penerapan keberlanjutan dan pengelolaan LST akan sejalan dengan penerapan transisi energi, dan memberikan benefit berkelanjutan untuk kelangsungan bisnis, meningkatkan daya saing, menurunkan risiko bisnis, meningkatkan kesejahteraan karyawan, meningkatkan reputasi PERTAMINA, serta menyediakan akses permodalan yang kompetitif. [POJK51-4.a.2][POJK51-4.a.3]

Strategi lain adalah dengan menerapkan pengelolaan risiko, sehingga risiko dari aspek ekonomi, lingkungan, maupun sosial perlu dikelola dengan baik. Perusahaan melaksanakan manajemen risiko sesuai kaidah *Enterprise Risk Management* (ERM), dengan merujuk pada ISO 31000-2018 Pengelolaan Risiko. Hasil monitoring risiko tahun 2021 berjalan efektif dan mampu menurunkan level risiko sesuai toleransi manajemen, serta *Risk Residual Exposure* dibawah Batas Toleransi Risiko Perusahaan. [POJK51-4.c.1]

Kami berkeyakinan penerapan keberlanjutan dan pengelolaan LST akan turut mendukung operasi dan bisnis Perseroan yang berkelanjutan. Dengan demikian Perusahaan tetap mampu memenuhi kebutuhan energi nasional yang bertumbuh 2,1% sampai tahun 2040 berdasarkan proyeksi PERTAMINA. Selain dengan meningkatkan produksi migas, Perseroan juga mengembangkan berbagai bisnis baru yang mendukung penerapan transisi energi dan pengembangan energi baru terbarukan (EBT). Terkait EBT, Perseroan akan meningkatkan porsi portofolio bisnis energi terbarukan menjadi

STRATEGY FOR SUSTAINABILITY TARGET ACHIEVEMENT AND OPPORTUNITIES [POJK51-4.c]

Dear stakeholders.

Recognizing the challenges that we face, the Company continues to build an integrated mechanism in sustainability and ESG management, both within the Holding Company, Subholdings and subsidiaries. Integration is needed to align the implementation of sustainability and ESG management with the energy transition, and deliver sustainable benefits for business continuity, increase competitiveness, reduce business risk, improve employee welfare, boost PERTAMINA's reputation, and provide access to capital. [POJK51-4.a.2][POJK51-4.a.3]

Another strategy is to implement risk management, to properly manage economic, environmental, and social risks. The company carries out risk management according to the Enterprise Risk Management (ERM) principles, with reference to ISO 31000-2018 Risk Management. The results of risk monitoring in 2021 showed risk management was implemented effectively and managed to reduce risk levels according to management tolerance, as well as Risk Residual Exposure below the Company's Risk Tolerance Limit. [POJK51-4.c.1]

We believe that the implementation of sustainability and ESG management will also support the Company's sustainable operations and business. Thus, the Company is still able to meet the national energy demand, which grows by 2.1% until 2040 based on PERTAMINA's projections. In addition to increasing oil and gas production, the Company has also been developing various new businesses that support the energy transition and the development of new and renewable energy (NRE). The Company will increase the portion of its renewable energy business portfolio to 17% by 2030, in line with the global trend

17% pada tahun 2030, sejalan dengan tren transisi energi yang sedang terjadi di global. Termasuk dalam portofolio tersebut antara lain *geothermal, hydrogen, electric vehicle (EV) battery* dan *energy storage system (ESS)*, gasifikasi, bioenergi, *green refinery, circular carbon economy*, serta EBT lainnya. [POJK51-4.c.2]

PENUTUP

Mengakhiri Laporan singkat ini, izinkan kami atas nama Perseroan menyampaikan ucapan terima kasih dan apresiasi setinggi-tingginya kepada seluruh pemangku kepentingan. Kami memahami tantangan penerapan keberlanjutan dan pengelolaan LST pada tahun-tahun mendatang tak kalah berat, mengingat transisi energi menjadi suatu keharusan. Namun dengan melangkah bersama dan bersinergi, kita dapat terus memberikan energi bagi Indonesia, mewujudkan visi menjadi perusahaan energi nasional kelas dunia, dan mendatangkan lebih banyak nilai demi keberlanjutan bagi segenap pemangku kepentingan.

of energy transition. Included in this portfolio are geothermal, hydrogen, electric vehicle (EV) battery and energy storage system (ESS), gasification, bioenergi, green refinery, circular carbon economy, and other NRE. [POJK51-4.c.2]

CLOSING

To conclude this report, allow us on behalf of the Company to express our gratitude and highest appreciation to all stakeholders. We understand that implementing sustainability and ESG management in the coming years will remain challenging, considering that the energy transition has become a requirement. However, by moving together and synergizing, we can continue to provide energy for Indonesia, realize our vision of becoming a world-class national energy company, and bring more sustainability value to all stakeholders.

Jakarta, Mei | May 2022

Atas Nama Direksi
On behalf of the Board of Directors



Nicke Widyawati

Direktur Utama
President Director & CEO

PERNYATAAN DEWAN KOMISARIS DAN DIREKSI TENTANG TANGGUNG JAWAB ATAS LAPORAN KEBERLANJUTAN 2021 PT PERTAMINA (PERSERO)
STATEMENT OF THE BOARD OF COMMISSIONERS AND BOARD OF DIRECTORS REGARDING RESPONSIBILITY FOR PT PERTAMINA (PERSERO)'S SUSTAINABILITY REPORT 2021

Kami yang bertanda tangan di bawah ini menyatakan seluruh informasi yang disampaikan dalam Laporan Keberlanjutan 2021 PT Pertamina (Persero) telah sesuai dengan Peraturan OJK No. 51/POJK.03/2017 tentang Keuangan Berkelanjutan. Kami secara penuh bertanggung jawab atas kebenaran isi Laporan ini.

We, the undersigned, declare that all information delivered in PT Pertamina (Persero) Sustainability Report 2021 is in accordance with OJK Regulation No. 51/POJK.03/2017 concerning Sustainable Finance. We are fully responsible for the accuracy of the contents of this Report.

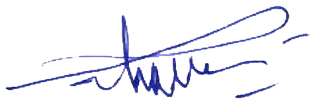
Jakarta, Mei | May 2022

Dewan Komisaris PT Pertamina (Persero)
The Board of Commissioners of PT Pertamina (Persero)



Basuki Tjahaja Purnama

Komisaris Utama/Komisaris Independen
President Commissioner/Independent Commissioner



Pahala Nugraha Mansury

Wakil Komisaris Utama
Vice President Commissioner



Alexander Lay

Komisaris Independen
Independent Commissioner



Ego Syahril

Komisaris
Commissioner



Heru Pambudi

Komisaris
Commissioner



Ahmad Fikri Assegaf

Komisaris Independen
Independent Commissioner



Iggi Haruman Achsien

Komisaris Independen
Independent Commissioner



Condro Kirono

Komisaris
Commissioner

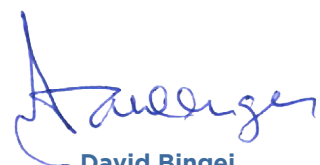
(Periode 1 Januari - 1 Juli 2021)
(Period of 1 January - 1 July 2021)



Isa Rachmatarwata

Komisaris
Commissioner

(Periode 1 Januari - 1 Juli 2021)
(Period of 1 January - 1 July 2021)



David Bingei

Komisaris Independen
Independent Commissioner

(Periode 1 Januari - 1 Juli 2021)
(Period of 1 January - 1 July 2021)

Jakarta, Mei | May 2022

Direksi PT Pertamina (Persero)
Board of Directors of PT Pertamina (Persero)



Nicke Widyawati
 Direktur Utama
President Director & CEO



Iman Rachman
 Direktur Strategi, Portofolio,
 dan Pengembangan Usaha
*Director of Strategy, Portfolio,
 & New Ventures*



Emma Sri Martini
 Direktur Keuangan
Director of Finance



M. Erry Sugiharto
 Direktur Sumber Daya Manusia
Director of Human Capital



Mulyono
 Direktur Logistik & Infrastruktur
Director of Integrated Logistics & Infrastructure



Dedi Sunardi
 Direktur Penunjang Bisnis
Director of Corporate Services



Koeshartanto
 Direktur Sumber Daya Manusia
Director of Human Capital
 (Periode 1 Januari - 4 Februari 2021)
(Period of 1 January - 4 February 2021)



M. Haryo Yudianto
 Direktur Penunjang Bisnis
Director of Corporate Services
 (Periode 1 Januari - 2 Mei 2021)
(Period of 1 January - 2 May 2021)

TENTANG LAPORAN KEBERLANJUTAN 2021

ABOUT THE 2021 SUSTAINABILITY REPORT

KEBIJAKAN TERKAIT LAPORAN KEBERLANJUTAN SUSTAINABILITY REPORTING POLICY

Laporan Keberlanjutan diterbitkan setiap tahun bersama dengan Laporan Tahunan, berdasarkan kebijakan Perseroan. Periode pelaporan mencakup 1 Januari - 31 Desember 2021, dengan laporan periode sebelumnya yang diterbitkan pada Juni 2021. Terdapat beberapa pernyataan kembali terkait jumlah pekerja, emisi, limbah, air dan efluen, dan pengadaan barang dan jasa. Keterangan penyajian kembali diberikan di bawah tabel data. [2-3][2-4]

Cakupan pelaporan meliputi Holding, *Subholding* dan anak perusahaan (AP). Untuk bagian informasi keuangan, data disajikan secara konsolidasi sebagai hasil audit Kantor Akuntan Publik Purwantono, Sungkoro & Surja (EY). Laporan ini telah melalui proses *assurance* oleh pihak eksternal independen dengan mengacu pada standar AA1000AS dan ISAE 3000. Proses pemilihan penjamin dilaksanakan secara independen dan dipastikan tidak ada benturan kepentingan dengan pihak manapun yang berada dalam Perseroan. Laporan dilengkapi indeks dan referensi silang standar pelaporan. [2-2][2-5]

The Sustainability Report is published annually along with the Annual Report, based on Company Policy. The reporting period covers January 1 - December 31, 2021; with the most recent period report released on June 2021. There are no significant changes or restatements to the previous Report, which was published in June 2021. There are several restatements regarding number of workers, emissions, waste, water and waste, and procurement of goods and services. The reason(s) of restatement is presented under the data table. [2-3][2-4]

The reporting scope covers the Holding Companyz, Subholdings, and their subsidiaries. Financial information data is presented in consolidation format according to the audit result of the Public Accounting Firm Purwantono, Sungkoro & Surja (EY). This report has been assured by independent external bodies with reference to AA1000AS and ISAE 3000 standards. The assurance process is carried out independently, and it is ensured that there is no conflict of interest with any party within the Company. The report contains some indexes and cross-references to reporting standards. [2-2][2-5]

STANDAR PELAPORAN REPORTING STANDARDS



Laporan ini memenuhi beberapa indikator dari standar/pedoman berikut:

- POJK No. 51/POJK.03/2017 tentang Penerapan Keuangan Berkelanjutan bagi Lembaga Jasa Keuangan, Emiten, dan Perusahaan Publik;
- SGXST Listing Rules, Practice Note 7.6 – Sustainability Reporting Guideline;
- Standar Global Reporting Initiatives (GRI) 2021 dan GRI 11: Oil and Gas Sector 2021;
- Sustainability Accounting Standard Board (SASB) Oil & Gas Standard;
- The Oil and Gas Industry Guidance on Voluntary Sustainability Reporting edisi ke-4 2020, dari International Petroleum Industry Environmental Conservation Association (IPIECA), serta American Petroleum Institute (API) and the International Association of Oil & Gas Producers (IOGP).
- Task Force on Climate Change-related Financial Disclosure (TCFD).

This report fulfills most indicators of these several standards and/or guidelines:

- *POJK No. 51/POJK.03/2017 regarding the Implementation of Sustainable Finance for Financial Service Institutions, Issuers, and Public Companies;*
- *SGXST Listing Rules, Practice Note 7.6 – Sustainability Reporting Guideline;*
- *Global Reporting Initiatives (GRI) 2021 Standards and Oil and GRI 11: Oil and Gas Sector 2021;*
- *Sustainability Accounting Standard Board (SASB) Oil & Gas Standard;*
- *The Oil and Gas Industry Guidance on Voluntary Sustainability Reporting 4th edition 2020, from the International Petroleum Industry Environmental Conservation Association (IPIECA), the American Petroleum Institute (API), and the International Association of Oil & Gas Producers (IOGP);*
- *Task Force on Climate Change-related Financial Disclosure (TCFD).*

TOPIK MATERIAL ^[3-1] MATERIAL TOPICS

Topik material dalam laporan ini telah diselaraskan dengan komitmen PERTAMINA dalam pengelolaan lingkungan, sosial dan tata kelola (LST) untuk pertumbuhan berkelanjutan. Penetapan topik material dilakukan pada melalui tahapan identifikasi, prioritas, validasi, dan tinjauan berdasarkan umpan balik, maupun penilaian pemangku kepentingan secara independen yang dilaksanakan pada 30 Agustus - 10 September 2021. Validasi topik material oleh manajemen dilakukan pada tanggal 22 September 2021, bersamaan pada rapat *kick-off* Laporan Tahunan dan Laporan Keberlanjutan 2021.

Prioritas topik-topik material berdasarkan kriteria tingkat kepentingan bagi keberlanjutan PERTAMINA, dan pengaruhnya terhadap pemangku kepentingan. Setiap topik relevan diuji materialitasnya dan diberikan penilaian 4-5 (“Penting”); 3-4 (“Menengah”); dan 1-3 (“Kurang Penting”).

The report’s material topics are aligned with PERTAMINA’s commitment to environmental, social, and governance (ESG) management for sustainable growth. Material topics determination was carried out throughout the stages of identification, priority, validation and review based on the feedback and independent stakeholder assessments held on 30 August-10 September 2021. The material topics were validated by the management on 22 September 2021, in conjunction with the kick-off meeting of the 2021 Annual Report and Sustainability Report.

Material topics are determined based on the criteria for the level of importance for the sustainability of PERTAMINA and their impact on stakeholders. Each relevant topic is tested for materiality and given a rating of 4-5 (“Important”); 3-4 (“Intermediate”); and 1-3 (“Less Important”).



Kontak terkait Laporan ^[2-3]
Contact for further
enquiry on the Report

PT Pertamina (Persero)
Jl. Medan Merdeka Timur
No. 11-13. Jakarta Pusat 10110
PERTAMINA Contact Center 135
Tel: (021) 3815111, 3816111
E-mail: pcc135@pertamina.com
Website: www.pertamina.com

10 FOKUS KEBERLANJUTAN DAN TOPIK MATERIAL PELAPORAN [2-22][3-2] 10 SUSTAINABILITY FOCUSES AND MATERIAL TOPICS

ASPEK LINGKUNGAN ENVIRONMENTAL ASPECT	ASPEK SOSIAL SOCIAL ASPECT	ASPEK TATA KELOLA GOVERNANCE ASPECT
<p>Sebagai BUMN, PERTAMINA turut menjadi garda terdepan dalam memberikan solusi penyediaan energi yang dengan wawas lingkungan di Indonesia.</p> <p><i>As a state-owned company, PERTAMINA is in the forefront of environmentally-sound energy solutions in Indonesia.</i></p>	<p>PERTAMINA tidak hanya berperan menjalankan bisnis utama dalam menyalurkan energi, tetapi juga terus memberikan dampak nyata ke masyarakat dengan memperkuat pembangunan sosial.</p> <p><i>PERTAMINA plays a role in running its main business in distributing energy and continues to have a tangible impact on society by strengthening social development.</i></p>	<p>PERTAMINA terus mengedepankan etika perusahaan dalam menjalankan seluruh kegiatan bisnisnya secara profesional serta mengedepankan keamanan siber dalam rangka mewujudkan keamanan dan kedaulatan energi.</p> <p><i>PERTAMINA continues to prioritize corporate ethics in carrying out all its business activities professionally and prioritizes cyber security to realize energy security and sovereignty.</i></p>
<p>Fokus Keberlanjutan <i>Sustainability Focus</i></p>	<p>Fokus Keberlanjutan <i>Sustainability Focus</i></p>	<p>Fokus Keberlanjutan <i>Sustainability Focus</i></p>
 <p>Mengatasi perubahan iklim <i>Addressing climate change</i></p>	 <p>Kesehatan dan keselamatan kerja (K3) <i>Occupational health and safety</i></p>	
 <p>Mengurangi jejak lingkungan <i>Reducing environmental footprint</i></p>	 <p>Upaya pencegahan insiden berskala besar <i>Prevention of major accidents</i></p>	<p>Keamanan digital <i>Digital security</i></p>
 <p>Melindungi keanekaragaman hayati <i>Protecting biodiversity</i></p>	 <p>Perekrutan, pengembangan, & retensi karyawan <i>Employee recruiting, development, and retention</i></p>	 <p>Etika Perusahaan <i>Code of conduct</i></p>
<p>Topik Material <i>Material Topics</i></p>	 <p>Keterlibatan dan dampak komunitas <i>Community engagement and impact</i></p>	<p>Topik Material <i>Material Topics</i></p>
<ol style="list-style-type: none"> 1. Emisi <i>Emission (305)</i> 2. Penggunaan energi dan efisiensi energi <i>Energy use and efficiency (302)</i> 3. Air dan efluen <i>Water and effluent (303)</i> 4. Limbah <i>Waste (306)</i> 5. Keanekaragaman hayati <i>Biodiversity (304)</i> 	 <p>Inovasi dan penelitian <i>Innovation and research</i></p> <p>Topik Material <i>Material Topics</i></p>	<ol style="list-style-type: none"> 8. Antikorupsi <i>Anti-corruption (205)</i>
	<ol style="list-style-type: none"> 6. Kesehatan dan keselamatan kerja <i>Occupational health and safety (403)</i> 7. Keragaman dan kesetaraan kesempatan <i>Diversity and equal opportunity (405)</i> 	

PELIBATAN PEMANGKU KEPENTINGAN STAKEHOLDER ENGAGEMENT

Pemangku Kepentingan PERTAMINA [2-29]

Definisi:

Kelompok atau individu yang: 1) terdampak dari kegiatan operasional Perusahaan; 2) memiliki dampak secara langsung, atau pengaruh yang besar terhadap keberlanjutan Perseroan saat ini maupun di masa mendatang.

Identifikasi Pemangku Kepentingan

- Pemetaan berdasarkan AA1000 Stakeholder Engagement Standard (SES) 2015 dari Accountability.
- Proses dalam 5 atribut: *Dependency, Responsibility, Tension, Influence, dan Diverse Perspective*.
- Metode: Wawancara secara daring dan *focus group discussion* (FGD)
- Waktu pelaksanaan 30 Agustus 2021 – 10 September 2021

Pemangku Kepentingan Internal

- Pemegang Saham
- Pekerja

Pemangku Kepentingan Eksternal

- Pelanggan
- Investor
- Regulator, Legislatif, dan Lembaga Pengawas
- Masyarakat di Sekitar Wilayah Operasi dan Usaha
- Kontraktor
- Media Massa
- Lembaga Swadaya Masyarakat
- Lembaga Penelitian dan Perguruan Tinggi

Pengelolaan pemangku kepentingan menjadi bagian dari tugas dan tanggung jawab Fungsi Stakeholder Relations & Management- Corporate Secretary beserta jajarannya di Corporate Secretary-Subholding PERTAMINA. Pelibatan pemangku kepentingan diawali dengan pemetaan secara eksternal oleh Fungsi Stakeholder Relations. Pemetaan dilakukan berdasarkan Standar AA1000 Stakeholder Engagement Standard (SES) 2015 dari Accountability. Proses yang dijalankan terbagi dalam lima atribut, yaitu, *Dependency, Responsibility, Tension, Influence, dan Diverse Perspective*.

PERTAMINA Stakeholders [2-29]

Definition:

Groups or individuals who: 1) are affected by the Company's operational activities; 2) have a direct impact, or a major influence on the Company's current and future sustainability.

Stakeholder Identification

- *Mapping based on the AA1000 Stakeholder Engagement Standard (SES) 2015 from Accountability.*
- *Process in 5 attributes: Dependency, Responsibility, Tension, Influence, and Diverse Perspective.*
- *Methods: Online interviews and focus group discussions (FGD)*
- *Implementation time 30 August 2021 – 10 September 2021*

Internal Stakeholders

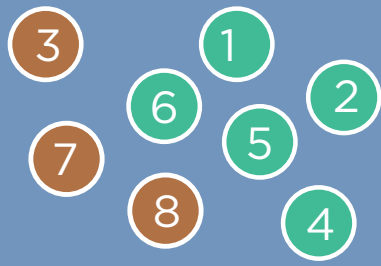
- *Shareholders*
- *Employees*

External Stakeholders

- *Customers*
- *Investors*
- *Regulators, Legislative bodies and Supervisory Agencies*
- *Communities Surrounding Operational and Business Areas*
- *Contractors*
- *Mass Media*
- *Non-Governmental Organizations*
- *Research Institutes and Universities*

Stakeholder management is part of the duties and responsibilities of the Stakeholder Relations & Management-Corporate Secretary function and staff in the Corporate Secretary-Subholdings of PERTAMINA. Stakeholder engagement begins with external mapping by the Stakeholder Relations Function. The mapping is carried out based on the AA1000 Stakeholder Engagement Standard (SES) 2015 from Accountability. The process is divided into five attributes: Dependency, Responsibility, Tension, Influence, and Diverse Perspective.

MATRIKS TOPIK MATERIAL MATRIX OF MATERIAL TOPICS



- 1 Emisi
Emission (305)

- 2 Energi
Energy (302)

- 3 Kesehatan dan Keselamatan Kerja
Occupational Health and Safety (405)

- 4 Keanekaragaman hayati
Biodiversity (304)

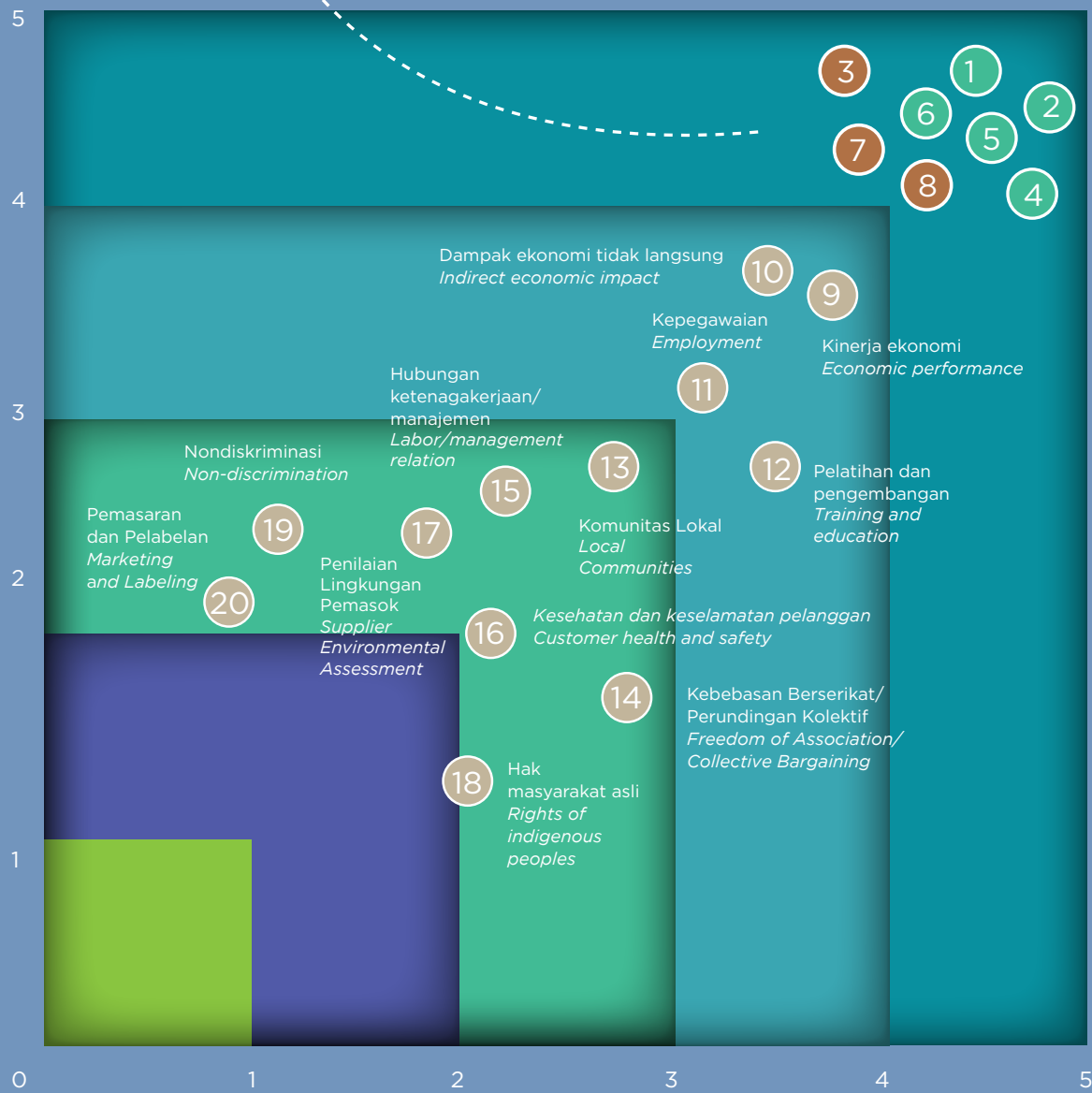
- 5 Air & efluen
Water & effluents (303)

- 6 Limbah
Waste (306)

- 7 Keberagaman dan kesetaraan kesempatan
Diversity and equal opportunity (405)

- 8 Antikorupsi
Anti-corruption (205)

Mempengaruhi Kebijakan dan Evaluasi Pemangku Kepentingan
Influence on Stakeholder Policy and Evaluation



Berdampak Signifikan pada Ekonomi, Sosial, dan Lingkungan
Significant Impact on the Economy, Social, and Environment

Pelibatan Pemangku Kepentingan, Topik Utama, dan Respon PERTAMINA [2-29] [SOC-9.C1]
PERTAMINA's Stakeholder Engagement, Main Topics, and Response

Pemangku Kepentingan Stakeholder	Tujuan Objective	Metode Engagement Engagement Method
Pemegang Saham Shareholders	Mengomunikasikan kinerja pengelolaan perusahaan yang efisien serta berkelanjutan meliputi aspek ekonomi, lingkungan, sosial, dan tata kelola untuk menjamin ketahanan energi nasional secara transparan dan akuntabel. <i>Communicating efficient and sustainable company management performance covers economic, environmental, social, and governance aspects to ensure national energy security in a transparent and accountable manner.</i>	<ul style="list-style-type: none"> Penyusunan Rencana Kerja dan Anggaran Perusahaan (RKAP), kunjungan kerja, komunikasi melalui surat resmi, audiensi, courtesy call, dan digital platform sesuai kebutuhan Pelaporan kinerja rutin sesuai kebutuhan, termasuk penyelenggaraan Rapat Umum Pemegang Saham (RUPS) Tahunan, RUPS Sirkuler, dan RUPS Luar Biasa. Informasi terkait RUPS, RUPS Luar Biasa, dan putusnya untuk tahun buku 2021, disampaikan dalam Laporan Tahunan 2021 PT Pertamina (Persero). Preparation of the Company's Work Plan and Budget (WP&B), working visits, communication through official letters, hearings, courtesy calls, and digital platforms as needed Regular performance reports as needed, including holding the Annual General Meeting of Shareholders (GMS), Circular GMS, and Extraordinary GMS Information regarding the GMS, EGMS, and their resolutions for the fiscal year 2021, are presented in the Annual Report 2021 of PT Pertamina (Persero).
Pelanggan Customers	Memastikan ketersediaan produk dan jasa dengan memperhatikan aspek mutu, keselamatan dan kesehatan pelanggan, serta memberikan informasi transparan terkait produk dan jasa <i>Ensure the availability of products and services by paying attention to aspects of quality, safety and customer health, and provide transparent information on products and services</i>	<ul style="list-style-type: none"> Layanan respon pengaduan terpusat 24/7, dengan tingkat penyelesaian pengaduan 100% tahun 2021 Survei Indeks Kepuasan Pelanggan tahunan, dengan pencapaian hasil 4,28 dari 5,00 tahun 2021 Kegiatan dan program engagement khusus dengan pelanggan 24/7 centralized complaint response service, with 100% complaint resolution rate in 2021 Annual Customer Satisfaction Index 4.28 out of 5.00 in 2021 Special customer engagement activities and programs
Pekerja Employee	Memenuhi hak-hak normatif pekerja, kebebasan berserikat, kesempatan yang setara, dan nondiskriminasi. <i>Fulfilling employees' normative rights, freedom of association, equal opportunity, and non-discrimination.</i>	<ul style="list-style-type: none"> Perpanjangan kerja bersama (PKB) periode 2019-2021 untuk satu tahun ke depan, dan diperbaharui setiap 2 tahun Survei Indeks Keterikatan Karyawan tahunan 80,68%, dilaksanakan satu kali setiap tahun Deklarasi PERTAMINA Zero Harassment Commitment serta Kebijakan HAM Sosialisasi dan evaluasi dilaksanakan secara berkala A one-year extension of collective work (PKB) for the period 2019-2021, which is renewed every two years Annual Employee Engagement Index Survey 80.68%, conducted once every year PERTAMINA Zero Harassment Commitment Declaration and Human Rights Policy Socialization and evaluation are carried out regularly

Pemangku Kepentingan Stakeholder	Tujuan Objective	Metode Engagement Engagement Method
Pekerja Employee	<ul style="list-style-type: none"> Menjamin upaya melindungi keselamatan dan kesehatan kerja (K3) <i>Ensure efforts to protect occupational health and safety (OHS)</i> Pelatihan, pendidikan, dan pengembangan pekerja <i>Employee training, education, and development.</i> 	<ul style="list-style-type: none"> Penerapan ISO 45001 Sistem Keselamatan dan Kesehatan Kerja dan SUPREME, disertai audit secara berkala sesuai kebutuhan Penerapan protokol kesehatan untuk penanggulangan pandemi COVID-19, dilaksanakan sepanjang tahun Penerapan Pedoman Pengelolaan Keadaan Darurat Krisis dan Keberlangsungan Bisnis PERTAMINA, disertai sosialisasi dan evaluasi secara berkala Peringatan Bulan K3, dilaksanakan pada 12 Januari - 12 Februari setiap tahun <i>Implementation of ISO 45001 Occupational Health and Safety System and SUPREME, as well as periodic audits as needed</i> <i>Implementation of health protocols for handling the COVID-19 pandemic, carried out throughout the year</i> <i>Implementation of Guidelines for Crisis Emergency Management and PERTAMINA Business Continuity, accompanied by periodic socialization and evaluation</i> <i>OHS Month Commemoration, held on 12 January - 12 February every year</i>
Investor Investors	<p>Mengomunikasikan kesinambungan usaha dan operasional, kinerja finansial, serta pengelolaan LST untuk potensi investasi di masa depan <i>Communicating business and operational continuity, financial performance, and ESG management for potential future investments</i></p>	<ul style="list-style-type: none"> Komunikasi dan korespondensi berkala, dilaksanakan sesuai kebutuhan Menyampaikan Laporan Keuangan dalam Laporan Tahunan Menyampaikan kinerja pengelolaan LST dalam Laporan Keberlanjutan Penyampaian kinerja pencapaian sustainability rating <i>Periodic communication and correspondence as needed</i> <i>Presenting Financial Statements in the Annual Report</i> <i>Delivering ESG management performance in the Sustainability Report</i> <i>Submission of performance on sustainability rating achievement</i>
Regulator, Legislatif, dan Lembaga Pengawas Regulator, Legislative, and Supervisory Bodies	<p>Mengomunikasikan kepatuhan seluruh regulasi, termasuk pelaksanaan tanggung jawab sosial dan lingkungan (TJSL), penerapan Tata Kelola Perusahaan yang Baik (GCG), transparansi dan tata kelola aset, pelaporan kinerja <i>Communicating compliance with all regulations, including the implementation of social and environmental responsibility (CSR), Good Corporate Governance (GCG), transparency and asset management, performance reporting</i></p>	<ul style="list-style-type: none"> Melakukan Rapat Dengar Pendapat (RDP), kunjungan kerja, focused-group discussion (FGD), audiensi, courtesy call, dan forum lainnya, dilaksanakan sesuai kebutuhan. Pelaporan pelaksanaan kinerja dan GCG, disampaikan berkala sesuai kebutuhan. Audit, dilakukan berkala sesuai kebutuhan. <i>Conducting Hearing sessions (RDP), working visits, focused-group discussions (FGD), audiences, courtesy calls, and other forums, as needed.</i> <i>Reporting on the performance and GCG, submitted periodically as needed.</i> <i>Conducting periodic audits as needed.</i>
Masyarakat di Sekitar Wilayah Usaha Perusahaan Communities Around the Company's Business Area	<p>Kepatuhan dalam pengelolaan dampak sosial untuk peningkatan kesejahteraan dan pemberdayaan masyarakat, melalui pelaksanaan TJSL termasuk Program Pendanaan Usaha Mikro Kecil (PUMK) <i>Compliance in the management of social impacts to improve welfare and community empowerment, through the CSR implementation including the Micro Small Business Funding Program (PUMK)</i></p>	<p>Melaksanakan program TJSL dan Program Pendanaan Usaha Mikro Kecil (PUMK) di seluruh wilayah operasi Perseroan, dengan menyertakan konsultasi publik dan musyawarah perencanaan pembangunan (musrenbang) rutin dengan frekuensi sesuai kebutuhan. <i>Implementing the CSR program and the Micro Small Business Funding Program (PUMK) in all of the Company's operating areas by including public consultations and regular development planning deliberations (musrenbang) as needed.</i></p>

Pemangku Kepentingan <i>Stakeholder</i>	Tujuan <i>Objective</i>	Metode Engagement <i>Engagement Method</i>
Media Massa <i>Mass Media</i>	Menyediakan keterbukaan informasi kinerja dan aksi korporasi PERTAMINA <i>Providing information disclosure of PERTAMINA's performance and corporate actions</i>	<ul style="list-style-type: none"> • Mengelola informasi perusahaan secara tepat dilaksanakan sesuai kebutuhan. • Melakukan komunikasi dengan media melalui <i>press release, press conference, wawancara, serta lainnya.</i> • <i>Managing company information appropriately as needed.</i> • <i>Communicating with the media through press releases, press conferences, interviews, and others.</i>
Kontraktor <i>Contractor</i>	Menjalin hubungan kerja sama yang saling menguntungkan dan berkelanjutan, serta memperhatikan aspek LST <i>Establish mutually beneficial and sustainable cooperation relationships, and pay attention to ESG aspects</i>	<ul style="list-style-type: none"> • Penerapan <i>Contractor Safety Management System (CSMS)</i>, disertai evaluasi secara berkala sesuai kebutuhan • Penerapan protokol kesehatan untuk penanggulangan pandemi COVID-19, dilaksanakan sepanjang tahun • Audit dilaksanakan berkala sesuai kebutuhan. • <i>Implementation of the Contractor Safety Management System (CSMS), as well as periodic evaluations as needed</i> • <i>Implementation of health protocols for the COVID-19 pandemic handling, throughout the year</i> • <i>Conducting periodic audits as needed</i>
Lembaga Swadaya Masyarakat (LSM) <i>Non-governmental Organizations (NGOs)</i>	Menyediakan informasi terkait kinerja finansial, serta pengelolaan LST <i>Providing information on financial performance, and ESG management</i>	<ul style="list-style-type: none"> • Menyampaikan kinerja Perusahaan melalui media dan saluran informasi lainnya, dilaksanakan sesuai kebutuhan • Melakukan komunikasi, dan kerja sama program/kegiatan, dilaksanakan secara berkala sesuai kebutuhan • <i>Delivering information on the Company's performance through the media and other information channels, as needed</i> • <i>Communicating, and collaborating on programs/ activities, periodically as needed</i>
Lembaga Penelitian dan Perguruan Tinggi <i>Research Institute and Universities</i>	Riset dan pengembangan yang mendukung kegiatan dan pengembangan usaha Perusahaan, termasuk dalam pengelolaan LST dan teknologi. <i>Conducting Research and development that supports the Company's business activities and development, including in ESG management and technology.</i>	Kerja sama riset, kegiatan, dan publikasi ilmiah, yang dilaksanakan sesuai kebutuhan. <i>Cooperation in research, activities, and scientific publications, which are carried out as needed.</i>





PROSES ASESMEN MATERIALITAS DENGAN PEMANGKU KEPENTINGAN *STAKEHOLDER MATERIALITY ASSESSMENT PROCESS*

Pada tahun 2021 PERTAMINA melaksanakan survei dan wawancara pemetaan fokus keberlanjutan. Survei ini dilakukan untuk mendapatkan pandangan serta memverifikasi kesesuaian kesepuluh fokus keberlanjutan dengan isu-isu yang dianggap penting oleh pemangku kepentingan. Kegiatan survei secara daring dilakukan melalui survei *online* dan wawancara dilaksanakan sejak 30 Agustus 2021 - 10 September 2021. Total responden sebanyak 178 orang yang berasal dari beberapa kelompok pemangku kepentingan PERTAMINA, yaitu pemegang saham, pelanggan, pekerja, investor, regulator, legislatif, lembaga pengawas, masyarakat, media, kontraktor/supplier, LSM/NGO dan lembaga penelitian. Berdasarkan proses yang telah dilakukan, dapat disimpulkan bahwa kesepuluh fokus keberlanjutan PERTAMINA secara umum sudah mendapatkan respon yang baik dari PERTAMINA melalui tindakan langsung maupun melalui rencana inisiatif.

In 2021, PERTAMINA conducted surveys and interviews on mapping the sustainability focus. The survey was conducted to gather opinions and verify the relevance of the ten sustainability focuses with issues deemed significant by stakeholders. The online survey and interviews were conducted from 30 August 2021 - 10 September 2021. A total of 178 respondents were from several of PERTAMINA's stakeholder groups, such as shareholders, customers, employees, investors, regulators, lawmakers, supervisory agencies, community, media, contractors/suppliers, NGOs and research institutions. The results of the survey concluded that the ten sustainability focuses of PERTAMINA in general have received a good response from the respondents through direct actions or initiative plans.

BERSAMA MEMBANGUN NEGERI
DEVELOPING THE NATION, TOGETHER



Sebagai kelanjutan pembentukan Holding di sektor energi pada 12 Juni 2020, pada tahun 2021 proses *legal-end-state* restrukturisasi PERTAMINA telah selesai. Dengan demikian, PERTAMINA membawahi enam subholding yang memastikan ketersediaan dan ketahanan energi untuk Indonesia. Peran penting tersebut dijalankan dengan mengedepankan pengelolaan LST.

Sejarah PERTAMINA diawali pendirian PT Eksploitasi Tambang Minyak Sumatera Utara sekitar tahun 1950-an. Pada tanggal 10 Desember 1957, perubahan nama perusahaan menjadi PT Perusahaan Minyak Nasional (PERMINA) diperingati sebagai hari lahir PERTAMINA.

Pada tanggal 1 Juli 1961, PT Permina berubah menjadi Perusahaan Negara (PN) Permina. Di tahun 1968, PN Permina dan PN Pertamina mengalami peleburan usaha, menjadi PN Pertamina. Pada tanggal 15 Desember 1971, nama perusahaan menjadi Perusahaan Pertambangan Minyak dan Gas Bumi Negara. Nama Perusahaan kembali berganti pada tanggal 17 September 2003 menjadi PT Pertamina (Persero).

Tahun 2011 PERTAMINA semakin menyempurnakan visinya untuk Menjadi Perusahaan Energi Nasional Kelas Dunia, yang diikuti perluasan kegiatan usaha melalui akuisisi 72,65% saham perusahaan migas Prancis Etablissements Maurel et Prom, SA (M&P) di tahun 2017. Langkah ini menjadikan PERTAMINA memiliki akses operasi di dua belas negara.

Tahun 2018 PERTAMINA menyusun peta jalan pembentukan holding migas, dimulai dengan pembentukan Subholding Gas. Restrukturisasi dilanjutkan pembentukan lima subholding lainnya, yakni Subholding Upstream, Commercial & Trading, Refining & Petrochemical, Power & New and Renewable Energy, serta Integrated Marine Logistics. Pada tanggal 1 September 2021, seluruh proses restrukturisasi telah dirampungkan melalui penandatanganan dokumen legal (*legal end-state*) dalam rangka pemisahan, pengambilalihan saham, dan pengalihan bisnis untuk Subholding Upstream, Subholding Refining & Petrochemical, serta Subholding Commercial & Trading. Proses tersebut melengkapi *legal end-state* Subholding lainnya yang terlebih dahulu diselesaikan.

As a continuation of the Holdings establishment in the energy sector on 12 June 2020, the legal-end-state process of PERTAMINA restructuring was completed in 2021. PERTAMINA oversees six sub-holdings that guarantee the availability and security of energy for Indonesia. This important role is carried out by promoting environmental, social, and governance (ESG) management.

The history of PERTAMINA began with the establishment of PT Eksploitasi Tambang Oil Sumatera Utara in the 1950s. On 10 December 1957, the company's name was changed to PT Perusahaan Minyak Nasional (PERMINA) and was commemorated as the founding of PERTAMINA.

On 1 July 1961, PT Pertamina was transformed into a State Company (PN) Permina. In 1968, PN Permina and PN Pertamina merged their businesses to become PN Pertamina. On 15 December 1971, the company's name was changed to Perusahaan Pertambangan Minyak dan Gas Bumi Negara (the State Oil and Gas Mining Company). The Company's name was changed again on 17 September 2003 to PT Pertamina (Persero).

In 2011, PERTAMINA further refined its vision to become a World Class National Energy Company, which was followed by the expansion of its business activities through the acquisition of 72.65% stake in Etablissements Maurel et Prom, SA (M&P), a French oil and gas company, in 2017. This move gave PERTAMINA access to operations in 12 countries.

In 2018, PERTAMINA prepared a roadmap for the oil and gas holding establishment, starting with the formation of the Gas Subholding. The restructuring was followed by the establishment of five other sub-holdings, namely the Upstream, Commercial & Trading, Refining & Petrochemical, Power and New & Renewable Energy (PNRE) as well as integrated Marine Logistics Subholdings. On 1 September 2021, the entire restructuring process was completed with the signing of legal end-state documents for spin-off, acquisition, and business transfer for Upstream, Refining & Petrochemical, and Commercial & Trading Subholdings. This process complemented the other Subholdings' legal end-state that had been completed earlier.

IDENTITAS PERUSAHAAN [2-1] CORPORATE IDENTITY



Nama Perusahaan [2-1-a]

Name of Company

PT Pertamina (Persero)

Selama tahun 2021 tidak ada perubahan nama Perseroan

During 2021 there was no change in the name of the Company



Modal Dasar

Authorized Capital

Rp600.000.000.000.000,- (enam ratus triliun rupiah), terdiri dari 600.000.000,- (enam ratus juta) lembar saham biasa dengan nilai nominal Rp1.000.000,- (satu juta rupiah) per lembar saham.

Rp600,000,000,000,000 (six hundred trillion Rupiah), consisting of 600,000,000 (six hundred million) shares with a nominal value of Rp1,000,000 (one million Rupiah) per share.



Jenis Perusahaan dan Pemegang Saham

Type of Company and Shareholder

Perseroan Terbatas (PT), Badan Usaha Milik Negara (BUMN)
Limited Liability Company, State Owned Enterprise (SOE)

100% Pemerintah Republik Indonesia

100% Government of Republic of Indonesia



Total Kapitalisasi Aset

Total Asset Capitalization

USD78.051 juta
USD78,051 million

Total Kewajiban

Total Liabilities

USD44.723 juta
USD44,723 million



Modal Disetor

Paid-up Capital

USD16.336 juta
USD16,336 million

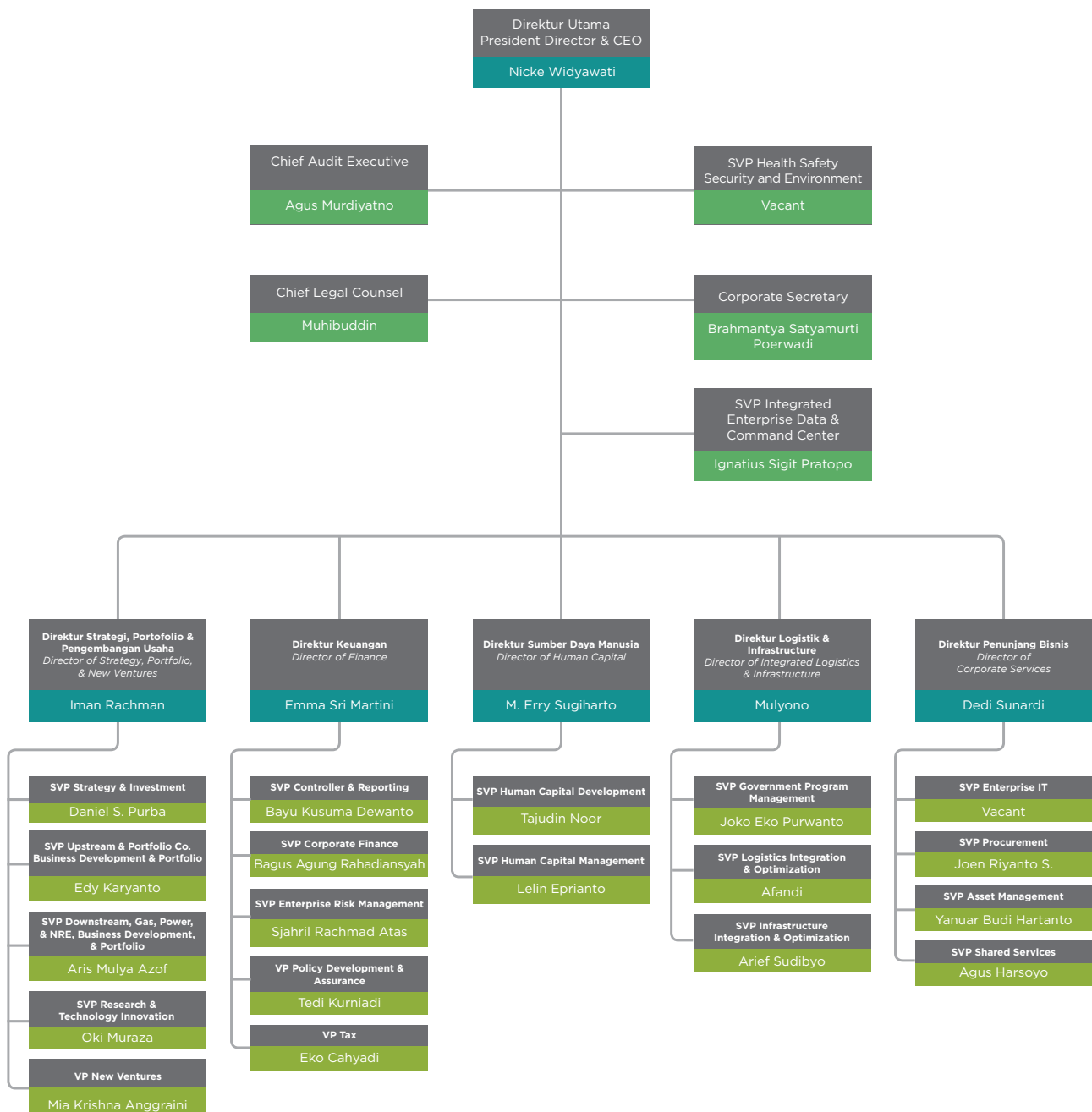


Alamat Kantor Pusat [2-1-c]

Head Office Address

Gedung Grha Pertamina
Jl. Medan Merdeka Timur No.11-13
Jakarta Pusat 10340 Indonesia
Telp | Phone: (62-21) 3815111, 3816111
Email: pcc135@pertamina.com
Website: <https://www.pertamina.com>
Instagram: @Pertamina
Facebook: @Pertamina
Twitter: @Pertamina

Struktur Organisasi PERTAMINA per 31 Desember 2021
 PERTAMINA Organizational Structure as of 31 December 2021



Wilayah Operasi dan Pemasaran Luar Negeri [2-1]
Operational and Overseas Marketing Area

1 UPSTREAM: EXPLORATION

- Canada
- Columbia
- France
- Italy
- Namibia

4 DOWNSTREAM: AVIATION FUEL (CONCO DELCO)

- Afghanistan
- Azerbaijan
- Bangladesh
- Belgium
- Brazil
- Brunei Darussalam
- Burma
- Cambodia
- China
- Colombia
- Czech Republic
- Denmark
- Egypt
- Germany
- Hong Kong
- India
- Japan
- Laos
- Macau
- Malaysia
- Maldives
- Netherlands
- New Zealand
- Oman
- Papua New Guinea
- Philippines
- Russian Fed
- Saudi Arabia
- Singapore
- Sri Lanka
- Taiwan
- Thailand
- Timor Leste
- Turkey
- United Arab Emirates
- Vietnam

2 UPSTREAM: PRODUCTION

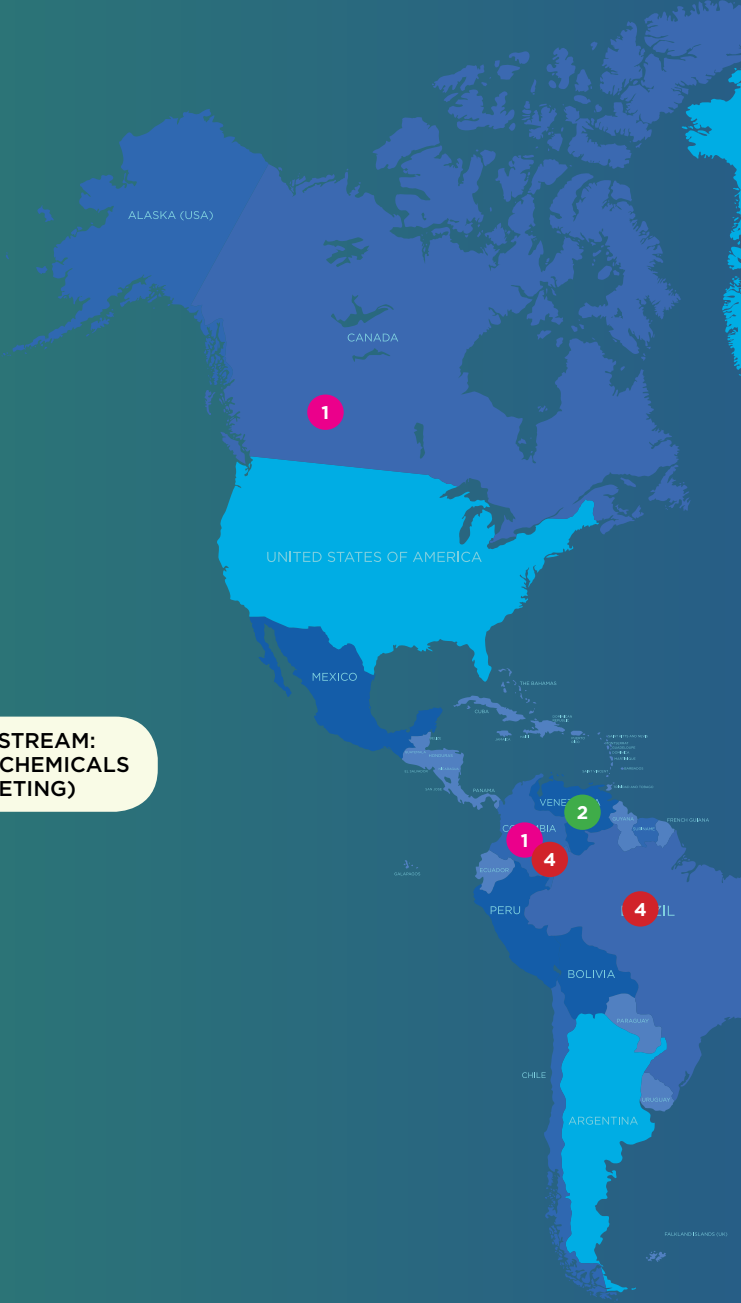
- Algeria
- Angola
- Gabon
- Malaysia
- Iraq
- Nigeria
- Tanzania
- Venezuela

3 DOWNSTREAM: LUBRICANTS (MARKETING)

- Australia
- Bangladesh
- China
- Japan
- Malaysia
- Myanmar
- Nepal
- Nigeria
- Philippines
- Singapore
- South Africa
- South Korea
- Taiwan
- Thailand
- Timor Leste
- Vietnam
- Yemen

5 DOWNSTREAM: PETROCHEMICALS (MARKETING)

- Algeria
- Angola
- Gabon
- Iraq
- Malaysia
- Nigeria
- Tanzania
- Venezuela



VISI, MISI, DAN TATA BUDAYA PERTAMINA VISION, MISSION, AND CULTURE OF PERTAMINA

Visi dan Misi PT Pertamina (Persero) disetujui Dewan Komisaris, Direksi, dan Pemegang Saham pada tanggal 14 Juni 2011 melalui Rapat Umum Pemegang Saham Luar Biasa (RUPSLB). Tidak ada perubahan Visi dan Misi pada tahun 2021.

The vision and mission of PT Pertamina (Persero) were approved by the Board of Commissioners, Directors and Shareholders on 14 June 2011 through the Extraordinary General Meeting of Shareholders (EGMS). There was no change in the Vision and Mission in 2021.



ASPIRASI PERTAMINA PERTAMINA'S ASPIRATION

"Menjadi perusahaan global energi terdepan dengan nilai pasar USD100 miliar"

"To become a leading global energy company with a market value of USD100 billion"

VISI Menjadi Perusahaan Energi Nasional Kelas Dunia

VISION *To Be a World-Class National Energy Company*

MISI Menjalankan Usaha Minyak, Gas, serta Energi Baru dan Terbarukan Secara Terintegrasi, Berdasarkan Prinsip-prinsip Komersial yang Kuat

MISSION *To Carry Out Integrated Core Business in Oil, Gas, New and Renewable Energy Based on Strong Commercial Principles*



AMANAH: Memegang teguh kepercayaan yang diberikan
Trustworthy : Holding the trust

KOMPETEN: Terus belajar & mengembangkan kapabilitas
Competence : Continue to learn & to develop capabilities

HARMONIS: Saling peduli & menghargai perbedaan
Harmony: Showing mutual respect and care for differences

LOYAL: Berdedikasi dan mengutamakan kepentingan bangsa & negara
Loyal : Dedicated and put Nation & Country's interest as top priorities

ADAPTIF: Terus berinovasi dan antusias dalam menggerakkan ataupun menghadapi perubahan
Adaptive: Continue innovating and always being enthusiastic to be agent of change or in facing challenges

KOLABORATIF: Membangun kerja sama yang sinergis
Collaborative: Building a synergetic team work

BIDANG USAHA, PRODUK, DAN JASA *LINE OF BUSINESS, PRODUCT AND SERVICES*

Sesuai Akta No. 29 tanggal 13 April 2018 oleh Notaris Aulia Taufani S.H., yang disahkan Kementerian Hukum dan Hak Asasi Manusia melalui Surat Keputusan No.AHU-0008395.AH.01.02. Tahun 2018 tanggal 13 April 2018, Perusahaan melalui entitas anaknya dapat melaksanakan usaha utama dan kegiatan usaha dalam rangka optimalisasi pemanfaatan sumber daya yang dimiliki. Perusahaan menerima mandat dari Pemerintah terkait penugasan kewajiban pelayanan publik (*public service obligation*) untuk penyediaan BBM tertentu. Tidak ada perubahan bidang usaha selama periode pelaporan. [2-6-a][2-6-c][2-6-d]

According to Deed No. 29 dated 13 April, 2018 by Notary Aulia Taufani S.H., which was legalized by the Ministry of Justice and Human Rights through Decree No. AHU-0008395.AH.01.02.2018 dated 13 April, 2018, the Company through its subsidiaries was able to carry out its core business and operations to optimize the utilization of its resources. The company received a mandate from the Government regarding the assignment of a public service obligation (PSO) for the supply of certain fuels. There was no change in the line of business during the reporting period. [2-6-a][2-6-c][2-6-d]



Kegiatan Usaha PERTAMINA [2-6-a][2-6-b]
PERTAMINA Business Activities

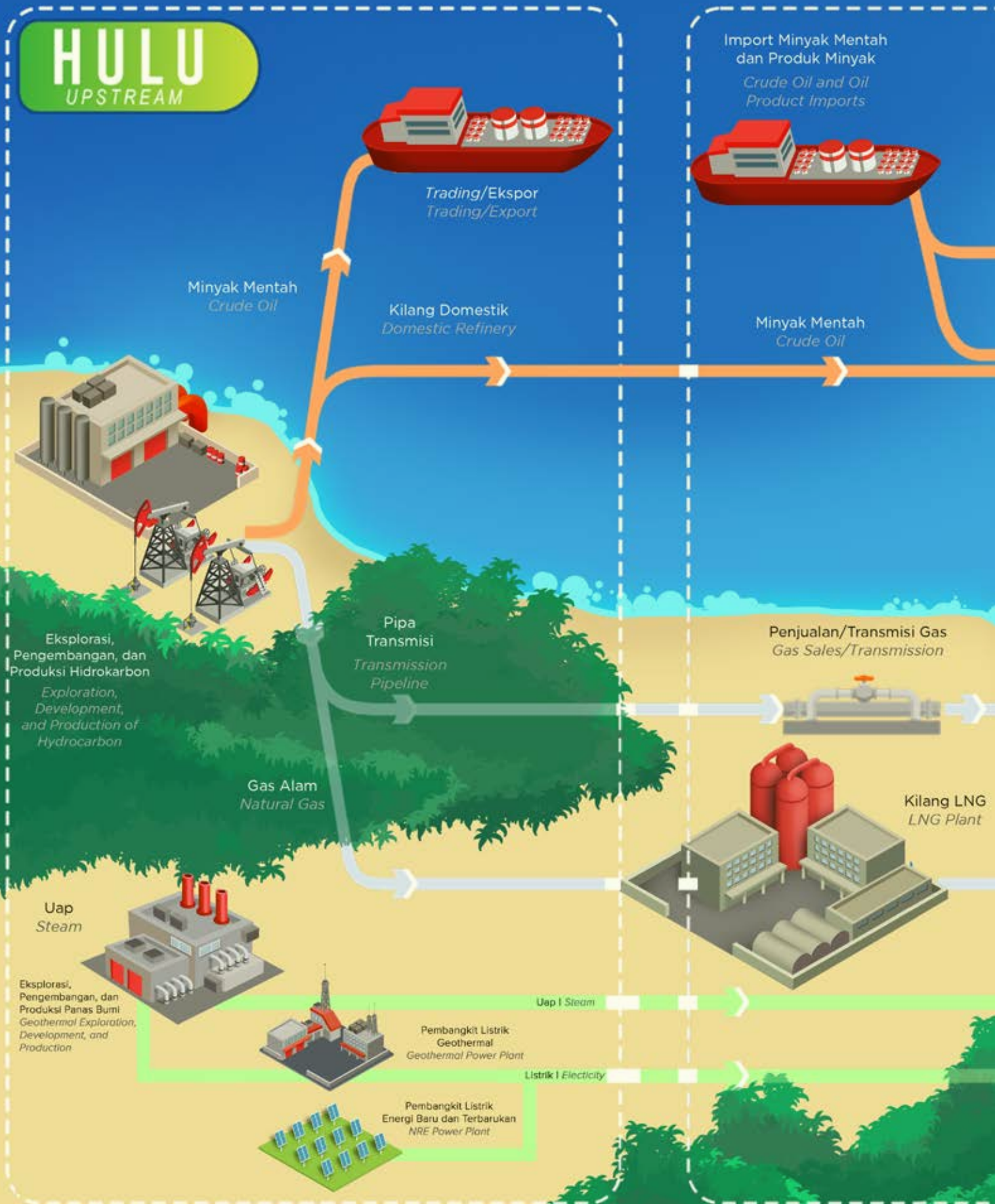
Kegiatan Utama Core Activities	Kegiatan Usaha dalam Rangka Optimalisasi Pemanfaatan Sumber Daya yang Dimiliki Business Activities in Optimizing the Utilization of Owned Resources
<ul style="list-style-type: none">• Melaksanakan kegiatan eksplorasi minyak dan gas bumi; <i>Performing oil and gas exploration activities;</i>• Melaksanakan kegiatan eksploitasi minyak dan gas bumi; <i>Performing oil and gas exploitation activities;</i>• Menyelenggarakan kegiatan di bidang energi listrik, termasuk tetapi tidak terbatas pada eksplorasi dan eksploitasi energi panas bumi, Pembangkit Listrik Tenaga Panas Bumi (PLTP), Pembangkit Listrik Tenaga Gas (PLTG), dan energi listrik yang dihasilkan Perseroan; <i>Conducting activities in the electricity sector, including but not limited to geothermal exploration and exploitation, geothermal power plant, gas power plant, and electric power generated by the Company;</i>• Melaksanakan kegiatan pengolahan yang menghasilkan Bahan Bakar Minyak, bahan bakar khusus, nonbahan bakar, petrokimia, bahan bakar gas, hasil gas alam cair (LNG) dan Gas to Liquid (GTL)/produk lain baik dan produk atau produk antara; <i>Conducting refining activities that produce fuel, specialty fuels, non-fuel, petrochemicals, raw materials, gas fuel, liquefied natural gas (LNG), and Gas to Liquid (GTL)/other products or intermediate products;</i>• Melaksanakan kegiatan penyediaan bahan baku, pengolahan, pengangkutan, penyimpanan, dan niaga Bahan Bakar Nabati (Biofuel); <i>Carrying out activities in biofuel (BBN) material supply, processing, transportation, storage, and commercial activities;</i>• Melaksanakan kegiatan pengangkutan yang meliputi kegiatan pemindahan minyak bumi, gas bumi, Bahan Bakar Minyak, Bahan Bakar Gas dan/atau hasil/produk lainnya untuk tujuan komersial; <i>Carrying out activities of transporting oil, fuel, fuel gas, and/or other products by land, water, and/or air, including gas transportation through pipelines;</i>• Melaksanakan kegiatan penyimpanan yang meliputi kegiatan penerimaan, pengumpulan, penampungan dan pengeluaran minyak bumi, Bahan Bakar Minyak, Bahan Bakar Gas dan/atau hasil/produk lainnya untuk tujuan komersial; <i>Performing storage activities (receiving, collecting, accommodating, and releasing) of gas, fuel, fuel gas, and/or other products located above and/or below ground level and/or water level;</i>• Melaksanakan kegiatan niaga yang meliputi kegiatan pembelian, penjualan, ekspor, impor minyak bumi, Bahan Bakar Minyak, Bahan Bakar Gas dan/atau hasil/produk lainnya, penyaluran gas bumi melalui pipa, termasuk niaga energi listrik yang dihasilkan Perseroan; dan <i>Performing commercial activities (purchasing, selling, exporting, importing) of oil, fuel, fuel gas, and/or other products, including commercial electric power; and</i>• Melaksanakan kegiatan pengembangan, eksplorasi, produksi dan niaga energi baru dan terbarukan, antara lain Coal Bed Methane (CBM), batubara cair, batubara gasifikasi, <i>shale gas, shale oil</i>, bahan bakar nabati, solar, energi angin, dan biomassa. <i>Carrying out development, exploration, production, and trading activities for new and renewable energy, including Coal Bed Methane (CBM), liquid coal, gasified coal, shale gas, shale oil, biofuels, diesel, wind energy, and biomass.</i>	<ul style="list-style-type: none">• <i>Trading house, real estate</i>, pergudangan, pariwisata, resor, olah raga dan rekreasi, <i>rest area</i>, rumah sakit, pendidikan, penelitian, prasarana, telekomunikasi, jasa penyewaan dan perusahaan sarana dan prasarana yang dimiliki Perusahaan, jalan bebas hambatan (tol) dan pusat perbelanjaan/mall; <i>Trading house, real estate, warehouse, tourism, resort, sports and recreation, rest areas, hospital, education, research, telecommunication infrastructure, rental service, operation of facilities and infrastructure owned by the Company, toll road and shopping center</i>• Pengelolaan Kawasan Ekonomi Khusus; <i>Special economic zone management;</i>• Pengelolaan Kawasan Industri (Industrial Complex); dan <i>Industrial complex management; and</i>• Kegiatan usaha lainnya yang menunjang dan terkait usaha utama Perusahaan. <i>Other business activities that support and are related to the main business activities.</i>





Pertamina Bisnis Terintegrasi [2-6]

Pertamina Integrated Business



HILIR DOWNSTREAM



Aktivitas dan Produk [2-6-b]

Activities & Products

Uraian Description	Hulu Upstream	Hilir Downstream
<p>Produk dan Jasa <i>Products and Services</i></p>	<ul style="list-style-type: none"> • Minyak mentah • Gas bumi • Pembangkit Listrik • Tenaga Panas Bumi (PLTPb) • Tenaga Surya (PLTS) • <i>Crude oil</i> • <i>Natural gas</i> • <i>Power Generation</i> • <i>Geothermal Power</i> • <i>Solar Power</i> 	<ul style="list-style-type: none"> • Bahan bakar • Petrokimia • Liquefied Petroleum Gas (LPG) • Lube Base Oil • Pelumas • Jasa niaga, transportasi, distribusi, pemrosesan, dan lainnya • <i>Fuel</i> • <i>Petrochemicals</i> • <i>Liquefied Petroleum Gas (LPG)</i> • <i>Lube base oil</i> • <i>Lubricants</i> • <i>Trading, transportation, distribution, refining, and other services</i>
<p>Pangsa Pasar 2021 <i>Market Share 2021</i></p>	<ul style="list-style-type: none"> • <i>Lifting</i> minyak 53% dari <i>lifting</i> nasional • <i>Lifting</i> gas 33% dari <i>lifting</i> nasional • <i>Oil lifting 53% of national lifting</i> • <i>Gas lifting 33% of national lifting</i> 	<ul style="list-style-type: none"> • Kapasitas kilang 80% dari kilang nasional • Penjualan nasional: <ul style="list-style-type: none"> • BBM Retail Fuel 96,06% • <i>Industrial Fuel Marketing</i> 86,83%, khususnya HSD • Bitumen 61% • Aromatic & Olefin 24% • Penjualan bahan bakar aviasi 100% dari penjualan nasional • Mengelola 97% infrastruktur nasional dan 92% niaga gas bumi nasional • Pangsa pasar pelumas 43,1% nasional • <i>Refinery capacity 80% of national refinery</i> • <i>National sales:</i> <ul style="list-style-type: none"> • <i>96.06% Retail Fuel</i> • <i>86.83% Industrial Fuel Marketing, especially HSD</i> • <i>61% Bitumen</i> • <i>Aromatic & Olefin 24%</i> • <i>Sales of aviation fuel 100% of national sales</i> • <i>Managing 97% of national infrastructure and 92% of national gas trade</i> • <i>43.1% of national lubricants market share</i>
<p>Entitas Anak <i>Subsidiaries</i></p>	<p>Entitas Anak: PT Pertamina Hulu Energi <i>Subsidiary: PT Pertamina Hulu Energi</i></p>	<p>Entitas Anak:</p> <ul style="list-style-type: none"> • PT Kilang Pertamina Internasional • PT Pertamina Patra Niaga • PT Pertamina International Shipping • PT Perusahaan Gas Negara Tbk • PT Pertamina Power Indonesia • Jasa Finansial dan Portofolio <p><i>Subsidiary:</i></p> <ul style="list-style-type: none"> • <i>PT Kilang Pertamina Internasional</i> • <i>PT Pertamina Patra Niaga</i> • <i>PT Pertamina International Shipping</i> • <i>PT Perusahaan Gas Negara Tbk</i> • <i>PT Pertamina Power Indonesia</i> • <i>Financial Service & Portfolio</i>

INFORMASI PEKERJA *EMPLOYEE INFORMATION*



Pengungkapan informasi jumlah pekerja dalam laporan ini mencakup Holding dan Subholding PERTAMINA yang berada di Indonesia dan mancanegara. Metode pengumpulan data kepegawaian diambil dari data di *enterprise resource planning* (ERP) menggunakan SAP dengan mekanisme *Ad Hoc Query*, digabungkan dengan *look up* data dari pelaporan standar SAP. [2-7-b][2-7-c]

Jumlah pekerja PERTAMINA hingga akhir tahun 2021 ada 45.312 orang. Mereka terdiri dari pekerja tetap sebanyak 34.141 orang (75,35%) dan tidak tetap sebanyak 11.171 orang (24,65%). Pada tahun 2021, Segmen Upstream mendapatkan penambahan 2.689 pekerja eks Chevron Pacific Indonesia (CPI) di Blok Rokan yang selanjutnya menjadi pekerja PT Pertamina Hulu Rokan (PHR). [2-8]

Pekerja PERTAMINA *PERTAMINA Employees*

Pekerja PERTAMINA terdiri dari Pekerja Waktu Tidak Tertentu (PWTT) dan Pekerja Waktu Tertentu (PWT). Seluruh pekerja PERTAMINA adalah pekerja penuh waktu. Data 2021 mencakup Holding dan Subholding, sedangkan 2019-2020 hanya mencakup Holding. [2-7]

The disclosure of information on the number of employees covers PERTAMINA Holding Company and Subholding's employees in Indonesia and overseas. The staffing data was collected from enterprise resource planning (ERP) data using SAP with an Ad Hoc Query mechanism, combined with lookup data from SAP standard reporting. [2-7-b][2-7-c]

The number of employees of PERTAMINA by the end of 2021 was 45,312. They consist of 34,141 (75.35%) PERTAMINA employees and 11,171 (24.65%) non-permanent employees. In 2021, Upstream Segment received an additional 2,689 ex-Chevron Pacific Indonesia (CPI) workers in the Rokan Block who later became the employees of PT Pertamina Hulu Rokan (PHR). [2-7-d]

PERTAMINA's employees consist of permanent employees (PWTT) and non-permanent employees (PWT). All PERTAMINA employees are full-timers. 2021 data includes Holding and Subholding, while 2019-2020 only includes Holding company. [2-7]

Komposisi Pekerja PERTAMINA Berdasarkan Status Kepegawaian dan Gender
PERTAMINA Employee Composition by Employment Status and Gender

Status Kepegawaian Employment Status	2021		2020		2019	
	Orang People	%	Orang People	%	Orang People	%
Pekerja Tetap (PWTT) Permanent Employees	34,141	75.35%	13,526	88.11%	13,738	89.81%
Laki-laki Male	27,914	61.60%	11,941	77.79%	12,149	79.42%
Perempuan Female	6,227	13.74%	1,585	10.33%	1,589	10.39%
Pekerja Tidak Tetap (PWT) Non-Permanent Employees	11,171	24.65%	1,825	11.89%	1,559	10.19%
Laki-laki Male	9,367	20.67%	1,795	11.69%	1,489	9.73%
Perempuan Female	1,804	3.98%	30	0.20%	70	0.46%
Jumlah Total	45,312	100%	15,351	100%	15,297	100%

Jumlah PWTT Berdasarkan Kelompok Usia dan Gender
Permanent Employee Composition by Age and Gender


Kelompok Usia Age Group	2021		2020		2019	
	Jumlah Total	%	Jumlah Total	%	Jumlah Total	%
< 26 Tahun < 26 years old	1,736	5.08%	2,097	15.50%	2,392	17.41%
Laki-laki Male	1,631	4.78%	2,017	14.91%	2,291	16.68%
Perempuan Female	105	0.31%	80	0.59%	101	0.74%
26 - 35 Tahun 26 - 35 years old	11,621	34.04%	5,840	43.18%	5,762	41.94%
Laki-laki Male	9,297	27.23%	5,065	37.45%	4,958	36.09%
Perempuan Female	2,324	6.81%	775	5.73%	804	5.85%
36 - 45 Tahun 36 - 45 years old	12,625	36.98%	3,189	23.58%	2,821	20.53%
Laki-laki Male	10,066	29.48%	2,649	19.58%	2,347	17.08%
Perempuan Female	2,559	7.50%	540	3.99%	474	3.45%
46 - 55 Tahun 46 - 55 years old	7,900	23.14%	2,349	17.37%	2,717	19.78%
Laki-laki Male	6,689	19.59%	2,166	16.01%	2,509	18.26%
Perempuan Female	1,211	3.55%	183	1.35%	208	1.51%
> 55 Tahun > 55 years old	259	0.76%	51	0.38%	46	0.33%
Laki-laki Male	231	0.68%	44	0.33%	44	0.32%
Perempuan Female	28	0.08%	7	0.05%	2	0.01%
Jumlah Total	34,141	100.00%	13,526	100.00%	13,738	100.00%

PERTAMINA juga membuka kesempatan magang bagi mahasiswa tingkat akhir yang masih menempuh studi di perguruan tinggi.

