



Accelerating Net Zero and Unlocking Indonesia Carbon Market Potential through IDXCarbon (Indonesia Carbon Exchange)



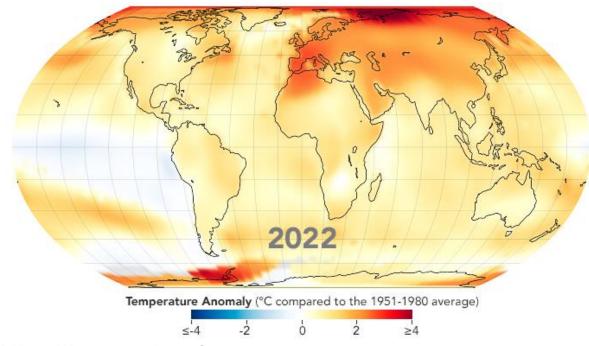
AGENDA

1. Carbon Pricing

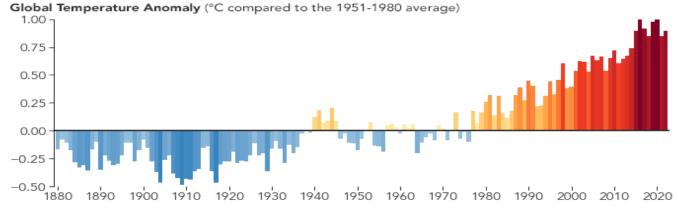
- 2. Indonesia Carbon Pricing
- 3. Indonesia Carbon Exchange
- 4. Join Us

Climate Action Failure' is Identified as the Most Severe Risk on a Global Scale Over the Next 10 Years





Last 9 Years Warmest on Record



Top 5 The Most Severe Risks on a Global Scale Over the Next 10 Years

1st	Extreme weather events
2 nd	Critical change to Earth systems
3rd	Biodiversity loss and ecosystem collapse
4 th	Natural resource shortages
5 th	Misinformation and disinformation

Source: World Economic Forum Global Risks Perception Survey 2023-2024

One of the largest contributing source of these environmental risks are due to Climate Action Failure

Source: World Economic Forum Global Risks Perception Survey 2022-2023

Net Zero by Mid Century will be the Only Solution to Mitigate the Climate Change



2015: The Paris Agreement

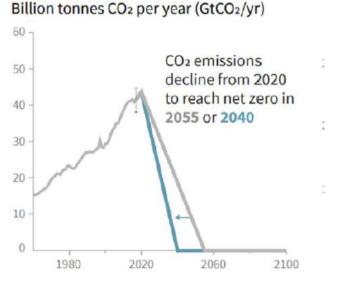


Global agreement to:

- Hold the increase in the global average temperature to well below 2°C above pre-industrial levels.
- Pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels

2018: IPCC Special Report on 1.5 Degrees

b) Stylized net global CO₂ emission pathways



 To achieve 1.5°C, global emissions must fall to '**net zero**' by mid-century

2019-2021: Major economies adopt net-zero targets

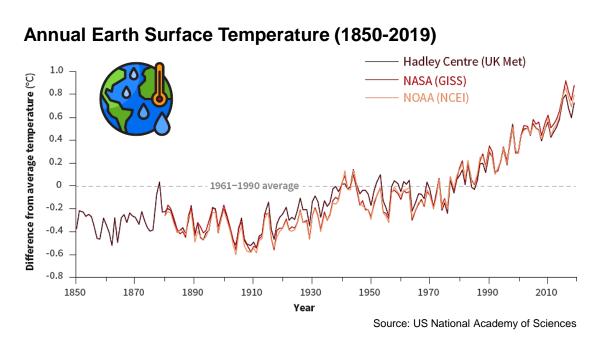
2019



Note: IPCC = Inter-governmental Panel on Climate Change.



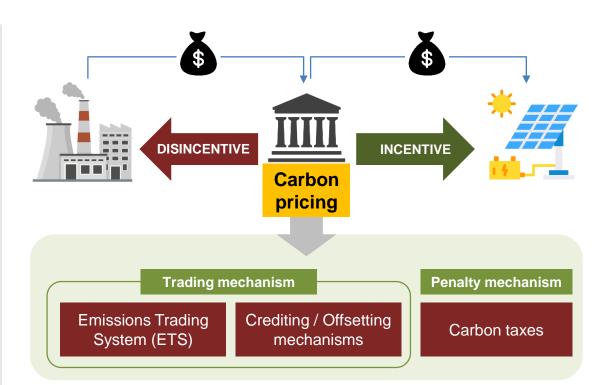
Carbon Pricing is a Critical Tool to Address Climate Change



Concentration of greenhouse gases (GHG) creates the greenhouse effect

Earth's surface temperature is increasing to 1°C higher than the average temperature in 1961-1990

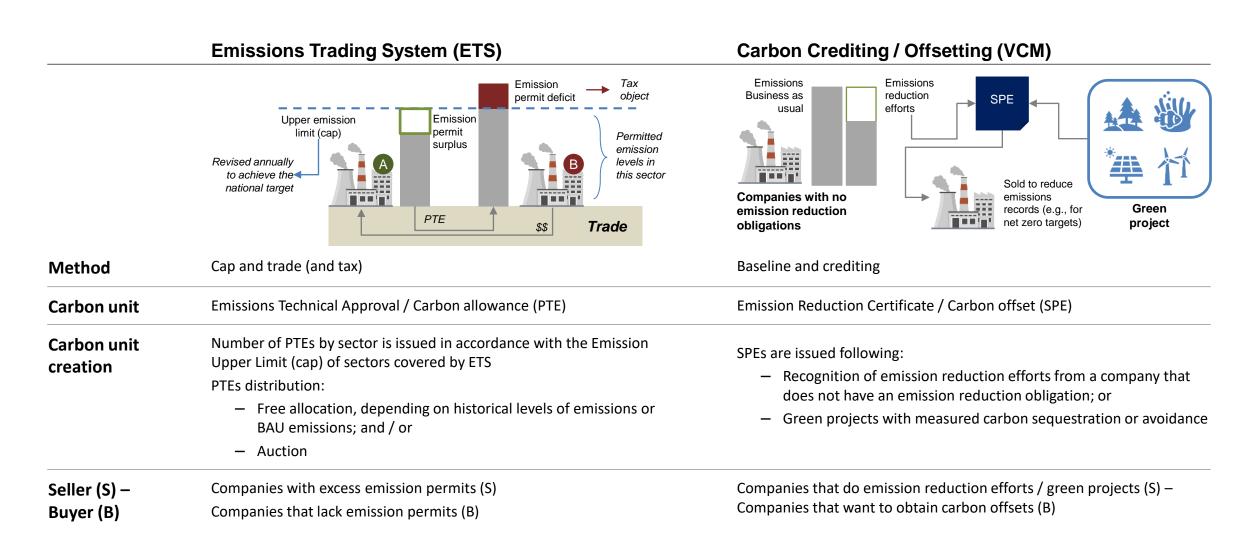
Mitigation action is needed, one of which is a carbon pricing mechanism



