



WEBINAR

Unlocking Coal Power Purchase Agreements

Unearthing the opportunities, challenges, and success factors

October 31st, 2023



Agenda

Welcome & Agenda Overview / *RMI*

The importance of the coal PPA transition / *RMI*

Chile towards a successful coal-to-clean PPA transition / *Shearman & Sterling*

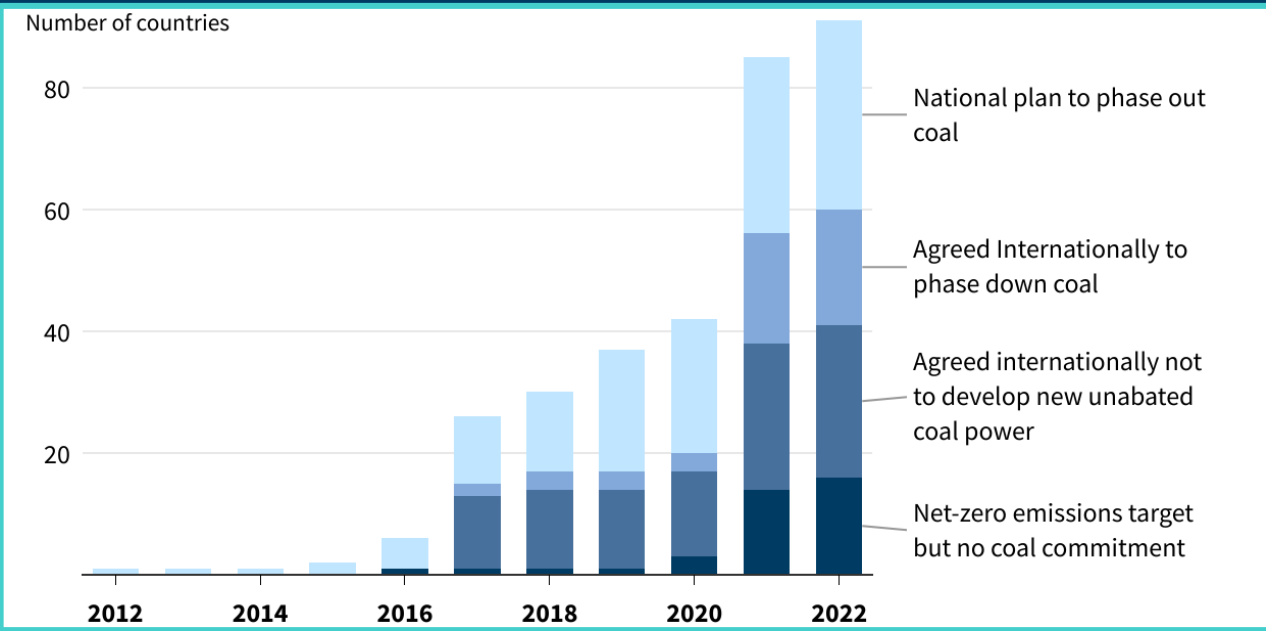
Panel discussion / *APLSI – Bank of America – Shearman & Sterling – Colombia MoE*

