



# PT Adaro Energy Indonesia Tbk

March 2023

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# Snapshot of Adaro Energy Indonesia



**Lost-time injury  
frequency rate  
(LTIFR)**  
0.12 in FY22



**Employees**  
~12,000



**Countries  
Served**  
16



**FY22 Operational  
EBITDA**  
\$5.0 billion  
(+139% YoY)



**FY22 Production**  
62.88 million  
tonnes (+19%  
YoY)



**FY22 Revenue**  
\$8.1 billion  
(+103% YoY)

# Adaro Energy Indonesia's Performance

Continue to deliver consistent results and strong cash flows



OPERATIONAL	FY22	FY21	Change
Production (Mt)	62.88	52.70	19%
Sales (Mt)	61.34	51.58	19%
OB removal (Mbcm)	235.58	218.90	8%
FINANCIAL (\$ millions, unless indicated)	FY22	FY21	Change
Net Revenue	8,102	3,993	103%
Core Earnings	3,013	1,256	140%
Operational EBITDA	5,030	2,104	139%
Cash	4,067	1,811	125%
Net Debt (Cash)	(2,599)	(434)	499%
Capex	424	193	120%
Free Cash Flow	2,769	1,270	118%
Operational EBITDA Margin	62%	53%	9%
Net Debt (Cash) to Equity (x)	(0.40)	(0.10)	300%
Net Debt (Cash) to Last 12 months Operational EBITDA (x)	(0.52)	(0.21)	148%
Cash from Operations to Capex (x)	9.66	8.11	19%

# Adaro Minerals MetCoal Business

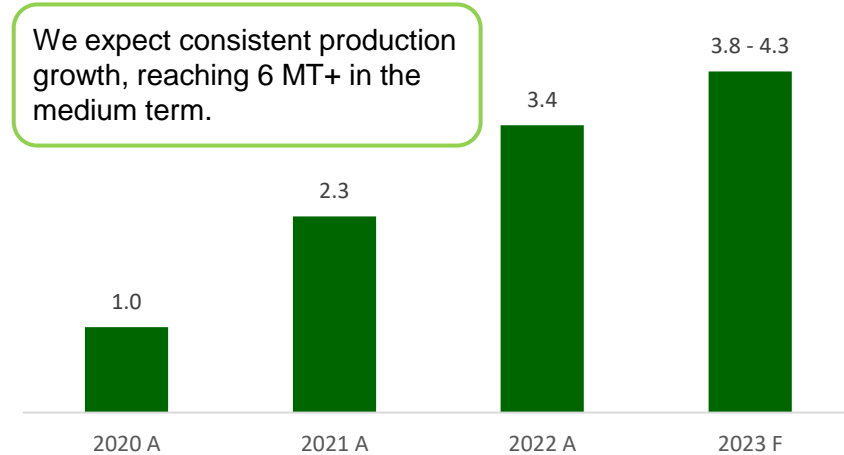
supports the Steel Industry a key component in Wind Turbine and the Solar Industry



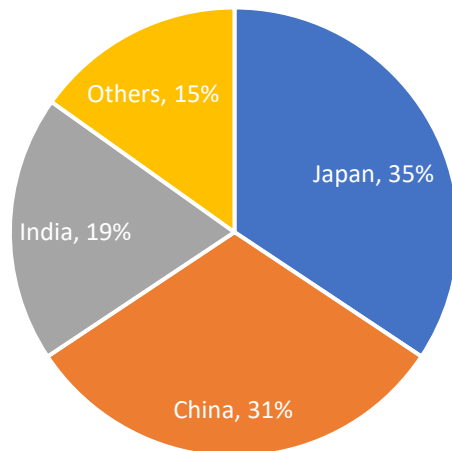
## Adaro Minerals key financial highlights

OPERATIONAL	FY22	FY21	Change
Production (Mt)	3.37	2.30	46%
Sales (Mt)	3.20	2.30	39%
Overburden removal (Mbcm)	8.32	5.15	62%
FINANCIAL (\$ million)	FY22	FY21	Change
Net Revenue	908	460	97%
Core Earnings	342	161	113%
Operational EBITDA	490	248	98%
Operational EBITDA Margin	54%	54%	0

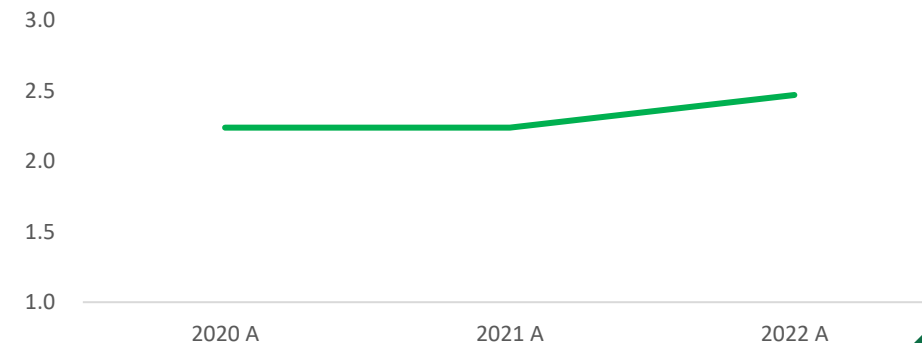
## Adaro Minerals metcoal production (Mt)



## Sales by Destination FY22



## Adaro Minerals Strip Ratio Remains Very Low



# FY23 guidance

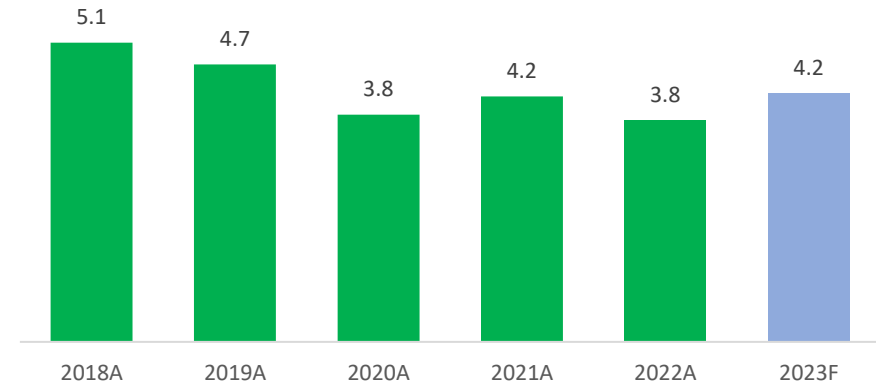
provides cash to invest in EV value chain and renewables



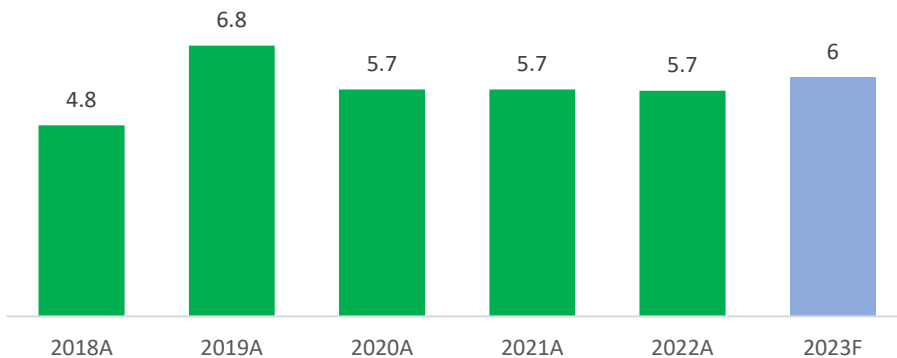
### Coal sales (Mt)



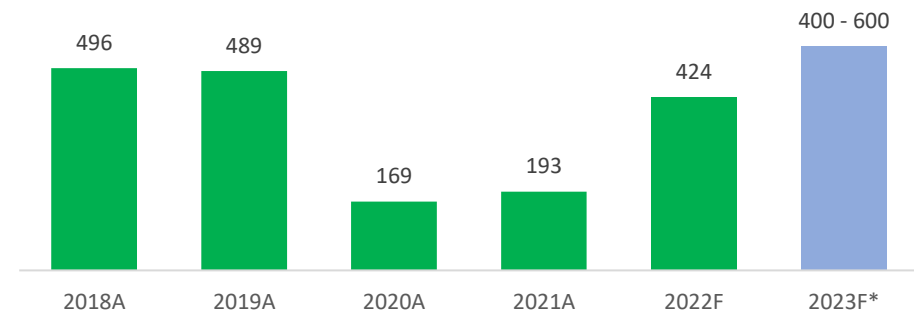
### Consolidated planned strip ratio (bcm/t)



### Kestrel Saleable MetCoal Production (Mt)



### Consolidated Capital expenditure (\$m)



\*) Exclude expenses related to Kaltara

# Three Business Pillars for a Bigger and Greener Adaro

Pursuing sustainable growth driven by the green economy



**Main operating pillar: pit-to-power integration to provide reliable and affordable energy**

- Core thermal coal operations in Indonesia supported by the group's mining services and logistics contractors.
- Operates thermal power plants in several areas in Indonesia and creates access to reliable power.
- Provides the cash flows that serve as the foundation to fund the Adaro Group's diversification strategy.

**Growth pillar: metallurgical coal, and minerals and minerals processing for green economy**

- Metallurgical coal operations in Indonesia through PT Adaro Minerals Indonesia Tbk (IDX: ADMR).
- Downstream processing of minerals for EV battery ecosystem in Indonesia.
- Through this pillar, Adaro Group is committed to achieve growth in a more sustainable manner.

**Growth pillar: renewable energy to support downstream processing and diversification of Indonesia's energy mix**

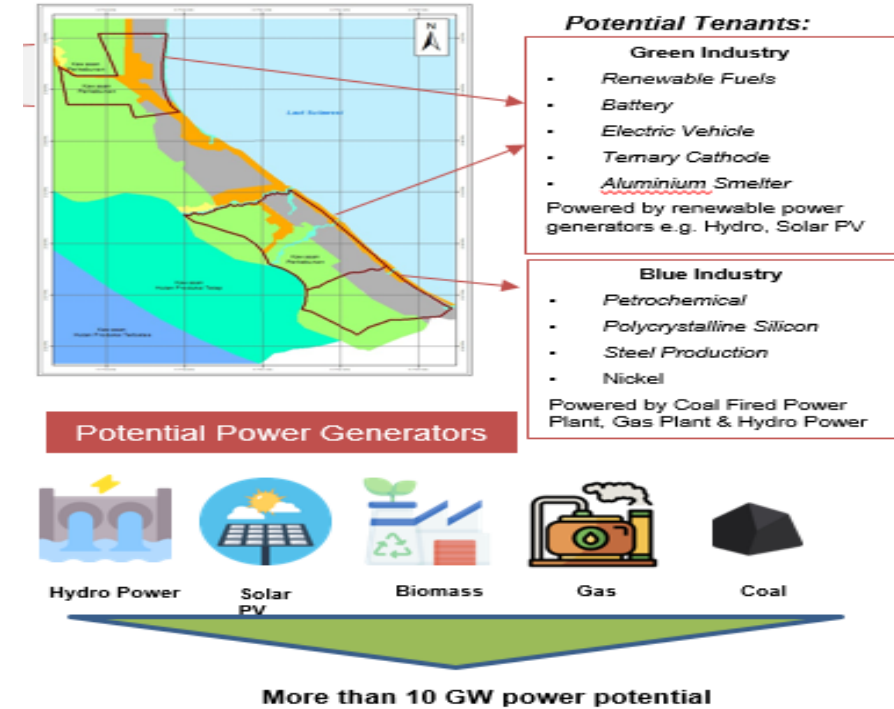
- Developing green energy sources: hydro, solar, wind – and continue to actively participate in tender of renewable power plants.
- Supplies the renewable energy requirement for green downstream processing.