Carbon pricing reduces GHG emissions with :

- ✓ **Disincentives:** additional costs for higher emitters
- Incentives: reduced costs and additional revenue for those who reduce emissions ('Polluter pays' principle)

There are two types of carbon markets: compliance (ETS) and voluntary (VCM)





AGENDA

1. Carbon Pricing

2. Indonesia Carbon Pricing

- 3. Indonesia Carbon Exchange
- 4. Join Us

Carbon Trading through the Carbon Exchange is one of Available Mechanisms to Achieve Indonesia's NDC



Indonesia ratified the Paris Agreement in 2016 Indonesia set Enhanced NDC (Sep 2022): 31.89%-43.20% in 2030 Indonesia Net Zero 2060 or sooner		Presidential Regulation 98 of 2021	Regulation of Ministry of Environment and Forestry Regulation No. 21 of 2022 concerning the
		of Carbon Economic Value in Achieving NDC Mechanisms for achieving the NDC: Mitigation Action Adaptation Carbon Economic Value 1. Carbon Trading	 Implementation of Carbon Economic Value Carbon Trading: Can be done domestically and/or internationally. Form of market mechanisms:
Sector	Target 2030, of Total BaU	 Performance-Based Payments Carbon Levy / Tax 	b. Direct trading
Energy and Fugitive	12.5% –15.5%		
Waste	1.4% – 1.5%	4. Other Mechanism	
IPPU	0.2 - 0.3%		
Agriculture	0.3% – 0.4%		
Forestry and Other Land Uses (FOLU)	17.4% – 25.4%		L

IDX has Obtained the License from OJK to Become a Carbon Exchange Operator

Law No 4 of 2023 on Financial Sector Development and Reinforcement

- Carbon unit is defined as securities under this Law.
- OJK has the authority to regulate secondary trading of instruments related to the economic value of carbon on the carbon exchange;
- Carbon trading can be conducted domestically and/or internationally.
- Carbon exchange can only conducted by market operator who has obtained a business permit from the OJK.
- Carbon trading done via the carbon exchange who meet the requirements and has obtained a license from OJK.



- OJK Regulation No 14 of 2023 on Carbon Trading through Carbon Exchange
- Circular Letter OJK No 12/04/2023 on Procedures for Organizing Carbon Trading through the Carbon Exchange

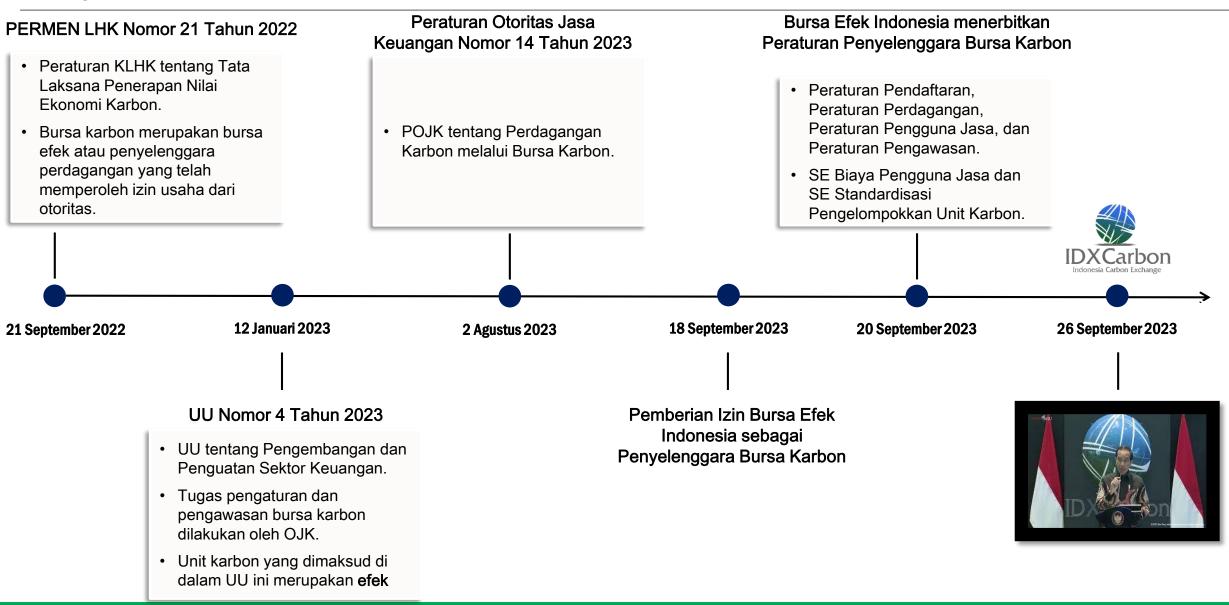


- Obtain the license as a Carbon Exchange Operator.
- Provides carbon trading infrastructure.
- Issue regulations related to the carbon trading. (Service Users, Trading, Carbon Unit Registration, Trade Surveillance).
- Issuing Circular Letters regarding carbon trading. (Standardization of Unit Grouping and User Fees for Carbon Exchange Services)



Key Milestones for IDXCarbon





Indonesia Carbon Market is Not Only Stores a Vast Potential Economic Value but also Critical to Help the World meet our Net Zero Target

The potential for carbon trading in Indonesia is huge



Carbon Capture (Utilisation) Storage | CCS/CCUS

• 2 gigatons of CO2 in Oil & Gas reservoir

• 10 gigatons of CO2 in Saline aquifers

SOURCE : Ministry of Energy and Mineral Resources



Forestry and Other Land Use | FOLU

- 301 million tons of CO2/year in forest
- 960 million tons of CO2/year in peatland
- 41 million tons of CO2/year in mangroves SOURCE : Ministry of Environment and Forestry



Energy

- 90 million tons of CO2 in Renewable Energy (RE)
- 12 million tons of CO2 from Electric Vehicle (EV)

