DEKARBONISASI

Emisi Gas Rumah Kaca

Pengurangan emisi gas rumah kaca (GRK) telah menjadi fokus utama masyarakat dunia karena GRK menjadi salah satu penyebab perubahan iklim. Pemerintah Republik Indonesia sendiri memiliki komitmen untuk mencapai *Net Zero Emission* pada 2060. Guna mendukung target tersebut, berbagai upaya telah ANTAM lakukan, di antaranya melalui kebijakan penurunan emisi GRK dan konvensional, identifikasi sumber emisi, beban emisi, data aktivitas faktor emisi, serta berbagai inisiatif di setiap unit bisnis. [OJK F.12]

Bersama MIND ID, langkah nyata ANTAM dalam upaya pengurangan emisi gas rumah kaca (GRK) juga dilakukan melalui penyusunan *roadmap* dekarbonisasi dengan menggunakan *baseline* 2019 oleh Tenaga Ahli dari Pusat Kebijakan Keenergian LPPM ITB. Perusahaan mulai menerapkan berbagai upaya dekarbonisasi di masing-masing unit bisnis. Dalam pelaksanaannya, ANTAM melakukan laporan serapan karbon tiap semester di area reklamasi dan revegetasi, melakukan pendataan seluruh kajian yang berkaitan dengan dekarbonisasi baik di pabrik maupun area tambang, hingga melanjutkan capaian PROPER yang berkaitan dengan dekarbonisasi pada setiap aspek. Selain itu, ANTAM berkomitmen menjalankan penggunaan energi baru terbarukan di beberapa elemen operasional, serta melakukan upaya dekarbonisasi dengan menggunakan bahan bakar ramah lingkungan dalam menjalankan kegiatan operasi dan produksi.

Terkait dengan penyusunan *roadmap* dekarbonisasi tersebut dan proses keanggotaan ANTAM di International Council on Mining and Metal (ICMM), Perusahaan menggunakan pendekatan dan metodologi yang lebih komprehensif untuk tahun 2022, termasuk penambahan titik pantau sesuai dengan perhitungan dan pendekatan GHG Inventory menggunakan standar internasional Intergovermental Panel on Climate Change (IPCC) Guidelines yang dikeluarkan oleh United Nations Environment Programme (UNEP) 2006, GHG Protocol for Corporate Accounting (WBCSD/WRI), ESDM dan ISO 14064. Dengan pertimbangan kompatibilitas, data tahun 2021 dan 2020 saat ini masih dalam perhitungan ulang dengan menggunakan metode dan pendekatan yang sama, sehingga belum dapat ditampilkan dalam laporan tahun ini. ANTAM juga melakukan penghitungan Cakupan 3 yang dimulai dari perjalanan bisnis para direksi dan komisaris dimana hasil emisi yang dihasilkan dari perjalanan bisnis BOC dan BOD sebesar 43.703,8 $kgCO_2e$.

DECARBONIZATION

GHG Emissions

Reducing greenhouse gas (GHG) emissions has become a major focus of the global community, as GHGs are one of the causes of climate change. The Government of the Republic of Indonesia itself has committed to achieving Net Zero Emissions by 2060. To support this target, ANTAM has made various efforts, including through policies to reduce GHG and conventional emissions, identifying emission sources, emission loads, activity data, emission factors, and various initiatives at each business unit. [OJK F.12]

Together with MIND ID, ANTAM has taken tangible steps towards reducing greenhouse gas emissions (GHG) by developing a decarbonization roadmap based on the 2019 baseline, created by energy policy experts from the ITB Research Center for Energy Policy. The company has started implementing various decarbonization efforts in each business unit. In practice, ANTAM reports carbon absorption every semester in reclamation and revegetation areas, collects all decarbonization-related studies in both plants and mining areas, and continues to achieve PROPER ratings related to decarbonization in every aspect. Additionally, ANTAM is committed to using renewable energy sources in some operational elements and using environmentally friendly fuels to conduct its operational and production activities, while also continuing decarbonization efforts.