# The world's largest Green Industrial Park

Strategically located in North Kalimantan



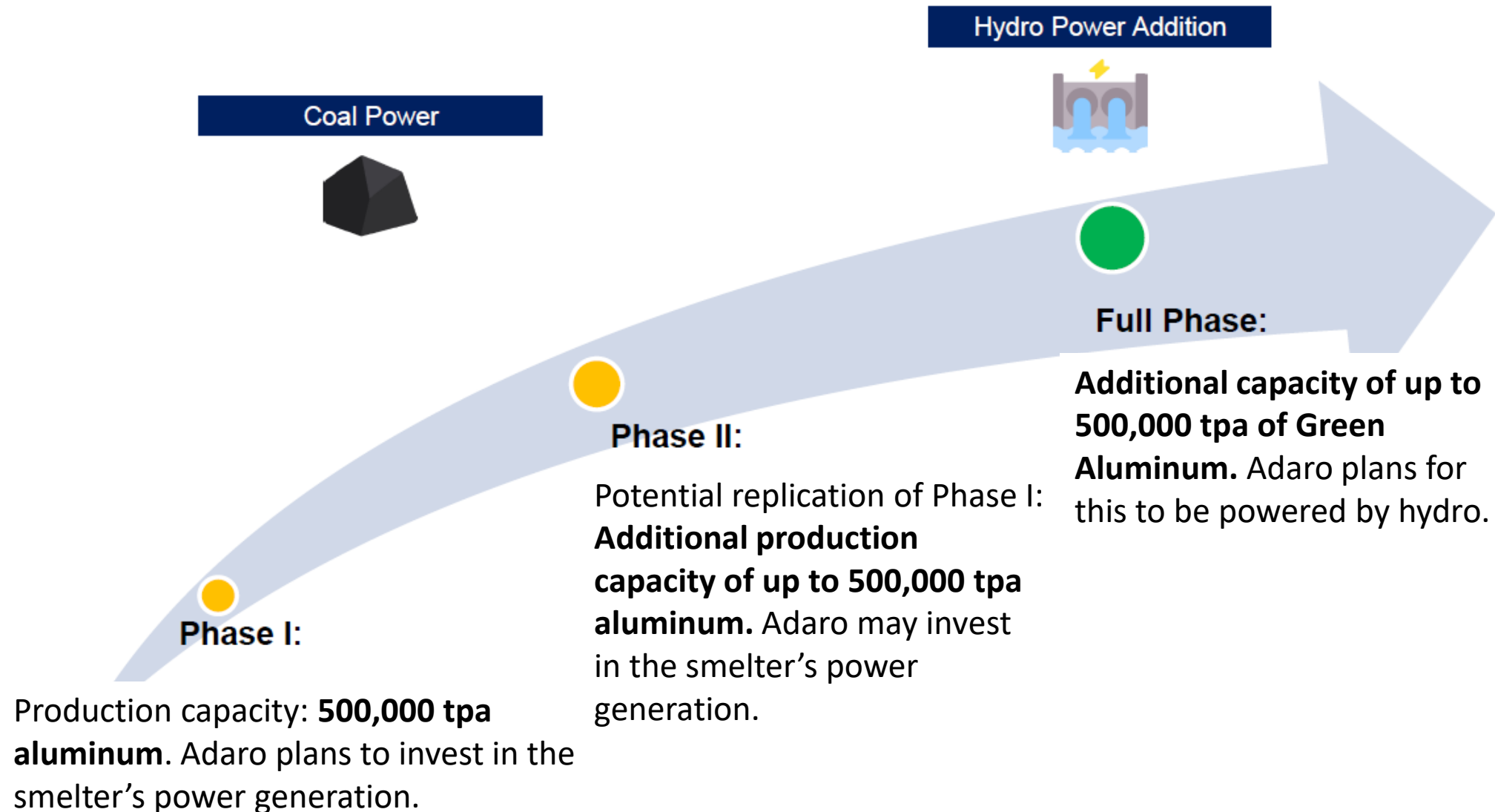
- Located in a very strategic location in terms of export & import, and potential supply of mineral sources and smelting industries
- Total area of 16,000 Ha, consists of 2 (two) large overlay area – 11,500 Ha and 4,700 Ha
- Potential development of a large-scale public port to support the industrial logistics
- Huge potential of Hydro Power Plants development to power the industrial estate





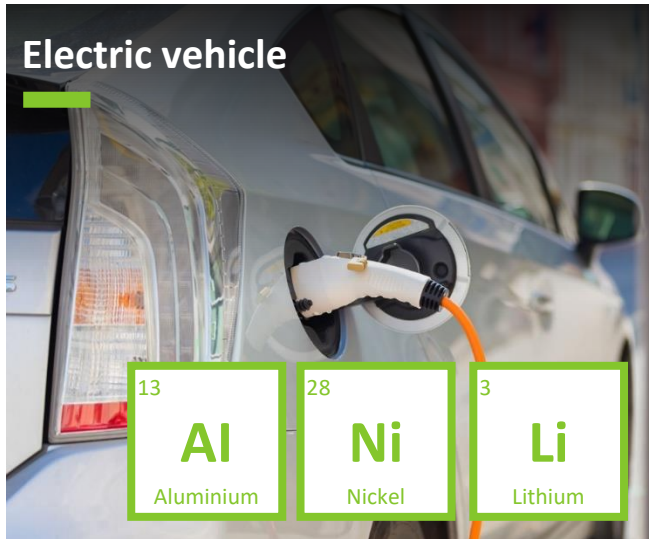
# Aluminum Smelter in Kaltara Industrial Park

Scope of project is 1.5mt of Aluminum production



# The Green Economy

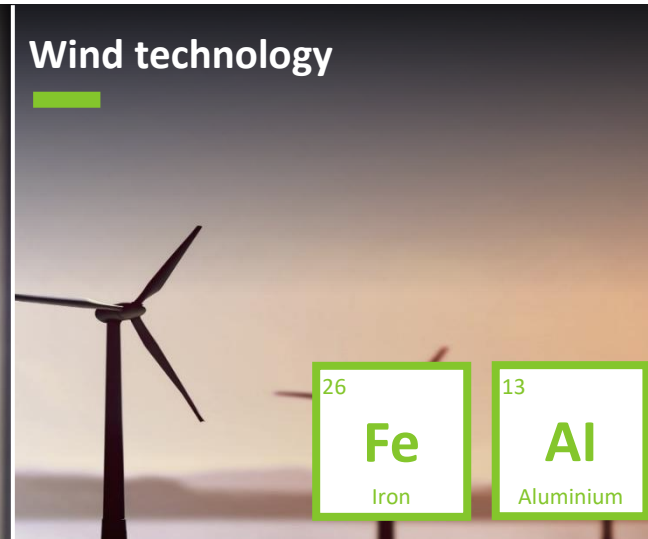
## Driving demand for Green Minerals



**30%** More Aluminium used in electric vehicles than internal combustion engines

**35 kg** Nickel needed in a single car lithium-ion battery pack

**8 kg** Lithium needed in a single car lithium-ion battery pack



**90 tons** Metallurgical coal needed to produce Steel for each MW of wind power

**120 tons** Steel needed for each MW of wind power

**1 ton** Aluminium in a single wind turbine



**7 tons** Polysilicon needed for each MW solar PV plant

**4M tons** Aluminium demand from the solar power sector by 2040

# Adaro is well positioned

to capture these opportunities, now and in the future



## Adaro has the necessary skillset...



Strong **balance sheet and financial capabilities**



**Proven track record** in building and operating **large-scale, complex projects**



**Deep experience** and knowledge in Indonesia's **mining** sector



**Strong ownership** and management team with extensive connections

## ...to capture these opportunities

Operating **metallurgical coal mine** in Indonesia & Australia

Building a **500K tons aluminium smelter**

Building one of the world's largest **green industrial estates** in North Kalimantan, including **plans to build several GW of hydro power & Solar PV plants**

Continue developing **renewable energy projects** within the region, and one of two consortiums to passed pre-qualification of **waste-to-energy project in Indonesia**

**Adaro will continue to explore opportunities to serve the green mineral needs of the new economy**

# Global Demand Outlook

Industry	2018	2040	Remarks
Transportation	25MT	43MT	<ul style="list-style-type: none"> <li>Higher demand for electric vehicle, especially for battery packaging and heat sink.</li> <li>Penetration to reduce vehicle weight and use of gasoline.</li> </ul>
Building and Construction	22MT	29MT	<ul style="list-style-type: none"> <li>Urbanization and growing construction industry.</li> <li>Penetration for building materials.</li> </ul>
Consumer and Industrial	15MT	21MT	<ul style="list-style-type: none"> <li>Increasing demand for consumer and industrial products.</li> </ul>
Packaging	13MT	19MT	<ul style="list-style-type: none"> <li>Increasing demand for tin packaging.</li> <li>Increasing demand for foil and plastic substitution.</li> </ul>
Energy	11MT	16MT	<ul style="list-style-type: none"> <li>Increasing demand for energy sector application, such as solar panel structure.</li> <li>Copper substitute for transmission cable.</li> </ul>

- Demand for aluminum is estimated to increase on the back of economic growth in Asia.
- Demand for aluminum will be supported by the increase in transportation sector, in line with the commitment of global citizen and the transportation industry to increase the production of new energy vehicle.



adaro  
GREEN



# Adaro Green

# 25GW of green energy needs by 2030

In Indonesia, before accounting for increased demand for processing green minerals

102 GW of installed capacity by 2030



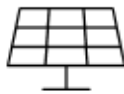
**11.3GW**

Hydropower



**5.8GW**

Geothermal



**4.8GW**

Solar



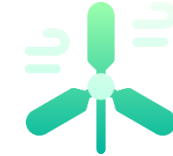
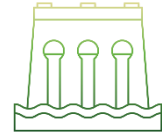
**2.7GW**

Others (incl Wind, bio-gas/mass & WTE)

**The increased demand for green minerals will drive further need for green energy**

Source: RUPTL 2021-2030

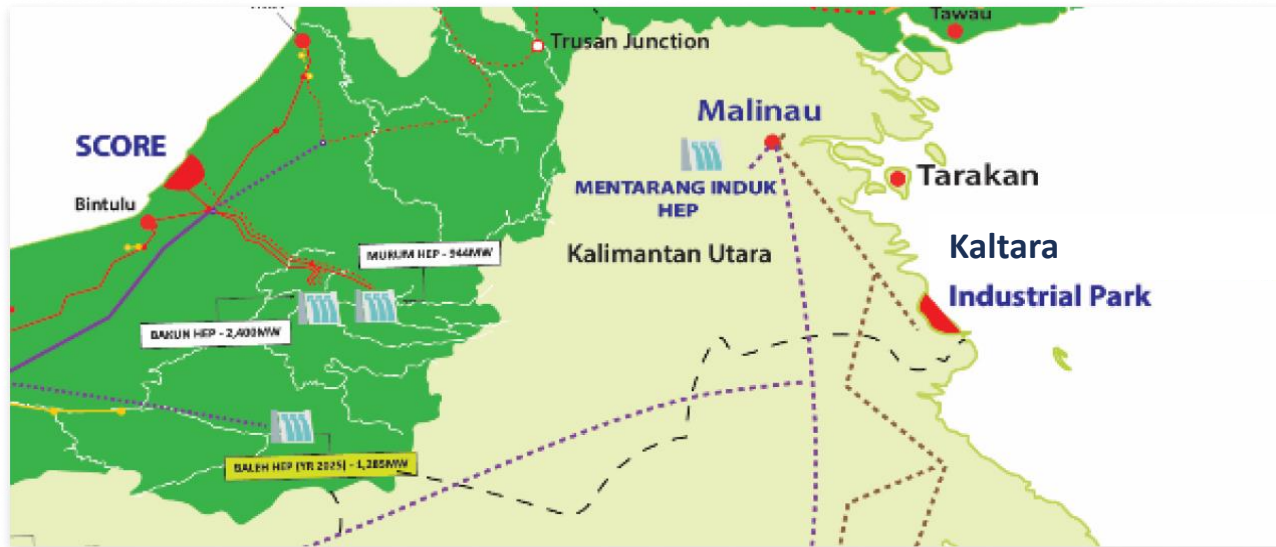
# Development of Renewable Energy for Green Business Transformation



• Project	Hydro Power Plant	Mini-Hydro Power Plant	Solar PV + Battery Energy Storage System (BESS)	Wind Turbine + Battery Energy Storage System (BESS)
• Location	Kalimantan Industrial Park Indonesia, North Kalimantan	Lampunut, Central Kalimantan	Kelanis, Central Kalimantan	Tanah Laut, South Kalimantan
• Installed Capacity	<b>Total capacity is ~1.4GW (phase 1)</b>	<b>~ 4 MW</b>	<b>Solar PV: ~ 8 MWp BESS: ~ 4 MWh</b>	<b>Wind: ~ 70 MW BESS: ~ 10 MWh</b>
• Off-taker / User	Kalimantan Industrial Park Indonesia's tenants	PT Maruwai Coal (PTMC), Adaro Minerals' subsidiary for coking coal mining operations	PT Adaro Indonesia, AEI's subsidiary for thermal coal mining operations	PLN
• Current Status	<b>Finalization of Offtake agreement</b>	<b>Selection process of EPC contractor</b>	<b>Development</b>	<b>LoI</b>



# Indonesia's largest hydro power plant project



- Planned installed capacity of 1,375 MW, with the potential to generate approximately 9 Terawatt hours (TWh) per annum.
- Located in North Kalimantan, this power plant will provide affordable, reliable, and sustainable energy to support the Kaltara Industrial Park. COD is estimated in 2030.
- Will use the Concrete Faced Rockfill Dam (CFRD), designed with a dam crest height of 235m and crest length of 815m. This hydro power plant will have one of the world's tallest dams.