SOURCE : Ministry of Energy and Mineral Resources

Regional and global exchanges also have started carbon trading







European Energy Exchange



CORE C L I M A T E Hongkong Exchange

"Indonesia's carbon exchange economic potential may reach 3,000 trillion IDR," – President of Republic of Indonesia on the launching day of IDXCarbon



AGENDA

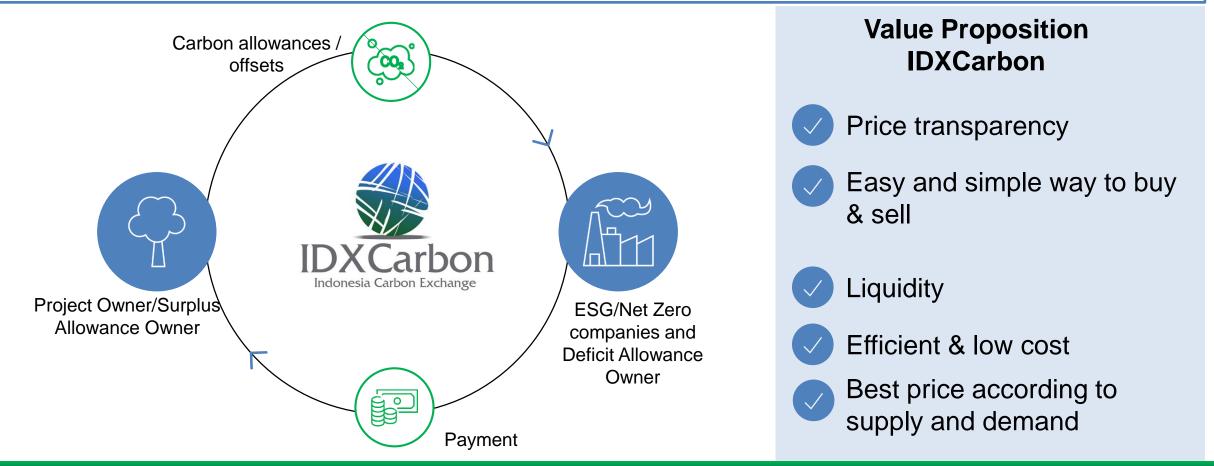
- 1. Carbon Pricing
- 2. Indonesia Carbon Pricing
- 3. Indonesia Carbon Exchange Mechanism
- 4. Join Us

About IDXCarbon (Indonesia Carbon Exchange)



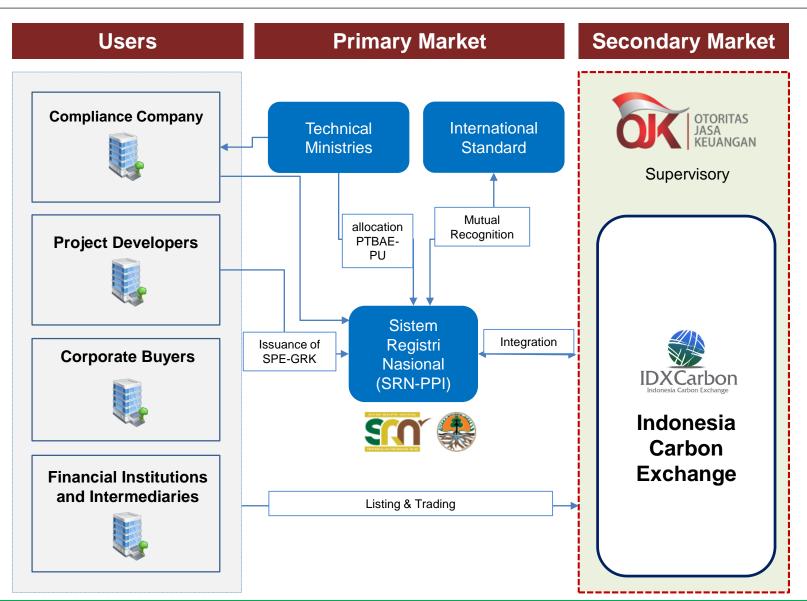


IDXCarbon/Indonesia Carbon Exchange is the brand name of the Carbon Exchange which is run by the Indonesia Stock Exchange. IDX, through the Indonesia Carbon Exchange, is committed to developing carbon trading that is transparent, orderly, and in accordance with the world practice so that it can unlock Indonesia's carbon trading potential.



The Carbon Exchange is the Secondary Trading Platform for Carbon Units under the Supervisory of the OJK

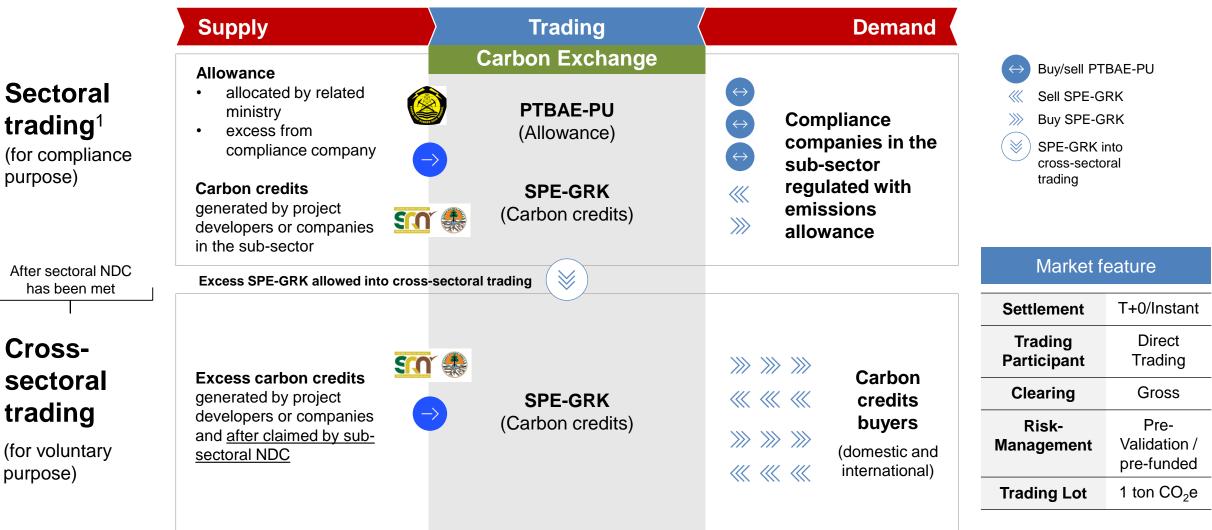




IDXCarbon – Carbon Market Design

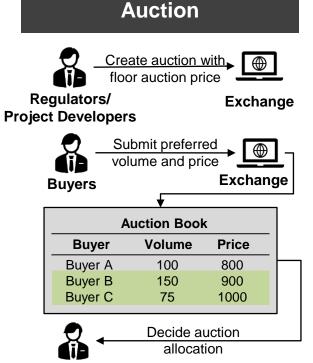


IDX would like to play a central role in Indonesian carbon markets: both facilitating sectoral trading for compliance company and cross sectoral trading to be accessed by domestic and international carbon credit buyers.