PERTAMINA also offers internship opportunities for students who are still studying in their final year of university.

Komposisi Pekerja Magang PERTAMINA [2-8] *Intern Composition in PERTAMINA*

Tahun <i>Year</i>	Tenaga Magang <i>Intern</i>			
	Laki-laki <i>Male</i>	%	Perempuan <i>Female</i>	%
2021	288	39.08	449	60.92
2020	202	47.42	224	52.58
2019	146	46.35	169	53.65



*) Untuk data 2019 subholding, merupakan magang yang ada di Subholding
*) 2019 data includes interns in Subholding

Komposisi Pemimpin Muda [2-7-a] *Young Leaders Composition*

Jabatan <i>Position</i>	Pemimpin Muda (< 42 tahun) <i>Young Leaders (< 42 years old)</i>					
	Laki-laki <i>Male</i>	% dari Total Laki-laki <i>% of Total Male</i>	Perempuan <i>Female</i>	% dari Total Perempuan <i>% of Total Female</i>	Jumlah Total	%
Pemimpin Muda Level Manajer <i>Young Leader Manager Level</i>	391	28	92	41	483	30
Pemimpin Muda Level VP & SVP <i>Young Leaders Level VPs & SVPs</i>	18	7	8	17	26	9
Pemimpin Muda di Manajemen <i>Young Leaders in Management</i>	409	25	100	37	509	27

Keterangan:
- Data pekerja mencakup keseluruhan PERTAMINA Grup
- Usia minimal pekerja PERTAMINA sesuai Peraturan Perusahaan adalah 15 tahun, dengan demikian tidak ada kegiatan usaha Perseroan yang berisiko mempekerjakan pekerja anak di bawah umur. [408-1]

Note:
- Employee data includes all PERTAMINA Group
- The minimum age for PERTAMINA employees is based on Company Regulations is 15 years old; thus, no Company's business activities are at risk of employing underage child labor. [408-1]

Selama tahun 2021, ada 262 pekerja perempuan menduduki jabatan pimpinan di PERTAMINA. Jumlah tersebut mencapai 14% dari total pekerja di tingkat manajemen. Pada tahun 2021, dua Direktur atau sekitar 33,33% dari total anggota Direksi merupakan perempuan. Kebijakan melibatkan pekerja perempuan pada manajemen menjadi dukungan pada Tujuan ke-5 TPB.

In 2021, there were 262 female employees holding leadership positions at PERTAMINA. The number accounted for 14% of the total number of employees at the management level. In 2021, two directors or 33.33% of the total members of the Board of Directors were female. The policy of involving women in management supports the 5th Goal of the Sustainable Development Goals (SDGs).

Proporsi Perempuan di Jajaran Manajemen dan Manajemen Senior
Number and Proportion of Women in Management and Senior Management

Jabatan Position	2021*	2020	2019
Jumlah <i>leader</i> perempuan Total number of female leaders	262	140	135
Jumlah <i>leader</i> Total number of leaders	1,867	818	1,178
Proporsi perempuan dalam posisi <i>leader</i> Female representation in leader position	14%	17%	11%

*Data 2021 mencakup Holding dan Subholding, sedangkan 2020-2019 hanya mencakup Holding.
2021 data includes Holding and Subholding, while 2020-2019 only includes Holding Company.



KEANGGOTAAN ASOSIASI [2-28] ASSOCIATION MEMBERSHIP

 <p>Mitra strategis <i>Strategic partner</i></p>	 <p>Anggota <i>Member</i></p>	 <p>Anggota <i>Member</i></p>	 <p>Anggota <i>Member</i></p>
 <p>Anggota <i>Member</i></p>	 <p>Anggota <i>Member</i></p>	 <p>Anggota <i>Member</i></p>	 <p>Anggota <i>Member</i></p>
 <p>Anggota <i>Member</i></p>	 <p>Anggota <i>Member</i></p>	 <p>Anggota <i>Member</i></p>	



TERUS MEMBERI ENERGI UNTUK NEGERI *KEEP PROVIDING ENERGY TO THE NATION*

PERTAMINA berhasil melewati tantangan tahun 2021 dengan mencatatkan kinerja operasional dan finansial yang positif. Seluruh *subholding* tetap dapat beroperasi dan memberikan energi untuk negeri, meski dihadapkan pada kondisi pandemi COVID-19. PERTAMINA mencatatkan perolehan laba sebesar USD2.046 juta, tumbuh USD995 juta, atau 194,67% dari tahun 2020 sebesar USD1.051 juta.

Selama periode pelaporan, PERTAMINA dihadapkan pada tantangan berlanjutnya pandemi COVID-19. Tantangan lain adalah fluktuasi harga minyak mentah yang menyebabkan nilai *Indonesia Crude Price* (ICP) terus bergerak naik, dari USD53,17 per barel di awal tahun, menjadi USD73,36 per barel di akhir tahun.

Dalam menghadapi situasi penuh tantangan, PERTAMINA melakukan langkah-langkah strategis untuk peningkatan pendapatan (*revenue enhancement*) dan juga efisiensi (*cost leadership*) di seluruh lini. Upaya *revenue enhancement* dilaksanakan antara lain dengan terus memperkuat kinerja operasional, sementara program efisiensi dijalankan dengan melakukan berbagai optimalisasi.



PERTAMINA successfully passed the 2021 global challenges as marked by the positive operational and financial performance. All subholdings managed to operate and supply energy for the country, despite having to deal with the COVID-19 pandemic situation. In the financial performance aspect, PERTAMINA recorded a profit of USD2,046 million, which grew by USD995 million, or 194,67%, from USD1,051 million in 2020.

During the reporting period, PERTAMINA had to deal with the challenge of the ongoing COVID-19 pandemic. Another challenge was the fluctuation of crude oil prices, which caused the Indonesia Crude Price (ICP) to continue to rise, from USD53.17 per barrel at the beginning of the year, to USD73.36 per barrel at the end of the year.

In addressing a challenging situation, PERTAMINA took strategic measures for revenue enhancement as well as to promote efficiency (cost leadership) in all lines. Revenue enhancement effort was implemented by continuously strengthening operational performance, while efficiency programs were carried out through various optimization efforts.



KINERJA SEGMENT UPSTREAM UPSTREAM SEGMENT PERFORMANCE

Komitmen memberi energi untuk Indonesia dimulai sejak dari hulu. Pasca-alih kelola Blok Hulu Rokan, kinerja Segmen Upstream tahun 2021 menunjukkan catatan positif.

Realisasi *lifting* minyak harian domestik tahun 2021 mencapai 350 MBOPD atau 53% dari realisasi *lifting* nasional 661 MBOPD. Realisasi *lifting* gas harian tahun 2021 mencapai 1.784 MMSCFD atau 33% dari realisasi *lifting* gas nasional sebesar 5.481 MMSCFD.

Total produksi minyak Segmen Upstream domestik dan internasional pada periode pelaporan terdiri atas produksi minyak sebesar 445 MBOPD dan produksi gas pada periode pelaporan tercatat 2.615 MMSCFD.

The commitment to supply energy for the nation starts from the Upstream sector. After the acquisition of the Rokan Block by PT Pertamina Rokan Hulu, the performance of the Upstream Segment in 2021 has shown a positive note.

The realization of domestic daily oil lifting in 2021 reached 350 MBOPD or 53% of the national lifting realization at 661 MBOPD. Gas daily lifting realization in 2021 reached 1,784 MMSCFD or 33% of the realization of national gas lifting at 5,481 MMSCFD.

Upstream Segment domestic and international total oil production in the reporting period consisted of oil production of 445 MBOPD, and gas production of 2,615 MMSCFD.

Realisasi Kinerja Produksi & *Lifting* Migas Segmen Upstream

Realization of Upstream Segment Oil and Gas Production & *Lifting* Performance

Uraian <i>Description</i>	Satuan <i>Unit</i>	2021	2020	2019
Produksi Harian <i>Daily Production</i>				
Minyak <i>Oil</i>	MBOPD	445	408	414
Gas <i>Gas</i>	MMSCFD	2,615	2,635	2,822
Migas <i>Oil and gas</i>	MBOEPD	897	863	901
<i>Lifting</i> Harian (Domestik & Internasional) <i>Daily Lifting (Domestic & International)</i>				
Minyak <i>Oil</i>	MBOPD	398.56	368.24	372.94
Gas <i>Gas</i>	MMSCFD	1,909.23	1,947.66	2,094.56
Realisasi <i>Lifting</i> Migas <i>Realization of Oil and Gas Lifting</i>	MBOEPD	728.09	704.41	734.46



KINERJA SEGMENT REFINING AND PETROCHEMICAL PERFORMANCE OF REFINING AND PETROCHEMICALS SEGMENT

Segmen Refining and Petrochemical membukukan kinerja positif selama tahun 2021. Segmen berhasil mencapai *yield valuable product*, yakni produk-produk hasil olahan kilang yang memiliki nilai jual di atas harga minyak mentah, pada angka 80,36% melampaui target RKAP 2021 sebesar 77,5%. Pencapaian operasional lain adalah *plant availability factor* (PAF) yang merupakan indikator keandalan operasi kilang, yakni 99,67% dari target.

Refining and Petrochemical Segment posted a positive performance during 2021. The Segment succeeded in achieving yield valuable products, which are refined products with selling value above the price of crude oil at 80.36%, surpassing the WP&B 2021 of 77.5%. Another operational achievement was the plant availability factor (PAF), as an indicator of the refinery's operation reliability, which was 99.67% of the target.

Realisasi Kinerja Operasi Segmen Refining & Petrochemicals

Realization of Refining & Petrochemicals Segment Operational Performance

Uraian Description	Satuan Unit	2021	2020	2019
Pengolahan Minyak Mentah, Gas, & Intermedia <i>Crude Oil, Gas & Intermediary Processing</i>	MMbbl	314.32	311.53	351.29
Total Produksi <i>Total Production</i>	MMbbl	296.24	294.07	331.79
Yield Valuable Product	%	80.36	78.34	76.23
Plant Availability Factor	%	99.67	99.58	99.09
Indeks Intensitas Energi <i>Energy Intensity Index</i>	Point	108.11	109.28	107.23

KINERJA SEGMENT COMMERCIAL & TRADING PERFORMANCE OF COMMERCIAL & TRADING SEGMENT

Selama tahun 2021, Segmen Commercial & Trading membukukan kinerja positif. Realisasi volume penjualan BBM mencapai 75 juta kiloliter (KL) atau naik 23% dari realisasi tahun 2020 sebesar 61 juta KL, dan mencapai 93% dari target tahun 2021 sebesar 81 juta KL. Penjualan Non-BBM mencapai 18 juta kiloliter (KL) atau mencapai 95% dari realisasi tahun 2020 sebesar 19 juta KL, dan mencapai 101,7% dari target tahun 2021 sebesar 17,6 juta KL.

In 2021, the Commercial & Trading Segment recorded a positive performance, consisting of 75 million kiloliter (KL) of fuel sales. This is a 23% increase from the 2020 realization of 61 million KL, and accounts for 93% of 2021 target of 81 million KL. Non-fuel sales reached 18 million KL, or 95% of 2020 realization of 19 million KL, and 101.7% of 2021 target of 17.6 million KL.

Realisasi Kinerja Penjualan Segmen Commercial & Trading
Realization of Sales Performance of Commercial & Trading Segment

Uraian <i>Description</i>	Satuan <i>Unit</i>	2021	2020	2019*
Penjualan BBM <i>Fuel Sales</i>	Juta KL <i>Million KL</i>	75	72	71
Penjualan Non-BBM <i>Non-fuel Sales</i>		18	17	20

*Operasi sendiri (Direktorat M&T)
Own-operations (M&T Directorate)

Saluran Distribusi BBM Ritel Tahun 2021
2021 Retail Fuel Distribution Channel

	SPBU Reguler <i>Regular Gas Station</i>	SPBU Mini <i>Mini Gas Station</i>	SPBU Kompak <i>Kompak Gas Station</i>	Pertashop	SPBU Nelayan <i>Fuel Distributor for Fishermen</i>	Agen Minyak Tanah <i>Kerosene Agent</i>
Jumlah <i>Total</i>	6,109	357	749	4,065	381	291





6G THE SPIRIT OF WINNING

Strategi bisnis Segmen Commercial & Trading: 6G The Spirit of Winning mendukung PERTAMINA untuk menggapai posisi sebagai *global energy company*.

The business strategy of Commercial & Trading Segment: 6Gs, the Spirit of Winning, supported PERTAMINA to achieve its position as a global energy company.

GO EXPAND

Mengembangkan bisnis PERTAMINA di luar pasar *existing* baik secara geografis, *market segment*, produk, *global talent*, serta pola bisnis & kerja sama

Develop PERTAMINA's business beyond the existing market both geographically, market segment, product, global talent, as well as business & cooperation schemes

GO PETCHEM

Bagian dari usaha untuk memperkuat *existing business*, sebagai antisipasi disrupsi terhadap industri oil & gas melalui *marketing arm petrochemical trading*, dan fokus pada *high value & volume product*

Part of the effort to strengthen existing business, in anticipation of disruption to the oil & gas industry through marketing arm petrochemical trading, and focusing on high value & volume products



GO SOLUTIONS

Meningkatkan value layanan kepada konsumen dan meningkatkan *share of wallet* Pertamina One Solution yang mencakup bundled product & service offering, financial solutions, dan mitigasi risiko bisnis yang terukur

Increasing service value to consumers and Pertamina One Solution's share of wallet which includes bundled product & service offerings, financial solutions, and measurable business risk mitigation

GO CUSTOMER

Mendekatkan PERTAMINA kepada pelanggan *anywhere & anytime* dalam memberikan layanan terbaik melalui program *Customer Care, Pertamina Delivery Service, Telemarketing*, dan *complaint handling*, dengan berbasis *digital channel* MyPertamina dan Call Center 135

Bringing PERTAMINA closer to customers anywhere & anytime in delivering the best service through Customer Care, Pertamina Delivery Service, Telemarketing, and complaint handling programs, via MyPertamina digital channel and Call Center 135

GO DIGITAL

Mengintegrasikan seluruh aktivitas pelanggan dengan PERTAMINA dalam satu *platform digital* melalui MyPertamina dan Digitalisasi SPBU, Fuel Terminal & DPPU

Integrating all customer activities with PERTAMINA in one digital platform via MyPertamina and Digitalization of gas stations (SPBU), Fuel Terminal & aircraft filling depots (DPPU)

GO RETAIL

Mengembangkan jaringan *outlet retail* untuk memperkuat penguasaan pasar melalui Pertashop, pengembangan *outlet LPG (OVOO)*, *new business ecosystem* di SPBU, dan Program Langit Biru

Developing retail outlet network to strengthen market share through Pertashop, development of LPG (OVOO) outlets, new business ecosystem at gas stations, and the Blue Sky Program

KINERJA SEGMENT GAS PERFORMANCE OF GAS SEGMENT

Segmen Gas mencatatkan realisasi penjualan gas tahun 2021 mencapai 871 BBTUD atau 5,2% dari realisasi tahun 2020 sebesar 828 BBTUD, dan 93,7% dari target tahun 2021. Jumlah pelanggan pada tahun 2021 mencapai 663.877 atau 34% dari realisasi pelanggan tahun 2020 sebanyak 459,935.

Gas Segment recorded gas sales realization in 2021 at 871 BBTUD or 5.2% of the realization in 2020 of 828 BBTUD, and 93.7% of the 2021 target. The number of customers in 2021 reached 663,877 or increased by 34% from the 459,935 realization of customers in 2020.

Realisasi dan Target Kinerja Penjualan Segmen Gas Realization of Gas Segment Sales Performance

Uraian Description	Satuan Unit	2021	2020	2019
Distribusi/Niaga Distribution/Commerce	BBTUD	871	828	951
Transmisi Transmission	MMSCFD	1,352*	1,314*	1,370
Jumlah Pelanggan Gas Bumi Number of Natural Gas Customers	Pelanggan Customers	663,877	459,935	397,474
Panjang Pipa Pipe Length	Km Km	10,766	10,688	10,169

* Tanpa eliminasi
Without elimination

Segmen terus mengoptimalkan penyerapan gas dalam negeri sesuai Tujuh Program Gasifikasi Nasional atau Sapta PGN, salah satunya melayani sektor rumah tangga atau PGN Sayang Ibu. Tahun 2021 PGN merealisasikan penugasan membangun jaringan gas (jargas) dengan dana Anggaran Pendapatan dan Belanja Negara (APBN) dan pembangunan jargas mandiri sebanyak 167.874 SR.

The Segment continues to optimize domestic gas absorption according to PGN's Seven National Gasification Programs or Sapta PGN, which include serving the household sector or PGN Sayang Ibu. In 2021, PGN realized the assignment to build a gas network (jargas) with funds from the State Budget (APBN) and to develop an independent gas network, thus the increase number in household customers of 167,874 SR.

KINERJA SEGMENT POWER & NRE POWER & NRE SEGMENT PERFORMANCE

Subholding PRNE juga membukukan kinerja positif, baik kinerja operasional dan finansial. Pada kinerja operasional, Segmen berhasil meningkatkan kapasitas terpasang pembangkit listrik bertambah 886 MW menjadi 1.567 MW.

The PNRE Segment also posted a positive performance, both operational and financial. In terms of operational performance, the Segment managed to increase the installed capacity of power plants from 886 MW to 1,567 MW.

Segmen PNRE mengelola 13 wilayah kerja panas bumi (WKP) dengan total realisasi produksi setara listrik dari wilayah kerja yang dioperasikan sendiri pada tahun 2021 mencapai 4.660,48 GWh, bertambah 42,21 GWh, atau 1% dari tahun 2020 sebesar 4.618,24 GWh.

Pada Oktober 2021 Segmen PNRE menyelesaikan tahapan commissioning PLTGU Jawa-1 di Cilamaya Wetan, Karawang, Jawa Barat, yang memiliki kapasitas terpasang 1.760 MW. Sampai dengan akhir tahun 2021, Segmen PNRE telah menyelesaikan pemasangan PLTS di RU-IV Cilacap, Jawa Tengah, dengan total kapasitas 1,34 MW; PLTS di Sei Mangkei dengan kapasitas 2 MW; PLTS di RU-II Dumai dengan kapasitas 2 MW, PLTS di internal PERTAMINA lainnya dengan total kapasitas 0,45 MW; dan PLTS atap di SPBU PERTAMINA, dengan realisasi sampai akhir tahun 2021 sebanyak 77 SPBU dengan total kapasitas 0,43 MW.

The PNRE Segment manages 13 geothermal working areas (WKP) with a total realized electricity equivalent production in 2021 of 4,660.48 GWh, an increase of 42,21 GWh, or 1% from 4,618.27 GWh in 2020.

In October 2021, the PNRE Segment completed the commissioning phase of the Java-1 gas and steam power plants in Cilamaya Wetan, Karawang, West Java, which has an installed capacity of 1,760 MW. By the end of 2021, NRE Segment has completed the installation of solar power plant in RU-IV Cilacap, Central Java, with a total capacity of 1.34 MW; solar power plant in Sei Mangkei with a capacity of 2 MW; solar power plant in RU-II Dumai with a capacity of 2 MW, solar power plant within PERTAMINA with a total capacity of 0.45 MW; and rooftop PLTS at PERTAMINA gas stations, with the realization by the end of 2021 of 77 gas stations with a total capacity of 0.43 MW.

Realisasi Kinerja Produksi Listrik Segmen Power & NRE

Realization of Electricity Production Performance of Power & NRE Segment

Pembangkit Power Plant	Kapasitas Terpasang (MW) Installed Capacity (MW)	Realisasi (MWh) Realization (MWh)	
		2021	2020
PLTS Badak Badak Solar Power Plant	4.00	4,455	4,978
PLTS Sei Mangkei Sei Mangkei Solar Power Plant	2.00	1,088	-
PLTS RU IV Cilacap RU IV Cilacap Solar Power Plant	1.34	833	-
PLTS SPBU PERTAMINA PERTAMINA Gas Station Solar Power Plant	0.48	385	-
PLTBg Sei Mangkei Sei Mangkei Gas and Steam Power Plant	2.40	10,516	9,194
PLTBg Kwala Sawit Kwala Sawit Gas and Steam Power Plant	1.00	4,287	949
PLTBg Pagar Merbau Pagar Merbau Gas and Steam Power Plant	1.00	4,081	3,525

Wilayah Kerja Panas Bumi (WKP) Operasi Sendiri <i>Geothermal Working Area (WKP) Own Operation</i>	Kapasitas (MW) <i>Capacity</i>	Realisasi (GWh) <i>Realization</i>	
		2021	2020
WKP Kamojang	235.00	1,750.77	1,649.71
WKP Lahendong	120.00	774.68	827.88
WKP Ulubelu	220.00	1,596.08	1,612.86
WKP Karaha	30.00	78.32	85.60
WKP Lumut Balai	55.00	460.62	442.21
WKP Sibayak	12.00	0	0

KINERJA SEGMENT INTEGRATED MARINE LOGISTICS *PERFORMANCE OF INTEGRATED MARINE LOGISTICS SEGMENT*

Di tengah kondisi pandemi COVID-19, Segmen Integrated Marine Logistics mencatatkan kinerja operasional dan keuangan yang positif. Dari sisi operasional, secara umum jumlah kargo yang diangkut pada tahun 2021 mengalami peningkatan signifikan untuk produk White Oil (RON 88, RON 90, RON 92, RON 95 dan Biosolar) dengan peningkatan volume sebesar 2.431 juta BBLs, meningkat 0,84 % dari tahun 2020.

Selama tahun 2021 Segmen Integrated Marine Logistics juga telah menerapkan ketentuan penggunaan bahan bakar bersulfur rendah (*Low Sulphur Fuel Oil* atau LSFO) pada seluruh armada yang dioperasikan, sesuai regulasi IMO2020 yang ditetapkan Ditjen Perhubungan Laut Kementerian Perhubungan RI. Pasokan LSFO diperoleh dari RU III Plaju dan RU V Balikpapan. Penerapan LSFO bertujuan mendukung reduksi emisi SOx dari operasional kapal, sehingga akan mengurangi dampak pencemaran udara bagi populasi di sekitar pelabuhan maupun pantai.

In the midst of the COVID-19 pandemic, the Integrated Marine Logistics Segment recorded positive operational and financial performance. In terms of operations, the number of cargo transported in 2021 generally experienced a significant increase for White Oil products (RON 88, RON 90, RON 92, RON 95 and Biodiesel) with an increase in volume of 2,431 million BBLs, up 0.84% from 2020.

During 2021, the Integrated Marine Logistics Segment has also implemented the provisions for the use of low sulfur fuel oil (LSFO) in all operating fleets, under the IMO2020 regulations issued by the Directorate General of Sea Transportation of the Indonesian Ministry of Transportation. LSFO is supplied from RU III Plaju and RU V Balikpapan. The application of LSFO aims to support the reduction of SOx emissions from ship operations, to reduce the air pollution impact on the residents around ports and the coast.

Realisasi Pengangkutan Kargo Segmen Integrated Marine Logistics
Cargo Realization of Integrated Marine Logistics Segment

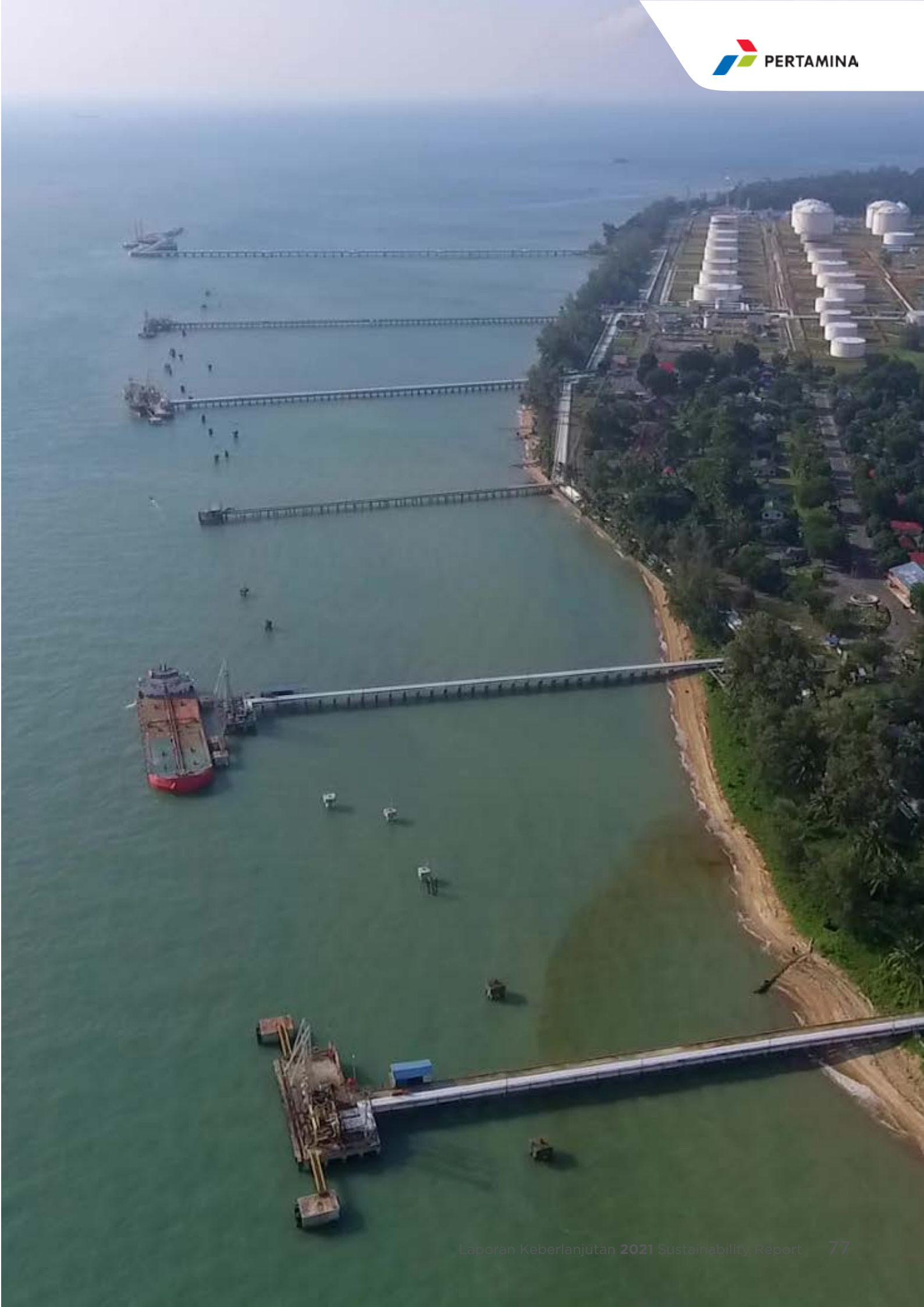
Jenis Kargo Cargo Type	Satuan Unit	2021	2020	2019
Produk Impor Imported Product				
Gasoline Grade 88		48.61	39.08	46.69
Gasoline Grade 90		1.36	0	0
Gasoline Grade 92	Juta BBLs Million BBLs	43.54	24.83	35.48
Gasoline Grade 98		0	0	0.21
Naphtha		0	0.6	0.19
High Speed Diesel (HSD)		0.19	0.062	0
Liquefied Petroleum Gas (LPG)	Juta MT Million MT	1.29	1.1	0.046
LBO and Additives	Ribu MT Thousand MT	225,032	225,114	238,474
Minyak Mentah Impor Imported Crude Oil				
Arabian Light Crude		30.60	32.5	35.68
Saharan		3.98	3.9	5.25
Malaysian	Juta BBLs Million BBLs	1.25	1.7	2.27
West Africa Light Crude Oil		20.94	11.5	22
Australian		0.38	0	0
Condensate		0	0.65	0.68

Kinerja Anak Perusahaan yang Lain
Performance of Other Subsidiaries

PERTAMINA juga memiliki entitas anak yang tidak bergerak di bidang usaha inti, meliputi bidang keuangan dan jasa. Ikhtisar dan pencapaian kinerja dari masing-masing anak usaha disampaikan dalam Laporan Tahunan dan/atau Laporan Keberlanjutan masing-masing entitas.

PERTAMINA also has subsidiaries that are not engaged in the core business, including finance and services. Highlights and performance achievements of each subsidiary are presented in the Annual Report and/or Sustainability Report of each entity.





ENERGI UNTUK NEGERI *ENERGIZING THE NATION*

PERTAMINA berhasil melewati tantangan tahun 2021 dengan mencatatkan kinerja operasional dan finansial yang positif.

PERTAMINA successfully passed the 2021 global challenges as marked by the positive operational and financial performance.



NILAI EKONOMI DIPEROLEH DAN DIDISTRIBUSIKAN

ECONOMIC VALUE GENERATED AND DISTRIBUTED

Sebagian dari nilai ekonomi yang didapat Perseroan selama periode pelaporan didistribusikan kepada pemangku kepentingan sesuai kebutuhan mereka. Pengungkapan informasi terkait nilai ekonomi dihasilkan dan didistribusikan tidak dilaporkan berdasarkan negara, regional, wilayah pemasaran, dan/atau kriteria lain. [201-1-a][201-1-b]

A portion of the economic value generated by the Company during the reporting period has been distributed to stakeholders according to their needs. Disclosure of information on the economic value generated and distributed are no reported by country, region, marketing area, and/or other criteria. [201-1-a][201-1-b]

Nilai Ekonomi Diperoleh dan Didistribusikan [201-1-a] [11.21] *Economic Value Generated and Distributed*

Uraian Description	Satuan Unit	2021	2020	2019
Nilai Ekonomi yang Dihasilkan <i>Economic Value Generated</i>				
Pendapatan <i>Revenues</i>	USD Juta <i>USD Million</i>	58,287	41,921	56,014
Penggantian Subsidi dari Pemerintah <i>Subsidy Reimbursement from the Government</i>		5,117	3,429	4,875
Nilai Ekonomi yang Didistribusikan <i>Economic Value Distributed</i>				
Biaya Operasi <i>Operating Costs</i>	USD Juta <i>USD Million</i>	46,134	31,104	44,279
Biaya Pekerja <i>Employee Wages and Benefits</i>		2,063	2,099	2,304
Pembayaran bagi Pemodal <i>Payments to Providers of Capital</i>		798	806	816
Pembayaran kepada Pemerintah <i>Payments to Government</i>		8,424	6,958	9,648
Investasi Sosial (TJSL + PUMK) <i>Social Investment (CSR + PUMK)</i>		56	31	19
Nilai Ekonomi yang Ditahan <i>Retained Economic Value</i>	USD Juta <i>USD Million</i>	5,929	4,352	3,824

Implikasi Finansial Akibat Perubahan Iklim *Financial Implications Due to Climate Change*

Secara umum selama tahun 2021 tidak ada kegiatan operasi dan produksi yang terganggu secara signifikan akibat perubahan iklim, sehingga menimbulkan implikasi finansial. Di sisi lain, PERTAMINA memiliki peluang kredit pengurangan emisi melalui mekanisme pembangunan bersih (Clean Development Mechanism atau CDM). Deskripsi lebih lanjut tentang CDM dapat dibaca di halaman 98 di bab Pengelolaan Lingkungan. [201-2-a]

In general, during 2021, there were no operations and production activities that were disrupted due to climate change, which would have a financial implication. PERTAMINA continues to support the effort to control climate change through a clean development mechanism (CDM) has provided an opportunity to gain profit with the realization by the end of 2021 on page 98. [201-2-a]

Pengelolaan Dana Pensiun *Pension Fund Management*

Sebagian nilai ekonomi yang didistribusikan ditujukan kepada Pekerja dalam bentuk pembayaran imbal jasa pekerjaan. Sesuai regulasi yang berlaku, PERTAMINA menyertakan pekerja dalam program pensiun, yakni Program Pensiun Manfaat Pasti (PPMP). Perseroan berkontribusi dengan membayarkan iuran sebesar 21,2% x Penghasilan Dasar Pensiun (PhDP) atau 5,512% x Upah Tetap Pensiun (UTP), sementara Pekerja membayarkan iuran sebesar 7,5% x PhDP atau 1,95% x UTP. [203-1-d]

A portion of the economic value is distributed to the employees in the form of remuneration. In accordance with the applicable regulations, PERTAMINA includes employees in the Defined Benefit Pension Program (PPMP). The Company pay a contribution of 21.2% x Basic Pension Income (PhDP) or 5.512% x Pension Fixed Wage (UTP), while employees pay a contribution of 7.5% x PhDP or 1.95% x UTP. [203-1-d]

Pengelolaan iuran dana pensiun dilaksanakan Dana Pensiun PERTAMINA, selaku penyelenggara PPMP untuk pekerja Perseroan. Jumlah dana pensiun yang dikelola per 31 Desember 2021 mencapai Rp9,6 triliun, menurun 10% dari tahun 2020 sebesar Rp Rp9,7 triliun, dengan jumlah kewajiban pembayaran pensiun Rp1,0 triliun, meningkat 3,4% dari tahun 2020 sebesar Rp967 miliar, dan Rasio Kecukupan Dana 95,9%, turun 0,2% dari tahun 2020 sebesar 96,1%. Informasi lebih lengkap mengenai pengelolaan dana pensiun dapat diakses di <https://dp-pertamina.com/>. [201-3-a][201-3-b][201-3-c]

The pension fund contributions are managed by the PERTAMINA Pension Fund, the organizer of PPMP for the Company's employees. Total managed pension funds as of 31 December 2021 reached Rp9.6 trillion, down 10% from Rp9.7 trillion in 2020, with total pension payment liabilities of Rp1 trillion, up 3.4% from Rp967 billion, and a Fund Sufficiency Ratio of 95.9%, down 0.2% from 96.1% in 2020. The complete information regarding pension fund management can be accessed at <https://dp-pertamina.com/> [201-3-a][201-3-b][201-3-c]

Bantuan Keuangan dari Pemerintah
Financial Assistance from the Government

Bantuan finansial dari Pemerintah selama periode pelaporan berupa penggantian beban biaya atas penyaluran BBM bersubsidi (solar), BBM Penugasan (Premium), dan kebijakan BBM Satu Harga. Hal tersebut sesuai Peraturan Presiden Nomor 43 Tahun 2018 tentang Perubahan atas Peraturan Presiden Nomor 191 Tahun 2014 tentang Penyediaan Pendistribusian dan Harga Jual Eceran. Laporan ini tidak menyertakan pengungkapan informasi terkait bantuan keuangan dari Pemerintah di wilayah operasi PERTAMINA di mancanegara. [201-4-a][201-4-b]

Financial assistance from the Government during the reporting period is in the form of cost recovery for the distribution of subsidized fuel (diesel), PSO fuel (premium), and the one-price fuel policy. It is in accordance with Presidential Regulation Number 43 of 2018 concerning Amendments to Presidential Regulation Number 191 of 2014 concerning the Provision of Distribution and Retail Selling Prices. This report does not include disclosure of information on financial assistance from the Government in PERTAMINA's overseas operational areas. [201-4-a] [201-4-b]



DAMPAK EKONOMI TIDAK LANGSUNG [11.14] INDIRECT ECONOMIC IMPACT [11.14]



Terhitung sejak 9 Agustus 2021, Blok Rokan dialih kelola dari Chevron Pacific Indonesia ("CPI") ke PT Pertamina Hulu Rokan. Alih kelola memberikan dampak ekonomi tidak langsung masyarakat melalui kepemilikan hak partisipasi (*participating interest* atau PI) Blok Rokan sebesar 10% (sepuluh persen) kepada badan usaha milik daerah (BUMD). Aturan mengenai PI 10% (sepuluh persen) tercantum dalam Permen Energi dan Sumber Daya Mineral (ESDM) Nomor 37 Tahun 2016 tentang Ketentuan Penawaran *Participating Interest* 10% (Sepuluh Persen) Pada Wilayah Kerja Minyak Dan Gas Bumi.

Kepemilikan PI memberikan manfaat ekonomi tidak langsung bagi masyarakat, melalui pemberian bagian keuntungan kepada BUMD yang akan menambah pendapatan daerah. Perolehan tersebut dapat dimanfaatkan mendukung berbagai program peningkatan ekonomi daerah maupun kesejahteraan masyarakat. Selain itu juga memberikan pengetahuan, pengalaman BUMD dalam pengelolaan blok migas sebagai kontraktor. [203-2-a]

Keberadaan *subholding* dan anak usahanya, juga mendatangkan manfaat ekonomi tidak langsung bagi masyarakat melalui pemanfaatan fasilitas yang dibangun untuk mendukung operasi perusahaan. Seluruh pemanfaatan fasilitas tersebut bersifat *pro bono*. [203-1-c]

PT Pertamina EP Cepu (PEPC) membangun jalan beton (*concrete road*) menuju Lapangan Gas Jambaran - Tiung Biru (JTB) yang menjadi akses utama warga

As of 9 August 2021, the Rokan Block management was transferred to PT Pertamina Hulu Rokan from Chevron Pacific Indonesia ("CPI"). The transfer of management has an indirect economic impact on the community through the 10% ownership of the participating interest (PI) of the Rokan Block to the regionally-owned enterprise (BUMD). The rules regarding the 10% PI are stated in the Minister of Energy and Mineral Resources (EMR) Number 37 of 2016 concerning the Provisions for Ten Percent Participating Interest Offer in Oil and Gas Working Areas.

The ownership of PI provides an indirect economic benefit for the community through the provision of a share of profits to BUMD which will increase the regional income. This gain can be used to support various regional economic improvement programs and community welfare. In addition, it also provides knowledge and experience to BUMD in managing oil and gas blocks as a contractor. [203-2-a]

*The presence of the subholding and subsidiaries also delivers an indirect economic benefit to the community with the use of facilities built to support the Company's operations. All these facilities can be used *pro bono*. [203-1-c]*

PT Pertamina EP Cepu built rigid pavement to the Jambaran - Tiung Biru (JTB) Gas Field, which became the main access for the local residents.



sekitar. Proyek peningkatan kualitas jalan sepanjang 4,5 km, menghubungkan Desa Mojodelik, Kecamatan Gayam dengan Desa Bandungrejo, Kecamatan Ngasem, di Kabupaten Bojonegoro, Jawa Timur, dan dikerjakan dengan melibatkan warga sekitar sebagai tenaga kerja. Pada tahun 2021, pekerjaan tahap satu sepanjang 2,5 km telah terselesaikan dan dilanjutkan pada tahap kedua di akhir tahun 2021 sampai dengan awal 2022 sepanjang 2 km. Kondisi jalan yang baik akan menunjang mobilitas masyarakat, serta memudahkan wisatawan menjangkau kawasan Wisata Puthuk Kreweng sehingga akhirnya dapat menciptakan kemanfaatan ekonomi dan meningkatkan kesejahteraan. [203-1-a][203-1-b]

Sampai akhir periode pelaporan, PERTAMINA melanjutkan pelaksanaan proyek *Refinery Development Master Plan (RDMP)* dan *New Grass Root Refinery (GRR)*. Keberadaan proyek-proyek tersebut mendatangkan manfaat bagi masyarakat setempat dalam bentuk lapangan kerja, serta peningkatan harga jual tanah di sekitar. [203-2-a]

Pembangunan NGRR Tuban diproyeksikan menyerap tenaga kerja sebanyak 55.000 orang pada tahun 2024-2025. Untuk tahun 2021, jumlah tenaga kerja yang terserap mencapai lebih dari 1.200 orang, dengan 98% di antaranya adalah warga yang berasal dari Kabupaten Tuban serta kabupaten lain di sekitarnya.

PERTAMINA bersama dengan Kantor Jasa Penilai Publik (KJPP) dan Badan Pertanahan Nasional (BPN) menetapkan harga pembelian tanah untuk kebutuhan proyek NGRR Tuban dengan harga melebihi nilai jual objek pajak (NJOP). Melalui kebijakan ini, diharapkan pemilik lahan yang dibebaskan bisa membeli tanah pengganti di tempat lain dengan luas setara, serta sebagian dapat dimanfaatkan untuk menggerakkan ekonomi setempat.

PERTAMINA memiliki program-program unggulan yang mendukung pemerataan energi di Indonesia melalui sasaran GO Retail, antara lain BBM Satu Harga, OVOO, Pertashop, dan Pinky Movement.

The project of road quality improvement was 4.5 km long, connecting Mojodelik Village in Gayam District and Bandungrejo Village in Ngasem District, Bojonegoro Regency, East Java, and was carried out by involving local residents as workers. In 2021, the 2.5 km road construction phase one was completed and continued to phase two at the end of 2021 until early 2022 for 2 km. The good road conditions would support the community's mobility, as well as make it easier for tourists to access the Puthuk Kreweng tourist spot, which has helped to generate economic benefit and improve their welfare. [203-1-a][203-1-b]

Until the end of the reporting period, PERTAMINA has continued the implementation of the Refinery Development Master Plant (RDMP) and the New Grass Root Refinery (GRR) projects. The presence of these projects benefits the local community in the form of employment, as well as an increase in the selling price of land in the vicinity. [203-2-a]

The construction of the Tuban NGRR has been projected to safely absorb 55,000 workers in 2024-2025. In 2021, the total workforce absorbed reached 1,200 people, with 98 % of them are residents from Tuban and other neighboring regencies.

PERTAMINA, together with the Public Appraisal Service Firm (KJPP) and the National Land Agency (BPN), set the purchase price for land for the Tuban NGRR project at a price that exceeds the selling value of the tax object (NJOP). Through this policy, it is hoped that the owners of the freed land can buy replacement land in other areas of comparatively equal size, while some of it can be used to stimulate the local economy.

PERTAMINA has flagship programs supporting nationwide energy distribution in Indonesia through GO Retail targets, including One Price Fuel Policy, OVOO, Pertashop, and Pinky Movement.

BBM SATU HARGA ONE PRICE FUEL

Harga BBM yang ditetapkan Pemerintah melalui program BBM Satu Harga mendukung misi PERTAMINA untuk menyediakan energi terjangkau, serta menjadi stimulus bagi Bergeraknya roda perekonomian masyarakat. [203-2-b]

The fuel price as determined by the Government through the One Price Fuel Policy supports PERTAMINA's mission to provide affordable energy, as well as stimulus for the community's economy. [203-2-b]

Perbandingan Harga BBM di Daerah 3T Tahun 2021 Sebelum dan Sesudah Program BBM Satu Harga Comparison of Fuel Prices in the 3T Regions in 2021 Before and After the One Price Fuel Program

Jenis BBM Fuel type	Sebelum Program BBM Satu Harga Before the One Price Fuel Program		Setelah Program BBM Satu Harga After the One Price Fuel Program
	Harga Terendah (Rp) Lowest Price (Rp)	Harga Tertinggi (Rp) Highest Price (Rp)	Harga (Rp) Price (Rp)
Premium Premium	8,000	25,000 - 50,000	6,450
Solar Diesel Fuel	7,000	25,000 - 50,000	5,150

PERTAMINA menjamin pasokan energi hingga ke wilayah terdepan, terpencil, dan tertinggal (3T) di seluruh Indonesia dengan target total 573 lokasi BBM Satu Harga Sampai di tahun 2024.

PERTAMINA guarantees energy supply to the frontier, outermost, and least developed (3T) areas across Indonesia with a target of 573 One Price Fuel locations by 2024.



Pencapaian hingga akhir tahun 2021
Achievements by the end of 2021

321

Total 321 lokasi
BBM Satu Harga
*Total 321 One Price
Fuel locations*

114

114 kabupaten, di antaranya
52 kabupaten di wilayah 3T
*114 regencies, including
52 regencies in 3T areas*

Pendirian Lembaga Penyalur Wilayah 3T
Establishment of 3T Regional Distribution Agency

TPB SDGs	2020	2021	2022	2023	2024
	Di wilayah dengan infrastruktur darat & laut cukup baik <i>In areas with fairly good land & sea infrastructure</i>	Di wilayah dengan infrastruktur darat & laut terbatas <i>In areas with limited land & sea infrastructure</i>	Di wilayah dengan infrastruktur darat & laut cukup sulit (belum ada) <i>In areas with fairly poor land & sea infrastructure (not yet available)</i>		
Target <i>Target</i>	83	76	92	89	71
Realisasi <i>Realization</i>	83	78			
Akumulasi <i>Accumulation</i>	243*	321*	413**	502**	573**

*Termasuk jumlah realisasi 160 titik lokasi Program BBM Satu Harga Tahap 1
Including 160 location realization of One Fuel One Price Program Stage 1

** Proyeksi/target
Projection/target

OVOO

One Village One Outlet (OVOO) berfokus pada penjualan LPG bersubsidi dengan harga eceran tertinggi (HET) yang telah ditetapkan untuk masing-masing daerah.

One Village One Outlet (OVOO) focuses on selling subsidized LPG at the highest retail price (HET) that has been set for each region.



Pencapaian hingga akhir tahun 2021
Achievements in 2021

4,035

Gerai baru di 4.035 desa di tahun 2021
New outlets in 4,035 villages in 2021

61,863

Total 61.863 desa/kelurahan di seluruh Indonesia, atau 93% dari total desa dan kelurahan di Indonesia yang sudah terkonversi LPG. [203-2-b]

A total of 61,863 villages/sub-districts across Indonesia, or 93% of the total villages and sub-districts in Indonesia have been converted to LPG. [203-2-b]

PERTASHOP

Pertashop merupakan layanan baru penyaluran BBM dari PERTAMINA bagi masyarakat di daerah yang belum tersedia SPBU. PERTAMINA juga berkolaborasi dengan Kementerian Dalam Negeri untuk mempermudah perizinan dan dengan Himpunan Bank Milik Negara (Himbara) untuk akses permodalan.

Pertashop is a new service for fuel distribution from PERTAMINA for people in areas where gas stations are not available. PERTAMINA also collaborates with the Ministry of Home Affairs to facilitate licensing and with the Association of State-Owned Banks (Himbara) for access to capital.



Pencapaian pada tahun 2021

Achievements in 2021:

2,977

Penambahan 2.977 Unit, atau 273% dari tahun 2020

Additional 2,977 Units, or 273% from 2020

4,400

Total 4.400 kecamatan memiliki penyalur resmi BBM

A total of 4,400 districts have official fuel distributors

Manfaat ekonomi tidak langsung yang signifikan bagi masyarakat dan pemerintah daerah dari program Pertashop: [203-2-b]

- Keberadaan Pertashop mempermudah masyarakat memperoleh BBM;
- Harga BBM yang merata yang dijual di Pertashop sama dengan harga BBM di SPBU PERTAMINA;
- Setiap gerai Pertashop dapat menyerap antara 2-4 orang tenaga kerja setempat;
- Potensi peningkatan pendapatan daerah dari bagi hasil penjualan BBM;
- Menggerakkan ekonomi masyarakat, melalui pelibatan badan usaha lokal untuk pembuatan unit Pertashop, serta penyediaan gerai khusus untuk usaha mikro kecil menengah (UMKM) setempat.

Significant indirect economic benefits for communities and local governments from the Pertashop program: [203-2-b]

- *Pertashop provides easier access to fuel for people;*
- *The prices of fuel sold at Pertashop are the same as the prices at PERTAMINA gas stations;*
- *Each Pertashop outlet can employ between 2-4 local workers;*
- *The potential for increasing regional income from fuel sales revenue sharing;*
- *Stimulating the community's economy, through the involvement of local businesses for the establishment of Pertashop units, as well as the provision of special outlets for local micro, small and medium enterprises (MSMEs).*





BBM DAN LPG NON-PSO NON-PSO FUEL AND LPG

PERTAMINA melanjutkan pemerataan energi di Indonesia untuk LPG Non-PSO guna mendukung dan memastikan penggunaan LPG yang tepat sasaran, salah satunya melalui program Pinky Movement. Program ini merupakan program kemitraan (PK) bantuan kredit pinjaman lunak untuk outlet Bright Gas sebagai jaringan distribusi resmi LPG NPSO serta Pangkalan LPG PSO yang tertarik menjual Bright Gas di seluruh Indonesia.

Program Pinky Movement juga menysasar Usaha Mikro dan Kecil (UKM) yang masih menggunakan LPG PSO atau subsidi 3 kg. UKM yang bersedia dikonversi menggunakan Bright Gas akan diberikan bantuan kredit pinjaman lunak dan menjadi mitra binaan PERTAMINA.

Program Pinky Movement merupakan salah satu cara memberikan nilai tambah (*creating value*), khususnya terkait dengan peningkatan pendapatan dari penebusan produk LPG Pertamina, *market share* produk Bright Gas, publikasi positif (*PR Value*), serta penghematan subsidi LPG yang disebabkan oleh peralihan/konversi konsumsi produk LPG dari PSO ke Non PSO (Bright Gas). [203-2-a]

PERTAMINA continues the equal distribution of energy in Indonesia for Non-PSO LPG to support and ensure the appropriate use of LPG, including the Pinky Movement program. This program is a partnership program (PK) on soft loan assistance for Bright Gas outlets as the official distribution network for NPSO LPG and PSO LPG outlets who are interested in selling Bright Gas across Indonesia.

The Pinky Movement program also targets Small and Micro Enterprises (SMEs) that still use PSO or subsidized 3 kg LPG. SMEs who are willing to convert using Bright Gas will be given soft loan assistance and become PERTAMINA's fostered partners.

The Pinky Movement program is one of the ways of creating value, particularly related to increasing revenue from the sales of Pertamina's LPG products, market share of Bright Gas products, positive publications (PR Value) and saving on LPG subsidies due to consumption shifts/conversion of LPG products from PSO to Non PSO (Bright Gas).

[203-2-a]

Realisasi Program Pinky Movement Pinky Movement Program Realization

Uraian Description		2021	2020
Mitra Partner	Outlet Outlet	251	387
	UMKM MSME	293	202
	Jumlah Total	544	589
Realisasi Penyaluran (Rp miliar) Distribution Realization (Rp billion)	Outlet Outlet	27,90	30,69
	UMKM MSME	27,30	17,62
	Jumlah Total	54,21	48,31

Manfaat Creating Shared Value (CSV) dari Program Pinky Movement:

Benefits of Creating Shared Value (CSV) from the Pinky Movement Program:




47,7

Rp47,7 miliar estimasi nilai penebusan tabung Bright Gas
Rp47.7 billion estimated sales value of Bright Gas cylinder

100

Rp100 miliar estimasi PR Value dari publikasi
Rp100 billion estimated PR Value from publication

ENERGI UNTUK BUMI LESTARI ENERGIZING A PRESERVED EARTH

An underwater photograph showing several divers in black wetsuits and scuba gear working on a large, complex metal structure, likely a coral reef restoration project. The divers are positioned around the structure, which is covered in yellowish-brown coral. The water is clear and blue. A white dashed spiral graphic is overlaid on the right side of the image.

Dalam menjalankan usahanya, PERTAMINA mengedepankan prinsip-prinsip pengelolaan bisnis yang ramah lingkungan dan berkelanjutan. Sejalan dengan telah ditetapkannya 10 fokus keberlanjutan PERTAMINA, Kami melakukan berbagai inisiatif untuk turut serta mengatasi perubahan iklim, mengurangi jejak lingkungan, dan mendukung perlindungan keanekaragaman hayati.

In running its business, PERTAMINA upholds the environmentally friendly and sustainable business management principles. Following the determination of PERTAMINA's 10 sustainability focuses, we carry out various initiatives to participate in tackling climate change, reducing our environmental footprint, and supporting the biodiversity protection.

KEBIJAKAN PENGELOLAAN LINGKUNGAN ENVIRONMENTAL MANAGEMENT POLICY

Pengelolaan lingkungan dilaksanakan dengan menerapkan praktik-praktik terbaik, sesuai Sustainability PERTAMINA Expectations for HSSE Management Excellence atau SUPREME, yang didasarkan pada peraturan perundangan yang berlaku nasional, seperti Sistem Manajemen Keselamatan dan Kesehatan Kerja (SMK3), Sistem Manajemen Pengamanan (SMP) Peraturan Kapolri No. 24/2007, serta PROPER Kementerian Lingkungan Hidup dan Kehutanan (KLHK). SUPREME juga mengacu pada standar sistem manajemen internasional, seperti ISO 9001, ISO 14001, ISO 26000, ISO 27001, ISO 28000, ISO 31000, ISO 39001, ISO 45001, ISO 50001, dan standar lainnya.

Kami mendorong setiap Subholding beserta entitas anak dan unit operasi/unit bisnis masing-masing, serta AP jasa dan portofolio, untuk melaksanakan sertifikasi standar internasional (ISO) dalam pengelolaan lingkungan. Penerapan ISO disertai evaluasi berkala guna memastikan pemenuhan kriteria standar yang ditetapkan.

Environmental management is carried out by adopting best practices in accordance with PERTAMINA Sustainability Expectations for HSSE Management Excellence or SUPREME, which is based on laws and regulations, such as the Occupational Health and Safety Management System (SMK3), Regulation of the National Police Chief No. 24/2007 on Security Management System (SMP), as well as the PROPER of the Ministry of Environment and Forestry (KLHK). SUPREME also refers to international management system standards, such as ISO 9001, ISO 14001, ISO 26000, ISO 27001, ISO 28000, ISO 31000, ISO 39001, ISO 45001, ISO 50001, and other standards.

We encourage each Subholding, as well as their subsidiaries and operating units/business units, as well as service and portfolio subsidiaries, to carry out international organization for standardization (ISO) certification in environmental management. The implementation of ISO is accompanied by regular evaluation to ensure compliance with the established standard criteria.

Sertifikasi Certification	Sektor Sector	Jumlah Sertifikasi Valid Number of Valid Certification
ISO 14001 :2015	Environmental management	192
ISO 9001:2015	Quality Management	165
ISO 45001:2018	Occupational Health and Safety	44
OHSAS 18001:2007	Occupational Health and Safety	107
ISO 50001:2018	Energy Management	4
ISO 26000:2010	Social Responsibility	11



PERTAMINA juga mendorong kepesertaan Subholding beserta entitas anak dan unit operasi/unit bisnis yang dikelolanya, untuk turut serta dalam Program Penilaian Peringkat Kinerja Perusahaan dalam Pengelolaan Lingkungan Hidup (PROPER) Kementerian Lingkungan Hidup dan Kehutanan (KLHK), sebagai mekanisme evaluasi eksternal atas kinerja pengelolaan lingkungan hidup. Pada kesertaan tahun 2021, tidak ada Subholding maupun entitas anak dan unit operasi/unit bisnis yang dikelolanya, yang mendapatkan PROPER Merah atau PROPER Hitam.

PERTAMINA also encourages the participation of Subholdings and subsidiaries, along with their operating units/business units, to participate in the Company Performance Rating Program in Environmental Management (PROPER) of the Ministry of Environment and Forestry, as an external evaluation mechanism for environmental management performance. In 2021 participation, neither Subholding nor subsidiaries and operating units/business units received Red or Black PROPER.

Pencapaian Peringkat PROPER PROPER Achievement				
Peringkat Rating	2021	2020	2019	
Jumlah Kepesertaan Number of Participants	171	170	177	
Emas Gold	23	16	13	
Hijau Green	81	64	76	
Biru Blue	67	90	88	
Merah Red	0	0	0	
Hitam Black	0	0	0	



PERTAMINA senantiasa berupaya mencegah dan menanggulangi dampak dari aktivitas perusahaan terhadap sumber daya alam dan daya dukung lingkungan hidup.

PERTAMINA seeks to prevent and mitigate the impact of the company's activities on natural resources and environment's carrying capacity.

Realisasi Belanja Aspek Lingkungan (dalam Rp Miliar) Environmental Expenditure Realization (in Rp Billion)			
	2021	2020	2019
Upstream	888.29	1,193.85	1,013.89
R&P	196.00	217.56	186.02
C&T	15.47	14.49	11.53
PNRE	5.76	4.30	4.28
Gas	15.11	18.79	22.25
Jumlah Total	1,120.61	1,448.94	1,237.96



MENGATASI PERUBAHAN IKLIM TACKLING CLIMATE CHANGE

Dalam menjalankan usahanya, PERTAMINA mengedepankan prinsip-prinsip pengelolaan bisnis yang ramah lingkungan dan berkelanjutan. Kami melakukan berbagai inisiatif untuk turut serta mengatasi perubahan iklim, mengurangi jejak lingkungan, dan mendukung perlindungan keanekaragaman hayati.

In running its business, PERTAMINA upholds the environmentally friendly and sustainable business management principles. We have carried out various initiatives to participate in tackling climate change, reducing our environmental footprint, and supporting the biodiversity protection.

Risiko Perubahan Iklim dan Strategi Pengelolaan Emisi Gas Rumah Kaca (GRK) [CCE-1, CCE-2] *Climate Change Risk and Greenhouse Gas (GHG) Emission Management Strategy*



Risiko perubahan iklim terhadap kesinambungan operasi dan bisnis PERTAMINA antara lain kenaikan muka air laut, banjir, badai, dan cuaca ekstrem.
The climate change risks to the sustainability of PERTAMINA's operations and business, include rising sea levels, floods, storms, and extreme weather.

Melakukan reduksi emisi dari operasional PERTAMINA

- Reduksi emisi gas rumah kaca (GRK) dan dekarbonisasi
 - » Penetapan baseline 2020 dan Peta Jalan Reduksi Emisi
 - » Pengendalian CH₄
 - » Penerapan perangkap karbon (carbon capture)
 - » Pemanfaatan gas suar bakar
 - » Pengembangan teknologi rendah karbon
- Efisiensi energi
- Transisi energi baru dan terbarukan (EBT)
- Produksi bersih dan ramah lingkungan
- Salah satu indikator KPI Direksi dan pejabat perusahaan di tingkat Holding serta Subholding



Target

Mendukung realisasi target reduksi GRK yang ditetapkan Pemerintah, yaitu sebesar 29% (dengan upaya sendiri) hingga 41% dengan bantuan internasional, sampai tahun 2030

Target

Support the realization of the GHG reduction target set by the Government at 29% (with its own efforts) up to 41% with international assistance, by 2030

Reducing emissions from PERTAMINA operations

- *Reduction of greenhouse gas (GHG) emissions and decarbonization*
 - » *Determining the 2020 baseline and Emission Reduction Roadmap*
 - » *CH₄ control*
 - » *Application of carbon traps (carbon capture)*
 - » *Utilization of gas flare*
 - » *Low carbon technology development*
- *Energy efficiency*
- *Transition to new and renewable energy (NRE)*
- *Clean and environmentally friendly production*
- *One of the KPIs for Directors and company officers at the Holding Company and Subholding levels*



Risiko Perubahan Iklim dan Strategi Pengelolaan Emisi Gas Rumah Kaca (GRK) [CCE-1, CCE-2]
Climate Change Risk and Greenhouse Gas (GHG) Emission Management Strategy

Meningkatkan Portofolio bisnis NRE

Menyiapkan 8 inisiatif pengembangan bisnis NRE sesuai Program Grand Strategy Energi Nasional dan Rencana Jangka Panjang Perusahaan (RJPP) yaitu:

- pemanfaatan energi panas bumi
- pemanfaatan *green hydrogen* di area geotermal
- *electric vehicle battery & energy storage system*
- gasifikasi (pembangunan methanol plant)
- pengembangan *dimethyl ether (dme)*
- kilang ramah lingkungan/*green refinery*
- bioenergi
- Penerapan ekonomi (pemanfaatan CO₂ menjadi PCC, CO₂ untuk EOR dan metanol)



Target
 Mendorong tumbuhnya EBT menjadi 17% pada tahun 2030 dan 23% pada tahun 2025 nasional di masa depan

Target
Boost NRE growth to 17% by 2030 and 23% by 2025 nationally in the future

Increasing NRE Business Portfolio

Preparing 8 initiatives on NRE business development in accordance with the National Energy Grand Strategy Program and the Company's Long Term Plan (RJPP), namely:

- *geothermal energy utilization*
- *utilization of green hydrogen in geothermal areas*
- *electric vehicle battery & energy storage system*
- *gasification (methanol plant construction)*
- *development of dimethyl ether (dme)*
- *green refinery*
- *bioenergy*
- *Economic application (utilization of CO₂ into PCC, CO₂ for EOR and methanol)*

Melakukan mitigasi dan adaptasi terhadap risiko perubahan iklim terhadap operasi PERTAMINA

- Memasukkan risiko perubahan iklim dalam risk register perusahaan
- Melakukan kajian *water risk* yang muncul sebagai dampak dari perubahan iklim
- Melakukan kajian terkait risiko gempa dan tsunami pada operasi PERTAMINA



Target
 Mengatasi risiko perubahan iklim terhadap kesinambungan operasi dan bisnis PERTAMINA antara lain kenaikan muka air laut, banjir, badai, dan cuaca ekstrim.

Target
Addressing the climate change risks to the sustainability of PERTAMINA's operations and business, including rising sea levels, floods, storms, and extreme weather.

Performing mitigation and adaptation to climate change risks to PERTAMINA's operations

- *Include climate change risk in the company's risk register*
- *Conducting water risk assessments that arise as a result of climate change*
- *Conducting studies related to the earthquake and tsunami risks in PERTAMINA's operations*

PENGUKURAN DAN PERHITUNGAN EMISI GRK [11.1.5] [CCE-4]
GHG EMISSION MEASUREMENT AND CALCULATION

Tahun 2010, PERTAMINA melakukan penghitungan *baseline* emisi GRK untuk Cakupan 1. Tahun 2020 PERTAMINA kembali melakukan perhitungan ulang *baseline* total emisi CO₂eq sebagai untuk Cakupan 1 dan 2, untuk seluruh Subholding beserta entitas anak masing-masing, anak perusahaan (AP) jasa dan portofolio, serta unit operasional/unit bisnis

In 2010, PERTAMINA calculated the GHG emission baseline for Scope 1. In 2020, PERTAMINA again recalculated the baseline for total CO₂eq emissions for Scope 1 and 2, for all Subholdings and their respective subsidiaries, service and portfolio subsidiaries, as well as operating units/business units under PERTAMINA Group. The baseline was

di PERTAMINA Grup. Penghitungan ulang *baseline* dilakukan terkait perkembangan dinamika usaha, seperti akuisisi WK baru, penambahan cakupan penghitungan, dan penambahan sumber emisi. [2-4] [305-4]

Perhitungan menggunakan referensi PERMENLH No. 12 Tahun 2012 tentang Pedoman Penghitungan Beban Emisi Kegiatan Industri Minyak dan Gas Bumi untuk Cakupan 1 (Penggunaan Sendiri), serta GHG Protocol khususnya Kategori 11 untuk Cakupan 3. Hingga akhir 2021, tidak ada peraturan spesifik yang mengatur pembatasan emisi. Berdasarkan perhitungan yang dilakukan, total emisi Cakupan 1 & Cakupan 2 tahun 2020 sebagai *baseline* baru adalah 21,358 juta ton CO₂eq. Perhitungan Cakupan 3 belum mencakup informasi detail mengenai jenis parameter GRK. [2-4] [305-2] [305-3] [305-4]

recalculated due to the development of business dynamics, such as the acquisition of new working areas, additional scope calculations, and additional emission sources. [2-4] [305-4]

The calculations refer to the Minister of Environment Regulation No. 12 of 2012 concerning Guidelines for Calculation of Emission Load for Oil and Gas Industry Activities for Scope 1 (Own Use), as well as the GHG Protocol specifically Category 11 for Scope 3. Until the end of 2021, there were no specific regulations on emission restrictions. The calculation results showed the total GHG Scope 1 & Scope 2 emissions in 2020 as the new baseline was 21.358 million tons of CO₂eq. The calculation of Scope 3 has yet to include detailed information on the types of GHG parameters. [2-4] [305-2] [305-3] [305-4]

Beban Emisi GRK Cakupan 1 berdasarkan Parameter GHG Emission Scope 1 based on Parameter [305-1] [CCE-4] [CCE-5]

Cakupan 1 Scope 1	Satuan Unit	2021	2020	2019
Emisi GRK Langsung Cakupan 1 <i>Direct GHG Emission Scope 1</i>	Juta Ton CO ₂ <i>Million Tonnes CO₂</i>	23.26	21.02	18.31
Karbon Dioksida <i>Carbon dioxide (CO₂)</i>		20.29	19.73	15.79
Metana <i>Methane (CH₄)</i>	Juta Ton <i>Million Tonnes</i>	0.0671	0.0397	0.0488
Nitrogen oksida <i>Nitrous oxide (N₂O)</i>		0.0044	0.0010	0.0044
Emisi Cakupan 1 berdasarkan segmen bisnis <i>Scope 1 emission by business segment</i>				
<i>Upstream*</i>		11.59	10.29	5.52
<i>Refining & Petrochemical</i>		8.52	7.31	12.5
<i>Commercial & Trading</i>	Juta Ton <i>Million Tonnes</i>	0.14	0.54	0.21
<i>Power New Renewable Energy</i>		0.11	0.21	0.07
<i>Gas</i>		0.48	0.81	0.01
<i>Integrated Marine Logistics</i>		2.43	1.86	-
Emisi Cakupan 1 berdasarkan sumber <i>Scope 1 emission by source</i>				
Pembakaran <i>Combustion</i>		14.62	12.86	13.11
<i>Routine Flaring</i>		2.38	1.80	0.95
<i>Non Routine Flaring</i>	Juta Ton <i>Million Tonnes</i>	0.27	0.22	0.10
<i>Safety Flaring</i>		0.27	-	-
<i>Venting and Process</i>		5.30	5.81	2.78
<i>Fugitives</i>		0.41	0.34	1.36

*Termasuk Badak LNG
Including Badak LNG

Beban Emisi GRK Cakupan 2 [305-2][CCE-4]
GHG Emissions Scope 2

Segmen Segment	Satuan Unit	2021	2020	2019
Upstream		188.20	171.22	28.01
Refining and Petrochemical		46.02	52.73	37.17
Commercial and Trading	Ribu ton CO ₂ eq Thousand ton CO ₂ eq	74.29	94.48	110.21
Power & New and Renewable Energy		1.85	1.60	-
Gas		9.44	19.77	11.09
Total		319.80	339.81	186.49

Beban Emisi GRK Cakupan 3 [305-3][CCE-4][11.1.7]
GHG Emissions Scope 3

Cakupan 3 Scope 3	Satuan Unit	2021	2020	2019
Penggunaan Produk yang Dijual – Kategori 11 Use of Sold Product – Category 11	Juta ton CO ₂ eq Million ton CO ₂ eq	154.05	144.24	160.41

Emisi cakupan 3 PERTAMINA merupakan emisi tidak langsung dari aktivitas yang berasal dari penggunaan produk BBM PERTAMINA oleh konsumen yang dihitung secara tahunan. Perhitungan Cakupan 3 mengacu pada GHG Protocol/IPIECA Category 11 Scope 3 – Use of Sold Products. Faktor emisi yang digunakan mengacu pada faktor emisi lokal produk BBM yang dijual di Indonesia. Produk non-BBM yang digunakan oleh konsumen tidak masuk dalam perhitungan emisi cakupan 3.

PERTAMINA's scope 3 emissions are indirect emissions from the use of PERTAMINA's fuel products by consumers which are calculated annually. The Scope 3 emissions are calculated based on the GHG Protocol/IPIECA Category 11 Scope 3 – Use of Sold Products. The calculation uses the emission factor from the local emissions of fuel products sold in Indonesia. Non-fuel products used by consumers are not included in the scope 3 emission calculation.

Intensitas Emisi [305-4][11.1.8]
Emission Intensity

Segmen Segment	Satuan Unit	2021	2020	2019
Upstream*	kg CO ₂ eq/ BOE	27.03	24.45	32.11
Refining and Petrochemical	kg CO ₂ eq/bbl minyak mentah diolah* crude processed*	27.10	32.47	27.17

*Tidak termasuk Badak LNG
Excluding Badak LNG

PENGENDALIAN DAN PEMANFAATAN GAS SUAR [CCE-7] FLARE CONTROL AND UTILIZATION

Flare gas atau gas suar bakar dihasilkan dari kegiatan eksplorasi dan produksi, maupun pengolahan minyak atau gas bumi, baik bersifat kontinu maupun tidak kontinu. Pengendalian gas suar bakar dilakukan dengan melakukan pengukuran, perhitungan, dan pemanfaatannya.

Acuan:

- Peraturan Menteri ESDM No. 17 Tahun 2021 tentang Pelaksanaan Pengelolaan Gas Suar Pada Kegiatan Usaha Minyak dan Gas Bumi
- Kebijakan *Zero Routine Flaring* 2030

Pada periode pelaporan, PERTAMINA menyelesaikan pembangunan New Flare Balikpapan-II, yang merupakan pemindahan Flare Balikpapan-II existing, sebagai bagian dari Proyek Refinery Development Master Plan (RDMP) RU-V Balikpapan. Operasional New Flare Balikpapan-II menggunakan teknologi *flare high smokeless capacity* atau *maximum smokeless*, sehingga proses pembakaran gas sisa proses produksi kilang telah memenuhi regulasi emisi dari Pemerintah dan lebih ramah lingkungan.

Gas flares are produced from exploration and production activities, as well as oil or natural gas processing, both continuous and discontinuous. Gas flare control is carried out by measuring, calculating, and utilizing.

Reference:

- *Regulation of the Minister of Energy and Mineral Resources No. 17 of 2021 concerning the Implementation of Gas Flare Management in Oil and Gas Business Activities*
- *Zero Routine Flaring Policy 2030*

In the reporting period, PERTAMINA completed the construction of the New Flare Balikpapan-II, which is the relocation of the existing Flare Balikpapan-II, as part of the RU-V Balikpapan Refinery Development Master Plan (RDMP) Project. The New Flare Balikpapan-II operation uses high smokeless capacity or maximum smokeless flare technology so that the process of burning the remaining gas from the refinery production process meets the Government regulations on emissions and is more environmentally friendly.



REDUKSI EMISI GRK [11.2.3] GHG EMISSION REDUCTION

Emisi GRK berpengaruh pada pemanasan global yang memicu perubahan iklim. PERTAMINA berupaya menurunkan emisi GRK dengan mengurangi emisi dari kegiatan operasi dan produksi yang mencakup Holding, Subholding, entitas anak, maupun unit operasi. Pengurangan reduksi emisi GRK mengacu pada Peta Jalan Reduksi Emisi berdasarkan hasil *baseline* 2010 dengan target 30% hingga tahun 2030. Untuk tahun 2021, PERTAMINA menargetkan untuk menurunkan emisi akumulatif sebesar 26.5% atau sebesar 6,58 juta ton CO₂eq* berdasarkan *baseline* emisi tahun 2010 mengacu pada skenario *business as usual*. Guna mencapai target tersebut, selama tahun 2021 PERTAMINA menginisiasi beberapa inisiatif baru untuk mereduksi emisi gas rumah kaca dari operasi PERTAMINA, dengan total reduksi akumulatif sebesar 641,939-ton CO₂eq*. Hingga akhir tahun 2021 PERTAMINA berhasil mereduksi emisi secara kumulatif sebesar 7,4 juta ton CO₂eq* atau sekitar 29,07% berdasarkan *baseline* emisi tahun 2010 mengacu pada skenario *business as usual*. [3-3]

GHG emissions have an effect on global warming that triggers climate change. PERTAMINA has made efforts to reduce GHG emissions by reducing emissions from operations and production activities, which include Holding Company, Subholdings, subsidiaries, and operating units. The GHG emission reduction refers to the Emission Reduction Roadmap based on the 2010 baseline results with a target of 30% by 2030. PERTAMINA has set a target to reduce its cumulative emissions by 26.5% in 2021, or 6.58 million tons of CO₂eq, based on the 2010 emission baseline referring to the business as usual scenario. In order to achieve this target, in 2021, PERTAMINA initiated several new initiatives to reduce greenhouse gas emissions from PERTAMINA's operations, with a total cumulative reduction of 641,939-ton CO₂eq*. Until the end of 2021, PERTAMINA has managed to reduce emissions cumulatively by 7.4 million tons of CO₂eq* or around 29.07% based on the 2010 emission baseline referring to the business as usual scenario. [3-3]*

Kinerja penurunan emisi GRK dievaluasi melalui mekanisme pencapaian target penurunan emisi GRK sebagai salah satu KPI manajemen PERTAMINA di level Holding dan Sub Holding. Hasil evaluasi menunjukkan target penurunan emisi GRK tahun 2021 dapat dipenuhi. [3-3]

GHG emission reduction performance is evaluated through the achievement of GHG emission reduction targets as one of PERTAMINA's management KPIs at the Holding Company and Sub Holding levels. The evaluation results showed that the 2021 GHG emission reduction target was managed to be met. [3-3]

* Keterangan: hasil dari tindakan atau intervensi yang mengakibatkan pengurangan emisi gas rumah kaca (GRK) Cakupan 1 (langsung) dan/atau Cakupan 2 (tidak langsung) (karbon dioksida dan metana) sehingga emisi GRK akan lebih tinggi di periode pelaporan jika intervensi tidak terjadi. Pengurangan Emisi harus memenuhi tiga kriteria: intervensi khusus yang telah mengurangi emisi GRK, pengurangan tersebut harus dapat diukur dan pengurangan diharapkan akan terus berlanjut.