# Recently energized captive solar PV

~600 kWp to supply to our mining area



- We have installed **130 kWp PV Rooftop**, and another **468 kWp PV Floating** (so far the biggest installed floating PV in Indonesia)
- The project is expected to generate **156,000 kWh/year** and serves a captive market to **support Adaro Group's mining operation.**
- Environmental impact of this project includes **replacing 33,000 liters of diesel per year**, and **avoiding emission of 98 ton CO2/year.**





# Adaro Energy

# Why Adaro



## Solid Foundation

- Integrated energy company with strong footing in the energy industry.

## Positioned for Sustainable Growth

- Integrated business model enables us to control cost and manage risks better, ensuring business sustainability.

## Capturing Opportunities in Green Economy

- Well positioned to capture the opportunity through ADMR, which will focus on managing and developing our non-coal mineral assets.

## Consistent Dividend Payment and Shareholder Return

- Cumulatively from 2008, we have paid approximately **US\$2.9 billion** in dividends with average payout ratio of **47%**.

## Industry Leading Cost Position

- Cost competitiveness resulted in one of the highest operational EBITDA margins in the sector, reaching **62%** of operational EBITDA margin in 2022.

## Experienced Management Team

- Management has been consistent with strategy execution while also being nimble in reacting to business developments

## Commitment to ESG

- PT Adaro Indonesia received 5<sup>th</sup> PROPER Gold Award
- MSCI ESG rating of BBB.

## Strong Cash Generation

- Adaro generated \$2.8 billion of free cash flow and net cash of \$2.6 billion in FY22 which will fund our business transformation.

# Regulatory Updates



## Conversion of CCOW to IUPK

- Continuation of AI's CCOW.
- Government Regulation (PP No 15 of 2022) stipulates the changes in the commercial terms: royalty rate, CIT rate, and additional profit sharing with the regional and central government.

	CCOW	IUPK
<b>1</b> Royalty rate	13.5%	14% - 28%
<b>2</b> CIT	45%	22%
<b>3</b> Profit Sharing (from net income)		
- Central Gov't	-	4%
- Regional Gov't	-	6%

- In line with conversion to IUPK, AI's concession size has been reduced, but does not affect our operation or our reserves.

## Change in the royalty rate of IUP

- This impacts MIP and Balangan Coal mines, representing approximately 17% of 2022 production. The royalty going forward will be based on HBA pricing and could increase to between 7% - 10.5% from 3% - 5%.

## Change in the formula of Harga Batubara Acuan (HBA)

- Indonesia has introduced the reformulation of HBA to better reflect the value of Indonesian coal. The new HBA has three coal categories: HBA (6,322 kcal GAR), HBA I (5,200 kcal GAR), and HBA II (4,200 kcal GAR).
- The HBA will be derived from an average of actual traded Indonesian prices from two months prior. 70% from deals done in the first month prior, and 30% from deals done in the two months prior.

# Large Reserves and Diverse Portfolio across Indonesia and Australia



**1**  
Adaro Indonesia: 88.5% Existing, S Kalimantan sub-bituminous  
**Reserves: 731 Mt**  
Resources: 3.3 Bt

**2**  
Balangan Coal Companies: S Kalimantan sub-bituminous  
**Reserves 125Mt**  
Resources: 265 Mt

**3**  
PT Adaro Minerals Indonesia Tbk (AMI): Central and East Kalimantan Metallurgical coal  
**Reserves: 171 Mt**  
Resources: 980 Mt

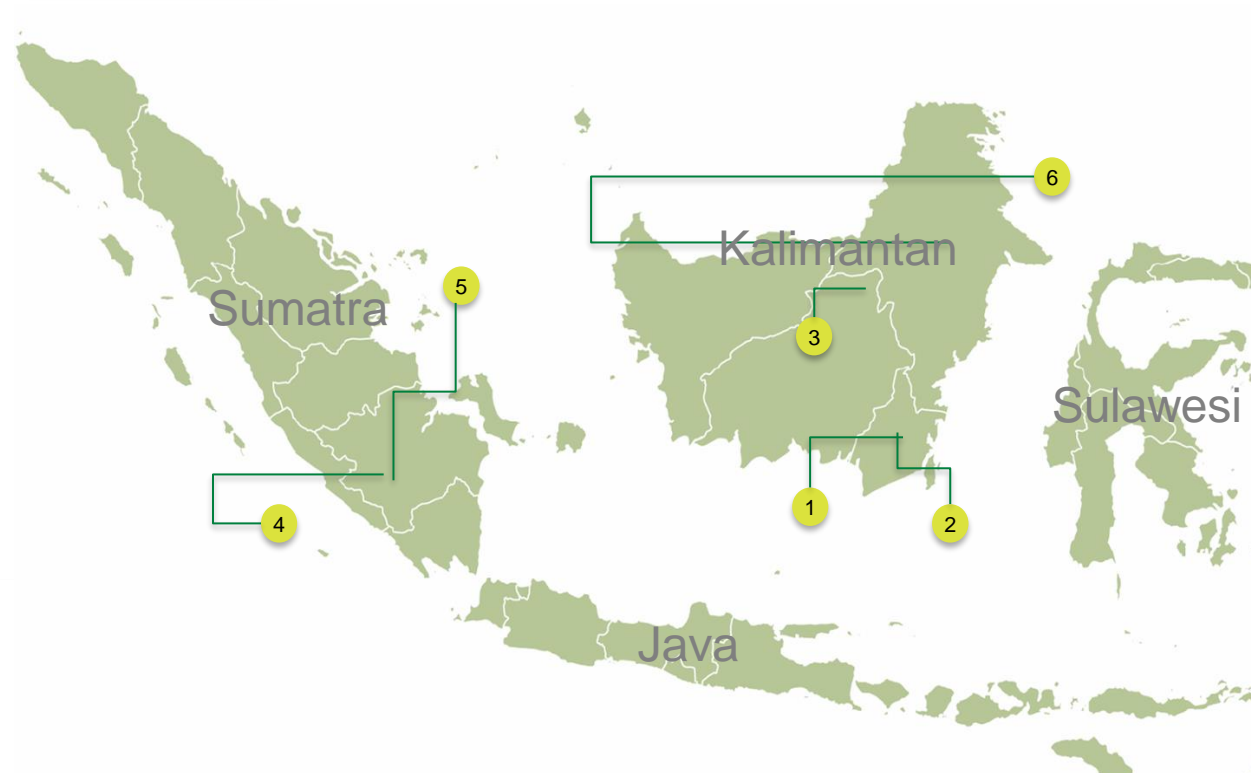
**4**  
MIP: 75% stake S Sumatra sub-bituminous  
**Reserves 210.2 Mt**  
Resources 305 Mt

AEI has more than **8.5 billion tonnes (Bt) of resources** and **1.4 Bt of reserves** across thermal and metallurgical coal – providing us with flexibility in the coal market.

**5**  
BEE: 61.04% stake S Sumatra sub-bituminous  
Geological study phase

**6**  
BEP: 10.22% stake with option to acquire 90% E Kalimantan sub-bituminous  
Resources 3.3 Bt

**7**  
Kestrel Coal Mine  
48% of 80% Queensland, Australia Premium HCC  
**Reserves: 190 Mt**  
Resources: 430.5 Mt

Note: Reserves and Resources numbers above are before taking into account AEI's equity ownership

# Integrated Business Model

with control over each part of the supply chain from pit-to-power



## MINING

### THERMAL COAL

<b>Adaro Indonesia (AI)</b> Coal mining, S. Kalimantan	<b>88.5%</b>
<b>Balangan Coal</b> Coal Mining, S. Kalimantan	<b>75%</b>
<b>Mustika Indah Permai (MIP)</b> Coal Mining, S. Sumatra	<b>75%</b>
<b>Bukit Enim Energi (BEE)</b> Coal Mining, S. Sumatra	<b>61%</b>
<b>Bhakti Energi Persada (BEP)</b> Coal mining, E. Kalimantan	<b>10.2%</b>

### METALLURGICAL COAL

<b>PT Adaro Minerals Indonesia Tbk (AMI)</b> Coal mining, C. Kalimantan, E. Kalimantan	<b>83.8%</b>
<b>Kestrel Coal Resources<sup>1</sup></b> Queensland, Australia	<b>48%</b>

1) Kestrel Coal Resources has 80% ownership on Kestrel Coal Mine



## SERVICES

### MINING SERVICES

<b>Saptaindra Sejati (SIS)</b> Coal mining and hauling contractor	<b>100%</b>
<b>Jasapower Indonesia (JPI)</b> Operator of overburden crusher and conveyor	<b>100%</b>
<b>Adaro Jasabara Indonesia (AJI)</b> Mining services	<b>100%</b>
<b>Adaro Mining Technologies (AMT)</b> Coal research & development	<b>100%</b>

### COAL TRADING

<b>Coaltrade Services International Pte. Ltd (CTI)</b> Coal Trader	<b>90%</b>
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## LOGISTICS

<b>Maritim Barito Perkasa (MBP)</b> Barging & Shipping	<b>100%</b>
<b>Sarana Daya Mandiri (SDM)</b> Dredging & maintenance in Barito River mouth	<b>51.2%</b>
<b>Indonesia Multi Purpose Terminal (IMPT)</b> Port management & terminal operator	<b>100%</b>
<b>Indonesia Bulk Terminal (IBT)</b> Coal terminal & fuel storage	<b>100%</b>
<b>Puradika Bongkar Muat Makmur (PBMM)</b> Cargo loading & unloading	<b>100%</b>
<b>Harapan Bahtera Internusa (HBI)</b> Shipping administration	<b>100%</b>
<b>Barito Galangan Nusantara (BGN)</b> Maintenance services	<b>100%</b>



## POWER

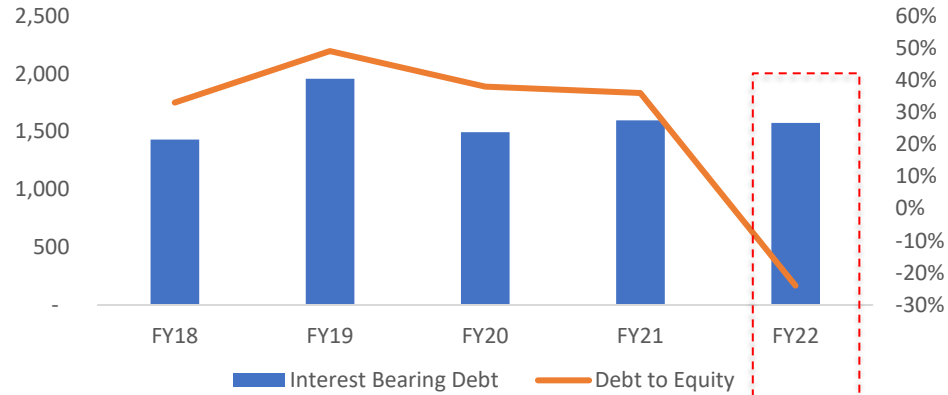
<b>Makmur Sejahtera Wisesa (MSW)</b> Operator of 2x30MW mine-mouth power plant in S. Kalimantan	<b>100%</b>
<b>Tanjung Power Indonesia (TPI)</b> Partner in 2x100MW power plant project in S. Kalimantan	<b>65%</b>
<b>Bhimasena Power Indonesia (BPI)</b> Partner in 2x1000MW power generation project in Central Java	<b>34%</b>