Regarding the preparation of the decarbonization roadmap and ANTAM's membership process in the International Council on Mining and Metals (ICMM), the Company employed a more comprehensive approach and methodology for 2022. This includes adding monitoring points in accordance with the GHG Inventory calculation and the Intergovernmental Panel on Climate Change (IPCC) Guidelines, which are internationally recognized standards issued by the United Nations Environment Programme (UNEP) 2006, GHG Protocol for Corporate Accounting (WBCSD/WRI), ESDM, and ISO 14064. Due to compatibility considerations, the data for 2021 and 2020 are currently being recalculated using the same method and approach, and therefore cannot be presented in this year's report. ANTAM also start to the process to conduct calculation of Scope 3 emissions based on the directors' and commissioners' business trips, with the resulting emissions from BOC and BOD business trips totaling to 43,703.8 $kgCO_2e$. ANTAM will conduct GHG inventory from upstream

Ke depan untuk emisi Cakupan 3, ANTAM akan melakukan GHG inventory dari kegiatan transportasi upstream dan transportasi pengiriman produk kami ke pelanggan.

transportation activities and transportation of our product delivery to customers in the future for Scope 3 emissions.

1,61 juta | million
tonCO_2eq
Total Emisi ANTAM pada 2022 dari Cakupan 1 dan Cakupan 2.
Total Emissions ANTAM in 2022 from Scope 1 and Scope 2

Total Emisi Berdasarkan Unit Bisnis & Cakupan Sumber Energi yang Digunakan
[OJK F.11][GRI 305-1][GRI 305-2]
Total Emission Based on Business Unit & Coverage of Energy Sources
[OJK F.11][GRI 305-1][GRI 305-2]

UNIT BISNIS BUSINESS UNIT	Emisi Emission (Ton CO_2 eq)	2022
UBP Nikel Kolaka Kolaka Nickel Mining Business Unit	Cakupan 1 Scope 1	1.504.764,18
	Cakupan 2 Scope 2	-
	Total Emisi Total Emissions	1.504.764,18
UBP Nikel Maluku Utara North Maluku Nickel Mining Business Unit	Cakupan 1 Scope 1	20.085,68
	Cakupan 2 Scope 2	383,39
	Total Emisi Total Emissions	20.469,07
UBP Emas Gold Mining Business Unit	Cakupan 1 Scope 1	2.716,89
	Cakupan 2 Scope 2	61.269,07
	Total Emisi Total Emissions	63.985,96
UBPP Logam Mulia Precious Metals Processing and Refinery Business Unit	Cakupan 1 Scope 1	318,00
	Cakupan 2 Scope 2	- 2.734,00
	Total Emisi Total Emissions	3.052,00
UBP Bauksit Kalimantan Barat West Kalimantan Bauxite Mining Business Unit	Cakupan 1 Scope 1	13.686,04
	Cakupan 2 Scope 2	-
	Total Emisi Total Emissions	13.686,04
UBP Nikel Konawe Utara* North Konawe Nickel Mining Business Unit	Cakupan 1 Scope 1	5.439,00
	Cakupan 2 Scope 2	-
	Total Emisi Total Emissions	5.439,00

Total Emisi Berdasarkan Unit Bisnis & Cakupan Sumber Energi yang Digunakan
[OJK F.11][GRI 305-1][GRI 305-2]

Total Emission Based on Business Unit & Coverage of Energy Sources
[OJK F.11][GRI 305-1][GRI 305-2]

UNIT BISNIS BUSINESS UNIT	Emisi Emission (Ton CO_2 eq)	2022
TOTAL	Cakupan 1 Scope 1	1.547.009,79
	Cakupan 2 Scope 2	64.386,46
	Total Emisi Total Emissions	1.611.396,25