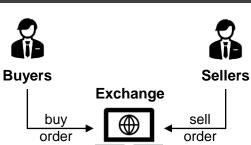
Four Available Trading Mechanism on IDXCarbon





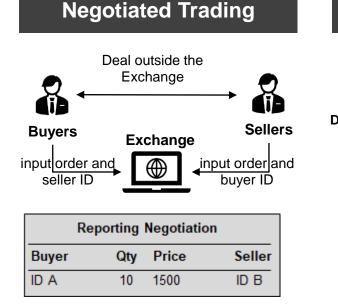
Regulators/ Project Developers

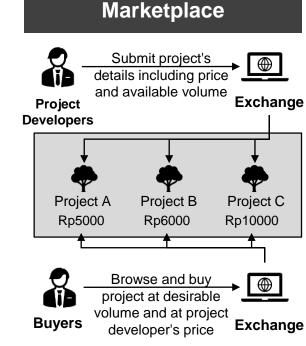
- Regulators/Project Developers create an auction and submit auction details including minimum price.
- Buyers will place desirable volume at minimum price or higher.
- Regulators/Project Developers decide allocation.



	Order Book			
-	Bid		Ask	
-	5 7	800 900		
	10	1000	1000	10
			1100	15
			1200	3

- Buyers and sellers submit order volume and price.
- Buy order will queue in bid order book, sell order will queue in ask order book.
- Exchange will match the order with **price** and **time** priority.
- The matched price will be the market price.



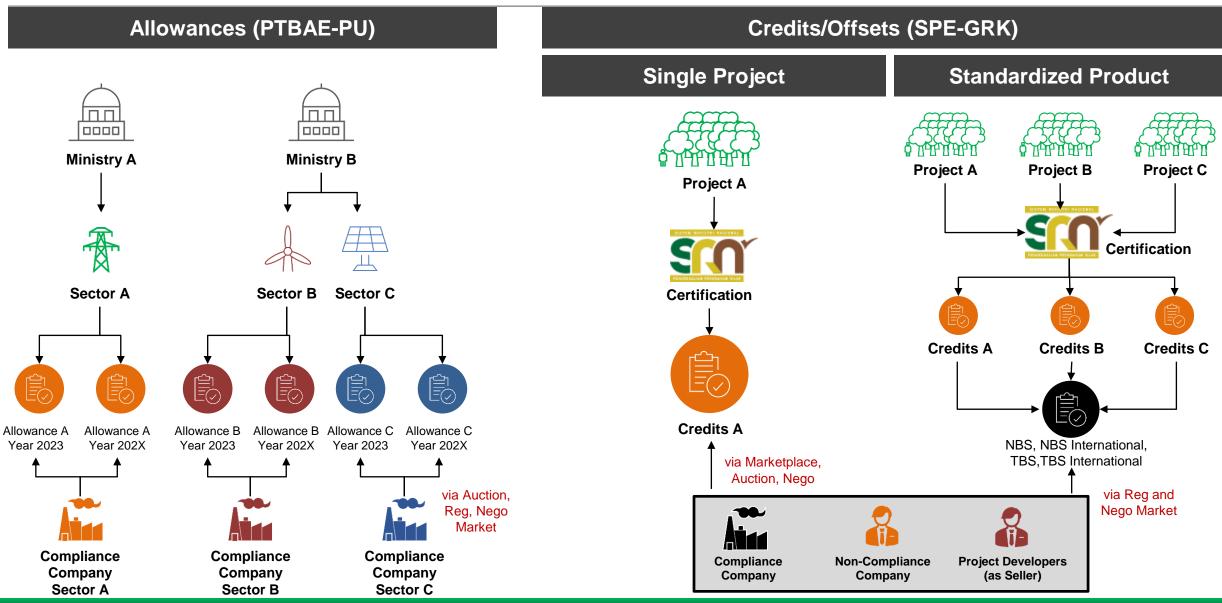


- Buyers and sellers make deal outside the exchange.
- Participants submit arranged volume, price, and counterpart to execute the trade.
- Settlement will be done in the exchange

- Project developers input project and price in the marketplace.
- Buyers browse the project and buy prefered project with designated volume.
- Transaction price will be done at set price.