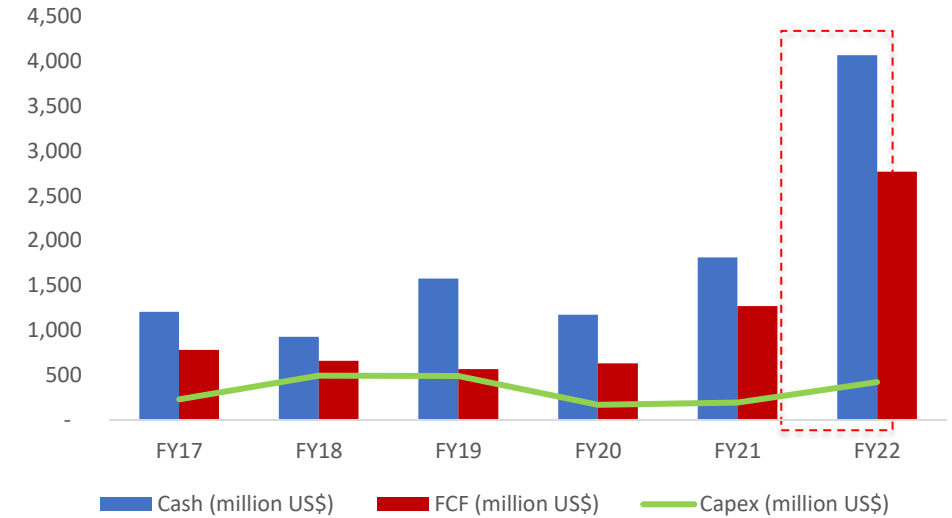
# Solid Financials Backed by Strong Operations



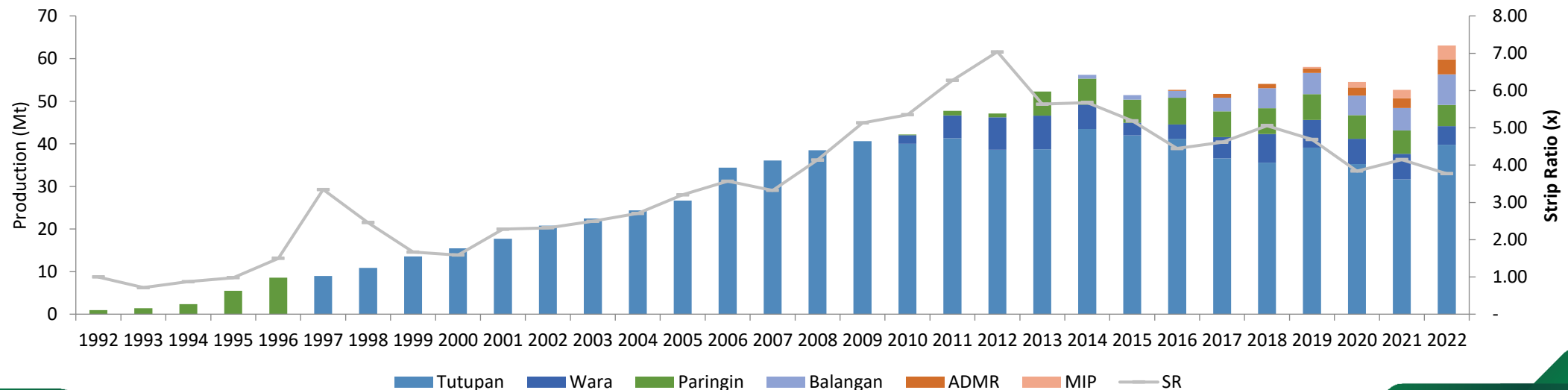
## Financial position continues to improve



## Strong cash balance and free cash flow generation



## Adaro Historical Production



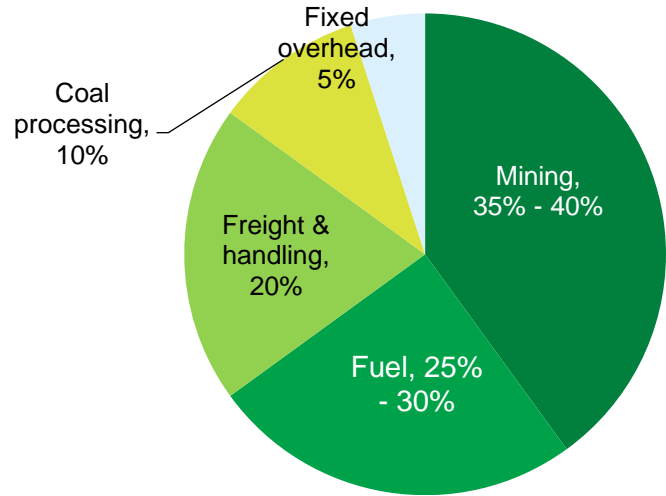


# Industry Leading Efficiency

One of the lowest cost operators in Indonesia



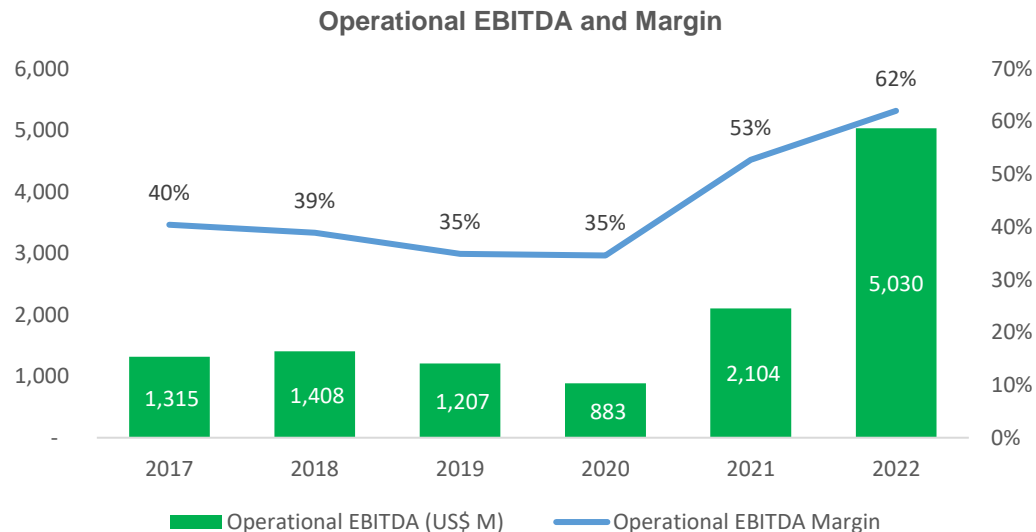
## Adaro's estimated coal cash cost breakdown (FY22)



## Electrification to reduce the usage of diesel gensets



## Strong operational EBITDA generation and healthy operational EBITDA margin

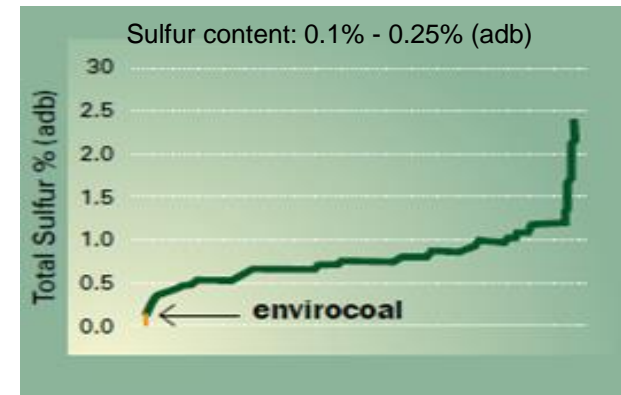
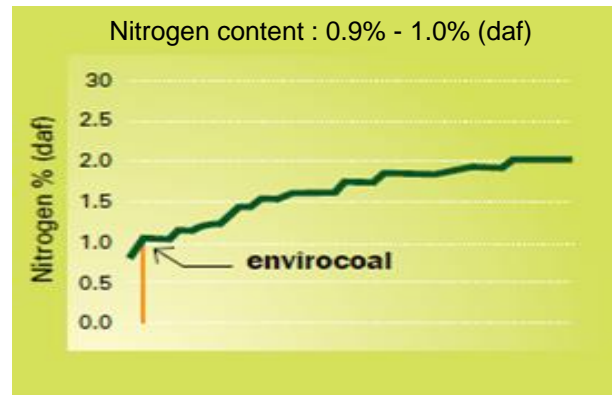
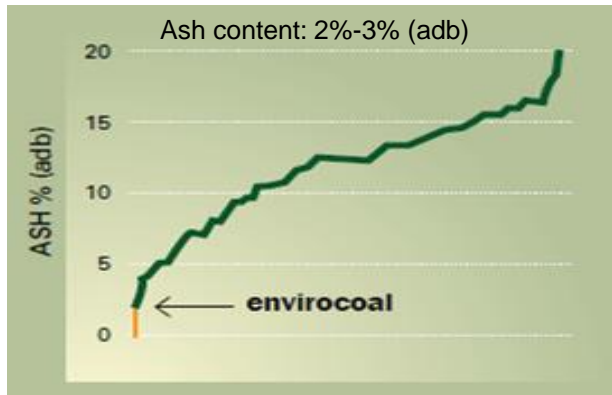


- Consistently delivers on operational EBITDA target and performed in-line with guidance.
- Healthy operational EBITDA margin on the back of better cost control from integrated business model.

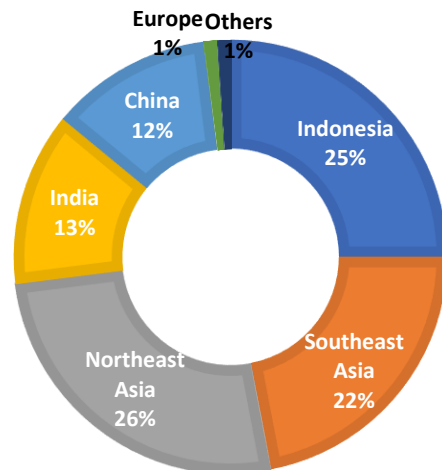
# Well Positioned Product and Strong Customer Base Focused on Asia



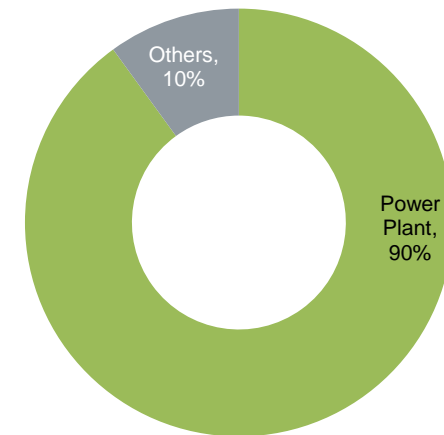
Envirocoal is among the lowest pollutant content coal in the seaborne market



Customer geographical breakdown (FY22)



Customer type by volume (FY22)



\*others include cement, pulp & paper, and industrial

# Operates Mining Services and Logistics to Ensure Operational Excellence



Key part of our vertical integration.

Ensures operational excellence, productivity improvement and timely reliable delivery to customers.

Stable earnings profile buffers against the volatility in coal price.

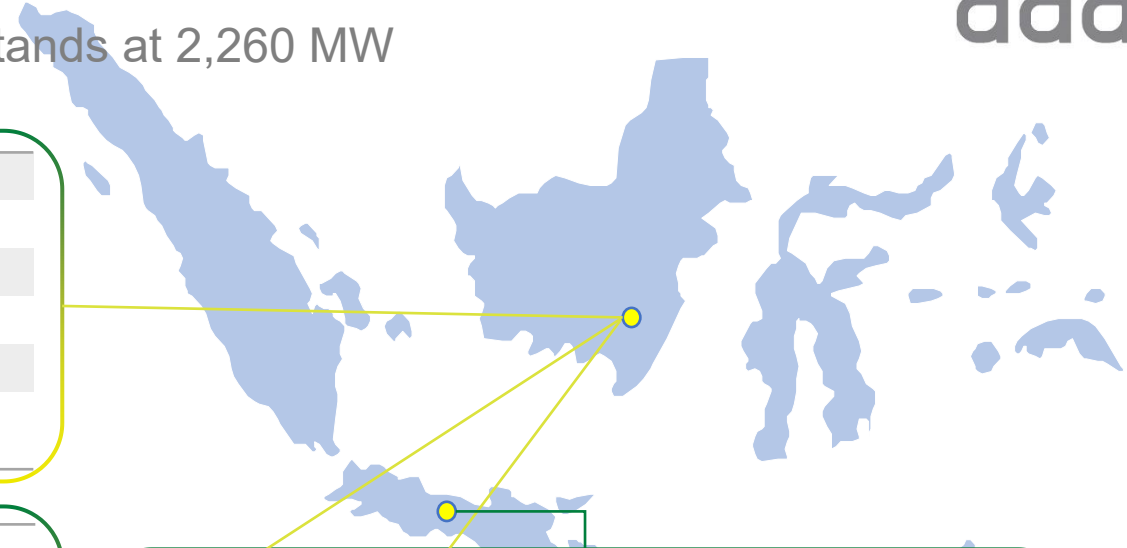
Focus on providing services for companies in the Adaro Group.



