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This document provides an overview technical description of a 350MW Coal Power Plant, emphasizing its power block configuration and operational components. The intent is to offer a comprehensive technical overview that supports the sales proposal for the facility.

The coal power plant consists of a complete single line, including power block, boiler, seawater cooling, the fuel system including transport, feeders, pulverizers, the desulfurization as well as the whole BOP.

The unit was commissioned in 2012. And was subject to upgrades during the short lifespan of one decade, leaving the plant with a remaining life of three to four decades.

The unit is of great interest for relocation or repowering projects and is immediately available.

The unit is a 350 MW subcritical steam, coal-fired power plant, equipped with latest technology environmental controls, it played a crucial role in the country's electricity generation before its retirement.

This document outlines the plant's major components, their technical specifications, and operational performance metrics.

The proposed 350 MW power block is designed to deliver reliable, scalable, and efficient energy production by repurposing the infrastructure of a former coal power plant. This innovative approach maximizes value from existing assets while supporting the global transition to sustainable energy.

## **Key Features and Benefits**

### **1. High-Capacity Output**

- Provides up to 350 MW of consistent, baseload power to meet the needs of industries, utilities, and grid operators. The coal fired unit achieves an efficiency of 37%.

### **2. Proven Reliability**

- Features robust infrastructure of a decommissioned coal facility, ensuring operational stability and long-term reliability.
- Designed with state-of-the-art safety and efficiency standards.

### **3. Cost-Effective Energy Solution**

- Lower Capital Investment: Reduces costs and time to grid by utilizing existing equipment.
- Operational Efficiency: Optimized for reduced maintenance and operational expenses.

### **4. Strategic Location**

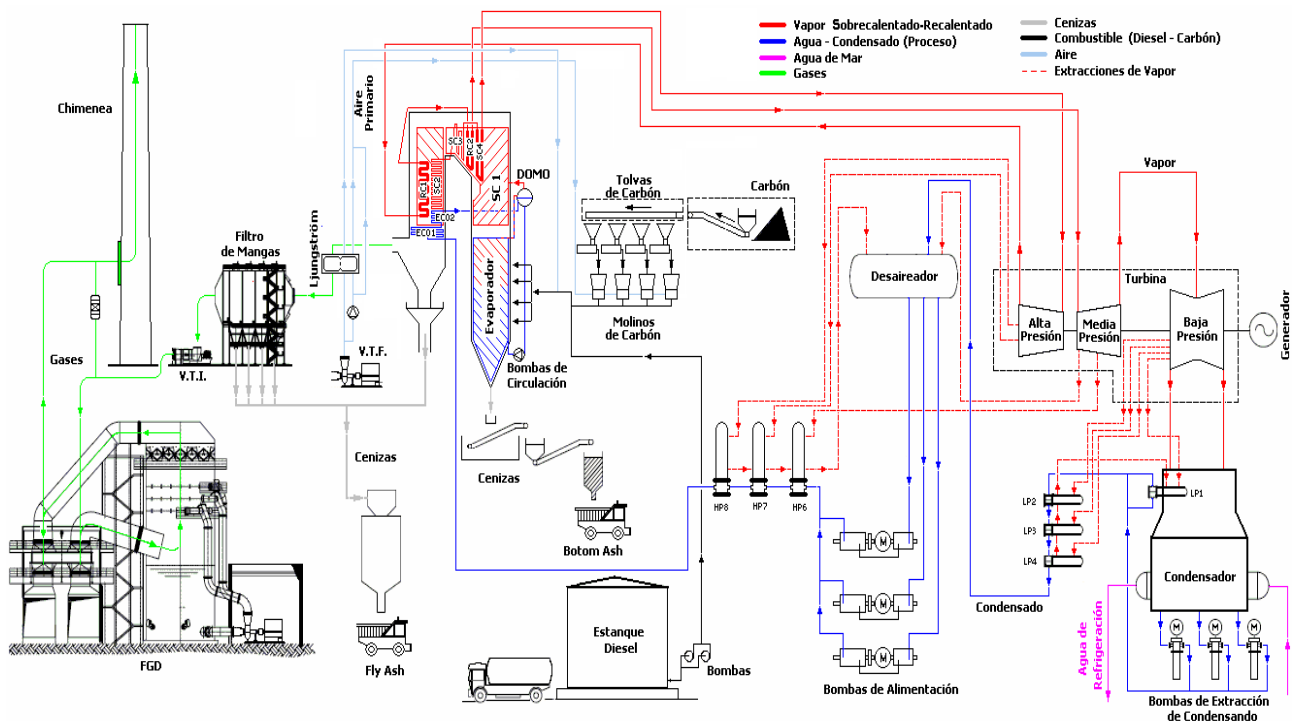
- Situated in immediate vicinity to a seaport.

### **5. Supporting the Energy Transition**

- Sustainability-Focused: Repurposing decommissioned facilities contributes to environmental goals by minimizing waste and utilizing existing resources.



Overview of the steam turbine. In the middle the HP and IP turbine enclosure, left of it the double flow LP turbine followed by the generator with its auxiliaries.



Process overview of the unit power plant. It is a typical process layout which has been realized in several plants across the world.

Steam turbine	
Manufacturer	General Electric
Model	D5
Year of construction	2012
Year of decommissioning	2022

<b>Generator</b>	
Manufacturer	General Electric
Model	H450
Year of construction	2012
Year of decommissioning	2022
<b>Boiler</b>	
Manufacturer	SES TImace
Model	forced draft
Year of construction	2012
Year of decommissioning	2022

#### Main Technical Data

The turbine island is the core of the power block, where thermal energy is converted into mechanical energy. The steam path includes:

- High-Pressure (HP) Turbine: Steam expands and loses some pressure but retains high temperatures.
- Reheater Section: Steam is reheated to regain temperature before entering the intermediate-pressure stage.
- Intermediate-Pressure (IP) Turbine: Steam expands further, reducing in pressure and temperature.
- Low-Pressure (LP) Turbine: Final stage where the steam expands to its lowest pressure before entering the condenser.

The turbine control system monitors performance, ensuring efficient operation and preventing damage from pressure fluctuations. Advanced vibration monitoring and predictive maintenance technologies are also implemented to minimize downtime.

- Turbine Type: Subcritical steam turbine
- Manufacturer: General Electric
- Capacity: 350 MW
- Generator Type: Synchronous AC generator
- Operating Speed: 3000RPM – 50Hz
- Cooling System: Hydrogen-cooled
- Output Power: 456 MVA
- Power Factor: 0.85
- Terminal Voltage: 18 kV
- Type: Pulverized Coal-Fired Boiler
- Manufacturer: SES TImace
- Steam Flow Rate: 1,215 tons per hour
- Operating Pressure: 171 bar
- Operating Temperature: 565°C
- Fuel: Pulverized bituminous coal
- Combustion: High-efficiency low-NOx burners

Full BOP and strategic spares are included

## Conclusion

The unit is a well-maintained and technologically advanced coal-fired power unit that played a crucial role in the country's electricity generation. Its high-efficiency systems and modern pollution control technologies make it a viable asset for potential buyers seeking a reliable power generation facility.

## Applications

The 350 MW power block is well-suited for a wide range of applications:

- Utility-Scale Power Generation: Reinforce grid reliability and provide baseload.
- Renewable Energy Backup: Serve as a dependable energy source to balance intermittent renewable inputs.
- The power block can be adapted to suit gas fired boilers or HRSG's (e.g. gas turbine fired or fed with CSP), however the coal boiler could eventually be relocated as well.

Lamone, the 14<sup>th</sup> of October 2025