* Note: the result from actions or interventions that have led to ongoing reductions in Scope 1 (direct) and/or Scope 2 (indirect) greenhouse gas (GHG) emissions (carbon dioxide and methane) such that GHG emissions would have been higher in the reporting year if the intervention had not taken place. Emission Reductions must meet three criteria: a specific intervention that has reduced GHG emissions, the reduction must be quantifiable, and the reduction is expected to be ongoing.

Beberapa inisiatif reduksi emisi yang terlaksana selama tahun 2021 di antaranya :



Some of the emission pre-reduction initiatives carried out in 2021 include:

Optimasi Penggunaan Bahan Bakar Gas untuk Mengurangi Emisi Flare (Refinery Unit IV)
Optimization of Gas Fuel Use to Reduce Flare Emissions (Refinery Unit IV)

Penerapan rasio jumlah pemakaian fuel gas yang lebih banyak dibandingkan dengan penggunaan fuel oil. Hal ini dikarenakan komposisi fuel gas yang lebih bersih bila dibandingkan dengan fuel oil. Sehingga dengan mengoptimalkan pemakaian fuel gas maka emisi menjadi rendah.

The application of the amount of fuel gas use ratio is greater than the use of oil fuel. It was due to the composition of fuel gas being cleaner when compared to fuel oil. Thus, by optimizing the use of fuel gas, the emissions will be low.

Pemanfaatan Flared Gas (Upstream - PHE OSES)
Utilization of Flared Gas (Upstream - PHE OSES)

Pemanfaatan Flared Gas RAMP dengan menggunakan mini Gas Compressor sebagai intake Gas Turbine menggantikan fuel gas yang dialihkan menjadi sales gas.

Utilization of Flared Gas RAMP by using a mini Gas Compressor as a Gas Turbine intake to replace fuel gas that is converted to sales gas

Optimasi operasional kompresor (Upstream-PHM)
Compressor operational optimization (Upstream - PHM)

Optimasi jumlah kompresor di lapangan PHM BSP dari sebelumnya dual compressor menjadi single compressor.

Optimization of the number of compressors in the PHM BSP field from previously dual compressors to single compressors.



Tahun Year	2019	2020	2021
% Target reduksi akumulatif % Accumulated reduction target	23.00%	26.00%	26.50%
% Realisasi reduksi akumulatif % Accumulated reduction realization	27.00%	27.00%	29.07%
Volume reduksi (kumulatif) - juta ton CO ₂ Volume of reduction (cumulative) - million tons CO ₂	6.77	6.77	7.40



Mekanisme Pembangunan Bersih (CDM) Clean Development Mechanism (CDM)

Perseroan juga berperan aktif dalam mendukung upaya reduksi emisi GRK serta pencapaian TPB dengan terlibat dalam proyek Clean Development Mechanism (CDM). Perusahaan menghitung pengurangan emisi GRK berdasarkan estimasi potensi carbon emission reduction dari proyek CDM serta proyek yang mengikuti mekanisme Verified Carbon Standard (VCS). Selama tahun 2021, dari unit PLTP yang dioperasikan sendiri, Perseroan berkontribusi pada pengurangan emisi GRK sebesar 1.996.362,14 ton CO₂eq, sedangkan dari pembangkitan seluruh unit (termasuk operasi kerja sama) Perseroan berkontribusi pengurangan emisi GRK sebesar 3.920.976,71 ton CO₂eq. Perhitungan potensi pengurangan emisi GRK ini menggunakan *standard methodology ACM 0002 grid connected electricity generation from renewable sources*.

The Company also plays an active role in supporting efforts to reduce GHG emissions and the achievement of SDGs by being involved in the Clean Development Mechanism (CDM) project. The company calculates GHG emission reductions based on the estimated potential carbon emission reduction from CDM projects and projects that follow the Verified Carbon Standard (VCS) mechanism. In 2021, from the PLTP units' own operation, the Company contributed to the GHG emission reduction by 1,996,362.14 tons of CO₂eq, while from the generation of all units of 4,660,478 MWh, the Company contributed to the reduction of GHG emissions by 3,920,976.71 tons of CO₂eq. The calculation of the potential for GHG emission reduction used the standard methodology of ACM 0002 grid connected electricity generation from renewable sources.

Program Clean Development Mechanism per 31 Desember 2021
Clean Development Mechanism Program as of 31 December 2021

Clean Development Mechanism Program as of 31 December 2021	Potential ER Verifikasi CDM (Ton CO ₂ eq) CDM Verification ER Potential (Ton CO ₂ eq)	Realisasi ER 2021 (Ton CO ₂ eq) Unverified-Own Operation ER 2021 Realization (Tons CO ₂ eq) Unverified-Own Operation
CDM Gold Standard	Lumut Balai 1-2	581,784
	Lumut Balai 3-4	581,784
	Ulubelu 3-4	581,518
	Karaha 1	156,669
	Kamojang 5	156,669
CDM	Kamojang 4 (dengan PLN)	402,780
VCS	Lahendong 5-6	181,030
		426,459.70*
		-
		682,655.62
		54,687.74
		599,143.75
		233,415.33

*Potensi ER dari Lumut Balai Unit 1
ER Potential of Lumut Balai Unit 1

Pengurangan Emisi CDM (Ton CO ₂ e) CDM Emission Reduction (Ton CO ₂ e)	2021	2020	YOY Change
Pembangkit Listrik Power Generation	4,660,478	4,618,272	0.91%
Pengurangan Emisi CDM CDM Emission Reduction	3,920,976.71	3,866,011.52	1.42%
Pembangkitan Listrik PLTP Geothermal Power Generation	2,366,214	2,324,370	1.80%
Pengurangan Emisi CDM CDM Emission Reduction	1,996,362.14	1,954,220.69	2.16%

Inisiatif Penerapan Perangkap Karbon (Carbon Capture) [CCE-3]
Carbon Capture Initiative

Pada periode pelaporan, PERTAMINA melakukan inisiatif penerapan capture, utilization and storage (CCUS) melalui mekanisme *enhanced oil recovery and enhanced gas recovery* (EOR/EGR), yang akan dilakukan di proyek Lapangan Gundih di Cepu, Jawa Tengah, serta proyek Lapangan Sukowati di Bojonegoro, Jawa Timur.

In the reporting period, PERTAMINA carried out the carbon capture, utilization, and storage (CCUS) initiative through the enhanced oil recovery and enhanced gas recovery (EOR/EGR) mechanisms at the Gundih Field project in Cepu, Central Java, as well as the Sukowati Field project in Bojonegoro, East Java.



Penerapan Capture, Utilization and Storage, Enhanced Oil Recovery, and Enhanced Gas Recovery (CCUS/EOR/EGR) pada Proyek Lapangan Gundih, Cepu, Jawa Tengah dan Proyek Lapangan Sukowati, Bojonegoro, Jawa Timur
Implementation of Carbon Capture, Utilization and Storage, Enhanced Oil Recovery, and Enhanced Gas Recovery (CCUS/EOR/EGR) in the Gundih Field Project, Cepu, Central Java and the Sukowati Field Project, Bojonegoro, East Java

Deskripsi Proyek

Kerja Sama Studi Penerapan CCUS/EGR di Lapangan Gundih antara PERTAMINA dan konsorsium dari Jepang yakni JAPAN NUS (JANUS) Co.,Ltd, JGC Corporation, J-Power, serta Institut Teknologi Bandung (ITB) dan Kerja Sama Studi Penerapan CCUS/EOR di Lapangan Sukowati antara PERTAMINA dengan LEMIGAS dan JAPEX. Target Operasional 2026-2030.

Project Description

The Cooperation Agreement for the Study on the CCUS/ EGR Application in Gundih Field between PERTAMINA and a Japanese consortium JAPAN NUS (JANUS) Co., Ltd, JGC Corporation, J-Power, and the Bandung Institute of Technology (ITB), as well as and the Cooperation Study on the CCUS/ EOR Application in Sukowati Field between PERTAMINA with LEMIGAS and JAPEX.

Manfaat

- Potensi reduksi emisi CO₂ sebesar 300.000 ton CO₂ per tahun dari kerja sama di Lapangan Gundih dan 7.2 hingga 14.1 juta ton CO₂ untuk 15 tahun dari kerja sama di Lapangan Sukowati;
- Peningkatan produksi melalui EOR sebesar 27,7 juta barel hingga 40,5 juta barel dengan injeksi CO₂ pada proyek Lapangan Sukowati, untuk menaikkan tekanan reservoir sehingga produksi migas meningkat. Pasokan CO₂ diperoleh dari Lapangan Jambaran-Tiung Biru menggunakan pipa superkritikal. Pada lapangan Gundih diperkirakan kenaikan produksi gas hingga 7,6 BSCF dan kondensat 86 MSTB

Benefits

- *CO₂ emission reduction potential of 300,000 tons CO₂ per year from cooperation in Gundih Field; 7.2 to 14.1 million ton CO₂ to 15 years from cooperation in Sukowati Field;*
- *Increased production through EGOR by 27.7 million barrels to 40.5 million barrels by injecting CO₂ into the Sukowati Field project, to increase reservoir pressure so that oil and gas production increases. The CO₂ was supplied from the Jambaran-Tiung Biru Field using a supercritical pipe. In the Gundih field, gas production is estimated to increase to 7.6 BSCF and condensate to 86 MSTB.*

Pengendalian kualitas udara ambien mengacu pada Peraturan Pemerintah Nomor 22 Tahun 2021 tentang Penyelenggaraan Perlindungan dan Pengelolaan Lingkungan Hidup, serta ketentuan turunannya, di antaranya Peraturan Menteri Negara Lingkungan Hidup (Permen LH) Nomor 13 Tahun 2009 tentang Baku Mutu Emisi Sumber Tidak Bergerak Bagi Usaha dan/atau Kegiatan Minyak dan Gas Bumi, dan peraturan yang diterbitkan pemerintah daerah setempat. Parameter yang diatur dalam baku mutu udara ambien yang berlaku nasional dan dipantau PERTAMINA secara berkala adalah NO₂ (nitrogen dioksida), SO₂ (sulfur dioksida), partikulat, senyawa organik volatil (VOC), dan total senyawa organik (TOC).

The control of ambient air quality refers to Government Regulation Number 22 of 2021 concerning the Implementation of Environmental Protection and Management, as well as the bylaws, including Regulation of the State Minister of the Environment Number 13 of 2009 concerning Quality Standards for Emissions from Stationary Sources for Business and/or Oil and Gas Activities, and regulations issued by the local government. The parameters used in national ambient air quality standards and monitored by PERTAMINA regularly are NO₂ (nitrogen dioxide), SO₂ (sulfur dioxide), particulates, volatile organic compounds (VOC), and total organic compounds (TOC).

Pengukuran dan perhitungan kualitas udara ambien menggunakan metode aktif manual dan aktif kontinu sesuai regulasi yang berlaku, dan dilakukan pada masing-masing Subholding maupun entitas anak dan unit operasi. Dari hasil pengukuran dan perhitungan selama periode pelaporan diketahui, kualitas udara ambien telah memenuhi baku mutu yang ditetapkan regulasi. Pengungkapan informasi hasil pengukuran dan perhitungan kualitas udara ambien tahun 2021 pada masing-masing Subholding maupun entitas anak dan unit operasi, dapat dilihat dalam Laporan Keberlanjutan yang diterbitkan mereka.

PERTAMINA telah memproduksi bahan bakar kapal (MFO) dengan kadar sulfur rendah (*low sulphur fuel oil* atau LSFO) maksimal 0,5 persen. Sesuai mandatori International Maritime Organization (IMO), bahan bakar untuk kapal mengandung sulfur maksimal 0,5 persen *mass by mass* (m/m). LSFO diproduksi RU-III Plaju sebanyak 380.000 kilo liter (KL) per tahun, atau kurang lebih 200.000 barel per bulan. Penyediaan LSFO sejalan dengan Peraturan Menteri Perhubungan No.29 Tahun 2014 tentang Pencegahan Pencemaran Lingkungan Maritim Dikarenakan Kadar Sulfur Pada Bahan Bakar Kapal. Pengurangan sulfur dari emisi bahan bakar kapal berdampak signifikan terhadap kesehatan dan kelestarian lingkungan, terutama penduduk yang tinggal dekat pelabuhan dan pantai.

Measurement and calculation of ambient air quality use manual active and continuous active methods in accordance with applicable regulations, and is carried out in each Subholding, subsidiary, and operating unit. The results of measurements and calculations during the reporting period showed that the ambient air quality had met the quality standards set by regulations. Disclosure of information on the results of measurements and calculations of ambient air quality in 2021 for each Subholding, as well as subsidiaries and operating units, can be found in their published Sustainability Report.

PERTAMINA has been producing marine fuel oil (MFO) for ships with a maximum low sulfur fuel oil (LSFO) of 0.5 percent. According to the International Maritime Organization (IMO) mandate, ship fuel must contain a maximum sulfur content of 0.5 percent mass by mass (m/m). The LSFO produced by RU-III Plaju is 380,000 kilo liters (KL) per year, or approximately 200,000 barrels per month. The provision of LSFO aligns with the Regulation of the Minister of Transportation No. 29 of 2014 concerning the Prevention of Pollution of the Maritime Environment Due to Sulfur Content in Ship Fuel. Reducing sulfur from ship fuel emissions has a significant impact on health and environmental sustainability, especially for people living near ports and beaches.



Beban Emisi Non-GHG [305-6] [305-7] [11.3] [CCE-4][SOC-9.C3][ENV-5.C1]
Non-GHG Emission

Parameter Parameter	Satuan Unit	2021	2020	2019
SOx (ton)	Ton	52,162.92	62,291.54	36,510.93
Nox	Ton	174,643.54	204,513.08	172,285.36
VOC	Ton	168,506.20	172,699.41	318,650.44
COx	Ton	3,492,543.32	3,616,985.48	3,832,509.57
PM	Ton	12,499.05	21,696.69	19,365.53
TOC	Ton	27,354.22	33,615.70	244,583.99

Kami menyatakan ulang sebaran hasil perhitungan total emisi non-GHG tahun 2020 karena ada perbedaan data pada Laporan Keberlanjutan periode sebelumnya.

We restate the distribution of the total of non-GHG emissions calculation results in 2020 due to the differences in the previous Sustainability Report data.

PENGENDALIAN EMISI PENIPIS LAPISAN OZON OZONE LAYER DEPLETING EMISSION CONTROL

PERTAMINA menggunakan refrigeran produksi sendiri yang ramah lingkungan, yakni Musicool dengan berbagai varian produk, di antaranya Breezon MC-32 yang memiliki indeks Global Warming Potential (GWP) sangat rendah, yakni GWP = 2, dan nilai indeks Ozone Depletion Potential (ODP) = 0.

Musicool dan varian produknya juga menjadi produk komersial yang digunakan berbagai pihak, sehingga secara tidak langsung turut mengurangi emisi ODS. Pada tahun 2021, total penjualan Musicool dan varian produknya mencapai 490 MT, sedangkan realisasi tahun 2020 dan 2019 masing-masing 306 dan 309 MT.

PERTAMINA uses its own environmentally friendly refrigerant, Musicool, with various product variants, including Breezon MC-32 which has a very low Global Warming Potential (GWP) index of 2, and an Ozone Depletion Potential (ODP) index value of 0.

Musicool and its product variants have also become commercial products that are used by various parties, thus indirectly helping reduce ODS emissions. In 2021, the total sales of Musicool and its product variants reached 490 MT, while the realization in 2020 and 2019 was 306 and 309 MT, respectively.

Perolehan Sertifikat Green Building
Green Building Certification

Sertifikat Green Building dari Green Building Council Indonesia (GBCI) Green Building Certificate from Green Building Council Indonesia (GBCI)	
Lokasi Location	Tanggal Sertifikat Date of Certificate
Kategori EDGE Advanced EDGE Advanced Category	
RU II Dumai untuk Bangunan HSSE Demo Room <i>RU II Dumai for HSSE Demo Room Building</i>	23 September 2019 <i>23 September 2019</i>
RU II Sei Pakning untuk Gedung Proper Center Jl Jend Sudirman, Desa Pakning Asal, Kec Bukit Batu Kab Bengkalis, Riau <i>RU II Sei Pakning for the Proper Center Building Jl Jend Sudirman, Pakning Asal Village, Bukit Batu District, Bengkalis Regency, Riau</i>	17 September 2019, berlaku hingga 16 September 2022 <i>17 September 2019, valid until 16 September 2022</i>
RU III Plaju untuk GM Office PT Pertamina RU III Plaju <i>RU III Plaju for GM Office PT Pertamina RU III Plaju</i>	29 September 2019 <i>29 September 2019</i>
Peringkat Gold Gold Rank	
RU IV Cilacap untuk Gedung Head Office Pertamina Refinery Unit RU IV Cilacap <i>RU IV Cilacap for Pertamina Refinery Unit Head Office Building RU IV Cilacap</i>	2019 berlaku hingga 1 Juni 2022 <i>2019 valid until 1 June 2022</i>
RU VI Balongan untuk Gedung Pertamina - New Office Field <i>RU VI Balongan for Pertamina Building - New Office Field</i>	30 April 2020 <i>30 April 2020</i>



PEMAKAIAN DAN EFISIENSI ENERGI [CCE-6.C2] ENERGY USE AND EFFICIENCY

Efisiensi energi turut berkontribusi pada penurunan emisi GRK. PERTAMINA menjalankan efisiensi melalui berbagai kebijakan, inisiatif dan inovasi berkelanjutan, termasuk ISO 50001:2018 Sistem Manajemen Energi, serta pemanfaatan energi baru dan terbarukan (EBT). Kinerja efisiensi energi menjadi tanggung jawab Fungsi Operasional dan Engineering, sedangkan Fungsi HSSE berperan sebagai advisor. [3-3]

Pelaksanaan dan pencapaian kinerja efisiensi energi dievaluasi melalui mekanisme audit energi dan laporan berkala kepada Direksi serta pihak-pihak berwenang. Berdasar audit energi yang dilaksanakan pada tahun 2021 diketahui, efisiensi energi telah berjalan baik di masing-masing Subholding serta entitas anak maupun unit operasi. [3-3]

Perhitungan efisiensi energi mencakup setiap Subholding, dengan basis periode satu tahun berdasarkan selisih antara jumlah energi terpakai aktual dengan program penghematan energi, dibandingkan estimasi energi terpakai tanpa program penghematan energi. Penghitungan belum dipilah untuk produk atau jasa tertentu. Konversi perhitungan energi mengacu kepada International Energy Agency (IEA).

Konsumsi Energi dalam Perusahaan [302-1][CCE-6.C1] Energy Consumption

Konsumsi energi Energy use	Satuan Unit	2021	2020	2019
Konsumsi energi total (a+b+c-d-e) Total energy use	TJ	207,632.48	197,020.48	253,677.47
a. Energi yang dihasilkan sendiri Self-generated energy		172,792.37	139,138.99	189,743.41
b. Listrik yang dibeli Purchased electricity		40,884.16	74,643.53	79,162.03
c. Uap dan panas yang dibeli Purchased steam and heat	TJ	10,930.43	-	-
d. Listrik yang dijual Electricity for Sale		8,715.14	8,503.99	7,167.90
e. Uap dan panas yang dijual Steam and Heat for sale		8,259.35	8,258.05	8,060.08

Energy efficiency has also contributed to the GHG emission reduction. PERTAMINA implements efficiency through various policies, initiatives, and sustainable innovations, including the ISO 50001:2018 Energy Management System, as well as the use of new and renewable energy (NRE). The Operations and Engineering Function is responsible for the energy efficiency performance, while the HSSE Function acts as an advisor. [3-3]

The energy efficiency implementation and performance achievement are evaluated through an energy audit and periodic reports to the Board of Directors and the authorities. The findings of the energy audit in 2021 showed that energy efficiency has been running properly in each Subholding as well as subsidiaries and operating units. [3-3]

The energy efficiency calculations cover every Subholding for a one-year period based on the difference between the actual amounts of energy used with the energy saving program, compared to the estimated energy used without the energy saving program. The calculations have not been sorted for specific products or services.

Konsumsi Energi Berdasarkan Segmen Bisnis <i>Energy Consumption By Business Segment</i>				
Segmen <i>Segment</i>	Satuan <i>Unit</i>	2021	2020	2019
Upstream*		119,103.17	109,408.09	119,262.87
Refining & Petrochemical		85,713.09	123,807.59	130,848.73
Commercial & Trading	TJ	335.54	426.93	497.58
Power New Renewable Energy		536.52	530.06	436.98
Gas		1,944.16	2,397.68	2,631.30
Konsumsi Energi dari Sumber Terbarukan Berdasarkan Sumber <i>Energy Consumption from Renewable Energy Resources by Source</i>				
Sumber <i>Source</i>	Satuan <i>Unit</i>	2021	2020	2019
Pembangkit energi internal <i>Onsite energy generation consumed</i>		3,159	3,813	3,753
Listrik dibeli <i>Purchased electricity</i>	TJ	16	18	13
Uap dibeli <i>Purchased steam</i>		0	0	0
Listrik dialirkan ke grid <i>Electricity exported to grid</i>		16,816	16,662	15,123

*Termasuk Badak LNG
Including Badak LNG

Konsumsi Bahan Bakar *Fuel Consumption*

Konsumsi Bahan Bakar <i>Fuel Consumption</i>	Satuan <i>Unit</i>	2021	2020	2019
Konsumsi Bahan Bakar untuk operasional sumber emisi tidak bergerak <i>Fuel consumption for operational stationary emission sources</i>				
Fuel gas	MMSCF	520,990	368,822	413,674
Fuel oil		844,276	911,358	1,241,211
Gasoline	m ³	19	31	82
Diesel		94,471	85,117	101,214
Konsumsi Bahan Bakar untuk operasional sumber emisi bergerak <i>Fuel consumption for operational stationary emission sources</i>				
Diesel		1,164,524	1,172,228	2,023,900
Gasoline	m ³	20,676	48,400	39,326
Marine fuel		1,557,385	1,576,692	1,597,428
Avtur/ Kerosene/LPG		65,571,931	39,862,784	65,552,048

Intensitas Energi [302-3][11.1.4] *Energy Intensity*

Energy Intensity				
Segmen <i>Segment</i>	Satuan <i>Unit</i>	2021	2020	2019
Upstream	TJ/MBOE	0.25	0.22	0.20
Refining & Petrochemical	Solomon Energy Intensity Index	108.11	109.28	107.23

Dukungan pada Penghematan Energi
Support on Energy Saving

Selama periode pelaporan, PERTAMINA melakukan beberapa upaya untuk mengurangi pemakaian energi. Dukungan pada upaya untuk pemakaian energi yang lebih hemat dan efisien, juga diwujudkan melalui penyediaan produk dan layanan jasa tertentu, termasuk pemanfaatan EBT dan pelaksanaan *Earth Hour*. [302-4]

Berbagai inisiatif dan upaya efisiensi energi yang dilakukan telah membuahkan capaian efisiensi energi.

During the reporting period, PERTAMINA made several efforts to reduce energy consumption. Support for efforts to save energy and use it more efficiently was also realized through the provision of certain products and services, including the use of renewable energy and the implementation of Earth Hour. [302-4]

Various energy efficiency initiatives and efforts have resulted in energy efficiency achievements.

Segmen <i>Segment</i>	Reduksi Energi 2021 <i>2021 Energy Reduction</i>	
	MWh	GJ
Upstream	29,651.61	106,745.80
Refining and Petrochemical	1,713,907.69	6,170,067.68
Commercial and Trading	433.07	1,559.05
Power & New and Renewable Energy	23,142.35	83,312.46
Gas	83,730.07	301,428.25
Total	1,850,864.78	6,663,113.20

Beberapa program reduksi emisi yang dilakukan selama tahun 2021:

Several emission reduction programs conducted in 2021:

Lokasi <i>Location</i>	Program <i>Program</i>
RU II Dumai	Optimasi program <i>steam reducing</i> <i>Steam reducing program optimization</i>
RU III Plaju	<i>Waste heat recovery unit</i>
RU IV Cilacap	Implementasi teknologi low Nox pada Burner Unit NHT 82 dan Platforming <i>Implementation of low Nox technology on the NHT 82 Burner Unit and Platforming</i>
RU IV Cilacap	Penerapan teknologi lorong udara tunggal pada sistem penyalur udara pembakaran furnace 011 dan 012 FOC II <i>Application of single pass airflow technology in the air systems for furnace 011 and 012 FOC II combustion</i>
RU IV Cilacap	Integrasi PLN Kilang <i>Refinery PLN Integration</i>

Pelaksanaan Earth Hour 2021 sebagai Dukungan pada Penghematan Energi
Implementation of Earth Hour 2021 as Support for Energy Saving

EARTH HOUR PERTAMINA 2021

Realisasi Earth Hour PERTAMINA 2021
 27 Maret 2021 Pukul 20.30 - 21.30 Waktu Setempat
*PERTAMINA Earth Hour 2021 Realization 27 March 2021
 20.30 - 21.30 Local Time*



5.919,24 kWh

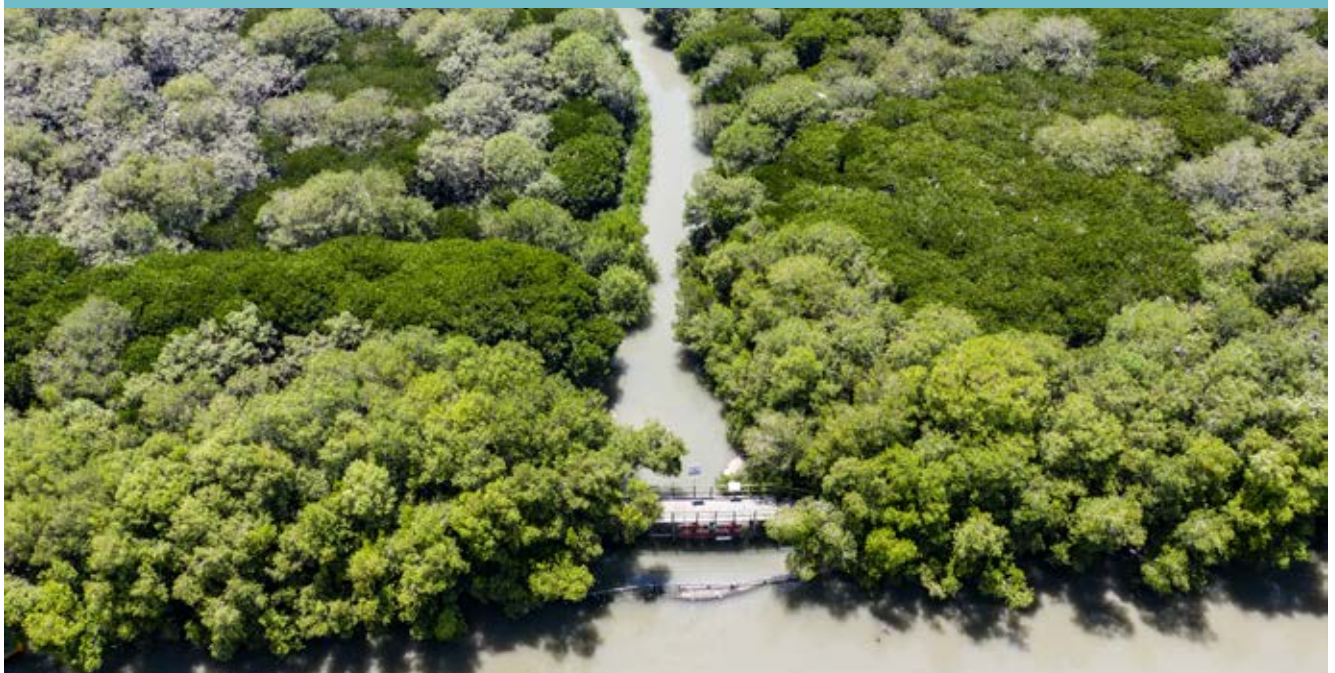
Jumlah Energi
 yang dihemat
*Total Energy
 saved*

419

Jumlah pekerja
 yang terlibat
*Number of workers
 involved*

20

Jumlah lokasi
 kerja
*Number of
 work locations*



MENGURANGI JEJAK LINGKUNGAN *REDUCING ENVIRONMENTAL FOOTPRINT*

PERTAMINA secara berkelanjutan terus berupaya menjaga daya dukung lingkungan dengan mengurangi dampak dari kegiatan operasi dan usaha yang dijalankan.

PERTAMINA has continuously made efforts to maintain the carrying capacity of the environment by reducing the impact of its operations and business activities.

DELAPAN INISIATIF PENGEMBANGAN EBT *EIGHT NRE DEVELOPMENT INITIATIVES*

PERTAMINA terus mendorong tumbuhnya EBT menjadi 17% pada tahun 2030 dan 23% pada tahun 2025, dengan menyiapkan 8 inisiatif sesuai Program Grand Strategy Energi Nasional dan Rencana Jangka Panjang Perusahaan (RJPP). Pertumbuhan bauran energi akan mendukung target penurunan emisi 29% di 2030 dengan tetap memenuhi kebutuhan energi nasional yang mencapai 7 juta terajoule, sekaligus memperkuat ketahanan dan kemandirian energi nasional di masa depan.

PERTAMINA strives to achieve the NRE growth of 17% in 2030 and 23% in 2025, by preparing 8 initiatives according to the National Energy Grand Strategy Program and the Company's Long Term Plan (RJPP). The growth of the energy mix will support the emission reduction target of 29% by 2030 while still meeting the national energy needs of 7 million terajoules, which simultaneously strengthens the national energy security and independence in the future.



DELAPAN INISIATIF STRATEGIS PENGEMBANGAN EBT EIGHT NRE DEVELOPMENT INITIATIVES

- 1.**

 Pemanfaatan energi panas bumi di Indonesia, dengan kapasitas total dari 672 MW pada 2020 menjadi 1.128 MW di 2025
Utilization of geothermal energy in Indonesia, with a total capacity of 672 MW in 2020 to 1,128 MW in 2025

 Pelaksanaan joint study pengembangan PLTP bersama PLNGG, Medco Power Indonesia, dan kegiatan EPCC binary power plant 0,5 MW di Area Lahendong
Implementation of a joint study of PLTP development with PLNGG, Medco Power Indonesia, and the 0.5 MW binary power plant EPCC activity in the Lahendong Area

- 2.**

 Pemanfaatan green hydrogen di area geotermal, dengan total potensi mencapai 8.600 kg hydrogen/day. Green hydrogen akan dimulai di pembangkit geotermal Ulubelu untuk digunakan di pabrik polypropylene di RU-III Plaju.
Utilization of green hydrogen in geothermal areas, with a total potential of up to 8,600 kg hydrogen/day. Green hydrogen will be initiated at the Ulubelu geothermal plant for use in the polypropylene plant at RU-III Plaju.

 Technology selection untuk electrolyser dan kajian skala komersial geothermal utilization bersama GIZ.
Technology selection for electrolyser and a commercial scale study of geothermal utilization with GIZ.

- 3.**

 Electric Vehicle Battery & Energy Storage System, yang merupakan JV Indonesia Battery Company dengan target produksi baterai 2022 kapasitas 0,2 GWh menjadi 140 GWh di tahun 2029 serta membangun ekosistem EV battery termasuk swapping & charging station
Electric Vehicle Battery & Energy Storage System, which is part of the JV Indonesia Battery Company with a target production of 2022 batteries with a capacity of 0.2 GWh to 140 GWh in 2029, as well as building an EV battery ecosystem including swapping & charging station businesses

 Pemerintah membentuk percepatan untuk mendorong pengembangan industri EV Melalui Kementerian BUMN Beberapa pencapaian yang dapat disampaikan pada tahun 2021:

 - Pembentukan PT Industri Baterai Indonesia (Indonesia Battery Corporation - IBC) yang merupakan perusahaan patungan bersama konsorsium baterai BUMN.
 - PERTAMINA turut serta membangun EV ecosystem berupa infrastruktur pengisian daya, baik Stasiun Pengisian Kendaraan Listrik Umum (SPKLU/charging station) maupun Stasiun Penukaran Baterai Kendaraan Listrik Umum (SPBKLU/swapping station).

The government accelerated the development of the EV industry through the Ministry of SOEs. Some achievements in 2021 include:


 - *The Establishment of PT Industri Baterai Indonesia (Indonesia Battery Corporation - IBC), which is a joint venture with a battery consortium of SOEs.*
 - *PERTAMINA has participated in building the EV ecosystem in the form of infrastructure for both Public Electric Vehicle Charging Stations (SPKLU) and Public Electric Vehicle Battery Swapping Stations (SPBKLU).*

- 4.**


 Gasifikasi - Pembangunan Methanol Plant Dumai dengan kapasitas 1000 KTPA onstream (2025), potensi offtake dari Nunukan 650 KTPA (2026) Bintuni pupuk Indonesia 1.800 ktpa (2026), serta Jambaran Tiung Biru dengan skema sinergi portfolio Upstream dan Refining and Petrochemical sebesar 1.000 KTPA.
Gasification - Construction of the Dumai Methanol Plant with a capacity of 1,000 KTPA onstream (2025), offtake potential from Nunukan 650 KTPA (2026), Bintuni fertilizer Indonesia 1,800 KTPA (2026), and Jambaran Tiung Biru with a synergy scheme for Upstream and Refining and Petrochemical portfolios of 1,000 KTPA.


 Mapping calon potensial konsultan Pre-FS, Evaluasi OE dan Joint Study dengan PT KMJ
Mapping potential candidates for Pre-FS consultants, OE Evaluation and Joint Study with PT KMJ

DELAPAN INISIATIF STRATEGIS PENGEMBANGAN EBT EIGHT NRE DEVELOPMENT INITIATIVES


5.  Energi Baru dan Terbarukan - Pengembangan Dimethyl Ether (DME) dengan kapasitas 5200 KTPA on stream (2025) dan peningkatan kapasitas pembangkit pada tahun 2020 - 2026 meliputi panel surya PV 4 - 910 MW, angin 225 MW (2024) dan hidro 200 - 400 MW.


New and Renewable Energy - Development of Dimethyl Ether (DME) with a capacity of 5,200 KTPA on stream (2025) and increased generating capacity in 2020 - 2026 consisting of solar panels PV 4 - 910 MW, wind 225 MW (2024) and hydro 200 - 400 MW.

-  10 Mei 2021: Penandatanganan Processing Services Agreement antara PERTAMINA, PT Bukit Asam Tbk (PTBA) dan Air Products & Chemicals Inc (APCI).
- 4 November 2021: Kementerian Investasi telah menandatangani Memorandum of Understanding (MoU) dengan APCI
- 10 May 2021: Processing Services Process siging among PERTAMINA, PT Bukit Asam Tbk (PTBA) and Air Products & Chemicals Inc (APCI)
- 4 November 2021: The Ministry of Investment has signed a Memorandum of Understanding (MoU) with APCI


6.  Penerapan Ekonomi Karbon di beberapa daerah: dengan melakukan *Recycle* (Biomass, *Biogas*), *Reduce* (Solar PV, EV, LNG Bunkering), dan *Reuse* (CO₂ untuk EOR dan Metanol)


Carbon Economy Implementation in several regions: by conducting Recycle (Biomass, Biogas), Reducing (Solar PV, EV, LNG Bunkering), and Reusing (CO₂ for EOR and Methanol)

-  Riset Pemanfaatan CO₂ menjadi PCC: automasi pilot plant dengan kapasitas 2 kg/ jam dan rencana pilot test di Lapangan SP Subang
- Research on the utilization of CO₂ into PCC: pilot plant automation with a capacity of 2 kg/hour and a pilot test plan at the SP Subang Field*


7.  Kilang Ramah Lingkungan/*Green Refinery* - Penambahan lima kilang ramah lingkungan dengan kapasitas 6 - 100 KTPA yang akan beroperasi pada 2025

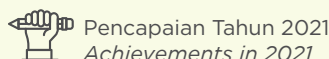
Green Refinery - Addition of five green refineries with a capacity of 6 - 100 KTPA, which will operate in 2025

-  Green Refinery difokuskan ke Revamping TDHT RU IV Cilacap yang telah mencapai proses penandatanganan guarantee agreement dilanjutkan dengan performance test
- Green Refinery is focused on Revamping TDHT RU IV Cilacap, which has reached the process of signing a guarantee agreement followed by a performance test*

8.  Bioenergi - Penambahan kapasitas pembangkit tahun 2026 Biomass/*Biogas* 153 MW, bio blending gas oil & gasoline, *biocrude* dari algae, serta etanol 1.000 KTPA onstream tahun 2025

Bioenergy - Additional generating capacity in 2026 consisting of Biomass/Biogas 153 MW, bio blending gas oil & gasoline, biocrude from algae, and ethanol 1,000 KTPA onstream in 2025

-  Pembangunan sarana dan fasilitas budidaya pilot plant mikroalga di *mini pond scale* skala 1.000-1.500 liter sudah terbangun.
- The construction of facilities for microalgae cultivation pilot plant on a mini pond scale of 1,000-1,500 liters has been built.*



Target bauran energi PERTAMINA secara umum adalah mengurangi porsi penggunaan bahan bakar minyak (BBM) dan LPG menjadi 64%, dan meningkatkan porsi penggunaan gas menjadi 19% serta EBT menjadi 17% dari total bauran energi di tahun 2030.

PERTAMINA's energy mix target in general is to reduce the portion of the use of fuel and LPG to 64%, and increase the gas use to 19% and NRE to 17% of the total energy mix by 2030.

INVESTASI BERKELANJUTAN PENGEMBANGAN EBT SUSTAINABLE INVESTMENT IN NRE DEVELOPMENT

Belanja Modal Investasi EBT PERTAMINA <i>PERTAMINA's NRE Investment Capital Expenditure</i>		
2021		2020
Rencana Budget	Realisasi Realization	Realisasi Realization
2,044	1,960	58,6

Keterangan: dalam ribu USD
Note: in million USD

Realisasi Investasi Pengembangan EBT Tahun 2021 <i>Investment Realization in the NRE Development 2021</i>	
• PLTS RU Cilacap	• <i>RU Cilacap Solar Power Plant</i>
• PLTS RU Dumai	• <i>RU Dumai Solar Power Plant</i>
• PLTS Sei Mangkei	• <i>Sei Mangkei Solar Power Plant</i>
• PLTS internal PERTAMINA	• <i>PERTAMINA internal Solar Power Plant</i>
• PGE Area Lumut Balai	• <i>PGE Area Lumut Balai</i>
• PGE Area Hululais	• <i>PGE Area Hululais</i>



PROGRAM LANGIT BIRU LANGIT BIRU PROGRAM

Melalui Program Langit Biru, PERTAMINA berupaya mengurangi jejak lingkungan dari dampak emisi gas buang kendaraan, akibat pemakaian bahan bakar dengan *Research Octane Number* (RON) rendah, dan menggantinya dengan bahan bakar RON tinggi yang lebih ramah lingkungan.

Through the Langit Biru Program, PERTAMINA attempted to reduce the environmental footprint of vehicle exhaust emissions, due to the use of fuel with a low Research Octane Number (RON), and replace it with high RON fuel which is more environmentally friendly.

TUJUAN: Mengendalikan pencemaran udara terutama yang bersumber dari kendaraan dengan meningkatkan kualitas udara bersih dan mengurangi emisi gas buang melalui edukasi dan mengajak masyarakat merasakan pengalaman manfaat menggunakan BBM berkualitas dan ramah lingkungan.

OBJECTIVE: Controlling air pollution, especially from vehicles, by improving clean air quality and reducing exhaust emissions through education and inviting the community to experience the benefits of using good quality and environmentally friendly fuel.

Nilai RON dan CN BBM PERTAMINA RON and CN of PERTAMINA Fuels					
Lebih Ramah Lingkungan More Environmentally Friendly					
Premium	Pertalite	Pertamax	Pertamax Turbo	Dexlite	Pertadex
RON 80	RON 90	RON 92	RON 98	CN 51	CN 55

Perkembangan Program Langit Biru: Jumlah Kabupaten/Kota Terjangkau Development of Blue Sky Program: Number of Regencies/Cities Covered							
Juli 2020 July 2020	Kabupaten/Kota Terjangkau per 31 Desember 2021 (Realisasi/Target) Regencies/Cities Reached per 31 December 2021 (Realization/Target)						
	Jawa Java	Bali Bali	Madura Madura	Sumatera Sumatra	Kalimantan Kalimantan	Sulawesi Sulawesi	Daerah Lain Other Region
Program dimulai di Denpasar, Bali The program started in Denpasar, Bali	119/119	9/9	4/4	154/154	56/56	81/81	63/63



PENGELOLAAN SUMUR LEPAS PANTAI [SOC-9.C3]
OFFSHORE WELL MANAGEMENT

Kegiatan eksplorasi dan produksi migas PERTAMINA juga dilakukan di lepas pantai (*offshore*). Keberadaan sumur dan anjungan di lepas pantai juga berdampak kepada kawasan perairan di sekitarnya. Untuk meminimalkan dampak yang ditimbulkan dan meminimalkan jejak lingkungan, pengelolaan sumur lepas pantai dilakukan sejak perencanaan hingga setelah selesai beroperasi.

PERTAMINA's oil and gas exploration and production activities are also carried out offshore. The offshore wells and platforms also have an impact on the surrounding waters. To minimize the impact and environmental footprint, offshore wells are managed from the planning up to the completion of operations.

Pengelolaan Sumur Lepas Pantai <i>Offshore Well Management</i>	
Kegiatan <i>Activity</i>	Bentuk Pengelolaan <i>Form of Management</i>
Pra-operasional <i>Pre-operational</i>	Memastikan semua sumur yang akan dikerjakan mengikuti prinsip prinsip pemboran dan well integrity yang baik. PERTAMINA telah memiliki Pedoman Pemboran dan Pedoman Pengelolaan Well Integrity. <i>Ensure that all wells that will be operated are based on the good drilling and integrity principles. PERTAMINA already has the Drilling Guideline Well Integrity Management Guidelines</i>
Operasional <i>Operational</i>	Melakukan monitoring dan perawatan umum oleh tim produksi dan tim well integrity. PERTAMINA telah memiliki Pedoman Pengelolaan Well Integrity <i>General monitoring and maintenance are carried out by the production team and well integrity team. PERTAMINA already has the Well Integrity Management Guidelines.</i>
Pasca-operasional <i>Post-operational</i>	Melakukan monitoring oleh tim produksi/aset. PERTAMINA telah memiliki Pedoman Pengelolaan Well Integrity dan Pedoman Kerja Paska Operasi. <i>Monitoring is carried out by the production/asset team. PERTAMINA already has the Well Integrity Management Guidelines and Post Operation Work Guidelines.</i>

Pengelolaan Sumur Lepas Pantai dalam kegiatan pra-operasional, operasional dan pasca operasional mengacu pada Pedoman Pengelolaan *Well Integrity* yang diberlakukan sejak Januari 2021. Pengelolaan dalam kegiatan pra-operasional *well integrity* yang baik. Monitoring dan *maintenance* dilakukan dalam tahap operasional, dan monitoring dilanjutkan hingga tahap pasca operasional. Pengelolaan sumur lepas pantai dilakukan di bawah koordinasi Fungsi Produksi sebagai pemilik aset dan Fungsi Drilling dan Well Intervention.

Pengelolaan Wilayah Operasi Nonaktif *Management of Inactive Operating Area*

Selama periode pelaporan, Segmen Upstream mengelola fasilitas anjungan non-aktif melalui perawatan secara periodik untuk memastikan kepatuhan pada aspek keselamatan dan lingkungan. Perencanaan untuk Kegiatan Pasca Operasi (KPO) dilakukan bersama dengan regulator, baik SKK MIGAS, Ditjen Migas, dan para pemangku kepentingan yang mengatur perijinan, dengan tetap mengedepankan aspek LST. Pengelolaan kegiatan pasca operasi mengacu kepada aturan PTK 040 SKK Migas Tahun 2018 dan Permen ESDM Nomor 15 Tahun 2018, serta PMK No. 140/PMK.06/2020 tentang Pengelolaan Barang Milik Negara Hulu Minyak dan Gas Bumi.

Selama periode pelaporan terdapat *feasibility study* KPO di beberapa Wilayah Kerja sebagai hasil kolaborasi dengan Pusat Riset Kelautan, Kementerian Kelautan dan Perikanan, serta lembaga akademisi di luar negeri dalam melakukan upaya kajian perencanaan *decommissioning* dan pemanfaatan kembali anjungan lepas pantai nonaktif. Saat ini masih berlangsung inisiasi kegiatan serupa dengan badan riset tersebut untuk Wilayah Kerja yang lain.

Offshore Well Management in pre-operational, operational, and post-operational activities refers to the Well Integrity Management Guideline, which has been in effect since January 2021. The management of pre-operational activities are carried out by ensuring that all wells being operated comply with good drilling principles and well integrity. In the operational stage monitoring and maintenance is carried out, and the monitoring continues until the post-operational stage. Offshore well management is carried out under the coordination of the Production Function as the owner of the asset and the Drilling and Well Intervention Function.

During the reporting period, Upstream Segment managed inactive platform facilities through regular maintenance to ensure compliance with safety and environmental protection aspects. Planning for Post Operations Activities (KPO) is prepared together with regulators, SKK MIGAS, the Directorate General of Oil and Gas, and stakeholders who issue licensing, while still prioritizing ESG aspects. The management of post-operation activities refers to the rules of PTK 040 SKK Migas of 2018 and the Minister of Energy and Mineral Resources Regulation No. 15 of 2018, and PMK No. 140/PMK.06/2020 concerning the Management of State-Owned Property of Upstream Oil and Gas.

In addition, several Working Areas conducted KPO feasibility studies during the reporting period, in collaboration with the Marine Research Center, the Ministry of Maritime Affairs and Fisheries, as well as foreign academic institutions, in conducting decommissioning planning studies and reuse of inactive offshore platforms. Currently, the initiation of similar activities with the research agency is still underway for other Working Areas.

PENGELOLAAN LIMBAH [11.5] WASTE MANAGEMENT

Timbulan limbah dikelola guna meminimalkan dampak terhadap lingkungan. Pengelolaan limbah dilakukan seluruh Subholding beserta entitas anak maupun unit operasional/unit bisnis masing-masing, serta AP jasa dan portofolio. Pengelolaan limbah dijalankan dengan pendekatan kepatuhan pada regulasi yang berlaku, penerapan ISO 14001:2015 Sistem Manajemen Lingkungan Limbah, dan SUPREME. Akuntabilitas pengelolaan limbah menjadi tanggung jawab Fungsi yang menimbulkan limbah, sementara Fungsi HSSE berperan sebagai *assurance body* untuk memastikan limbah telah dikelola dengan baik. Kinerja pengelolaan limbah dievaluasi Direksi melalui mekanisme penilaian pelaporan berkala dan pencapaian KPI. Berdasar hasil evaluasi tahun 2021, pengelolaan limbah telah berjalan dengan baik, sehingga tidak ada sanksi dari pihak berwenang. [2-27][3-3]

Timbulan limbah dilakukan melalui penerapan 5RTD, yakni *Reduce* atau mengurangi, *Reuse* atau menggunakan kembali, *Recycle* atau daur ulang, *Replace* atau mengganti, *Return to Supplier* atau dikembalikan kepada pemasok, *Treatment* atau perlakuan, dan *Disposal* atau pemusnahan. Kegiatan pengelolaan limbah dapat dilakukan sendiri maupun melibatkan pihak ketiga dengan persyaratan tertentu, di antaranya memiliki izin dari Kementerian Lingkungan Hidup dan Kehutanan (KLHK), fasilitas pengangkutan dan penyimpanan yang aman. Kami berkomitmen terus mengurangi volume timbulan limbah. [306-1, 306-2]

Pengungkapan informasi pengelolaan limbah dalam Laporan ini hanya mencakup keenam Subholding, tidak termasuk AP Jasa & Portofolio.

We manage waste generation to minimize the impact on the environment. Waste management is carried out by all Subholdings and their respective subsidiaries and operational units/business units, as well as service and portfolio subsidiaries. Waste management is carried out with an approach to compliance with applicable regulations, the application of ISO 14001:2015 Waste Environmental Management System, and SUPREME. The accountability of waste management is the responsibility of the functions that generate waste, while the HSSE Function acts as an assurance body to ensure that waste is managed properly. The performance of waste management is evaluated by the Board of Directors through a periodic reporting assessment and the achievement of KPIs. The results of the 2021 evaluation, showed that the waste management had been conducted properly, thus no sanctions were imposed by the authorities. [2-27][3-3]

Waste generation is carried out through the implementation of 5RTD, namely Reduce, Reuse, Recycle, Replace, Return to Supplier, Treatment, and Disposal. Waste management activities are carried out independently or involving third parties with certain requirements, including having a permit from the Ministry of Environment and Forestry, safe transportation and storage facilities. We are committed to continuously reducing the volume of waste generation. [306-1, 306-2]

Disclosure of information on waste management in this report only covers the six Subholdings, excluding Service & Portfolio subsidiaries.

Jenis dan Bentuk Limbah Non-B3, serta Metode Pengelolaan dan Pengolahan [306-4, 306-5]
Types and Forms of Non-Hazardous Waste, as well as Management and Processing Methods

Jenis Limbah Type of Waste	Bentuk Limbah Form of Waste	Metode Pengelolaan dan Pengolahan Management and Processing Methods
Padatan Solid	Kertas bekas, sampah organik dan anorganik, karton bekas kemasan, kayu bekas, dan rumput/potongan tanaman Used paper, organic and inorganic waste, used cardboard packaging, used wood, and grass/plant clippings	Tempat penampungan sementara Temporary storage
		<p>Dimanfaatkan kembali oleh perusahaan melalui program reuse, recycle, dan recovery Managed by the company through reuse, recycle, and recovery programs</p> <p>Dimanfaatkan kembali oleh pihak ketiga, termasuk masyarakat melalui kegiatan pemberdayaan (CSR), di antaranya bank sampah, composting, dan lainnya Managed by third parties, including the community through empowerment activities (CSR), including waste banks, composting, and others</p>
		Program pengurangan timbulan limbah: 5RTD Waste reduction program: 5RTD

Limbah Non-B3 Dihasilkan dan Pengelolaannya [306-3] [306-4] [306-5]
Non-hazardous Waste Generated and Management

Limbah non-B3 Non Hazardous waste	Satuan Unit	2021	2020	2019
Limbah dihasilkan Waste generated	Ton	21,436.64	17,668.08	16,718.75
Pengurangan limbah Waste reduced	Ton	1,848.87	175.39	395.67
Limbah digunakan kembali & didaur ulang Waste reused & recycled	Ton	3,533.83	1,418.40	1,444.82
Limbah dikelola oleh pihak ketiga, di dalam & di luar lokasi Waste managed by third party, in-site & off-site	Ton	19,842.77	15,883.55	14,786.48

Keterangan: Total timbulan limbah pada Segmen Refinery & Petrochemical termasuk hidrokarbon
Note: Total waste generation at Refinery & Petrochemical Segment including hydrocarbons



Jenis dan Bentuk Limbah B3, dan Metode Pengelolaan dan Pengolahan [306-4, 306-5] <i>Types and Forms of Hazardous Waste, and Methods of Management and Processing</i>				
Jenis Limbah <i>Type of Waste</i>	Bentuk Limbah <i>Form of Waste</i>	Metode Pengelolaan dan Pengolahan <i>Management and Processing Methods</i>		
Padatan <i>Solid</i>	Kemasan B3 bekas, obat kedaluwarsa, sarung tangan & majun bekas, serbuk bor, filter bekas, lampu bekas, aki/baterai bekas, dan absorbent bekas <i>Used hazardous packaging, expired medicines, used gloves & rags, drill cuttings, used filters, used lamps, used dry batteries/batteries, and used absorbents</i>	Tempat penampungan sementara <i>Temporary storage</i>	Diangkut pihak ketiga berizin ke tempat pengolahan <i>Transported by a licensed third party to the processing site</i>	<ul style="list-style-type: none"> • Insinerasi • Penimbunan dengan metode khusus • Pemanfaatan kembali untuk kegiatan lain • <i>Incineration</i> • <i>Landfilling with specific methods</i> • <i>Reuse for other activities</i>
		Program pengurangan timbulan limbah <i>Waste reduction program</i>	Inovasi perbaikan proses penyelesaian akhir (kompleksi) pemboran sumur untuk mengurangi timbulan limbah <i>oily sand</i> <i>Innovation to improve the completion process of well drilling to reduce the generation of oily sand waste at PERTAMINA Hulu Mahakam NPU;</i>	
Cairan <i>Liquid</i>	Katalis bekas, pelumas bekas, sludge oil, limbah analisis laboratorium <i>Used catalysts, used lubricants, sludge oil, laboratory analysis waste</i>	Tempat penampungan sementara <i>Temporary storage</i>	Diangkut pihak ketiga berizin ke tempat pengolahan <i>Transported by a licensed third party to the processing site</i>	<ul style="list-style-type: none"> • Insinerasi • Penimbunan dengan metode khusus • Pemanfaatan kembali untuk kegiatan lain • <i>Incineration</i> • <i>Landfilling with specific methods</i> • <i>Reused for other activities</i>
		Program pengurangan timbulan limbah <i>Waste reduction program</i>	Kegiatan <i>Activities</i> <ul style="list-style-type: none"> • Inovasi modifikasi WTIP untuk mengurangi timbulan <i>sludge oil</i> • Inovasi dalam pekerjaan pressure vessel maintenance untuk mengurangi timbulan limbah glycol • <i>Innovation in Water Treatment Injection Plant (WTIP) modification to reduce the generation of sludge oil</i> • <i>Innovation to improve the completion process of well drilling to reduce the generation of oily and waste</i> 	
		Air terproduksi <i>Produced water</i>	Disuntikkan kembali sebagai air injeksi dalam kegiatan <i>enhanced oil recovery</i> (EOR) sumur minyak maupun sumur panas bumi. <i>Reinjected as injection water in enhanced oil recovery (EOR) activities for oil wells and geothermal wells.</i>	
		Diolah di instalasi pengolahan air limbah (IPAL) untuk memenuhi parameter berdasar Peraturan Menteri Negara Lingkungan Hidup Nomor 19 Tahun 2010 Tentang Baku Mutu Air Limbah Bagi Usaha dan/atau Kegiatan Minyak dan Gas Serta Panas Bumi. <i>Treated at a wastewater treatment plant (WWTP) to meet the parameters based on the Regulation of the State Minister of the Environment Number 19 of 2010 concerning Wastewater Quality Standards for Oil, Gas and Geothermal Businesses and/or Activities.</i>	<ul style="list-style-type: none"> • Dialirkan ke badan air; • Dimanfaatkan kembali untuk kegiatan lain • <i>Disposed into water bodies;</i> • <i>Reused for other activities</i> 	
		Program pengurangan timbulan limbah <i>Waste reduction program</i>		

Limbah B3 Dihasilkan dan Pengelolaannya [306-4][206-5][306-6]
Hazardous Waste Generated and Management

Limbah B3 <i>Hazardous Waste</i>	Satuan <i>Unit</i>	2021	2020	2019
Limbah dihasilkan <i>Waste generated</i>		72,998.20	77,572.34	76,509.32
Pengurangan limbah non-B3 <i>Waste reduced</i>		209.39	395.04	343.36
Limbah digunakan kembali & didaur ulang <i>Waste reused & recycled</i>	Ton	1,641.94	1,399.10	3,192.10
Limbah dikelola oleh pihak ketiga, di dalam & di luar lokasi <i>Waste managed by third party, in-site & off-site</i>		68,004.71	76,933.19	73,182.81

AKTIVITAS REKAHAN HIDRAULIK *HYDRAULIC FRACTURING ACTIVITIES*

Sampai dengan akhir tahun 2021, PERTAMINA tidak melakukan kegiatan peretakan hidraulik dari sumber hidrokarbon non-konvensional untuk mendapatkan minyak serpih maupun gas serpih, di wilayah operasi di Indonesia. Dengan demikian Laporan ini tidak menyertakan pengungkapan informasi terkait pemakaian fluida, bahan kimia, maupun pemakaian air untuk kegiatan peretakan hidraulik di wilayah operasi di Indonesia, beserta strategi perencanaan dan pengelolaan risiko dan peluang.

Melalui PT SAKA Energi Indonesia yang sahamnya dimiliki Subholding PT Perusahaan Gas Negara Tbk (PGN), PERTAMINA berpartisipasi dalam pengelolaan blok gas serpih (*shale gas*) di Lapangan Fasken, Texas, Amerika Serikat. Sesuai perjanjian dalam pengalihan kepemilikan 36% saham dari Swift Energy Company (yang berganti nama menjadi SilverBow Resources), seluruh kegiatan operasional di Lapangan Fasken dilakukan SilverBow Resources, sehingga informasi terkait kegiatan peretakan hidraulik di Lapangan Fasken tidak disertakan dalam Laporan ini.

Until the end of 2021, PERTAMINA did not conduct any hydraulic fracturing activities from non-conventional hydrocarbon sources to get shale oil or shale gas, in its operating areas in Indonesia. Therefore, this report does not include disclosure of information on the use of fluids, chemicals, or water for hydraulic fracturing activities in operating areas in Indonesia, as well as planning strategies and managing risks and opportunities.

Through PT SAKA Energi Indonesia, whose shares are owned by the Gas Subholding, PT Perusahaan Gas Negara Tbk (PGN), PERTAMINA also manages the shale gas block in the Fasken Field, Texas, United States. Under the agreement of a 36% stake transfer from Swift Energy Company, all operating activities in the Fasken Field are carried out by Swift Energy Company, thus the information on hydraulic fracturing activities in the Fasken Field is not included in this Report.

PENGGUNAAN AIR DAN PENGELOLAAN EFLUEN [11.6] WATER USE AND EFFLUENT MANAGEMENT

Air digunakan untuk mendukung kegiatan operasi dan produksi, serta kebutuhan domestik, sehingga perlu dikelola dengan baik agar tetap terjaga ketersediaannya di alam. Pengelolaan air dilakukan seluruh Subholding beserta entitas anak dan unit operasional/unit bisnis masing-masing, serta AP jasa dan portofolio. Pengelolaan air dijalankan dengan pendekatan kepatuhan pada regulasi yang berlaku, penerapan ISO 14001:2015 Sistem Manajemen Lingkungan, dan SUPREME. Akuntabilitas pengelolaan air menjadi tanggung jawab Fungsi yang memanfaatkan air, sementara Fungsi HSSE berperan sebagai *assurance body* untuk memastikan pengelolaan air telah dilakukan dengan baik. Kinerja pengelolaan air dievaluasi Direksi melalui mekanisme penilaian pelaporan berkala. Berdasar hasil evaluasi selama tahun 2021, pengelolaan air telah berjalan dengan baik, sehingga tidak ada sanksi dari pihak berwenang. [2-27][3-3]

Air yang digunakan berasal dari berbagai sumber. PERTAMINA memastikan pemakaian air dilakukan dengan bertanggung jawab, mempertimbangkan konservasi sumber daya air di daerah setempat, dan tidak berdampak pada sumber air yang digunakan bersama masyarakat. Melalui pengelolaan di instalasi pengolahan air limbah (IPAL), sebagian olahan air bekas pakai dilepaskan kembali ke badan air. Tidak ada proses pelepasan air ke badan air dengan tekanan tinggi, yang dapat merusak lapisan permukaan tanah maupun dasar sumber air. Selama tahun 2021, tidak ada Subholding dan entitas anak masing-masing, AP jasa dan portofolio, serta unit operasi/unit bisnis yang dihadapkan pada sanksi karena pelanggaran regulasi terkait pemakaian air dan pelepasan olahan air limbah ke badan air. [303-1, 303-2][ENV-1, ENV-2]

Water is used to support operations and production activities, as well as domestic needs, which requires proper management to maintain its availability in nature. Water management is carried out by all Subholdings and their respective subsidiaries and operating units/business units, as well as service and portfolio subsidiaries. The water management implementation complies with applicable regulations, ISO 14001:2015 Environmental Management System, and SUPREME. The accountability of water management is the responsibility of the functions that use the water, while the HSSE function acts as an assurance body to ensure that water management has been carried out properly. The performance of water management is evaluated by the Board of Directors through a periodic reporting assessment. The evaluation results in 2021, showed that water management has been properly implemented, therefore no sanctions were imposed by the authorities. [2-27][3-3]

The water used originated from various sources. PERTAMINA ensures that the water is used responsibly, takes into account the conservation of water resources in the local area, in 2021, showed that no impact on water sources that are shared with the community. Through management at the wastewater treatment plant (WWTP), some of the treated used water is disposed into water bodies. There is no process of discharging water into water bodies with high pressure, which can damage the surface of the soil and the bottom of the water source. During 2021, none of the Subholdings and their respective subsidiaries, service and portfolio subsidiaries, as well as operating units/business units, were faced with sanctions due to violations of regulations on water use and the disposal of treated wastewater into water bodies. [303-1, 303-2][ENV-1, ENV-2]

Pengungkapan informasi terkait volume pengambilan air dan air terpakai dalam Laporan ini, hanya meliputi Subholding, tanpa menyertakan AP jasa dan portfolio yang bukan merupakan bisnis inti PERTAMINA. Kami menyatakan ulang informasi atas Laporan terdahulu, karena menyesuaikan dengan kriteria dalam Standar GRI. Khusus untuk pengungkapan informasi debit penarikan air, dapat dilihat pada Laporan Keberlanjutan Subholding dan entitas anak masing-masing. [2-4][303-4]

Disclosure of information on the volume of water withdrawal and water used in this Report, only covers Subholdings, excluding service and portfolio subsidiaries, which are not PERTAMINA's core business. We restated the information in the previous Report, to adjust it to the criteria in the GRI Standards. Specifically, the disclosure of water withdrawal information can be seen in the Subholding Sustainability Report and their respective subsidiaries. [2-4][303-4]



Pengambilan Air berdasarkan Sumber [303-3]
Water Withdrawal by Source

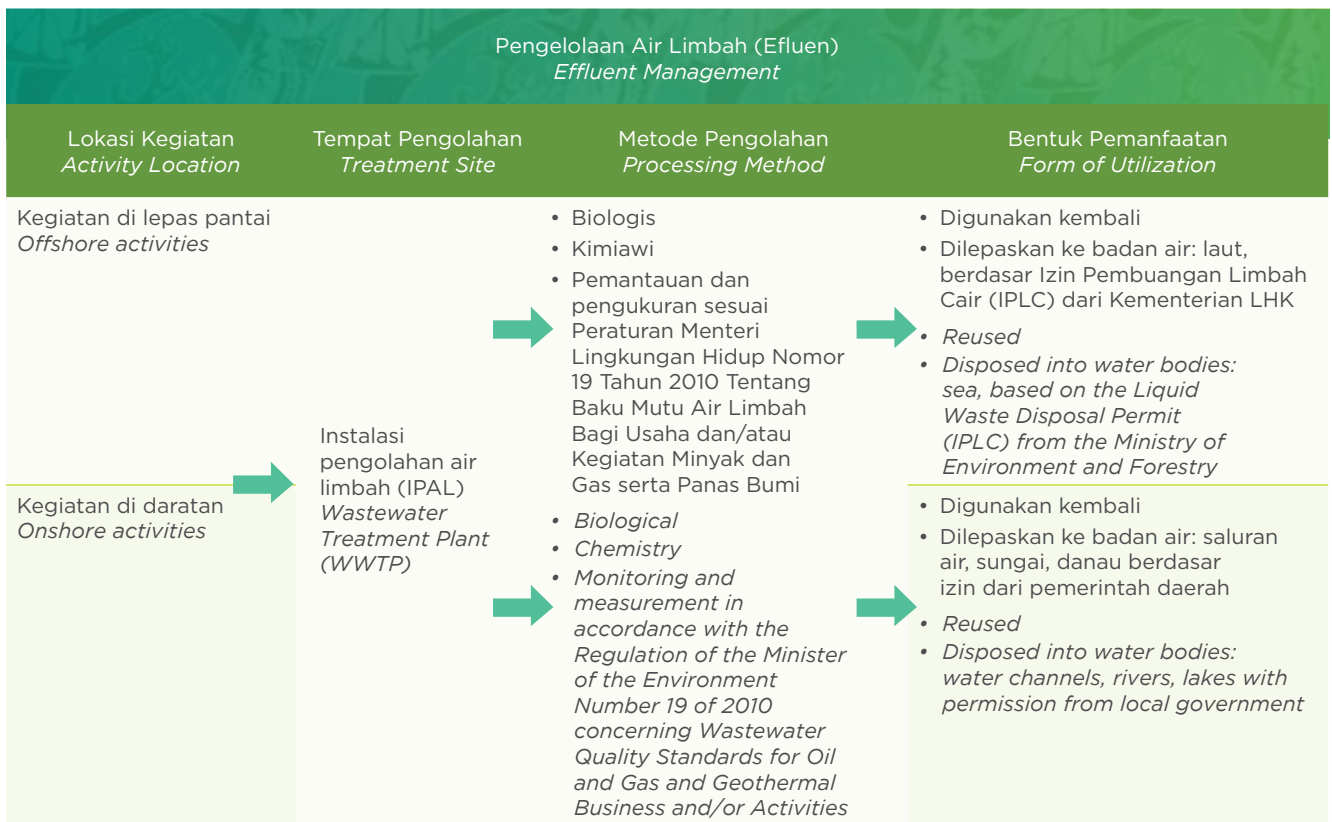
	Satuan Unit	2021	2020	2019
Total air tawar diambil <i>Total freshwater withdrawn</i>		553.62	573.50	564.55
Air permukaan <i>Surface water</i>		29.24	22.71	28.39
Air tanah <i>Groundwater</i>	Juta m ³ Million m ³	16.86	17.63	19.01
Air laut <i>Sea water</i>		504.06	529.03	516.43
Air yang berasal dari pihak ketiga <i>Water from third party</i>		3.46	4.14	0.72
Pengambilan air tawar berdasarkan segmen bisnis <i>Fresh water withdrawn by business segment</i>				
Upstream*		23.02	20.12	20.18
Refining & Petrochemical		363.71	396.83	368.55
Commercial & Trading	Juta m ³ Million m ³	0.41	0.39	0.61
Power New Renewable Energy		0.05	0.27	0.49
Gas		166.42	159.94	174.71

*Termasuk Badak LNG
Including Badak LNG

Konsumsi dan Daur Ulang Air [303-5]
Water Consumption and Recycling

Subholding maupun entitas anak dan unit operasi/unit bisnisnya dilengkapi instalasi pengolahan air limbah (IPAL), untuk mengolah olahan air limbah sehingga memenuhi baku mutu yang ditetapkan regulasi saat dilepaskan ke badan air. Pengukuran meliputi parameter *chemical oxygen demand* (COD), sulfida, ammonia, fenol, total padatan tersuspensi (TSS). Secara umum, hasil pengukuran untuk setiap parameter telah memenuhi baku mutu yang ditetapkan regulasi di masing-masing wilayah operasi, dan telah dilaporkan kepada pihak-pihak berwenang. Selama periode pelaporan, PERTAMINA tidak pernah dihadapkan pada sanksi denda maupun sanksi hukum lain karena sangkaan pencemaran air. Pengungkapan informasi hasil pengukuran untuk setiap parameter oleh Subholding maupun entitas anak dan unit operasional/unit bisnis masing-masing disampaikan dalam Laporan Keberlanjutan mereka. [2-27]

Subholding, subsidiaries, and their operating units/business units are equipped with wastewater treatment plants (WWTP) to treat wastewater to meet the quality standards set by regulations when released into water bodies. The measurement includes parameters of chemical oxygen demand (COD), sulfide, ammonia, phenol, and total suspended solids (TSS). In general, the measurement results for each parameter have met the quality standards set by the regulations in each operating area, and have been reported to the authorities. During the reporting period, PERTAMINA never received any fines or other legal sanctions for alleged water pollution. Disclosure of information on measurement results for each parameter by Subholding, subsidiaries and their respective operating/business units is presented in their Sustainability Reports. [2-27]



	Satuan Unit	2021	2020	2019
Total Air Tawar Dikonsumsi <i>Total Freshwater Consumed</i>		262.96	291.43	253.77
Upstream*		9.51	7.97	12.39
Refining & Petrochemical		249.99	280.56	243.11
Commercial & Trading		0.41	0.39	0.61
Power New Renewable Energy		0.05	0.005	0.01
Gas	Juta m ³ <i>Million m³</i>	2.99	2.51	2.32
Konsumsi Air Tawar Didaur Ulang berdasarkan Segmen Bisnis <i>Freshwater Recycled by Business Segment</i>		5.28	4.72	5.27
Upstream		0.23	0.23	0.16
Refining & Petrochemical		2.78	3.47	3.14
Power New Renewable Energy		0.002	-	-
Gas		2.27	1.02	1.97

*Termasuk Badak LNG
Including Badak LNG

Pembuangan Air Tawar berdasarkan Tujuan [303-4]
Freshwater Discharge

	Satuan Unit	2021	2020	2019
Pembuangan Air Tawar berdasarkan Tujuan Freshwater Discharge by Destination		290.65	285.86	310.30
Air permukaan Surface water		116.16	114.35	123.20
Air tanah Groundwater	Juta m ³ Million m ³	0.00	0.002	0.001
Air laut Sea water		173.55	170.58	186.21
Distribusi pihak ketiga pihak ketiga Third-party distribution		0.94	0.92	0.89
Total air tawar dibuang berdasarkan segmen bisnis Total fresh water disposed by business segment				
Upstream*		13.50	12.15	12.46
Refining & Petrochemical	Juta m ³ Million m ³	113.72	116.26	125.44
Gas		163.43	157.44	172.39

*Termasuk Badak LNG
Including Badak LNG

Pembuangan Air Limbah [303-4]
Wastewater Discharge

	Satuan Unit	2021	2020	2019
Pembuangan Air Limbah berdasarkan Tujuan Wastewater Discharge by Destination		448.94	430.13	446.18
Air permukaan Surface water	Juta m ³ Million m ³	116.35	114.35	123.29
Air tanah Groundwater		0.000004	-	-
Air laut Sea water		332.59	315.78	322.89
Distribusi pihak ketiga pihak ketiga Third-party distribution		0.000003	0.000032	0.000196

Pembuangan Air Terproduksi berdasarkan Tujuan [303-4]
Produced Water Management by Destination

	Satuan Unit	2021	2020	2019
Total volume air terproduksi (IPIECA ENV-1) <i>Total volume of produced water (IPIECA ENV-1)</i>		941.00	829.09	952.17
Volume air terproduksi yang diinjeksikan kembali <i>Volume of re-injected produced water</i>	Juta m ³ Million m ³	385.82	227.21	334.44
Volume air terproduksi yang dibuang <i>Volume of produced water discharged</i>		555.17	601.88	617.73
Volume air terproduksi yang dijual <i>Produced water volume sold</i>		-	-	-

Volume Hidrokarbon Dilepas ke Air Permukaan [303-4]
Hydrocarbon Disposed to Surface Water

	Satuan Unit	2021	2020	2019
Volume hidrokarbon yang dilepas ke air permukaan (IPIECA ENV-2) <i>Volume of hydrocarbon released to surface water</i>	m ³ m ³	245.20	217.06	206.933

Intensitas Konsumsi Air <i>Water Consumption Intensity</i>				
	Unit	2021	2020	2019
Upstream	m ³ /MBOE	16.412	11.422	23.464
Refining & Petrochemical	m ³ /barell minyak mentah diproses <i>bbl crude processed</i>	0.795	0.901	0.692



OPERASIONAL DI DAERAH RAWAN SUMBER DAYA AIR OPERATIONS IN AREAS WITH LIMITED WATER RESOURCES



Sampai dengan akhir tahun 2021 PERTAMINA terdapat 11 lokasi Pertamina yang beroperasi di daerah rawan sumber daya air.