Audience Q&A

Closing remarks / *PPCA*

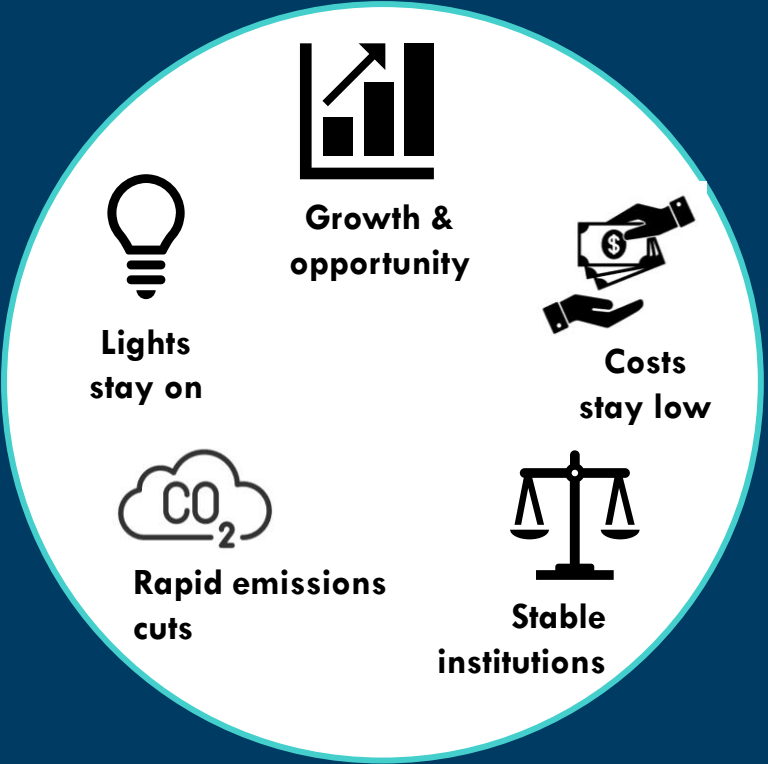
The transition from fossil to clean power is gaining momentum, spurred by political commitments and clean energy investments

Rapid growth in political commitments to phase out coal and net-zero pledges



Source: IEA, *Coal in Net Zero Transitions*

Raising challenges demand a thoughtful design for transitioning coal

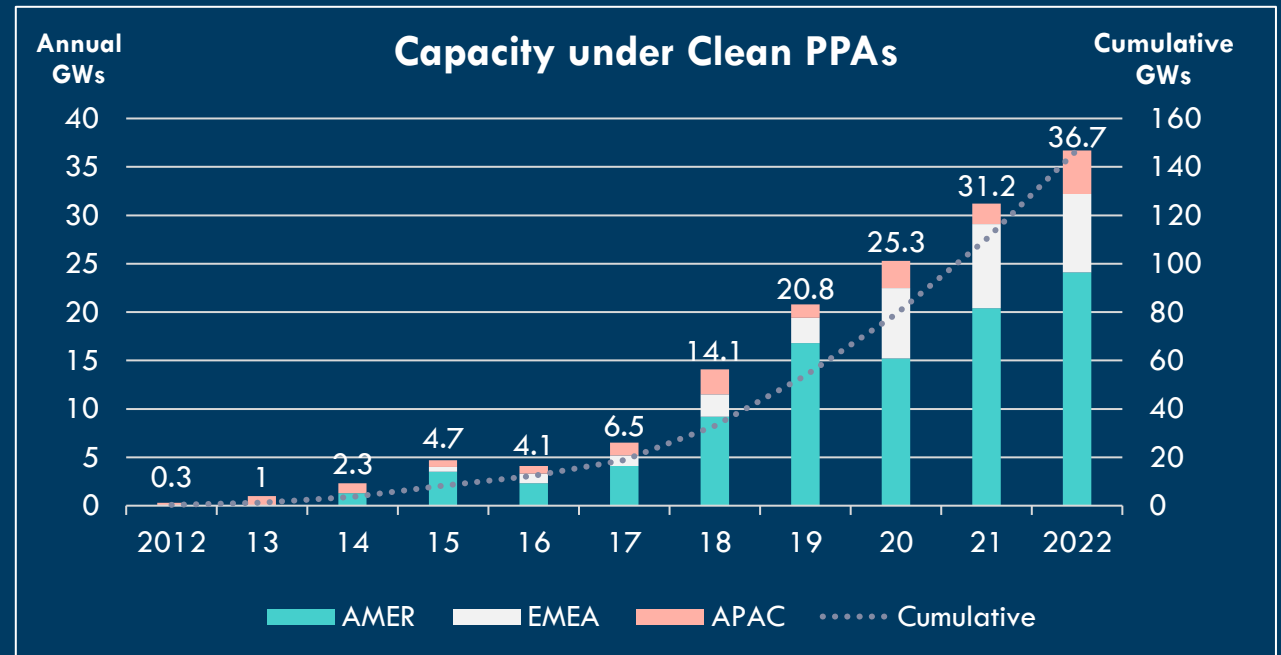


Long-term Power Purchase Agreements (PPAs) have played—and will continue to play—a key role in mobilizing investment for clean energy