		Units	FY22	FY21	FY22 vs FY21
SIS	Overburden Removal	Mbcm	189.60	161.13	18%
	Coal Transport to Port	Mt	59.51	43.36	37%
MBP	Coal barging	Mt	57.58	48.94	18%

# One of Indonesia's largest IPPs

Adaro Power's gross power generation capacity stands at 2,260 MW



Makmur Sejahtera Wisesa – CFPP	
Size / Tech.	2 x 30 MW CFB technology
Shareholders	100% Adaro Power
COD	#1 Jun 2013, #2 Feb 2014
Availability Factor	90.6% (Avg. FY22)
Adaro Mining Electrification	Current: 11.7 MW Plan: additional 17.9 MW



Makmur Sejahtera Wisesa – Solar PV	
Size	130 kWp + 467 kWp
Shareholder	100% Adaro Power
COD	Q3 2018 (for 130 kWp) & 467 kWp COD 27 December 2021
Project cost	USD 800,000 (approx.)
Electricity produced	791.4 MWh (FY22)



Tanjung Power Indonesia – CFPP	
Size / Tech.	2 x 100 MW CFB technology
Shareholders	65% AP, 35% Korea EWP
Project cost	USD 545 million
COD	2019
Availability Factor	89.7% (Avg. FY22)



Bhimasena Power Indonesia – CFPP	
Size / Tech.	2 x 1,000 MW Ultra Super Critical
Shareholders	34% AP, 34% JPower, 32% Itochu
Project cost	USD 4.2 billion
Availability Factor	86.5% (Avg. FY22)

Apart from improving the performance of its already-operated power plants and completing the construction, Adaro Power continues to study renewable power projects such as biomass, wind power, and solar PV to support PLN through unsolicited proposal and tenders. Adaro Power is also in the process of developing captive use power generation projects for the Group's other business units such as IBT (Genset & Solar PV) and ADMR (Mini-hydro)


# Owns & Operates 1,670 Ips of Water Treatment Plants



Also Supports Mining Operations through Slurry Management Business Unit


**1**

**Dumai Tirta Persada**  
 Location : Dumai, Riau  
 Size : 450 Ips  
 Adaro Shares : 49%  
 Status : First phase (50 Ips) completed




**2**

**Grenex Tirta Mandiri**  
 Location : Bekasi, West Java  
 Size : 200 Ips  
 Adaro Shares : 49%  
 Status : Started construction




**3**

**Drupadi Tirta Gresik**  
 Location : Gresik, East Java  
 Size : 400 Ips  
 Adaro Shares : 100%  
 Status : In operation since 2012




**4**

**Adaro Wamco Prima**  
 Location : Tanjung, South Kalimantan  
 Business : Mining pump services  
 Adaro Shares : 60%  
 Status : Operation




**5**

**Drupadi Tirta Intan**  
 Location : Banjar, South Kalimantan  
 Size : 500 Ips  
 Adaro Shares : 100%  
 Status : In operation since 2012



**6**

**Adaro Tirta Mentaya**  
 Location : Sampit, Central Kalimantan  
 Size : 320 Ips (contract), 400 Ips (capacity)  
 Adaro Shares : 90%  
 Status : In operation upto 250 Ips




Adaro Water is currently in the process to achieve operational excellence through continuous improvement in its operating subsidiaries, including WTPs operations and slurry pumps operations. Meanwhile, on the construction side, Adaro Water continues to ensure that the project can achieve its goals in terms of schedule, budget & quality. From business development perspective, Adaro Water continues to actively seeking for new projects through PPP, non PPP and acquisition.

**PT Adaro Minerals  
Indonesia Tbk  
(IDX:ADMR)**

# Adaro Minerals Indonesia at a Glance



Indonesia's leading metallurgical coal producer with low-cost, efficient operation supported by Adaro Group's integrated supply chain network



Five CCoW holders located in Central and East Kalimantan, Indonesia.



Large coal reserves and resources base which supports long-term sustainable growth.  
**Coal reserves: 170.7 Mt. Coal resources: 980 Mt.**



Coal production in 2021 reached 2.3 Mt, and in 2022 coal production reached 3.37 Mt  
**(▲ 46% y-o-y).** Aiming at 6 Mtpa in 2025.



**Strong demand profile** from blue-chip steel companies. Current customers are located in China, Japan and Indonesia.



Offers coal **supply diversification** for customers in a market dominated by Australia, Canada and the US.



Close proximity to key markets offers customers with more **competitive cost** and shorter transportation time.

# Company Overview - ADMR

- Established in 2007, Adaro Minerals carries out an integrated mining activities through its subsidiaries, which has one of the largest greenfields area in Central Kalimantan for metallurgical coal.
- The Company's subsidiaries own 5 Coal Contract Of Work ("CCoW") located in East Kalimantan and Central Kalimantan with total area up to 146,579 ha.
- The 5 CCoWs are in the operation and production operation development stages: Maruwai Coal is currently operating and selling metallurgical coal, Lahai Coal is conducting mining optimization, meanwhile Kalteng Coal, Sumber Barito Coal and Juloi Coal are in development phase.

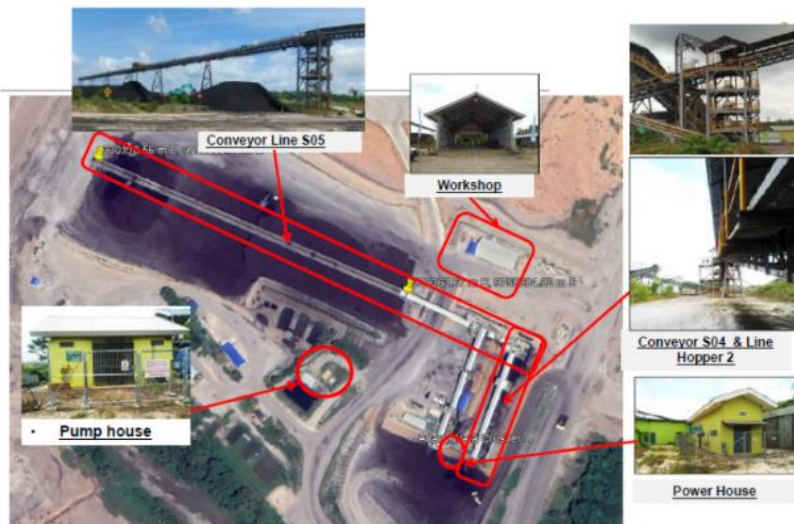
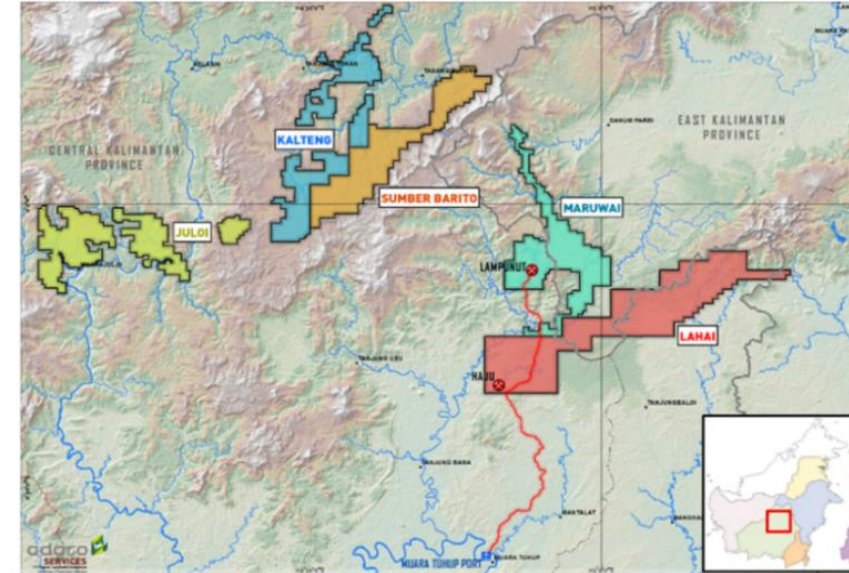







Foto Udara Area Wara Coal Crusher PT. JPI

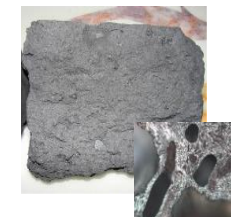
CCoW	STAGE	COALS
Lahai		Green Coal
Maruwai		Hard Coking Coal, Green Coal
Kalteng		Met-Coal
Juloi		Met-Coal
Sumber Barito		Met-Coal

Notes :  Operation

 Production Operation Development



**Metallurgical Coal**



**Cokes**



# Large Coal Resource and Reserves

## Coal Resource

Company / Locality	Total Coal Resources (Mt)	Measured (Mt)	Indicated (Mt)	Inferred (Mt)	Compliance Standard
<b>LC - Haju</b> (Green Coal)	4.4	3.8	0.4	0.1	JORC
<b>MC - Lampunat</b> (Metallurgical and Green Coal)	105.4	98.4	6.9	0.2	JORC
<b>JC - Juloi Northwest</b> (Metallurgical)	629.8	-	269.6	360.3	JORC
<b>JC - Bumbun</b> (Metallurgical)	174.5	60.4	57.8	56.4	JORC
<b>KC - Luon</b> (Metallurgical)	50.9	24.7	19.3	6.9	JORC
<b>SBC - Dahlia Arwana</b> (Metallurgical)	15.0	6.5	6.5	2.0	JORC
<b>TOTAL</b>	<b>980.0</b>	<b>193.8</b>	<b>360.5</b>	<b>425.7</b>	

## Coal Reserves

Company / Locality	Total Coal Reserves (Mt)	Proved (Mt)	Probable (Mt)	Compliance Standard
<b>LC - Haju</b> (Green Coal)	2.3	2.3	0.03	JORC
<b>MC - Lampunat</b> (Metallurgical and Green Coal)	89.6	81.2	8.4	JORC
<b>JC - Bumbun</b> (Metallurgical)	55.5	-	55.5	JORC
<b>KC - Luon</b> (Metallurgical)	17.7	-	17.7	JORC
<b>SBC - Dahlia Arwana</b> (Metallurgical)	5.6	-	5.6	JORC
<b>TOTAL</b>	<b>170.7</b>	<b>83.4</b>	<b>87.2</b>	

One of the **largest undeveloped** met coal reserves and resources globally

Premium quality hard coking coal with **low ash, low phosphorus, and high vitrinite** content

**Long reserves life,** based on current production

*\*Coal Reserves and Resources data is as of August 2021 from independent consultant PT Quantus Consultants Indonesia*

# Established Infrastructure to Ensure Operational Excellence

## Lampunut Coal Handling and Processing Plant

### Crushing Plant : 600 tph



- One of the largest CHPPs in Indonesia in terms of capacity
- Reduces ash from 12% ad to 4.5% ad