Catatan | Notes:
- Emisi GRK dihitung berdasarkan metode perhitungan yang dikembangkan ANTAM berdasarkan studi yang dilakukan di masing-masing unit. Perhitungan emisi GRK menggunakan metode Intergovermental Panel on Climate Change (IPCC) Guidelines yang dikeluarkan oleh United Nations Environment Programme (UNEP) 2006 Fifth Assessment Report (AR5), GHG Protocol for Corporate Accounting (WBCSD/WRI), ESDM dan ISO 14064.
- Cakupan-1: emisi bruto GRK langsung dari operasional yang dimiliki atau dikendalikan oleh organisasi (termasuk penambangan, pemakaian energi, pengolahan limbah, dan proses kimia) dari Unit Bisnis ANTAM yang termasuk dalam batasan laporan ini.
- Cakupan-2: emisi GRK tidak langsung dari pemakaian energi yang dibeli dari luar (PLN) Unit Bisnis ANTAM yang termasuk dalam batasan laporan ini.
- Gas Rumah Kaca yang termasuk dalam perhitungan diatas adalah CO_2, CH_4, N_2O.
- Tidak termasuk perhitungan biogenic emission.
- Tidak termasuk fugitive emission.
- Perhitungan emisi menggunakan pendekatan operational control.
- Penentuan base year masih dalam proses seiiring dengan pengembangan roadmap dekarbonisasi ANTAM.
- Perhitungan emisi menggunakan pendekatan operational control.
- Belum mencakup data dari Kantor Pusat ANTAM dan Unit Geomin.
- Mencakup data dari UBP Bauksit Kalimantan Barat, UBP Emas, UBP Nikel Kolaka, UBP Nikel Konawe Utara, UBP Nikel Maluku Utara, dan UBPP Logam Mulia
- GHG emissions are calculated using an ANTAM-developed method based on studies conducted in each unit. The Intergovernmental Panel on Climate Change (IPCC) Guidelines issued by the United Nations Environment Programme (UNEP) 2006 Fifth Assessment Report (AR5), GHG Protocol for Corporate Accounting (WBCSD/WRI), ESDM, and ISO 14064 are used to calculate GHG emissions.
- Scope-1: gross direct GHG emissions from operations owned or controlled by the organization (including mining, energy use, waste treatment, and chemical processes) within the boundaries of this report.
- Scope-2: indirect GHG emissions from the use of energy purchased outside (PLN) of the ANTAM Business Units included in this report.
- CO_2, CH_4, and N_2O are the greenhouse gases included in the above calculations.
- The calculation of biogenic emission is not included.
- This figure does not include fugitive emissions. An operational control approach is used to calculate emissions.
- The base year is still being determined, as is the development of ANTAM's decarbonization roadmap.
- The operational control approach is used to calculate emissions.
- Data from the ANTAM Head Office and Geomin Unit are not included.
- Data from the West Kalimantan Bauxite Mining Business Unit, Gold Mining Business Unit, Kolaka Nickel Mining Business Unit, North Konawe Nickel Mining Business Unit, North Maluku Nickel Mining Business Unit, and Precious Metals Processing and Refinery Business Unit are included.

Intensitas Emisi GRK ANTAM Berdasarkan Unit Bisnis [OJK F.11][GRI 305-4]

ANTAM's GHG Emission Intensity Based on Business Unit [OJK F.11][GRI 305-4]