Until the end of 2021, PERTAMINA had 11 Pertamina locations operating in areas prone to water resources.

Unit Operasi <i>Operating Unit</i>	Area Kerja <i>Working Area</i>
Upstream regional 2	Jawa Barat <i>West Java</i>
Upstream regional 3	Kalimantan
Upstream regional 4	Jawa Timur <i>East Java</i>
Refinery Unit IV	Jawa Tengah <i>Central Java</i>
Refinery Unit VI	Jawa Barat <i>West Java</i>
Marketing Operation Region III	Jawa Barat <i>West Java</i>
Marketing Operation Region IV	Jawa Tengah <i>Central Java</i>
Marketing Operation Region V	Jawa Timur <i>East Java</i>
PGE Area Kamojang	Jawa Barat <i>West Java</i>
PGE Area Karaha	Jawa Barat <i>West Java</i>
PGE Area Lumut Balai	Sumatra Selatan <i>South Sumatra</i>

Untuk meminimalkan pengaruh kegiatan operasi pada sumber daya air, kami melakukan upaya sebagai berikut:

In order to minimize the impact of operating activities on water resources, we carry out the following efforts:

Unit Operasi <i>Operational Unit</i>	Kegiatan <i>Activity</i>
RU IV Cilacap	Pemanfaatan kembali air condensate outlet area proses sebagai air campuran treated water di unit utilities <i>Reuse of condensate outlet water in the process area as mixed water treated water in utilities unit</i>
RU V Balikpapan	Pemanfaatan LLS steam ex-Kilang Balikpapan II sebagai supply heat di SWD 1 dan 2 <i>Utilization of LLS steam ex-Balikpapan II Refinery as heat supply in SWD 1 and 2</i>
RU III Plaju	Simplifikasi dan perbaikan line steam <i>Steam line simplification and improvement</i>
RU V Balikpapan	Implementasi chemical dan mechanical cleaning SWD 1 dan 2 untuk meningkatkan efisiensi <i>Implementation of chemical and mechanical cleaning SWD 1 and 2 to increase efficiency</i>
RU V Balikpapan	Implementasi program change of resin di Demin Plant untuk meningkatkan efisiensi produksi demin water <i>Utilization of stripped water ex-Nex SWS Plant 17 and Plant 7 as wash water at the Balikpapan II Refinery</i>
RU V Balikpapan	Pemanfaatan stripped water ex-Nex SWS Plant 17 dan Plant 7 sebagai wash water di Kilang Balikpapan II <i>Utilization of stripped water ex-Nex SWS Plant 17 and Plant 7 as wash water at the Balikpapan II Refinery</i>

PELIBATAN PEMANGKU KEPENTINGAN DALAM PEMANFAATAN AIR *STAKEHOLDER INVOLVEMENT IN WATER USE*

Pengambilan Air <i>Water Withdrawal</i>	Pengolahan Air Bekas Pakai <i>Used Water Treatment</i>	Pelepasan ke Badan Air <i>Disposal to Water Bodies</i>
Pemerintah/Pemerintah Daerah <i>Government/Local Government</i>		
<ul style="list-style-type: none"> • Pemenuhan Perizinan <ul style="list-style-type: none"> • Peraturan Pemerintah (PP) Nomor 122 Tahun 2015 tentang Pengusahaan Sumber Daya Air • Ketentuan turunan, sesuai masing-masing daerah • Pemantauan dan pengukuran • Licensing Fulfillment <ul style="list-style-type: none"> • <i>Government Regulation (PP) Number 122 of 2015 concerning Water Resources for Business</i> • <i>Bylaws, according to each region</i> • Monitoring and measurement 	<ul style="list-style-type: none"> • Pemenuhan Perizinan • Pemantauan dan pengukuran parameter kualitas olahan air limbah <ul style="list-style-type: none"> • Sesuai Peraturan Menteri Lingkungan Hidup Nomor 19 Tahun 2010 Tentang Baku Mutu Air Limbah Bagi Usaha dan/atau Kegiatan Minyak dan Gas serta Panas Bumi • Licensing Fulfillment • Monitoring and measuring of wastewater treatment quality parameters <ul style="list-style-type: none"> • <i>In accordance with the Regulation of the Minister of the Environment Number 19 of 2010 concerning Wastewater Quality Standards for Oil and Gas and Geothermal Businesses and/or Activities</i> 	<ul style="list-style-type: none"> • Persetujuan teknis pembuangan air limbah <ul style="list-style-type: none"> • Sesuai Peraturan Menteri Lingkungan Hidup dan Kehutanan Nomor P.102/MENLHK/SETJEN/KUM.1/11/2018 tentang Tata Cara Perizinan Pembuangan Air Limbah Melalui Pelayanan Perizinan Berusaha Terintegrasi Secara Elektronik • Wastewater disposal technical approval <ul style="list-style-type: none"> • <i>In accordance with the Regulation of the Minister of Environment and Forestry Number P.102/MENLHK/SETJEN/KUM.1/11/2018 concerning Procedures of licensing for Wastewater Disposal through Electronic Integrated Business Licensing Services</i>
Masyarakat <i>Community</i>		
<ul style="list-style-type: none"> • Sosialisasi • Pemantauan dan pengukuran • Penerimaan keluhan dan tindak lanjut • Tahun 2021 PERTAMINA tidak menerima keluhan terkait sumber daya air di sekitar area operasional. 	<ul style="list-style-type: none"> • <i>Dissemination</i> • <i>Monitoring and measurement</i> • <i>Receiving complaints and follow up</i> • <i>In 2021 PERTAMINA did not received complaints on water resources around the operating area.</i> 	

PEMAKAIAN AIR PADA MATURE FIELD WATER USE IN MATURE FIELDS

Pemakaian air pada *mature field*, yakni lapangan yang telah cukup lama diproduksi, digunakan sebagai material untuk kegiatan EOR dengan metode *water flooding* pada perolehan sekunder. Pada periode pelaporan, kegiatan EOR dengan metode *water flooding* dilakukan pada 8 (delapan) *mature field*, dengan total volume air terpakai mencapai 127,58 juta m³.

The use of water in mature fields, which are fields that have been produced for a long time, is as a material for EOR activities with the water flooding method for secondary recovery. In the reporting period, EOR activities using the water flooding method were carried out in 8 (eight) mature fields, with a total volume of water used reaching 127.58 million m³.

Pelaksanaan Water Flooding pada Lapangan Matang <i>Implementation of Water Flooding in Mature Fields</i>		
Lapangan <i>Field</i>	Sumber Air Terpakai <i>Used Water Source</i>	Volume Air Terpakai (juta m ³) <i>Volume of Used Water (million m³)</i>
Rantau	Produksi air struktur Rantau <i>Water production of Rantau structure</i>	30.14
Jirak	Produksi air struktur Jirak ditambah produksi Struktur Sopa dan Musi <i>Water production of Jirak structure plus Sopa and Musi structure production</i>	7.3
Belimbing	Produksi air struktur Belimbing <i>Water production of Belimbing structure</i>	25.14
Ramba	Produksi air Struktur Ramba <i>Water production of Ramba Structure</i>	47.54
North East Air Serdang (PHE OK)	Produksi air Struktur North East Air Serdang <i>Water production of North East Air Serdang Structure</i>	11.45
Meruap	Produksi air Struktur Meruap <i>Water production of Meruap Structure</i>	1.67
Handil	Produksi air Struktur Handil <i>Water production of Handil Structure</i>	1.98
Tanjung	Produksi air Struktur Tanjung <i>Water production of Tanjung Structure</i>	2.36

PERTAMINA memiliki Pedoman Pengelolaan Keadaan Darurat, Krisis, dan Keberlangsungan Bisnis, serta mengacu ke ke standar internasional, yaitu API RP 754 dan IOGP Report 456 dalam melakukan pengkategorian kejadian *process safety event*.

PERTAMINA has Emergency, Crisis, and Business Continuity Management Guideline referring to international standards of API RP 754 and IOGP Report 456 in categorizing process safety events.

Tumpahan Minyak

Oil Spill

Tumpahan Minyak <i>Oil Spill</i>	Satuan <i>Unit</i>	2021	2020	2019
1-15 barrel <i>1-15 barrels</i>		171	191	219
15-100 barrel <i>15-100 barrels</i>	case <i>kasus</i>	0	0	0
>100 barrel <i>>100 barrels</i>		0	0	0
Volume tumpahan minyak <i>Volume of oil spill</i>	barrel	262.08	378.38	297.51

PERLINDUNGAN KEANEKARAGAMAN HAYATI

BIODIVERSITY PROTECTION

Indonesia memiliki keanekaragaman hayati tinggi, sehingga PERTAMINA turut mendukung perlindungan keanekaragaman hayati melalui konservasi satwa maupun tumbuhan endemik dan dilindungi. Kegiatan konservasi dilaksanakan melalui Program TJSJ yang dijalankan Subholding beserta entitas anak dan unit operasional/unit bisnisnya, serta AP jasa dan portofolio, pada wilayah kerja masing-masing. Kegiatan konservasi ditujukan pada pelestarian flora dan fauna, dengan melibatkan pihak berwenang serta masyarakat. Pelaksanaan kegiatan konservasi menjadi tanggung jawab Fungsi HSSE dan Fungsi CSR & SMEPP, dan dievaluasi Direksi melalui mekanisme penilaian laporan kinerja termasuk penyusunan Indeks Keanekaragaman Hayati, serta pemenuhan KPI. Dari hasil evaluasi tahun 2021 diketahui program konservasi berjalan dengan baik. Beberapa unit operasi/unit bisnis juga telah dapat melepasliarkan sejumlah spesies dilindungi. PERTAMINA menerapkan hirarki mitigasi: *avoid, minimize, remediate, offsite*. [3-3]

*Indonesia has a high biodiversity. Therefore PERTAMINA also supports biodiversity protection through the conservation of endemic and protected animals and plants. The conservation activities are carried out through the CSR Program by the Subholdings and subsidiaries, operating units/business units, as well as service and portfolio subsidiaries, in their respective working areas. The conservation activities are aimed at preserving flora and fauna by involving the authorities and the community. The implementation of conservation activities is the responsibility of the HSSE Function and the CSR & SMEPP Function, and is evaluated by the Board of Directors through a performance report assessment, including the preparation of the Biodiversity Index, as well as the fulfillment of KPIs. The results of the 2021 evaluation showed the conservation program was properly carried out. Several operating units/business units have also been able to release a number of protected species. PERTAMINA implements a mitigate hierarchy: *avoid, minimize, remediate, offset*. [3--3]*

KEBIJAKAN TERKAIT KEANEKARAGAMAN HAYATI [ENV-3] POLICY ON BIODIVERSITY

Dengan kegiatan operasi dan bisnis yang mencakup sektor hulu hingga hilir, wilayah operasi PERTAMINA mencakup daratan (*onshore*) serta perairan pantai dan laut (*offshore*). Sebagian wilayah operasi di Indonesia, berada di dalam maupun berdekatan dengan kawasan dilindungi yang ditetapkan regulasi nasional. Untuk wilayah operasi di mancanegara, tidak ada yang berada di dalam atau berdekatan dengan kawasan artik maupun kawasan lain yang dilindungi berdasar regulasi internasional. Setiap kegiatan di wilayah operasi di Indonesia yang berada di dalam maupun berdekatan dengan kawasan dilindungi, telah dilengkapi dengan dokumen perizinan dari Kementerian Lingkungan Hidup dan Kehutanan (KLHK). [304-1]

Pengungkapan informasi wilayah operasi yang berada di dalam dan/atau berdekatan dengan kawasan dilindungi, disampaikan dalam Laporan Keberlanjutan masing-masing Subholding dan entitas anak maupun unit operasi/unit bisnisnya. Laporan ini hanya mengungkapkan informasi total luas wilayah yang berada di dalam dan/atau berdekatan dengan kawasan dilindungi, dan persentase perbandingan terhadap total luas wilayah operasi.

With operations and business activities cover the upstream to downstream sectors, PERTAMINA's operating areas covering onshore, as well as the waters and offshore. Some of the operating areas in Indonesia are located within or adjacent to protected areas designated by national regulations. Meanwhile, none of the overseas operations are located in or adjacent to the Arctic region or other areas protected under international regulations. Every activity in the operating areas in Indonesia, located within or adjacent to a protected area has been issued with a permit document from the Ministry of Environment and Forestry. [304-1]

Disclosure of information on operating areas located within and/or adjacent to protected areas is presented in the Sustainability Reports of each Subholding and subsidiaries, as well as operating units/business units. This report only discloses information on the total area within and/or adjacent to the protected area, and the percentage of comparison to the total operating areas.

Luasan Wilayah Konservasi (Ha) di Wilayah Operasi PERTAMINA Size of Conservation Area (ha) in PERTAMINA Operating Area			
Segmen Segment	2021	2020	2019
Upstream	13,511.37	12,988.23	6,067.23
Refinery and Petrochemicals	5,567.51	5,449.70	5,446.20
Commercial & Trading	4,580.74	4,580.74	4,580.74
Power & New and Renewable Energy	19.73	14.32	13.72
Gas	5.85	5.85	5.85
Total	23,685.20	23,038.84	16,113.74

Aktivitas Operasi PERTAMINA yang dekat dengan Daerah Dilindungi/Tinggi Nilai Keanekaragaman Hayati
Number of PERTAMINA Operating Areas Adjacent to Protected Areas/High Biodiversity Value

	Bersilangan dengan area operasional <i>Overlapping with operational sites</i>	Dekat dengan area operasional (<1km) <i>Adjacent to operational sites (<1 km)</i>
UNESCO World Heritage Natural Sites	0	0
Area Konservasi <i>Conservation area</i>	8	3

Wilayah Operasi PERTAMINA yang dekat dengan Daerah Dilindungi/Tinggi Nilai Keanekaragaman Hayati [ENV-4.C1]
PERTAMINA Operating Areas Adjacent to Protected Areas/High Biodiversity Value

Segmen <i>Segment</i>	Area <i>Area</i>	Keterangan <i>Description</i>
Upstream	Blok ONWJ ONWJ Block	Seluas 324 km ² dari WK di perairan Kabupaten Kepulauan Seribu berada di kawasan Taman Nasional Kepulauan Seribu <i>An area of 324 km² of WK in the waters of the Kepulauan Seribu Regency is in the Seribu Islands National Park area</i>
Upstream	Jambi Merang	Wilayah Kerja PHE Jambi Merang beririsan dengan kawasan Taman Nasional Sembilang. <i>PHE Jambi Merang Working Area intersects with the Sembilang National Park area.</i>
Upstream	Blok OSES OSES Block	Wilayah kerja terluar PHE OSES di perairan Laut Jawa, berbatasan dengan Taman Nasional Kepulauan Seribu di Tenggara dan Taman Nasional Way Kambas di Barat <i>The outermost working area of PHE OSES is in the waters of the Java Sea, bordering the Seribu Islands National Park in the Southeast and Way Kambas National Park in the West.</i>
Upstream	Donggi Matindok	Wilayah Kerja PEP Field Donggi Matindok berbatasan dengan Taman Keanekaragaman Hayati Kokolomboi, Banggai Kepulauan, Sulawesi Tengah <i>PEP Donggi Matindok Field borders with the Kokolomboi Biodiversity Park, Banggai Islands, Central Sulawesi</i>
Upstream	Sanga-Sanga	Wilayah Kerja PEP Field Sangasanga area Samboja berbatasan dengan Taman Nasional Bukit Soeharto <i>PEP Sangasanga Field Working Area in the Samboja area borders the Bukit Soeharto National Park</i>
PNRE	Kamojang, Lumut Balai, Karaha, Hululais, Bukit Daun, Ulubelu	Wilayah kerja PGE area Kamojang, Lumut balai, Karaha, Hululais, Bukit Daun, Ulubelu berada di kawasan hutan lindung <i>PGE's working area in Kamojang, Lumut Balai, Karaha, Hululais, Bukit Daun, Ulubelu areas are in protected forest areas</i>

PERTAMINA memahami kegiatan operasi yang dijalankan, terutama di sektor hulu, akan berdampak terhadap keanekaragaman hayati di wilayah operasi. Kegiatan eksplorasi dan produksi akan menimbulkan perubahan rona lingkungan, sehingga mempengaruhi keberadaan habitat dan populasi satwa maupun tumbuhan. Kami berkomitmen melindungi keanekaragaman hayati yang ada, dengan melakukan identifikasi keberadaan spesies endemik maupun spesies dilindungi sebelum kegiatan operasi dilaksanakan, dan melakukan pemindahan ke kawasan konservasi yang sudah disiapkan, atau kawasan lain yang tidak terdampak kegiatan operasi. Seluruh tahapan kegiatan dijalankan dengan melibatkan pihak-pihak berwenang, termasuk Balai Konservasi dan Sumber Daya Alam (BKSDA) maupun Dinas Lingkungan Hidup setempat, dan disertai pelaporan berkala. [304-2] [ENV-3.C1] [ENV-4.C1]

Sasaran program adalah spesies endemik dan dilindungi, berdasarkan:

- Peraturan Menteri Lingkungan Hidup dan Kehutanan Nomor P.106/MENLHK/SETJEN/KUM.1/12/2018 tentang Perubahan Kedua Atas Peraturan Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia Nomor P.20/MENLHK/SETJEN/KUM.1/6/2018 tentang Jenis Tumbuhan dan Satwa Dilindungi.
- Daftar Merah IUCN

Pengungkapan informasi terkait daftar nama spesies satwa dan tumbuhan dilindungi, serta status perlindungannya, disampaikan dalam Laporan Keberlanjutan masing-masing Subholding dan entitas anak maupun unit operasi/unit bisnisnya.

PERTAMINA understands that the operations carried out, especially in the upstream sector, will have an impact on the biodiversity in the operating area. Exploration and production activities will cause changes in the environment, affecting the habitat and population of animals and plants. We are committed to protecting the existing biodiversity, by identifying the presence of endemic and protected species before operations, and transferring them to conservation areas that have been prepared, or other areas that are not affected by operations. All stages of the activity are carried out by involving the authorities, including the Natural Resources Conservation Center (BKSDA) and the local Environmental Agency, accompanied by periodic reports. [304-2] [ENV-3.C1] [ENV-4.C1]

The target of the program are endemic and protected species, based on:

- *Regulation of the Minister of Environment and Forestry Number P.106/MENLHK/SETJEN/KUM.1/12/2018 concerning the Second Amendment to the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.20/MENLHK/SETJEN/KUM.1/6/2018 concerning Types of Protected Plants and Animals.*
- *IUCN Red List*

Disclosure of information on the list of protected animal, plant species, as well as their protection status, is presented in the Sustainability Reports of Subholdings, subsidiaries, and their operating units/business units.

Jumlah Spesies IUCN Red List yang berada dekat Wilayah Operasi [304-4]
Number of Species in the vicinity of Operating Area on IUCN Red List

Status Status	Fauna Fauna	Flora Flora
Kritis atau Sangat Terancam (<i>Critically Endangered</i> ; CR)	8	2
Terancam (<i>Endangered</i> ; EN)	10	0
Rentan (<i>Vulnerable</i> ; VU)	8	8
Hampir Terancam (<i>Near Threatened</i> ; NT)	3	2
Risiko Rendah (<i>Least Concern</i> ; LC)	20	22

KONSERVASI KEANEKARAGAMAN HAYATI DI WILAYAH OPERASI [304-3] [11.4] [ENV-4]
BIODIVERSITY CONSERVATION IN OPERATING AREA

Pelepasliaran Satwa Dilindungi Tahun 2021
The Release of Protected Animals in 2021



PT Pertamina (Persero) TBBM Maos, Cilacap, Jawa Tengah bersama BKSDA Jawa Tengah melepasliarkan 206 tukik Penyu Lekang (*Lepidochelys olivacea*) di Pantai Sodong Cilacap. Tukik yang dilepaskan merupakan hasil relokasi sarang serta penyelamatan telur yang diserahkan masyarakat kepada Kelompok Konservasi Penyu Nagaraja, Cilacap, binaan TBBM Maos dan BKSDA Jawa Tengah.

*PT Pertamina (Persero) TBBM Maos, Cilacap, Central Java together with the Central Java Natural Resources Conservation Center (BKSDA), released 206 turtle hatchlings (*Lepidochelys olivacea*) at Sodong Beach, Cilacap. The hatchlings released were the result of the relocation of nests and rescue of eggs that were handed over by the community to the Nagaraja Turtle Conservation Group, Cilacap, assisted by TBBM Maos and the Central Java BKSDA.*



PT Pertamina EP Rantau Field turut berpartisipasi dalam kegiatan pelepasliaran tukik tuntong laut (*Batagur Borneoensis*) di Pantai Wisata Ujung Tamiang, Desa Pusung Kapal, Kabupaten Aceh Tamiang. Kegiatan ini merupakan bagian dari program konservasi dengan skema pemberdayaan masyarakat terkait Ekowisata Ujung Tamiang yang telah dimulai sejak 2017.

*PT Pertamina EP Rantau Field participated in the release of sea turtle hatchlings (*Batagur Borneoensis*) at Ujung Tamiang Tourism Beach, Pusung Kapal Village, Aceh Tamiang Regency. This activity was part of a conservation program with a community empowerment scheme for Ujung Tamiang Ecotourism which has started in 2017.*



PT Pertamina Geothermal Energy (PGE), bersama BKSDA Jawa Barat melepasliarkan dua pasang elang ular bido (*Spilornis cheela*), yang sebelumnya diserahkan masyarakat untuk direhabilitasi di Pusat Konservasi Elang Kamojang (PKEK) yang dikelola PGE. Proses pelepasliaran termasuk pemilihan lokasi telah melalui serangkaian proses asesmen, untuk memastikan kondisi satwa serta kesiapan daya dukung habitat. [11.7]

*PT Pertamina Geothermal Energy (PGE), together with the West Java BKSDA, released two pairs of crested serpent eagles (*Spilornis cheela*), which were previously handed over to the community for rehabilitation at the Kamojang Eagle Conservation Center (PKEK) managed by PGE. The release process, including site selection, has undergone a series of assessment processes to ensure the condition of the animals and the readiness of the carrying capacity of the habitat. [11.7]*

PENGELOLAAN KEANEKARAGAMAN HAYATI PASCA-INSIDEN SUMUR YYA-1 [2-25] MANAGEMENT OF BIODIVERSITY POST YYA-1 WELL INCIDENT

Komitmen PERTAMINA dalam memulihkan dampak tumpahan minyak Sumur YYA-1 selaras dengan Rencana Pemulihan Fungsi Lingkungan Hidup (RPFLH) yang telah disetujui Kementerian Lingkungan Hidup dan Kehutanan (KLHK). Dalam melakukan program pemulihan lingkungan hidup, PERTAMINA telah melakukan studi terhadap ekosistem dan biota di area terdampak oleh pihak ketiga independen (Pusat Penelitian Lingkungan Hidup Institut Pertanian Bogor - PPLH IPB). Berdasarkan hasil studi PPLH IPB serta verifikasi oleh Kementerian Lingkungan Hidup dan Kehutanan (KLHK), secara umum, ekosistem (sedimen dasar laut, terumbu karang, padang lamun, kualitas air laut, kualitas udara) dan biota (nekton, ikan) tidak terdampak tumpahan minyak, kecuali tanaman Mangrove spesies *Rhizophora*.

Terhadap mangrove terdampak telah dilakukan pemulihan dengan pengkayaan vegetasi mangrove di area terdampak sejumlah 233.498 pohon mangrove atau 656% (lebih dari 6 kali) dari jumlah pohon terpapar minyak, yaitu 35.569 pohon. Berikut detail identifikasi spesies Mangrove yang ditanam:


*PERTAMINA's commitment to recovering from the impact of the YYA-1 well oil spill aligns with the Environmental Function Recovery Plan (RPFLH) which has been approved by the Ministry of Environment and Forestry. In carrying out the environmental recovery program, PERTAMINA with the involvement of an independent third party (Center for Environmental Research, Bogor Agricultural IPB University - PPLH IPB), has conducted a study on ecosystems and biota in the affected areas. The results of the PPLH IPB study and verification by the Ministry of Environment and Forestry showed that, in general, ecosystems (seabed sediments, coral reefs, seagrass beds, seawater quality, and air quality) and biota (nekton, fish) are not affected by the oil spill, except for *Rhizophora* species of mangrove.*

The affected mangroves have been recovered with enrichment of mangrove vegetation in the affected area with 233,498 mangrove trees, or 656% (more than 6 times) of the total of 35,569 trees exposed to oil. The following are details on identified mangrove species planted:

Nama Spesies <i>Species Name</i>	Status IUCN <i>IUCN Status</i>	Langkah Mitigasi/Pemulihan <i>Mitigation/Recovery Measures</i>
Bakau Kurap <i>(Rhizophora mucronata)</i>	Risiko Rendah (LC) <i>Least Concern</i>	Pemulihan substrat mangrove dan pengkayaan vegetasi mangrove sejumlah 233.498 pohon mangrove, tersebar di: <ul style="list-style-type: none"> • Karawang: 136.401 individu • Bekasi: 12.920 individu • Kepulauan Seribu: 63.677 individu • Banten: 20.400 individu Recovery of mangrove substrates and enrichment of mangrove vegetation totaling 233,498 mangrove trees, spread across: <ul style="list-style-type: none"> • Karawang: 136,401 individuals • Bekasi: 12,920 individuals • Seribu Islands: 63,677 individuals • Banten: 20,400 individuals
Bakau Merah <i>(Rhizophora stylosa)</i>	Risiko Rendah (LC) <i>Least Concern</i>	
Bakau Kecil <i>(Rhizophora apiculata)</i>	Risiko Rendah (LC) <i>Least Concern</i>	



ENERGI UNTUK SEMUA *ENERGIZING ALL*



PERTAMINA menjalankan bisnis dengan mengutamakan keselamatan dan kesehatan kerja, serta keselamatan proses guna mencegah insiden, disertai rekrutmen dan pengembangan talenta-talenta terbaik menjadi Perwira PERTAMINA unggul, serta terus berinovasi. Kami juga melibatkan dan memberdayakan masyarakat di sekitar wilayah operasi.

PERTAMINA runs its business by prioritizing occupational health and safety, as well as process safety to prevent incidents, along with recruitment and development of the best talents to become excellent and innovative PERTAMINA Officers. We are also involving and empowering the communities around our operating areas.

KESELAMATAN DAN KESEHATAN KERJA (K3) [11.9] OCCUPATIONAL HEALTH AND SAFETY (OHS)

Aspek K3 sangat penting bagi PERTAMINA dalam mendukung operasi dan bisnis yang berkelanjutan. Penerapan K3 mencakup Holding, Subholding beserta entitas anak dan unit operasi/unit bisnis masing-masing, serta anak perusahaan (AP) jasa dan portofolio. Penerapan aspek K3 dalam proses bisnis perusahaan menjadi tanggung jawab seluruh Fungsi di PERTAMINA dengan Fungsi HSSE bertindak sebagai fasilitator dan advisor.

PERTAMINA memiliki Management System yang dikenal dengan nama SUPREME (Sustainability PERTAMINA Expectations for HSSE Management Excellence), dan HSSE Golden Rules sebagai acuan untuk penerapan *Safe Behavior* bagi seluruh pekerja dan mitra kerja. Evaluasi kinerja penerapan K3 dilaksanakan berdasarkan pencapaian target Indikator Kinerja Kunci (KPI) termasuk bagi Direksi, serta pelaksanaan audit penerapan SUPREME. Pada tahun 2021, Perseroan menerbitkan Pedoman Pengelolaan Keadaan Darurat, Krisis, dan Keberlangsungan Bisnis Di PERTAMINA, sebagai respon atas insiden berskala besar yang terjadi pada periode pelaporan. Dari hasil evaluasi diketahui beberapa entitas anak dan unit operasi/unit bisnis masing-masing Subholding mencatatkan kinerja tanpa insiden. [3-3]

The OHS aspect is very crucial for PERTAMINA in supporting sustainable operations and business. The OHS implementation covers Holding Company, Subholdings and their respective subsidiaries and operating units/business units, as well as service and portfolio subsidiaries. The implementation of OHS aspects in the company's business processes is the responsibility of all Functions at PERTAMINA with the HSSE Function as a facilitator and advisor.

PERTAMINA has a management system referred to as SUPREME (Sustainability PERTAMINA Expectations for HSSE Management Excellence), and HSSE Golden Rules as a reference for the implementation of Safe Behavior for all employees and partners. The OHS implementation performance is evaluated based on the achievement of the Key Performance Indicators (KPI) including for the Board of Directors, as well as the audit on the SUPREME implementation. In 2021, the Company issued Guidelines for Managing Emergency, Crisis, and Business Continuity at PERTAMINA, as a response to large-scale incidents that occurred during the reporting period. The evaluation results showed that several subsidiaries and operating units/business units of each Subholding recorded performance without incident. [3-3]

SISTEM MANAJEMEN K3 [403-1][403-8] OHS MANAGEMENT SYSTEM

PERTAMINA menerapkan sistem manajemen K3 untuk seluruh karyawan, pekerja kontraktor/pemasok/pihak ketiga lain, dengan mengedepankan aspek keselamatan dan kesehatan dalam bekerja.
PERTAMINA implements an OHS management system for all employees, workers of contractors/suppliers/other third parties, by upholding safety and health aspects at work.

Keselamatan

PERTAMINA sangat memerhatikan aspek-aspek keselamatan dalam bekerja dan beraktivitas.

Tujuan:

- Tanpa insiden;
- Menghilangkan faktor-faktor risiko kecelakaan kerja.

Kesehatan

Bagi PERTAMINA, kesehatan adalah aset yang sangat penting dalam bekerja dan beraktivitas. Kami mengadakan program-program untuk mendukung kesehatan pekerja.

Tujuan:

- Mencegah penyakit akibat kerja;
- Menciptakan iklim kerja yang sehat, serta mendukung kesehatan pekerja.

Safety

PERTAMINA pays close attention to safety aspects in work and activities. Safety is a top priority.

Objectives:

- *No incidents;*
- *Eliminate risk factors of work accidents.*

Health

For PERTAMINA, health is a very important asset in work and activities. We carry out programs to support employees' health.

Objectives:

- *Preventing occupational diseases;*
- *Creating a healthy work climate, as well as supporting the health of employees health.*

Standarisasi K3
OHS Standards

Internal

- SUPREME;
- Corporate Life Saving Rules;
- Pedoman HSSE;
- Contractor Safety Management System (CSMS).

Eksternal

- Sistem Manajemen K3 dan Lindung Lingkungan (SMK3LL);
- Sistem Manajemen Pengamanan Peraturan Kapolri No. 24/2007;
- ISO 45001 Sistem Manajemen K3;
- ISRS

Internal

- SUPREME;
- Corporate Life Saving Rules;
- HSSE Guideline;
- Contractor Safety Management System (CSMS).

External

- OHS Management and Environmental Protection System (SMK3LL);
- National Police Chief Regulation No. 24/2007 on Security Management System;
- ISO 45001 OHS Management System;
- ISRS

SUPREME DAN HSSE GOLDEN RULES [SHS-6.C2] *SUPREME AND HSSE GOLDEN RULES*

SUPREME merupakan sistem manajemen untuk mengintegrasikan praktik-praktik HSSE terbaik/kelas dunia secara terstruktur dan sistematis pada tingkat Holding, Subholding, beserta entitas anak dan unit operasi/unit bisnis masing-masing, maupun anak perusahaan (AP) jasa dan portofolio. SUPREME mendorong terciptanya HSSE Beyond Culture dan menjadikan HSSE sebagai *way of life* insan PERTAMINA, sehingga akan mendukung nilai-nilai kepemimpinan dalam menciptakan lingkungan kerja dan produk-produk bisnis sesuai aspek-aspek HSSE, serta implementasi manajemen risiko operasional yang unggul.

SUPREME is a management system to integrate the best/world-class HSSE practices in a structured and systematic way at the Holding Company, Subholding, and their respective subsidiaries and operating units/business units, as well as service and portfolio subsidiaries. SUPREME encourages the creation of HSSE Beyond Culture and makes HSSE a way of life for PERTAMINA personnel to support leadership values in creating a work environment and business products according to HSSE aspects, as well as implementing excellent operational risk management.








Proses, Ekspektasi, Kelengkapan, dan Tujuan SUPREME <i>Process, Expectation, Completeness, and Objectives of SUPREME</i>			
Proses dan Ekspektasi <i>Process and Expectation</i>		Kelengkapan <i>Completeness</i>	Tujuan <i>Objectives</i>
Proses 1 Kepemimpinan dan Akuntabilitas <i>Process 1 Leadership and Accountability</i>	191 ekspektasi 191 expectations	<ul style="list-style-type: none"> • Pedoman Implementasi SUPREME • SUPREME Internal Audit Protocol (SIAP) • Continuous Performance Improvement Management Tools • Pedoman Standar Proses-proses Bisnis Utama HSSE • SUPREME Implementation Guidelines • SUPREME Internal Audit Protocol (SIAP) • Continuous Performance Improvement Management Tools • HSSE Key Business Process Standard Guidelines 	HSSE Beyond Culture <i>HSSE Beyond Culture</i>
Proses 2 Kebijakan dan Sasaran <i>Process 2 Policy and Objectives</i>			Kompetensi pengendalian risiko dan kepatuhan aspek HSSE sebagai "Way of Life" Insan PERTAMINA. <i>Competence of risk control and compliance with HSSE aspects as a "Way of Life" for PERTAMINA Personnel.</i>
Proses 3 Organisasi, Tanggung Jawab, Sumber Daya, dan Dokumen <i>Process 3 Organization, Responsibilities, Resources and Documents</i>			
Proses 4 Manajemen Risiko <i>Process 4 Risk Management</i>			
Proses 5 Perencanaan dan Prosedur <i>Process 5 Planning and Procedure</i>			
Proses 6 Implementasi dan Pengendalian Operasional <i>Process 6 Operational Implementation and Control</i>			
Proses 7 Jaminan: Pemantauan, Pengukuran, dan Audit <i>Process 7 Assurance: Monitoring, Measurement and Audit</i>			Manajemen Risiko Operasional yang Ekselen <i>Excellent Operational Risk Management Zero Accident</i>
Proses 8 Tinjauan <i>Process 8 Review</i>			



AUDIT STANDAR K3 DAN SURVEI BUDAYA HSSE OHS STANDARD AUDIT AND HSSE CULTURE SURVEY

Secara berkala, PERTAMINA melakukan audit atas implementasi standar K3 yang diterapkan. Audit dilakukan internal maupun eksternal dengan melibatkan lembaga independen. Audit internal SUPREME dilaksanakan dengan periode interval 1-3 tahun sekali. Pada tahun 2021, tercatat ada 24 organisasi yang terdiri dari Subholding/anak perusahaan/unit operasi/unit bisnis yang melaksanakan audit internal SUPREME. Adapun definisi dari peringkat warna Audit SUPREME yaitu:

PERTAMINA regularly conducts audits on the implementation of applicable OHS standards. The audits are carried out internally and externally by involving an independent institution. SUPREME internal audit is conducted at intervals of 1-3 years. In 2021, there were 24 organizations consisting of Subholdings/subsidiaries/operating units/business units that carried out SUPREME internal audit. The definition of the SUPREME Audit color rating is:

Warna Color Type	Definisi Definition
 <p>Hijau Tua Dark Green</p>	<p>Seluruh proses, SPT & SBT dan implementasinya telah melampaui syarat minimum sehingga secara umum risiko kegiatan operasional telah mampu dikelola secara aman. (Excellence/Generative)</p> <p><i>All process, SPT & SBT and their implementation have exceeded minimum requirements that in general the operational have been able to be safely managed. (Excellence/Generative)</i></p>
 <p>Hijau Muda Light Green</p>	<p>Seluruh proses, SPT & SBT dan implementasinya memenuhi syarat minimum sehingga secara umum risiko kegiatan operasional telah mampu dikelola secara aman. (Acceptable/Fully Adequate)</p> <p><i>All process, SPT & SBT and their implementation have met minimum requirements and risk management in general can be is tolerable/adequate to carry out operating activities (Acceptable/Fully Adequate)</i></p>
 <p>Kuning Yellow</p>	<p>Sebagian besar proses, SPT & SBT dan implementasinya telah memenuhi syarat minimum dan pengelolaan risikonya secara umum masih dapat ditoleransi/mencukupi untuk dapat melaksanakan kegiatan operasional. (Tolerable/Adequate)</p> <p><i>Most of processes, SPT & SBT and their implementation met minimum requirements and risk management in general can be is tolerable/adequate to carry out operating activities. (Tolerable/Adequate)</i></p>
 <p>Oranye Orange</p>	<p>Sebagian proses, SPT & SBT dan implementasinya tidak memenuhi syarat serta berpotensi memberikan dampak risiko menengah ke tinggi terhadap kegiatan operasional kondisi tersebut tidak dapat ditoleransi. (Not Tolerable)</p> <p><i>Some of processes, SPT & SBT and their implementation do not meet the requirements, and potentially pose moderate up to high risks to the operating activities that the conditions are not tolerable. (Not Tolerable)</i></p>
 <p>Merah Red</p>	<p>Seluruh proses, SPT & SBT dan implementasinya tidak memenuhi syarat serta berpotensi memberikan dampak risiko tinggi terhadap kegiatan operasional sehingga kondisi tersebut tidak dapat diterima. (Unacceptable)</p> <p><i>Most of processes, SPT & SBT and their implementation do not meet requirements and potentially pose high risk to operating activities that the conditions are unacceptable. (Unacceptable)</i></p>

Pada tahun 2021, 17 organisasi yang diaudit merupakan organisasi yang pada tahun sebelumnya mendapat peringkat merah dan oranye, sementara 7 lainnya merupakan organisasi yang baru pertama kali diaudit. Dari 17 organisasi yang dilakukan audit ulang, sebanyak 9 organisasi berhasil meningkatkan peringkat menjadi Kuning dan 1 organisasi meningkat menjadi Hijau Muda.

In 2021, 17 audited organizations were organizations that were rated red and orange in the previous year, while the other 7 were organizations that were audited for the first time. Out of the 17 organizations that were reaudited, 9 of them managed to increase their rating to Yellow and 1 organization rose to Light Green.

Hasil Audit Internal SUPREME Tahun 2021 SUPREME Internal Audit Results 2021					
Jumlah Organisasi Number of Organizations	Merah Red	Oranye Orange	Kuning Yellow	Hijau Muda Light green	Hijau Tua Dark green
24	5	8	10	1	0

Selain 24 organisasi yang diaudit SUPREME pada tahun 2021, terdapat 33 organisasi lainnya yang diwajibkan untuk melakukan tindak lanjut hasil audit SUPREME tahun sebelumnya. Organisasi ini mendapatkan peringkat Kuning hingga Hijau Tua pada audit tahun 2020, dan seluruh organisasi ini telah berhasil menyelesaikan tindak lanjut hasil audit sebelumnya.

In addition to the 24 organizations that underwent a SUPREME audit in 2021, there were 33 other organizations required to follow up on the findings of the previous year's SUPREME audit. These organizations were rated Yellow to Dark Green in the 2020 audit, and all of the organizations have successfully completed follow-up on the findings of previous audits.

PERTAMINA juga melakukan Survei Budaya HSSE dengan nilai rata-rata skor mencapai 4,01 dari skala 5, atau berada pada level Proactive. Pencapaian tersebut menandakan level budaya yang masih relatif sama dari tahun 2020 sebesar 4,03 dari skala 5 (level Proactive). Hal ini juga menandakan bahwa PERTAMINA konsisten dalam melakukan upaya menjaga level budaya HSSE di organisasinya.

PERTAMINA also conducted the HSSE Cultural Survey with an average score of 4.01 out of a scale of 5, or at the Proactive level. This achievement indicated that the culture level was still relatively the same from 2020 at 4.03 out of a scale of 5 (Proactive level). This also indicated that PERTAMINA has been consistent in making efforts to maintain the level of HSSE culture in its organization.

Hasil Survei Budaya HSSE HSSE Culture Survey Results			
Uraian Description	2021	2020	2019
Skor Score	4.01	4.03	3.98
Level Level	Proactive	Proactive	Proactive

PERTAMINA juga melaksanakan audit Fit to Work (FTW) mengacu pada panduan yang diterbitkan oleh IPIECA tahun 2011 dan regulasi dari Kementerian Tenaga Kerja Republik Indonesia, untuk memastikan pekerja dan mitra kerja berada dalam kondisi sehat dan dapat beraktivitas sesuai beban pekerjaan yang diberikannya. Pada tahun 2021, pelaksanaan audit FTW mencakup 24 lokasi, dengan skor rata-rata mencapai 2,63 dari skala 4. Audit FTW dilakukan sebagai bagian dari Audit SUPREME mulai tahun 2020 ke seluruh unit operasi/anak perusahaan PERTAMINA Grup. Sementara Audit FTW tahun 2021 dilakukan di 17 lokasi yang mendapatkan peringkat SUPREME Merah dan Oranye pada tahun 2020 serta 7 organisasi yang baru diaudit di 2021.

PERTAMINA also conducts a Fit to Work (FTW) audit which refers to the guidelines issued by IPIECA in 2011 and regulations from the Ministry of Manpower of the Republic of Indonesia, to ensure employees and partners are in good health and able to do their activities according to the workload assigned to them. In 2021, the FTW audit covered 24 locations, with an average score of 2.63 out of a scale of 4. The FTW audit was conducted as part of the SUPREME Audit, which began in 2020 to all operating units/subsidiaries of the PERTAMINA Group. Meanwhile, the 2021 FTW Audit was conducted in 17 locations that had received SUPREME Red and Orange ratings in 2020 and in 7 organizations that were audited for the first time in 2021.

Hasil Audit <i>Fit to Work</i> <i>Audit Fit to Work Results</i>		
Uraian <i>Description</i>	2021	2020
Skor <i>Score</i>	2.63	2.83



Audit eksternal untuk aspek K3 yakni audit sertifikasi ISO 45001 atau OHSAS 18001. Audit dilakukan pihak ketiga, yakni lembaga sertifikasi independen yang telah diakreditasi negara. Pada tahun 2021, ada 42 organisasi, yakni Subholding/anak perusahaan/unit operasi/unit bisnis yang tercatat memiliki sertifikat ISO 45001 atau OHSAS 180001.

The external audit for OHS aspect is an audit for ISO 45001 or OHSAS 18001 certification. The audit is conducted a third party as an independent certification body that has been accredited by the state. In 2021, some 42 out of the total number of organizations consisting of Subholdings/subsidiaries/operational units/business units were recorded as having ISO 45001 or OHSAS 180001.

Selain itu, dilaksanakan pula Audit ISRS 9 oleh DNV untuk 6 lokasi Refinery Unit di Segmen Refining & Petrochemical untuk memvalidasi penerapan sistem manajemen terintegrasi yang mendukung keberlanjutan perusahaan, dengan fokus utama pada aspek *process safety, security, asset integrity*, dan *knowledge management*. Audit ini secara khusus dilakukan di Segmen Refining & Petrochemicals yang memiliki risiko keselamatan proses yang lebih tinggi dibanding unit operasi di Subholding lainnya. Dari

In addition, ISRS 9 audit was also conducted by DNV on 6 Refinery Unit locations in Refining & Petrochemical Segment to validate the integrated management system implementation that supports company sustainability, with the main focus on aspects of process safety, security, asset integrity, and knowledge management. The audit was specifically conducted at Refining & Petrochemicals Segment which has a higher process safety risk than operating units in other Subholdings. The audit

audit ini, didapatkan rekomendasi *opportunity for improvement* yang akan ditindaklanjuti oleh seluruh Refinery Unit untuk meningkatkan kinerja sistem manajemen terintegrasinya, dan secara khusus dapat mencegah terjadinya insiden skala besar di kilang PERTAMINA. Aspek ini merupakan salah satu Fokus Keberlanjutan yang telah ditetapkan PERTAMINA.

finding recommendations would provide room for improvement to be followed up by all Refinery Units to improve their integrated management system performance, particularly to prevent large-scale incidents at the PERTAMINA refineries. This aspect is one of the Sustainability Focuses that has been established by PERTAMINA.

PENERAPAN CSMS UNTUK KONTRAKTOR/PEMASOK/PIHAK KETIGA [SHS-1.C3] CSMS IMPLEMENTATION FOR CONTRACTORS/SUPPLIERS/THIRD PARTIES

Pengelolaan HSSE melibatkan kontraktor, pemasok maupun pihak ketiga lainnya, melalui penerapan *Contractor Safety Management System* (CSMS). Dalam CSMS, pihak-pihak yang bekerja di wilayah operasi PERTAMINA, terutama kontraktor, harus memenuhi persyaratan minimum aspek HSSE berdasarkan risiko pekerjaan sebagai persyaratan mengikuti proses lelang pekerjaan. Kontraktor harus melewati tahapan prakualifikasi dan kualifikasi tiga tingkatan klasifikasi kontraktor, yaitu kontraktor yang mampu mengelola pekerjaan berisiko tinggi, kontraktor yang mengelola pekerjaan risiko menengah, dan kontraktor yang mengelola pekerjaan risiko rendah. Hanya mereka yang telah memenuhi persyaratan CSMS yang dapat bekerja di lokasi PERTAMINA. [414-1]

PERTAMINA menyediakan *coaching* dan klinik CSMS sebagai salah satu upaya untuk meningkatkan kapabilitas, terutama bagi kontraktor/pemasok/pihak ketiga lokal, sehingga mereka memiliki kemampuan aspek HSSE yang memadai untuk berpartisipasi dalam kegiatan *supply chain* PERTAMINA yang mayoritas bersifat *high risk*. Untuk mendapatkan sertifikat CSMS PERTAMINA, salah satu syarat yang harus dimiliki oleh kontraktor/pemasok/pihak ketiga adalah memiliki sertifikasi Sistem Manajemen HSSE dari Lembaga Sertifikasi Eksternal, seperti ISO 45001 atau OHSAS 18001 serta ISO 14001.

HSSE management involves contractors, suppliers and other third parties through the implementation of the Contractor Safety Management System (CSMS). As part of the CSMS, parties working in PERTAMINA's operating areas, especially contractors, must meet the minimum requirements for the HSSE aspect based on job risk as a requirement to participate in the job auction process. Contractors must pass the pre-qualification and qualification stages of three levels of contractor classification, i.e. contractors who are able to manage high-risk jobs, contractors who manage medium-risk jobs, and contractors who manage low-risk jobs. Only those who have met the CSMS requirements can work at PERTAMINA locations. [414-1]

PERTAMINA provides CSMS coaching and clinics in bids to increase capabilities, especially for local contractors/suppliers/third parties, to have adequate HSSE aspects to participate in PERTAMINA's supply chain activities, the majority of which are high-risk. To obtain a PERTAMINA CSMS certificate, one of the requirements that must be met by a contractor/supplier/third party is to have an HSSE Management System certification from an External Certification Agency, such as ISO 45001 or OHSAS 18001 and ISO 14001.

Hasil Penerapan Tahapan CSMS terhadap Pemasok/Kontraktor/Pihak Ketiga
Results of the Implementation of CSMS Stages for Suppliers/Contractors/Third Parties

Uraian Tingkat Kemampuan Pemasok/Kontraktor/Pihak Ketiga Description of Supplier/Contractor/Third Party Ability Level	Jumlah Total		
	2021*	2020	2019
Berkemampuan mengelola pekerjaan risiko tinggi Able to manage high-risk work	4,150	3,496	3,403
Berkemampuan mengelola pekerjaan risiko sedang Able to manage moderate-risk work	911	778	759
Berkemampuan mengelola pekerjaan risiko rendah Able to manage low-risk work	700	589	592
Jumlah pemasok/kontraktor/pihak ketiga Number of suppliers/contractors/third parties	5,761	4,863	6,001

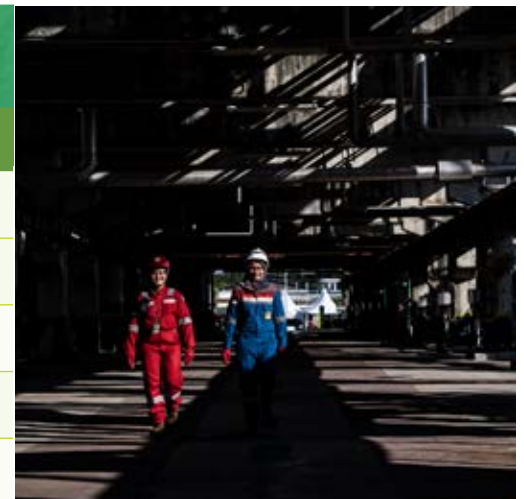
*Pemasok Holding dan Subholding
Holding Company and Subholding's vendors

Jika terbukti menyalahi ketentuan dalam persyaratan rencana kerja, PERTAMINA secara tegas akan menjatuhkan sanksi kepada vendor sesuai ketentuan berupa *blacklist*/sanksi kategori hitam. Sanksi ini merupakan kategori sanksi terberat yang berujung pada tidak diperkenalkannya vendor untuk mengikuti proses pengadaan barang dan jasa di PERTAMINA.

If it is proven that it violates the provisions in the work plan requirements, PERTAMINA will strictly impose sanctions on the vendor based on the provisions in the blacklist/black category sanction. Such a sanction is the heaviest category in which the vendor is not allowed to participate in the procurement process for goods and services at PERTAMINA.

Jumlah Vendor yang Dikenakan Sanksi
Number of Vendors Penalized

Kategori* Category*	2021	2020	2019
Blok Blocked	11,099	11,043	10,091
Hitam Black	171	164	154
Red Merah	44	45	43
Kuning Yellow	50	45	52
Hijau Green	5,576	4,832	4,567



*Hitam: Kelompok Penyedia Barang/Jasa ini tidak diperbolehkan mengikuti kegiatan Pengadaan Barang/Jasa selanjutnya selama 2 (tahun) tahun dan dilanjutkan dengan masa percobaan selama 1 tahun kepada Penyedia Barang/Jasa tersebut beserta pemilik dan/atau pengurusnya

Merah: Kelompok Penyedia Barang/Jasa ini tidak diperbolehkan mengikuti kegiatan Pengadaan Barang/Jasa selanjutnya selama 1 (satu) tahun sejak Sanksi dimasukkan ke dalam sistem

*Black: The providers of goods/services group are not allowed to take part in the next procurement of goods/services for 2 years and is followed by a probationary period of 1 year for the providers of goods/services and their owners and/or management

Red: The providers of goods/services group are not allowed to take part in the next procurement of goods/services for 1 (one) year since the sanction is included in the system

PELIBATAN KARYAWAN DAN PROTOKOL KOMUNIKASI K3 BAGI EKSTERNAL [SHS-1.C1] EMPLOYEE ENGAGEMENT AND EXTERNAL OHS COMMUNICATION PROTOCOL

Para pekerja dilibatkan dalam penerapan maupun pengelolaan K3 melalui perwakilan pekerja di Panitia Pembina Kesehatan dan Keselamatan Kerja (P2K3). Melalui perwakilan di serikat pekerja, karyawan juga menyampaikan aspirasi dalam menyertakan pasal-pasal terkait K3 di dalam Perjanjian Kerja Bersama (PKB). Mekanisme lain yang bisa menjadi saluran komunikasi, berkonsultasi dan sosialisasi perihal K3, yakni *safety induction*, *safety talk*, rapat P2K3, kegiatan Management Walk Through, *safety campaign*, serta *vendor day*. [403-4]

Employees are involved in OHS implementation and management through employee representatives on the Occupational Health and Safety Committee (P2K3). Through representatives in trade unions, employees also express their aspirations to include OHS-related articles in the Collective Labor Agreement (CLA). Other mechanisms that can be used as channels for communication, consultation, and dissemination regarding OHS, are safety induction, safety talk, P2K3 meetings, Management Walk Through activities, safety campaigns, and vendor day [403-4]



PERTAMINA menyusun sistem komunikasi internal maupun komunikasi eksternal dengan pemangku kepentingan lain seperti kontraktor, pemasok, pengunjung, tamu dan masyarakat. Komunikasi dilakukan melalui beragam media, cara dan teknologi yang secara efektif dapat menyampaikan pesan terkait penerapan K3. Selain itu, dalam setiap pertemuan baik tatap muka maupun daring, *safety induction*/informasi terkait K3 wajib disampaikan kepada pihak internal maupun eksternal.

PERTAMINA develops an internal and external communication system with other stakeholders such as contractors, suppliers, visitors, guests, and the community. Communication is carried out through multiple media, methods, and technologies that can effectively deliver messages regarding OHS implementation. In addition, at every meeting, both offline and online, safety induction/information on OHS must be presented to the internal and external parties.

Protokol Komunikasi Sistem Manajemen K3
OHS Management System Communication Protocol

Internal <i>Internal</i>	Eksternal <i>External</i>	
	Kontraktor, Pemasok, Mitra Kerja <i>Contractors, Suppliers, Partners</i>	Tamu dan Pengunjung <i>Guests and Visitors</i>
<ul style="list-style-type: none"> • Komitmen Perusahaan terhadap penerapan K3 di tempat kerja; • Program-program yang berkaitan dengan Penerapan K3 di tempat kerja; • Identifikasi bahaya, penilaian dan pengendalian resiko K3 di tempat kerja; • Prosedur kerja, instruksi kerja, diagram alur proses kerja serta material/bahan/alat/ mesin yang digunakan dalam proses kerja; • Tujuan K3 dan aktivitas peningkatan berkelanjutan lainnya; • Hasil-hasil investigasi kecelakaan kerja; • Perkembangan aktivitas pengendalian bahaya di tempat kerja; • Perubahan-perubahan manajemen Perusahaan yang mempengaruhi penerapan K3 di tempat kerja. • <i>The company's commitment to the implementation of OHS in the workplace;</i> • <i>Programs related to the application of OSH in the workplace;</i> • <i>Hazard identification, assessment and control of OHS risks in the workplace;</i> • <i>Work procedures, work instructions, work process flow diagrams and materials/tools/ machines used in the work process;</i> • <i>OHS objectives and other continuous improvement activities;</i> • <i>The results of work accident investigations;</i> • <i>Development of hazard control activities in the workplace;</i> • <i>Changes in Company management that affect the implementation of OHS in the workplace.</i> 	<ul style="list-style-type: none"> • Sistem Manajemen K3 kontraktor individual; • Peraturan dan persyaratan komunikasi kontraktor; • Kinerja K3 kontraktor; • Daftar kontraktor lain di tempat kerja; • Hasil pemeriksaan dan pemantauan K3; • Tanggap Darurat; • Hasil investigasi kecelakaan, ketidaksesuaian dan tindakan perbaikan dan tindakan pencegahan; • <i>Individual contractor of OHS Management System;</i> • <i>Contractors' communications regulations and requirements;</i> • <i>OHS contractor performance;</i> • <i>List of other contractors at work;</i> • <i>OHS inspection and monitoring results;</i> • <i>Emergency Response;</i> • <i>Results of accident investigations, non-conformities, and corrective and preventive actions;</i> • <i>Daily communication requirements.</i> 	<ul style="list-style-type: none"> • Persyaratan-persyaratan K3 untuk tamu; • Prosedur evakuasi darurat; • Aturan lalu lintas di tempat kerja; • Aturan akses tempat kerja dan pengawalan; • APD (Alat Pelindung Diri) yang digunakan di tempat kerja. • <i>OHS requirements for guests;</i> • <i>Emergency evacuation procedures;</i> • <i>Traffic rules at work;</i> • <i>Workplace access rules and escorts;</i> • <i>PPE (Personal Protective Equipment) that is used in the workplace.</i>
		
<p>Media Komunikasi K3</p> <p>Papan informasi Surat dan korespondensi Email dan internet Pengeras suara Rambu-rambu dan tanda bahaya K3 Bel, alarm, lampu bahaya Knowledge Sharing, Media Cetak Call Center 135</p> <p><i>OHS Communication Media</i></p> <p><i>Information boards Letters and correspondence Email and internet Loudspeakers OHS signs and warnings Bells, alarms, hazard lights Knowledge Sharing, Print Media Call Center 135</i></p>		

KINERJA K3 OHS PERFORMANCE

Komitmen PERTAMINA menerapkan praktik-praktik terbaik HSSE, antara lain diwujudkan dengan memasukkan keberhasilan pelaksanaan HSSE sebagai penilaian Indikator Kinerja Kunci (KPI) Direksi atau KPI Manajemen tahun 2021, di mana TRIR dan pencegahan insiden skala besar menjadi bagian dari KPI manajemen PERTAMINA. Untuk tahun 2021, target KPI TRIR tidak boleh melebihi 0,66 serta zero fatal accident dan zero major accident. Perhitungan mengacu kepada International Association of Oil & Gas Procedures, yakni per 1.000.000 jam kerja untuk LTIR dan TRIR, sedangkan untuk FAR per 100.000.000 jam kerja. [SHS-3.C1]

PERTAMINA is committed to implementing HSSE best practices by including the achievement of HSSE implementation as an assessment parameter of the Board of Directors' Key Performance Indicators (KPI) or Management KPIs in 2021, whereas TRIR and prevention of large-scale incidents are part of PERTAMINA's management KPIs. In 2021, the TRIR KPI target should not exceed 0.66 and have zero fatal accident and zero major accident. The calculation refers to the International Association of Oil & Gas Procedures, which is per 1,000,000 work hours for LTIR and TRIR, while for FAR is per 100,000,000 work hours. [SHS-3.C1]

Tingkat Kecelakaan pada Karyawan Tetap dan Kontraktor [403-9]
Accident Rate on Permanent Employees and Contractors

Kategori <i>Category</i>	Realisasi <i>Realization</i>		
	2021	2020	2019
Fatal Accident Rate (FAR) - per 100.000.000 Work Hour	0.50	0.74	0.54
Lost Time Incident Rate (LTIR) - per 1.000.000 Work Hour	0.01	0.02	0.03
Total Recordable Incident Rate (TRIR) - per 1.000.000 Work Hour	0.12	0.15	0.19

Jumlah Insiden pada Karyawan Tetap dan Kontraktor [403-9]
Number of Incidents on Permanent Employees and Contractors

	Kategori <i>Category</i>	Fatalitas <i>Fatality</i>	Lost Time Injury (LTI)	Restricted Work Days <i>Restricted Work Days</i>	Perawatan Medis <i>Medical Treatment</i>	Jumlah Kasus <i>Total Cases</i>
2021	Karyawan <i>Employee</i>	0	0	0	0	0
	Kontraktor <i>Contractor</i>	3	4	12	53	72
2020	Karyawan <i>Employee</i>	0	0	0	0	0
	Kontraktor <i>Contractor</i>	4	7	19	49	79
2019	Karyawan <i>Employee</i>	0	0	0	0	0
	Kontraktor <i>Contractor</i>	3	16	24	60	103

Keterangan: Di tahun 2019, Subholding belum terbentuk sehingga perhitungan TRIR, LTIR, FAR berdasarkan pembagian per direktorat.
Note: The Subholdings has not yet been established in 2019, therefore the calculation of TRIR, LTIR, FAR is based on the directorate.

Pencapaian FAR, LTIR, dan TRIR, serta indikator K3 lain pada tahun 2021 dipengaruhi beberapa insiden terkait keselamatan. Data mencakup pekerja Perusahaan dan kontraktor. Pengungkapan informasi terkait peristiwa-peristiwa keselamatan proses tahun 2021, disampaikan pada bahasan mengenai Keselamatan Proses dan Pencegahan Insiden Berskala Besar dalam Laporan ini. [403-9]

Terkait insiden fatalitas, peristiwa yang terjadi adalah pekerja kontraktor meninggal karena letupan pada cargo tank kapal. Pekerja kontraktor meninggal saat melakukan pekerjaan konstruksi pipa serta saat pelaksanaan *moving* alat berat. PERTAMINA telah melakukan langkah-langkah untuk mencegah kejadian serupa terjadi melalui tiga aspek langkah perbaikan: *Plant, Process/Procedure/System, serta People/Culture*.

The achievements of FAR, LTIR, and TRIR, as well as other OHS indicators in 2021, were affected by several safety-related incidents. The data includes the Company's employees and contractors. Disclosure of information on process safety incidents in 2021 is presented in the discussion on Process Safety and Large-Scale Incident Prevention in this Report. [403-9]

The fatal incident occurred when a contractor worker died due to an exploded cargo tank on a vessel. The contractor worker died while doing pipe construction work and while moving heavy equipment. PERTAMINA has taken steps to prevent similar incidents from happening through three aspects of rectification measures: Plant, Process/Procedure/System, and People/Culture.

Langkah-langkah Pencegahan Insiden Fatalitas Berulang
Prevention Measures for Recurring Fatal Incidents

<i>Plant</i>	<i>Process/Procedure/System</i>	<i>People/Culture</i>
<ul style="list-style-type: none"> • Membangun integritas aset fasilitas/<i>plant</i> melalui kontrak payung jasa inspeksi/ sertifikasi/ resertifikasi persetujuan layak operasi (PLO) fasilitas operasi; • Memperkuat <i>pre-use inspection tools/ equipment</i> kontraktor dan <i>good housekeeping</i> di area kerja; • Memperkuat pemeliharaan dan <i>turn around</i> (TA) fasilitas operasi. • <i>Building the integrity of facility/plant assets through an umbrella contract for inspection/certification/recertification services for Operational Worthiness Approval (PLO) of operating facilities;</i> • <i>Strengthening the contractors' pre-use inspection tools/equipment and good housekeeping in the work area;</i> • <i>Strengthening maintenance and turn around (TA) of operating facilities.</i> 	<ul style="list-style-type: none"> • Sosialisasi dan peningkatan pengawasan 12 komponen CLSR di area kerja; • Peningkatan implementasi dan pengawasan <i>full cycle</i> CSMS; • Mengintegrasikan aspek HSSE/<i>risk management</i> ke dalam sistem pengelolaan <i>human resources</i> (<i>effective organization, MOC, hand over system, leadership orientation</i>); • Membangun Sistem Manajemen Keselamatan Proses & Integritas Aset yang lebih kuat dan sistematis untuk guna memperbaiki implementasi <i>process safety & asset integrity</i>; • Mengintegrasikan sistem MCU/DCU PERTAMINA secara <i>online</i> (termasuk ke dalam <i>personnel database</i>) untuk memantau tindak lanjutnya secara efektif. • <i>Dissemination and increasing supervision of the 12 components of CLSR in the work area;</i> • <i>Improving implementation and monitoring of the full cycle of CSMS;</i> • <i>Integrating HSSE/risk management aspects into the human resources management system (effective organization, MOC, hand over system, leadership orientation);</i> • <i>Build a more robust and systematic Process Safety & Asset Integrity Management System to improve the implementation of process safety & asset integrity;</i> • <i>Integrating PERTAMINA's online MCU/DCU system (including into the personnel database) to monitor its follow-up effectively.</i> 	<ul style="list-style-type: none"> • Memperkuat HSSE Leadership melalui Visible Management Commitment dengan meningkatkan keterlibatan pimpinan tertinggi dan para pimpinan senior; • Memperkuat dan mengembangkan sistem pelatihan sehingga kualifikasi dan kompetensi pekerja PERTAMINA dan Mitra Kerja dapat dipenuhi; • Konsistensi dalam pelaksanaan <i>reward & consequences</i>. • <i>Strengthening HSSE Leadership through Visible Management Commitment by increasing the involvement of top management and senior leaders;</i> • <i>Strengthening and developing the training system to meet the qualifications and competencies of PERTAMINA employees and partners;</i> • <i>Consistency in the implementation of rewards & consequences.</i>

Meski dihadapkan pada beberapa insiden, secara umum kinerja K3 pada tahun 2021 memperlihatkan kesungguhan PERTAMINA menerapkan praktik-praktik terbaik HSSE. Beberapa Subholding maupun entitas anak dan unit operasi/unit bisnis, AP jasa dan portofolio, mencatatkan nihil kecelakaan kerja bersifat fatal, di antaranya: [403-9][SHS-2.C3]

- Proyek Strategis Nasional (PSN) Kilang Grass Root Refinery (GRR) Tuban berhasil menjaga angka kecelakaan nol atau zero accident hingga memasuki periode 1 juta jam kerja, per Juli 2021. Pencapaian ini dihitung sejak 13 Maret 2019 hingga Juli 2021. Jumlah jam kerja selamat per Agustus 2021 mencapai 1.045.946 jam kerja.
- Lapangan Bekapai di Wilayah Kerja PT Pertamina Hulu Mahakam (PHM) yang termasuk dalam zona 8 Regional Kalimantan Segmen Upstream, berhasil mencapai 10 tahun tanpa Lost Time Injury (LTI) atau kehilangan jam kerja akibat kecelakaan. Pencapaian yang diraih pada tanggal 27 Agustus 2021 ini setara dengan 8.221.414 jam kerja.

Despite these incidents, the OHS performance in 2021 generally showed PERTAMINA's seriousness in implementing HSSE best practices. Several Subholdings, as well as subsidiaries and operating units/business units, subsidiaries in services and portfolios, recorded zero fatal work accidents, including: [403-9][SHS-2.C3]

- *The Tuban Grass Root Refinery (GRR) National Strategic Project (PSN) managed to maintain zero accident rates until it entered a period of 1 million working hours, as of July 2021. This achievement was calculated from 13 March 2019 to July 2021. Total safe man hours as of August 2021 reached 1,045,946 man hours.*
- *The Bekapai Field in the Working Area of PT Pertamina Hulu Mahakam (PHM), which is located in zone 8 of the Kalimantan Region of Upstream Segment, has managed to reach 10 years without a Lost Time Injury (LTI) or lost working hours due to accidents. The achievement as of 27 August 2021 was equivalent to 8,221,414 working hours.*

Tingkat Kecelakaan pada Subholding [403-9][OG13]
Subholding Accident Rate

Segmen Segment	2021		
	FAR	LTIR	TRIR
Upstream	0.39	0.015	0.13
Refinery & Petrochemicals	0	0.015	0.15
Trading & Commercial	0	0	0.07
Gas	2.14	0.021	0.11
Power & NRE	0	0	0
Integrated Marine Logistics	7.22	0.072	0.22



PERTAMINA melakukan investigasi terstruktur untuk semua kejadian cedera dan insiden nyaris celaka, yang tertuang dalam Pedoman Klasifikasi dan Pencatatan Insiden dan Surat Keputusan Direktur Utama tentang Pengelolaan HSSE di PT PERTAMINA (Persero).

Kami juga memberikan perhatian pada upaya kesehatan kerja dalam rangka menjaga pekerja tetap sehat dan produktif, mengurangi risiko kesakitan, kematian dan kecatatan, serta pencegahan penyakit akibat kerja (PAK), yang ditetapkan dalam Peraturan Presiden No. 7 tahun 2019 tentang Penyakit Akibat yang Timbul karena Hubungan Kerja (PAK). Upaya yang dilakukan pada tahun 2021, antara lain: [403-3]

- Program kesehatan kerja yang mencakup higiene perusahaan, dan kesehatan lingkungan yang didasarkan pada identifikasi bahaya-bahaya kesehatan melalui penilaian risiko (*health risk assessment*);
- Persiapan prosedur kerja aman dan sehat.
- Edukasi kepada pekerja/mitra kerja tentang kondisi bahaya;
- Pengawasan dan mitigasi risiko bahaya kesehatan hingga pada level yang dapat diterima sesuai standar PERTAMINA dan peraturan di Indonesia;
- Pemeriksaan kesehatan berkala (*medical check-up* atau MCU)

PERTAMINA has carried out structured investigations for all incidents of injury and near-miss incidents, which are stipulated in the Guidelines for Classification and Recording of Incidents and the President Director & CEO's Decree on HSSE Management at PT PERTAMINA (Persero).

We also pay attention to occupational health efforts to maintain employees' health and productivity, reduce the risk of illness, death, and disability, and prevent occupational diseases (PAK), which is stipulated in the Presidential Regulation No. 7 of 2019 concerning Work Related Disease (PAHK). The efforts made in 2021, among others: [403-3]

- *Occupational health program covering company hygiene, industrial hygiene, and environmental health based on the identification of health hazards through a health risk assessment;*
- *Preparation of safe and healthy work procedures.*
- *Education for employees/partners about hazardous conditions;*
- *Monitoring and mitigating the risk of health hazards to an acceptable level according to PERTAMINA standards and Indonesian regulations;*
- *Periodic medical check-up (MCU)*

- Pemeriksaan kesehatan khusus untuk pekerja dengan pajanan bahaya tertentu (biological monitoring).
- Penyediaan APD yang memadai;
- Penguatan sistem tanggap darurat medis (Medical Emergency Response Preparedness)

Secara berkala dilakukan pemeriksaan kesehatan (*medical check-up* atau MCU) kepada pekerja, dan pekerja kontraktor/pemasok/mitra kerja, sebagai bagian dari implementasi *Corporate Life Saving Rule* (CSLR) PERTAMINA aspek *Fit to Work*, dan dalam rangka monitoring dampak risiko pekerjaan terhadap pekerja. Selama pandemi, pemeriksaan kesehatan berkala tetap dilakukan dengan mitigasi maksimal, dengan mempertimbangkan risiko paparan di mana fasilitas kesehatan berada serta kondisi medis masing-masing pekerja.

Sampai dengan akhir tahun 2021, berdasarkan hasil pemeriksaan kesehatan dan MCU rutin di lingkungan Kantor Pusat, belum ditemukan PAK (Penyakit Akibat Kerja). Pengungkapan informasi tentang PAK dominan pada Subholding maupun entitas anak dan unit operasi/unit bisnis, serta AP jasa dan portfolio disampaikan pada Laporan Keberlanjutan masing-masing. [403-10]

Kami juga melakukan upaya promosi kesehatan dalam rangka meningkatkan derajat kesehatan dan produktivitas kerja. Kegiatan yang dilaksanakan pada tahun 2021 di antaranya: [403-6]

- Kegiatan Wellness Program melalui *wellness challenge* (antara lain *Stay Energized Challenge*)
- Penyuluhan / webinar / bincang-bincang terkait Kesehatan (*health talk*)
- Program Konseling (*Employee Assistance Program*), juga memanfaatkan psikolog internal Perusahaan
- Penguatan Program Pencegahan & Pengendalian HIV di tempat Kerja, melalui implementasi Skrining HIV Mandiri pada sekitar 4000 pekerja & mitra kerja bekerja sama dengan ILO (International

- *Special health checks for employees exposed to specific hazards (biological monitoring).*
- *Provision of adequate PPE;*
- *Medical Emergency Response Preparedness Strengthening*

Medical check-up (MCU) is periodically carried out for employees, and contractors/suppliers/partners, as part of PERTAMINA's Corporate Life Saving Rule (CSLR) for the Fit to Work aspect, and to monitor the impact of work risks on employees. During the pandemic, periodic health checks have been carried out with maximum mitigation, taking into account the risk of exposure where the health facility is located and the medical condition of each employee.

Until the end of 2021, based on the results of regular health checks and MCU at the Head Office, no occupational disease (PAK) has been found. Disclosure of information on dominant occupational diseases in Subholdings and subsidiaries and operating units/business units, as well as service and portfolio subsidiaries is submitted in their respective Sustainability Reports. [403-10]

Our health promotion efforts are aimed to improve health and work productivity. The activities carried out in 2021 include: [403-6]

- *Wellness Program activities are carried out through wellness challenges (including the Stay Energized Challenge)*
- *Counseling/webinar/health talk*
- *Counseling Program (Employee Assistance Program), by the Company's internal psychologist*
- *Strengthening the HIV Prevention & Control Program in the Workplace, through independent HIV Screening to approximately 4,000 employees and work partners in collaboration with the ILO*

Labour Organization), Kementerian Kesehatan dan Kementerian Ketenagakerjaan Republik Indonesia. PERTAMINA mendapatkan apresiasi dari ILO, dan beberapa unit dan Anak Perusahaan PERTAMINA mendapatkan Kategori Platinum Program P2HIV dari Kementerian Ketenagakerjaan Republik Indonesia, antara lain PGN, PHE ONWJ, PHKT, RU V dan RU VI

(International Labor Organization), the Ministry of Health and the Ministry of Manpower of the Republic of Indonesia. PERTAMINA received appreciation from the ILO, and several units and subsidiaries received the Platinum Category of the P2HIV Program from the Ministry of Manpower of the Republic of Indonesia, including PGN, PHE ONWJ, PHKT, RU V, and RU VI.