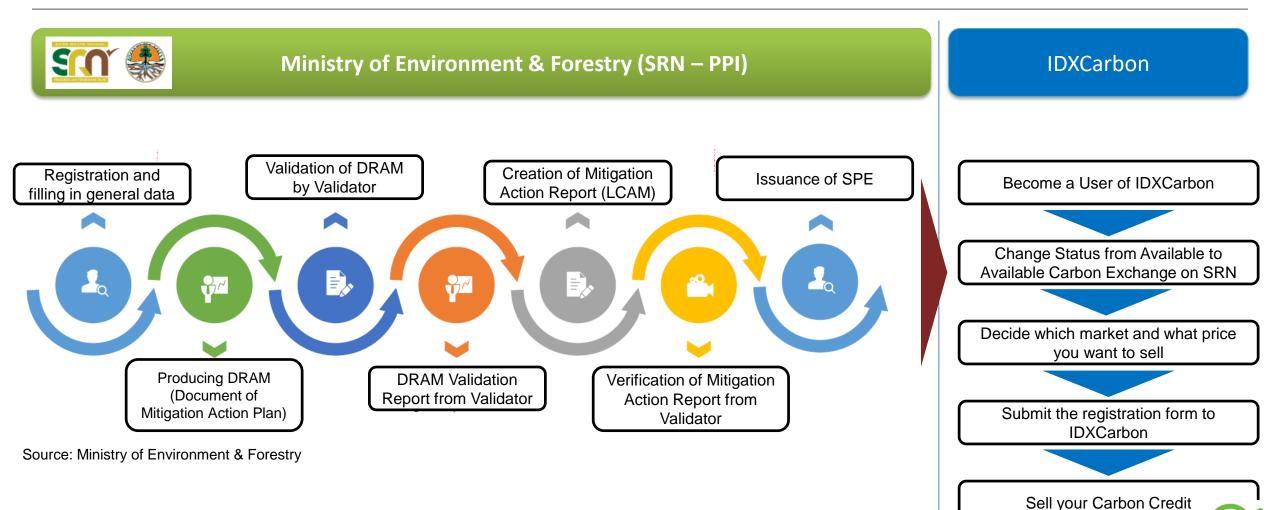
Product Features





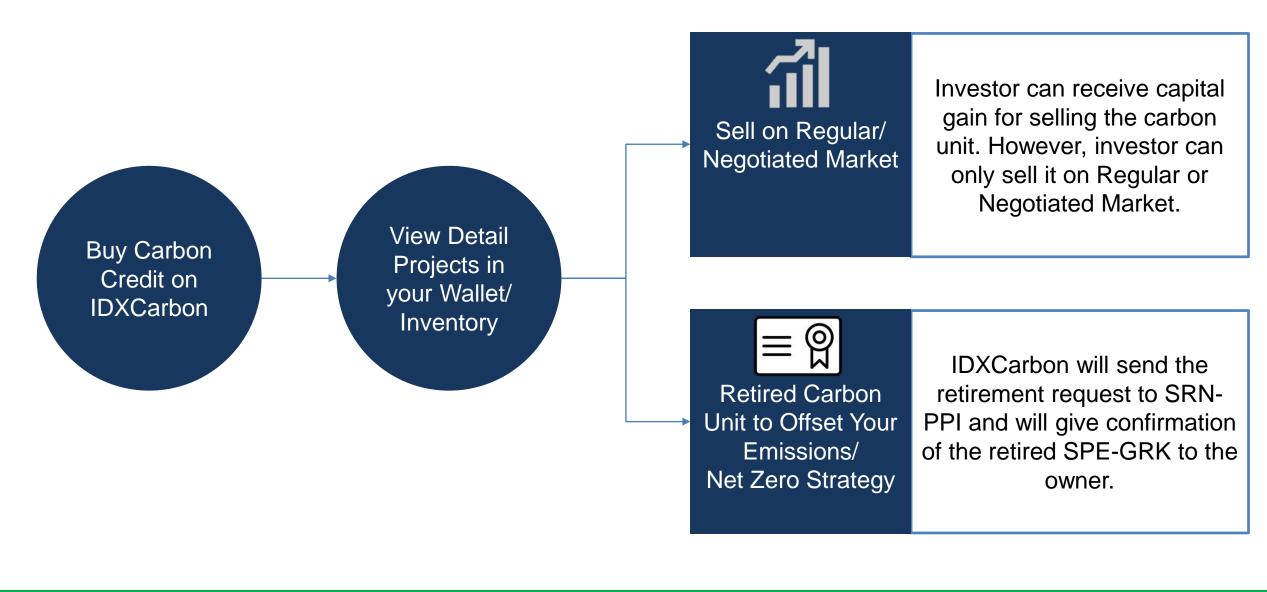
SPE GRK Procedure





I Bought Carbon Credits. Now What?





Carbon Unit has Some Distinguished Features compared with Stock or Bond



Produk Product	Harga Pasar Perdana Primary Market Price			Dividen/Kupon Dividend/Coupon
Unit Karbon Carbon Units	Kecuali lelang kuota emisi Except for allowance auction	Selama belum retired Before retired by user		×
Saham <i>Stock</i>			×	
Obligasi <i>Bond</i>			×	

Indonesia Carbon Exchange Resume 2023









15 First Buyers on the Initial Trading Day 26 September 2023

- 1. PT Bank Central Asia Tbk,
- 2. PT Bank CIMB Niaga Tbk,
- 3. PT Bank DBS Indonesia,
- 4. PT Bank Mandiri (Persero) Tbk,
- 5. PT BNI Sekuritas,
- PT BRI Danareksa Sekuritas (bagian dari PT Bank Rakyat Indonesia (Persero) Tbk),
- 7. PT CarbonX Bumi Harmoni,
- 8. PT MMS Group Indonesia,
- 9. PT Multi Optimal Riset dan Edukasi,
- 10. PT Pamapersada Nusantara,
- 11. PT Pelita Air Service,
- 12. PT Pertamina Hulu Energi,
- 13. PT Pertamina Patra Niaga,
- 14. PT Truclimate Dekarbonisasi Indonesia,
- 15. PT Udara Untuk Semua (Fairatmos).

Trading Value Composition



Listed Companies (including subsidiaries)



Financial Institution (including banks)



BUMN/ BUMD (including subsidiaries)

LISTED PROJECT

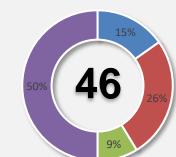


Geothermal Lahendong Unit 5 & 6 PT Pertamina Power Indonesia 864.209 tCO2e



PLTGU Muara Karang PT PLN Nusantara Power 900.000 tCO2e

CARBON EXCHANGE PARTICIPANT



- BUMN & Subsidiaries (non listed)
- Listed Companies & Subsidiaries
- Exchange Members

Others



AGENDA

- 1. Carbon Pricing
- 2. Indonesia Carbon Pricing
- 3. Indonesia Carbon Exchange Mechanism
- 4. Join Us

Join Us in Accelerating Net Zero Emission

15 Pembeli pada Perdagangan Perdana Indonesia Carbon Exchange 26 September 2023



- 1. PT Bank Central Asia Tbk,
- 2. PT Bank CIMB Niaga Tbk,
- 3. PT Bank DBS Indonesia,
- 4. PT Bank Mandiri (Persero) Tbk,
- 5. PT BNI Sekuritas,
- 6. PT BRI Danareksa Sekuritas (bagian dari PT Bank Rakyat Indonesia (Persero) Tbk),
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- 15. PT Udara Untuk Semua (Fairatmos).