UNIT BISNIS BUSINESS UNIT		Satuan Unit	2022
UBP Nikel Kolaka **Kolaka Nickel Mining Business Unit**	Total Emisi Total Emission	$TonCO_2eq$	1.504.764,18
	Total Produksi Total Production	TNi	24.334
	Intensitas Emisi **Emissions Intensity**	**$TonCO_2eq$/TNi**	**61,84**
UBP Nikel Maluku Utara **North Maluku Nickel Mining Business Unit**	Total Emisi Total Emission	$TonCO_2eq$	20.469,07
	Total Produksi Total Production	WMT	3.014.608
	Intensitas Emisi **Emissions Intensity**	**$TonCO_2eq$/WMT**	**0,00679**
UBP Emas **Gold Mining Business Unit**	Total Emisi Total Emission	$TonCO_2eq$	63.985,96
	Total Produksi Total Production	WMT	397.793
	Intensitas Emisi **Emissions Intensity**	**$TonCO_2eq$/WMT**	**0,16**
UBPP Logam Mulia **Precious Metals Processing and Refinery Business Unit**	Total Emisi Total Emission	$TonCO_2eq$	3.052,00
	Total Produksi Total Production	Kg	142.487
	Intensitas Emisi Emissions Intensity	$TonCO_2eq$/Kg	**0,02142**
UBP Bauksit Kalimantan Barat **West Kalimantan Bauxite Mining Business Unit**	Total Emisi Total Emission	$TonCO_2eq$	13.686,04
	Total Produksi Total Production	WMT	1.486.002
	Intensitas Emisi Emissions Intensity	$TonCO_2eq$/WMT	**0,00921**
UBP Nikel Konawe Utara **North Konawe Nickel Mining Business Unit**	Total Emisi Total Emission	$TonCO_2eq$	5.439,00
	Total Produksi Total Production	WMT	1.090.006
	Intensitas Emisi Emissions Intensity	$TonCO_2eq$/WMT	**0,00499**
TOTAL	Total Emisi Total Emission	$TonCO_2eq$	1.611.396,25
	Pendapatan Revenue	Rp juta	45.930.356
	Intensitas Emisi Emissions Intensity	**$TonCO_2eq$/Rp juta**	0,04

Intensitas Emisi GRK ANTAM Berdasarkan Unit Bisnis [OJK F.11][GRI 305-4]
ANTAM's GHG Emission Intensity Based on Business Unit [OJK F.11][GRI 305-4]

UNIT BISNIS BUSINESS UNIT	Satuan Unit	2022

Catatan | Notes:
- Emisi GRK dihitung berdasarkan metode perhitungan yang dikembangkan ANTAM berdasarkan studi yang dilakukan di masing-masing unit. Perhitungan emisi GRK menggunakan metode Intergovermental Panel on Climate Change (IPCC) Guidelines yang dikeluarkan oleh United Nations Environment Programme (UNEP) 2006 Fifth Assessment Report (AR5), GHG Protocol for Corporate Accounting (WBCSD/WRI), ESDM dan ISO 14064.
- Intensitas emisi dihitung menggunakan total emisi Cakupan 1 dan Cakupan 2.
- Tidak termasuk fugitive emission.
- Cakupan-1: emisi bruto GRK langsung dari operasional yang dimiliki atau dikendalikan oleh organisasi (termasuk penambangan, pemakaian energi, pengolahan limbah, dan proses kimia) dari Unit Bisnis ANTAM yang termasuk dalam batasan laporan ini.
- Cakupan-2: emisi GRK tidak langsung dari pemakaian energi yang dibeli dari luar (PLN) Unit Bisnis ANTAM yang termasuk dalam batasan laporan ini.
- Gas Rumah Kaca yang termasuk dalam perhitungan diatas adalah CO_2, CH_4, N_2O.
- Tidak termasuk perhitungan biogenic emission.
- Penentuan base year masih dalam proses seiiring dengan pengembangan roadmap dekarbonisasi ANTAM.
- Perhitungan emisi menggunakan pendekatan *operational control*.
- Belum mencakup data dari Kantor Pusat ANTAM dan Unit Geomin.
- Mencakup data dari UBP Bauksit Kalimantan Barat, UBP Emas, UBP Nikel Kolaka, UBP Nikel Konawe Utara, UBP Nikel Maluku Utara, dan UBPP Logam Mulia