Selama periode pelaporan, PERTAMINA melaksanakan beberapa pelatihan untuk meningkatkan penerapan K3, di antaranya terkait penerapan SUPREME. Selama tahun 2021, ada 914 karyawan, dan pekerja kontraktor/pemasok/mitra kerja yang mengikuti pelatihan penerapan SUPREME. Selain itu juga diselenggarakan pelatihan rutin oleh setiap Subholding maupun entitas anak dan unit operasi/unit bisnisnya, serta AP jasa dan portofolio. Pengungkapan informasi terkait hal tersebut disampaikan dalam Laporan Keberlanjutan masing-masing. [403-5] [SHS-1.C2]

In the reporting period, PERTAMINA conducted several trainings to improve the implementation of OHS, including those related to the implementation of SUPREME. During 2021, there were 914 employees, and contractors/suppliers/partners who participated in the SUPREME implementation training. In addition, regular training is also held by each Subholding as well as its subsidiaries and operating units/business units, service and portfolio subsidiaries. Disclosure of this information is presented in the respective Sustainability Reports. [403-5] [SHS-1.C2]

Pelatihan bagi Karyawan dan Kontraktor terkait SUPREME Tahun 2021 [403-5]
SUPREME Training for Employees and Contractors SUPREME in 2021

Uraian <i>Description</i>	Jumlah Peserta <i>Number of Participants</i>	
	2021	2020
Training SUPREME (Peserta yang Diaudit) <i>SUPREME Training (Auditee)</i>	756	1,570
Training SUPREME (Auditor) <i>SUPREME Training (Auditor)</i>	158	265
Training HSE Demo Room <i>HSE Demo Room Training</i>	70	494
Pelatihan Daring (Webinar) <i>Training (Webinar)</i>	54	952
Training (Webinar) Process Safety & Asset Integrity Management (PSAIM) <i>PSAIM Training (Webinar)</i>	659	1,972
Training Pertolongan Pertama <i>First Aid Training</i>	1,209	748
Jumlah <i>Total</i>	2,906	6,001

PENANGANAN COVID-19 COVID-19 HANDLING

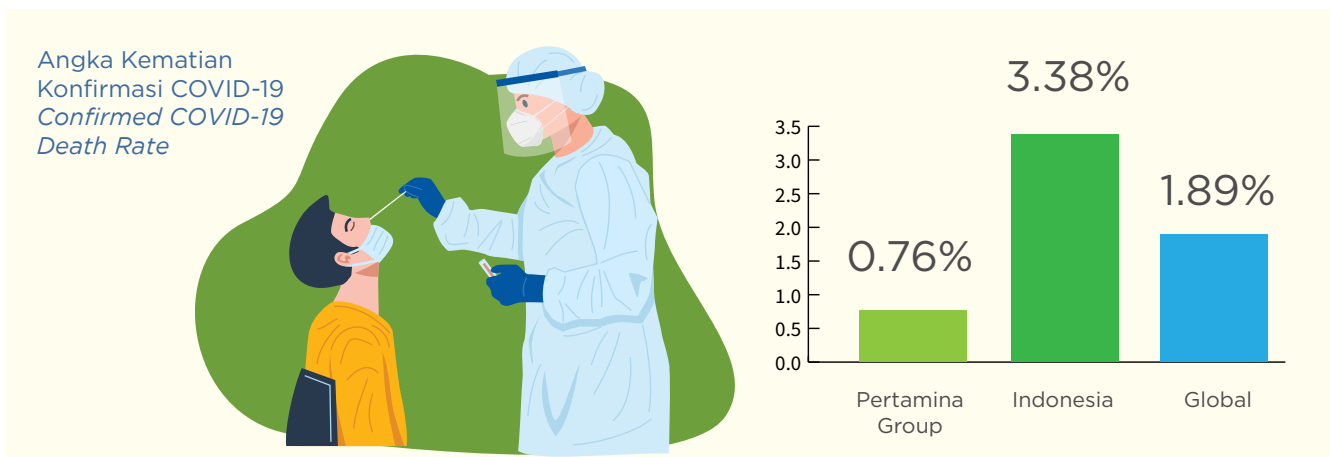
PERTAMINA telah menerapkan protokol pencegahan COVID-19 di semua lini bisnis. Strategi yang dilakukan telah dapat menjamin seluruh kegiatan di hulu migas dan hilir migas tetap dioperasikan selama pandemi. Penanggulangan COVID-19 di PERTAMINA Grup cukup efektif dalam menekan jumlah kematian pada kasus terkonfirmasi COVID-19 jauh di bawah angka Nasional maupun global, rata-rata positivity rate pada tahun 2021 PERTAMINA Grup sebesar 7,7% juga dibawah angka Nasional sebesar 10,6%.

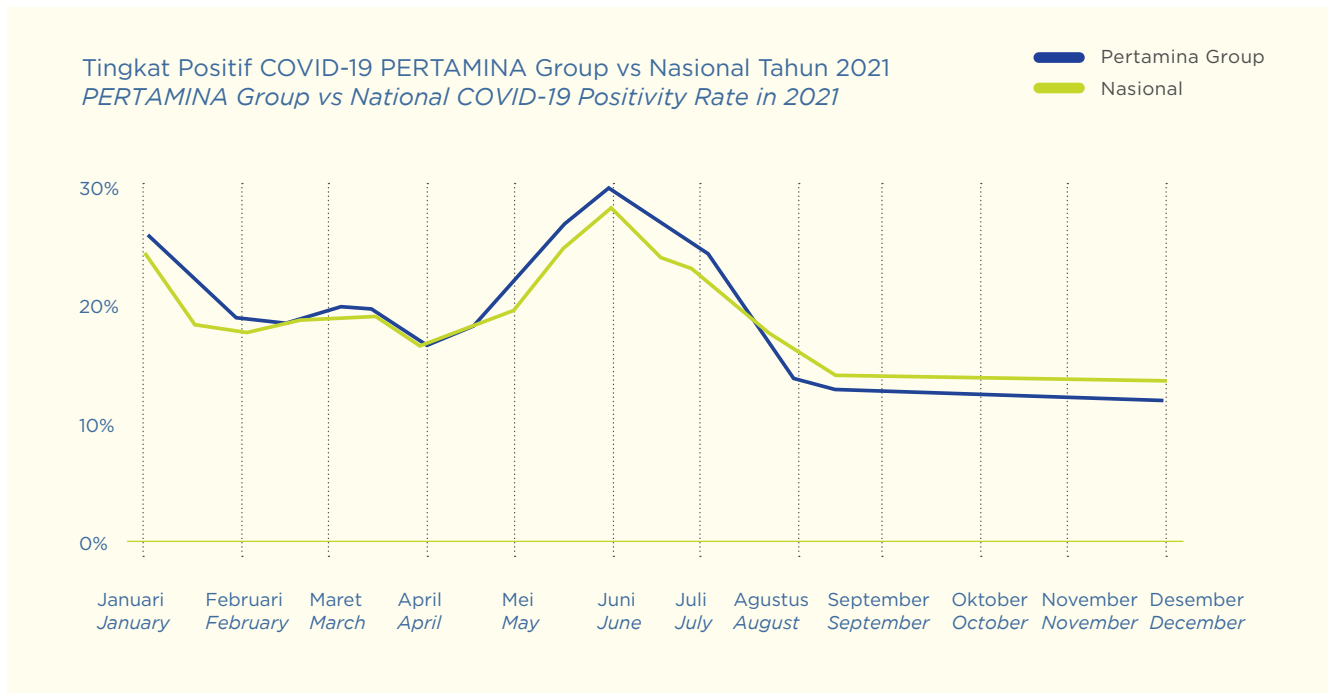
PERTAMINA has implemented a COVID-19 prevention protocol in all business lines. The strategy has managed to ensure all upstream and downstream activities keep operating during the pandemic. The COVID-19 handling at PERTAMINA Group is quite effective in reducing the number of deaths in confirmed cases of COVID-19, far below the national and global figures, the average positivity rate in 2021 for PERTAMINA Group is 7.7%, which is also below the national figure of 10.6%.



PERTAMINA melalui beberapa Unit dan Anak Perusahaan mendapat Penghargaan Pencegahan dan Penanggulangan COVID-19 di Tempat Kerja dari Kementerian Tenaga Kerja Republik Indonesia, diantaranya Pertamina MOR 6, RU 6, RU 5, PHKT, dan PHM.

A number of units and subsidiaries of PERTAMINA received the COVID-19 Prevention and Control at Workplace Award from the Ministry of Manpower of the Republic of Indonesia, including Pertamina MOR 6, RU 6, RU 5, PHKT, and PHM.





Sebagian besar kasus ditemukan dalam rangka *active case finding* dan skrining rutin, sebagai bagian dari implementasi 3T (*Testing, Tracing & Treatment*) yang dilakukan Perusahaan. PERTAMINA melalui beberapa Unit dan Anak Perusahaan mendapat Penghargaan Pencegahan dan Penanggulangan COVID-19 di Tempat Kerja dari Kementerian Tenaga Kerja Republik Indonesia, diantaranya Pertamina MOR 6, RU 6, RU 5, PHKT, dan PHM.

Most cases are found during active case finding and regular screening, as part of the PERTAMINA's 3T (Testing, Tracing & Treatment) implementation. Pertamina through several units and subsidiaries received the COVID-19 Prevention and Control at Work Award from the Ministry of Manpower of the Republic of Indonesia, including Pertamina MOR 6, RU 6, RU 5, PHKT, and PHM.

Selain pengelolaan pandemi untuk menjaga operasional tetap terjaga, Pertamina juga menjalankan proyek-proyek strategis nasional yang ditugaskan Pemerintah kepada PERTAMINA, tetap berjalan sesuai dengan perencanaan.

Aside from managing the pandemic to ensure the continuity of operational activities, PERTAMINA also carried out national strategic projects assigned by the Government to run as planned.

PERTAMINA mengoperasikan 4 Rumah Sakit Darurat COVID-19 yang menerima sekitar 8.175 pasien sepanjang tahun 2021, yaitu RS Pertamina Jaya (RSPJ), RS Emergency Modular Simprug mulai tahun 2020, dan pada tahun 2021 terdapat penambahan RSPJ Ekstensi Asrama Haji, di Pondok Gede, Jakarta Timur, dan RS PELNI ekstensi Tanjung Duren, selain RS Jejaring Pertamedika IHC yang juga melayani pasien COVID-19.

PERTAMINA has been operating four COVID-19 Emergency Hospitals and treated approximately 8,175 patients during 2021. The four hospitals are Pertamina Jaya Hospital (RSPJ), Simprug Emergency Modular Hospital starting in 2020, and additional Haji Dormitory Extension Hospital, in Pondok Gede, East Jakarta, and the Tanjung Duren PELNI Hospital Extension, in 2021. In addition, the Pertamedika IHC hospital network also provided services to COVID-19 patients.

Kontribusi PERTAMINA untuk Penanganan Pandemi COVID-19 Tahun 2021
PERTAMINA's Contribution to the COVID-19 Pandemic Handling in 2021

Vaksinasi
Vaccination

Internal PERTAMINA

- 39.861 karyawan (100% karyawan yang memenuhi syarat divaksin)
- 128.567 pekerja kontraktor, pemasok, dan mitra kerja
- 43.775 keluarga pekerja
- Jenis vaksin: Sinopharm (Vaksin Gotong Royong), selain itu juga support jasa vaksinator untuk penyelenggaraan Vaksinasi Program Pemerintah (Sinovac, Astrazeneca, dan Moderna)

Eksternal PERTAMINA

- 9.204 pensiunan PERTAMINA dan keluarganya

PERTAMINA internal

- *39,861 employees (100% of employees eligible for vaccination)*
- *128,567 contractors, suppliers and partners*
- *43,775 employees' families*
- *Types of vaccine: Sinopharm (Gotong Royong Vaccination), in addition to supporting vaccinator to organize the Government Vaccination Programs (Sinovac, Astrazeneca, and Moderna)*

PERTAMINA external

- *9,204 PERTAMINA retirees and their families*

Rumah Sakit Darurat COVID-19 tambahan tahun 2021
COVID-19 Emergency Hospital Addition in 2021

PERTAMINA mengoperasikan Rumah Sakit Pertamina Jaya (RSPJ) Ekstensi Asrama Haji, di Pondok Gede, Jakarta Timur, sebagai RS rujukan COVID-19. Operasional RS darurat didukung:

- Fasilitas 20 tempat tidur ICU, 36 tempat tidur HCU, 6 tempat tidur IGD, 30 mesin ventilator, dan laboratorium.
- Didukung 157 tenaga Kesehatan, yaitu 120 perawat, 30 dokter, 2 analis, 2 apoteker, dan 3 asisten apoteker.
- Selama dioperasikan, RSPJ Ekstensi Asrama Haji telah merawat dan menyembuhkan 174 penderita COVID-19.

Pada 6 Agustus 2021, Presiden meresmikan rumah sakit modular yakni RS Tanjung Duren Ekstensi RS PELNI, di Tanjung Duren, Jakarta Barat. Operasional Rumah Sakit dilengkapi:

- 276 *bed* yang dilengkapi dengan fasilitas ICU, 105 *bed* yang disertai HFNC dan ventilator, serta ruang perawatan ibu hamil dan anak. Selain itu, juga didukung oleh instalasi Radiologi (CT Scan & CXR), Laboratorium Klinis Unit Hemodialisis, dan kamar bedah.
- Saat ini, terdapat 166 tenaga kesehatan yang melayani perawatan, yaitu 87 perawat, 4 bidan, 38 dokter, 4 analis, 3 apoteker, dan 30 tenaga kesehatan profesional lainnya.

Hingga akhir tahun 2021, RS Tanjung Duren Ekstensi RS PELNI telah merawat dan mengobati 140 penderita COVID-19.

PERTAMINA operates the Pertamina Jaya Hospital (RSPJ) Hajj Dormitory Extension, in Pondok Gede, East Jakarta, as a COVID-19 referral hospital.

Emergency hospital operations are supported with:

- *Facilities for 20 ICU beds, 36 HCU beds, 6 ICU beds, 30 ventilator machines, and laboratories.*
- *Supported by 157 health workers, comprising 120 nurses, 30 doctors, 2 analysts, 2 pharmacists, and 3 pharmacist assistants.*
- *During the operations, the Hajj Dormitory Extension Hospital has treated and cured 174 COVID-19 patients.*

On 6 August 2021, the President inaugurated a modular hospital, the Tanjung Duren Hospital Extension of the PELNI Hospital, in Tanjung Duren, West Jakarta. Hospital Operations are equipped with:

- *276 beds with ICU facilities, 105 beds with HFNC and ventilators, as well as treatment rooms for pregnant women and children. It is also supported by the Radiology Installation (CT Scan & CXR), Hemodialysis Unit Clinical Laboratory, and operating room.*
- *Currently, there are 166 health workers providing care, comprising 87 nurses, 4 midwives, 38 doctors, 4 analysts, 3 pharmacists, and 30 other professional health workers.*

Until the end of 2021, Tanjung Duren Hospital Extension of PELNI Hospital has treated 140 COVID-19 patients.

Kontribusi Lain
Other Contributions:

- Distribusi oksigen ke rumah sakit di berbagai daerah. Sampai dengan akhir tahun 2021, volume bantuan oksigen yang telah didistribusikan, untuk 504 Rumah Sakit di 11 provinsi di Pulau Jawa, Bali, NTB, Kalimantan Selatan, Sumatera Selatan, dan Lampung.
- Bantuan alat kesehatan bagi wilayah operasi anak perusahaan di luar negeri, yaitu Pertamina Algeria EP yang berlokasi di Ouargla, Algeria.
- *Oxygen distribution to hospitals in various areas. Until the end of 2021, the volume of oxygen assistance has been distributed to 504 hospitals in 11 provinces in Java, Bali, W. Nusa Tenggara, South Kalimantan, South Sumatra, and Lampung.*
- *Medical equipment assistance for operating areas in overseas subsidiaries, namely Pertamina Algeria EP, which is located in Ouargla, Algeria.*



KESELAMATAN PROSES DAN PENCEGAHAN INSIDEN SKALA BESAR [403-2, 403-7] PROCESS SAFETY AND LARGE-SCALE INCIDENT PREVENTION

Keselamatan proses berkaitan dengan pencegahan masalah keselamatan ekstrem yang berhubungan dengan hal-hal yang dapat menimbulkan kecelakaan besar melibatkan pelepasan bahan yang berpotensi berbahaya, pelepasan energi (seperti kebakaran atau ledakan) atau keduanya. Sesuai Pedoman Pengelolaan Keadaan Darurat, Krisis dan Keberlangsungan Bisnis Perseroan, PERTAMINA memiliki kebijakan, bahwa potensi kejadian besar yang terkait dengan kegiatan operasional harus diidentifikasi dan dikaji secara komprehensif dan menyeluruh, terkait kemungkinan dampaknya terhadap kelangsungan kegiatan operasional di lokasi masing-masing sehingga dapat digunakan sebagai *Site Credible Scenario* (skenario insiden yang masuk akal), dan data masukan dalam penyusunan rencana tanggap darurat, manajemen krisis, dan pengelolaan keberlanjutan bisnis secara efektif dan terstruktur. Melalui penerapan keselamatan proses yang terukur dan sesuai regulasi yang berlaku, PERTAMINA berupaya mencegah terjadinya insiden berskala besar.

Kinerja keselamatan proses selama tahun 2021 ditandai oleh 38 *process safety event* (PSE), yang mencakup 7 peristiwa Tier 1 dan 31 peristiwa Tier 2. PERTAMINA juga memantau dan melaporkan Tier 3 dengan jumlah peristiwa yang dilaporkan ada 2.982 peristiwa.

Dalam melakukan pengkategorian *process safety event*, PERTAMINA mengacu ke standar internasional, yaitu API RP 754 dan IOGP Report 456. Mengacu ke standar, tersebut definisi *process safety event* adalah terlepasnya material secara tidak terkendali, baik material berbahaya maupun material tidak beracun dan material tidak mudah terbakar dari sebuah fasilitas produksi, distribusi, penyimpanan, dan utilitas. Berdasarkan tingkat keparahannya *process safety event* dapat dibagi menjadi empat, yaitu:

Process safety is related to the prevention of extreme safety issues associated with those that could lead to major accidents involving the release of potentially hazardous materials, the release of energy (such as fire or explosion) or both. In accordance with the Emergency, Crisis and Business Continuity Management Guidelines of the Company, PERTAMINA has a policy that potential major events concerning operating activities must be identified and studied comprehensively and thoroughly, regarding the possible impact on the continuity of operating activities at each location so that they can be used as Site Credible Scenarios, and input data in the preparation of emergency response plans, crisis management, and business continuity management in an effective and structured manner. Through the implementation of measurable process safety and in accordance with applicable regulations, PERTAMINA makes serious efforts to prevent large-scale incidents from occurring.

Process safety performance during 2021 was marked by 38 process safety events (PSE), which included 7 Tier 1 events and 31 Tier 2 events. PERTAMINA also monitored and reported Tier 3 events with a total of 2,982 events reported.

In categorizing process safety events, PERTAMINA refers to international standards of API RP 754 and IOGP Report 456. According to the standards, a process safety event is defined as the uncontrolled release of material, both hazardous and non-toxic materials, as well as non-flammable materials in production, distribution, storage, and utility facilities. Based on the severity, the process safety event can be divided into four:

- *Process safety event Tier 1: Process safety event yang memiliki dampak negatif paling besar.*
- *Process safety event Tier 2: Process safety event yang memiliki dampak lebih rendah.*
- *Process safety event Tier 3: Permasalahan pada sistem instrumentasi keselamatan proses, namun tidak sampai menimbulkan process safety event Tier 1 dan 2.*
- *Process safety event Tier 4: Kinerja sistem manajemen untuk mencegah insiden keselamatan proses.*
- *Process safety event Tier 1: Process safety event that has the most negative impact.*
- *Process safety events Tier 2: Process safety events that have a lower impact.*
- *Process safety event Tier 3: Problems with the process safety instrumentation system, without causing Tier 1 and 2 process safety events.*
- *Process safety event Tier 4: Management system performance to prevent process safety incidents.*

Jumlah PSE yang Dipantau dan Dilaporkan tahun 2021
Number of PSE Monitored and Reported in 2021

Tingkatan Tier	Uraian Description	Jumlah Kejadian Number of Cases
Tingkat 1 Tier 1		
Jumlah kejadian keselamatan proses (PSE) <i>Number of process safety events (PSE)</i>		
	Tumpahan minyak <i>Oil spill</i>	0
	Tumpahan bahan kimia dan/atau lainnya <i>Chemical and/or other spills</i>	0
	Kebocoran gas <i>Gas leak</i>	1
	Kebakaran atau ledakan, dengan nilai kerugian \geq USD100.000 <i>Fire or explosion, with loss value \geq USD100,000</i>	4
Konsekuensi <i>Consequences</i>		
	Jumlah karyawan, kontraktor atau subkontraktor kehilangan hari kerja karena cedera/dan atau kematian <i>Number of employees, contractors or subcontractors who lost their workdays due to injury/ and/or death</i>	1
	Jumlah orang dirawat di rumah sakit dan/atau kematian dari pihak ketiga, termasuk masyarakat <i>Number of people hospitalized and/or deaths from third parties, including the public</i>	11
	Jumlah individu yang dievakuasi ke tempat penampungan sementara <i>Number of individuals evacuated to temporary shelter</i>	923

Jumlah PSE yang Dipantau dan Dilaporkan tahun 2021 <i>Number of PSE Monitored and Reported in 2021</i>	
Tingkat 2 <i>Tier 2</i>	Jumlah Kasus <i>Number of Cases</i>
Jumlah kejadian keselamatan proses (PSE) <i>Number of process safety events (PSE)</i>	
Tumpahan minyak <i>Oil spill</i>	21
Tumpahan bahan kimia dan/atau lainnya <i>Chemical and/or other spills</i>	0
Kebocoran gas <i>Gas leak</i>	5
Kebakaran atau ledakan, dengan nilai kerugian > = USD2.500 <i>Fire or explosion, with loss value > = USD2,500</i>	3
Konsekuensi <i>Consequences</i>	
Jumlah karyawan, kontraktor atau subkontraktor mengalami cedera <i>Number of employees, contractors or subcontractors injured</i>	1
Jumlah individu yang dievakuasi ke tempat penampungan sementara <i>Number of individuals evacuated to temporary shelter</i>	0
Pelepasan pada pressure relief system <i>Release on pressure relief system</i>	1
Tingkat 3 <i>Tier 3</i>	Jumlah Kasus <i>Number of Cases</i>
Jumlah kejadian keselamatan proses (PSE) <i>Number of process safety events (PSE)</i>	2,982

Pada tahun 2021, tercatat ada beberapa peristiwa keselamatan proses yang termasuk Tier 1 dan 2 dan telah ditindaklanjuti PERTAMINA dengan berbagai langkah. Kami juga terus melakukan berbagai upaya pencegahan terjadinya peristiwa keselamatan proses, termasuk insiden berskala besar. [SHS-3.C2]

In 2021, some of the recorded process safety events were under Tier 1 and 2 categories, which have been followed-up by PERTAMINA with various measures. We also continue to make various efforts to prevent the process safety events, including large-scale incidents. [SHS-3.C2]

Insiden Berskala Besar Tahun 2021 [SHS-6.C2]
Large-Scale Incidents of 2021

Kronologi <i>Chronology</i>	Konsekuensi <i>Consequences</i>	Tindak Lanjut dan Mitigasi <i>Follow Up and Mitigation</i>
<p>Kebakaran pada tangki T-301G pada RU-VI Balongan, Indramayu, Jawa Barat</p> <ul style="list-style-type: none"> • Jumlah unit tangki terbakar 4 unit • Tanggal kejadian 29 Maret 2021 • Tanggal padam 31 Maret 2021 <p>Fire on the T-301G tank at RU-VI Balongan, Indramayu, West Java</p> <ul style="list-style-type: none"> • 4 units of tank burned • Occurrence date on 29 March 2021 • Extinguished date on 31 March 2021 	<ul style="list-style-type: none"> • Material terbakar: Peralite • Volume material: 100.000 kiloliter (KL) • Korban meninggal: tidak ada • Korban luka-luka: tidak ada • Evakuasi warga sekitar <ul style="list-style-type: none"> • Jumlah warga dievakuasi 923 orang • Lokasi penampungan di Pendopo Kabupaten Indramayu (320 jiwa), GOR Bumi Patra (220 jiwa), dan Masjid Islamic Center Indramayu (392 jiwa) • Gardu distribusi PLN terdampak ada 10 unit dengan 1.078 pelanggan terdampak • Penutupan akses hanya pada area sekitar kilang, berlangsung selama proses pemadaman • Combustible material: Peralite • Material volume: 100,000 kiloliters (KL) • Death toll: none • Injuries: none • Local residents evacuation <ul style="list-style-type: none"> • The number of residents evacuated: 923 people • The shelter locations were at the Hall of Indramayu Regency (320 people), Bumi Patra Sports Center (220 people), and the Indramayu Islamic Center Mosque (392 people) • Ten PLN distribution substations with 1,078 customers were affected • Closure of access only in the area around the refinery, which lasts during the fire extinguishing process 	<ul style="list-style-type: none"> • Pemasangan/upgrade instalasi penangkal petir • Pemasangan CCTV di area tangki • Pemasangan/upgrade sirine bahaya dan evaluasi kesiapsiagaan evakuasi • Peningkatan sistem deteksi dini dan offensive firefighting strategy • Evaluasi dan pemasangan instrumen pencegah overflow • Melakukan safe & operation integrity audit berupa audit ISRS • Pemenuhan kompetensi keselamatan operasional tangki timbun • Lightning rod installation/upgrade • CCTV installation in the tank area • Installation/upgrade of hazard sirens and evaluation of evacuation preparedness • Improved early detection system and offensive firefighting strategy • Evaluation and installation of overflow prevention instruments • Conducting a safe & operational integrity audit in the form of ISRS audit Fulfillment
<p>Insiden kebakaran tangki atau bundwall nomor 39 di RU-IV Cilacap, Jawa Tengah</p> <ul style="list-style-type: none"> • Tanggal kejadian 11 Juni 2021. • Jam kejadian pukul 19:45 WIB <p>Tank fire incident or bundwall number 39 at RU-IV Cilacap, Central Java</p> <ul style="list-style-type: none"> • Date of incident on 11 June 2021. • Time of incident at 19:45 Western Indonesian Time 	<ul style="list-style-type: none"> • Material terbakar: benzene • Volume material: 1.100 barel dari kapasitas tangki 3.000 barel • Korban meninggal: tidak ada • Korban luka-luka: tidak ada • Tidak ada pernyataan evakuasi warga • Penutupan hanya pada area sekitar kilang, berlangsung selama proses pemadaman • Lama pemadaman 40 jam • Combustible material: benzene • Material volume: 1,100 barrels from a tank capacity of 3,000 barrels • Death toll: none • Injuries: none • No declaration of citizen evacuation • Closure only in the area around the refinery, during the extinguishing process • Duration of extinguishing was 40 hours 	



Penanganan Pasca Insiden Kebakaran Tangki RU-VI Balongan dan RU-IV Cilacap *Handling Post Incident of RU-VI Balongan and RU-IV Cilacap Tank Fires*

PERTAMINA melakukan investigasi menyeluruh atas insiden kebakaran Tangki RU-VI Balongan dan RU-IV Cilacap. Selain investigasi, langkah-langkah mitigasi juga diterapkan untuk mencegah kejadian serupa di masa depan. Beberapa poin penting perbaikan adalah: [SHS-3.C3]

1. *Improvement* atau perbaikan peralatan-peralatan kedaruratan (*protection systems*) termasuk *Lightning Protection System* di Area Tank Foam, *Fire Protection System*, dan pemasangan FGDS pada tangki Minyak ringan;
2. Reviu prosedur dan sistem kedaruratan serta kesiapan peralatan yang memadai;
3. Meningkatkan kesiapan tim tanggap darurat dengan pelatihan dan *drill* berkala.

PERTAMINA conducted a thorough investigation of the RU-VI Balongan and RU-IV Cilacap fire incidents. In addition to the investigations, mitigation measures have also been implemented to prevent similar incidents in the future. Some important points of improvement are: [SHS-3.C3]

1. *Improvement or repair of emergency equipment (protection systems); including Lightning Protection System in the Foam Tank Area, Fire Protection System, and installation of FGDS on light oil tanks;*
2. *Review of emergency procedures and system as well as the readiness of adequate equipment;*
3. *Improve the readiness of the emergency response team with regular training and drills.*

Tahapan Penanggulangan dan Penanganan Tumpahan Minyak dari Sumur YYA-1
Stages of Mitigation and Handling of Oil Spills from the YYA-1 Well

Tahapan Penanggulangan
Juli – Oktober 2019
*Response Stage
July – October 2019*

▼

Tahapan Pemulihan
Oktober 2019 – Desember 2021
*Recovery Stage
October 2019 – December 2021*

▼

Tahapan Pasca-pemulihan & Tahap Rutin
Sejak Desember 2021
*Post-recovery Stage & Routine Stage
Since December 2021*

Penyusunan dan penerbitan Dokumen Rencana Pemulihan Fungsi Lingkungan Hidup (RPFLH) dengan persetujuan Kementerian Lingkungan Hidup dan Kehutanan (KLHK)
Preparation and issuance of Environmental Function Recovery Plan Documents (RPFLH) with the approval of the Ministry of Environment and Forestry

- RPFLH 1 - Lahan Karawang-1
- RPFLH 2 - Lahan Karawang-2
- RPFLH 3 - Lahan Karawang-3
- RPFLH 4 - Mangrove Kepulauan Seribu
- RPFLH 5 - Mangrove Karawang dan Bekasi
- RPFLH 6 - Lahan Tanjung Sari
- RPFLH 7 - Lahan Kepulauan Seribu
- RPFLH 8 - Lahan Banten
- RPFLH 9 - Mangrove Banten

- *RPFLH 1 - Karawang-1 Land*
- *RPFLH 2 - Karawang-2 Land*
- *RPFLH 3 - Karawang-3 Land*
- *RPFLH 4 - Seribu Islands Mangrove*
- *RPFLH 5 - Mangrove Karawang and Bekasi*
- *RPFLH 6 - Tanjung Sari Land*
- *RPFLH 7 - Seribu Islands Land*
- *RPFLH 8 - Banten Land*
- *RPFLH 9 - Mangrove Banten*

Pelaksanaan pemulihan 2020
Selesai 16 pantai
RPFLH Karawang-1
RPFLH Karawang-2
RPFLH Karawang- 3

*Recovery implementation 2020
Completed 16 beaches
RPFLH Karawang-1
RPFLH Karawang-2
RPFLH Karawang- 3*

2021
Penerbitan Surat Status Penyelesaian Lahan Terkontaminasi (SSPLT);
Keputusan Menteri LHK:

- No.: SK.653/MENLHK-PSLB3/PKTDLB3/PLB.4/2/2021;
- No.: SK.654/MENLHK-PSLB3/PKTDLB3/PLB.4/2/2021;
- No.: SK.655/MENLHK-PSLB3/PKTDLB3/PLB.4/2/2021;
- No.: SK.7435/MENLHK-PSLB3/PKTDLB3/PLB.4/12/2020;
- No.: SK.7426/MENLHK-PSLB3/PKTDLB3/PLB.4/12/2020;

Issuance of Letter of Contaminated Land Settlement Status (SSPLT)

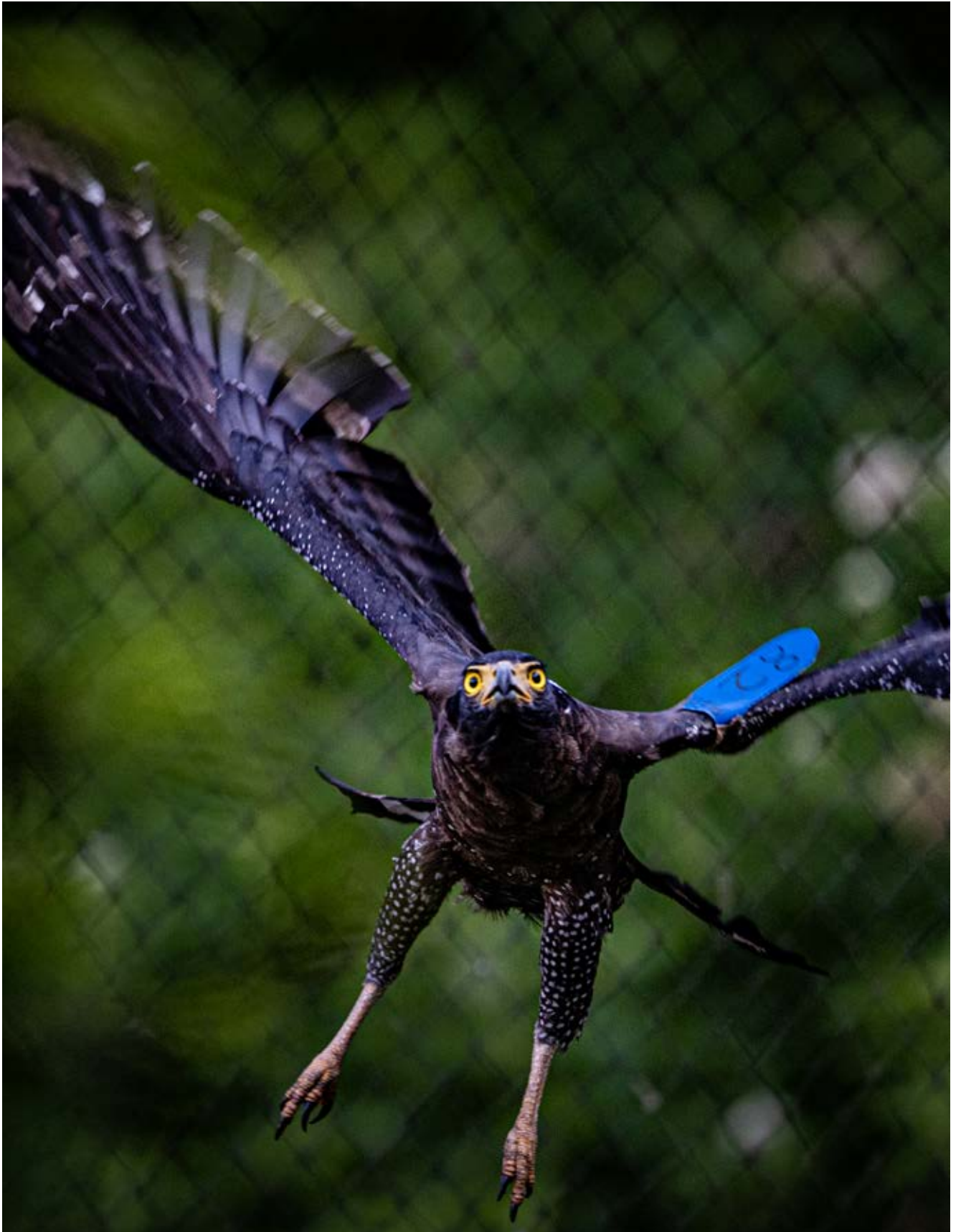
• *Decree of the Minister of Environment and Forestry:*

- No.: SK.653/MENLHK-PSLB3/PKTDLB3/PLB.4/2/2021
- No.: SK.654/MENLHK-PSLB3/PKTDLB3/PLB.4/2/2021
- No.: SK.655/MENLHK-PSLB3/PKTDLB3/PLB.4/2/2021
- No.: SK.7435/MENLHK-PSLB3/PKTDLB3/PLB.4/12/2020
- No.: SK.7426/MENLHK-PSLB3/PKTDLB3/PLB.4/12/2020

Pelaksanaan pemulihan 2021
Recovery implementation 2021

RPFLH/Arahan KLHK RPFLH/MEF Directive	Covered Area	Status Pemulihan Per 31 Desember 2021 Recovery Status As of 31 December 2021	Progress
Lahan Karawang 1 <i>Karawang Land 1</i>	Pantai Mutiara, Pantai Galangan Kapal, Pantai Jelasena, Tambak Garam Cemara, Muara Sungai Buntu, Pantai Cemara (Pisangan), Pantai Samudera Baru, Pemukiman Cemara 1 dan 2, serta Pantai Pelangi <i>Mutiara Beach, Shipyard Beach, Jelasena Beach, Cemara Salt Pond, Buntu River Estuary, Cemara Beach (Pisangan), Samudera Baru Beach, Cemara Housing 1 and 2, and Pelangi Beach</i>	Mendapat SSPLT dari KLHK pada 14 Desember 2020 dan 10 Februari 2021 <i>Receiving SSPLT from MEF on 14 December 2020 and 10 February 2021</i>	100%

RPFLH/Arahan KLHK RPFLH/MEF Directive	Covered Area	Status Pemulihan Per 31 Desember 2021 Recovery Status As of 31 December 2021	Progress
Lahan Karawang 2 <i>Karawang Land 2</i>	Pantai Dobolan, Pantai Sedari, Pantai Karangsari, dan Pantai Singkih <i>Dobolan Beach, Sedari Beach, Karangsari Beach, and Singkih Beach</i>	SSPLT: 14 Desember 2020 dan 10 Februari 2021 <i>SSPLT: 14 December and 10 February 2021</i>	100%
Lahan Karawang 3 <i>Karawang Land 3</i>	Pantai Sarakan dan Pantai Bungin <i>Sarakan Beach and Bungin Beach</i>	SSPLT: 10 Februari 2021 <i>SSPLT: 10 February 2021</i>	100%
Substrat Kepulauan Seribu <i>Seribu Islands Substrate</i>	Substrat: Pulau Untung Jawa, Pulau Rambut, dan Pulau Lancang <i>Substrate: Untung Jawa Island, Rambut Island, and Lancang Island</i>	SSPLT: 30 Agustus 2021 <i>SSPLT: 30 August 2021</i>	100%
Pengayaan Mangrove Kepulauan Seribu <i>Mangrove enrichment in Thousand Islands</i>	Mangrove: Pulau Untung Jawa, Pulau Rambut, Pulau Bokor, dan Pulau Lancang <i>Mangroves: Untung Jawa Island, Rambut Island, Bokor Island, and Lancang Island</i>	Verlap KLHK 7-9 April 2021. Submit Final Report 7 Juni 2021 <i>MEF's Field Verification on 7-9 April 2021</i>	100%
Substrat Karawang - Bekasi	Substrat: Segar Jaya (Kab. Karawang) dan Pantai Bakti (Kab. Bekasi) <i>Substrate: Segar Jaya (Karawang Regency) and Bakti Beach (Bekasi Regency)</i>	SSPLT: 30 Agustus 2021 <i>SSPLT: 30 August 2021</i>	100%
Pengayaan Mangrove Karawang - Bekasi <i>Mangrove enrichment in Karawang - Bekasi</i>	Mangrove: Sukajaya, Mekarpohaci, Pusaka Jaya Utara, Sedari, Tambaksari, Segar Jaya, Pantai Bahagia, dan Pantai Bakti <i>Mangroves: Sukajaya, Mekarpohaci, North Pusaka Jaya, Sedari, Tambaksari, Segar Jaya, Happy Beach, and Bakti Beach</i>	Verlap KLHK 7-9 April 2021. Submit Final Report 7 Juni 2021 <i>MEF's Field Verification on 7-9 April 2021</i> <i>Final Report submission on 7 June 2021</i>	100%
Lahan Tanjung Sari	Tanjung Sari Bagian 1, 2, dan 3 <i>Tanjung Sari Sections 1, 2, and 3</i>	SSPLT: 30 Agustus 2021 <i>SSPLT: 30 August 2021</i>	100%
Lahan Kepulauan Seribu	Pulau Untung Jawa - Area 1 dan 2, serta Pulau Rambut - Area 1 dan 2 <i>Untung Jawa Island - Areas 1 and 2, and Rambut Island - Areas 1 and 2</i>	Pulau Untung Jawa: SSPLT 30 Agustus 2021 Pulau Rambut: SSPLT 13 Desember 2021 <i>Untung Jawa Island: SSPLT 30 August 2021</i> <i>Rambut Island: SSPLT 13 December 2021</i>	100%
Lahan Banten	Pantai Muara serta Pulau Panjang 1, 2, dan 3 <i>Muara Beach and Panjang Island 1, 2, and 3</i>	SSPLT: 13 Desember 2021 <i>SSPLT: 13 December 2021</i>	100%
Substrat Mangrove <i>Mangrove Substrate</i>	Substrat: Desa Kronjo <i>Substrate: Kronjo Village</i>	SSPLT: 30 Agustus 2021 <i>SSPLT: 30 August 2021</i>	100%
Pengayaan Mangrove Banten <i>Mangrove Enrichment in Banten</i>	Mangrove: Desa Muara, Desa Tanjung Burung, Desa Karangantu, Pulau Tunda, Pulau Panjang, dan Pulau Sangiang <i>Mangroves: Muara Village, Tanjung Burung Village, Karangantu Village, Tunda Island, Panjang Island, and Sangiang Island</i>	Penanaman Mangrove dan Final Report telah selesai dilaksanakan. <i>Mangrove planting and Final Report have been completed.</i>	100%
Lahan Kepulauan Seribu Tahap 2 <i>Seribu Islands Land Stage 2</i>	Pulau Burung, Pulau Tikus, Pulau Tidung Kecil, Pulau Tidung Besar Area Timur, Tengah, dan Barat, Pulau Pari Area Barat, Tengah, dan Timur, serta Pulau Payung Bagian Dalam, Tengah, dan Luar <i>Burung Island, Tikus Island, Tidung Kecil Island, East, Central and West areas of Tidung Besar Island, West, Central and East areas of Pari Island, and Inner, Middle and Outer areas of Payung Island</i>	SSPLT: 17 Januari 2022 <i>SSPLT: 17 January 2022</i>	100%





Strategi dan mitigasi pencegahan terulangnya insiden tumpahan minyak:

- Assurance terhadap *well integrity*;
- Inspeksi dan *maintenance* terhadap fasilitas produksi *offshore*;
- Memastikan kesiapan penanggulangan keadaan darurat tumpahan minyak di perairan;
- Implementasi *process safety & asset integrity management system*.

Strategies and mitigation to prevent the recurrence of oil spill incidents:

- *Well integrity assurance*;
- *Inspection and maintenance of offshore production facilities*;
- *Ensure the readiness of oil spill emergency response in the waters*;
- *Implementation of process safety & asset integrity management system*.



PENCEGAHAN PSE PSE PREVENTION

Kami memiliki program dan kegiatan untuk mitigasi dan mengurangi risiko terjadinya peristiwa keselamatan proses, yang dapat mempengaruhi kondisi lingkungan. Langkah yang dilakukan mencakup pencegahan dan pengendalian tumpahan, kebocoran, dan insiden operasi lain yang berpotensi melepaskan bahan berbahaya dan beracun (B3) ke lingkungan.

We have programs and activities to mitigate and reduce the risk of process safety events' occurrence, which may affect environmental conditions. The steps include the prevention and control of spills, leaks, and other operational incidents that have the potential to release hazardous and toxic materials into the environment.

	Kegiatan <i>Activity</i>	Mitigasi <i>Mitigation</i>
Produksi <i>Production</i>	Fasilitas dan sumur di daratan (<i>onshore</i>) <i>Onshore facilities and wells</i>	Manajemen integritas sumur, inspeksi dan pemeliharaan, tanggap darurat tumpahan minyak, keselamatan proses & sistem manajemen integritas aset <i>Well integrity management, inspection and maintenance, oil spill emergency response, process safety & asset integrity management system, monitoring system</i>
	Fasilitas dan sumur di lepas pantai (<i>offshore</i>) <i>Offshore facilities and wells</i>	
Distribusi dan Pengangkutan <i>Distribution and Transportation</i>	Pipa di permukaan tanah <i>Surface pipe</i>	Inspeksi dan pemeliharaan, tanggap darurat tumpahan minyak, keselamatan proses & sistem manajemen integritas aset <i>Inspection and maintenance, oil spill emergency response, process safety & asset integrity management system.</i>
	Pipa di bawah tanah dan bawah laut <i>Underground and underwater pipes</i>	Inspeksi dan pemeliharaan, tanggap darurat tumpahan minyak, keselamatan proses & sistem manajemen integritas aset. <i>Inspection and maintenance, oil spill emergency response, process safety & asset integrity management system.</i>
	Transportasi darat <i>Land transportation</i>	Digitalisasi armada mobil tangki (AMT) pengangkut bahan bakar dengan penerapan SmartMT. Total unit dilengkapi SmartMT pada tahun 2021 berjumlah 10 unit. <i>Digitizing the fuel tanker fleet (AMT) with SmartMT. A total of 10 units have been equipped with SmartMT in 2021.</i>
	Transportasi laut <i>Sea transportation</i>	Inspeksi dan pemeliharaan, tanggap darurat tumpahan minyak, keselamatan proses & sistem manajemen integritas aset. <i>Inspection and maintenance, oil spill emergency response, process safety & asset integrity management system.</i>
Kilang dan Pengolahan <i>Refinery and Processing</i>	Produksi <i>Production</i>	Inspeksi dan pemeliharaan, tanggap darurat tumpahan minyak, keselamatan proses & sistem manajemen integritas aset. <i>Inspection and maintenance, oil spill emergency response, process safety & asset integrity management system.</i>
	Penyimpanan <i>Storage</i>	Inspeksi dan pemeliharaan, tanggap darurat tumpahan minyak, keselamatan proses & sistem manajemen integritas aset. <i>Inspection and maintenance, oil spill emergency response, process safety & asset integrity management system.</i>

KESELAMATAN PROSES PADA RANTAI PASOK [11.8] PROCESS SAFETY IN THE SUPPLY CHAIN

Keselamatan proses pada rantai pasok terkait dengan transportasi dan pengangkutan, baik untuk proses produksi maupun produk. Kegiatan transportasi dan pengangkutan dilakukan menggunakan moda transportasi darat menggunakan mobil tangki, kereta api bekerja sama dengan PT KAI (Persero) dan kapal laut.

Pada tahun 2021, terdapat 264 insiden transportasi produk di mana sebanyak 194 (73%) insiden dikategorikan passive (armada PERTAMINA menjadi korban dari kecelakaan kendaraan lain). PERTAMINA terus meningkatkan kualitas keselamatan dan keamanan, di antaranya dengan melakukan program Fleet Safety & Security Improvement melalui pengembangan platform Pertamina Fleet Safety (*online reporting* dan *dashboard monitoring*) di 59 Integrated Terminal/Fuel Terminal yang melibatkan lebih dari 4.000 armada mobil tangki BBM. Saat ini, PERTAMINA sedang dikembangkan program replikasi Fleet Safety & Security Improvement di angkutan LPG.

Sebagai upaya dalam menerapkan proses distribusi yang aman dan selamat, PT Pertamina Niaga mengimplementasikan program Fleet Safety & Security Improvement Program. Fleet Safety & Security Improvement Program sudah dimulai sejak 2019 dengan dimulainya Breakthrough Project di 2 Fuel Terminal yaitu di Ujung Berung (Pengelolaan PPN) dan Fuel Terminal Kertapati (Pengelolaan EPN). Setiap tahun program replikasi terus ditambahkan. Hingga tahun 2021 program replikasi diimplementasikan di 59 lokasi terminal BBM dan di 2022 ini akan direplikasikan tambahan pada angkutan LPG dari 9 LPG Terminal.

Terdapat enam indikator yang menjadikan dasar Implementasi Program Fleet Safety Improvement mengacu pada kondisi best practice yang dijadikan referensi: pembatasan jam kerja, pemantauan perilaku pengemudi, *profiling* risiko pengemudi,

Process safety in the supply chain is related to transportation and freight, both materials for the production process and products. Transportation and freight activities are carried out using land transportation modes using tank cars, trains in collaboration with PT KAI (Persero), and ships.

*In 2021, there were 264 product transportation incidents of which 194 (73%) incidents were categorized as passive (PERTAMINA's fleet became victims of other vehicle accidents). PERTAMINA continues to improve the quality of safety and security, including by conducting the Fleet Safety & Security Improvement program through the development of the Pertamina Fleet Safety platform (*online reporting* and *dashboard monitoring*) at 59 Integrated Terminals/Fuel Terminals involving more than 4,000 fuel tank cars. Currently, PERTAMINA is developing a Fleet Safety & Security Improvement replication program in LPG transportation.*

In an effort to implement a safe and secure distribution process, PT Pertamina Niaga has implemented the Fleet Safety & Security Improvement Program. The Fleet Safety & Security Improvement Program has begun since 2019 with the start of the Breakthrough Project at 2 Fuel Terminals of Ujung Berung (PPN Management) and Kertapati Fuel Terminal (EPN Management). Every year, replication programs increase. Until 2021, the replication program were implemented in 59 fuel terminal locations and in 2022 it will be replicated in additional LPG transportation from 9 LPG Terminals.

There are six indicators as the basis for the Fleet Safety Improvement Program Implementation according to the best practices that are used as references: limiting working hours, monitoring driver behavior, driver risk profiling, training and counseling,

pelatihan dan konseling, pencatatan daring kinerja pengemudi, dan reward & consequences.

PERTAMINA juga memiliki platform *online reporting* dan *dashboard* monitoring tersebut dapat diakses melalui akses www.pertaminafleetsafety.com. Selanjutnya proses pelaporan akan dimonitor secara berkala setiap bulan.

online recording of driver performance, and rewards & consequences.

PERTAMINA also has an online reporting platform and a monitoring dashboard that can be accessed via www.pertaminafleetsafety.com. The reporting process will be monitored regularly every month.

MANAJEMEN RISIKO KESELAMATAN TERKAIT PENGIRIMAN BAHAN BAKAR *FUEL DELIVERY SAFETY RISK MANAGEMENT*

Program Fleet Safety & Security Improvement sudah dimulai sejak 2019 dengan dimulainya Breakthrough Project di dua Fuel Terminal, yaitu di Ujung Berung (Pengelolaan PPN) dan Fuel Terminal Kertapati (Pengelolaan EPN). Setiap tahun program replikasi terus ditambahkan di mana hingga tahun 2021, program replikasi diimplementasikan di 59 lokasi terminal BBM dan direncanakan akan direplikasikan tambahan pada angkutan LPG di tahun 2022. Terdapat 6 indikator yang menjadikan dasar Implementasi Program Fleet Safety Improvement dengan mengacu pada kondisi *best practice* untuk dapat dilakukan perbaikan dari kondisi pengelolaan *fleet* saat itu. Dari beberapa indikator yang perlu dilakukan pengawasan yang mengacu pada *best practices* yang ada, Perseroan menyusun program *improvement safety & security program* melalui aspek teknologi, *driving rules, monitoring, safety performance report, dan reward consequence*.

Pada tahun 2021, terdapat 59 lokasi dan 8 regional yang mengimplementasikan program tersebut. Untuk memudahkan proses pelaporan dan monitoring, PERTAMINA membuat suatu *platform* untuk dapat melakukan proses pelaporan secara *online* dan terverifikasi secara bertahap mulai dari tahapan lokasi kerja, regional hingga ke pusat. [SHS-4.C1]

The Fleet Safety & Security Improvement program has begun since 2019 with the start of the Breakthrough Project at two Fuel Terminals, Ujung Berung (VAT Management) and Kertapati Fuel Terminal (EPN Management). We continuously add replication program every year, and as of 2021, we had implemented the replication program in 59 Fuel terminal locations, with more replication for additional LPG transportation in 2022. There are 6 indicators as the basis for Fleet Safety Improvement Program implementation, which refers to the best practices for improvements based on the condition of fleet management at the time. Out of indicators that required monitoring based on existing best practices, the Company developed a safety & security improvement program through technology aspects, driving rules, monitoring, safety performance reporting, and reward consequences.

In 2021, as many as 59 locations in 8 regions had implemented the program to facilitate the reporting and monitoring process, PERTAMINA created a platform to carry out the online and verified reporting process in stages, starting from the work location, regional up to the head office [SHS-4.C1]

MANAJEMEN RISIKO KESELAMATAN TERKAIT INTEGRITAS KEAMANAN ASET [11.8] SAFETY RISK MANAGEMENT RELATED TO ASSET SECURITY INTEGRITY

Dalam mengelola risiko terkait aspek keamanan di objek vital nasional yang ada di bawah pengawasan Perseroan, PERTAMINA telah menerapkan Sistem Manajemen Pengamanan yang merujuk kepada Peraturan Kepolisian Negara Republik Indonesia No 7 Tahun 2019 tentang Perubahan Kedua Atas Peraturan Kepala Kepolisian Negara Republik Indonesia Nomor 13 Tahun 2017 Tentang Pemberian Bantuan Pengamanan pada Objek Vital Nasional Dan Objek Tertentu. Pada tahun 2018 dan sebelumnya, pelaksanaan audit SMP mengacu pada PERKAPOLRI No. 24 Tahun 2007. Untuk memastikan bahwa Sistem Manajemen Pengamanan berjalan dengan efektif, PERTAMINA melakukan audit SMP di level unit operasi, baik secara internal maupun eksternal dengan melibatkan instansi POLRI.

In managing risks related to security aspects at national vital objects under the supervision of the Company, PERTAMINA has implemented a Security Management System that refers to the Regulation of the Indonesian National Police Chief No. 7 of 2019 concerning the Second Amendment to the Regulation of the Indonesian National Police Chief No. 13 of 2017 concerning the Provision of Security Assistance on National Vital Objects and Certain Objects. In 2018 and prior, the implementation of the SMP audit referred to the Regulation of the Indonesian National Police Chief No. 24 of 2007. To ensure that the Security Management System is implemented effectively, PERTAMINA conducts SMP audit at the operating unit level both internally and externally by involving the Indonesian National Police.

Hasil Audit SMP Tahun 2021 SMP Audit Results 2021	
Audit Internal Internal Audit	<ul style="list-style-type: none"> • 9 Unit Operasi mendapat Peringkat Gold • 12 Unit Operasi mendapat Peringkat Silver • 9 Operating Units received Gold Rating • 12 Operating Units received Silver Rating
Audit External External Audit	5 Unit Operasi mendapat Peringkat Gold 5 Operating Units received Gold Rating



Pada tahun 2022, Perseroan merencanakan untuk melaksanakan audit SMP di internal maupun eksternal di unit operasi lain secara bertahap, sehingga seluruh unit operasi yang ada di bawah PERTAMINA Grup dapat dipetakan kinerja Sistem Manajemen Penggunaannya secara berkesinambungan.

In 2022, the Company plans to perform both internal and external SMP audit in other operating units gradually, so that all PERTAMINA Group operating units can continuously map the Management System performance for their use.

PERTAMINA juga mengikutsertakan tenaga keamanan (*security forces*) pada pelatihan-pelatihan dan sertifikasi keamanan.

PERTAMINA also includes security forces in security training programs and certifications.

Jumlah Sertifikasi Keamanan Number of Security Certifications				
No.	Perusahaan/Anak Perusahaan Company/Subsidiary	Gada Pratama Basic Training	Gada Madya Security Supervisor Training	Gada Utama Chief Security Training
1	PT Pertamina (Persero)	227	118	1
2	PT Kilang Pertamina Internasional	938	508	1
3	PT Pertamina Internasional Shipping	16	23	0
4	PT Pertamina Patra Niaga	1,158	937	13
5	PT Pertamina Trans Kontinental	16	13	0
6	Segmen Upstream <i>Upstream Segment</i>	3,362	380	58

Penghargaan dan Apresiasi bidang K3 OHS Awards and Appreciation

Penghargaan Awards	Penyelenggara Organizer	Waktu Pelaksanaan Date
PT Perusahaan Gas Negara Penghargaan Program Pencegahan dan Penanggulangan HIV-AIDS di Tempat Kerja dengan Kategori Platinum <i>PT Perusahaan Gas Negara Awarded the HIV-AID Prevention and Control Program in the Workplace with Platinum Category</i>	Kementerian Ketenagakerjaan Republik Indonesia <i>Ministry of Manpower of the Republic of Indonesia</i>	22 April 2021 <i>22 April 2021</i>
PT Perusahaan Gas Negara Penghargaan Program Pencegahan dan Penanggulangan COVID-19 di Tempat Kerja dengan Kategori Platinum <i>PT Perusahaan Gas Negara Awarded the COVID-19 Prevention and Handling Program in the Workplace with Platinum Category</i>	Kementerian Ketenagakerjaan Republik Indonesia <i>Ministry of Manpower of the Republic of Indonesia</i>	22 April 2021 <i>22 April 2021</i>
Kategori Gold RU VI Balongan: Program Pencegahan dan Penanggulangan HIV AIDS di tempat Kerja <i>HIV AIDS Prevention and Control Program in the Workplace RU VI Balongan, Gold Category</i>	Menakertrans <i>Ministry of Manpower and Transmigration of the Republic of Indonesia</i>	April 2021 <i>April 2021</i>
Hari pertambangan dan Energi Dharma Karya Muda: RU II S Pakning Pemanfaatan Inovasi Nozzle Gambut dalam penanganan Karhutla Program Pemberdayaan Masyarakat Peduli Api <i>Mining and Energy Day Dharma Karya Muda: RU II Sei Pakning, Utilization of Peat Nozzle Innovation in handling forest and land fires, Fire Aware Community Empowerment Program</i>	Kementerian Ketenagakerjaan Republik Indonesia <i>Ministry of Manpower of the Republic of Indonesia</i>	28 September 2021 <i>28 September 2021</i>

PEREKRUTAN, RETENSI, DAN PENGEMBANGAN KARYAWAN [11.10] EMPLOYEE RECRUITMENT, RETENTION AND DEVELOPMENT

Sejalan dengan restrukturisasi yang berlangsung, PERTAMINA telah melakukan beberapa hal untuk mengakselerasi transisi karyawan menjadi aset (*human capital* atau HC). Upaya yang dilakukan didukung transformasi digital, dengan pemanfaatan teknologi informasi untuk mendukung proses pembelajaran dan pengembangan (*learning & development*), serta pengelolaan pengetahuan (*knowledge management*). Pengembangan HC yang berkelanjutan akan mendukung terciptanya ekosistem PERTAMINA yang didukung lebih dari 45.000 pekerja aktif, dengan sebagian besar memiliki masa kerja di bawah 10 tahun, sehingga berpotensi memberikan nilai tambah di masa mendatang.

In line with the ongoing restructuring, PERTAMINA has taken several steps to accelerate the transition of employees into assets (human capital or HC). The efforts are supported by digital transformation, with the use of information technology to support the learning and development process, as well as knowledge management. The sustainable HC development will support the creation of the PERTAMINA ecosystem for more than 45,000 active employees, most of whom have a working period of under 10 years, thus potentially providing added value in the future.



REKRUTMEN KARYAWAN

EMPLOYEE RECRUITMENT

Para pekerja yang kami sebut sebagai PERTAMINA Wira atau Perwira, sangat mempengaruhi keberlanjutan PERTAMINA. Kami merekrut talenta-talenta terbaik dari berbagai sumber secara transparan, dan mengedepankan kesetaraan. Pengungkapan informasi mencakup Holding, Subholding beserta entitas anak dan unit operasi/unit bisnis masing-masing, serta anak perusahaan (AP) jasa dan portofolio. Pada periode pelaporan PERTAMINA melanjutkan rekrutmen penyandang disabilitas dalam upaya pemenuhan target 2% karyawan penyandang disabilitas pada tahun 2024. Kami juga melakukan alih kepegawaian lebih dari 2.600 pekerja Blok Rokan pasca-alih kelola kepada PT Pertamina Hulu Rokan. Pengembangan karyawan menjadi tanggung jawab Fungsi HC, dan dievaluasi berdasarkan pencapaian target Indikator Kinerja Kunci (KPI). Berdasar hasil evaluasi diketahui pengelolaan HC terkait rekrutmen dan aspek-aspek lain ketenagakerjaan telah berjalan dengan baik. [3-3]

PERTAMINA berkomitmen bahwa proses restrukturisasi dan pembentukan Holding serta Subholding, tidak melibatkan pemutusan hubungan kerja (PHK) pekerja. Kami tetap melakukan rekrutmen, yang dilaksanakan terpusat oleh Kantor Pusat dari sumber domestik dan global dengan proses seleksi ketat, mengedepankan kesetaraan serta bebas dari bias gender. PERTAMINA juga tetap melaksanakan pengembangan pekerja untuk membentuk pekerja unggul, melalui *Dynamic Manpower Plan*, yakni kolaborasi *people analytics*, *machine learning (AI)*, *digital savvy*, *agility mindsets*, dengan melaksanakan pelatihan yang mutakhir, bersertifikasi, dan berkeahlian (*skilled*).

Our employees, whom we call PERTAMINA Wira or Perwira (Officers), significantly affect the sustainability of PERTAMINA. We recruit the best talents from various sources transparently, and promote equality. Disclosure of information includes Holding Company, Subholding and their respective subsidiaries and operating units/business units, as well as service and portfolio subsidiaries. In the reporting period, PERTAMINA continued the recruitment of people with disabilities to meet the target of 2% of employees with disabilities by 2024. We also transferred more than 2,600 employees from the Rokan Block after the takeover of PT Pertamina Hulu Rokan. The HC Function is responsible for employee development, which is evaluated based on the achievement of the Key Performance Indicators (KPI) targets. The evaluation results showed that the management of HC related to recruitment and other aspects of employment has been properly implemented. [3-3]

PERTAMINA is committed to the restructuring process and the formation of Holding Company and Subholding that would not cause the termination of employment (PHK) of employees. We continue to carry out recruitment centrally by the Head Office from domestic and global sources with a strict selection process, prioritizing equality and free from gender bias. PERTAMINA also continues to carry out employee development to form excellent employees, through the Dynamic Manpower Plan covering collaboration of people analytics, machine learning (AI), digital savvy, and agility mindsets by carrying out cutting-edge, certified, and skilled training.

KESETARAAN KESEMPATAN [11.11] EQUAL OPPORTUNITY

Proses seleksi ketat dilaksanakan dengan mengedepankan kesetaraan kesempatan, dan bebas dari bias gender. PERTAMINA memiliki target 15% dari pekerja *High Flyer Nominated Talent* jenjang Asisten Manajer ke atas merupakan perempuan, yang ditetapkan dalam Kontrak Manajemen Tahun 2021, yang telah disepakati oleh Direksi, Dewan Komisaris, serta Kementerian BUMN. Kami juga telah menyiapkan 500 top talent sebagai pemimpin PERTAMINA di masa depan, dengan 30% di antaranya adalah perempuan.

Untuk mendukung peningkatan pekerja perempuan, pada 21 April 2021, PERTAMINA membentuk komunitas Perempuan PERTAMINA Tangguh Inspiratif Wibawa Integritas (PERTIWI), sebagai wadah inklusif pekerja perempuan PERTAMINA untuk meningkatkan kemampuan dan menyiapkan kader pemimpin di masa mendatang. Dengan Direktur Utama dan Direktur SDM sebagai Penasihat PERTIWI, dan memiliki misi:

- Menciptakan kesetaraan gender di lingkungan kerja dan pengembangan karir;
- Membangun kemampuan kepemimpinan dalam menyiapkan pemimpin masa depan dan mendukung pencapaian target perusahaan dan Kementerian BUMN di tingkat nasional dan global;
- Berupaya meningkatkan sinergi internal dan eksternal untuk mendukung implementasi pengelolaan LST dan TPB, khususnya Tujuan ke-5, yakni kesetaraan gender, serta;
- Mengoptimalkan kontribusi Perwira Perempuan dalam mewujudkan lingkungan sosial yang sejahtera.

We carry out selection process by promoting equality of opportunity, and free from gender bias. PERTAMINA has a target that 15% of High Flyer Nominated Talents at the Assistant Manager levels and above are women, which is stipulated in the 2021 Management Contract, which has been agreed upon by the Board of Directors, Board of Commissioners, and the Ministry of SOEs. We have also prepared 500 top talents as future leaders of PERTAMINA, with 30% of whom are women.

To support the increased member of female employees, on 21 April 2021, PERTAMINA formed the Perempuan PERTAMINA Tangguh Inspiratif Wibawa Integritas (PERTIWI) community, as an inclusive forum for PERTAMINA female employees to enhance their abilities and prepare for leadership cadres in the future. The President Director & CEO and Finance Director act as PERTIWI Advisors, with the mission:

- *Creating gender equality in the work environment and career development;*
- *Building leadership capacity in order to prepare for leaders and supporting the achievement of corporate and SOE Ministry's national and global targets;*
- *Striving to improve internal and external synergies to support the implementation of ESG and SDGs, especially Goal 5 on gender equality, and;*
- *Optimizing the contribution of female officers in creating a prosperous social environment.*

Pada 1 Juli 2021, Direktur Utama juga memberikan komitmen akan kesetaraan gender dengan menjadi anggota pada Women Empowerment Principles (WEP):

On 1 July 2021, the President Director & CEO also committed to gender equality by becoming a member of the Women's Empowerment Principles (WEP):

The Women's Empowerment Principles (WEPs) adalah prinsip-prinsip panduan bagi bisnis tentang bagaimana mempromosikan kesetaraan gender dan pemberdayaan perempuan di tempat kerja, pasar dan masyarakat. Diinisiasi oleh UN Global Compact dan UN Women, WEP mengacu pada standar ketenagakerjaan dan hak asasi manusia internasional dan didasarkan pada pengakuan bahwa bisnis memiliki kepentingan, dan tanggung jawab untuk, kesetaraan gender dan pemberdayaan perempuan.

WEP adalah kendaraan utama sebagai sarana perusahaan pada dimensi kesetaraan gender dari Agenda 2030 dan Tujuan Pembangunan Berkelanjutan Perserikatan Bangsa-Bangsa. Dengan bergabung dalam komunitas WEP, Direktur Utama menunjukkan bahwa komitmen terhadap agenda ini merupakan prioritas tertinggi perusahaan serta bekerja secara kolaboratif dalam jaringan antarpemangku kepentingan untuk mendorong praktik bisnis yang memberdayakan perempuan. Ini termasuk upah yang sama untuk pekerjaan dengan nilai yang sama, praktik rantai pasokan yang responsif terhadap gender, dan nol toleransi terhadap pelecehan seksual di tempat kerja.

The Women's Empowerment Principles (WEPs) are a set of Principles offering guidance to businesses on how to promote gender equality and women's empowerment in the workplace, marketplace, and community. Established by UN Global Compact and UN Women, the WEPs are informed by international labor and human rights standards and grounded in the recognition that businesses have a stake in, and a responsibility for, gender equality and women's empowerment.

WEPs are a primary vehicle for corporate delivery on the gender equality dimensions of the 2030 agenda and the United Nations Sustainable Development Goals. By joining the WEPs community, the CEO signals commitment to this agenda at the highest levels of the company and to working collaboratively in multi-stakeholder networks to foster business practices that empower women. These include equal pay for work of equal value, gender-responsive supply chain practices, and zero tolerance for sexual harassment in the workplace.

REKRUTMEN PEKERJA BARU NEW EMPLOYEE RECRUITMENT

Untuk wilayah operasi di Indonesia, pada tahun 2021 PERTAMINA merekrut total 403 pekerja baru. Mereka terdiri atas 81 orang atau 20% perempuan, serta 322 orang atau 80% laki-laki. Seluruhnya atau 100% adalah penduduk lokal yang didefinisikan sebagai warga negara Indonesia (WNI). Sesuai Peraturan Perundang-undangan, usia minimal calon pekerja adalah 18 tahun, sehingga tidak ada pekerja PERTAMINA yang merupakan pekerja anak. [408-1]

PERTAMINA recruited a total of 403 new employees in 2021 for operating areas across Indonesia. They consisted of 81 women, or 20%, and 322 men, or 80%. All, or 100%, are local residents who are defined as Indonesian citizens (WNI). Under the Laws and Regulations, the minimum age for candidate employees is 18 years old. There is no child labor employed as PERTAMINA's employees. [408-1]

Rekrutmen Pekerja Baru PERTAMINA Tahun 2021 Wilayah Operasi Indonesia [401-1]
PERTAMINA New Recruits 2021 for Indonesia Operating Areas

Sumber Rekrutmen
Recruitment Sources

Program Program	Laki-laki Male	Perempuan Female
Program Rekrutmen Reguler Regular Recruitment Program	322	81
	80%	20%
Alih Kepegawaian Blok Rokan Rokan Block Transfer Employees	2,348	341
	87%	13%

Seluruhnya (100%) adalah pekerja lokal, yakni warga negara Indonesia (WNI).
All of them (100%) are local employees with Indonesian citizenship (WNI).

Rekrutmen Pekerja Baru PERTAMINA Berdasar Kelompok Usia dan Gender
PERTAMINA New Recruits 2021 based on Gender

Kelompok Usia Age Group	2021		
	Laki-laki Male	Perempuan Female	Jumlah Total
20 - 29 Tahun 20 - 29 Years	298	78	376
30 - 39 Tahun 30 - 39 Years	12	2	14
40 - 49 Tahun 40 - 49 Years	10	1	11
50 - 59 Tahun 50 - 59 Years	2	0	2
Jumlah Total	322	81	403

Akumulasi Jumlah Perwira Putra Daerah Papua Berdasarkan Gender
Accumulated Number of Employees from Papua by Gender

Gender	2021		2020		2019	
	Jumlah Total	%	Jumlah Total	%	Jumlah Total	%
Laki-Laki <i>Male</i>	17	59	17	59	8	54
Perempuan <i>Female</i>	12	41	12	41	7	46
Jumlah Total	29	100	29	100	15	100

Akumulasi Jumlah Perwira Putra Daerah Kalimantan Berdasarkan Gender
Accumulated Number of Employees from Kalimantan by Gender

Gender	2021		2020	
	Jumlah Total	%	Jumlah Total	%
Laki-Laki <i>Male</i>	106	91	30	75
Perempuan <i>Female</i>	10	9	10	25
Jumlah Total	116	100	40	100

Akumulasi Jumlah Perwira Penyandang Disabilitas Berdasarkan Gender
Accumulated Number of Employees with Disabilities by Gender

Gender	2021		2020		2019	
	Jumlah Total	%	Jumlah Total	%	Jumlah Total	%
Laki-Laki <i>Male</i>	20	48	20	48	14	54
Perempuan <i>Female</i>	22	52	22	52	12	46
Jumlah Total	42	100	42	100	26	100

Target Akumulasi Jumlah Pekerja Penyandang Disabilitas
Accumulation Target for Employee with Disabilities

2024	2021			2020		
	2023	2022	Target Target	Realisasi Realization	Target Target	Realisasi Realization
79	64	56	48	42	31	42

Komposisi dan Persentase Pekerja Penyandang Disabilitas
Composition and Percentage of Employees with Disabilities

Jenis Disabilitas <i>Disability Type</i>	2021		2020		2019	
	Jumlah <i>Total</i>	%	Jumlah <i>Total</i>	%	Jumlah <i>Total</i>	%
Tuna Daksa <i>Physically Disabled</i>	20	48%	20	48%	17	65%
Tuna Netra <i>Visually Impaired</i>	2	5%	2	5%	2	8%
Tuna Rungu <i>Hearing Impaired</i>	19	45%	19	45%	6	23%
Tuna Wicara <i>Speech Impaired</i>	1	2%	1	2%	1	4%
Jumlah <i>Total</i>	42	100%	42	100%	26	100%



TESTIMONI
TESTIMONIAL

**Kitorang Bisa,
Kitorang Tangguh!**
*We Can,
We Are Strong!*



Perkenalkan, nama saya Sara Marlis Youwe. Saat ini saya menjabat sebagai Jr. Assistant CSR & SMEPP di Fungsi Unit Communication, Relationship, & CSR Regional Papua Maluku. Saya adalah salah satu Putri Daerah Papua yang beruntung karena telah memiliki pengalaman dengan PERTAMINA sejak SMA. Saya mendapatkan Beasiswa Program Inspirasi Indonesia Timur dari Pertamina Foundation selama 3 tahun di SMK N 1 Probolinggo. Setelah lulus sekolah pada tahun 2017, saya termasuk satu dari sembilan orang yang menerima beasiswa, dari total pendaftar delapan puluh orang.