Trading Value Composition



Listed Companies (including subsidiaries)



Financial Institution (including banks)



BUMN/ BUMD (including subsidiaries)

Statistics as of 15 Feb 2023



Listed Project (SPE-GRK):



Geothermal Lahendong Unit 5 & 6 864.209 tCO2e



PLTGU Muara Karang 900.000 tCO2e

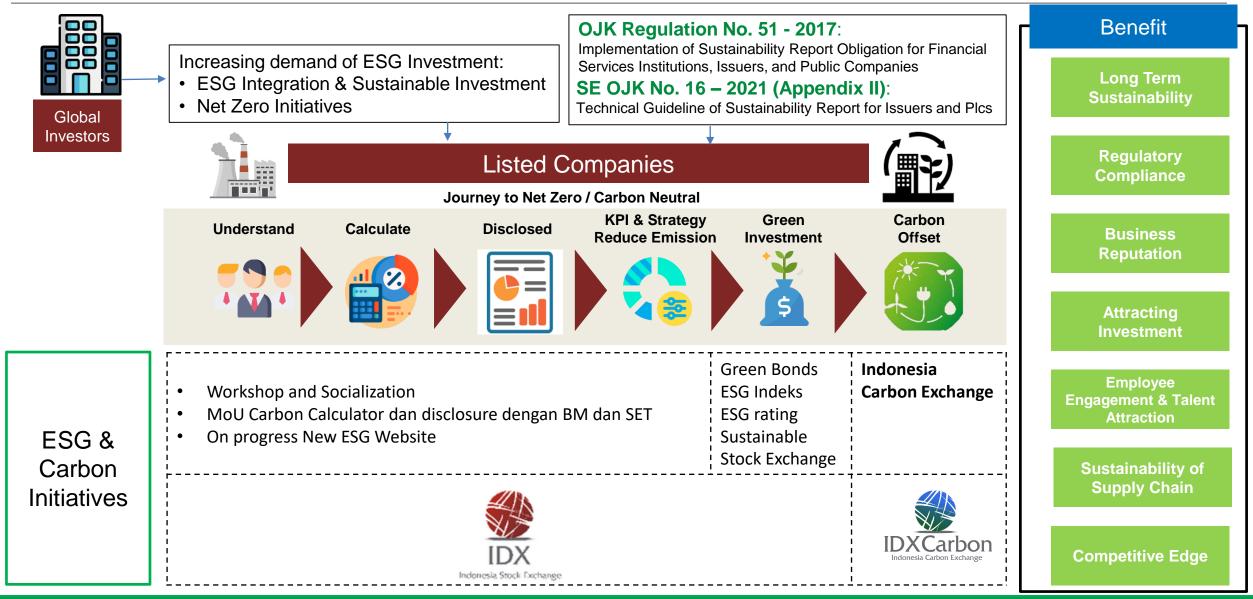
- Registry: Indonesia Registry (SRN-PPI)
- Traded Volume: 501.910 tCO2e
- Retired Volume: 176.552 tCO2e
- Type: IDTBS (Indonesia Tech Based Solution)
- Closing Price: Rp58.800
- Registered Participants : 48



IDXCarbon also Complements the Initiatives in Decarbonization and Net Zero for Listed Companies

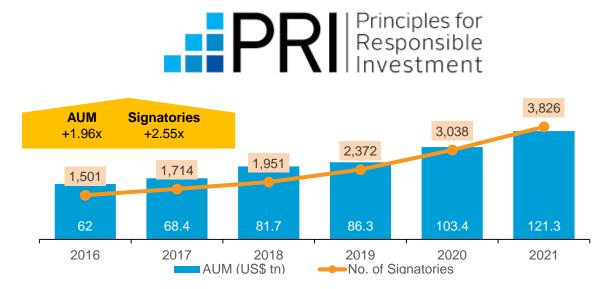


Expected to Attract Investment in the Indonesia Capital Market Sustainability Report Regulation Disclosure



Many Investors Initiatives That Focuses on ESG Investing





The PRI focuses on incorporating ESG issues into investment.

- 1. **Principle 1**: We will <u>incorporate</u> ESG issues into investment analysis and decision-making processes.
- 2. **Principle 2**: We will <u>be active</u> owners and incorporate ESG issues into our ownership policies and practices.
- 3. Principle 3: We will <u>seek appropriate disclosure</u> on ESG issues by the entities in which we invest.
- 4. **Principle 4**: We will **promote** acceptance and implementation of the Principles within the investment industry.
- 5. **Principle 5**: We will <u>work</u> together to enhance our effectiveness in implementing the Principles.
- 6. **Principle 6**: We will each <u>report</u> on our activities and progress towards implementing the Principles.





Asia Investor Group on Climate Change (AIGCC)

Initiative to create awareness among Asia's asset owners and financial institutions about the risks and opportunities associated with **climate change and low-carbon investing**.

Global Impact Investing Network (GIIN)

Reducing barriers to impact investment by building critical infrastructure and developing activities, education, and research that help accelerate the development of a coherent impact investing industry.



Global Sustainable Investment Alliance (GSIA) international collaboration of national forum for responsible investment.



Climate

Action 100+

International Corporate Governance Network (ICGN)

investor-led organization established in 1995 to promote effective standards of **corporate governance** and investor stewardship to advance efficient markets.



ALIGNMENT ASSESSMENTS

Climate Accounting and Audit Assessments

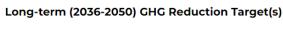
Provided by Carbon Tracker Initiative

Climate Policy Engagement Alignment

Provided by InfluenceMap, these assessments complement the findings from Indicator 7: Climate Policy Engagement of the Disclosure Framework.

DISCLOSURE FRAMEWORK









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Medium-term (2027 to 2035) GHG Reduction Target(s)