### Washing Plant : 525 tph (max: 550 tph)



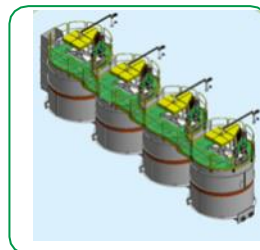
### WASHING – 3 Process Circuit



DMC  
1.4 – 50 mm

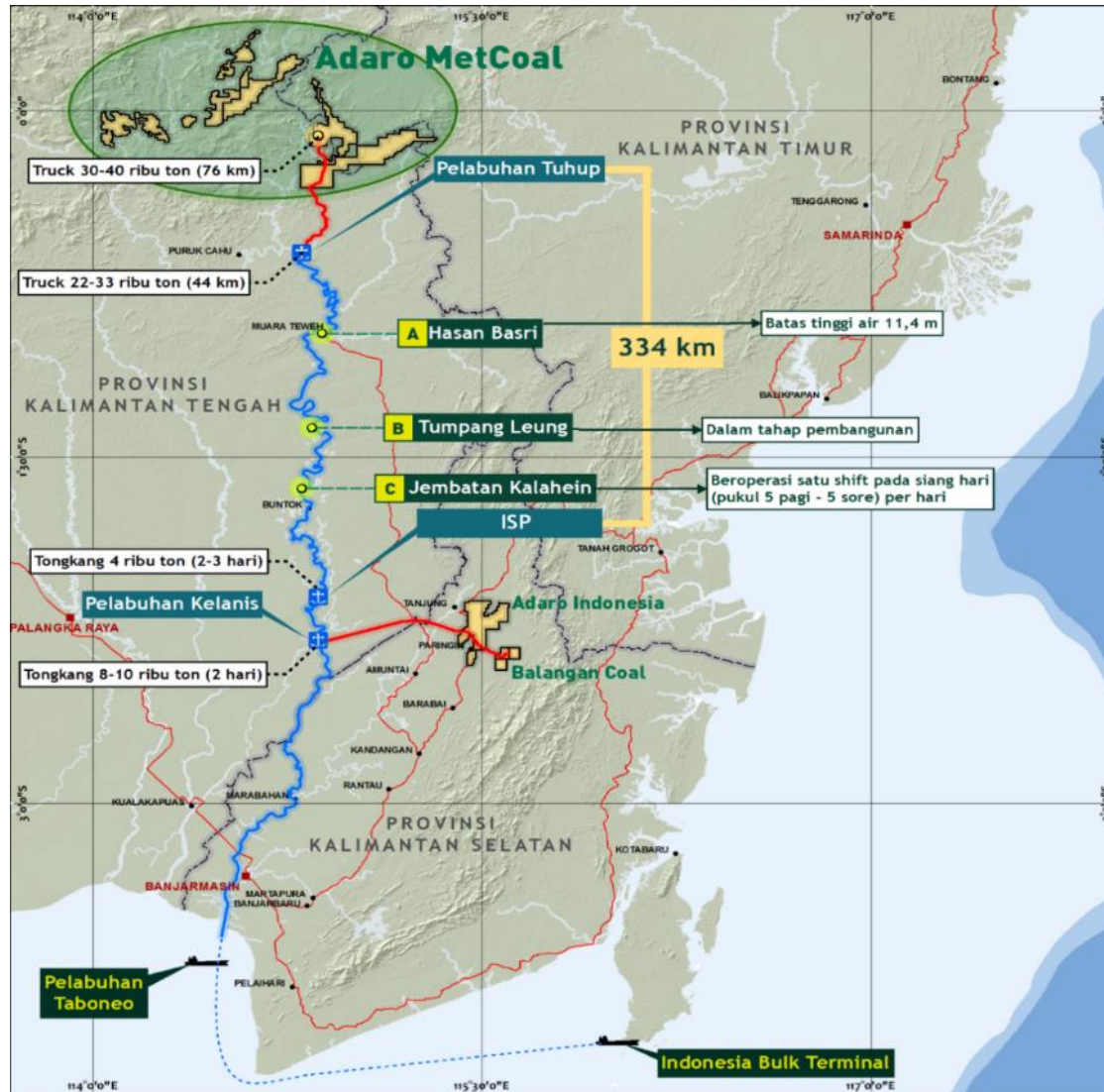


Hydrocyclone & Spiral  
0.25 – 1.4 mm

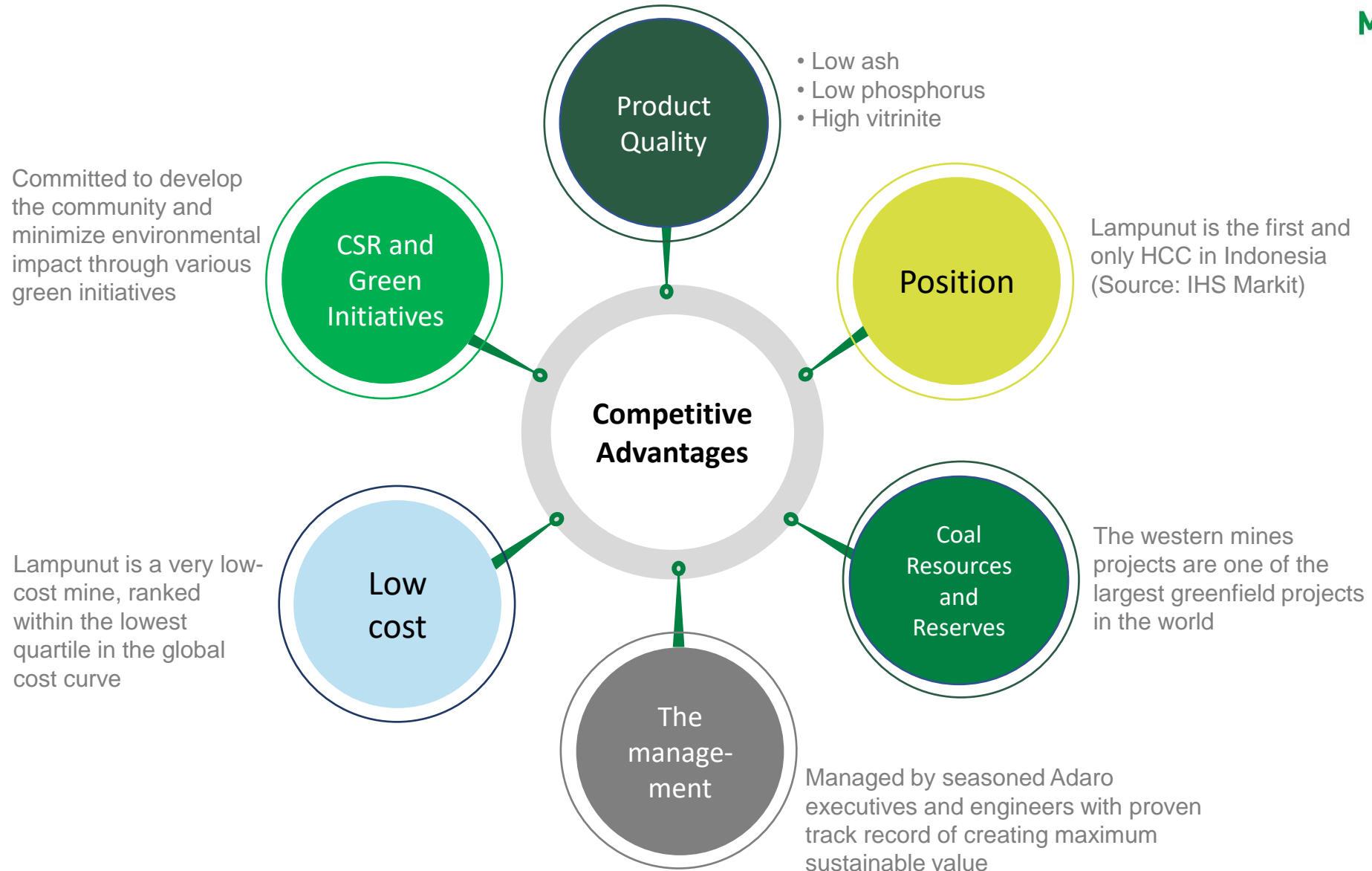


Flotation  
0.25 mm

# Supply Chain: from Coal Terminal to Vessel Loading Points



# Competitive Advantages

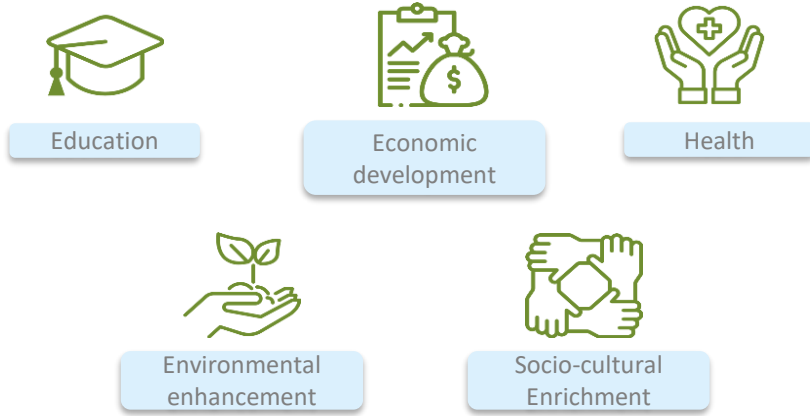




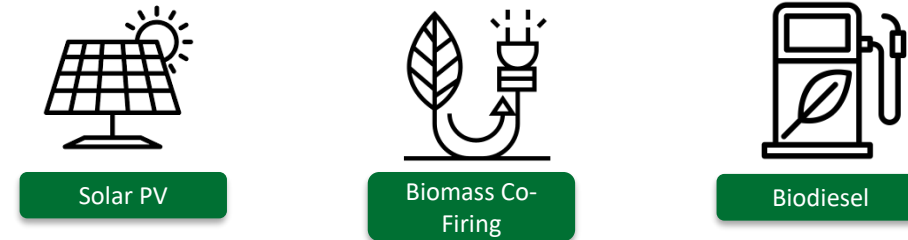
# Sustainability and Green Initiatives

# Balance of People, Planet and Purpose

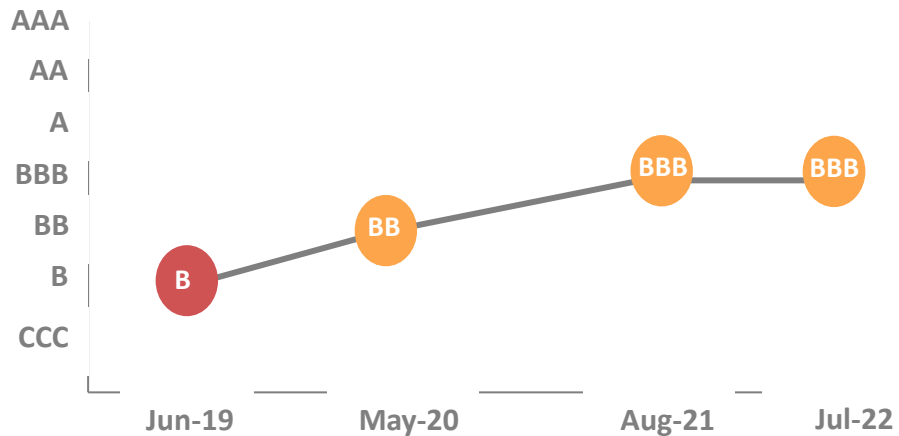
## Key programs in Corporate Social Responsibility



## Green Initiatives to Reduce Emission



## MSCI ESG Rating History

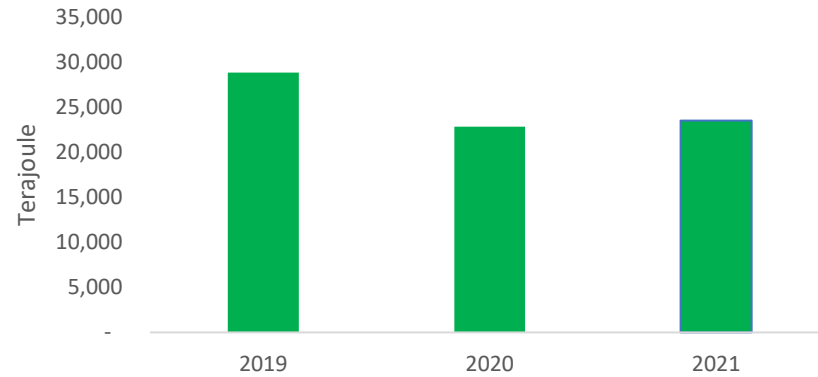


## Fifth PROPER Gold Award

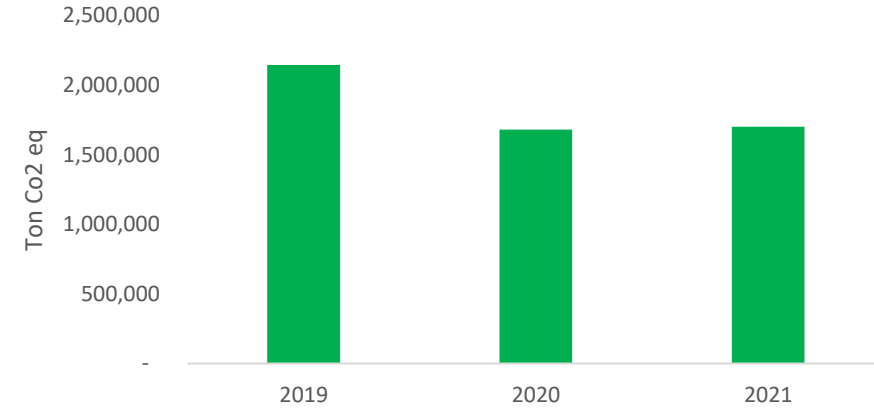


# Improving Environmental Performance

## Reduced total energy consumption by 21% y-o-y



## ...and reduced GHG emission (scope 1) by 22% y-o-y



## Innovative projects to improve efficiency and environmental performance

Fleet Management System reduces queueing time and energy used



Kelanis Smart Inverter Solar Cell reduces diesel usage and CO2 emission

# Ecosystem Restoration and Carbon Capture



Through Adaro Land Pillar, we have subsidiaries which own forest management permits for ecosystem restoration and forest management permits for carbon absorption.