- GHG emissions are calculated using a method developed by ANTAM based on studies conducted in each unit. GHG emissions are calculated using the Intergovernmental Panel on Climate Change (IPCC) Guidelines method from the United Nations Environment Program (UNEP) 2006 Fifth Assessment Report (AR5), the GHG Protocol for Corporate Accounting (WBCSD/WRI), ESDM, and ISO 14064.
- The intensity of emissions is calculated using total Scope 1 and Scope 2 emissions.
- Excludes fugitive emissions.
- Scope-1: gross direct GHG emissions from operations owned or controlled by the organization (including mining, energy use, waste treatment, and chemical processes) of ANTAM Business Units that are included within the boundaries of this report.
- Scope-2: indirect GHG emissions from the use of energy purchased from outside (PLN) of ANTAM Business Units included in the boundary of this report.
- Greenhouse gases included in the above calculations are CO_2, CH_4, and N_2O.
- Biogenic emission calculation is not included.
- The base year is still being determined, as is the development of ANTAM's decarbonization roadmap.
- Emission calculation using operational control approach.
- Does not include data from ANTAM Head Office and Geomin Unit.
- Includes data from West Kalimantan Bauxite Mining Business Unit, Gold Mining Business Unit, Kolaka Nickel Mining Business Unit, North Konawe Nickel Mining Business Unit, North Maluku Nickel Mining Business Unit, and Precious Metals Processing and Refinery Business Unit.

Seluruh upaya dan kegiatan pengendalian emisi ANTAM ini dijalankan sesuai dengan aturan pemerintah, yaitu Peraturan Presiden Nomor 61/2011 tentang Rencana Aksi Penurunan Gas Rumah Kaca (GRK) dan Peraturan Presiden Nomor 71/2011 tentang Pencatatan Inventarisasi GRK Nasional.

Pada tahun 2020, ANTAM telah melaksanakan beberapa inisiatif dan inovasi, seperti perubahan metode penambangan bawah tanah dan instalasi sistem pengendalian emisi di pabrik feronikel. Inisiatif dan inovasi yang Perusahaan jalankan tersebut terus dilanjutkan sampai saat ini.

Hingga tahun 2022, upaya lain yang dilakukan ANTAM guna menurunkan emisi GRK di antaranya melalui pemakaian bahan bakar B30 untuk kendaraan operasional tambang, penggunaan panel surya untuk penerangan jalan tambang di beberapa unit bisnis, serta sedang melakukan upaya penggantian bahan bakar dalam kegiatan pengolahan bijih nikel dari Marine Fuel Oil menjadi Dual Fuel yang akan mampu mengurangi emisi GRK pada proses produksi feronikel. [OJK F.5]

ANTAM's emission control efforts and activities adhere to government regulations, specifically Presidential Regulation No. 61/2011 on Greenhouse Gas (GHG) Reduction Action Plan and Presidential Regulation No. 71/2011 on National GHG Inventory Listing.

Back in 2020, ANTAM implemented several initiatives and innovations, such as changing the underground mining method and installing emission control systems at the ferronickel plant. These initiatives and innovations continue to be implemented by the Company until today.

ANTAM's other efforts to reduce GHG emissions include the use of B30 fuel in mining operational vehicles, the use of solar panels for mining areas road lighting in several business units, and efforts to replace the fuel in nickel ore processing activities from Marine Fuel Oil to Dual Fuel, which will reduce GHG emissions in the ferronickel production process. [FSA F.5]

ANTAM Menjadi Bagian dari Indeks IDX LQ45 Low Carbon Leaders di Bursa Efek Indonesia

ANTAM Becomes Part of the IDX LQ45 Low Carbon Leaders Index on the Indonesia Stock Exchange

ANTAM secara resmi menjadi bagian dari indeks IDX LQ45 Low Carbon Leaders di Bursa Efek Indonesia (BEI) untuk periode perdagangan 11 November 2022 sampai dengan 31 Januari 2023. Indeks IDX LQ45 Low Carbon Leaders bertujuan untuk mengurangi eksposur intensitas emisi karbon atas portofolio sebesar minimal 50%, dibandingkan dengan Indeks LQ45 sebagai parent index, setelah melakukan penyesuaian bobot per sektor sesuai dengan carbon intensity dan mengecualikan perusahaan di industri batu bara sesuai dengan klasifikasi IDX Industrial Classification (IDX-IC).