Short-term (up to 2026) GHG Reduction Target(s) 4

Decarbonisation Strategy



Capital Allocation



Climate Policy Engagement

Climate Governance





TCFD Disclosure



[New Beta Indicator] Historical GHG Emissions Reductions 🕐



Public Companies Pledge to Net Zero Across Sectors





Apple | *Technology* Market Cap: USD \$2.776 tn



Carbon neutral for **own operations** since 2020



Carbon neutral across global supply chain by 2030



BHP Group | *Mining* Market Cap: USD \$149.6 bn



Carbon neutral for **own operations** since 2050



Pursue long-term net zero goal supply chain by 2050



Procter & Gamble | *Consumer Goods* Market Cap: USD \$353 bn



Carbon neutral for **own operations** since 2040



Carbon neutral across global supply chain by 2040



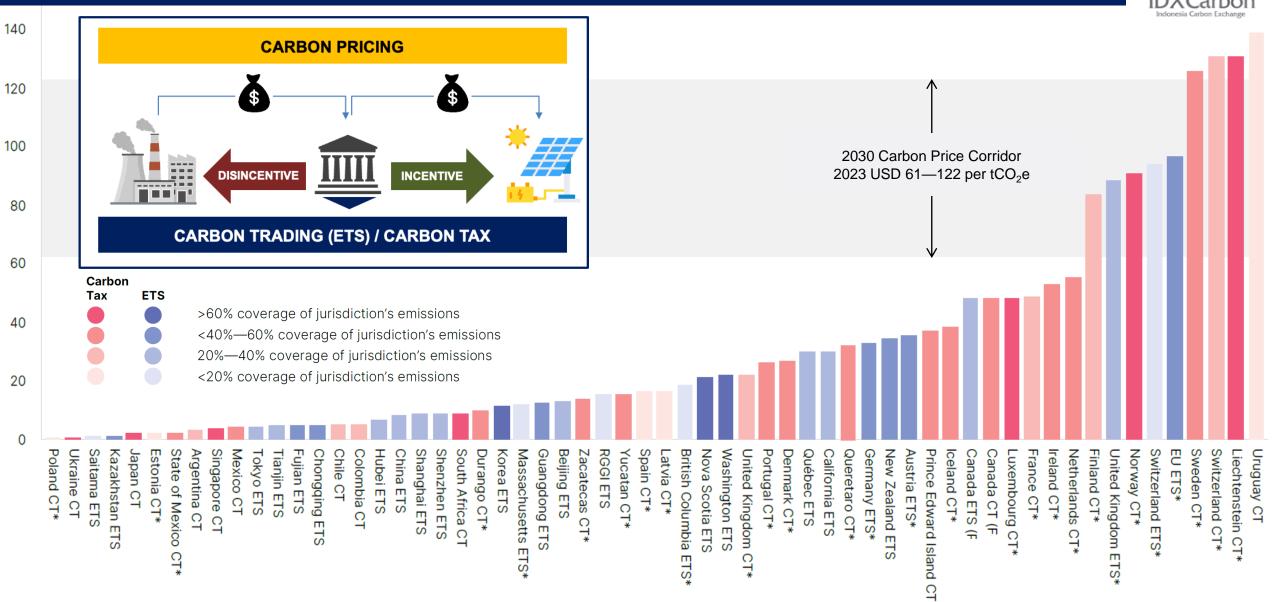
McDonald | *Food* Market Cap: USD \$195 bn



achieve net zero emissions across its global operations by **2050**. market business teams, **franchisees**, **suppliers** and **other partners** to convert ambition to action.

Thousands of Suppliers are Affected of Their Ambitions

Carbon Prices Across the Globe (2023)



Pelita Air and Singapore Airlines have Offered Carbon Neutral Flight Experiences



The Singapore Airlines Group Carbon Offset Programme

Singapore Airlines is committed to protecting the environment — but we cannot do it alone. With our carbon offset programme, you too can help by offsetting the carbon emitted from your flight. Every act counts, so join us in reducing your carbon footprint. Enter your flight details below to get started.



Passengers -

detiktravel Home Travel News Destinations d'Traveler Travel Tips Hotel Story Transportation

Momen Penerbangan Karbon Netral Pertama dari Maskapai Indonesia

Ahmad Masaul Khoiri - detikTravel Jumat, 03 Nov 2023 14:47 WIB



Calculate and offset your carbon emissions

Enter your flight details to calculate the carbon footprint of your trip. If there are multiple segments in your trip, enter each flight segment separately.

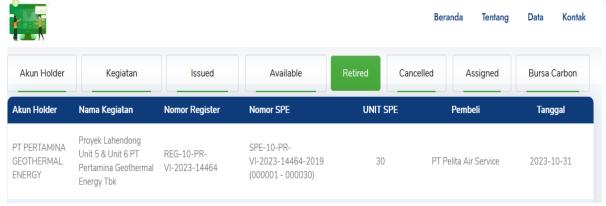
Return O One way

From 👻

Class -

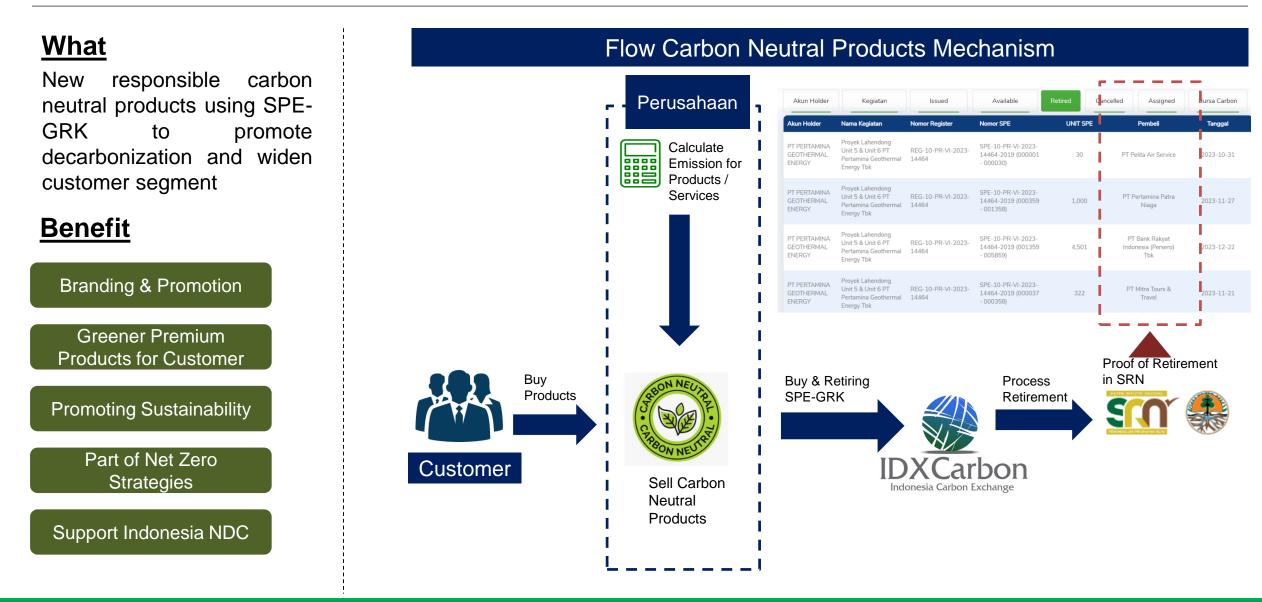
CALCULATE YOUR EMISSIONS

Singapore Airlines provides calculator to calculate carbon emission and provides facility to personally offset passenger's carbon footprint.



Creating Carbon Neutral Products Through Indonesia Carbon Exchange





START YOUR CLIMATE JOURNEY NOW AND JOIN INDONESIA CARBON EXCHANGE TO ACCELERATE YOUR AMBITION







https://idxcarbon.co.id/join-us

Thank You

Contact us



support.idxcarbon@idx.co.id

Join us https://idxcarbon.co.id/join-us



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APPENDIX

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Carbon Neutral x Net Zero x Carbon Negative



NEUTRAL

Carbon Neutral

Measure the emission from activity, then offsetting by carbon offset.