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PT Alam Sukses Lestari holds license to use timber product – ecosystem restoration in natural forest which allows restoration of forest ecosystem to achieve balanced biodiversity.

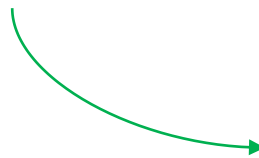
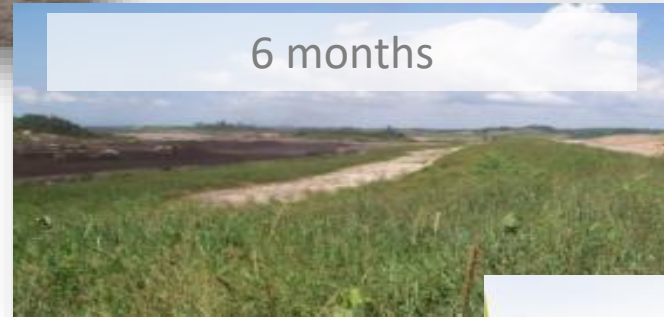
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PT Hutan Amanah Lestari holds license for utilization of carbon absorption and is one of the largest holders of such license in Indonesia. We expect that once operational, carbon trading will be the main business of this company.



# Reclamation and Rehabilitation



# Awards and Recognitions

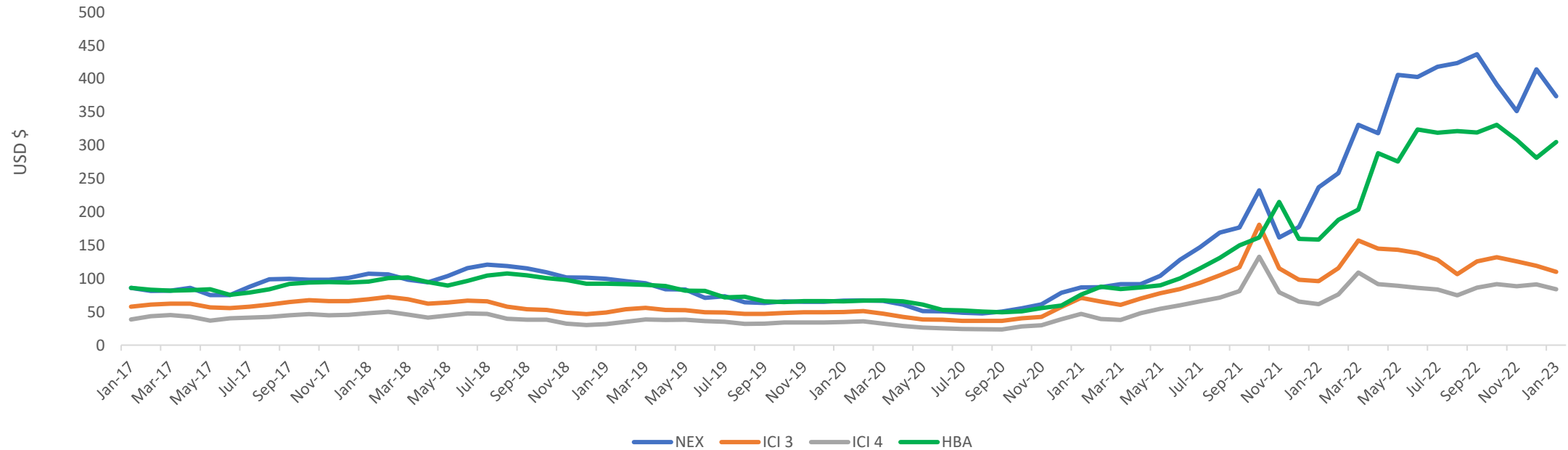


2012	2013	2014	2015	2016
<p><b>PROPER gold award</b> Ministry of Environment &amp; Forestry</p> <p><b>Aditama gold award</b> <i>For environment excellence in the coal sector</i> Ministry of Energy &amp; mineral resources</p> <p><b>Social empowerment award</b> <i>Won nine awards honoring companies that run CSR programs</i> Ministry of Human Dev</p>	<p><b>PROPER green award</b> Ministry of Environment &amp; Forestry</p> <p><b>Aditama gold award</b> <i>For environmental excellence in the coal sector</i> Ministry of Energy &amp; mineral resources</p> <p><b>Global CSR bronze award</b> <i>For sustainable clean water program</i> Pinnacle Group Global CSR</p>	<p><b>PROPER green award</b> Ministry of Environment &amp; Forestry</p> <p><b>Aditama gold award</b> <i>For environmental excellence in the coal sector</i> Ministry of Energy &amp; mineral resources</p> <p><b>Bronze sustainability award</b> <i>For sustainable investment</i> RobecoSAM</p>	<p><b>PROPER green award</b> Ministry of Environment &amp; Forestry</p> <p><b>Cultural based community empowerment award</b> <i>Awards in several categories</i> Corporate Forum for Community Development &amp; Ministry of Human Dev</p> <p><b>Bakti Husada award</b> <i>For community health development</i> Ministry of Health</p>	<p><b>PROPER green award</b> Ministry of Environment &amp; Forestry</p> <p><b>Global CSR bronze award</b> <i>For community-led sanitation</i> Annual Global CSR &amp; Summit</p> <p><b>Padmamitra award</b> <i>For poverty alleviation</i> Ministry of Social Affairs</p>
2017	2018	2019	2020	2021
<p><b>PROPER green award</b> Ministry of Environment &amp; Forestry</p> <p><b>Aditama gold award</b> <i>For environment excellence in the coal sector</i> Ministry of Energy &amp; mineral resources</p> <p><b>Best of environmental management &amp; safety award</b> Ministry of Energy &amp; mineral resources</p>	<p><b>PROPER green award</b> Ministry of Environment &amp; Forestry</p> <p><b>Aditama gold award</b> <i>For environment excellence in the coal sector</i> Ministry of Energy &amp; mineral resources</p> <p><b>Best of coal mining service business management &amp; safety award</b> Ministry of Energy &amp; mineral resources</p>	<p><b>PROPER gold award</b> Ministry of Environment &amp; Forestry</p> <p><b>Global CSR award, one gold and two silver</b> <i>For early childhood education program, CSR Leadership and environmental excellence in leader program.</i> Annual Global CSR &amp; Summit</p>	<p><b>PROPER gold award</b> Ministry of Environment &amp; Forestry</p> <p><b>MSCI ESG Ratings upgraded to BB</b> MSCI</p> <p><b>Charity and Community Impact</b> Coaltrans Asia</p> <p><b>Best Implementation of Good Mining Practices</b> MoEMR</p>	<p><b>PROPER gold award</b> Ministry of Environment &amp; Forestry</p> <p><b>MSCI ESG Ratings upgraded to BBB</b> MSCI</p> <p><b>Best Environmental Excellence Award - Silver</b> Global CSR Summit &amp; Awards</p> <p><b>Aditama award</b> <i>Good mining practices</i> MoEMR</p>



# Industry Outlook

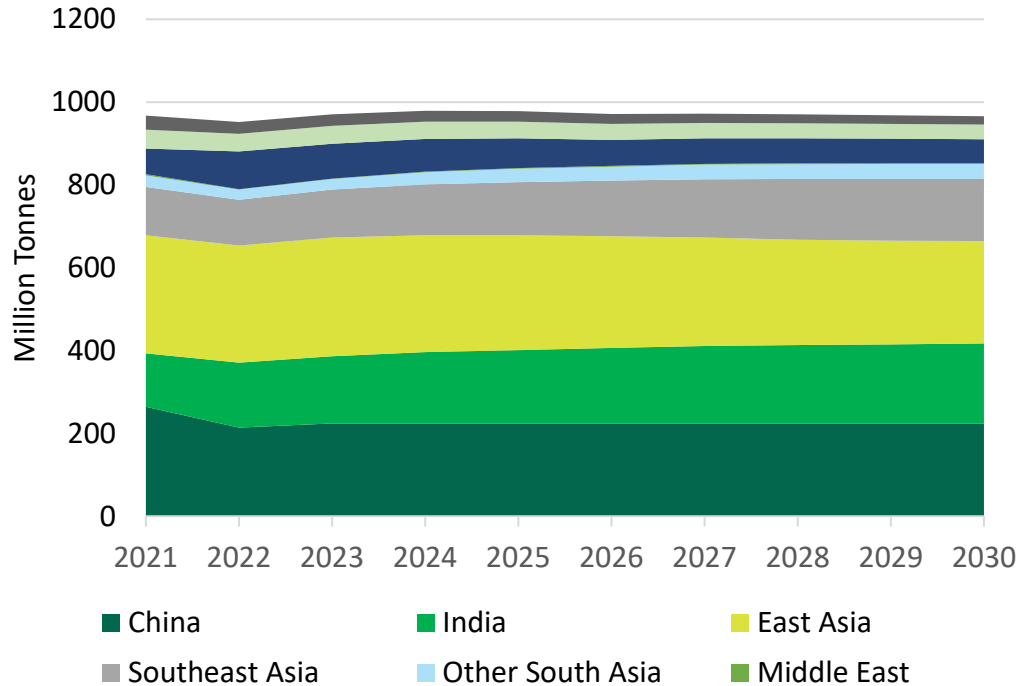
# Prices Remain Near Historical Highs



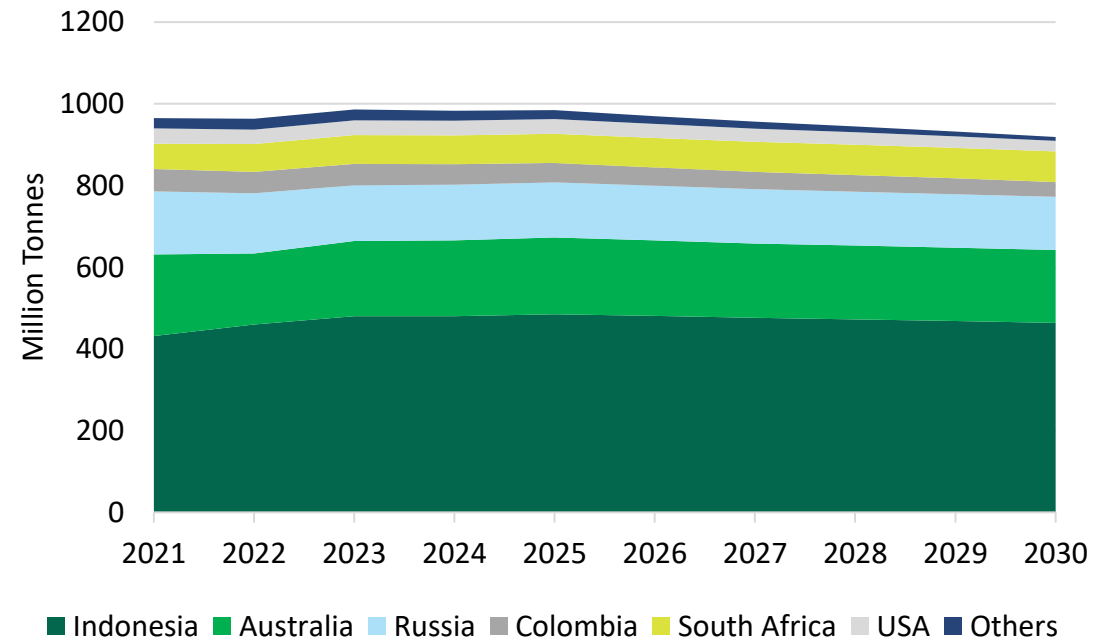
- Prices have remained volatile at high levels.
- Demand from India and Southeast Asia has supported Indonesian thermal coal imports – due to inclement weather and also supply crunch.
- Indonesian coal demand is still expected to be high due to its competitiveness and unique characteristics