Sebagai seseorang dengan status minoritas ganda: perempuan dan berasal dari Papua, suatu kebanggaan tersendiri untuk saya bisa dapat bekerja di PERTAMINA. Di kantor, saya merasakan kesempatan kerja yang sama dan setara tanpa diskriminasi. Saya harus belajar untuk menyesuaikan diri dengan pekerjaan di dalam kantor maupun di lapangan, juga melakukan pekerjaan-pekerjaan yang umumnya dilakukan laki-laki, seperti penerimaan tanker pada malam hari, sounding ketinggian minyak di tangki timbun, mengawasi pekerjaan di area terbatas pada malam hari, dan masih banyak lagi. Sebagai perempuan tangguh di PERTAMINA, saya belajar untuk berinteraksi dengan banyak pekerja dari beragam suku, bahasa dan budaya di Indonesia yang banyak dipelajari. Saya yakin bahwa Perempuan Tangguh adalah dia yang akan berjuang sangat keras untuk mencapai kesuksesan di segala bidang. Kitorang Bisa, Kitorang Tangguh!

Let me introduce myself. my name is Sara Marlis Youwe. I currently serve as Jr. Assistant for CSR & SMEPP in the Communications, Relationship, & CSR Unit Function for Papua Maluku Region. I am one of the lucky Papuans because I have been introduced to PERTAMINA since high school. I received the Inspirasi Indonesia Timur (Eastern Indonesia Inspiration) Program Scholarship from the Pertamina Foundation for 3 years at vocational school SMKN 1 Probolinggo. After graduating from school in 2017, I was one of nine people who received scholarships, out of a total of eighty applicants.

As someone with double minority status: female and originated from Papua, it is an honor for me to be able to work at PERTAMINA. In the office, I receive equal opportunity and equal treatment without discrimination. I had to learn to adapt to work in the office as well as in the field, also to do jobs that are generally done by men, such as receiving tankers at night, sounding oil levels in storage tanks, supervising work in restricted area at night, and many others. As one of Perempuan Tangguh (strong woman) at PERTAMINA, I learned to interact with many employees from various ethnic groups, languages and cultures in Indonesia which I learned a lot. I believe that the Perempuan Tangguh (Strong Women) are the ones who will try our hardest to achieve success in all fields. Kitorang Bisa, Kitorang Tangguh! (We Can, We Are Strong!)



Dalam melakukan perekrutan pekerja, PERTAMINA memiliki kebijakan penyediaan kesempatan setara bagi masyarakat lokal dan masyarakat adat setempat. Hingga akhir tahun 2021, PERTAMINA mempekerjakan 29 pekerja dari Papua dan 116 pekerja dari putra daerah Kalimantan. Komitmen ini selaras dengan komitmen Kementerian BUMN untuk menyediakan kesempatan setara.

In recruiting employees, PERTAMINA has an equal opportunity policy for local communities and local indigenous peoples. Until the end of 2021, PERTAMINA has employed 29 employees from Papua and 116 employees from Kalimantan. This policy aligns with the commitment of the Ministry of SOEs to provide equal opportunities.

Untuk wilayah operasi di mancanegara, pekerja baru PERTAMINA yang direkrut mencapai 75 orang. Mereka terdiri dari 29 orang atau 38% perempuan, dan 46 orang atau 62% laki-laki. Dengan demikian, total pekerja PERTAMINA untuk wilayah operasi di mancanegara mencapai 106 orang yang merupakan WNI dan WNA dengan sebaran sebagai berikut:

For overseas operating areas, PERTAMINA has recruited 75 new employees. They consisted of 29 women or 38%, and 46 men or 62%. Thus, the total number of PERTAMINA employees for overseas operations has reached 106 people, consisting of Indonesian citizens and foreigners with the following distribution:

Jumlah Pekerja PERTAMINA di Mancanegara Number of PERTAMINA Overseas Employees								
Perusahaan Company	Wilayah Operasi Operating Area	WNI WNI			WNA WNA			Jumlah Total
		Laki-laki Male	Perempuan Female	Subtotal Subtotal	Laki-laki Male	Perempuan Female	Subtotal Subtotal	
Pertamina International Marketing and Distribution PTe Ltd	PIM&D Singapore	12	1	13	4	4	8	21
Pertamina Lubricants (Thailand), Co., Ltd	Thailand	0	0	0	21	20	41	41
PT Pertamina International Timor SA	Dili - Timor Leste	0	0	0	16	3	19	19
PT Pertamina Irak Eksplorasi Produksi	Basrah Office	10	0	10	0	0	0	10
PT Pertamina Malaysia Eksplorasi Produksi	Kuala Lumpur Office	5	0	5	0	0	0	5
PT Pertamina Rosneft Pengolahan & Petrokimia	PRP&P Madrid	7	0	7	2	1	3	10
Jumlah Total		34	1	35	43	28	71	106

Jumlah pekerja WNA yaitu sebesar 71 orang atau 67% dari total pekerja, di mana 28 orang atau 39% merupakan pekerja perempuan dan 43 orang atau 61% pekerja laki-laki. Sementara jumlah pekerja WNI yaitu sebesar 35 orang atau 33% dari total pekerja, terdiri 1 orang pekerja perempuan atau 3% dan 34 orang pekerja laki-laki atau 97%.

The number of foreign employees was 71 people or 67% of the total employees, consisting of 28 female employees or 39%, and 43 male employees or 61%. Meanwhile, the number of Indonesian citizens is 35 people or 33% of the total employees, consisting of 1 female employee or 3% and 34 male employees or 97%.

RETENSI PEKERJA EMPLOYEE RETENTION

Restrukturisasi PERTAMINA dibarengi standarisasi sistem penilaian dan pemberian imbal jasa pekerjaan (remunerasi) yang adil berbasis kinerja. Kondisi tersebut akan mendorong setiap pekerja berkontribusi maksimal, serta menjadikan PERTAMINA sebagai tempat kerja pilihan. Pada tahun 2021, jumlah pekerja yang meninggalkan PERTAMINA karena mengundurkan diri relatif rendah, yakni 385 orang, atau 0,85% dari total pekerja. [401-1]

Salah satu faktor yang mempengaruhi tingkat retensi adalah tingkat remunerasi pekerja yang mengacu pada kemampuan perusahaan dan competitiveness posisi upah sesuai pasar atau market. Selain hal tersebut, sesuai Peraturan Pemerintah, remunerasi diberikan berbeda atas pekerja tetap (Pekerja Waktu Tidak Tertentu/PWTT), dan pekerja tidak tetap (Pekerja Waktu Tertentu/PWT). Beberapa komponen dalam imbal jasa pekerjaan yang tidak diberikan kepada pekerja tidak tetap adalah komponen terkait Penghargaan Atas Pengabdian (PAP) yang meliputi pesangon, Uang Penghargaan Masa Kerja (UPMK), Uang Penggantian Hak (UPH), serta komponen penggantian biaya lainnya terkait PAP. PERTAMINA memberlakukan *gender pay gap nol* persen antara remunerasi bagi pekerja laki-laki dan perempuan. Besaran imbal jasa pekerjaan terendah untuk pekerja PERTAMINA lebih besar daripada upah minimum yang ditetapkan pemerintah daerah di setiap wilayah operasi. [2-19][2-20][401-2] [405-2]

PERTAMINA's restructuring was accompanied by the standardization of the appraisal system and the provision of fair performance-based remuneration. Such condition encourages every employee to give their maximum contribution, and makes PERTAMINA the preferred workplace. In 2021, a total of 385 employees, or 0.85% of the total employees, resigned from PERTAMINA, which was relatively low. [401-1]

One of the factors that affect the retention rate is employee remuneration, which is based on the company's ability and the competitiveness of the wage position according to the market. In addition to this, according to Government Regulations, remuneration is provided differently for permanent employees (PWTT), and non-permanent employees (PWT). Several components in the remuneration that are not provided to non-permanent employees are those related to the Severance and Service Pay (PAP) which includes severance pay, Long Service Pay (UPMK), Compensation of Rights (UPH), as well as other compensation components related to PAP. PERTAMINA applies a zero percent gender pay gap between remuneration for male and female workers. The lowest amount of remuneration for PERTAMINA workers is greater than the minimum wage set by the regional government in each area of operation. [2-19] [2-20][401-2] [405-2]



Jumlah Pekerja Meninggalkan PERTAMINA dan Tingkat Perputaran Pekerja Tahun 2021 [401-1] <i>Number of Workers Leaving PERTAMINA and Worker Turnover Rate in 2021</i>							
Uraian <i>Detail</i>	Satuan <i>Unit</i>	2021*		2020		2019	
		Laki-Laki	Perempuan	Laki-Laki	Perempuan	Laki-Laki	Perempuan
		<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>
< 30 tahun <i>< 30 Years</i>	Orang <i>People</i>	94	52	2	2	-	5
30 – 50 tahun <i>30 – 50 Years</i>	Orang <i>People</i>	143	65	9	4	8	10
> 50 tahun <i>> 50 Years</i>	Orang <i>People</i>	21	10	4	1	10	-
Jumlah <i>Total</i>	Orang <i>People</i>	258	127	15	7	18	15
		385		22		33	

*Mencakup seluruh PERTAMINA Grup setelah proses *legal-end-state*
Includes the entire PERTAMINA Group after the legal-end-state process

Hasil Survei terhadap Pekerja PERTAMINA Tahun 2021 <i>Results of PERTAMINA Employee Survey 2021</i>			
Latar Belakang <i>Background</i>	Skor <i>Score</i>	Skala <i>Scale</i>	Keterangan <i>Description</i>
Indeks Keterikatan Pekerja (termasuk Indeks Kepuasan Pekerja) <i>Employee Engagement Index (including Employee Satisfaction Index)</i>	80.68	100	Indeks tinggi di seluruh entitas organisasi (lebih dari 70% pekerja) <i>High index in all organizational entities (more than 70% employees)</i>

PERTAMINA memberikan cuti selama 3 (tiga) bulan kepada pekerja yang melahirkan disertai jaminan dari perusahaan kepada pekerja perempuan untuk bekerja kembali sesuai jabatan semula, serta cuti tiga hari kerja bagi pekerja laki-laki yang istrinya melahirkan. Selama tahun 2021, ada 42 pekerja perempuan yang menjalani cuti melahirkan dan 248 pekerja laki-laki yang istrinya melahirkan, mengambil cuti melahirkan, dan telah bekerja kembali sesuai jabatan semula. [401-3]

PERTAMINA provides leave for 3 (three) months to female employees who give birth, with a guarantee to return to work in their original positions and three days leave for male employees whose wives give birth. During 2021, there were 42 female employees on maternity leave and 248 male employees whose wives gave birth, took maternity and paternity leave, and returned to work in their original positions. [401-3]

PENGEMBANGAN PEKERJA EMPLOYEE DEVELOPMENT

PERTAMINA terus meningkatkan kompetensi pekerja melalui pembelajaran. Pada masa pandemi, kami menyesuaikan kegiatan pembelajaran yakni secara daring dan digital. Selama tahun 2021 PERTAMINA telah merealisasikan 31,48 jam pembelajaran per pekerja, dengan tingkat kepesertaan sebanyak 30.144 pekerja. Pengungkapan informasi mencakup Holding, Subholding beserta entitas anak dan unit operasi/unit bisnis masing-masing, serta anak perusahaan (AP) jasa dan portofolio. Peningkatan kompetensi pekerja menjadi tanggung jawab Fungsi HC, dan didukung PERTAMINA Corporate University (PCU) serta PT Pertamina Training & Consulting (PTC). Evaluasi kinerja pengembangan pekerja dilakukan berdasarkan pencapaian target KPI. Berdasar hasil evaluasi diketahui kegiatan pengembangan pekerja telah berjalan dengan baik, meski dihadapkan pada pandemi COVID-19. [3-3] [404-1]

Selama tahun 2021, PERTAMINA melanjutkan kegiatan pendidikan dan pelatihan, yang mengedepankan metode pembelajaran dengan memanfaatkan teknologi, di antaranya mobile learning dan e-learning. Metode ini memungkinkan setiap pekerja dapat langsung mengakses ratusan modul pembelajaran baik bersifat teknis, kepemimpinan, bisnis atau pun manajemen. Program pengembangan pekerja disusun melalui kolaborasi dengan institusi global.

PERTAMINA continues to improve employee competencies through learning, as we consider competent and excellent employees to be our main assets. During the pandemic, we made adjustments for learning activities through online and digital media. In 2021, PERTAMINA has realized 31.48 hours of learning per worker, with a participation rate of 30,144 workers. The disclosed information covered Holding Company, Subholdings and their respective subsidiaries and operating units/business units, as well as service and portfolio subsidiaries. The HC Function is responsible for employee competence development, which is supported by PERTAMINA Corporate University (PCU) and PT Pertamina Training & Consulting (PTC). Employee development performance is evaluated based on the achievement of KPI targets. The evaluation results showed that employee development activities had been properly implemented, despite the COVID-19 pandemic. [3-3] [404-1]

During 2021, PERTAMINA continued the education and training activities, which prioritized learning methods by utilizing technology, including mobile learning and e-learning. These methods allow every employee to directly access hundreds of learning modules in technical, leadership, business, or management. The employee development programs are formulated in collaboration with global institutions.

Kami memberikan kesempatan setara kepada setiap pekerja untuk mengikuti kegiatan pelatihan dan pendidikan. Pelatihan juga diberikan kepada pekerja yang akan memasuki purnatugas, dengan materi memberikan persiapan agar mereka tetap dapat berkegiatan dan memenuhi kebutuhan hidup setelah tak lagi menjadi pekerja PERTAMINA. [404-2]

We provide equal opportunities for every employee to participate in training and educational activities. The training is also given to employees who are about to retire, with material on preparation to continue to carry out activities and meet their daily needs after they are no longer employees of PERTAMINA. [404-2]

PERTAMINA juga memberdayakan para pimpinan untuk memiliki tanggung jawab dalam melakukan transfer pengetahuan melalui kegiatan coaching dan mentoring. Program tersebut di antaranya *Functional Program, Managerial/Leadership Program, Corporate Values Program, HSSE Program, Strong National Commitment Program (SNCP)*, dan *Series of Formal Education*.

PERTAMINA also empowers leaders to be responsible for transferring knowledge through coaching and mentoring activities. These programs include the Functional Program, Managerial/Leadership Program, Corporate Values Program, HSSE Program, Strong National Commitment Program (SNCP), and Series of Formal Education.

Jenis, Jumlah Program, serta Jumlah Peserta Pelatihan dan Pendidikan [404-1][404-2]
Type, Number of Programs, and Number of Training and Education Participants

Jenis Pelatihan dan Pendidikan Type of Training and Education	2021		2020		2019	
	Jumlah Program Number of Programs	Jumlah Peserta Number of Participants	Jumlah Program Number of Programs	Jumlah Peserta Number of Participants	Jumlah Program Number of Programs	Jumlah Peserta Number of Participants
Pre-Employee Program Pre-Employee Program	2	167	5	363	10	1,592
Program Pendidikan Lanjutan (Tugas Belajar) Advanced Education Program (Study Assignment)	2	23	5	111	6	92
Program Pelatihan Jangka Panjang dan Pendek Long-Term and Short-Term Training Programs	305	15,135	258	43,497	386	17,328
Program E-Learning/Mobile Learning E-Learning/Mobile Learning Program	43	26,875	78	56,597	104	26,551



PERTAMINA menyelenggarakan pelatihan-pelatihan khusus topik LST yang diikuti oleh 17.368 peserta pada tahun 2021, antara lain terkait HAM, keberlanjutan, dan HSE. Capaian ini mencapai 173% dari target peserta pada tahun 2021.

PERTAMINA held special trainings on ESG topics, including those related to human rights, sustainability, and HSE, which were attended by 17,368 participants in 2021. The achievement reached 173% of the target participants in 2021.

PENGEMBANGAN KARIR DAN KEBERAGAMAN CAREER DEVELOPMENT AND DIVERSITY

PERTAMINA memberikan kesempatan yang sama kepada setiap pekerja untuk mengembangkan karir, tanpa diskriminasi. Promosi jabatan didasarkan pada hasil penilaian kinerja, dengan mempertimbangkan kebutuhan organisasi. Tahun 2021 penilaian dilakukan terhadap seluruh (100%) pekerja. Dari penilaian yang dilaksanakan tahun 2021, diperoleh hasil sebanyak 6.625 pekerja atau 28% dari total pekerja telah mendapatkan promosi jabatan. Mereka terdiri dari 5.761 orang atau 87% laki-laki, dan 864 orang, atau 13% perempuan. [404-3]

PERTAMINA provides equal opportunities for every employee to develop a career without discrimination. Promotions are based on the results of performance assessments, taking into account the needs of the organization. In 2021, all (100%) employees have undergone assessments. The results of assessments in 2021, showed as many as 6,625 employees or 28% of the total employees were promoted. They consisted of 5,761 men or 87%, and 864 women, or 13%. [404-3]



Pekerja penyandang disabilitas yang bertugas di Pertamina Call Center
Workers with disabilities at Pertamina Call Center

Jumlah Pekerja Mendapat Promosi Jabatan Berdasarkan Gender <i>Number of Promoted Employees By Gender</i>						
Gender <i>Gender</i>	2021		2020		2019	
	Jumlah <i>Total</i>	%	Jumlah <i>Total</i>	%	Jumlah <i>Total</i>	%
Laki-laki <i>Male</i>	5,761	87%	3,789	84%	5,381	88%
Perempuan <i>Female</i>	864	13%	723	16%	717	12%
Jumlah <i>Total</i>	6,625	100%	4,512	100%	6,098	100%

Dalam mempersiapkan para pemimpin, PERTAMINA memiliki program akselerasi bagi pemimpin masa depan, di antaranya Catalyser, Talent Development Acceleration (TDA), Advance Leadership Program (ALP), GM Academy, CFO Academy dan program pengembangan pekerja lainnya. Kami juga menugaskan pekerja di lebih dari 13 negara untuk mendapatkan *exposure* dalam lingkungan multikultural dengan tujuan meningkatkan kapabilitas dan mempersiapkan pekerja yang siap *go global*.

PERTAMINA menerapkan mekanisme lelang jabatan untuk posisi *vice president* hingga direksi Subholding maupun entitas anak/unit operasi/unit bisnis masing-masing, maupun AP jasa dan portofolio. Kebijakan ini mendorong keberagaman komposisi pejabat perusahaan, di antaranya berdasar gender, dan kelompok usia. Di beberapa wilayah kerja PERTAMINA, terdapat beberapa pekerja lokal yang mampu menduduki jabatan strategis di perusahaan.

In preparing leaders, PERTAMINA has acceleration programs for future leaders, including Catalyser, Talent Development Acceleration (TDA), Advance Leadership Program (ALP), GM Academy, CFO Academy, and other employee development programs. We also assign employees in more than 13 countries to gain exposure in a multicultural environment with the aim of increasing capabilities and preparing employees who are ready to go global.

PERTAMINA applies a job auction for the positions of vice president to directors of Subholding and subsidiaries/operating units/business units, as well as service and portfolio subsidiaries. This policy promotes diversity in the composition of company officers, including by gender and age group. In several PERTAMINA working areas, there are several local employees who are capable of occupying strategic positions in the company.

Komposisi Keberagaman Pejabat Perusahaan di PERTAMINA Grup
Tahun 2021 Berdasar Gender dan Kelompok Usia
*Composition of Company Officer Diversity at PERTAMINA Group
in 2021 By Gender and Age Group*

Uraian <i>Description</i>	Gender				Kelompok Usia <i>Age Group</i>					
	Laki-laki <i>Male</i>		Perempuan <i>Female</i>		<30		31-50		>50	
	Jumlah <i>Total</i>	%	Jumlah <i>Total</i>	%	Jumlah <i>Total</i>	%	Jumlah <i>Total</i>	%	Jumlah <i>Total</i>	%
Direksi Sub Holding dan AP <i>Directors of Subholdings and Subsidiaries</i>	55	86%	9	14%	0	0%	23	36%	41	64%
Senior Vice President (SVP) <i>Senior Vice President (SVP)</i>	22	100%	0	0%	0	0%	7	32%	15	68%
Vice President (VP) <i>Vice President (VP)</i>	231	83%	47	17%	0	0%	145	52%	133	48%
Manager Holding <i>Holding Company Manager</i>	129	72%	49	28%	0	0%	142	80%	36	20%



DUKUNGAN PADA HAK ASASI MANUSIA SUPPORT FOR HUMAN RIGHTS

PERTAMINA terus mendorong produktivitas kerja, target dan pencapaian perusahaan dengan menjamin keamanan, kenyamanan, dan iklim kerja yang harmonis bagi pekerja, dan pekerja kontraktor/pemasok/mitra kerja, dengan mengedepankan penghormatan pada hak-hak asasi manusia (HAM). Pada periode pelaporan, PERTAMINA menerapkan komitmen *zero harassment* untuk memastikan lingkungan kerja yang bebas dari diskriminasi, kekerasan dan pelecehan. Sesuai dengan Organisasi Perburuhan Internasional (ILO), PERTAMINA menjamin tidak mempekerjakan pekerja paksa maupun pekerja anak. [11.12]

Deklarasi *Zero Harassment* ditegaskan dengan mencanangkan *Respectful Workplace Policy* pada 31 Agustus 2021. Kebijakan tersebut menjadi pedoman bagi manajemen dan seluruh pekerja PERTAMINA di seluruh tingkatan Holding, Subholding serta anak perusahaan dan unit operasi/unit bisnis masing-masing, maupun AP jasa dan portofolio. *Zero Harassment* telah menjadi komitmen bersama seluruh pimpinan, sehingga diharapkan tidak ada lagi diskriminasi, pelecehan, dan kekerasan di lingkungan kerja PERTAMINA.

Pada tahun 2021, tidak ada kasus diskriminasi, kekerasan, maupun pelecehan yang terjadi di lingkungan kerja PERTAMINA. PERTAMINA menyediakan akses pelaporan untuk segala bentuk diskriminasi, kekerasan, dan pelecehan yang terjadi di tempat kerja. Setiap laporan akan ditindaklanjuti. Akses pelaporan yang disediakan: [405-2] [11.11.6]

- Melalui atasan;
- Fungsi Human Capital;
- Email: respect@pertamina.com;
- Prosedur *Whistleblowing System*, yakni email pertaminaclean@tipoffs.com.sg.

PERTAMINA continues to encourage work productivity, company targets, and achievements by ensuring safety, comfort, and a harmonious work climate for employees and contractors/suppliers/partners, by upholding respect for human rights. During the reporting period, PERTAMINA implemented a zero harassment commitment to ensure a work environment free from discrimination, violence, and harassment. In accordance with the International Labor Organization (ILO), PERTAMINA guarantees no practice of forced labor or child labor in the company. [11.12]

The Zero Harassment Declaration was established with the launch of the Respectful Workplace Policy on 31 August 2021. The policy is a guideline for the management and all PERTAMINA employees at all levels in Holding Company, Subholdings and subsidiaries and operating units/business units, as well as service and portfolio subsidiaries. The Zero Harassment has become a joint commitment of all leaders, which is expected that there will be no more discrimination, harassment, or violence in the PERTAMINA work environment.

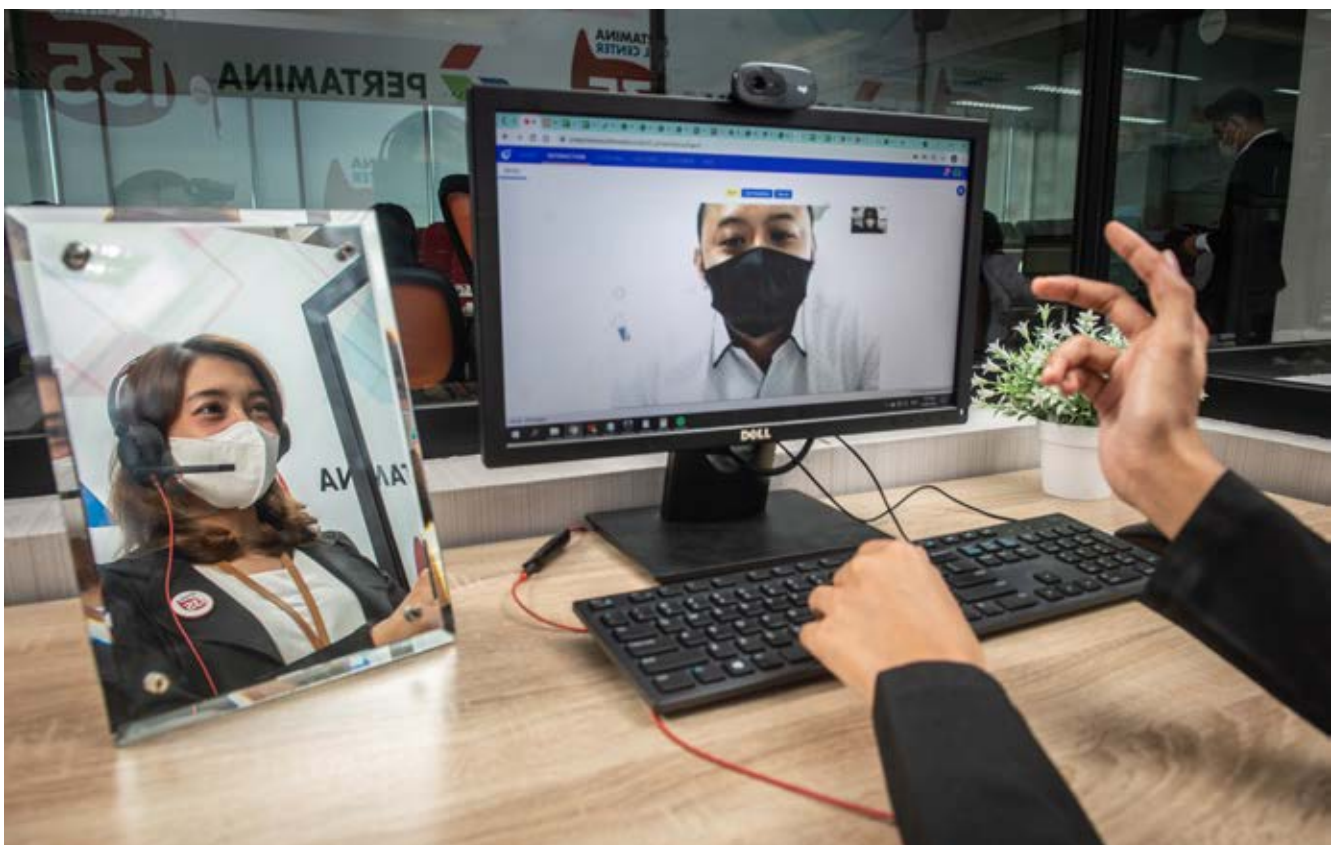
In 2021, there were no cases of discrimination, violence, or harassment in PERTAMINA's work environment. PERTAMINA provides access to report all forms of workplace discrimination, violence, and harassment. Every report will be followed up. The provided reporting access: [405-2] [11.11.6]

- *Through superiors;*
- *Human Capital function;*
- *Email: respect@pertamina.com;*
- *Whistleblowing System procedure, at email address: pertaminaclean@tipoffs.com.sg.*

PERTAMINA juga secara rutin menyelenggarakan pelatihan dan sosialisasi khusus terkait HAM, dengan realisasi tahun 2021 antara lain:

PERTAMINA also regularly organizes special training and dissemination about human rights, with the realization in 2021 as follows:

Pelatihan terkait HAM <i>Human Rights Training</i>			
Nama Pelatihan <i>Training Name</i>	Peserta <i>Participants</i>		
	Laki-laki <i>Male</i>	Perempuan <i>Female</i>	Jumlah <i>Total</i>
FRIYAY - Advancing and Mainstreaming Gender Equality in Corporation	59	100	159
FRIYAY - Pertamina Industrial Peace Level: Improving Workplace Equality, Inclusion & Wellbeing	99	86	185
FRIYAY - Promoting and Mainstreaming Equality in The Workplace	98	114	212
POLS - Sexual Harassment Prevention Awareness	1,746	578	2,324
Jumlah <i>Total</i>	2,002	878	2,880



KEBEBASAN BERSERIKAT FREEDOM OF ASSOCIATION

Sampai dengan akhir periode pelaporan, tidak ada hal-hal yang dapat dikategorikan sebagai bentuk-bentuk penghalangan kebebasan berserikat bagi pekerja PERTAMINA. Saat ini, ada 30 serikat pekerja di lingkungan PERTAMINA, yang tergabung dalam tiga federasi serikat pekerja, yaitu Federasi Serikat Pekerja PERTAMINA Bersatu (FSPPB), Federasi Serikat Pekerja Pertamina Hulu (FSPPH), dan Federasi Serikat Pekerja Pertamina Hilir Indonesia (FSPPHI). Jumlah anggota seluruh serikat pekerja mencapai 18.459 orang, atau 54% dari total pekerja PERTAMINA. Melalui perwakilan di serikat pekerja, pekerja menyusun dan menyetujui Perjanjian Kerja Bersama (PKB) dengan manajemen. Pada 6 April 2021, FSPPB dan PERTAMINA telah menandatangani kesepakatan perpanjangan PKB 2019-2021 untuk satu tahun ke depan. [2-30][407-1] [11.13]

Until the end of the reporting period, there were no incidents that can be categorized as forms of obstruction to freedom of association for PERTAMINA employees. Currently, there are 30 trade unions within PERTAMINA, which are grouped into three trade union federations, namely the Federation of United Pertamina Trade Unions (FSPPB), the Federation of Pertamina Upstream Trade Union (FSPPH), and the Indonesian Federation of Pertamina Downstream Trade Union (FSPPHI). The total number of members of all trade unions was 18,459 people, or 54% of the total PERTAMINA employees. Through representatives in the trade union, the employees draft and agree on a Collective Labor Agreement (CLA) with management. On 6 April 2021, FSPPB and PERTAMINA signed an agreement to extend the 2019-2021 CLA for another year. [2-30][407-1] [11.13]

MENCIPTAKAN KESEIMBANGAN BEKERJA CREATING WORK-LIFE BALANCE

Berlarutnya pandemi COVID-19 mendorong PERTAMINA beradaptasi, termasuk dalam menciptakan keseimbangan bekerja. Hal ini dilakukan mengingat kebijakan Pemerintah menerapkan ketentuan bekerja dari rumah (WFH), guna mengurangi penyebaran pandemi COVID-19.

PERTAMINA melakukan kajian pemetaan paling lambat selesai di tahun 2022, untuk memetakan pekerja mana saja yang dapat dioptimalkan untuk bekerja dari rumah. Berdasarkan evaluasi yang dilakukan, operasional perusahaan masih berjalan dengan baik meskipun sebagian pekerja melakukan WFH. Untuk Holding dan Kantor Pusat, sekitar 69% dari total pekerja melakukan WFH. Untuk Subholding operasional, umumnya hanya 12% yang sifatnya *business support* yang melakukan WFH.

The prolonged COVID-19 pandemic has prompted PERTAMINA to adapt, including creating a work balance. It was due to the Government's policy of implementing working from home (WFH), in order to reduce the transmission of the COVID-19 pandemic.

PERTAMINA has been conducting a mapping study to be completed in 2022, to map which employees can be optimized to work from home. The evaluation results showed the company's operations ran properly even though some employees worked from home. For Holding Company and Head Office, around 82% of the total employees did WFH. For operational subholdings, there was generally only 12% of business support performed WFH.

Kami menyadari tantangan yang harus dihadapi guna mempersiapkan keseimbangan dalam bekerja untuk para pekerja, di antaranya adalah memantau kinerja setiap pekerja, pola pelaporan, serta memantau hasil dan sistem sehingga kinerja tidak menurun selama WFH. Pada sisi lain PERTAMINA menyadari peluang efisiensi dari pelaksanaan WFH, yaitu biaya operasional kantor.

We are aware of the challenges that must be faced to prepare a work balance for employees, including monitoring the performance of each employee, reporting patterns, as well as monitoring results and systems to prevent weakening performance during WFH. On the other hand, PERTAMINA is aware of the efficiency opportunities from the WFH implementation, including office operational costs.

INOVASI DAN PENELITIAN BERKELANJUTAN SUSTAINABLE INNOVATION AND RESEARCH

Sebagai dukungan pada transisi energi, PERTAMINA terus mendorong inovasi dan penelitian berkelanjutan untuk pengembangan energi baru dan terbarukan (EBT). Inovasi dan penelitian juga ditujukan untuk mendukung menuju karbon netral, sejalan dengan pengelolaan lingkungan, sosial, dan tata kelola (LST).

As support for the energy transition, PERTAMINA continues to encourage sustainable innovation and research for the development of new and renewable energy (NRE). Innovation and research are also aimed at supporting the goal of achieving carbon neutrality, in line with environmental, social, and governance (ESG) management.

Kegiatan inovasi dan penelitian utamanya dijalankan oleh Research & Technology Innovation pada Direktorat Perencanaan Investasi & Manajemen Risiko RTI memiliki empat tugas utama dalam mendukung pertumbuhan bisnis PERTAMINA dan didukung oleh empat fungsi pendukung.

Innovation and research activities are mainly carried out by the Research & Technology Innovation at the Directorate of Investment Planning & Risk Management with four main tasks to achieve PERTAMINA's business growth and are supported by four functions.

Tujuan RTI PERTAMINA The objectives of RTI PERTAMINA

1.

Recovery dari sumber daya eksisting untuk optimalisasi sumber daya dan peningkatan produksi minyak dan gas.
Recovery from existing resources to optimize resources and increase oil and gas production.

2.

Mengakses sumber daya baru, termasuk sumber daya yang belum digali dari wilayah yang belum terjamah.
Access new resources, including unexplored resources from unspoiled areas.

3.

Mendorong efektivitas dan efisiensi operasional, dengan memaksimalkan penggunaan teknologi baru.
Drive operational effectiveness and efficiency, by maximizing the use of new technologies.

4.

Mendukung keberlanjutan bisnis dengan mendorong diversifikasi bisnis.
Support business sustainability by encouraging business diversification.

Kegiatan inovasi dan penelitian dilaksanakan dengan mengedepankan aspek-aspek pengelolaan LST secara komprehensif untuk memperkuat upaya mencapai aspirasi PERTAMINA dan menghadapi tantangan transisi energi. Pada tahun 2021, RTI menjalankan total 134 proyek, terdiri dari 87 proyek riset, 20 proyek pra komersial, dan 27 proyek operasional. Seluruh proyek dijalankan oleh fungsi-fungsi yang ada di RTI. Beberapa proyek prioritas utama pada tahun 2021 ditujukan untuk mendukung transisi energi dan pengembangan EBT.

Innovation and research activities are carried out by comprehensively prioritizing ESG management to strengthen efforts to achieve PERTAMINA's aspirations and face the energy transition challenges. In 2021, RTI carried out a total of 134 projects, consisting of 87 research projects, 20 pre-commercial projects, and 27 operational projects. All projects are carried out by functions within RTI. Several key priority projects in 2021 were aimed at supporting the energy transition and NRE development.

Jumlah Proyek dan Proyek Prioritas Tahun 2021 sesuai Fungsi-fungsi dalam RTI PERTAMINA
Number of Projects and Priority Projects in 2021 according to Functions within RTI PERTAMINA

Fungsi Penanggung Jawab <i>Responsible Function</i>	Jumlah Proyek <i>Number of Projects</i>	Proyek Prioritas Utama <i>Top Priority Projects</i>
<p>Fungsi Planning & Commercial Development <i>Planning & Commercial Development Function</i></p>	<p>36</p>	<ul style="list-style-type: none"> • Pengembangan JV Pabrik Katalis Hydrotreating (JV Katalis Merah Putih); • Pengembangan Produksi Katalis FCC/RFCC; • Pengembangan Inisiatif Gasoline-Methanol Ethanol Blending; • Pengembangan Inisiatif Biodiesel B50; • Pengembangan Manufaktur Sel Surya Kerja Sama Konsorsium BUMN; • Pengembangan Converter Kit Sepeda Motor Listrik Hibrida; • Pengembangan Komersialisasi Software PertaflowSIM dan PertaEOR; • Pengembangan Komersialisasi Produk Petrochemical. <ul style="list-style-type: none"> • <i>Development of Hydrotreating Catalyst Plant JV (JV Katalis Merah Putih);</i> • <i>Development of FCC/RFCC Catalyst Production;</i> • <i>Development of the Gasoline-Methanol Ethanol Blending Initiative;</i> • <i>Development of the B50 Biodiesel Initiative;</i> • <i>Development of Solar Cell Manufacturing in Cooperation with the SOE Consortium;</i> • <i>Development of Hybrid Electric Motorcycle Converter Kit;</i> • <i>Development of PertaflowSIM and PertaEOR Software Commercialization;</i> • <i>Development of Petrochemical Products Commercialization.</i>

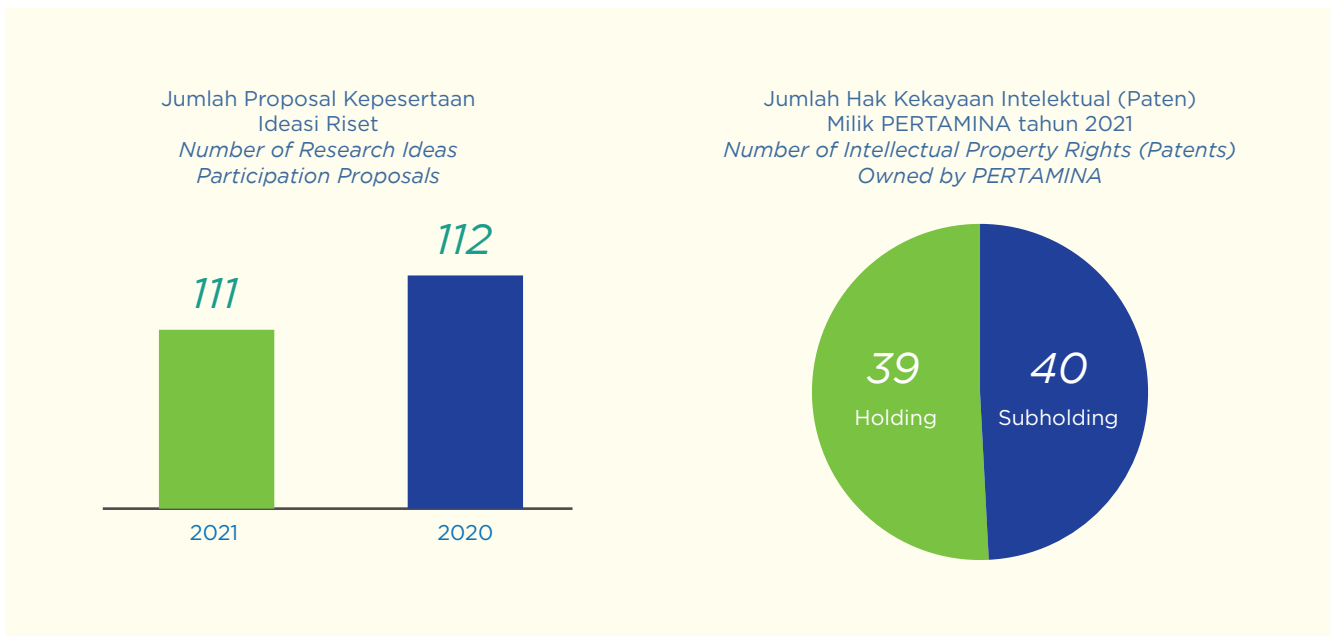


Jumlah Proyek dan Proyek Prioritas Tahun 2021 sesuai Fungsi-fungsi dalam RTI PERTAMINA
Number of Projects and Priority Projects in 2021 according to Functions within RTI PERTAMINA

<p>Fungsi Upstream Research & Technology Innovation <i>Upstream Research & Technology Innovation Function</i></p>	<p>35</p>	<ul style="list-style-type: none"> • Pengembangan Teknologi Well Fracturing di Lapangan Batang PHE Siak Kampar; • Penelitian Teknologi Stimulasi Vibroseis untuk Peningkatan Produksi di Lapangan Tempino; • Pembuatan Perangkat Lunak PertaEOR Tahap 4; • Pengembangan Metode Noise Tomografi untuk Pemetaan Rekaan Bawah Permukaan di Lapangan Geothermal (Uji Resolusi); • Pengembangan Perangkat Lunak Pengolahan Data Seismik berbasis Cloud; • Pengembangan PertafloSIM; • Pemilihan Formulasi dan Pengujian Drilling & Completion Fluid di Sumur HPHT; • Otomasi Pilot Plant, Plant Trial, dan Studi Pengembangan Demo Plant Utilisasi CO₂ menjadi Precipitated Calcium Carbonate (PCC). • <i>Well Fracturing Technology Development in the PHE Siak Kampar Batang Field;</i> • <i>Research on Vibroseis Stimulation Technology for Production Improvement in Tempino Field;</i> • <i>PertaEOR Software Development Phase 4;</i> • <i>Tomographic Noise Method Development for Subsurface Design Mapping in Geothermal Fields (Resolution Test);</i> • <i>Development of Cloud-based Seismic Data Processing Software;</i> • <i>PertafloSIM development;</i> • <i>Selection of Formulation and Drilling & Completion Fluid Testing in HPHT Well;</i> • <i>Automation of Pilot Plant, Plant Trial, and Demo Plant Development Study for CO₂ Utilization into Precipitated Calcium Carbonate (PCC).</i>
<p>Fungsi Downstream Research and Technology Innovation <i>Downstream Research and Technology Innovation Function</i></p>	<p>55</p>	<ul style="list-style-type: none"> • Formulasi/Sintesa Bahan Kimia untuk Aditif Bahan Bakar Bensin di PERTAMINA; • Penggunaan Metanol sebagai Komponen Campuran Bahan Bakar Bensin; • Penelitian Bahan Bakar "Beyond 30"; • Formulasi dan Pengembangan Katalis FCC/RFCC dengan Plant Trial pada Pilot Project RTI; • Pengembangan Smooth Fluid O2 dan Field Smooth Fluid O4 di RU IV; • Studi Pengembangan Sistem Pengumpulan dan Pemanfaatan Used Cooking Oil (UCO) di Wilayah Jabodetabek; • Formulasi dan Optimasi Pembuatan Material Battery Lithium Ion NMC; • Teknologi Seleksi Biofinery Biothenol Generasi Kedua Secara Fermentasi di Fasilitas Produk Komersial atau Lembaga Riset; • Intensifikasi Proses Mikroalga Menjadi Biofuel Lab Scale dengan Pembuatan Fasilitas Active Monitoring dan Control System di Fasilitas Skala Pilot; • <i>Chemical Formulation/Synthesis for Gasoline Fuel Additives at PERTAMINA;</i> • <i>Use of Methanol as a Component of Gasoline Fuel Mixtures;</i> • <i>"Beyond 30" Fuel Research;</i> • <i>FCC/RFCC Catalyst Formulation and Development with Plant Trial on RTI Pilot Project;</i> • <i>Development of Smooth Fluid O2 and Field Smooth Fluid O4 at RU IV;</i> • <i>Study on Development of Used Cooking Oil (UCO) Collection and Utilization System in Greater Jakarta (Jabodetabek) Area;</i> • <i>Formulation and Optimization of Materials for Lithium Ion NMC Battery;</i> • <i>Second Generation Biothenol Biofinery Selection Technology by Fermentation in Commercial Product Facilities or Research Institutes;</i> • <i>Intensification of Microalgae Process into Lab Scale Biofuel by Making Active Monitoring and Control System Facilities at Pilot Scale Facilities.</i>
<p>Fungsi Laboratory Services <i>Laboratory Services Function</i></p>	<p>7</p>	<ul style="list-style-type: none"> • Technical Services untuk Internal dan Eksternal RTI; • Contract Maintenance untuk Peralatan Uji; • Uji Implementasi ISO 17025:2017 di Laboratory Services. • <i>Technical Services for Internal and External RTI;</i> • <i>Contract Maintenance for Test Equipment;</i> • <i>ISO 17025:2017 Implementation Test in Laboratory Services.</i>

Hingga saat ini, sebagian dari inovasi dan penelitian yang dijalin antara PERTAMINA dengan berbagai institusi pendidikan telah masuk ke tahap komersialisasi. PERTAMINA juga mendaftarkan Hak Kekayaan Intelektual sebanyak 79 paten dalam kinerja dan layanan yang inovatif. Jumlah tersebut terdiri dari 39 paten dari Holding dan 40 paten dari entitas anak.

Some of the innovations and research that have been established between PERTAMINA and various educational institutions have entered the commercialization stage. PERTAMINA also registered Intellectual Property Rights for 79 patents in innovative performance and services, consisting of 39 patents from Holding Company and 40 patents from Subholdings.



Penghargaan dan Apresiasi bidang Inovasi
Innovation Awards and Appreciation

Penghargaan <i>Award</i>	Penyelenggara <i>Organizer</i>	Waktu Pelaksanaan <i>Implementation Date</i>
Dharma Karya Energi dan Sumber Daya Mineral Madya - PC PROVE ELANG GURUN <i>Second place of Dharma Karya Energy and Mineral Resources award - PC PROVE ELANG GURUN</i>	Menteri Energi dan Sumber Daya Mineral (ESDM) Republik Indonesia Republic of Indonesia's Minister of Energy and Mineral Resources (MEMR) <i>Minister of Energy and Mineral Resources (MEMR) of the Republic of Indonesia</i>	27 September 2021 <i>27 September 2021</i>
Dharma Karya Energi dan Sumber Daya Mineral Muda - I PROVE NOZGAM <i>Third place of Dharma Karya Energy and Mineral Resources award - I PROVE NOZGAM</i>	Menteri ESDM Republik Indonesia Republic of Indonesia's MEMR <i>MEMR of the Republic of Indonesia</i>	27 September 2021 <i>27 September 2021</i>
Dharma Karya Energi dan Sumber Daya Mineral Muda - PC PROVE SLUKU-SLUKU BATHOK <i>Third place of Dharma Karya Energy and Mineral Resources award - PC PROVE SLUKU-SLUKU BATHOK</i>	Menteri ESDM Republik Indonesia Republic of Indonesia's MEMR <i>MEMR of the Republic of Indonesia</i>	27 September 2021 <i>27 September 2021</i>
Perusahaan Pendukung Program Kampung Iklim (PROKLIM) <i>Climate Village Program Supporting Company (PROKLIM)</i>	Kementerian Lingkungan Hidup dan Kehutanan RI <i>Ministry of Environment and Forestry of the Republic of Indonesia</i>	19 Oktober 2021 <i>19 October 2021</i>



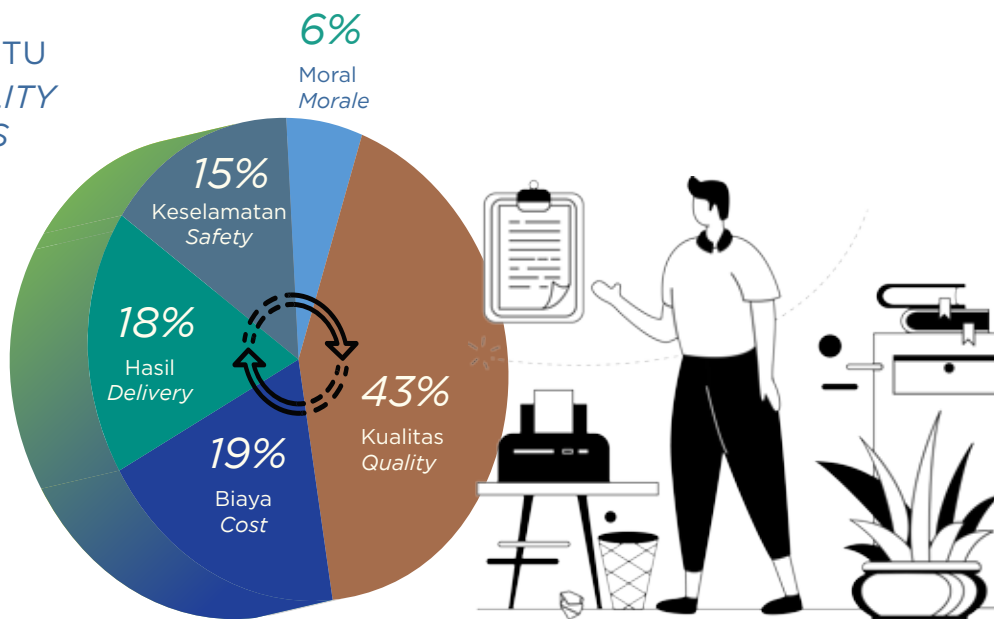
CONTINUOUS IMPROVEMENT PROGRAM

PERTAMINA terus mendorong para pekerjanya untuk meningkatkan inovasi produk, teknologi, dan pelayanan. Secara berkala, PERTAMINA menyelenggarakan Annual Pertamina Quality (APQ) Award untuk mendorong lahirnya karya inovatif dan menciptakan *value creation*. APQ Award meliputi Forum Inovasi Pertamina melalui Continuous Improvement Program (CIP) dan Digital Expo. Kegiatan tahun 2021 diikuti 130 inovasi terbaik dari 3.283 inovasi yang dihasilkan seluruh entitas dan unit bisnis PERTAMINA.

PERTAMINA continues to encourage its employees to develop innovations in products, technology, and services. Periodically, PERTAMINA organizes the Annual Pertamina Quality (APQ) Awards to encourage innovative work and create value creation. The APQ Awards cover the Pertamina Innovation Forum through the Continuous Improvement Program (CIP) and the Digital Expo. The 2021 activities were participated by 130 of the best innovations from 3,283 innovations produced by all PERTAMINA entities and business units.

Jumlah Karya Inovasi Number of Innovation Works		Replikasi Replication	
Peta Jalan 2021 Roadmap 2021	Realisasi 2021 Realization 2021	Peta Jalan 2021 Roadmap 2021	Realisasi 2021 Realization 2021
1,066	3,283	115	160

PRIORITAS PANCA MUTU FIVE QUALITY PRIORITIES





INOVASI DAN RISET UNTUK TRANSISI ENERGI DAN KARBON NETRAL INNOVATION AND RESEARCH FOR THE ENERGY AND CARBON NEUTRAL TRANSITION

Pengembangan Hidrogen Hijau

PERTAMINA mengembangkan hidrogen sebagai energi baru, baik blue hydrogen maupun green hydrogen. Kajian dan uji coba dilakukan di Wilayah Kerja Panas Bumi (WKP) Ulubelu yang dikelola PT Pertamina Geothermal Energy.

Pada periode pelaporan, PERTAMINA menandatangani nota kesepahaman dengan PT Pupuk Indonesia (Persero) untuk pengembangan green hydrogen dan blue hydrogen. Kerja sama juga mencakup pemanfaatan sarana dan peralatan teknologi dan komersialisasi green ammonia dan blue ammonia menggunakan hidrogen produksi PERTAMINA sebagai bahan baku.

Green ammonia dan blue ammonia merupakan amonia yang diproses dari sumber energi terbarukan, dengan kandungan karbon rendah sehingga lebih ramah lingkungan. Blue ammonia diproduksi menggunakan blue hydrogen dari sumber energi fosil dan karbon (CO₂) yang terbentuk dari proses produksi akan diinjeksikan ke dalam perut bumi menggunakan CCS Technology. Sedangkan green ammonia produksinya menggunakan green hydrogen dari sumber energi bersih.

PERTAMINA juga melakukan kerja sama dengan ExploRE terkait pengembangan dan produksi hidrogen hijau dari panas bumi untuk aplikasi di pasar domestik dan internasional. ExploRE merupakan proyek kerja sama antara Direktorat Jenderal EBTKE Kementerian ESDM, dan Kementerian Lingkungan Hidup, Konservasi Alam dan Keamanan Nuklir (BMU) Pemerintah Jerman c.q Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

Pengembangan Teknologi Baterai Penyimpanan Energi Berbasis EBT

Riset dan inovasi lain yang dikembangkan adalah teknologi khusus EBT, dengan prioritas pengembangan teknologi penyimpanan energi (baterai) berbasis EBT. Hal ini dilakukan karena belum ada teknologi yang khusus untuk menyimpan energi berbasis EBT. Keberhasilan PERTAMINA mengembangkan penyimpanan EBT maka akan mendorong percepatan perpindahan penggunaan energi dari energi konvensional ke EBT.

Green Hydrogen Development

PERTAMINA develops hydrogen, both blue and green hydrogen, new energy sources. The study and trials were carried out in the Ulubelu Geothermal Working Area (WKP) managed by PT Pertamina Geothermal Energy.

In the reporting period, PERTAMINA signed a memorandum of understanding with PT Pupuk Indonesia (Persero) for the development of green and blue hydrogen. The cooperation also covered the use of technological facilities and equipment and the commercialization of green and blue ammonia using PERTAMINA's hydrogen as a raw material.

Green ammonia and blue ammonia are more environmentally friendly which are processed from renewable energy sources with low carbon content. Blue ammonia is produced using blue hydrogen from fossil energy sources and carbon (CO₂) formed from the production process will be injected into the bowels of the earth using CCS Technology. Meanwhile, green ammonia is produced using green hydrogen from clean energy sources.

PERTAMINA is also collaborating with ExploRE for the development and production of green hydrogen from geothermal for applications in domestic and international markets. ExploRE is a collaborative project between the Directorate General of NREEC of the Ministry of Energy and Mineral Resources, and the Ministry of Environment, Nature Conservation and Nuclear Security (BMU) of the German Government c.q Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

NRE-Based Energy Storage Battery Technology Development

Other research and innovations that are being developed are NRE specific technology, with a priority on developing NREbased energy storage (battery) technology. This is done because there is no specific technology to store NRE-based energy. PERTAMINA's achievement in developing NRE storage accelerates the shift in energy use from conventional energy to NRE.

INOVASI DAN RISET UNTUK TRANSISI ENERGI DAN KARBON NETRAL INNOVATION AND RESEARCH FOR THE ENERGY AND CARBON NEUTRAL TRANSITION

Pengembangan CCS dan CCUS

Sejalan dukungan pada Pemerintah untuk menekan perubahan iklim dan pemanasan global, PERTAMINA turut mengembangkan Carbon Capture and Storage (CCS) dan Carbon Capture, Utilization, and Storage (CCUS) untuk menekan emisi karbon. Dalam aplikasi lain, CCS dan CCUS juga dimanfaatkan untuk Enhanced Gas Recovery (EGR) guna meningkatkan produksi minyak dan gas.

Pada periode pelaporan, PERTAMINA bekerja sama dengan JAPAN NUS CO.,Ltd, JGC Corporation, J-Power, dan Institut Teknologi Bandung melalui Kesepakatan Kerja Sama Studi (Joint Study Agreement) mengkaji penerapan CCUS dan EGR pada proyek Lapangan Gundih di Cepu, Jawa Tengah. PERTAMINA juga melakukan nota kesepahaman dengan JAPEX dan Lemigas untuk penerapan CCUS dan EGR pada proyek Lapangan Sukowati.

Melalui kerja sama ini, karbon yang ditimbulkan dari proses produksi migas akan ditangkap dan dimasukkan kembali ke dalam bumi untuk proses EGR. CO₂ yang tersimpan akan dinyatakan sebagai kredit karbon yang akan di-share antara Pemerintah Indonesia dan Jepang.

Kerja sama pengembangan CCS dan CCUS juga dilakukan PERTAMINA dengan ExxonMobil. Kerja sama meliputi kajian pengembangan dan penerapan teknologi rendah karbon untuk mencapai emisi net-zero. Teknologi CCS diaplikasikan melalui penerapan proses injeksi CO₂ ke dalam lapisan subsurface untuk diterapkan pada depleted reservoir di wilayah kerja PERTAMINA serta mengkaji potensi skema hubs and cluster.

Pengembangan Pemanfaatan Mikroalga

Bersama Universitas Gadjah Mada, PERTAMINA memperkuat pengembangan EBT berbasis mikroalga, mengingat di Indonesia mikroalga berlimpah dan belum dimanfaatkan secara optimal. Hal ini didasari kondisi geografis Indonesia yang 70% terdiri dari laut dan memiliki keragaman mikroalga untuk dimanfaatkan sebagai bioenergi. Dari hasil percobaan skala laboratorium melalui proses inkubasi 48 jam, untuk mikroalga single strain mampu menghasilkan 0,36 gram etanol per gram biomassa.

Pengembangan Pemanfaatan Mikroalga

In line with support for the Government to control climate change and global warming, PERTAMINA has also developed Carbon Capture and Storage (CCS) and Carbon Capture, Utilization, and Storage (CCUS) to reduce carbon emissions. In other applications, CCS and CCUS are also used for Enhanced Gas Recovery (EGR) to increase oil and gas production.

In the reporting period, PERTAMINA collaborated with JAPAN NUS CO., Ltd, JGC Corporation, J-Power, and the Bandung Institute of Technology through a Joint Study Agreement to review the implementation of CCUS and EGR on the Gundih Field project in Cepu, Central Java. PERTAMINA also signed a memorandum of understanding with JAPEX and Lemigas for the implementation of CCUS and EGR in the Sukowati Field project.

Through this collaboration, carbon generated from the oil and gas production process will be captured and put back into the ground for the EGR process. The stored CO₂ will be declared as carbon credits, which will be shared between the Governments of Indonesia and Japan.

PERTAMINA has also collaborated on the development of CCS and CCUS with ExxonMobil. The collaboration includes studies on the development and application of low-carbon technologies to achieve net-zero emissions. CCS technology is applied through the application of a CO₂ injection process into the subsurface layer to be applied to depleted reservoirs in PERTAMINA's working area as well as assessing the potential for hubs and cluster schemes.

Development of Microalgae Utilization

Together with Universitas Gadjah Mada, PERTAMINA strengthened the development of microalgae-based NRE, given the abundant microalgae in Indonesia that have not been used optimally. The geographical conditions of Indonesia consist of 70% sea and has a diversity of microalgae to be used as bioenergy. The results of laboratory-scale experiments through a 48-hour incubation process, show that single-strain microalgae is able to produce 0.36 grams of ethanol per gram of biomass.

KOMITMEN LST PADA RANTAI PASOK *ESG COMMITMENT TO THE SUPPLY CHAIN*

Komitmen PERTAMINA untuk mengintegrasikan praktik LST juga diperkuat dengan Komitmen Penerapan *ESG Management* dalam kegiatan barang dan jasa. Komitmen ini telah ditandatangani SVP Procurement, antara lain berisi dukungan yang berorientasi *ESG Management* pada perubahan dan penerapan dalam aktivitas Perseroan, dorongan pemahaman Insan PERTAMINA dan pemangku kepentingan, serta penerapan sanksi bagi pihak yang terbukti bertindak tidak sesuai dengan penerapan kaidah *ESG Management* Perseroan. PERTAMINA juga berkomitmen dalam penerapan Green Procurement Policy dalam proses pengadaan barang dan jasa yang mengandung kebijakan pengurangan penggunaan kertas, penghematan energi, pengelolaan limbah, antikorupsi, dan kesejahteraan pekerja mitra (jaminan sosial, anti-pekerja anak dan paksa).

PERTAMINA menyertakan klausul persyaratan terkait LST dalam berkontrak dengan mitra yang sifat kerja samanya dinilai memiliki risiko lingkungan, sosial, dan tata kelola. Beberapa di antaranya adalah sertifikasi dan/atau analisis kesenjangan EMS ISO 14001, ISO 50001, ISO9001, OHSAS 18001, dan ISO 17025.

DUKUNGAN PADA TKDN *SUPPORT FOR LOCAL CONTENT*

PERTAMINA melalui RTI mendorong peningkatan penggunaan komponen dalam negeri di berbagai proyek dan operasional perusahaan. Inovasi dan penelitian yang dilakukan juga bertujuan meningkatkan penggunaan produk dalam negeri, termasuk specialty chemicals dan katalis. Pengembangan kedua jenis produk tersebut dilakukan RTI, untuk memenuhi kebutuhan di unit pengolahan dan sumur pengeboran, bahkan sudah digunakan oleh pihak eksternal.

PERTAMINA's commitment to integrating ESG practices is also strengthened by the Commitment to Implementing ESG Management in goods and services activities. The commitment has been signed by SVP Procurement, which includes support for ESG Management-oriented changes and implementation in the Company's activities, promoting knowledge for PERTAMINA personnel and stakeholders, as well as imposing sanctions for parties who are proven to have acted inconsistently with the implementation of the Company's ESG Management principles. PERTAMINA is also committed to implementing the Green Procurement Policy in the process of procuring goods and services, including policies to reduce paper use, energy saving, waste management, anti-corruption, and the welfare of partner workers (social security, anti-child and forced labor).

PERTAMINA includes clauses on ESG requirements in contracts with partners whose nature of cooperation is considered to have environmental, social, and governance risks. Some of these are ISO 14001, ISO 50001, ISO9001, OHSAS 18001 and ISO 17025 EMS certification and/or gap analysis.

PERTAMINA, through RTI, encourages the increased use of domestic components in various projects and company operations. The innovations and research carried out are also aimed at increasing the use of domestic products, including specialty chemicals and catalysts. The development of the two types of products is carried out by RTI to meet the needs of the refining unit and well drilling, and has even been used by external parties.

Komitmen pada Peningkatan Penggunaan Produk Dalam Negeri dijalankan PERTAMINA melalui keterlibatan badan usaha dalam negeri sebagai pemasok barang dan jasa. Komitmen capaian penggunaan produk dalam negeri PERTAMINA periode 2020 - 2024 melalui rencana investasi senilai USD92 miliar di seluruh lini bisnis, diproyeksikan mencapai 50% pada tahun 2024.

PERTAMINA's commitment to increasing the use of domestic products is carried out through the involvement of domestic business entities as suppliers of goods and services. The commitment to achieving PERTAMINA's use of domestic products for the 2020-2024 period was implemented through an investment plan worth USD92 billion in all business lines, and is projected to reach 50% by 2024.

Proyeksi TKDN PERTAMINA 2020 - 2024 PERTAMINA Local Content Projection 2020 - 2024						
Uraian Description	Satuan Unit	2020	2021	2022	2023	2024
Target TKDN Local Content Target	%	25%	30%	32.5%	35%	40%
Realisasi TKDN Local Content Realization		55.60	60.00%			

Keterangan: Pencapaian realisasi rata-rata TKDN sesuai Surveyor Independen
Note: The local content average realization achievement according to the Independent Surveyor

Komitmen capaian penggunaan produk dalam negeri PERTAMINA periode 2020 - 2024 melalui rencana investasi senilai USD92 miliar di seluruh lini bisnis, diproyeksikan mencapai 50% pada tahun 2024.

The commitment to achieving PERTAMINA's use of domestic products for the 2020-2024 period was implemented through an investment plan worth USD92 billion in all business lines, and is projected to reach 50% by 2024.

Selain itu peningkatan TKDN juga didukung dengan telah dibentuknya Fungsi Peningkatan Penggunaan Produk Dalam Negeri (P3DN) di masing-masing Subholding. Fungsi P3DN memiliki tugas dan tanggung jawab yang sama yaitu melakukan monitoring dan evaluasi penerapan TKDN serta melakukan fasilitasi terhadap perbedaan penafsiran TKDN, sehingga maka penerapan implementasi P2DN di PERTAMINA Group menjadi lebih terintegrasi dan optimal.

In addition, the increase in local content is also supported by the establishment of the Function for Increasing the Use of Domestic Products (P3DN) in each Subholding. The P3DN function has the same duties and responsibilities in monitoring and evaluating the implementation of local content and facilitating differences in the interpretation of local content for more integrated and optimized implementation of P2DN in PERTAMINA.

Selain dengan menerapkan TKDN pada pengadaan, pada tahun 2021 PERTAMINA melakukan sertifikasi TKDN terhadap 22 varian produk PERTAMINA Group untuk dapat menaikkan daya saing penjualan produk tersebut.

Aside from implementing local content in the procurement process, in 2021, PERTAMINA conducted local content certification for 22 variants of PERTAMINA Group's products to increase the competitiveness these products's sales.

Proporsi Pengadaan Barang [204-1] Proportion of Goods Procurement							
Uraian Description	Satuan Unit	2021	%	2020*	%	2019*	%
Jumlah Pemasok Number of Suppliers							
Nasional National		2,865	94.24	2,927	93,54	2,867	93,18
Internasional International	Jumlah Total	175	5.76	202	6,46	210	6,82
Jumlah Total		3,040	100	3,129	100	3,077	100
Nilai Kontrak Contract Value							
Nasional National		16,39	90.93	15,41	91,53	14,14	85,58
Internasional International	USD USD	1,63	9.07	1,43	8,47	2,38	14,42
Jumlah Total		18,02	100	16,84	100	16,52	100

*Dinyatakan ulang sebagai angka konsolidasi terkait restrukturisasi organisasi.
Restated as a consolidated figure due to organizational restructuring.



Proporsi Pengadaan Jasa [204-1] Proportion of Service Procurement							
Uraian Description	Satuan Unit	2021	%	2020*	%	2019*	%
Jumlah Pemasok Number of Suppliers							
Nasional National		8,947	95.39	8,045	95,47	8,230	95,12
Internasional International	Jumlah Number	432	4.61	382	4,53	422	4,88
Total Total		9,379	100	84,27	100	8,652	100
Nilai Kontrak Contract Value							
Nasional National		131,51	97,64	120,04	96,48	119,54	96,80
Internasional International	USD USD	3,18	2,36	4,37	3,52	3,95	3,20
Jumlah Total		134,69	100	124,41	100	123,49	100

*Dinyatakan ulang sebagai angka konsolidasi terkait restrukturisasi organisasi.
Restated as a consolidated figure due to organizational restructuring.

Pengadaan Digital Digital Procurement

Pada Tahun 2020 Digital Procurement telah diimplementasikan sebagai single platform pengadaan barang dan jasa di Holding dan Segmen Refinery & Petrochemical, Commercial & Trading, dan Integrated Marine Logistics. Tahun 2021 Digital Procurement diimplementasikan di Segmen Upstream dan PT Pertamina Lubricants serta *readiness assessment* di beberapa subholding lainnya. Sampai dengan 31 Desember 2021 progres digital procurement untuk tahap MVP (pilot) telah dilaksanakan di PT Pertamina Hulu Energi, PT Pertamina Hulu Energi ONWJ, PT Pertamina Hulu Energi WMO dan PT Pertamina Lubricants.

In 2020, Digital Procurement has been implemented as a single platform for the procurement of goods and services in Holding Company and the Refinery & Petrochemical, Commercial & Trading, and Integrated Marine Logistics Segment. In 2021, Digital Procurement has been implemented in Upstream Segment and PT Pertamina Lubricants as well as readiness assessment in several other Segment. As of 31 December 2021, the progress of digital procurement for the MVP (pilot) stage has been carried out at PT Pertamina Hulu Energi, PT Pertamina Hulu Energi ONWJ, PT Pertamina Hulu Energi WMO, and PT Pertamina Lubricants.

Sentralisasi Pengadaan Centralized Procurement

PERTAMINA menerapkan langkah optimalisasi biaya melalui sentralisasi pengadaan. Sentralisasi Kontrak Payung mencakup seluruh kontrak payung yang diterbitkan oleh Fungsi Procurement PERTAMINA Holding dan Subholding. optimalisasi biaya dilakukan dengan melakukan praktik pengadaan secara transparan, efisiensi, mengacu pada best practice, mendorong nilai tambah dan mengembangkan budaya sadar biaya di seluruh organisasi.

PERTAMINA implements cost optimization through centralized procurement. The Centralized Umbrella Contract covers all umbrella contracts issued by the Procurement Function of PERTAMINA Holding Company and Subholdings. The cost optimization is implemented with transparent, efficient procurement practices, referring to best practices, boosting added value, and developing a cost-conscious culture in the entire organization.

Target optimalisasi biaya di 2021: USD200 juta dari pemanfaatan kontrak payung Holding & Sub Holding, dengan realisasi USD217,36 juta hingga akhir 2021.

Cost optimization target in 2021: USD200 million from the Holding Company & SubHolding umbrella contract, with a realization of USD217.36 million until the end of 2021.

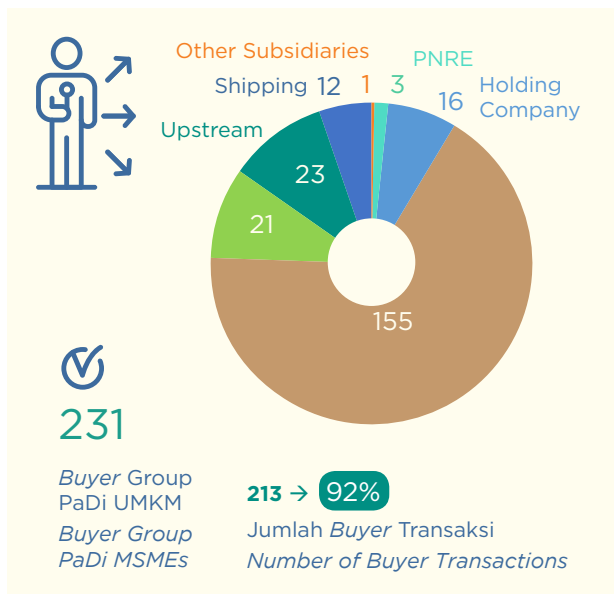
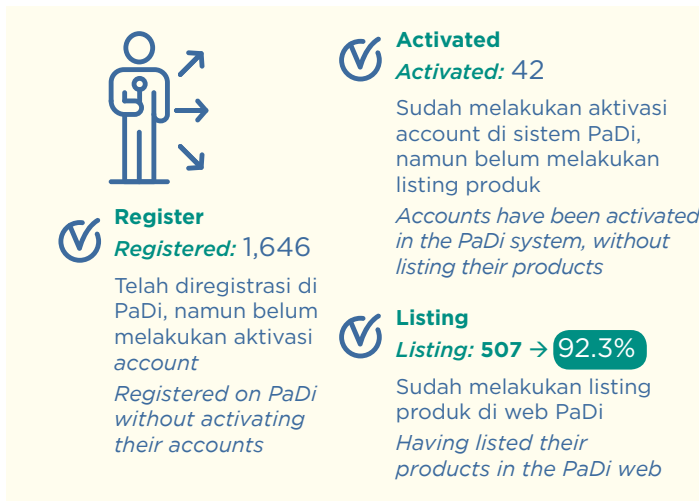
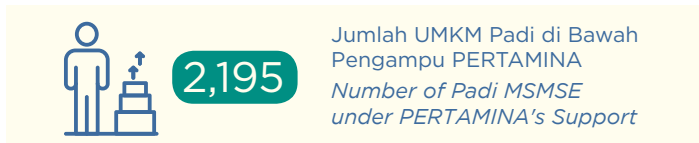
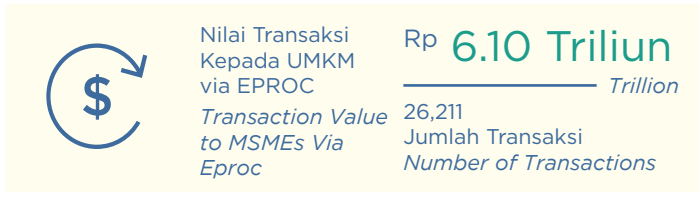
UMK sebagai Rantai Pasok PERTAMINA
SMEs as PERTAMINA Supply Chain

Pasar Digital (PaDi) Usaha Mikro, Kecil dan Menengah (UMKM)
Micro, Small and Medium Enterprises Digital Market (PaDi UMKM)

PaDi UMKM merupakan program dari Kementerian BUMN berupa platform digital yang bertujuan untuk memonitor kontribusi BUMN dalam pemberdayaan UMKM di Indonesia. PERTAMINA merupakan salah satu diantara 9 BUMN Piloting yang ditugaskan oleh Kementerian BUMN untuk mengimplementasikan PaDi UMKM.

PaDi UMKM is a program from the Ministry of SOEs in the form of a digital platform that aims to monitor the SOEs contribution in empowering MSMEs in Indonesia. PERTAMINA is one of 9 Piloting SOEs assigned by the Ministry of SOEs to implement PaDi UMKM.

Progress Implementasi PaDi UMKM PERTAMINA hingga akhir 2021
Progress of PERTAMINA's PaDi UMKM Implementation as of the end of 2021



Selain itu, dalam rangka Sinergi Implementasi Info Tender BUMN, saat ini PERTAMINA juga sudah mulai menjajaki program integrasi Sistem Pengadaan dengan Platform PaDi UMKM sebagaimana arahan dari Kementerian BUMN melalui Telkom sebagai pengelola platform.

In addition, the Synergy in the Implementation of SOE Tender Info, currently PERTAMINA has also begun exploring the integration program of the Procurement System with the PaDi UMKM platform as directed by the Ministry of SOEs through Telkom as the platform manager.