Net Zero

∼ = У

Reducing the emission from activity as much as possible, then offset the unavoidable emission left by carbon offset. **Carbon Negative**

The activity remove emission more than it releases. Also often called *climate positive*.





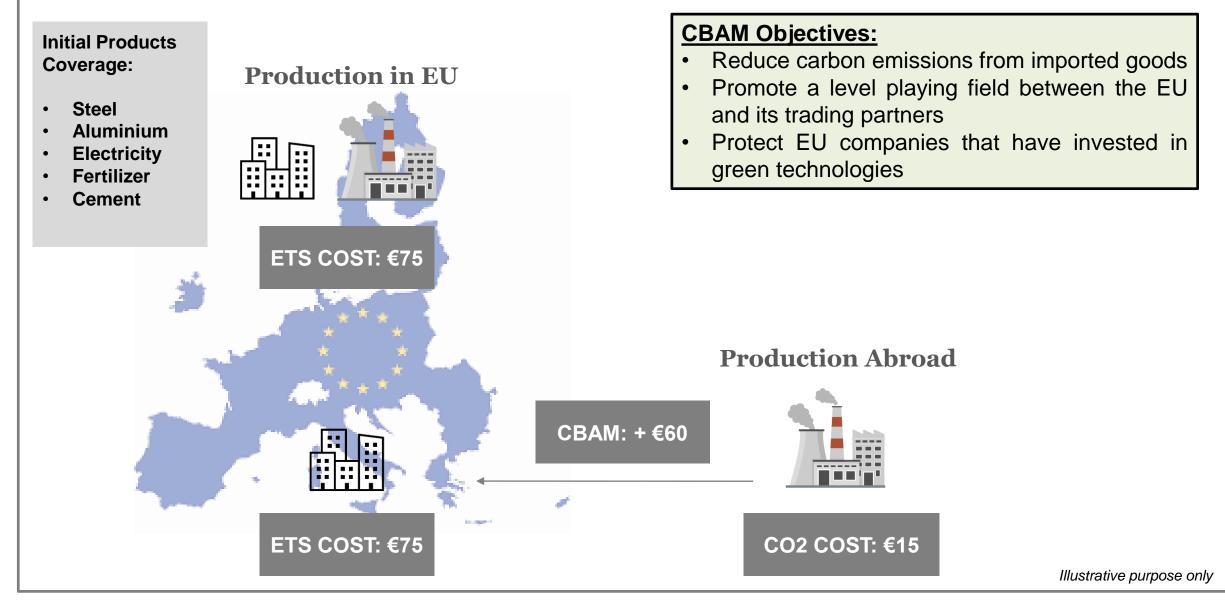
Akun Holder	Kegiatan	Issued	Available	Retired Ca	ncelled Assigned	Bursa Carbon
Akun Holder	Nama Kegiatan	Nomor Register	Nomor SPE	UNIT SPE	Pembeli	Tanggal
PT PERTAMINA GEOTHERMAL ENERGY	Proyek Lahendong Unit 5 & Unit 6 PT Pertamina Geothermal Energy Tbk	REG-10-PR-VI-2023- 14464	SPE-10-PR-VI-2023- 14464-2020 (000402 - 001756)	1,355	PT Adira Dinamika Multi Finance Tbk	2024-01-15
PT PERTAMINA GEOTHERMAL ENERGY	Proyek Lahendong Unit 5 & Unit 6 PT Pertamina Geothermal Energy Tbk	REG-10-PR-VI-2023- 14464	SPE-10-PR-VI-2023- 14464-2016 (20918 - 20932)	15	PT Pertamina Patra Niaga	2024-02-13
PT PJB UP Muara Karang	Pembangunan Pembangkit Listrik Baru Berbahan Bakar Gas Bumi PLTGU Blok 3 PJB Muara Karang	REG-11-PR-V-2023- 10867	SPE-11-PR-V-2023- 10867 (000104 - 002802)	2,699	PT. Bank Danamon Indonesia, Tbk	2024-02-13
PT PERTAMINA GEOTHERMAL ENERGY	Proyek Lahendong Unit 5 & Unit 6 PT Pertamina Geothermal Energy Tbk	REG-10-PR-VI-2023- 14464	SPE-10-PR-VI-2023- 14464-2016 (20718 - 20767)	50	PT. Garuda Indonesia (Persero) Tbk	2024-01-30
PT PERTAMINA GEOTHERMAL ENERGY	Proyek Lahendong Unit 5 & Unit 6 PT Pertamina Geothermal Energy Tbk	REG-10-PR-VI-2023- 14464	SPE-10-PR-VI-2023- 14464-2019 (001359 - 005859)	4,501	PT Bank Rakyat Indonesia (Persero) Tbk	2023-12-22
PT PERTAMINA GEOTHERMAL ENERGY	Proyek Lahendong Unit 5 & Unit 6 PT Pertamina Geothermal Energy Tbk	REG-10-PR-VI-2023- 14464	SPE-10-PR-VI-2023- 14464-2017 (000001 - 167934)	167,934	PT PAMAPERSADA NUSANTARA	2024-01-25
PT PERTAMINA GEOTHERMAL ENERGY	Proyek Lahendong Unit 5 & Unit 6 PT Pertamina Geothermal Energy Tbk	REG-10-PR-VI-2023- 14464	SPE-10-PR-VI-2023- 14464-2019 (000001 - 000030)	30	PT Pelita Air Service	2023-10-31

Seluruh Pihak yang Telah Melakukan Retirement dan Support dalam Pencapaian **Penurunan Emisi** Indonesia akan Secara Transparan Terpublikasikan di Website SRN **Kementerian LHK**

https://srn.menlhk.go.id/spe/

EU - CARBON BORDER ADJUSTMENT MECHANISM





WHY JOIN IDXCARBON





Create New Carbon Neutral Products

Attract **new responsible customers segment** through premium carbon neutral products



Accelerate your Net Zero / Carbon Neutral Strategy

- Attract responsible Investors & business partners through your Net Zero / Carbon Neutral Strategy & Journey – be relevant
- Enhance your green projects profit using Carbon Credit



Prepare and Mitigate Impact of (Future) Carbon Tax Policy

Carbon Tax will be there, be prepared.

Support Indonesia and Global to Achieve NDC and create better World for Future Generation

Every activity is recorded in SRN and your contribution is matter.