Masuknya saham ANTAM pada Indeks IDX LQ45 Low Carbon Leaders di IDX mencerminkan apresiasi positif para pemegang saham terhadap kinerja saham dan upaya Perusahaan dalam menjalankan kegiatan operasional yang berkelanjutan. Ke depan, ANTAM terus berupaya untuk melakukan pencarian sumber energi baru terbarukan serta energi alternatif yang lebih ramah lingkungan dalam menjalankan kegiatan operasional Perusahaan.

ANTAM officially became part of the IDX LQ45 Low Carbon Leaders index on the Indonesia Stock Exchange (IDX) from November 11, 2022, to January 31, 2023. The IDX LQ45 Low Carbon Leaders Index aims to reduce exposure to the carbon emission intensity of the portfolio by at least 50%, compared to the LQ45 Index as the parent index, after adjusting the weight per sector according to carbon intensity and excluding companies in the coal industry by the IDX Industrial Classification (IDX-IC).

The entry of ANTAM's stock in the IDX LQ45 Low Carbon Leaders Index reflects the positive appreciation of shareholders for the Company's performance and sustainable operation efforts. Moving forward, ANTAM will continue to explore new sources of renewable energy and alternative, eco-friendly energy options to support our business operations.

Gunakan Bahan Bakar Ramah Lingkungan, ANTAM Dukung Inisiasi Dekarbonisasi [OJK F.5]

Using Environmentally Friendly Fuel, ANTAM Supports Decarbonization Initiative [OJK F.5]

ANTAM terus mendukung upaya dekarbonisasi dengan menggunakan bahan bakar ramah lingkungan dalam kegiatan operasi dan produksi. Inisiasi ini sejalan dengan target Pemerintah Indonesia dalam upaya penanggulangan perubahan iklim, yaitu Net Zero Emission 2060. Untuk mewujudkannya, berbagai inisiatif telah dilakukan Perusahaan.

Sejak tahun 2019, ANTAM telah melakukan inisiasi penggunaan bahan bakar B20. Sementara pada tahun 2022, ANTAM mulai menggunakan bahan bakar B30 untuk kendaraan operasional tambang. Perusahaan juga telah menyusun roadmap dekarbonisasi, sejalan dengan komitmen ANTAM sebagai anggota MIND ID untuk menjalankan operasional yang berkelanjutan.

Berbagai upaya lain termasuk pemanfaatan bahan bakar ramah lingkungan telah dilakukan ANTAM untuk pengurangan emisi. Perusahaan memiliki rencana untuk melakukan subtitusi *industrial diesel oil* (IDO) dengan B30 untuk coal firing system (CFS), *ladle preheating, dan hot air generator* (HAG) pada shot making di UBP Nikel Kolaka. Saat ini, penggunaan *co-firing* di PLTU PT ICA telah diterapkan dengan menggunakan *wood pellet* dari masyarakat sekitar pabrik/tambang. Sedangkan untuk PLTU UBP Nikel Kolaka masih dalam tahap uji lapangan.

Selain itu, Perusahaan juga memanfaatkan tenaga surya dengan menggunakan panel surya untuk penerangan jalan tambang di beberapa unit bisnis, dan penyediaan fasilitas penerangan jalan umum dengan teknologi panel surya di sekitar wilayah tambang ANTAM Unit Bisnis Pertambangan Emas, Jawa Barat. Upaya lainnya di PT ANTAM Tbk UBP Bauksit Kalimantan Barat mengganti penggunaan listrik untuk supporting operasional tambang sebelumnya dari PLTD menjadi PLN hydro.