Rantai Pasok BUMN *SOE Supply Chain*

Kementerian BUMN bersama dengan Kementerian Koperasi & Usaha Kecil dan Menengah (UKM) serta Kementerian Perindustrian berkolaborasi dalam mendukung program kemitraan UMKM dalam rantai pasok BUMN, PERTAMINA turut berkontribusi dalam mengembangkan kompetensi UMKM untuk menjadi Fabrikator Modular Pertashop dan Mitra Pertashop. Sampai dengan TW IV 2021 realisasi kemitraan modular Pertashop dengan Mitra Pertashop mencapai nilai transaksi Rp46,1 miliar.

The Ministry of SOEs, together with the Ministry of Cooperatives & Small and Medium Enterprises (SMEs) and the Ministry of Industry, collaborate in supporting the MSME partnership program in the SOE supply chain PERTAMINA also contributes to MSME competency development to become Pertashop Modular Fabricators and Pertashop's Partners. As of the fourth quarter of 2021, the realization of Pertashop modular partnership with Pertashop Partners has reached a transaction value of Rp46.1 billion.

KETERLIBATAN KOMUNITAS DAN PENGELOLAAN DAMPAK TERHADAP KOMUNITAS [11.15] [SOC-9.C2]

COMMUNITY ENGAGEMENT AND MANAGEMENT OF IMPACTS ON THE COMMUNITY

Masyarakat di sekitar wilayah operasi adalah pemangku kepentingan yang terdampak kegiatan operasi. Melalui pelaksanaan tanggung jawab sosial dan lingkungan (TJSL), PERTAMINA berupaya memberdayakan masyarakat di sekitar wilayah operasi, dan melibatkan mereka dalam berbagai program peningkatan kesejahteraan. Pemenuhan kewajiban PERTAMINA TJSL mendukung komitmen LST melalui penciptaan nilai (*creating shared value*) dan kontribusi pada pencapaian TPB.

PERTAMINA telah menetapkan target CSR Index yang mengukur persepsi masyarakat terhadap pelaksanaan Tanggung Jawab Sosial dan Lingkungan (TJSL) PERTAMINA. Dari pengukuran yang dilaksanakan, didapatkan gambaran dan deskripsi persepsi masyarakat atas program-program TJSL yang telah dilaksanakan. Untuk tahun 2021, CSR Index yang berhasil diraih TJSL PERTAMINA adalah 4,00 dari rentang 1,00-5,00 skala likert; tertinggi dalam empat tahun terakhir. Selain pelaksanaan program TJSL yang baik, komunikasi dan publikasi TJSL yang efektif juga dibutuhkan.

Pelaksanaan TJSL berpedoman pada Undang-Undang Nomor 40 Tahun 2007 tentang Perseroan Terbatas dan Peraturan Menteri (Permen) BUMN Nomor Per-05/MBU/04/2021 tentang Program Tanggung Jawab Sosial dan Lingkungan Badan Usaha Milik Negara, serta merujuk pada ISO 26000 Guidance Standard on Social Responsibility. Secara berkala, kinerja pelaksanaan TJSL dievaluasi oleh Komite Komisaris melalui mekanisme pelaporan, dan juga oleh Direktur Utama melalui mekanisme monitoring pencapaian target KPI. Pemenuhan TJSL mencakup program TJSL Kontribusi dan Program Pendanaan Usaha Mikro dan Kecil (PUMK). [3-3]

The community around the operating area is the stakeholder affected by the operating activities. Through the implementation of social and environmental responsibility (CSR), PERTAMINA strives for the empowerment of communities around our operational areas, and involves them in various welfare improvement programs. The fulfillment of PERTAMINA CSR obligations supports ESG commitments through creating shared value and contributing to the achievement of SDGs.

PERTAMINA has set a target of CSR Index that measures community perception of PERTAMINA's Social and Environmental Responsibility (CSR) implementation. The measurement results provide an overview and description of the community perception of the CSR programs that have been implemented. In 2021, PERTAMINA's CSR index was 4.00 on Likert scale of 1.00 to 5.00; the highest in the last four years. In addition, a good CSR program implementation requires effective CSR communication and publication.

The CSR implementation is guided by Law Number 40 of 2007 concerning Limited Liability Companies and Minister of SOEs Regulation Number Per-05/MBU/04/2021 concerning Social and Environmental Responsibility Programs for State-Owned Enterprises, and refers to ISO 26000 Guidance Standard on Social Responsibility. Periodically, the performance of the CSR implementation is evaluated by the Committee of Commissioners through the reporting mechanism, as well as by the President Director & CEO through the mechanism of KPI target achievement monitoring. CSR Fulfillment includes the Contribution CSR program and the Micro and Small Enterprise Funding Program (PUMK). [3-3]

Target capaian Program TJSL BUMN dituangkan dalam tiga indikator, yaitu:

- Program prioritas untuk mendukung pencapaian prioritas TPB
- Program TJSL yang berkomitmen mendukung bisnis inti dan menciptakan creating shared value (CSV) bagi Perusahaan
- Jumlah mitra binaan yang naik kelas melalui peningkatan kapasitas usaha (membaik secara ekonomi dan mandiri).

Pelibatan masyarakat lokal dilaksanakan melalui mekanisme asesmen dampak sosial pada setiap proyek maupun kegiatan operasi yang dijalankan. PERTAMINA melengkapi seluruh (100%) proyek maupun kegiatan operasi yang dijalankan dengan dokumen Analisis Mengenai Dampak Lingkungan (AMDAL), yang menyertakan analisis dampak sosial.

[413-1][413-2]

The SOE CSR Program achievement targets are stated in three indicators, namely:

- *Priority programs to support the achievement of priority SDGs*
- *CSR program that is committed to supporting core business and creating shared value (CSV) for the Company*
- *The number of partners who have been upgraded through business capacity building (improved economically and independently).*

The local communities are involved through a social impact assessment mechanism for each project and operational activity. PERTAMINA completes all (100%) of its projects and operations with an Environmental Impact Analysis (AMDAL) document, which includes a social impact analysis.

[413-1][413-2]

TJSL SEBAGAI INVESTASI SOSIAL DAN DUKUNGAN PADA TPB CSR AS SOCIAL INVESTMENT AND SUPPORT FOR SDGS

Realisasi biaya TJSL Kontribusi:
Realization of CSR Contribution fee:

Rp379.05 miliar
billion

Rp379,05 miliar atau
121,88% dari target
*Rp379.05 billion or
121.88% of target.*

Realisasi penyaluran dana
Program Pendanaan PUMK:
*Realization of fund disbursement
of PUMK Funding Program:*

Rp213,99 miliar
billion

Rp213,99 miliar dengan
tingkat efektivitas penyaluran
sebesar 99,60%.
*Rp213.99 billion with
disbursement effectiveness
level of 99.60%.*

TJSL Kontribusi *Contribution CSR*

TJSL Kontribusi berfokus pada peningkatan kualitas hidup dan pemberdayaan kemandirian masyarakat di sekitar wilayah operasi PERTAMINA, dan berada di bawah tanggung jawab Fungsi CSR di bawah Corporate Secretary.

Contribution CSR focuses on improving the quality of life and empowering the community around PERTAMINA's operational area to be independent, and is the responsibility of the CSR function under the Corporate Secretary.

Pelaksanaan Tanggung Jawab Sosial dan Lingkungan PERTAMINA
Implementation of PERTAMINA's Social and Environmental Responsibility

DUKUNGAN
PADA TPB DAN
KOMITMEN
NILAI-NILAI LST
SUPPORT FOR
SDGS AND
ESG VALUES
COMMITMENT

Pelibatan dan
Pengembangan
Komunitas dan
Pemetaan berbasis
potensi masing-
masing wilayah dan
kelompok
*Community
Engagement and
Development and
Mapping based the
potential of each
region and group*

SOSIAL
SOCIAL

TPB 1: Tanpa
Kemiskinan
SDG 1:
No Poverty



Program PERTAMINA PEDULI

- mitigasi bencana dan penyaluran bantuan bencana alam: banjir Kalimantan, erupsi Gunung Semeru, gempa Sulawesi Barat
- program penanganan pandemi COVID-19: vaksinasi COVID-19 bagi masyarakat melalui Sentra Vaksinasi Bersama BUMN

PERTAMINA PEDULI Program

- *disaster mitigation and relief distribution for natural disasters: flood in Kalimantan, eruption of Mount Semeru, earthquake in West Sulawesi*
- *COVID-19 pandemic handling program: COVID-19 vaccination for the community through the SOE Joint Vaccination Center*

TPB 4: Pendidikan
Berkualitas
SDG 4: Quality
Education



Beasiswa PERTAMINA Sobat Bumi dengan penerima manfaat 644 mahasiswa di 37 perguruan tinggi sepanjang 2021

PERTAMINA Sobat Bumi Scholarship with 644 students as beneficiaries in 37 universities during 2021

TPB 5:
Kesetaraan
Gender
SDG 5: Gender
Equality



Program pemberdayaan perempuan:

- **Desyandu (Delivery Posyandu):** pemberdayaan 65 kader kesehatan Pos Pelayanan Terpadu (Posyandu) dalam edukasi kesehatan ibu dan anak serta monitoring tumbuh kembang anak di Desa Teras, Kecamatan Teras, Kabupaten Boyolali.
- **Sahabat Disabilitas PERTAMINA:** pemberdayaan masyarakat difabel melalui pembinaan keterampilan maupun pemasaran produk yang dihasilkan, dan telah melibatkan 125 perempuan

Women's empowerment program

- **Desyandu (Delivery Posyandu):** *empowering 65 posyandu health cadres in maternal and child health education and child development monitoring in Teras Village, Teras District, Boyolali Regency.*
- **Sahabat Disabilitas PERTAMINA:** *empowerment of people with disabilities through skills development and marketing of their products, and it has involved 125 women.*

EKONOMI
ECONOMY

TPB 7: Energi
Bersih dan
Terjangkau
SDG 7: Clean and
Affordable Energy



Inovasi sumber energi ramah lingkungan dan energi baru terbarukan (EBT):

- **Program E-Mas Bayu** (Energi Mandiri Tenaga Surya dan Angin) dan E-mbak Mina (Energi Mandiri Tambak Ikan) di Dusun Bondan Desa Ujung Alang Kecamatan Kampung Laut Kabupaten Cilacap, Jawa Tengah, mampu menghasilkan daya 16.000 WP dan dimanfaatkan oleh 44 rumah tangga
- **Program Wasteco** (Waste Energy for Community) telah dimanfaatkan untuk gas rumah tangga dan UMKM oleh 200 rumah dan 22 UMKM di lingkungan Kelurahan Manggar Baru, Balikpapan, dengan memanfaatkan gas metana sebesar 462.680 m³/tahun oleh warga

Innovation of environmentally friendly energy sources and new renewable energy (NRE) through the Energy Independent Village Program:

- **E-Mas Bayu** (Energi Mandiri Tenaga Surya dan Angin or Independent Energy Solar and Wind) and **E-mbak Mina** (Energi Mandiri Tambak Ikan Independent Energy for Fish Ponds) programs in Bondan Hamlet, Ujung Alang Village, Kampung Laut District, Cilacap Regency, Central Java, are able to generate 16,000 WP of power and are utilized by 44 houses ladder
- **The Wasteco** (Waste Energy for Community) has been used for household gas and MSMEs by 200 houses and 22 MSMEs in the Manggar Baru Village, Balikpapan, by utilizing methane gas of 462,680 m³/year by residents

DUKUNGAN
PADA TPB DAN
KOMITMEN
NILAI-NILAI LST
SUPPORT FOR
SDGS AND
COMMITMENT
TO ESG VALUES

EKONOMI ECONOMY

TPB 8:
Pekerjaan Layak
& Pertumbuhan
Ekonomi
SDG 8: Decent
Work and
Economic Growth



- Pencapaian CSV melalui **Enduro Entrepreneurship Program (EEP)** yang pada peningkatan kapasitas dan kapabilitas mekanik dan kewirausahaan perbengkelan. Selama tahun 2021, program ini telah membina 185 penerima manfaat dengan 82 bengkel agen penjualan produk pelumas PERTAMINA. Estimasi nilai penebusan produk Pelumas PERTAMINA: Rp380,29 juta
- **Program Sahabat Disabilitas PERTAMINA:** Program Kotugres di Gresik, Program Difablepreneur Boyolali, serta Kawasan Ekonomi Kolok Bengkala di Buleleng, Bali.
- *Achievement of CSV through the **Enduro Entrepreneurship Program (EEP)**, which focuses on increasing the capacity and capability of mechanics and workshop entrepreneurship. During 2021, this program has developed 185 beneficiaries with 82 sales agent workshops for PERTAMINA lubricants. PERTAMINA Lubricants' estimated sales value is Rp380.29 million.*
- **Sahabat Disabilitas PERTAMINA Program:** the Kotugres Program in Gresik, the Boyolali Difablepreneur Program, and the Kolok Bengkala Economic Zone in Buleleng, Bali.

Pelibatan dan Pengembangan Komunitas dan Pemetaan berbasis potensi masing-masing wilayah dan kelompok

Community Engagement and Development and Mapping based the potential of each region and group

LINGKUNGAN ENVIRONMENT

TPB 12:
Konsumsi & Produksi Bertanggung Jawab
SDG 12: Responsible Consumption and Production



- Program pengelolaan sampah terpadu **WIRALODRA** (Wilayah Masyarakat Pengelola Daur Ulang Sampah) di Desa Balongan, Kab. Indramayu berupa biopot dan budidaya Black Soldier Fly (BSF) dan sampah anorganik berupa pembuatan Ecobrick dan kerajinan limbah lainnya. Program ini mampu mereduksi sampah organik hingga 1 ton/bulan dan sampah anorganik hingga 200 kg/bulan.
- **BETTER (Balikpapan Energi Terbarukan)**, telah mengelola sebanyak 8 ton/bulan sampah organik dan anorganik dan mengolah sampah menjadi FAME hingga 300 liter/bulan.
- *The integrated waste management program **WIRALODRA** (Wilayah Masyarakat Pengelola Daur Ulang Sampah or Community Area for Waste Recycling Management) in Balongan Village, Indramayu Regency in the form of biopots and cultivation of Black Soldier Fly (BSF) and inorganic waste in the form of making Ecobricks and other waste crafts. This program has been able to reduce organic waste up to 1 ton/month and inorganic waste by up to 200 kg/month.*
- **BETTER (Balikpapan Energi Terbarukan or Balikpapan Renewable Energy)**, has managed 8 tons/month of organic and inorganic waste and treated waste into FAME up to 300 liters/month.

Pelaksanaan Tanggung Jawab Sosial dan Lingkungan PERTAMINA
PERTAMINA's Social and Environmental Responsibility Implementation

DUKUNGAN
PADA TPB DAN
KOMITMEN
NILAI-NILAI LST
SUPPORT FOR
SDGS AND
COMMITMENT
TO ESG VALUES



LINGKUNGAN
ENVIRONMENT

Pelibatan dan Pengembangan Komunitas dan Pemetaan berbasis potensi masing-masing wilayah dan kelompok
Community Engagement and Development and Mapping based the potential of each region and group

TPB 13:
Perubahan Iklim
SDG 13:
Climate Change



Program Kampung Iklim (PROKLIM)

- Empat unit operasi PERTAMINA memperoleh Apresiasi Perusahaan Pendukung Proklam
- Dua puluh tiga lokasi binaan meraih PROKLIM Lestari (2), Utama (16), Madya (4) dan Pratama (1) dari Kementerian Lingkungan Hidup dan Kehutanan.

Climate Village Program (PROKLIM)

- Four operating units of PERTAMINA received Appreciation for Proklam Supporting Companies
- Twenty-three fostered locations received PROKLIM Lestari (2), Utama (16), Madya (4) and Pratama (1) from the Ministry of Environment and Forestry.

Beberapa kegiatan pelestarian dan perlindungan keanekaragaman hayati yang dijalankan pada tahun 2021, yaitu:

- Pusat Konservasi dan Bekantan Rescue Center di Banjarmasin, dengan capaian peningkatan populasi bekantan dari 14 ekor menjadi 48 ekor.
- Kampung Gambut Berdikari di Kelurahan Sungai Pakning, dengan pencapaian 2,72 H' Peningkat Indeks Kehati Arboretum Gambut.
- Kawasan Konservasi Mangrove Tambakrejo, dengan capaian perlindungan kawasan konservasi seluas 2 ha di Tambakrejo dan serapan karbon sebanyak 76,5 ton CO₂/tahun.
- Pusat Konservasi Elang Kamojang di Garut, dengan capaian konservasi 283 ekor elang serta 67 ekor elang yang telah dilepasliarkan.

Some of the biodiversity conservation and protection activities that were carried out in 2021, namely:

- Conservation Center and Proboscis Monkey Rescue Center in Banjarmasin, with the achievement of increasing the proboscis monkey population from 14 to 48.
- Berdikari Peat Village in Sungai Pakning sub-district, with the achievement of Kehati Index improvement for 2.72 Ha Peat Arboretum.
- Tambakrejo Mangrove Conservation Area, with the achievement of protecting a 2-ha conservation area in Tambakrejo and sequestering carbon of 76.5 tons of CO₂/year.
- Kamojang Eagle Conservation Center in Garut, with conservation achievements of 283 eagles, including 67 eagles that have been released into the wild.

TPB 14:
Ekosistem Lautan
TPB 15:
Ekosistem Daratan
SDG 14: Marine Ecosystems
SDG 15: Terrestrial Ecosystems



Setiap program pengembangan dan pemberdayaan masyarakat dievaluasi melalui beberapa pendekatan, di antaranya Social Return of Investment (SROI). Melalui pendekatan ini, PERTAMINA menghitung atau memberikan evaluasi atas dampak yang dihasilkan dari suatu program pengembangan dan pemberdayaan masyarakat. Pendekatan SROI melibatkan masyarakat sebagai penerima manfaat, termasuk memetakan perubahan yang terjadi pada penerima manfaat.

Each community development and empowerment program is evaluated through several approaches, including Social Return on Investment (SROI). Through this approach, PERTAMINA calculates or evaluates the impacts resulting from a community development and empowerment program. The SROI approach involves the community as the beneficiary, including mapping the changes that occur in the beneficiaries.



Pilar dan Nilai Realisasi TJSL PERTAMINA (dalam Juta Rp) <i>PERTAMINA's CSR Pillars and Realization Value (in Million Rp)</i>	
TPB SDGs	2021
Pilar Sosial Social Pillar	
TPB 1: Tanpa Kemiskinan <i>SDG 1: No Poverty</i>	135,982
TPB 3: Kesehatan <i>SDG 3: Health</i>	26,030
TPB 4: Pendidikan <i>SDG 4: Education</i>	66,362
TPB 5: Kesenjangan Gender <i>SDG 5: Gender Equality</i>	1,316
Total Pilar Sosial Social Pillar Total	229,690

Pilar Ekonomi Economic Pillar	
TPB 7: Energi Bersih <i>SDG 7: Clean Energy</i>	4,753
TPB 8: Pekerjaan Layak dan Pertumbuhan Ekonomi <i>SDG 8: Decent Work and Economic Growth</i>	335,980
Total Pilar Ekonomi Economic Pillar Total	340,734
Pilar Lingkungan Environmental Pillar	
TPB 12: Konsumsi & Produksi Bertanggung Jawab <i>SDG 12: Responsible Consumption and Production</i>	1,592
TPB 13: Perubahan Iklim <i>SDG 13: Climate Change</i>	1,583
TPB 14: Ekosistem Lautan <i>SDG 14: Marine Ecosystems</i>	1,984
TPB 15: Ekosistem Daratan <i>SDG 15: Terrestrial Ecosystem</i>	17,460
Total Pilar Lingkungan Environmental Pillar Total	22,619
Jumlah Total	593,044

Perubahan format penyampaian menyesuaikan format laporan ke Kementerian BUMN

Changes in the submission format is adjusted to the reporting format to the Ministry of SOEs



Program PUMK
PUMK Program

Fokus kegiatan Program Pendanaan Usaha Mikro Kecil (PUMK) adalah pemberdayaan UMKM melalui pemberian bantuan modal kerja, pembinaan, dan peningkatan akses pemasaran kepada para pelaku usaha kecil. Program PUMK dilaksanakan oleh Tim Small Medium Enterprise Partnership Program (SMEPP) yang berada di bawah koordinasi VP CSR & SMEPP Management. Sampai dengan akhir tahun 2021, tercatat ada 66.184 Mitra Binaan (MB) yang tersebar di wilayah operasi PERTAMINA di seluruh Indonesia, di mana 1.723 di antaranya merupakan mitra binaan dari Program Sinergi PUMK (BUMN dan Lembaga Finansial). Hingga akhir tahun 2021, terdapat 33.147 mitra binaan perseorangan yang masih memiliki kewajiban cicilan dana PUMK kepada PERTAMINA, di mana 699 mitra binaan di antaranya merupakan binaan dari kegiatan penyaluran baru selama tahun 2021.

The focus of the Small Micro Enterprise Funding Program (PUMK) is empowering MSMEs through the disbursement of working capital assistance, coaching, and increasing marketing access to small business actors. The PUMK program is implemented by the Small Medium Enterprise Partnership Program (SMEPP) Team which is under the coordination of VP CSR & SMEPP Management. Until the end of 2021, there were 66,184 Fostered Partners (MB) spread across PERTAMINA's operational areas all over Indonesia, of which 1,723 were fostered partners of the PUMK Synergy Program (SOE and Financial Institutions). Until the end of 2021, there were 33,147 individual fostered partners who still had PUMK fund installment liabilities to PERTAMINA, of which 699 fostered partners were from new disbursement activities during 2021.



66,184

66.184 mitra binaan hingga akhir tahun 2021, 33.147 masih memiliki kewajiban dana PUMK.
66,184 fostered partners until the end of 2021, 33,147 still have PUMK fund obligations



9 Cara PERTAMINA Dukung UMK Naik Kelas dan Go Global
9 PERTAMINA Ways to Support MSEs to Upgrade and Go Global

UMK Academy

Pada Tahun 2021 terdapat 702 mitra binaan yang menjadi peserta UMK Academy. Mitra binaan telah dinyatakan lulus menjadi UMK naik kelas (Go Modern: 25, Go Digital: 355, Go Online: 154, Go Global: 54).

UMK Academy

In 2021, 702 fostered partners became participants in the UMK Academy. Fostered partners have graduated as Upgraded MSEs (Go Modern: 25, Go Digital: 355, Go Online: 154, Go Global: 54).

Publikasi Mitra Binaan

Program PUMK yang dijalankan di beberapa wilayah region PERTAMINA. Hingga akhir tahun 2021, terdapat 779 konten publikasi dengan rincian: 403 IG posting, 1 kali sosialisasi, 77 kali broadcast internal PERTAMINA Grup, 244 konten berita/features, dan 54 YouTube posting.

Development Partner Publications

A PUMK program is carried out in several PERTAMINA regions. Until the end of 2021, there were 779 published contents with the following details: 403 IG posts, 1 dissemination, 77 PERTAMINA Group internal broadcasts, 244 news/features content, and 54 YouTube posts.

Fasilitas Pembelajaran

PERTAMINA menyediakan sarana pembelajaran digital melalui media e-learning secara regular melalui wadah UMK Academy.

Learning Facilities

PERTAMINA provides digital learning facilities through regular e-learning media in the UMK Academy forum.

Hibah Terknologi

Hibah teknologi tepat guna untuk membantu pengembangan produksi UMK melalui hibah alat berteknologi tepat guna. Mayoritas diberikan kepada mitra binaan dari sektor pertanian dan perkebunan.

Technology Grant

Appropriate technology grants to assist the development of MSE production through grants of appropriate technology devices. The majority is given to foster partners from the agriculture and plantation sectors.

Kerja Sama dengan E-commerce

Pada Bulan Maret 2021, melalui UMK Academy, perusahaan telah melakukan pelatihan e-commerce yang diikuti oleh 33 UMK mitra binaan. Dari seluruh mitra binaan PERTAMINA di Indonesia, 5.234 UMK perempuan telah menjadi mitra binaan Go Digital dan Go Online.

Cooperation with E-commerce

In March 2021, through the UMK Academy, the company conducted e-commerce training, which was attended by 33 fostered MSE partners. Out of all PERTAMINA's fostered partners in Indonesia, 5,234 MSEs owned by women have become Go Digital and Go Online fostered partners



9 Cara PERTAMINA Dukung UMK Naik Kelas dan Go Global
 9 PERTAMINA Ways to Support MSEs to Upgrade and Go Global

Sertifikasi dan Perizinan

Selama Tahun 2021, pendampingan Sertifikasi Halal telah dilakukan kepada 22 mitra binaan terpilih, 12 di antaranya telah mendapatkan sertifikat dan yang lainnya sedang dalam proses audit dokumen.

Certification and Licensing

In 2021, Halal Certification assistance has been carried out to 22 selected foster partners, 12 of whom have received certificates, and the others are in the document audit process.

Katalog SME 1000

Pada Bulan September 2021 telah dilakukan launching Buku PERTAMINA SME 1000 edisi terbaru dalam acara live talkshow. Buku Pertamina SME 1000 edisi Tahun 2021 bekerjasama dengan KADIN terkait kurasi terhadap para mitra binaan terpilih.

SME Catalog 1000

In September 2021, the newest edition of the PERTAMINA SME 1000 Book was launched during a live talk show. The 2021 edition of the Pertamina SME 1000 book was in collaboration with KADIN to curate selected foster partners.

Display Produk

Display produk SME kembali di pajang di area publik. Pada semester I tahun 2021, dilakukan penataan kembali (revitalisasi) Gerai UMK di Terminal 3 (T3) Bandara Internasional Soekarno-Hatta, dan Soft Opening nya telah dilakukan pada TW III 2021. Sebanyak 15 UMK terpilih (50% fashion, 25% craft, dan 25% makanan & minuman) terpilih telah menampilkan produk dan karyanya di gerai tersebut. Terdapat pula produk karya disabilitas yang merupakan salah satu terobosan baru pada revitalisasi Gerai UMKM tersebut.

Product Display

The SME products are back on display in public areas. In the first semester of 2021, the SME outlets were revitalized at Terminal 3 (T3) Soekarno-Hatta International Airport, and the Soft Opening has been held in Q3 of 2021. A total of selected 15 MSEs (50% fashion, 25% craft, and 25% food & beverage) have displayed their products and work at the outlet. There were also products for people with disabilities, which was one of the new breakthroughs in the revitalized MSME Outlet.

Exhibition Virtual

PERTAMINA kembali mengadakan pameran virtual SMEXPO 2021 baik secara online melalui website: <https://smexpo.pertamina.com/> maupun melalui offline showcase yang dilaksanakan di Kota Kasablanka pada tanggal 15-17 Oktober 2021. Hingga akhir 2021, terdapat 2.002 produk UMKM yang ditawarkan pada marketplace Pertamina SMEXPO dan telah diakses oleh 25.137 pengunjung dari 34 negara. Selain itu, 30 mitra binaan juga telah mengikuti kegiatan business matching dengan nilai potensial transaksi sebesar Rp17,2 Miliar. 10 mitra binaan telah berhasil melakukan transaksi ekspor dengan nilai total sebesar Rp9,27 Miliar.

Virtual Exhibition

PERTAMINA hosted the SMEXPO 2021 virtual exhibition both online through the website: <https://smexpo.pertamina.com/> and through an offline showcase which was held in Kota Kasablanka shopping mall from 15 to 17 October 2021. Until the end of 2021, a total of 2,002 MSME products offered on the Pertamina SMEXPO marketplace, which has been accessed by 25,137 visitors from 34 countries. In addition, 30 fostered partners have also participated in business matching activities with a potential transaction value of Rp17.2 billion. Ten fostered partners have successfully completed export transactions with a total value of Rp9.27 billion.

PERTAMINA UMKM Academy (SMEPP)
PERTAMINA UMKM Academy

Sejak Tahun 2020, PERTAMINA telah melakukan perbaikan terkait pembinaan UMK secara lebih terintegrasi melalui program PERTAMINA UMK Academy untuk akselerasi program UMK Naik Kelas. Dalam PERTAMINA UMKM Academy terdapat 4 (empat) fokus kurikulum pembelajaran, yaitu Go Modern, Go Digital, Go Online, dan Go Global. Mereka mendapatkan pelatihan sesuai modul kurikulum yang telah disusun berdasarkan masing-masing fokus dan di damping secara intensif oleh para trainer dan coach yang berkompeten. Selama tahun 2021, hampir seluruh kegiatan UMK Academy dilakukan secara online. Dalam tiga tahun terakhir, total terdapat 1.918 UMK mitra binaan yang telah dinyatakan naik kelas. Beberapa UMK yang dinyatakan naik kelas telah mampu menembus pasar global.

Since 2020, Pertamina has made improvements to more integrated SME development through the PERTAMINA UMK Academy program to accelerate the SME Upgrade program. In PERTAMINA UMKM Academy, there are four focuses of learning curriculum, namely Go Modern, Go Digital, Go Online, and Go Global. They receive training according to the curriculum modules that have been prepared based on their respective focuses and are intensively mentored by competent trainers and coaches. During 2021, almost all UMK Academy activities were held online. In the last three years, a total of 1,918 SMEs of fostered partners have been declared upgraded. Several SMEs that have been declared upgraded managed to penetrate the global market.

Pelaksanaan PUMK (SMEPP) PERTAMINA <i>PERTAMINA PUMK (SMEPP) Implementation</i>		
Dana Pinjaman <i>Loan</i>	Pembinaan dan Pendampingan <i>Coaching and Mentoring</i>	Naik Kelas <i>Upgrade</i>
<ul style="list-style-type: none"> • Nilai pinjaman hingga Rp250 juta • Jasa administrasi 6 persen per tahun • Tenor 3 tahun • <i>Loan value up to Rp250 million</i> • <i>Administrative services 6 percent per year</i> • <i>3 years tenor</i> 	<ul style="list-style-type: none"> • Peningkatan keahlian keuangan, promosi dan marketing 4.0 • Kolaborasi Rumah BUMN • <i>Upgrading financial, promotion and marketing skills 4.0</i> • <i>Rumah BUMN Collaboration</i> 	<ul style="list-style-type: none"> • Go Modern • Go Digital • Go Online • Go Global • Pertamina SMEXPO
<p>Per 31 Desember 2021 Total 33.147 UMKM mitra binaan, 22.000 dikelola perempuan <i>As of 31 December 2021, there were a total of 33,147 MSME partners, with 22,000 managed by women.</i></p>		<p>UMKM Naik Kelas</p> <ul style="list-style-type: none"> • 2019: 535 • 2020: 795 • 2021: 558

PERTAMINA UMKM Academy Tahun 2021
PERTAMINA UMKM Academy 2021

Kelas Class	Jumlah Total	Materi Pelatihan Training Material
Go Modern	25	Pelatihan kemasan; branding; standarisasi produk; pembukuan/akuntansi dan pengelolaan usaha secara modern <i>Training on packaging; branding; product standardization; modern bookkeeping/ accounting and business management</i>
Go Digital	355	Pelatihan terkait marketplace/e-commerce, ikut serta pada Pertamina SMEXPO <i>Training on marketplace/e-commerce, participating in Pertamina SMEXPO</i>
Go Online	154	Pelatihan terkait social media dan digital media <i>Training related to on social media and digital media</i>
Go Global	54	Business matching, Ikut serta pada Pertamina SMEXPO, pengenalan ekspor <i>Business matching, Participating in Pertamina SMEXPO, export introduction</i>

CERITA SUKSES ALUMNI PERTAMINA UMKM ACADEMY
SUCCESS STORY OF PERTAMINA UMKM ACADEMY ALUMNI

KEKEAN WASTRA GALLERY:

Sociopreneur Binaan PERTAMINA Berdayakan Perempuan dan Difabel Hasilkan Produk Berkelas Dunia milik Achmad Nur Hasim

KEKEAN WASTRA GALLERY:

Sociopreneurs mentored by PERTAMINA Empower Women and People with Disabilities to Produce World-Class Products owned by Achmad Nur Hasim



100%

100% bahan baku lokal
100% local raw materials.

99%

99% pekerja perempuan
99% female workers

12

12 KUB yang beranggotakan 290 penenun
12 KUB consisting of 290 weavers



Mengkaryakan pekerja difabel muda
Employing young disabled workers

PELUANG DARI PANDEMI COVID-19 OPPORTUNITIES FROM THE COVID-19 PANDEMIC

Situasi pandemi COVID-19 yang berlarut mendorong PERTAMINA untuk menyalurkan bantuan penjualan produk UMK di masa pandemi COVID-19 dengan total nilai lebih dari Rp17 miliar. PERTAMINA memberdayakan 176 UMK mitra binaan yang tersebar di seluruh Indonesia untuk menyediakan kebutuhan pemberian bantuan COVID-19. Bentuk dukungan tersebut diwujudkan dalam bentuk 10.000 lebih produk bantuan dukungan berupa produk multivitamin dan herbal, madu, sabun, hand sanitizer, disinfektan, masker, serta perangkat lain yang dapat mendukung upaya pencegahan pandemi COVID-19.

Ada beberapa pelaku UMKM yang menjadi pemasok kebutuhan bantuan penanganan pandemi COVID-19 yang akan didistribusikan PERTAMINA, di antaranya:

- Salah satu mitra binaan adaptif pandemi COVID-19 dengan memproduksi aneka produk herbal adalah Bagus Arya Kusuma. Produk herbal yang dihasilkan dipesan untuk didistribusikan kepada berbagai pihak.
- Mitra binaan lain adalah Asih Wijayanti, yang membuat 5.000 pcs masker dan 7.000 hazmat. Produk Asih Wijayanti juga sudah tersebar ke seluruh wilayah Indonesia.

Dukungan PERTAMINA pada UMKM juga diwujudkan dengan memberikan akses menjadi mitra dalam penyediaan layanan pendukung. Informasi lebih lengkap dapat dibaca di bagian Komitmen LST pada Rantai Pasok di halaman 202.

The prolonged COVID-19 pandemic situation has prompted PERTAMINA to distribute assistance for the sale of MSE products during the COVID-19 pandemic with a total value of more than Rp17 billion. PERTAMINA has empowered 176 fostered MSE partners across Indonesia to provide assistance for COVID-19 needs. The support is in the form of more than 10,000 support products such as multivitamin and herbal products, honey, soap, sanitizers, disinfectants, masks, and other products to prevent the COVID-19 pandemic.

Several MSME actors have become suppliers of COVID-19 pandemic handling assistance to be distributed by PERTAMINA, including:

- *One of the adaptive fostered partners for the COVID-19 pandemic who produces various herbal products is Bagus Arya Kusuma. His herbal products are ordered to be distributed to various parties.*
- *Another fostered partner is Asih Wijayanti, who produces 5,000 masks and 7,000 hazmat suits. Asih Wijayanti's products have also spread across Indonesia.*

PERTAMINA's support for MSMEs is also realized by providing access to become partners in providing support services. More detailed information can be found in the ESG Commitment to the Supply Chain section on page 202.

Penghargaan dan Apresiasi bidang Pengelolaan Sosial Masyarakat
Awards and Appreciation in the Community Social Management

Penghargaan Awards	Penyelenggara Organizer
<p>Mitra Bakti Husada</p> <ul style="list-style-type: none"> • RU II Dumai: Respon Kebencanaan • RU III Plaju: Respon Kebencanaan melalui Pemanfaatan TOGA <p><i>Mitra Bakti Husada</i></p> <ul style="list-style-type: none"> • <i>RU II Dumai: Disaster Response</i> • <i>RU III Plaju: Disaster Response through the Utilization of TOGA</i> 	<p>Kementerian Kesehatan <i>Ministry of Health</i></p>
<p>TJSL/CSR AWARD</p> <ul style="list-style-type: none"> • RU II Dumai: Apresiasi Perusahaan Penerima Penghargaan Penerapan TJSL SDGs berbasis ISO 26000 • RU II Sei Pakning: Pilar Ekonomi dalam Program CSR • RU IV Cilacap: Pilar Ekonomi • RU IV Cilacap: Pilar Sosial <p>CSR AWARD</p> <ul style="list-style-type: none"> • <i>RU II Dumai: Appreciation of Companies Recipient of ISO 26000 based CSR SDGs Implementation Award</i> • <i>RU II Sei Pakning: Economic Pillar in CSR Program</i> • <i>RU IV Cilacap: Economic Pillar</i> • <i>RU IV Cilacap: Social Pillar</i> 	<p>ISVI, BUMN TRACK <i>Indonesia Shared Value Institute, BUMN TRACK</i></p>
<p>Penghargaan Mata Lokal Awards RU III Plaju: BUMN Paling Peduli <i>Mata Lokal Awards</i> <i>RU III Plaju: The Most Concerned SOE</i></p>	<p>Tribun Sumsel dalam rangka HUT ke-9 Tribun Sumsel <i>Tribun Sumsel in commemoration of Tribun Sumsel 9th Anniversary</i></p>
<p>Apresiasi Perusahaan Pendukung Program kampung Iklim:</p> <ul style="list-style-type: none"> • RU III Plaju (Pembinaan untuk 11 Kampung Proklim) • RU IV Cilacap (Pembinaan untuk 4 Program Proklim) <p><i>Appreciation for Companies Supporting the Climate Village Program:</i></p> <ul style="list-style-type: none"> • <i>RU III Plaju (Fostering 11 Proklim Villages)</i> • <i>RU IV Cilacap (Fostering 4 Proklim Programs)</i> 	<p>KLHK MEF</p>
<p>PROKLIM Apresiasi Perusahaan Pendukung Program Kampung Iklim: RU III Plaju <i>PROKLIM</i> <i>Appreciation for Companies Supporting Climate Village Program: RU III Plaju</i></p>	<p>Walikota Palembang <i>Palembang Mayor</i></p>

Penghargaan Awards	Penyelenggara Organizer
<p>Proving League</p> <ul style="list-style-type: none"> • Best of Disaster Response Program: RU II Sei Pakning (Program Kampung Gambut Berdikari) • Best of Environment Program: RU II Sei Pakning (Program Pemberdayaan Masyarakat Pesisir) • Best of Creating Shared Value (CSV) Program: RU III Plaju (Program Kampung Pangan Inovatif) • Best of CSR Manager Performance: RU III Plaju (Program Mari Berkreasi) • Best of The Best Proving League 2021: RU IV Cilacap (Program Ibu Siaga Covid-19) • Best of Local Hero Achievement: RU IV Cilacap (Program Ibu Siaga Covid-19) • Best Novelty Program: RU IV Cilacap (Program E-Mas Bayu dan E-Mbak Mina) • Best of Content and Transparent Program for Indigeneous People: RU VII Kasim (Program Klay Project) 	<p>E2 S E2 S</p>
<p>Proving League</p> <ul style="list-style-type: none"> • Best of Disaster Response Program: RU II Sei Pakning (Program Kampung Gambut Berdikari) • Best of Environment Program: RU II Sei Pakning (Program Pemberdayaan Masyarakat Pesisir) • Best of Creating Shared Value (CSV) Program: RU III Plaju (Program Kampung Pangan Inovatif) • Best of CSR Manager Performance: RU III Plaju (Program Mari Berkreasi) • Best of The Best Proving League 2021: RU IV Cilacap (Program Ibu Siaga Covid-19) • Best of Local Hero Achievement: RU IV Cilacap (Program Ibu Siaga Covid-19) • Best Novelty Program: RU IV Cilacap (Program E-Mas Bayu dan E-Mbak Mina) • Best of Content and Transparent Program for Indigeneous People: RU VII Kasim (Program Klay Project) 	



KESELAMATAN PELANGGAN [SHS-5.C1] [SHS-5.C3] CUSTOMER SAFETY



Upaya melindungi keselamatan pelanggan juga dilakukan dengan memastikan seluruh (100%) proses produksi, produk serta distribusinya telah melalui penerapan Kebijakan Mutu, Kesehatan, Keselamatan, Keamanan, dan Kelola Lingkungan (QHSSE). PERTAMINA menerapkan uji coba sebelum suatu produk digunakan pelanggan, guna menjamin keamanannya. Uji coba dilakukan sesuai regulasi yang berlaku. [416-1] [11.3.3]

Pada periode pelaporan, kami melakukan uji coba bahan bakar Bioavtur J2.4 yang merupakan bahan bakar campuran 2,4% bahan bakar nabati dengan avtur. Uji coba meliputi ground test selama 20 menit dengan pesawat CN235-220 Flying Test Bed (FTB) pada 6 September 2021 yang dilaksanakan oleh tim uji PT Dirgantara Indonesia (PTDI). Adapun tahapan uji coba terbang dengan pesawat yang sama dilaksanakan pada 6 Oktober 2021, menempuh rute Bandung - Jakarta. Keberhasilan uji coba ini menandakan Bioavtur J2.4 telah memenuhi aspek keamanan dan keselamatan penerbangan. Selanjutnya PERTAMINA bersama pemangku kepentingan lain akan melanjutkan pada tahapan lain sebelum produksi dan penggunaan komersial Bioavtur J2.4.

Efforts to protect customer safety are also carried out by ensuring that all (100%) production processes, products, and distribution have passed the Quality, Health, Safety, Security, and Environmental Management (QHSSE) Policy. PERTAMINA tests a product before it is used by customers to ensure its safety. The test is carried out in accordance with applicable regulations. [416-1] [11.3.3]

During the reporting period, we tested Bioavtur J2.4, which is a mixture of 2.4% biofuel with avtur. The trial included a 20-minute ground test with the CN235-220 aircraft Flying Test Bed (FTB) on 6 September 2021, which was carried out by the PT Dirgantara Indonesia (PTDI) test team. The flight test with the same aircraft was carried out on 6 October 2021, taking the Bandung - Jakarta route. The success of this trial indicated that the J2.4 Bioavtur has met the aviation security and safety aspects. PERTAMINA together with other stakeholders will proceed to other stages prior to the production and commercial use of Bioavtur J2.4.

Seluruh proses produksi yang dijalankan juga telah memenuhi standar ISO 9001: Sistem Manajemen Mutu, untuk menjamin kualitas produk termasuk dari aspek keamanan dan keselamatan pelanggan. Selama periode pelaporan, PERTAMINA tidak melakukan penarikan produk terkait sanksi hukum dari pihak berwenang, maupun inisiatif sendiri akibat kesalahan produksi. [2-27]

Seluruh produk telah dilengkapi informasi label kemasan yang patut diketahui pelanggan. Pencantuman informasi sesuai Peraturan Menteri Perdagangan Republik Indonesia No.73/M-DAG/PER/9/2015 tentang Kewajiban Pencantuman Label dalam Bahasa Indonesia pada Barang. Selama tahun 2021, PERTAMINA tidak pernah mendapatkan pengaduan maupun sanksi hukum terkait informasi dalam label produk yang dicantumkan, maupun sanksi hukum terkait dugaan pelanggaran komunikasi pemasaran. [417-1, 417-2, 417-3]

PRODUK RAMAH LINGKUNGAN ENVIRONMENTALLY FRIENDLY PRODUCTS

Selain Bioavtur J2.4, pada periode pelaporan PERTAMINA juga meluncurkan produk lain yang ramah lingkungan, yakni Pertamina DEX sulfur 50 *part per million* (PPM) untuk industri yang ada di *Integrated Terminal* Jakarta - Plumpang. Pertamina Dex sulfur 50 PPM adalah bahan bakar diesel hasil produksi kilang dalam negeri, dengan *cetane number* 53 dan kandungan sulfur 50 PPM, sesuai standar Euro 4. Dengan kandungan sulfur yang sangat rendah, kinerja mesin menjadi lebih lama, lebih tangguh, dan lebih aman.

The entire production process has also complied with ISO 9001: Quality Management System Standard, for product quality assurance, including the aspect of customer safety and security. During the reporting period, PERTAMINA did not recall any products due to legal sanctions from the authorities, nor did taking our own initiative due to production errors. [2-27]

All products have been equipped with packaging label information that customers should know. The inclusion of information is in compliance with the Regulation of the Minister of Trade of the Republic of Indonesia No.73/M-DAG/PER/9/2015 concerning the Obligation to Attach Labels in Indonesian Language on Goods. In 2021, PERTAMINA has never received a complaint or legal sanction regarding the information in the product label attached, nor has there been any legal sanction over the alleged violation of marketing communications. [417-1, 417-2, 417-3]

In addition to Bioavtur J2.4, in the reporting period PERTAMINA launched another environmentally friendly product, Pertamina DEX sulfur 50 PPM (part per million) for the industry in Jakarta - Plumpang Integrated Terminal. Pertamina Dex sulfur 50 PPM is diesel fuel produced by domestic refineries, with cetane number 53 and a sulfur content of 50 PPM, to meet Euro 4 standards. The ultra-low sulfur diesel will make engine performance last longer, tougher, and safer.

SURVEI PELANGGAN CUSTOMER SURVEY

Pada tahun 2021, PERTAMINA melakukan survei untuk mengetahui tingkat kepuasan pelanggan atas layanan dan produk yang diberikan. Survei dilakukan oleh lembaga independen dengan melibatkan 15.643 responden di 135 kota di Indonesia. Hasil survei pada tahun 2021 memperlihatkan Indeks Kepuasan Pelanggan mencapai 4,28 Skala Likert, sementara Indeks Kesetiaan Pelanggan mencapai 4,32 Skala Likert.

In 2021, PERTAMINA conducted a survey to determine the level of customer satisfaction with the company's services and products. The survey was conducted by an independent institution involving 15,643 respondents in 135 cities in Indonesia. The survey results in 2021 showed that the Customer Satisfaction Index reached a 4.28 Likert Scale, while the Customer Loyalty Index reached a 4.32 Likert Scale.

Hasil Survei Pelanggan (Skala Likert) Customer Survey Results (Likert Scale)				
Uraian Description	2021	2020	2019	
Indeks Kepuasan Pelanggan Customer Satisfaction Index	4.28	4.1	3.8	
Indeks Kesetiaan Pelanggan Customer Loyalty Index	4.32	4.1	3.9	

PENGADUAN PELANGGAN CUSTOMER GRIEVANCE

Sebagai dukungan pada layanan pelanggan, termasuk aspek keselamatan pelanggan, PERTAMINA menyediakan akses kepada pelanggan maupun pemangku kepentingan lain untuk menyampaikan pengaduan atau keluhan. Pengaduan maupun keluhan dapat disampaikan melalui layanan PERTAMINA Call Center 135. Selama periode pelaporan, PERTAMINA menerima 12.131 pengaduan atau keluhan dari pelanggan, dengan 92 pengaduan atau 0,76% berkaitan dengan keamanan produk dan keselamatan pelanggan. Seluruh pengaduan yang disampaikan telah ditindaklanjuti.

As support for customer care, including customer safety aspects, PERTAMINA provides customers and other stakeholders with access to submit grievances or complaints. The grievances and complaints can be submitted via PERTAMINA Call Center 135. During the reporting period, PERTAMINA received 12,131 grievances or complaints from customers, with 92 complaints or 0.76% related to product safety and customer safety. All of these complaints have been followed up.

2019	
Jenis Pengaduan <i>Type of Complaint</i>	Jumlah Pengaduan <i>Number of Complaint</i>
Pelayanan Petugas SPBU <i>Gas Station Attendant Service</i>	561
Indikasi Kecurangan SPBU <i>Indication of gas station fraud</i>	433
Kelangkaan BBM <i>Fuel shortage</i>	320
Kendala Transaksi MyPertamina <i>MyPertamina Transaction trouble</i>	244
Pelayanan SPBU <i>Gas Station Service</i>	180

2020	
Jenis Pengaduan <i>Type of Complaint</i>	Jumlah Pengaduan <i>Number of Complaints</i>
Kendala Transaksi MyPertamina <i>MyPertamina Transaction Trouble</i>	3,703
Promo MyPertamina <i>MyPertamina Promo</i>	3,325
Pembayaran Ganda <i>Double Payment</i>	1,140
Tidak Mendapatkan Point MyPertamina <i>MyPertamina Points are not received</i>	1,136
Pelayanan Petugas SPBU <i>Gas Station Service</i>	794

2021	
Jenis Pengaduan <i>Type of Complaint</i>	Jumlah Pengaduan <i>Number of Complaints</i>
Kendala Transaksi <i>Transaction Trouble</i>	1,593
Digitalisasi SPBU <i>Gas Station Digitalization</i>	1,344
Pelayanan Petugas SPBU <i>Gas Station Attendant Service</i>	1,186
Kendala Transaksi MyPertamina <i>MyPertamina Transaction Trouble</i>	991
Indikasi Kecurangan / Penyalahgunaan BBM <i>Indication of Fraud/ Misuse of Fuels</i>	673



KEBERPIHAKAN PADA PENDUDUK ASLI/ MASYARAKAT ADAT ^{[11.16][11.17]} *SUPPORTING INDIGENOUS PEOPLES*



Pasca alih-kelola Blok Rokan, PERTAMINA melanjutkan kebijakan pelibatan pekerja lokal yang berasal dari suku Melayu maupun Sakai. Beberapa dari mereka telah menduduki jabatan strategis di PT Pertamina Hulu Rokan. Sesuai Peraturan Menteri ESDM Nomor 37 Tahun 2016, PERTAMINA juga telah memberikan 10% *participating interest* kepada pemerintah daerah melalui badan usaha milik daerah (BUMD). Selain itu, WK Rokan memfasilitasi Suku Sakai yang ada di Kabupaten Bengkalis dan Kabupaten Siak untuk meningkatkan kualitas SDM dan menciptakan angkatan kerja produktif melalui pemberian beasiswa dan program inkubator karir bagi mahasiswa Suku Sakai.

WK Rokan melalui program Pertanian Terpadu di Desa Tenganau, Pinggir, Bengkalis dengan menggandeng LPPM Universitas Lancang Kuning dan Kelompok Tani Tangguh Sakai. Program ini meliputi berupa bantuan ternak, peralatan dan pelatihan pengelolaan ternak. Bantuan ini dapat digunakan untuk meningkatkan ekonomi keluarga dan masyarakat.

After the acquisition of Rokan Block, PERTAMINA maintained the policy of involving local workers originating from the Malay and Sakai ethnic groups. Some of them have held strategic positions at PT Pertamina Hulu Rokan. In accordance with the Minister of Energy and Mineral Resources Regulation Number 37 of 2016, PERTAMINA has also allocated a 10% participating interest to local governments through regionally owned enterprises (BUMD). In addition, Rokan Block has been facilitating the Sakai Tribe in Bengkalis Regency and Siak Regency to improve the quality of human resources and create a productive workforce through scholarships and career incubator programs for Sakai Tribe students.

Rokan Block has carried out the Integrated Agriculture program in Tenganau Village, Pinggir, Bengkalis, in collaboration with LPPM Lancang Kuning University and Tangguh Sakai Farmers Group. This program provides assistance in livestock, equipment, and husbandry management training. This assistance can be used to improve the economy of families and communities.

WK Rokan juga mendorong peningkatan kesejahteraan yang berkesinambungan Masyarakat Adat Tempatan, salah satunya Suku Sakai, melalui program Pencegahan Stunting. WK Rokan bermitra dengan Perkumpulan Keluarga Berencana Indonesia (PKBI) dalam menjalankan Program Pencegahan Stunting Melalui Aktivasi Posyandu di Kabupaten Bengkalis dan Kabupaten Siak.

Rokan Working Area also promotes sustainable welfare improvement for Local Indigenous Peoples, including the Sakai Tribe, through the Stunting Prevention program. Rokan Working Area partnered with the Indonesian Family Planning Association (PKBI) in conducting the Stunting Prevention Program through Posyandu Activation in Bengkalis and Siak regencies.



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ENERGI PERKUAT INTEGRITAS

ENERGIZING INTEGRITY

PERTAMINA terus memperkuat penerapan tata kelola keberlanjutan guna mendukung pengelolaan aspek LST di seluruh lini bisnis dan operasional Perseroan. Penerapan tata kelola keberlanjutan juga menjadi bentuk dukungan pada upaya pencapaian TPB.

PERTAMINA continues to strengthen the implementation of sustainable governance to support environmental, social and governance (ESG) management in all of the Company's business lines and operations. The implementation of sustainable governance is also a form of support in the effort to achieve the Sustainable Development Goals (SDGs).



STRUKTUR TATA KELOLA SUSTAINABILITY GOVERNANCE

Struktur tata kelola PERTAMINA sesuai Undang-Undang Nomor 40 Tahun 2007 tentang Perseroan Terbatas terdiri dari: [2-9-a]

- Rapat Umum Pemegang Saham (RUPS), sebagai organ tata kelola tertinggi;
- Dewan Komisaris, bertanggung jawab mengawasi Direksi dalam mengelola Perseroan. Dewan Komisaris dipimpin Komisaris Utama, serta dibantu Komite Audit, Komite Nominasi dan Remunerasi serta Komite Investasi;
- Direksi, bertanggung jawab mengelola Perseroan. Direksi dipimpin Direktur Utama yang tidak merangkap jabatan sebagai eksekutif perusahaan. Direksi dibantu Sekretaris Perusahaan; Fungsi Legal Counsel and Compliance; Satuan Pengawasan Internal; dan Fungsi Health, Safety, Security, and Environmental (HSSE). [2-11-a]

Keanggotaan Dewan Komisaris per 31 Desember 2021 berjumlah tujuh orang yang seluruhnya pria, dengan empat orang (57,14%) di antaranya adalah Komisaris Independen. Keanggotaan Direksi per 31 Desember 2021 berjumlah enam orang, dengan dua orang (33,33%) di antaranya perempuan. Seluruh Anggota Dewan Komisaris dan Direksi adalah warga negara Indonesia (WNI), dengan latar belakang usia, pendidikan, bidang keahlian, dan kompetensi yang menunjukkan keberagaman. Pengungkapan informasi lengkap tentang Anggota Direksi dan Dewan Komisaris; proses nominasi serta seleksi; pencegahan benturan kepentingan; uraian tugas, tanggung jawab dan kewenangan; disampaikan dalam Laporan Tahunan 2021 PT Pertamina (Persero). [2-9-c][2-10][2-15]

PERTAMINA's governance structure under the Law Number 40 of 2007 concerning Limited Liability Companies consists of: [2-9-a]

- *General Meeting of Shareholders (GMS), as the highest governance organ;*
- *The Board of Commissioners, has responsibility to supervise the Board of Directors in managing the Company. The Board of Commissioners is led by the President Commissioner and is assisted by the Audit Committee, the Nomination and Remuneration Committee, and the Investment Committee;*
- *The Board of Directors, take responsibility to manage the Company. The Board of Directors is led by a President Director & CEO who does not hold a concurrent position as a company executive. The Board of Directors is assisted by the Corporate Secretary; the Legal Counsel and Compliance Function; the Internal Control Unit; and the Health, Safety, Security, and Environmental (HSSE) functions. [2-11-a]*

The Board of Commissioners' members as of 31 December 2021, consists of seven people, all of whom are men, with four of them (57.14%) are Independent Commissioners. Meanwhile, the Board of Directors has six members as of 31 December 2021, two of whom (33.33%) are women. All members of the Board of Commissioners and Board of Directors are Indonesian citizens, with diverse backgrounds in age, education, areas of expertise, and competencies. Disclosure of complete information about the members of the Board of Directors and the Board of Commissioners; nomination and selection process; prevention of conflicts of interest; description of duties, responsibilities, and authorities; is presented in the 2021 Annual Report of PT Pertamina (Persero). [2-9-c][2-10][2-15]

KOMITE KEBERLANJUTAN SUSTAINABILITY COMMITTEES

Komite bertanggung jawab langsung kepada Direktur Utama dan memiliki peran utama sebagai pengawas, serta pengarah pelaksanaan aspek keberlanjutan di PERTAMINA. Komite didukung penanggung jawab bidang, dengan tugas dan tanggung jawab yang telah ditentukan. Komite menyelenggarakan rapat rutin bersama penanggung jawab bidang untuk menyampaikan laporan kinerja pada masing-masing bidang. [2-13-a][2-13-b]

The Committee reports directly to the President Director & CEO and has the main role in supervising and directing the implementation of sustainability aspects at PERTAMINA. The committee is supported by the person in charge of the field, with the duties and responsibilities that have been determined. Periodically, the Committee holds a meeting, and the person in charge of the field submits a performance report. [2-13-a][2-13-b]

Susunan Komite Keberlanjutan Sustainability Committee Composition	
Ketua Komite Committee Chair	Direktur Utama President Director & CEO
Anggota Komite Committee Member	Direktur Keuangan Director of Finance
	Direktur Strategi, Portofolio, dan Pengembangan Usaha Director of Strategy, Portfolio and New Ventures
	Direktur Logistik & Infrastruktur Director of Integrated Logistics & Infrastructure
Sekretaris Komite Committee Secretary	VP Investor Relation



Penanggung Jawab Bidang <i>Officer in Charge</i>		
No	Pejabat <i>Officer</i>	Aspek Keberlanjutan <i>Sustainability Aspect</i>
1	Direktur Sumber Daya Manusia <i>Director of Human Capital</i>	Keberagaman, Hak Asasi Manusia, rekrutmen pekerja, retensi & pengembangan <i>Diversity, human rights, inclusivity, employee recruitment, retention & development</i>
2	Direktur Penunjang Bisnis <i>Director of Corporate Services</i>	Keamanan siber, pengadaan hijau, standar sosial pemasok <i>Cyber security, green procurement, social supplier standards</i>
3	Corporate Secretary <i>Corporate Secretary</i>	Keterlibatan dan pengembangan masyarakat, tata kelola, etika perusahaan, hubungan pemangku kepentingan <i>Community involvement & development, corporate governance, corporate ethics, stakeholder relation</i>
4	SVP Health, Safety, Security & Environment <i>SVP Health, Safety, Security & Environment</i>	Iklim, lingkungan, emisi, keanekaragaman hayati, kesehatan & keselamatan, pencegahan insiden skala besar, air, efluen, manajemen limbah, respon kedaruratan, manajemen sumur lepas pantai, penutupan lahan & rehabilitasi <i>Climate, environment, emission, biodiversity, health & safety, prevention of major accident, water, effluent, waste management, emergency response, offshore well management, land closure & rehabilitation</i>
5	SVP Corporate Finance <i>SVP Corporate Finance</i>	Keuangan berkelanjutan <i>Sustainability financing</i>
6	SVP Corporate Communication & Investor Relation <i>SVP Corporate Communication & Investor Relation</i>	Strategi komunikasi <i>Communication strategy</i>
7	SVP Strategy & Investment <i>SVP Strategy & Investment</i>	Integrasi ESG ke dalam strategi, transisi energi <i>ESG integration to strategy, energy transition</i>
8	SVP Research, Technology & Innovation <i>SVP Research, Technology & Innovation</i>	Inovasi & penelitian <i>Innovation & research</i>
9	CEO Subholding Upstream <i>CEO Subholding Upstream</i>	Implementasi atas ambisi, strategi, roadmap, kebijakan, dan inisiatif <i>Implementation of ambitions, strategies, roadmaps, policies, and initiatives</i>
10	CEO Subholding Gas <i>CEO Subholding Gas</i>	
11	CEO Subholding Power & NRE <i>CEO Subholding Power & NRE</i>	
12	CEO Subholding Refining & Petrochemical <i>CEO Subholding Refining & Petrochemical</i>	
13	CEO Subholding Commercial & Trading <i>CEO Subholding Commercial & Trading</i>	
14	CEO Integrated Marine & Logistics <i>CEO Integrated Marine & Logistics</i>	
15	Direktur Utama Anak Perusahaan Portfolio & Services <i>President Director of Subsidiary Portfolio & Services</i>	

Tugas, Tanggung Jawab, dan Kewenangan Komite Keberlanjutan
Duties, Responsibilities and Authorities of the Sustainability Committee

Tugas, Tanggung Jawab, dan Kewenangan Umum
General Duties, Responsibilities and Authorities

1. Mengawasi, menetapkan, dan memberi arahan terkait ambisi, strategi, roadmap, kebijakan, inisiatif, dan ukuran kinerja terkait Aspek Keberlanjutan;
Supervise, determine, and provide direction on ambitions, strategies, roadmaps, policies, initiatives, and performance measures related to Sustainability Aspects;
2. Memonitor pencapaian target dan deliverables penerapan Aspek Keberlanjutan sesuai tata waktu yang ditentukan;
Monitor the company's performance achievement in Sustainability based on third party assessments, including but not limited to ESG Rating;
3. Memonitor pencapaian kinerja perusahaan di bidang Keberlanjutan berdasarkan penilaian pihak ketiga, antara lain namun tidak terbatas pada ESG Rating;
Monitor the company's performance achievement in Sustainability based on third party assessments, including but not limited to ESG Rating;
4. Mengarahkan dan memonitor komunikasi eksternal terkait Aspek Keberlanjutan;
Direct and monitor external communications related to Sustainability Aspects;
5. Memberi arahan terkait pelaksanaan pendanaan eksternal Perusahaan berbasis Keberlanjutan, antara lain namun tidak terbatas pada Sustainability Linked Financing, Green Financing, Transition Financing, dan lain-lain;
Provide direction regarding the implementation of Sustainability-based Company external funding, including but not limited to Sustainability Linked Financing, Green Financing, Transition Financing, and others.
5. Melakukan koordinasi dengan Dewan Komisaris, Dewan Direksi, Direktorat, atau Subholding dalam penerapan Aspek Keberlanjutan;
Coordinate with the Board of Commissioners, Board of Directors, Directorates, or Subholding in the implementation of Sustainability Aspects;
6. Melaksanakan fungsi Komite TJSL BUMN sebagaimana diatur dalam Peraturan Menteri Badan Usaha Milik Negara Republik Indonesia No. PER-05/MBU/04/2021 tanggal 8 April 2021, yaitu:
Carry out the functions of the SOE CSR Committee as stipulated in the Regulation of the Minister of State-Owned Enterprises of the Republic of Indonesia No. PER-05/MBU/04/2021 dated April 8, 2021, specifically:
 - Melakukan koordinasi antar unit/direktorat untuk merumuskan tujuan dan petunjuk pelaksanaan Program TJSL BUMN;
Coordinate between units/directorates to formulate objectives and guidelines for the implementation of the SOE CSR Program;
 - Pemetaan dan penyusunan Program TJSL BUMN; dan
Map and organize the SOE CSR Program; and
 - Membantu Direksi dalam melaksanakan monitoring dan evaluasi atas pelaksanaan Program TJSL BUMN.
Assist the Board of Directors in monitoring and evaluation of the implementation of the SOE CSR Program.

Tugas, Tanggung Jawab, dan Kewenangan Khusus
Specific Duties, Responsibilities and Authorities

1. Ketua Komite dan Anggota Komite Keberlanjutan berwenang untuk memutuskan dan memberi arahan atas ambisi, strategi, roadmap, kebijakan, inisiatif, serta ukuran kinerja terkait penerapan Aspek Keberlanjutan;
The Sustainability Committee Chair and Members have the authority to decide and provide advice on ambitions, strategies, road maps, Committee policies, and performance measures on the implementation of Sustainability Aspects;
2. Sekretaris Komite Keberlanjutan melaksanakan arahan Ketua Komite dan Anggota Komite terkait pengelolaan Aspek Keberlanjutan dan melakukan tugas antara lain perencanaan, monitoring, evaluasi penerapan Aspek Keberlanjutan, serta pelaporan eksternal, asesmen eksternal serta keterlibatan PERTAMINA dalam inisiatif Keberlanjutan di tingkat nasional maupun internasional;
The Secretary of the Sustainability Committee carries out the directives of the Committee Chair and Members regarding the management of Sustainability Aspects and carries out tasks such as planning, monitoring, and evaluating the implementation of Sustainability Aspects, as well as external reporting, external assessments, and PERTAMINA's involvement in national and international Sustainability initiatives;
3. Penanggung Jawab Bidang memberikan usulan dan masukan sesuai bidang keahlian masing-masing, serta melaksanakan program Keberlanjutan di fungsi dan unit bisnis masing-masing.
Person in charge provide advice and input according to their respective areas of expertise, as well as implement Sustainability programs in their respective functions and business units.

TANGGUNG JAWAB LAPORAN KEBERLANJUTAN SUSTAINABILITY COMPETENCE DEVELOPMENT

Kesepuluh topik material kunci (key material topics) telah disetujui dilaporkan kepada Direksi. Persetujuan ini juga menyetujui 59 inisiatif kunci LST dalam empat kategori utama: lingkungan (10 inisiatif), sosial (32 inisiatif), tata kelola (14 inisiatif), dan enablers (3 inisiatif). Direksi memberikan persetujuan dan menyatakan bertanggung jawab atas Laporan Keberlanjutan, yang dinyatakan dalam Lembar Pernyataan, serta ditandatangani seluruh anggota Direksi dan anggota Dewan Komisaris. [2-14]

Ten key material topics have been approved and reported to the Board of Directors. The agreement also approved 59 key ESG initiatives in four main categories: environmental (10 initiatives), social (32 initiatives), governance (14 initiatives), and enablers (3 initiatives). The Board of Directors has given approval and declared responsibility for the Sustainability Report on the Statement Page, which has been signed by all members of the Board of Directors and the Board of Commissioners. [2-14]

PENINGKATAN KOMPETENSI TERKAIT KEBERLANJUTAN SUSTAINABILITY COMPETENCE DEVELOPMENT

Perseroan menyertakan Direksi, Komisaris, maupun pejabat perusahaan lain yang ditunjuk, dalam kegiatan untuk meningkatkan pengetahuan, kompetensi, dan pengalaman kolektif terkait pembangunan berkelanjutan. [2-17-a]

The Company includes the Board of Directors, Board of Commissioners, and other appointed company officers in activities to enhance their knowledge, competence, and collective experience in sustainable development. [2-17-a]

Pelatihan Direksi dan Dewan Komisaris terkait Keberlanjutan *Sustainability Training for BOD*

No	Nama Name	Jabatan Position	Judul Pelatihan Title of Training	Tanggal Pelaksanaan Implementation Date
Dewan Komisaris Board of Commissioners				
1	Alexander Lay	Komisaris Independen Independent Commissioner	Implementasi Cyber Security di PT Pertamina (Persero) Implementation of Cyber Security at PT Pertamina (Persero)	19 Juli 2021 19 July 2021
2	Ahmad Fikri Assegaf	Komisaris Independen Independent Commissioner	Implementasi Cyber Security di PT Pertamina (Persero) Implementation of Cyber Security at PT Pertamina (Persero)	19 Juli 2021 19 July 2021

No	Nama Name	Jabatan Position	Judul Pelatihan Title of Training	Tanggal Pelaksanaan Date of Implementation
3	Basuki Tjahaja Purnama	Komisaris Utama/ Komisaris Independen <i>President Commissioner/ Independent Commissioner</i>	Reformasi Pengelolaan SDM <i>HR Management Reform</i>	12 Agustus 2021 <i>12 August 2021</i>
4	Alexander Lay	Komisaris Independen <i>Independent Commissioner</i>	Reformasi Pengelolaan SDM <i>HR Management Reform</i>	12 Agustus 2021 <i>12 August 2021</i>
5	Iggi Haruman Achsien	Komisaris Independen <i>Independent Commissioner</i>	Reformasi Pengelolaan SDM <i>HR Management Reform</i>	12 Agustus 2021 <i>12 August 2021</i>
6	Heru Pambudi	Komisaris <i>Commissioner</i>	Reformasi Pengelolaan SDM <i>HR Management Reform</i>	12 Agustus 2021 <i>12 August 2021</i>
7	Ego Syahrial	Komisaris <i>Commissioner</i>	Reformasi Pengelolaan SDM <i>HR Management Reform</i>	12 Agustus 2021 <i>12 August 2021</i>
8	Ahmad Fikri Assegaf	Komisaris Independen <i>Independent Commissioner</i>	Webinar Tanggung Jawab Komite Audit saat Perseroan Tersangkut Masalah Hukum terkait Laporan Keuangan <i>Webinar on the Audit Committee's Responsibilities when the Company is Involved in Legal Issues related to Financial Statements</i>	23 September 2021 <i>23 September 2021</i>
Direksi <i>Board of Directors</i>				
1			Sharing session PEI kepada BOC BOD: EV Ecosystem <i>PEI sharing session with BOC- BOD: EV Ecosystem</i>	18 Maret 2021 <i>18 March 2021</i>
2	Nicke Widyawati	Direktur Utama <i>President Director & CEO</i>	Sharing session PEI kepada BOC BOD: Trend dan Peta Jalan Dekarbonisasi Di Industri Minyak dan Gas <i>PEI sharing session with BOC-BOD: Trends and Roadmaps for Decarbonization in the Oil and Gas Industry</i>	17 Juni 2021 <i>17 June 2021</i>

No	Nama Name	Jabatan Position	Judul Pelatihan Title of Training	Tanggal Pelaksanaan Date of Implementation
3	Iman Rachman	Direktur Strategi, Portofolio dan Pengembangan Usaha <i>Director of Strategy, Portfolio and New Ventures</i>	Sharing session PEI kepada BOC BOD: EV Ecosystem <i>PEI sharing session with BOC- BOD: EV Ecosystem</i>	18 Maret 2021 <i>18 March 2021</i>
4			Sharing session PEI kepada BOC BOD: Trend dan Peta Jalan Dekarbonisasi di Industri Minyak dan Gas <i>PEI sharing session with BOC-BOD: Trends and Roadmaps for Decarbonization in the Oil and Gas Industry</i>	17 Juni 2021 <i>17 June 2021</i>
5	Emma Sri Martini	Direktur Keuangan <i>Director of Finance</i>	Sharing session PEI kepada BOC BOD: EV Ecosystem <i>PEI sharing session with BOC- BOD: EV Ecosystem</i>	18 Maret 2021 <i>18 March 2021</i>
6			Sharing session PEI kepada BOC BOD: Trend dan Peta Jalan Dekarbonisasi di Industri Minyak dan Gas <i>PEI sharing session with BOC-BOD: Trends and Roadmaps for Decarbonization in the Oil and Gas Industry</i>	17 Juni 2021 <i>17 June 2021</i>
7	M. Erry Sugiharto	Direktur Sumber Daya Manusia <i>Director of Human Capital</i>	Sharing session PEI kepada BOC BOD: EV Ecosystem <i>Sharing session PEI kepada BOC BOD: EV Ecosystem PEI sharing session with BOC-BOD: EV Ecosystem</i>	18 Maret 2021 <i>18 March 2021</i>
8			Sharing session PEI kepada BOC BOD: Trend dan Peta Jalan Dekarbonisasi di Industri Minyak dan Gas <i>PEI sharing session with BOC-BOD: Trends and Roadmaps for Decarbonization in the Oil and Gas Industry</i>	17 Juni 2021 <i>17 June 2021</i>
9	Mulyono	Direktur Logistik & Infrastruktur <i>Director of Integrated Logistics & Infrastructure</i>	Sharing session PEI kepada BOC BOD: EV Ecosystem <i>PEI sharing session with BOC- BOD: EV Ecosystem</i>	18 Maret 2021 <i>18 March 2021</i>
10			Sharing session PEI kepada BOC BOD: Trend dan Peta Jalan Dekarbonisasi di Industri Minyak dan Gas <i>PEI sharing session with BOC-BOD: Trends and Roadmaps for Decarbonization in the Oil and Gas Industry</i>	17 Juni 2021 <i>17 June 2021</i>
11	Dedi Sunardi	Direktur Penunjang Bisnis <i>Director of Corporate Services</i>	Sharing session PEI kepada BOC BOD: Trend dan Peta Jalan Dekarbonisasi di Industri Minyak dan Gas <i>PEI sharing session with BOC-BOD: Trends and Roadmaps for Decarbonization in the Oil and Gas Industry</i>	17 Juni 2021 <i>17 June 2021</i>

KEAMANAN DIGITAL DIGITAL SECURITY

Salah satu aspek penting dalam penerapan tata kelola keberlanjutan di PERTAMINA adalah dukungan pemanfaatan dan pengembangan teknologi informasi melalui transformasi digital. PERTAMINA telah memulai transformasi digital sejak tahun 2017 dan untuk tahun 2020-2024, telah disusun IT Master Plan yang terdiri dari tujuh poin utama, yakni Application, Data & Analytics, Middleware, Back End Apps, Infra & Security, ICT Delivery Model, dan ICT Capabilities. [SHS-7.C2][SHS-7.C3]

PERTAMINA menggunakan framework COBIT sebagai *best practice* dalam melaksanakan tata kelola Teknologi Informasi. Pengukuran level kematangan atas tata kelola TI dilakukan oleh pihak eksternal independen pada akhir 2021 dengan *score* kematangan 4,03 dari 5 level kematangan. Status kematangan dari *score* tersebut adalah optimalisasi proses (*continuous improvement*).