PPAs provide stable cash flows to investors to de-risk investments

- De-risking power sector investment is crucial to meeting demand growth in developing economies

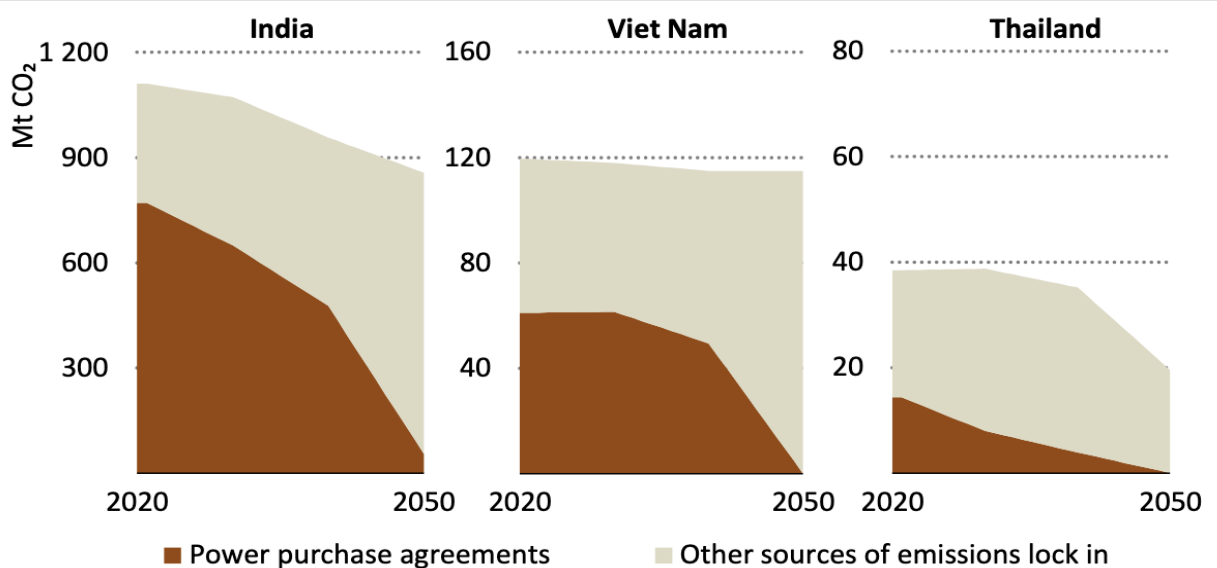
De-risking has enabled both scaling and massive cost reductions in the cost of clean energy generation



Source: [BNEF](#), Feb 2023

However, long-term PPAs for coal-fired power also represent a barrier to the coal-to-clean transition

Figure 4.7 ▶ CO₂ emissions from coal-fired generation that is contractually tied to power purchase agreements in selected countries



IEA. CC BY 4.0.

Source: IEA, [Coal in Net Zero Transitions](#)

These contracts can:

- **Lock in costs** – renewables are the cheapest form of new electricity in most geographies today; these contracts prevent realizing the savings from that ever-cheaper power
- **Lock in emissions** – if left unchecked, the existing coal fleet would consume two-thirds of the 1.5C budget, and coal PPAs represent about half of this challenge
- **Discourage grid flexibility** – due to their structure, grid operators are strongly incentivized to run these plants as much as possible, even with difficult supply and demand dynamics

Coal PPAs must be addressed, but in a way that **does not undermine the integrity of PPAs** as a tool to de-risk investment

How can we address them? In July, RMI released a report analyzing the financial feasibility and policy implications for three transition pathways for coal plants under a PPA



Simple retirement

A coal plant is **retired and permanently decommissioned**. **Other available resources in the grid replace** the services needed.



Retirement and Replacement

While a **coal plant is retired and decommissioned**, a portfolio of **clean resources is deployed** and brought to service.



Repurposing

Coal PPAs are **modified** to operate the coal plant as a backup asset **instead of a baseload one**.