# Seaborne Thermal Coal Demand and Supply Outlook

Global thermal coal imports demand (Mt)



Global thermal coal supply (Mt)



Sources: Adaro Analysis

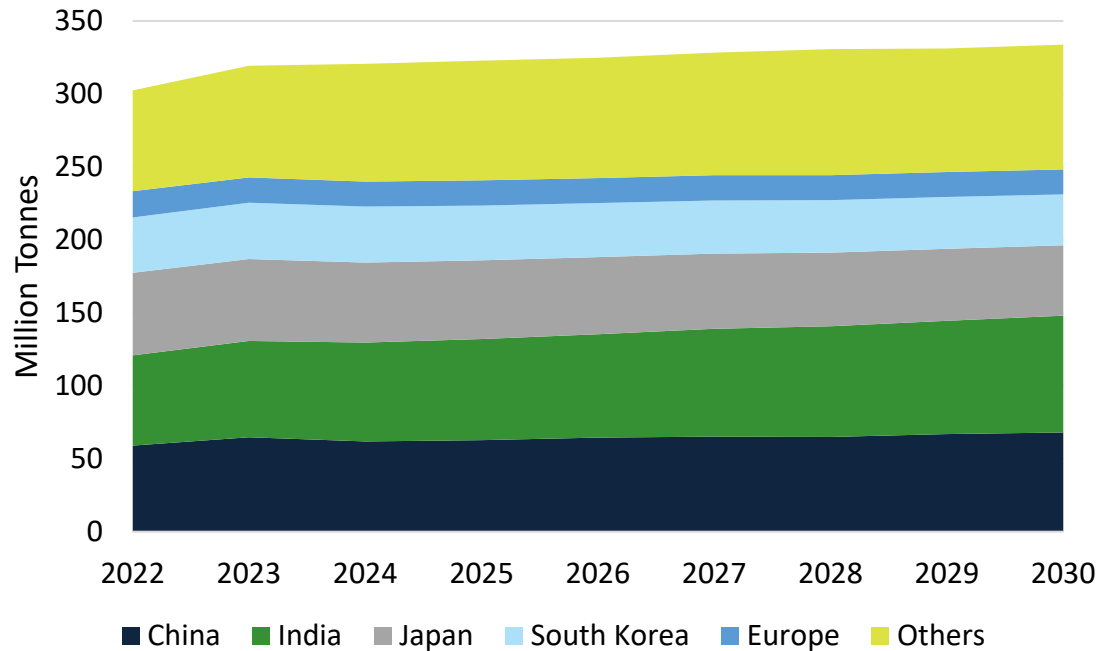
- Coal remains as significant part of energy mix in emerging economies in Asia
- Despite push towards renewable energy, emerging economies in Asia still rely on coal for electricity generation due to its availability and affordability.
- As the world aims to reduce carbon emission, demand for coal will be affected.



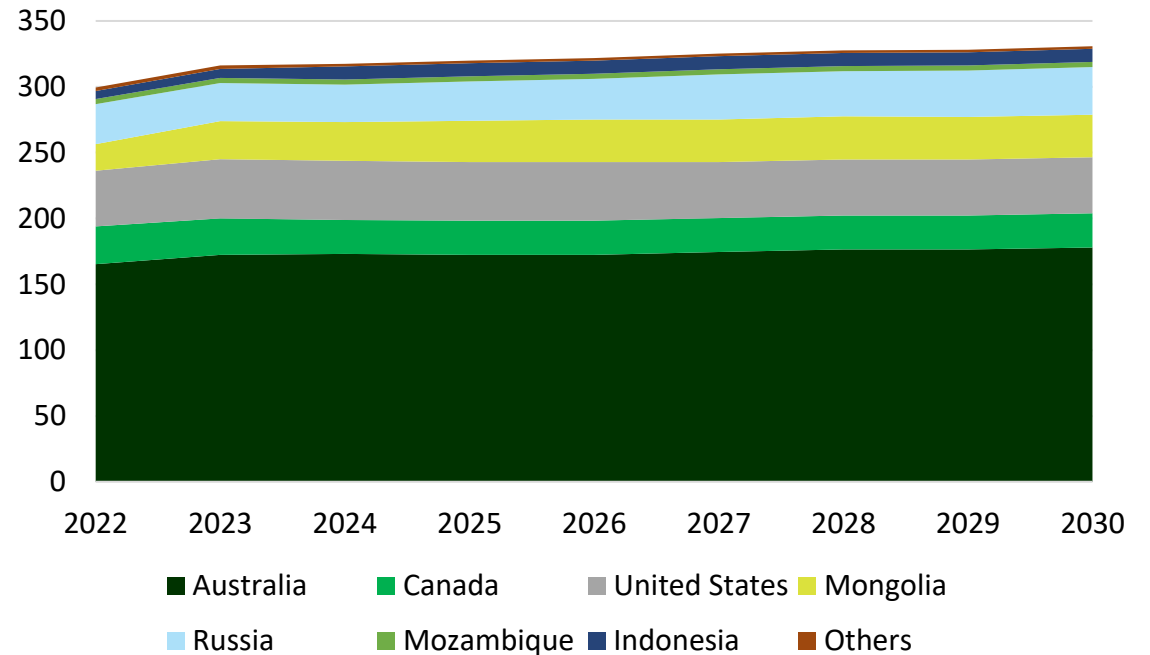
# Seaborne Metallurgical Coal Demand and Supply Outlook



Global metallurgical coal imports demand (Mt)



Global metallurgical coal supply (Mt)



Sources: Adaro Analysis

## Underinvestment and Robust Demand expected to lead to Undersupplied market

- The long-term outlook shows a positive and stable growth of demand and supply.
- India to be the main driver of growth for the next decade, outpacing China and Japan.
- Australia continues to be the main supplier in seaborne market, but supply growth will be constrained due to underinvestment in some supplying countries.

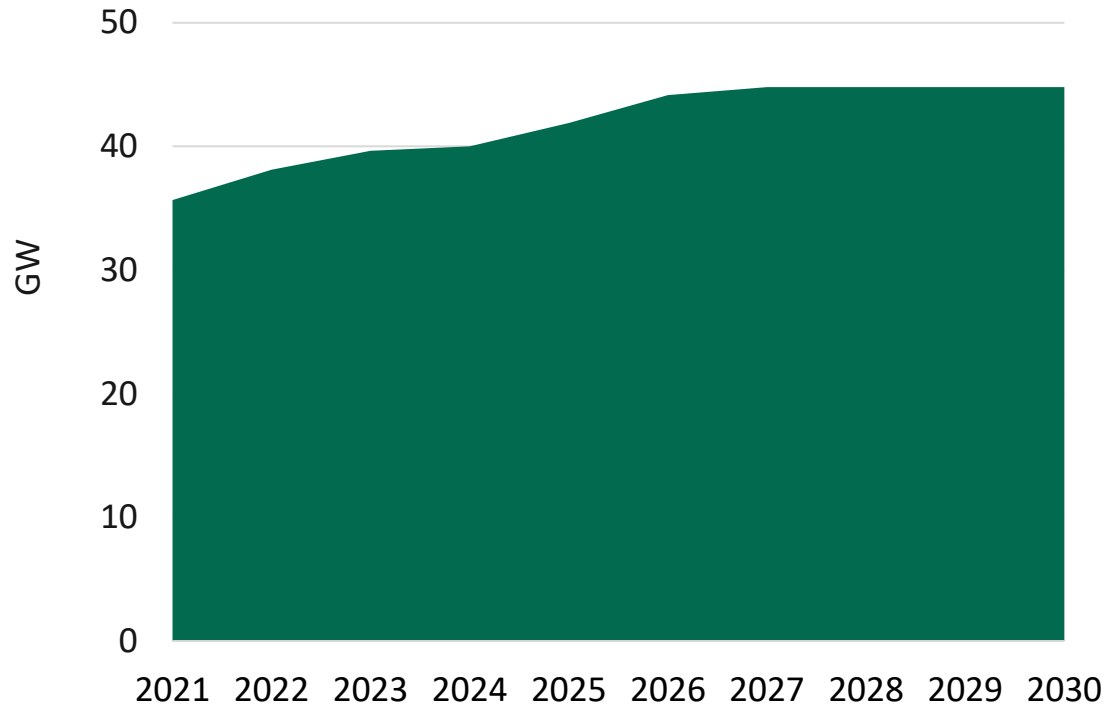


# Indonesian Long-Term Demand Remains Robust

Supported by growing downstream activities in Indonesia

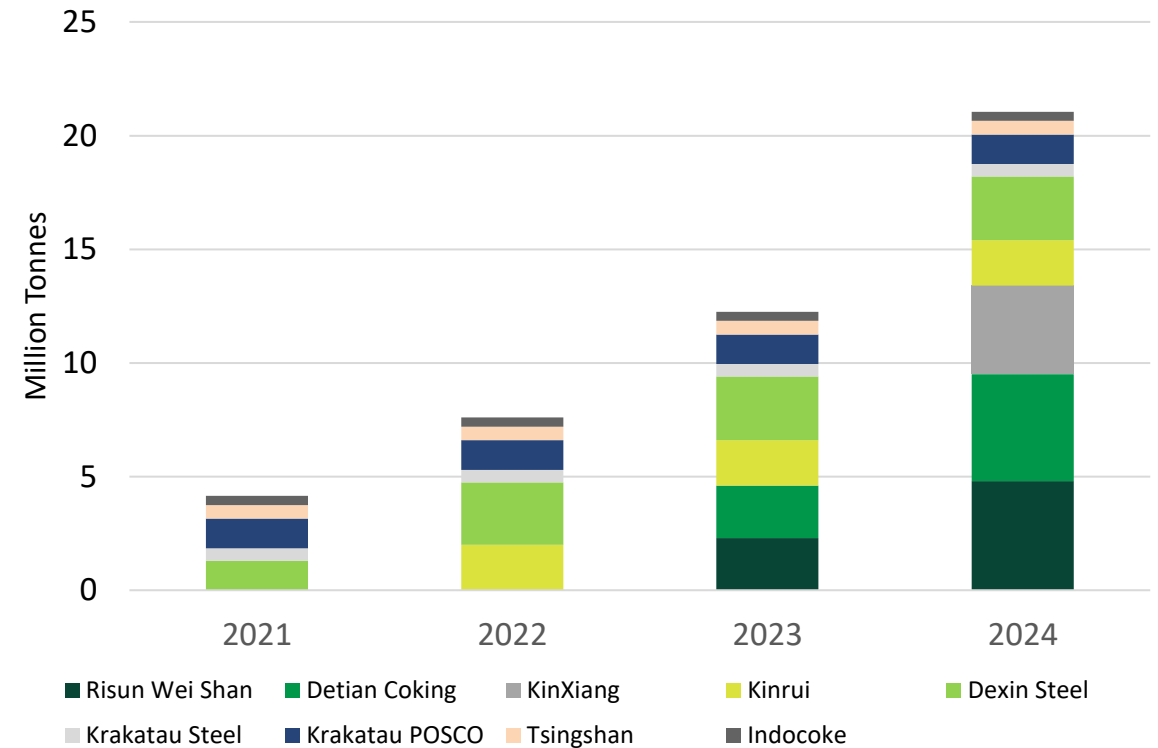


## Coal Fired Power Plant Capacities in 2021 - 2030



Source: RUPTL 2021 – 2030, ESDM 2022, APBI

## Coke capacity increase



- CFPP capacity continues to increase to support the transition in minerals processing and refinery in Indonesia.
- Indonesia coke capacities are expected to reach 21 Mt in 2024, which translates to 35 Mt of metallurgical coal consumption.

**Thank you**