SOLUSI UNGGULAN EXCELLENT SOLUTIONS

Pada masa pandemi COVID-19 yang berlanjut hingga tahun 2021, PERTAMINA mengembangkan beberapa solusi unggulan yang mendukung pengelolaan, pengawasan, dan transparansi Perseroan yang meliputi:

- Internal administration applications
Pengembangan sistem korespondensi modern yang mengotomatisasi distribusi surat resmi kepada pejabat maupun instansi afiliasi secara elektronik.
- B2C applications
Pengembangan aplikasi yang digunakan untuk pembayaran bahan bakar minyak secara non-tunai di stasiun pengisian bahan bakar umum PERTAMINA yang terintegrasi dengan aplikasi LinkAja.

One of the important aspects of sustainable governance implementation in PERTAMINA is the support for the use and development of information technology through digital transformation. PERTAMINA has started digital transformation since 2017 and has created an IT Master Plan for 2020-2024, consisting of seven main points, namely: Application, Data & Analytics, Middleware, BackEnd Apps, Infra & Security, ICT Delivery Model, and ICT Capabilities. [SHS-7.C2][SHS-7.C3]

PERTAMINA uses the COBIT framework as best practice in implementing Information Technology governance. The maturity level of IT governance was measured by an independent external party at the end of 2021 with a score of 4.03 out of 5 maturity levels. The maturity status of the score is process optimization (continuous improvement).

During the COVID-19 pandemic, which persisted in 2021, PERTAMINA has developed several excellent solutions to support the management, supervision, and transparency of the Company including:

- Internal administration applications
Development of a modern correspondence system that automates the distribution of official letters to officers and affiliated agencies electronically.
- B2C applications
Development of applications that are used for non-cash payments for fuel oil at PERTAMINA gas stations that are integrated with the LinkAja application.

- **IT Infrastructure**
Penggunaan infrastruktur penyimpanan data secara hybrid antara on premise dan cloud sehingga PERTAMINA tetap patuh dengan peraturan pemerintah yang berlaku.
- **New tech**
Pembangunan big data analytic, machine learning serta cloud-based applications.

- *IT Infrastructure*
Use of a hybrid data storage infrastructure between on-premise and cloud to maintain PERTAMINA's compliance with applicable government regulations.
- *New tech*
Development of big data analytics, machine learning, and cloud-based applications.

KEAMANAN SISTEM IT IT SYSTEM SECURITY

Pengembangan TI dan transformasi digital yang dijalankan PERTAMINA dihadapkan pada beberapa tantangan, di antaranya keamanan sistem TI dan data digital. Selama tahun 2021, berkaca dari peningkatan serangan siber yang terjadi di Indonesia, PERTAMINA mengantisipasi hal tersebut antara lain dengan:

- Melakukan mitigasi dampak gangguan operasional dan penurunan image PERTAMINA;
- Membentuk tim Incident Response;
- Melakukan koordinasi dengan tim eksternal termasuk dengan Badan Siber dan Sandi Negara (BSSN) dan Bareskrim Polri;
- Meningkatkan kesadaran terhadap keamanan siber kepada seluruh pekerja, mitra kerja dan vendor;
- Mereviu dan *update* kebijakan keamanan siber secara berkesinambungan untuk mengantisipasi perkembangan siber;
- Mengawasi dan mempelajari potensi kerentanan terhadap serangan siber di sistem PERTAMINA.

PERTAMINA terus meningkatkan keamanan sistem TI dan data digital, termasuk memastikan kesiapan setiap karyawan dari aktivitas pihak-pihak eksternal yang ingin melakukan peretasan. Untuk itu PERTAMINA menginisiasi berbagai aktivitas internal terkait keamanan digital pada aspek *people, process* dan *technology*.

PERTAMINA's IT development and digital transformation were facing several challenges, including IT system security and digital data. In 2021, due to the surge of cyberattacks that occurred in Indonesia, PERTAMINA anticipated this by:

- *Mitigating the impact of operational disturbances and the declining image of PERTAMINA;*
- *Forming an Incident Response team;*
- *Coordinating with external teams, including the National Cyber and Crypto Agency (BSSN) and the Criminal Investigation Unit of the National Police.*
- *Increasing cyber security awareness among all employees, partners and vendors;*
- *Reviewing and updating cyber security policies continuously to anticipate cyber developments;*
- *Monitoring and studying potential vulnerabilities to cyber attacks in PERTAMINA systems.*

PERTAMINA continues to improve the security of IT systems and digital data, including making sure the readiness of every employee to deal with an external party's hacking activities. Therefore, PERTAMINA has initiated various internal activities on digital security in the aspects of people, process, and technology.

ETIKA PERUSAHAAN CORPORATE ETHICS

Penerapan tata kelola keberlanjutan di PERTAMINA menjadi bagian dari Tata Kelola Perusahaan yang Baik (GCG) yang berpijak pada kepatuhan terhadap hukum dan prinsip-prinsip GCG.

The sustainable governance implementation at PERTAMINA is a part of Good Corporate Governance (GCG), which complies with the laws and GCG principles.



Corporate Secretary Pertamina, Brahmantya S. Poerwadi (kiri) menerima Sertifikat ISO 37001:2016 Sistem Manajemen Anti Penyuapan untuk lingkup korporat dari Presiden Direktur PT SGS Indonesia, Shashibhushan Jogani, di Jakarta, Selasa, 4 Mei 2021. [GOV-3 C3]

PERTAMINA's Corporate Secretary, Brahmantya S. Poerwadi (left), received the ISO 37001:2016 Anti-Bribery Management System Certificate for the corporation from the President Director of PT SGS Indonesia, Shashibhushan Jogani, in Jakarta, Tuesday, 4 May 2021. [GOV-3 C3]

Selama tahun 2021, tidak ada kasus korupsi terbukti yang terjadi di lingkungan PERTAMINA. [205-3-c] [GOV-3.C2]

During 2021, there were no recorded confirmed cases in PERTAMINA. [205-3-c] [GOV-3.C2]

PERTAMINA terus memperkuat tata kelola perusahaan dengan memperoleh sertifikasi ISO 37001:2016 Sistem Manajemen Anti Penyuapan (SMAP) untuk lingkup korporat. Sertifikasi tersebut menjadi salah satu bukti PERTAMINA sebagai holding BUMN migas telah menerapkan sistem manajemen antipenyuapan di seluruh proses bisnisnya. [205-1-a]

PERTAMINA continues to strengthen corporate governance by obtaining ISO 37001:2016 Anti-Bribery Management System (SMAP) certification for the corporate sphere. The certification demonstrates that PERTAMINA, as a holding of oil and gas SOE company, has implemented an anti-bribery management system in all of its business processes.[205-1-a]

Sertifikasi dan penerapan SMAP juga bentuk dukungan atas kebijakan Pemerintah untuk pencegahan korupsi sesuai Inpres No. 10 Tahun 2016 tentang Aksi Pencegahan dan Pemberantasan Korupsi Tahun 2016 dan Tahun 2017; Perpres No. 54

The ABMS (SMAP) certification and implementation are also a form of support for the Government's policies to prevent corruption in accordance with Presidential Instruction No. 10 of 2016 concerning the Actions for Prevention and Eradication of Corruption

Tahun 2018 tentang Strategi Nasional Pencegahan Korupsi; serta Surat Edaran Kementerian BUMN No SE-2/MBU/07/2019 yang menghimbau semua BUMN untuk mengambil langkah-langkah anti penyuapan. [3-3]

Penerapan SMAP juga menjadi upaya memperkuat tata kelola bisnis bersih dan transparan, yang sejalan dengan komitmen pada pengelolaan LST, serta TPB ke-16. Hingga 31 Desember 2021 tercatat ada 19 entitas PERTAMINA Grup yang telah mengimplementasikan ISO 37000:2016. Dalam hubungan dengan pemasok, Perusahaan juga menyertakan beberapa klausul terkait antikorupsi dalam proses registrasi pemasok sebagai bagian dari *due diligence*. [GOV-3 C3]

in 2016 and 2017; Presidential Decree No. 54 of 2018 concerning the National Strategy for Corruption Prevention; and the SOE Ministry Circular No. SE-2/MBU/07/2019, which urges all SOEs to take anti-bribery measures.[3-3]

The implementation of ABMS is also an effort to reinforce clean and transparent business governance, which is in line with the commitment to environmental, social, and governance (ESG) management, as well as the 16th SDG. On 31 December 2021, there were nineteen entities of the PERTAMINA Group that had implemented ISO 37001:2016. The Company also incorporates several clauses on anticorruption in the vendor registration process, as part of due diligence. [GOV-3 C3]

PELATIHAN DAN SOSIALISASI ANTIKORUPSI [GOV-3.C4] ANTI-CORRUPTION TRAINING AND OUTREACH

PERTAMINA secara berkala melakukan sosialisasi terkait antikorupsi. Seluruh *governance body*, karyawan dan partner bisnis telah dikomunikasikan melalui *vendor day*, pakta integritas, *compliance online system*, *broadcast*, dan *email blast*. Sebesar 94,59% dari jumlah pekerja Holding telah menerima sosialisasi antikorupsi.

Pada periode pelaporan, PERTAMINA menyelenggarakan beberapa kegiatan pelatihan antikorupsi, di antaranya: [SHS-7.C2]

- Pada 2-5 Februari 2021, sebanyak 50 karyawan yang menjalankan fungsi Internal Audit mengikuti pelatihan antikorupsi yang diberikan Komisi Pemberantasan Korupsi (KPK) untuk mengawal pencegahan korupsi melalui *early warning system*. Peserta menerima pengetahuan mengenai tindak pidana korupsi, konflik kepentingan, gratifikasi, serta panduan CEK. [205-2-e]

PERTAMINA periodically conducts dissemination related to anti-corruption. The entire governance body, employees, and business partners have been communicated through vendor day, integrity pact, compliance online system, broadcast, and email blast. Some 94.59% of the total employees of Holding Company have received anti-corruption dissemination.

During the reporting period, PERTAMINA held several anti-corruption training activities, including: [SHS-7.C2]

- *On 2-5 February 2021, as many as 50 employees of the Internal Audit function participated in anti-corruption training provided by the Corruption Eradication Commission (KPK). The training was given to employees in the Internal Audit function because they play an important role in the prevention of corruption through an early warning system. In the online training, participants gained knowledge about criminal acts of corruption, conflicts of interest, gratuities, as well as CEK guidelines.* [205-2-e]

- Pada tanggal 29 April 2021, sebanyak 700 karyawan mengikuti Sosialisasi ISO 37001:2016, LHKPN, dan Gratifikasi.
 - Pada tanggal 8 Desember 2021, sebanyak 1.226 karyawan mengikuti “Webinar Membangun Budaya Antikorupsi di Lingkungan Perusahaan” secara daring. Materi yang diberikan antara lain terkait langkah preventif yang harus dilakukan untuk menghindari adanya korupsi di perusahaan.
- On 29 April 2021, as many as 700 employees participated in the Dissemination of ISO 37001:2016, LHKPN, and Gratification.
 - On 8 December 2021, as many as 1,226 employees participated in the “Webinar on Building an Anti-Corruption Culture in the Company’s Environment”. In the online webinar, participants were given knowledge about preventive measures that must be taken to avoid corruption in the company.

PERSAINGAN USAHA SEHAT [11.19] FAIR BUSINESS COMPETITION

PERTAMINA mendukung persaingan usaha dan kompetisi sehat dalam menjalankan bisnisnya. Namun sebagai BUMN, PERTAMINA juga mendapatkan penugasan dari Pemerintah untuk mendistribusikan bahan bakar jenis tertentu. Sampai dengan akhir tahun 2021, PERTAMINA tidak pernah menerima sanksi terkait perkara pelanggaran persaingan usaha sehat, dan pelaksanaan sanksi tertunda terkait perkara pelanggaran persaingan usaha sehat. [2-27]

Dalam hal penjualan avtur, kondisi sampai dengan akhir periode pelaporan menempatkan PERTAMINA sebagai satu-satunya penjual avtur di Indonesia. Namun demikian hal ini bukanlah bentuk monopoli, karena sesuai regulasi yang berlaku tidak ada larangan bagi siapapun untuk melakukan bisnis avtur di Indonesia.

Dalam menjalankan bisnis avtur tersebut, PERTAMINA senantiasa mematuhi aturan yang ditetapkan Pemerintah, termasuk keharusan membangun depot pengisian pesawat udara (DPPU) di bandara serta penetapan harga jual. Saat ini, PERTAMINA telah memiliki 67 DPPU di seluruh Indonesia dengan standar keamanan yang baik, sementara untuk penetapan harga jual avtur berpedoman pada Kepmen ESDM Nomor 17K/10/MEM/2019 yang menetapkan adanya batas atas dengan margin sebesar 10% dari harga dasar.

PERTAMINA supports business competition and fair competition in running its business. However, as an SOE, PERTAMINA is also mandated by the Government to distribute certain types of fuel under the public service obligation scheme. Until the end of 2021, PERTAMINA has never received any sanctions related to the cases of fair business competition violations, nor has it delayed execution of sanctions regarding cases of fair business competition violations. [2-27]

In terms of the jet fuel sales, up to the end of the reporting period, PERTAMINA was the only jet fuel seller in Indonesia. However, it was not a form of monopoly, because there is no prohibition for anyone to run jet fuel business in Indonesia under the existing regulations.

In running the avtur business, PERTAMINA always complies with the Government regulations, including the obligation to build aircraft refueling depots (DPPU) at the airports as well as determining the selling price. Currently, PERTAMINA has 67 DPPUs across Indonesia with good safety standards, while the avtur selling price is based on the EMR Ministerial Decree No. 17K/10/MEM/2019 which stipulates an upper limit with a margin of 10% of the base price.

KEBIJAKAN GRATIFIKASI GRATIFICATION POLICY

PERTAMINA memiliki Pedoman Gratifikasi dan membentuk Unit Pengendalian Gratifikasi (UPG). Pedoman Gratifikasi memuat ketentuan mengenai gratifikasi yang dikecualikan beserta mekanisme pelaporannya. UPG dibentuk berdasarkan Pedoman Unit Pengendalian Gratifikasi. UPG menyampaikan laporan secara berkala dan berkoordinasi dengan KPK untuk laporan gratifikasi. Selama tahun 2021, UPG telah menyampaikan 20 (dua puluh) laporan gratifikasi.

PERTAMINA has Gratification Guidelines in place and has established a Gratification Control Unit (UPG). The Gratification Guidelines contain provisions regarding exempted gratuities and the reporting mechanism. UPG submits reports periodically and coordinates with the KPK for gratification reports. In 2021, UPG received 20 (twenty) gratification reports.

KEBIJAKAN LHKPN STATE OFFICIAL ASSET REPORT (LHKPN) OBLIGATION

Sebagai BUMN, maka anggota Direksi, Dewan Komisaris, dan pejabat struktural lain di PERTAMINA dikategorikan sebagai penyelenggara negara. Mereka harus melaporkan dan mengumumkan kekayaan sebelum dan sesudah menjabat.

As an SOE, members of the Board of Directors, Board of Commissioners, and other structural officers at PERTAMINA are categorized as state officials. They are required to report and declare their wealth both before and after taking office.

Pada periode pelaporan, jumlah pejabat PERTAMINA yang memiliki kewajiban penyampaian LHKPN ada 2.385 orang dan jumlah pejabat PERTAMINA yang telah menyampaikan LHKPN yaitu sebanyak 2.385 orang, sehingga tingkat kepatuhan mencapai 100%.

In the reporting period, the number of PERTAMINA officers who have the obligation to submit LHKPN was 2,385 people, and the number of PERTAMINA officers who have submitted LHKPN was 2,385 people, thus the compliance level is at 100%.



SISTEM PELAPORAN PELANGGARAN [2-16] WHISTLEBLOWING SYSTEM

PERTAMINA menyediakan sistem pelaporan pelanggaran atau *whistleblowing system* (WBS) yang dapat digunakan para pemangku kepentingan untuk menyampaikan laporan pelanggaran atau hal-hal kritis lain terkait PERTAMINA. WBS dikelola Fungsi Investigation Audit & WBS, bekerja sama dengan konsultan independen. Pengaduan dan data yang masuk ke WBS bersifat independen dan rahasia. Sepanjang tahun 2021, PERTAMINA menerima 201 pengaduan WBS dengan 141 pengaduan atau 70,15% telah selesai ditindaklanjuti (Analisis Awal). [2-16-a]

PERTAMINA provides a whistleblowing system (WBS) that can be used by stakeholders to submit reports of violations or other critical matters related to PERTAMINA. The WBS is managed by the Investigation Audit & WBS Function, together with independent consultants. Complaints and data submitted to the WBS are independent and confidential. In 2021, PERTAMINA received 201 WBS complaints with 141 reports (70.15%) have been followed up (Initial Analysis). [2-16-a]

Saluran WBS WBS Channels	
Telepon <i>Telephone</i>	Pertamina Call Center 135
SMS	+62811 861 5000
Fax	+6221 381 5912
Email	pertaminaclean@tipoffs.com.sg
Website	https://pertaminaclean.tipoffs.info
Mail Box	Pertamina Clean PO Box 2600 JKP 10026

Jumlah Pengaduan dan Bentuk Pelanggaran yang Dilaporkan melalui WBS [2-16-a]
Number of Complaints and Forms of Violations Reported via WBS

Bentuk Pelanggaran Form of Violation	2021	2020	2019
Korupsi Corruption	15	9	6
Penyuapan Bribery	8	8	5
Konflik Kepentingan Conflict of Interest	25	16	6
Pencurian Theft	28	21	17
Penipuan Fraud	11	8	7
Pelanggaran Hukum dan Peraturan Violation of Laws and Regulations	111	92	56
Lainnya Others	3	1	0
Jumlah Total	201	155	97

Jumlah Pengaduan WBS dan Tingkat Tindak Lanjut [2-16-a]
Number of WBS Complaints and Follow-up Level

Tahun Year	Jumlah Pengaduan Number of Complaints	Jumlah Selesai Ditindaklanjuti (Analisis Awal) Number of Complaints Followed Up (Initial Analysis)	Persentase Percentage
2021	201	141	70.15%
2020	155	152	98.06%
2019	97	53	54.60%

Keterangan:

- Data WBS tahun 2019 merupakan data saat penanganan WBS masih dikelola oleh Fungsi Compliance.
- Data WBS (tahun 2019-2021) hanya data yang bersumber dari kanal WBS yang diterima melalui web Pertamina Clean (tidak termasuk pengaduan yang berasal dari kanal Non WBS).
- Data pengaduan berdasarkan klasifikasi bentuk pelanggaran diambil dari data Deloitte di web Pertamina Clean dan merupakan klasifikasi berdasarkan analisa awal atas pengaduan yang diterima.
- Jumlah pengaduan yang selesai ditindaklanjuti (analisis awal) tahun 2020 adalah jumlah pengaduan yang yang diterima tahun 2020 dan ditindaklanjuti (analisis awal) di tahun 2020 dan 2021.

Note:

- The 2019 WBS data comes from the period when WBS handling was still managed by the Compliance Function.
- WBS data (2019-2021) merely consists of the data sourced from the WBS channels received via the Pertamina Clean website (excluding complaints originating from Non-WBS channels).
- The Complaint data based on the classification of violations are taken from Deloitte data on the Pertamina Clean website and is classified based on an initial analysis of the complaints received.
- The number of complaints that have been followed up (initial analysis) in 2020 is equal to the number of complaints received in 2020 and have followed up (initial analysis) in 2020 and 2021.

PENILAIAN PENERAPAN TATA KELOLA PERUSAHAAN GOOD CORPORATE GOVERNANCE IMPLEMENTATION ASSESSMENT

Setiap tahun, PERTAMINA melakukan penilaian atas penerapan GCG untuk mengetahui tingkat penerapan GCG, serta menindaklanjuti rekomendasi yang disampaikan dari kegiatan penilaian pada periode sebelumnya. Rekomendasi dan tindak lanjut atas hasil asesmen dapat dibaca lebih lanjut di Laporan Tahunan 2021 PT Pertamina (Persero) pada bab Tata Kelola Perusahaan.

Terdapat enam parameter aspek penilaian penerapan GCG, yang di antaranya terdapat aspek Direksi dan Dewan Komisaris. Selain itu, kinerja Dewan Komisaris dan Direksi juga dievaluasi melalui pencapaian target dalam Indeks Kinerja Kunci (KPI) yang ditetapkan manajemen. Asesmen tahun 2021 dilakukan oleh pihak ketiga independen, yaitu PT RSM Konsultan Indonesia. [2-18]

Every year, PERTAMINA conducts an assessment on the GCG implementation to determine the level of GCG implementation during the assessment period, as well as follow up on recommendations from the assessment in the previous period. Recommendations and follow-up on the results of the assessment can be read further in the 2021 Annual Report of PT Pertamina (Persero) in the Corporate Governance chapter.

There are six assessment parameters for the GCG implementation in the Board of Commissioners and the Board of Directors aspects. In addition, the performance of the Board of Commissioners and the Board of Directors is also evaluated through the achievement of the Key Performance Index (KPI) targets set by management. The 2021 assessment was carried out by an independent third party, PT RSM Konsultan Indonesia. [2-18]

Hasil Penilaian Penerapan GCG Results of GCG Implementation Assessment			
Uraian Description	2021	2020	2019
Skor Score	96.94%	92.85%	92.65%
Kategori Category	Sangat Baik Very Good	Sangat Baik Very Good	Sangat Baik Very Good



Tabel Hasil Penilaian GCG PERTAMINA Tahun 2021
Table of GCG Assessment Results of PERTAMINA in 2021

Aspek Penilaian <i>Assessment Aspect</i>	Bobot (%) <i>Weight (%)</i>	Nilai <i>Score</i>	Capaian (%) <i>Achievement (%)</i>
	A	B	(B/A)
Komitmen terhadap Penerapan Tata Kelola Perusahaan yang Baik Secara Berkelanjutan <i>Commitment to Sustainable Implementation of Good Corporate Governance</i>	7,00	6,962	99.46
Pemegang Saham dan RUPS <i>Shareholders and GMS</i>	9,00	8,611	95.68
Dewan Komisaris <i>Board of Commissioners</i>	35,00	34,072	97.35
Direksi <i>Board of Directors</i>	35,00	33,569	95.91
Pengungkapan Informasi dan Transparansi <i>Information Disclosure and Transparency</i>	9,00	8,729	96.99
Aspek Lainnya <i>Other Aspect</i>	5,00	5,000	100.00
Skor Capaian Keseluruhan <i>Overall Achievement Score</i>	100.00	96.943	96.94

PENCEGAHAN TRANSAKSI ORANG DALAM DAN PENYAMPAIAN LAPORAN KEUANGAN

PREVENTION OF INSIDER TRADING AND PUBLICATION OF FINANCIAL STATEMENTS

Selama tahun 2021, PERTAMINA tidak dihadapkan pada sangkaan terkait dugaan praktik-praktik transaksi orang dalam. Kebijakan pencegahan terjadinya transaksi orang dalam (*insider trading*) terdapat pada *Code of Conduct* PERTAMINA, yakni ketentuan yang mengatur:

- Insan PERTAMINA harus menjaga kerahasiaan dokumen dan informasi mengenai Perseroan; serta
- Insan PERTAMINA melakukan praktik bisnis yang adil, etis, dan tidak menyebarkan informasi sensitif apapun kepada pihak lain untuk menjaga persaingan yang sehat.

In 2021, PERTAMINA had not faced any allegations of insider trading-practices. The policy for preventing insider trading is contained in PERTAMINA's Code of Conduct, as follows:

- *PERTAMINA personnel must maintain the confidentiality of documents and information regarding the Company; and*
- *PERTAMINA personnel carries out fair, ethical business practices, and does not share any sensitive information with other parties to maintain fair competition.*

PERTAMINA menjunjung tinggi transparansi serta keterbukaan informasi kepada masyarakat sesuai Undang-Undang Nomor 14 Tahun 2008 tentang Keterbukaan Informasi Publik. Kami menyediakan akses informasi dan data kepada masyarakat secara digital lewat laman, termasuk dalam hal penyampaian Laporan Keuangan melalui <https://www.pertamina.com/id/laporan-keuangan>.

PERTAMINA upholds transparency and disclosure of information to the public in accordance with Law Number 14 of 2008 concerning Transparency of Public Information. We provide digital access to information and data to the public on our website, including the submission of Financial Statements via <https://www.pertamina.com/id/laporan-keuangan>.

DUKUNGAN PADA INISIATIF TRANSPARANSI INDUSTRI EKSTRAKTIF SUPPORT FOR EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE

PERTAMINA mendukung penerapan Inisiatif Transparansi Industri Ekstraktif (EITI atau *Extractive Industries Transparency Initiative*). Hal ini sejalan dengan kesertaan Indonesia sebagai negara pelaksana EITI dan komitmen Pemerintah untuk mengungkapkan semua pajak, *royalty*, dan biaya yang diterima dari sektor migas dan pertambangan. Dukungan PERTAMINA pada EITI dilaksanakan melalui pelaporan kepada Kementerian ESDM. Secara berkala, PERTAMINA menyampaikan laporan kinerja yang di dalamnya memuat laporan tentang pembayaran kepada Pemerintah.

PERTAMINA supports the implementation of the Extractive Industries Transparency Initiative (EITI). This aligns with Indonesia's participation as an EITI implementing country and the Government's commitment to disclose all taxes, royalties, and fees received from the oil, gas, and mining sectors. PERTAMINA's support for EITI is carried out through reporting to the Ministry of Energy and Mineral Resources (EMR). Periodically, PERTAMINA submits performance reports, which include reports on payments to the Government.



KEBIJAKAN REMUNERASI DEWAN KOMISARIS DAN DIREKSI

REMUNERATION POLICY FOR THE BOARD OF COMMISSIONERS AND THE BOARD OF DIRECTORS

Remunerasi Direksi dan Dewan Komisaris ditetapkan Pemegang Saham dalam RUPS. Pemegang Saham menjadi pemangku kepentingan yang terlibat dalam proses penetapan remunerasi Direksi dan Dewan Komisaris. Penetapan mengacu pada Permen BUMN Nomor PER-12/MBU/11/2020 tanggal 25 November 2020 tentang Perubahan Kelima Atas Peraturan BUMN Nomor PER-04/MBU/2014 tentang Pedoman Penetapan Penghasilan Direksi, Dewan Komisaris, dan Dewan Pengawas BUMN. Remunerasi Direksi, dan Dewan Komisaris meliputi: [2-19][2-20]

- Gaji/Honorarium;
- Tunjangan;
- Fasilitas; dan
- Tantiem/Insentif kinerja.

Penetapan Penghasilan yang berupa Gaji atau Honorarium, Tunjangan, dan Fasilitas yang bersifat tetap dilakukan dengan mempertimbangkan faktor skala usaha, faktor kompleksitas usaha, tingkat inflasi, kondisi dan kemampuan keuangan perusahaan, faktor-faktor lain yang relevan, serta tidak boleh bertentangan dengan peraturan perundang-undangan. Penetapan penghasilan yang berupa Tantiem/Insentif Kinerja yang bersifat variabel (merit rating) dilakukan dengan mempertimbangkan faktor kinerja dan kemampuan keuangan perusahaan serta faktor-faktor lain yang relevan. Bagi BUMN induk (Holding), gaji Direktur Pelaksana dihitung menggunakan pendekatan perhitungan berdasarkan angka sebelum konsolidasi setara Direktur Utama.

The remuneration of the Board of Directors (BOD) and the Board of Commissioners (BOC) is determined by the Shareholders at the GMS. Shareholders are stakeholders involved in the process of determining the remuneration for the Board of Directors and the Board of Commissioners. The process refers to the SOE Ministerial Regulation Number PER-12/MBU/11/2020 dated 25 November 2020, regarding the Fifth Amendment to the SOE Regulation Number PER-04/MBU/2014 concerning Guidelines for Determining the Income of the Board of Directors, Board of Commissioners, and Supervisory Board of SOEs. The remuneration of the Board of Directors and the Supervisory Board of Commissioners includes: [2-19][2-20]

- Salary/Honorarium;
- Allowances;
- Facilities; and
- Tantiem/Performance incentives.

The determination of income in the form of salary or honorarium, allowances, and facilities that are permanent is carried out by considering factors of business scale, business complexity, inflation rates, company financial conditions and capabilities, and other relevant factors, and must not conflict with laws and regulations. The determination of income - in the form of Tantiem/Performance Incentives that are variable (merit rating), - is carried out by considering performance factors and the company's financial capability as well as other relevant factors. For holding SOEs, the salary of the Managing Director is calculated using an approach based on pre-consolidation figures equal to the President Director & CEO.

Struktur Gaji, Honorarium, Tantiem, dan Insentif Anggota Direksi dan Dewan Komisaris [2-21]
Salary, Honorarium, Tantiem, and Incentive Structure for Members of BOD and Members of BOC

Direksi Board of Directors			Dewan Komisaris Board of Commissioners			
Komponen Component	Jabatan dan Struktur Position and Structure		Komponen Component	Jabatan dan Struktur Position and Structure		
Gaji Salary	Direktur Utama President Director & CEO	Anggota Direksi Lain Other Members of BOD	Honorarium Honorarium	Komisaris Utama President Commissioner	Wakil Komisaris Utama Wakil Vice President Commissioner	Anggota Komisaris Lain Other Members of BOC
	100% 100%	85% dari gaji Direktur Utama 85% of the President Director & CEO's salary		45% dari gaji Direktur Utama 45% of the President Director & CEO's salary	42,5% dari gaji Direktur Utama 42.5% of the President Director & CEO's salary	90% dari honorarium Komisaris Utama 90% of the President Commissioner's salary

Jenis Tunjangan Anggota Direksi dan Anggota Dewan Komisaris
Types of Benefits for Members of BOD and BOC

Direksi Board of Directors	Dewan Komisaris Board of Commissioners
<ul style="list-style-type: none"> Tunjangan hari raya (THR) Tunjangan perumahan Asuransi purna jabatan Religious Holiday allowance (THR) Housing allowance Retirement insurance 	<ul style="list-style-type: none"> Tunjangan hari raya (THR) Tunjangan transportasi Asuransi purna jabatan Religious Holiday allowance (THR) Housing allowance Retirement insurance

Jenis Fasilitas Anggota Direksi dan Anggota Dewan Komisaris
Types of Benefits for Members of BOD and BOC

Direksi Board of Directors	Dewan Komisaris Board of Commissioners
<ul style="list-style-type: none"> Fasilitas kendaraan Fasilitas kesehatan Fasilitas bantuan hukum Vehicle facilities Health facilities Legal aid facilities 	<ul style="list-style-type: none"> Fasilitas kesehatan Fasilitas bantuan hukum Health facilities Legal aid facilities

Laporan ini belum mengungkapkan informasi rasio total kompensasi tahunan yang dibayarkan PERTAMINA kepada Dewan Komisaris dan Direksi terhadap kompensasi tahunan yang dibayarkan PERTAMINA kepada karyawan. Hal ini didasarkan pertimbangan PERTAMINA sebagai Perseroan tertutup, dan seluruh proses maupun penetapan kompensasi telah mendapatkan persetujuan Menteri BUMN sebagai Pemegang Saham. [2-28]

The Company may provide Tantiem/Performance Incentives to Members of the Board of Directors and Board of Commissioners based on the GMS resolution in the annual report ratification, with a pre-determined requirement. The calculation of the Tantiem/Performance Incentive uses the guidelines set by the Minister of SOEs. [2-28]



ADVOKASI PUBLIK DAN LOBI [11.22] PUBLIC ADVOCACY AND LOBBYING



Sebagai Holding BUMN energi, PERTAMINA berkepentingan erat dengan kebijakan Pemerintah, terutama di sektor energi. Kami senantiasa berupaya menggunakan berbagai mekanisme lobi untuk memberikan penjelasan, pendapat maupun pandangan agar kebijakan di sektor energi tetap mendukung kepentingan publik, serta memberikan jaminan keberlanjutan kegiatan operasi dan bisnis PERTAMINA di masa depan.

PERTAMINA senantiasa menyertakan advokasi publik dalam kegiatan pengembangan usaha, terutama kepada publik yang terdampak. Advokasi publik ditujukan guna memastikan publik yang terdampak tetap terjamin hak dan kewajibannya sesuai hukum yang berlaku. PERTAMINA melaksanakan Rapat Dengar Pendapat (RDP) dengan Dewan Perwakilan Rakyat sebanyak 42 kali pada tahun 2021, dengan materi strategis yang dibahas antara lain kebijakan subsidi, progress pembangunan kilang, penanganan kebakaran kilang, dan distribusi BBM & LPG.

Melalui Subholding, entitas anak sebagai kontraktor kontrak kerja sama (KKKS) di sektor hulu maupun unit operasi/unit bisnis di sektor hilir, secara berkala melakukan pertemuan dengan SKK Migas, BPH Migas, dan Kementerian ESDM.

As an energy SOE Holding, PERTAMINA has a particular interest in government policies, especially in the energy sector. We always try to use various lobbying mechanisms to deliver explanations, opinions, and views so that policies in the energy sector will accommodate the public interest, as well as guarantee the sustainability of PERTAMINA's operations and business activities in the future.

PERTAMINA continuously includes public advocacy in its business development activities, especially for the affected community. Public advocacy is aimed at ensuring the rights and obligations of the affected community are guaranteed under the applicable laws. PERTAMINA held 42 times Hearing (RDP) sessions with the House of Representatives in 2021, to discuss strategic materials including subsidy policies, refinery development progress, handling refinery fires, and distribution of fuel & LPG..

Through Subholdings, the subsidiaries as contractors of cooperation contracts (KKKS) in the upstream sector as well as operating units/business units in the downstream sector, hold periodic meetings with the Special Task Force for Upstream Oil & Gas Activities (SKK Migas), the Downstream Oil and Gas regulatory agency (BPH Migas), and the Ministry of Energy and Mineral Resources.

PERTAMINA juga melakukan pendekatan dan lobi terkait pelaksanaan proyek-proyek berskala besar dengan pihak-pihak berwenang maupun berkepentingan, baik untuk kepentingan perizinan, pembebasan lahan, bea masuk dan lainnya.

Selama periode pelaporan, PERTAMINA tidak pernah dihadapkan pada sangkaan melakukan advokasi publik dan/atau lobi yang disertai tindakan tidak bertanggung jawab, baik untuk kegiatan yang dijalankan di Indonesia maupun di wilayah operasi di luar negeri.

Kami menghindari segala bentuk keterlibatan dan kontribusi pada politik dalam bentuk apapun, termasuk pemberian dana politik atau dukungan pada kelompok politik tertentu. Perseroan melarang penggunaan fasilitas perusahaan untuk digunakan dalam kegiatan politik praktis, dan mengharuskan karyawan yang mencalonkan diri dalam jabatan politik untuk mengundurkan diri sebagai karyawan PERTAMINA. [2-15] [415-1]

PERTAMINA has also approached and lobbied the authorities and interested parties for the implementation of large-scale projects related to licensing, land acquisition, import duties, and others.

During the reporting period, PERTAMINA was never faced any allegations of conducting public advocacy and/or lobbying as well as illegitimate actions, both for activities in Indonesia and in overseas operating areas.

We avoid any form of involvement and contribution in politics in any form, including providing political funds or supporting certain political groups. The Company prohibits the use of company facilities for practical political activities, and requires employees who are running for political office to resign as employees of PERTAMINA. [2-15] [415-1]



LAMPIRAN LAPORAN REPORT APPENDIX

Detail Komposisi Pekerja PERTAMINA (HC) [2-7]

Detailed Employee Composition of PERTAMINA

Komposisi Pekerja PERTAMINA Berdasarkan Status Kepegawaian dan Gender [2-7]
PERTAMINA Employee Composition by Employment Status and Gender

Status Kepegawaian Employment Status	2021				2020		2019	
	Holding (*)	Subholding (*)	Jumlah Total	%	Holding (*)	Subholding (*)	Jumlah Total	%
Pekerja Tetap (PWTT) <i>Permanent Employees</i>	13,048	21,093	34,141	75	13,526	88	13,738	90
Laki-laki <i>Male</i>	11,525	16,389	27,914	62	11,941	78	12,149	79
Perempuan <i>Female</i>	1,523	4,704	6,227	14	1,585	10	1,589	10
Pekerja Tidak Tetap (PWT) <i>Non-Permanent Employees</i>	33	11,138	11,171	25	1,825	12	1,559	10
Laki-laki <i>Male</i>	19	9,348	9,367	21	1,795	12	1,489	10
Perempuan <i>Female</i>	14	1,790	1,804	4	30	0	70	0
Total	13,081	32,231	45,312	100	15,351	100	15,297	100

Komposisi Pekerja PWTT PERTAMINA Berdasarkan Tingkat Jabatan dan Gender
PERTAMINA's Permanent Employee Composition by Position and Gender

Tingkat Jabatan Level of Position	2021				2020		2019	
	Holding (*)	Subholding (*)	Jumlah Total	%	Jumlah Total	%	Jumlah Total	%
L1 (SVP Setara) <i>L1 (SVP equivalent)</i>	17	5	22	0,06	20	0,15	30	0,22
Laki-laki <i>Male</i>	17	5	22	0,06	20	0,15	29	0,21
Perempuan <i>Female</i>	0	0	0	0,00	0	0,00	1	0,01%
L2 (VP Setara) <i>L2 (VP Equivalent)</i>	187	81	268	0,78	113	0,84	196	1,43%
Laki-laki <i>Male</i>	162	60	222	0,65	99	0,73	178	1,30
Perempuan <i>Female</i>	25	21	46	0,13	14	0,10	18	0,13
L3 (Manajer Setara) <i>L3 (Manager Equivalent)</i>	965	612	1,577	4,62	685	5,06	952	6,93
Laki-laki <i>Male</i>	820	541	1,361	3,99	559	4,13	836	6,09
Perempuan <i>Female</i>	145	71	216	0,63	126	0,93	116	0,84
L4 dan lainnya <i>L4 and others</i>	11,879	20,395	32,274	94,53	12,708	93,95	12,560	91,43
Laki-laki <i>Male</i>	10,526	15,783	26,309	77,06	11,263	83,27	11,113	80,89
Perempuan <i>Female</i>	1,353	4,612	5,965	17,47	1,445	10,68	1,447	10,53
Total	13,048	21,093	34,141	100,00	13,526	100,00	13,738	100,00

Komposisi Pekerja PWT PERTAMINA Berdasarkan Tingkat Pendidikan dan Gender
Composition of PERTAMINA's Permanent Employees by Education Level and Gender

Tingkat Pendidikan Education Level	2021				2020		2019	
	Holding (*)	Subholding (*)	Jumlah Total	%	Jumlah Total	%	Jumlah	%
Pasca Sarjana <i>Graduate and Post Graduate</i>	1,260	2,862	4,122	12.07	1,271	9,40	1,161	8,45
Laki-laki <i>Male</i>	1,005	2,289	3,294	9.65	1,033	7,64	958	6,97
Perempuan <i>Female</i>	255	573	828	2.43	238	1,76	203	1,48
Sarjana <i>Undergraduate</i>	5,274	10,045	15,319	44.87	5,506	40,71	5,649	41,12
Laki-laki <i>Male</i>	4,228	7,766	11,994	35.13	4,396	32,50	4,513	32,85
Perempuan <i>Female</i>	1,046	2,279	3,325	9.74	1,110	8,21	1,136	8,27
Diploma	3,992	4,263	8,255	24.18	4,160	30,76	4,287	31,21
Laki-laki <i>Male</i>	3,790	2,814	6,604	19.34	3,953	29,23	4,076	29,67
Perempuan <i>Female</i>	202	1,449	1,651	4.84	207	1,53	211	1,54
SMA <i>Senior High School</i>	2,522	3,859	6,381	18.69	2,578	19,06	2,625	19,11
Laki-laki <i>Male</i>	2,502	3,520	6,022	17.64	2,553	18,87	2,593	18,87
Perempuan <i>Female</i>	20	403	423	1.24	25	0,18	32	0,23
SMP <i>Junior High School</i>	-	38	38	0.11	11	0,08	15	0,11
Laki-laki <i>Male</i>	-	34	34	0.10	6	0,04	9	0,07
Perempuan <i>Female</i>	-	4	4	0.01	5	0,04	6	0,04
SD <i>Elementary School</i>	-	26	26	0.08	-	0,00	1	0,01
Laki-laki <i>Male</i>	-	22	22	0.06	-	0,00	-	0,00
Perempuan <i>Female</i>	-	4	4	0.01	-	0,00	1	0,01
Total	13,048	21,093	34,141	100.00	13,526	100,00	13,738	100,00

Jumlah PWTT di Holding/Subholding Berdasarkan Kelompok Usia dan Gender
Number of Permanent Employees in Holding/Subholding By Age Group and Gender

Kelompok Usia Age Group	2021				2020		2019	
	Holding (*)	Subholding (*)	Jumlah Total	%	Jumlah Total	%	Jumlah Total	%
< 26 Tahun <26 years old	1,307	429	1,736	5,08	2,097	15.50	2,392	17.41
Laki-laki Male	1,271	360	1,631	4,78	2,017	14.91	2,291	16.68
Perempuan Female	36	69	105	0,31	80	0.59	101	0.74
26 – 35 Tahun 26 – 35 years old	5,869	5,752	11,621	34,04	5,840	43.18	5,762	41.94
Laki-laki Male	5,136	4,161	9,297	27,23	5,065	37.45	4,958	36.09
Perempuan Female	733	1,591	2,324	6,81	775	5.73	804	5.85
36 – 45 Tahun 36 – 45 years old	3,686	8,939	12,625	36,98	3,189	23.58	2,821	20.53
Laki-laki Male	3,088	6,978	10,066	29,48	2,649	19.58	2,347	17.08
Perempuan Female	598	1,961	2,559	7,50	540	3.99	474	3.45
46 – 55 Tahun 46 – 55 years old	2,172	5,728	7,900	23,14	2,349	17.37	2,717	19.78
Laki-laki Male	2,016	4,673	6,689	19,59	2,166	16.01	2,509	18.26
Perempuan Female	156	1,055	1,211	3,55	183	1.35	208	1.51
> 55 Tahun >55 years old	14	245	259	0,76	51	0.38	46	0.33
Laki-laki Male	14	217	231	0,68	44	0.33	44	0.32
Perempuan Female	-	28	28	0,08	7	0.05	2	0.01
Total	13,048	21,093	34,141	100,00	13,526	100.00	13,738	100

Komposisi Pekerja PERTAMINA Berdasarkan Status Kepegawaian, Penempatan, dan Gender tahun 2021
PERTAMINA Employee Composition By Employment Status, Placement, and Gender in 2021

Penempatan <i>Placement</i>	Gender	PWTT (Pekerja Tetap) <i>Permanent Employees</i>	PWT (Pekerja Tidak Tetap) <i>Non-permanent Employees</i>
Holding	Laki-laki <i>Male</i>	977	19
	Perempuan <i>Female</i>	522	14
	Jumlah <i>Total</i>	1,499	33
Upstream	Laki-laki <i>Male</i>	11,068	1,424
	Perempuan <i>Female</i>	1,666	233
	Jumlah <i>Total</i>	12,734	1,657
R&P	Laki-laki <i>Male</i>	5,709	125
	Perempuan <i>Female</i>	330	9
	Jumlah <i>Total</i>	6,039	134
C&T	Laki-laki <i>Male</i>	4,190	758
	Perempuan <i>Female</i>	727	128
	Jumlah <i>Total</i>	4,917	886
PNRE	Laki-laki <i>Male</i>	544	70
	Perempuan <i>Female</i>	81	13
	Jumlah <i>Total</i>	625	83
Gas	Laki-laki <i>Male</i>	2,196	141
	Perempuan <i>Female</i>	693	31
	Jumlah <i>Total</i>	2,889	172
IML	Laki-laki <i>Male</i>	1,257	2,531
	Perempuan <i>Female</i>	184	78
	Jumlah <i>Total</i>	1,441	2,609
Total	Laki-laki <i>Male</i>	25,941	9,367
	Perempuan <i>Female</i>	4,203	1,804
	Jumlah <i>Total</i>	30,144	11,171

Komposisi Pekerja Magang PERTAMINA [2-8]
Intern Composition in PERTAMINA

Tahun Year	Penempatan Placement	Tenaga Magang Interns		
		Laki-laki Male	Perempuan Female	Jumlah Total
2021	Holding	184	294	478
	Subholding	104	155	259
	Total	288	449	737
2020	Holding	150	167	317
	Subholding	52	57	109
	Total	202	224	426
2019	Holding	109	121	230
	Subholding	37	48	85
	Total	146	169	315

Komposisi Pekerja TKJP PERTAMINA [2-8]
PERTAMINA Supporting Service Worker
Composition

	2021	2020	2019
Persero / Holding	1,362		
R&P	4,429		
C&T	8,793		
IML	248	18,200	18,518
Upstream	10,615		
Gas	3,243		
PNRE	69		

Komposisi Pekerja PERTAMINA Berdasarkan Status
Kepegawaian dan Gender [2-7-a]
PERTAMINA Employee Composition by
Employment Status and Gender

Jabatan Position	Pemimpin Muda (< 42 tahun) Young Leaders (< 42 years old)		
	Laki-laki Male	Perempuan Female	Jumlah Total
Manajer < 42 tahun Manager < 42 years old	391	92	483
Total Manajer Total Manager	1,391	226	1,617
% Pemimpin Muda Level Manajer % Manager Level Young Leaders	28%	41%	30%
VP & SVP < 42 tahun VP & SVP < 42 years old	18	8	26
Total VP Total VP	250	46	296
% Pemimpin Muda Level VP & SVP % VP & SVP Level Young Leaders	7%	17%	9%
Jumlah Manajemen < 42 tahun Number of Management < 42 years	409	100	509
Jumlah Jajaran Manajemen Total Management members	1,641	272	1,913
% Pemimpin Muda di Manajemen % Young Leaders in Management	25%	37%	27%

Keterangan:

- Data pekerja mencakup keseluruhan PERTAMINA Grup
- Usia minimal pekerja PERTAMINA sesuai Peraturan Perusahaan adalah 15 tahun, dengan demikian tidak ada kegiatan usaha Perseroan yang berisiko mempekerjakan pekerja anak di bawah umur. [408-1]

Note:

- Employee data covers the entire Pertamina Group
- The minimum age for PERTAMINA employees under Company Regulation is 15 years old, thus there is no risk for the Company's business activities of employing underage workers (child labor). [408-1]

Jumlah dan Proporsi Perempuan di Jajaran Manajemen dan Manajemen Senior
Number and Proportion of Women in Management and Senior Management

	2021	2020	2019
SVP Setara <i>SVP Equivalent</i>	-	-	1
VP Setara <i>VP Equivalent</i>	46	14	18
Manajer Setara <i>Equivalent Manager</i>	216	126	116
Total pekerja di posisi manajemen dan manajemen senior <i>Total employees in management and senior management positions</i>	262	140	135
% pemimpin perempuan <i>% women leaders</i>	1,867	818	1,178
SVP Setara <i>SVP Equivalent</i>	14%	17%	11%

*Data 2021 mencakup Holding dan Subholding, sedangkan 2020-2019 hanya mencakup Persero.
 2021 data includes Holding Company and Subholding, while 2020-2019 only includes Persero.



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Pernyataan penggunaan Statement of use	PT Pertamina (Persero) melaporkan informasi dalam Indeks Isi GRI ini untuk periode 1 Januari 2021-31 Desember 2021 dengan referensi Standar GRI. <i>PT Pertamina (Persero) has reported the information cited in this GRI content index for the period 1 January 2021-31 December 2021 with reference to the GRI Standards.</i>
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GRI Sector Standard yang Digunakan Applicable GRI Sector Standard(s)	GRI 11: Oil and Gas Sector 2021

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GRI 404: Pelatihan dan Pendidikan 2016 <i>Training and Education 2016</i>	404-1, 11.10.6, 11.11.7 Rata-rata jam pelatihan per tahun per karyawan <i>Average hours of training per year per employee</i>		SOC-7.C1	172, 174, 185, 186
	404-2, 11.7.3, 11.10.7 Program untuk meningkatkan keterampilan karyawan dan program bantuan peralihan <i>Programs for upgrading employee skills and transition assistance programs</i>		SOC-7.C2	172, 186
	404-3 Program untuk meningkatkan keterampilan karyawan dan program bantuan peralihan <i>Percentage of employees receiving regular performance and career development reviews</i>			187
POJK 51/ POJK.03/2017	6.c.2.d Pelatihan dan pendidikan bagi karyawan <i>Training and education for employees</i>			185, 186

REFERENSI ACUAN PELAPORAN
REPORTING GUIDANCE REFERENCE

POJK No.51/ POJK.03/2017 & Standar GRI POJK 51/2017 & GRI Standards	Pengungkapan <i>Disclosure</i>	Referensi SASB SASB References	Referensi IPIECA IPIECA References	Halaman Pages
Keberagaman dan Kesetaraan Kesempatan <i>Diversity and Equal Opportunity</i>				
GRI 405: Keberagaman dan Kesetaraan Kesempatan 2016 <i>Diversity and Equal Opportunity 2016</i>	405-1, 11.11.4 Keberagaman badan tata kelola dan karyawan <i>Diversity of governance bodies and employees</i>		SOC-5.C1 SOC-5.C2 SOC-5.C3 SOC-5.C4 SOC-5.A1 SOC-5.A2	174, 189
	405-2, 11.11.5 Rasio gaji pokok dan remunerasi perempuan terhadap laki-laki <i>Ratio of basic salary and remuneration of women to men</i>			174, 190
POJK 51/ POJK.03/2017	6.c.2.a Kesetaraan kesempatan bekerja dan ada atau tidaknya tenaga kerja paksa dan tenaga kerja anak <i>Equality of employment opportunities, forced labor and child labor</i>			174, 190
	6.c.2.c Lingkungan bekerja yang layak dan aman <i>Decent and safe working environment</i>			137-154
	6.c.2.b Persentase remunerasi pegawai tetap di tingkat terendah terhadap upah minimum regional <i>Permanent employee remuneration at the lowest level against the regional minimum wage</i>			183
	Due Diligence Hak Asasi Manusia <i>Human Rights Due Diligence</i>		SOC-1.C1 SOC-1.C3	190
	Mekanisme pengaduan pekerja <i>Workforce grievance mechanism</i>		SOC-8.C1	244
Komunitas Lokal <i>Local Communities</i>				
GRI 413: Komunitas Lokal 2016 <i>Local Communities 2016</i>	413-1, 11.15.2 Operasi dengan keterlibatan masyarakat lokal, penilaian dampak, dan program pembangunan <i>Operations with local community engagement, impact assessments, and development programs</i>	EM-EP-210b.1	SOC-9.C2 SOC-9.C3 SOC-9.A2 SOC-13.C1 SOC-13.C2 SOC-13.A1	102, 114, 208, 209
	413-2, 11.15.3 Operasi yang secara aktual dan yang berpotensi memiliki dampak negatif signifikan terhadap masyarakat lokal <i>Operations with significant actual and potential negative impacts on local communities</i>		SOC-9.C1	46, 208, 209
GRI 411: Hak-hak Masyarakat Adat 2016 <i>Rights of Indigenous Peoples 2016</i>	411-1 Insiden pelanggaran yang melibatkan hak-hak masyarakat adat <i>Incidents of violations involving rights of indigenous peoples</i>			227
	11.17.1, 11.17.3 Lokasi operasi tempat masyarakat adat ada atau terpengaruh oleh kegiatan organisasi <i>List the locations of operations where indigenous peoples are present or affected by activities of the organization</i>		SOC-10.C1	227
	Mekanisme pengaduan masyarakat <i>Community grievance mechanism</i>		SOC-12.C1	225
Penilaian Sosial Pemasok <i>Supplier Social Assessment</i>				
GRI 414: Penilaian Sosial Pemasok 2016 <i>Supplier Social Assessment 2016</i>	414-1, 11.10.9 Pemasok baru yang disaring menggunakan kriteria sosial <i>New suppliers that were screened using social criteria</i>		SOC-2.C1 SOC-2.C2 SOC-2.A1	144

POJK No.51/ POJK.03/2017 & Standar GRI POJK 51/2017 & GRI Standards	Pengungkapan <i>Disclosure</i>	Referensi SASB SASB References	Referensi IPIECA IPIECA References	Halaman <i>Pages</i>
Kebijakan Publik <i>Public Policy</i>				
GRI 415: Kebijakan Publik 2016 <i>Public Policy 2016</i>	415-1, 11.22.1 Kontribusi politik <i>Political contributions</i>			252, 253
Keselamatan dan Kesehatan Pelanggan <i>Customer Health and Safety</i>				
GRI 416: Keselamatan dan Kesehatan Pelanggan 2016 <i>Customer Health</i> <i>and Safety 2016</i>	416-1, 11.3.3 Penilaian dampak kesehatan dan keselamatan dari kategori produk dan layanan <i>Assessment of the health and safety impacts of product and service categories</i>		SHS-5.C1 SHS-5.C2 SHS-5.C3	223
Pemasaran dan Pelabelan <i>Marketing and Labelling</i>				
GRI 417: Pemasaran dan Pelabelan 2016 <i>Marketing and</i> <i>Labelling 2016</i>	417-1 Persyaratan untuk pelabelan dan informasi produk dan jasa <i>Requirements for product and service information and labelling</i>			224
	417-2 Insiden ketidakpatuhan terkait informasi dan pelabelan produk dan layanan <i>Incidents of non-compliance concerning product and service information and labelling</i>			224
	417-3 Insiden ketidakpatuhan terkait komunikasi pemasaran <i>Incidents of non-compliance concerning marketing communications</i>			224
Privasi Pelanggan <i>Customer Privacy</i>				
POJK 51/ POJK.03/2017	6.f.5 Survei kepuasan pelanggan <i>Customer satisfaction survey</i>			225

INDEKS SGX-ST LISTING RULES PRACTICE NOTE 7.6
SGX-ST LISTING RULES PRACTICE NOTE 7.6 INDEX

	Deskripsi Description	Pelaksanaan Implementation	Keterangan/ Halaman/ Remarks/ Page
Rules 711A	Perusahaan harus menerbitkan laporan keberlanjutan, tidak lebih dari 4 bulan setelah periode finansial berakhir; atau jika melakukan verifikasi eksternal, 5 bulan setelah periode finansial berakhir An issuer must issue a sustainability report for its financial year, no later than 4 months after the end of the financial year, or where the issuer has conducted external assurance on the sustainability report, no later than 5 months after the end of the financial year.	√	
	(1) Laporan keberlanjutan harus menjelaskan praktik keberlanjutan dengan mengacu pada komponen utama berikut ini: The sustainability report must describe the sustainability practices with reference to the following primary components: (a) faktor penting terkait lingkungan, sosial, dan tata kelola material environmental, social and governance factors;	√	
	(aa) pengungkapan terkait iklim sesuai dengan rekomendasi Task Force on Climate-related Financial Disclosures climate-related disclosures consistent with the recommendations of the Task Force on Climate-related Financial Disclosures;	√	91-102
	(b) kebijakan, prosedur, dan kinerja policies, practices and performance;	√	91-92
	(c) target targets;	√	97
	(d) kerangka pelaporan keberlanjutan sustainability reporting framework; and	√	41
Rules 711B	(e) Pernyataan dari jajaran manajemen tentang tata kelola praktik keberlanjutan Board statement and associated governance structure for sustainability practices.	√	12-13
	(2) Jika perusahaan mengecualikan salah satu komponen utama, pengecualian tersebut harus diungkapkan dan dijelaskan alasannya. Perusahaan di salah satu industri yang diidentifikasi Practice Note 7.6 tidak boleh mengecualikan komponen utama dalam Rules 711B(1)(aa) If the issuer excludes any primary component, it must disclose such exclusion and describe what it does instead, with reasons for doing so. An issuer in any of the industries identified in Practice Note 7.6 may not exclude the primary component in Rule 711B(1)(aa).	√	
	(3) Laporan keberlanjutan perusahaan harus direviu oleh internal perusahaan. Perusahaan juga dapat melakukan penjaminan eksternal independen atas laporan keberlanjutan The issuer's sustainability reporting process must be subject to internal review. The issuer may additionally commission an independent external assurance on the sustainability report.	√	40, 272-277

PERNYATAAN ASSURANCE INDEPENDEN INDEPENDENT ASSURANCE STATEMENT



Independent Assurance Statement The 2021 Sustainability Report of PT Pertamina (Persero)

Number : 13/000-174/IV/2022/SR-Asia/Indonesia

Assurance Type : Type 1 and Type 2 on the specific topic of the emission and the occupational health and safety

Assurance Level : Moderate

Reporting Standards : GRI Universal Standard 2021 Consolidated, GRI 11 Oil & Gas Sector, SASB Oil & Gas Sector (Exploration and Production EM-EP 2018-10, Refining and Marketing EM-RM 2018-10, Midstream EM-MD 2018-10, Services EM-SV 2018-10), IPIECA Sustainability Reporting Guidance for the Oil and Gas Industry 4th edition 2020, and TCFD Guidance for All Sector.

Reporting Regulation: Sustainable Finance Regulation POJK No.51/2017 (Indonesia), SGXST Listing Rules (Singapore)

Dear stakeholders,

PT Pertamina (Persero), hereinafter called “the Company” or “the Reporting Organization”, has published its **2021 Sustainability Report** (“the Report”) and engaged **Social Responsibility Asia** (“SR Asia”) to assure the Report. The Reporting Organization is a state-owned and Indonesia’s national oil company (NOC) listed as a bond issuer on Singapore Stock Exchange. This is the **Independent Assurance Statement** (“the Statement”) that describes the overall results of assurance work by SR Asia.

Intended User and Purpose

This Statement discloses our assessment results to the stakeholders based on the specific assurance standards and principles, as well as the pertinent reporting regulations. This Statement also contains our findings and recommendations regarding the data, information, and disclosures in the Report against the AA1000AS v3 Assurance Standard. The assurance work was carried out as per the agreed scope, mechanism, and procedures by the Management¹ following the globally accepted standards and best practices with some limitations and assumptions applied. Therefore, We DO NOT recommend any parties to interpret or conclude the Company’s sustainability or its whole performance merely based on this Statement or the Report.

Responsibilities

SR Asia is responsible to evaluate the Report content, generating findings and recommendations, and come up with the Statement. We are also responsible to issue the Management Letter (“the Letter”) only to the highest executive and governance body of the Company. On the other hand, the Management has its sole responsibility for the presentation of data, information, and disclosures in the Report content. As indicated in the Non-Disclosure Agreement and the Assurance Engagement Agreement, SR Asia is only responsible to deliver assurance work, NOT an audit, to the Company. Except for the agreed scope of assurance work, have NO responsibilities or accountabilities for any claims to any other individuals or organizations. Therefore, any parties who depend on the Report and this Statement shall bear and manage their own risks.

Independence, Impartiality, and Competency

In all assurance works, SR Asia always confirms NO relationships between the assurance experts and the clients that can influence their independence and impartiality in carrying out the assessment and coming up with the

¹ “Management” refers to the management of the reporting organization



Statements. SR Asia experts are mandated to follow particular assurance protocols and professional ethical code of conduct to ensure their objectivity and integrity. We also carried out a pre-engagement assessment before the assurance work was taken to verify the risks of engagement as well as the independence and impartiality of experts. The Assurance Team members are familiar with ISO 26000 and AA1000 AccountAbility standards and principles, and also have experience in sustainability and integrated report drafting and assessment based on various reporting regulations, standards, and principles, such as POJK 51 regulation as well as GRI, SUSBA, and SASB standards.

Type and Level of Assurance Service

1. **Type 1 assurance** on the Report content and specifically **Type 2 assurance** was applied on **the emission and the occupational health and safety** topic based on the AA1000 Assurance Standard v3 and AA1000APS (2018) AccountAbility Principles.
2. A **moderate level of assurance** procedure on the Report content and evidence, where **the risks of information and conclusions of the Report being error is reduced, not to very low, but not zero.**

Scope and Limitation of Assurance Service

1. SR Asia did not include financial data, information, and figures in the Report content in the scope of assurance work. It is assumed that the Company, or independent parties, or other parties associated with the Company, have verified and/or audited any data and information related to financial statements
2. Data and information in the Report content for the period of **January 1st to December 31st, 2021.**
3. Topics in the Report content that have been identified as material by the Company: **the emission; the energy use and efficiency; the waste and effluent management; the water use; the biodiversity; the occupational health and safety; the diversity and equal opportunity; the management of social impacts on communities; the new and renewable energy development and energy transition; the anti-corruption; and the digital security.**
4. Assessment of data, information, and disclosures including the mechanism, process, and control system under Type 2 assurance mechanism and procedures on **the emission and the occupational health and safety.**
5. Adherence to the following reporting principles, standards, and regulations:
 - a) Regulation of Indonesia Financial Service Authority No.51/POJK.03/2017 on the Application of Sustainable Finance to Financial Services Institution, Issuer, and Publicly Listed Companies ("POJK 51");
 - b) SGXST Listing Rules, Practice Note 7.6 – Sustainability Reporting Guideline ("SGXT");
 - c) Consolidated set of GRI Sustainability Reporting Standards 2021 (GRI Universal Standards);
 - d) GRI 11 Oil and Gas Sector ("GRI 11");
 - e) Sustainability Accounting Standard for Oil & Gas Sector (Exploration & Production EM-EP 2018-19, Refining and Marketing EM-RM 2018-10, Midstream EM-MD 2018-19, Services EM-SV 2018-19) issued by the Sustainability Accounting Standard Board ("SASB");
 - f) IPIECA Sustainability Reporting Guidance for the Oil and Gas Industry 4th edition 2020 ("IPIECA"); and
 - g) Task Force on Climate-Related Financial Disclosures) Guidance for All Sectors ("TCFD").
6. Evaluation of publicly disclosed information, system, and process of the Company to ensure adherence of the Report content to the reporting principles.

Exclusion

1. Assessment against the regulations, indicators, standards, guidelines, and principles other than those indicated in the Statement.
2. Expression of opinion, belief, expectation, advertisement, and future planning of the Company as indicated in the Report content.



3. Financial performance data and information as presented in the Company's financial statements and documents, other than those mentioned in the Report.
4. Topics, data, and information outside the reporting period; or In the public domain not covered in the reporting period; or other than those mentioned under the defining materiality section and discussion on defining Report content.
5. Stakeholders' engagement that might be taken by the Company in developing the Report.

Methodology

1. SR Asia assigned several experts to become the Assurance Team members in Indonesia.
2. The Assurance Team conducted the pre-engagement evaluation to identify the risks of engagement and potential factors that could negatively influence the independence and impartiality of the experts.
3. In a kick-off meeting, the Assurance Team presented to the Company about the assurance methods and approaches, the scope of analysis, the time plan, and other essential aspects of the assurance work plan.
4. The Assurance Team conducted a preliminary analysis of the Report draft submitted by the Company.
5. Through online meetings, the Assurance Team shared the results of the initial analysis with the Management and verified the disclosures in the Report content against the regulations, standards, principles, and indicators of AA1000AS v3, AA1000AP (2018), GRI Universal Standards, GRI 11, POJK 51, SGXT, SASB, IPIECA, and TCFD.
6. The Assurance Team verified evidence documents and traced back the data, information, and disclosures in the Report.
7. The Company incorporated recommendations in the draft Report and released the final Report content.
8. The Assurance Team prepared the Statement and sent it to SR Asia International for getting review and approval.
9. The Assurance Team submitted the Statement to the Company and prepared a Management Letter presenting all aspects seen, recorded, and observed during the assurance work to the Management of the Company for further improvement of sustainability processes.

Adherence to AA1000AP (2018) and GRI Standards

Inclusivity – In overall, the presentation of the stakeholder groups in the Report content is inclusive. The Company is also committed to being accountable for the impacts of its decisions and activities on the stakeholders and the environment. As indicated in the Report, the Company has implemented the stakeholder engagement practices with various approaches and methods, managed by different functions and units.

Materiality – At a certain level, the identification and presentation of material topics in the Report are adequate. The material topics in the Report can explain its sustainability context as an oil and gas company. In the future, the Company needs to perform material testing documented as evidence in the next sustainability report.

Responsiveness – The Company has sufficiently responded to the stakeholders' concerns and expectations. As specified in the Report, the Company has a whistleblowing system in place to respond to grievances or receive complaints from any individuals regarding unethical conduct. Furthermore, the Company has measured several indexes, such as the CSR Index and User Satisfaction Index. Nevertheless, no evidence was found that the Company already considered the relationship between maturity, impact, and prioritization of a topic and the appropriateness of the responses.

Impact – In general, the Report adequately presents the economic, environmental, and social impacts of business decisions and operations of the Company. The impacts are presented in both qualitative data and narrative information. In managing the impacts, the Company has allocated sufficient resources and competencies.

Statement of Use: "Reference to the GRI Standards" – The Assurance Team has assessed the Report content including the statement of use against the GRI requirements for reporting to the GRI Standards. We concluded that

SR Asia Independent Assurance Statement, version 2022, page 3 of 4



the Report has met the three requirements; publish a GRI Content Index; provide a statement of use; and notify GRI.

GRI Standards Principles – At a certain level, the Report has indicated its adherence to the GRI Reporting Principles (Accuracy, Balance, Clarity, Comparability, Completeness, Sustainability Context, and Verifiability). Overall, the Company also sufficiently presented evidence documents during the assurance work.

Type 2 Assurance – Under Type 2 Assurance procedures, SR Asia has reviewed the topics of **the Emission** and **the Occupational Health and Safety**. The Company already has policies, manuals, procedures, as well as control and management systems already in place to manage those topics. The Company has its own health, safety, security, and environmental management system known as “SUPREME” following the international standards, pertinent regulations, and best practices. In managing carbon emissions, the Company has already set the baseline and implemented several carbon emission reduction initiatives. The Company also has started developing the climate change and transition strategy covering the period up to 2060, in line with the government’s road map. However, no external party yet has been engaged to monitor, evaluate, and validate the initiatives.

Recommendation

1. To carry out a materiality test for identifying material topics with clear and justified criteria and thresholds.
2. To strengthen and disclose climate change and transition strategy including roadmap, indicators, and targets in the future sustainability report.
3. To keep updating SUPREME against global standards and best practices, and ensure its consistency of implementation.
4. To enhance the adherence of disclosures against reporting standards in the future sustainability report.

The assurance provider,

Jakarta, 28th of April 2022



Birendra Ratuff
International Director
Social Responsibility Asia



Dr. Semerdanta Pusaka
Country Director for Indonesia
Social Responsibility Asia

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Independent Assurance Statement
Report No. 0522/BD/0018/JK

To the Management of PT Pertamina (Persero),

We were engaged by PT Pertamina (Persero) ('Pertamina') to provide assurance in respect to its Sustainability Report 2021 ('the Report'). The assurance engagement was conducted by a multidisciplinary team with relevant experience in sustainability reporting.

Independence

We carried out all assurance undertakings with independence and autonomy having not been involved in the preparation of any key part of the Report, nor did we provide any services to Pertamina during 2021 that could conflict with the independence of the assurance engagement.

Assurance Standards

Our work was carried out in accordance with ISAE3000 'Assurance Engagements other than Audits or Reviews of Historical Financial Information,' issued by the International Auditing and Assurance Standards Board. This standard requires that we comply with ethical requirements and plan and perform the assurance engagement to obtain limited assurance.

Level of Assurance

By designing our evidence-gathering procedures to obtain a limited level of assurance based on ISAE3000, readers of the report can be confident that all risks or errors have been reduced to a very low level, although not necessarily to zero.

Scope of Assurance

The scope of our work is restricted to following selected information:

- Emissions management
- Occupational health and safety
- Diversity and equal opportunity

Responsibility

Pertamina is responsible for the preparation of the Report and all information and claims therein, which include established sustainability management targets, performance management, data collection, etc. In performing this engagement, meanwhile, our responsibility to the management of Pertamina is solely for the purpose of verifying the statements it has made in relation to its sustainability performance, specifically as described in the selected information, and expressing our opinion on the conclusions reached.

Methodology

In order to assess the veracity of certain assertions and specified data sets included within the report, as well as the systems and processes used to manage and report them, the following methods were employed during the engagement process:

- Review of the report, internal policies, documentation, management and information systems



- Interview of relevant staff involved in sustainability-related management and reporting
- Following data trails to the initial aggregated source, to check samples of data to a greater depth.

Limitations

Our scope of work was limited to a review of the accuracy and reliability of selected sustainability performance-related information. It was also not designed to detect all weaknesses in the internal controls over the preparation and presentation of the Report, as the engagement has not been performed continuously throughout the period and the procedures performed were undertaken on a test basis.

Conclusions

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the Report has not been properly prepared and presented, in all material respects.

All key assurance findings are included herein, while detailed observations and follow-up recommendations have been submitted to Pertamina management in a separate report.

Jakarta, May 18, 2022

A handwritten signature in black ink, appearing to read 'James Kallman'.

James Kallman
Chief Executive Officer

Moores Rowland is an international organization specializing in audit, accounting, tax, legal and advisory services. Moores Rowland is a member of Praxity AISBL, the world's largest Alliance of independent and unaffiliated audit and consultancy companies.

With more than 33,400 professionals operating in 97 countries across the globe, each sharing the same values and sense of responsibility, Praxity is served by Moores Rowland in Indonesia, one of the leading sustainability assurance providers.

LEMBAR UMPAN BALIK [2-26] FEEDBACK FORM



Laporan Keberlanjutan 2021 PT Pertamina (Persero) menggambarkan kinerja keberlanjutan Perseroan. Kami mengharapkan masukan dari Bapak/Ibu/Saudara sekalian atas Laporan Keberlanjutan ini melalui e-mail atau formulir ini.

PT Pertamina (Persero)'s 2021 Sustainability Report describes the Company's sustainability performance. We welcome your input on this Sustainability Report via e-mail or this form.

Terima kasih atas masukan anda. Mohon lembar umpan balik dapat dikirim melalui surat elektronik kepada kontak yang tertera di Laporan ini, atau langsung ke:

Thank you for your input. Please send the feedback sheet by e-mail to the contact listed on this Report, or directly to:

Investor Relations

PT Pertamina (Persero)
Jl. Medan Merdeka Timur No. 11-13.
Jakarta Pusat 10110
PERTAMINA Contact Center 135
Tel: (021) 3815111, 3816111
E-mail: pcc135@pertamina.com
Website: www.pertamina.com

1 Laporan ini mudah dimengerti:
This report is easy to understand:
 Tidak Setuju *Disagree* Netral *Neutral* Setuju *Agree*

2 Laporan ini sudah menggambarkan informasi aspek material yang sesuai dengan kegiatan usaha Perusahaan:
This report has described information on material aspects in accordance with the Company's business activities:
 Tidak Setuju *Disagree* Netral *Neutral* Setuju *Agree*

3 Mohon berikan penilaian untuk topik material yang paling penting menurut anda (nilai 1 = paling tidak penting s/d 5= paling penting)
Please rate the most important material topics in your opinion (score 1 = least important to 5 = most important):

- Emisi | *Emission* []
- Energi | *Energy* []
- Air dan efluen | *Water and effluents* []
- Limbah | *Waste* []
- Keanekaragaman hayati | *Biodiversity* []
- Kesehatan dan Keselamatan Kerja
Occupational Health and Safety []
- Keragaman dan kesetaraan kesempatan
Diversity and equal opportunity []
- Antikorupsi | *Anti-corruption* []

4 Saran atau informasi lain terkait Laporan:
Any suggestions or other information regarding the Report:
.....
.....

Profil Anda | Your Profile

Nama (bila berkenan) | *Name (if wish to disclose):*
.....

Institusi/Perusahaan | *Institution/Company:*
.....

E-mail:

Golongan Pemangku Kepentingan | Stakeholders Group

- Pemegang Saham | *Shareholders*
- Pelanggan | *Customers*
- Pekerja | *Employee*
- Investor
- Regulator, Legislatif, dan Lembaga Pengawas
Regulator, Legislative, and Supervisory Bodies Communities
- Masyarakat di Sekitar Wilayah Usaha Perusahaan
Communities Around the Company's Business Area
- Kontraktor | *Contractors*
- Lembaga Swadaya Masyarakat (LSM)
Non-governmental Organizations (NGOs)
- Lembaga Penelitian dan Perguruan Tinggi
Research Institute and Universities



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