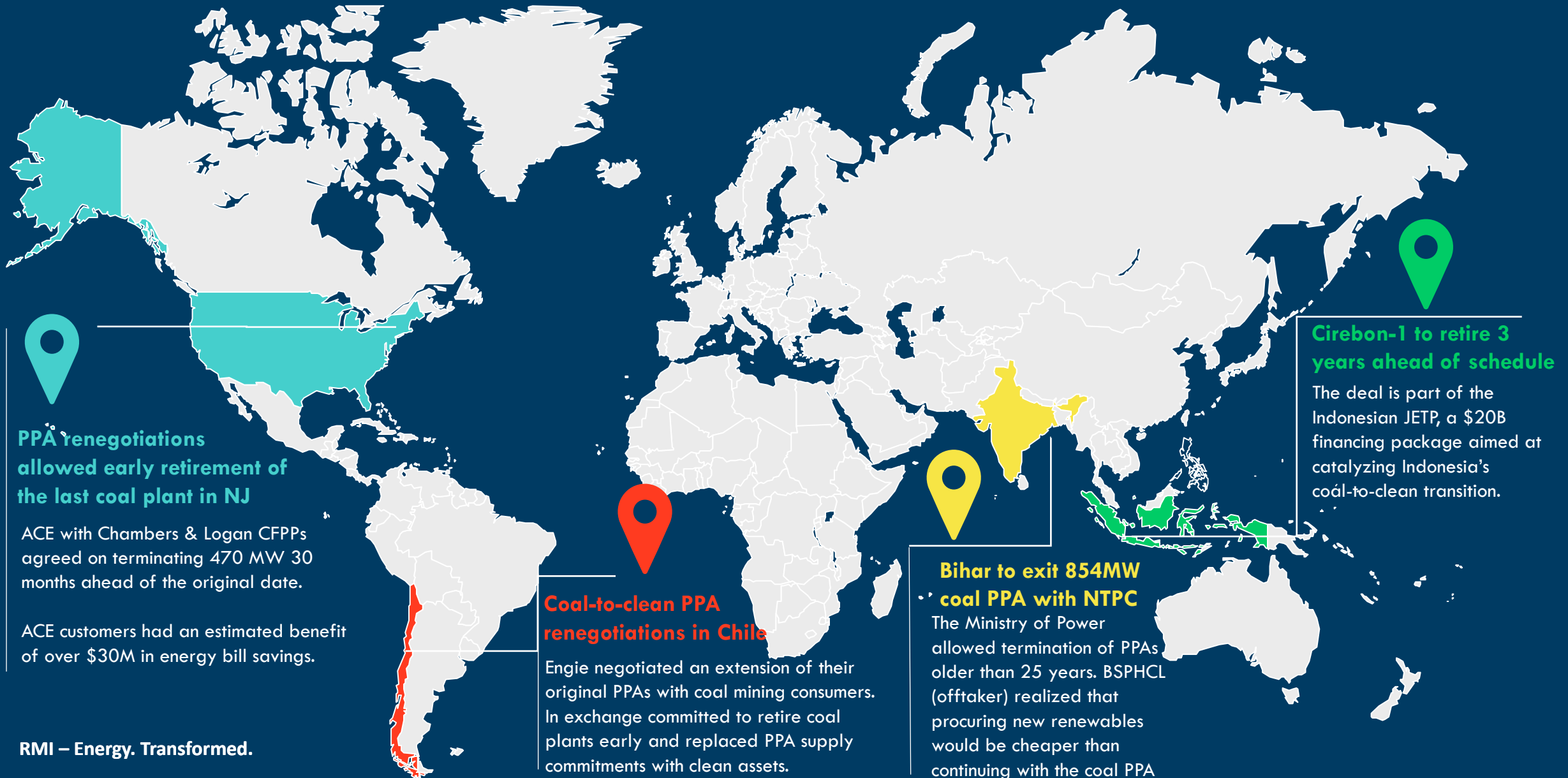
Financial mechanisms



Policy reforms



Good news: the coal PPA transition is already underway in many markets worldwide...



PPA renegotiations allowed early retirement of the last coal plant in NJ

ACE with Chambers & Logan CFPPs agreed on terminating 470 MW 30 months ahead of the original date.

ACE customers had an estimated benefit of over \$30M in energy bill savings.