ANTAM continues to support decarbonization efforts by using environmentally friendly fuels in operations and production activities. This initiative aligns with the Government of Indonesia's target in climate change mitigation efforts, namely Net Zero Emission 2060. To realize this, various industries have been carried out by the Company.

Since 2019, ANTAM has initiated the use of B20 fuel. While in 2022, ANTAM began using B30 fuel for mining operational vehicles. The Company has also developed a decarbonization roadmap, in line with ANTAM's commitment as a member of MIND ID to run sustainable operations.

ANTAM has made various other efforts, including using environmentally friendly fuels to reduce emissions. The company has the plan to substitute industrial diesel oil (IDO) with B30 for the coal firing system (CFS), ladle preheating, and hot air generator (HAG) in shot-making at Kolaka Nickel Mining Business Unit. Currently, co-firing in the PT ICA Coal Fired Power Plant has been implemented using wood pellets from the community around the factory/mines. Meanwhile, the Kolaka Nickel Mining Business Unit Coal Fired Power Plant is still in the field test stage.

In addition, the Company also utilizes solar power by using solar panels for mine road lighting in several business units and providing public road lighting facilities with solar panel technology around the ANTAM Gold Mining Business Unit mine area, West Java. Another effort at PT ANTAM Tbk West Kalimantan Bauxite Mining Business Unit is replacing electricity to support the previous mine operations from PLTD to PLN hydro.

ANTAM Tandatangani Framework Agreement Proyek *EV Battery* Terintegrasi

ANTAM Signs Framework Agreement for Integrated EV Battery Project

Pada bulan April 2022, ANTAM bersama dengan PT Ningbo Contemporary Brunp Lygend Co, Ltd (CBL) dan PT Industri Baterai Indonesia atau Indonesia Battery Corporation (IBC) melakukan penandatanganan *Framework Agreement* untuk inisiatif proyek baterai kendaraan listrik (EV battery) terintegrasiANTAM dan IBC juga menandatangani perjanjian serupa dengan LG Energy Solution. Perkiraan total nilai investasi dari kedua mitra ini mencapai sebesar USD15 miliar atau setara dengan Rp215 triliun.

In April 2022, ANTAM and PT Ningbo Contemporary Brunp Lygend Co, Ltd (CBL), and PT Industri Baterai Indonesia or Indonesia Battery Corporation (IBC), signed a Framework Agreement for an integrated EV battery project initiative. ANTAM and IBC also signed a similar agreement with LG Energy Solution. The estimated total investment value of the two partners is USD15 billion, equivalent to IDR215 trillion.

Kegiatan kerja sama dalam pengembangan proyek ini merupakan salah satu inisiatif paling strategis di lingkungan Kementerian BUMN dalam kegiatan hilirisasi. Penandatanganan yang dilakukan merupakan langkah awal untuk mengembangkan ekosistem EV Baterai di Indonesia. Dalam hal ini, ANTAM mendukung penuh inisiatif Pemerintah dalam pengembangan EV Baterai sebagai upaya untuk pengembangan hilirisasi industri *battery* yang terintegrasi dan meningkatkan nilai tambah komoditas mineral Indonesia ke arah yang lebih strategis.

Cooperation in developing this project is one of the most strategic initiatives within the Ministry of SOEs in downstream activities. The signing is the first step to creating the EV Battery ecosystem in Indonesia. In this case, ANTAM fully supports the Government's initiative to develop EV Batteries to establish an integrated downstream battery industry and increase the added value of Indonesian mineral commodities in a more strategic direction.

Selain itu, hal ini juga merupakan salah satu inisiatif dan langkah nyata untuk memenuhi komitmen Indonesia pada Perjanjian Paris dan COP 27 dalam mengurangi gas rumah kaca berdasarkan *National Determined Contribution* (NDC) hingga 31,89% pada tahun 2030.

In addition, this is also one of the initiatives and concrete steps to fulfill Indonesia's commitment to the Paris Agreement and COP 27 in reducing greenhouse gases based on the National Determined Contribution (NDC) by 31.89% by 2030.