RMI – Energy. Transformed.

Coal-to-clean PPA renegotiations in Chile

Engie negotiated an extension of their original PPAs with coal mining consumers. In exchange committed to retire coal plants early and replaced PPA supply commitments with clean assets.

Bihar to exit 854MW coal PPA with NTPC

The Ministry of Power allowed termination of PPAs older than 25 years. BSPHCL (offtaker) realized that procuring new renewables would be cheaper than continuing with the coal PPA

Cirebon-1 to retire 3 years ahead of schedule

The deal is part of the Indonesian JETP, a \$20B financing package aimed at catalyzing Indonesia's coal-to-clean transition.

2. Chile towards a successful coal-to-clean PPA transition



CHILE'S GOALS TO TERMINATE COAL DEPENDENCY

- Comply with commitments under the Paris Agreement
- Mitigate vulnerability to external factors, such as droughts and fossil fuel prices
- Mitigate social and economic adverse impact of pollution (e.g., suspension of schools located in critical areas)

Achieving carbon neutrality

- **Increase renewable power generation**
 - Amendments to the PPAs bidding process (time blocks instead of 24 hours commitments, longer tenors, longer deadlines to achieve COD, etc.)
 - PMGD stabilized tariff regime
 - Exemption from payment of transmission fees
 - ENRC policies, e.g., mandatory quotas for generation based in renewable non-conventional energy
 - Introduction of taxes to CO₂ emissions
- **Progressive disconnection of coal-fired power plants**
 - 2018: Voluntary agreement between the Chilean government and the largest coal power generating companies not to develop new coal-fired power plants
 - 2019: Voluntary agreement between the Chilean government and the largest coal power generating companies to phase out their operating coal-fired power plants (8 towards 2025, and the remaining towards 2040)

...but not without challenges

- Delays in the development of new projects
- Modernization of the electric system / reliability of the grid
- Deployment of new technologies (e.g., storage systems)

Renegotiation / early termination of coal PPAs and results of decarbonization commitments

- **Renegotiation / early termination of coal PPAs**
 - **AES Andes** – Termination of Coal PPA with BHP
 - **Colbun** – Staggered replacement of coal PPA with Codelco
 - **Engie** – As of 2022, 75% of Engie's PPAs with clients were decarbonized
 - **Enel** – All coal-fired units disconnected, including Bocamina II (350 MW), which was programmed for retirement in 2040.
- **Results of decarbonization commitments**
 - 8 coal-fired power plants disconnected between 2019-2023
 - 7 coal-fired power plants to be disconnected towards 2025
 - 5 coal-fired power plants to be converted towards 2025
 - **All remaining units (8) to be disconnected before 2040**



3. Panel Discussion

PANEL

Unearthing challenges and opportunities to transition Coal PPAs



Arthur Simatupang
President Commissioner
PT Toba Bara Energi
Chairman at APLSI



Alan Levy
Managing Director
Global Sustainable Finance
Bank of America



Augusto Ruiloba
Partner
Project Development & Finance
Shearman & Sterling LLP



Felipe Alberto Corral
Advisor
Policies / Colombia
Ministry of M&E



Tyeler Matsuo
Manager
Global Coal Transition Initiative
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Moderated by

During the panel, please drop your questions in the chat for the following Q&A section

Q&A



Arthur Simatupang – PT Toba Bara Energi and APLSI



Alan Levy – Bank of America



Augusto Ruiloba – Shearman & Sterling LLP



Felipe Corral – Colombian Ministry of Mines and Energy

Closing Remarks – Julia Skorupska



- **Coal use must fall rapidly and substantially over the next decade if the world is to limit climate change in line with the aims of the Paris Agreement’s 1.5°C trajectory.**
- **Coal PPAs have been extensively utilized in expanding power markets globally. They are not necessarily a barrier, and there are opportunities for careful customization to support an accelerated coal phase-out.**
- **A combination of the right policies and innovative financing is necessary for success. It requires many willing partners to come to the table.**
- **We need action now. Countries can demonstrate ambition and bring the relevant stakeholders into the discussion to ensure PPA renegotiation provides for a just transition.**

Thank you

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