

**Second Annual Conference on  
Balance of Plant Systems:  
Market Developments, Requirements, Opportunities and  
Challenges**

**“Welcome Note”**

**May 22-23, 2012**

## Background

- Power capacity addition is a key driver for the market for balance of plant (BoP) systems, which constitute a critical part of a power plant. The Twelfth Plan conventional power generation capacity addition target of 75,785 MW and renewable capacity addition target of 18,500 MW present a major opportunity for this segment.
- On an average, BoP constitutes 40-45 per cent of the total investment in generation capacity addition. The BoP market size is conservatively estimated at approximately Rs 1,400 billion during the Twelfth Plan period (2012-17).

## Background

- The key sub-systems of BoP for thermal power plants typically include coal handling plants (CHPs), ash handling plants (AHPs), water treatment facilities, cooling towers, chimneys, fuel oil systems, effluent treatment and switchyard. Each BoP activity comprises components like civil works, structural works, electro-mechanical equipment, and control and instrumentation. BoP systems for nuclear power plants are similar to those for thermal power plants except for specific components like CHPs and AHPs. For hydro power plants, electrical works constitute the majority of the BoP package. In the case of renewable energy systems, particularly solar thermal power, BoP includes raw water and wastewater treatment, cooling water, compressed air, dosing and sampling equipment, and electrical components. The balance of system (BoS) pertaining to solar photovoltaic (PV) and wind plants comprise inverters, cables, mounting structures, foundations and power electronics.
- BoP systems are critical to the timely commissioning of power plants. In the past, delays in the supply and erection of these systems have contributed to slippages in generation capacity addition. The Central Electricity Authority (CEA) and the Ministry of Power have been working with industry bodies to increase capacity in this segment, particularly for conventional plants. Measures taken by them include the provision of guidelines on qualifying requirements for BoP bidders, which has allowed the entry of new players in the segment.

## Background

- Though the BoP market has expanded in the past few years, it needs to develop further to meet the growing power demand. This is particularly relevant for new and emerging areas, like renewable energy, where these systems have an impact on generation costs.
- While developers consider a limited and concentrated BoP market a major challenge, suppliers face the issue of bunching of orders and high customisation. As such, utilities are opting for multiple packages or single engineering, procurement and construction (EPC) contracts for sourcing BoP systems. Once orders are placed, better coordination among project developers, main plant suppliers and BoP vendors would be crucial for meeting the plants' commissioning schedules.

## Mission

- **The mission of this conference is to provide an update on the key market developments so far and highlight the opportunities in the BoP segment. The conference will focus on the key demand drivers, developer perspective, emerging industry requirements, technology trends, and the challenges faced by the industry and the developers. The conference will attempt to answer questions like:**
  - What have been the key trends in thermal power generation?
  - What are the plans and perspective of key BoP players?
  - What challenges are being faced by developers with regard to BoP systems?
  - What are the procurement models for BoP systems?
  - What are the manufacturing capacities of key air-handling system providers?  
What have been the trends in manufacturing capacities of key CHP and AHP players?
  - What are the manufacturing capacities of key providers of BoS for renewable energy sources, particularly wind and solar PV systems?
  - What are the manufacturing capacities of key cooling tower suppliers?
  - What are the manufacturing capacities of key providers of electrical BoP?
  - What is the current BoP civil and structural works capacity?
  - What have been the key trends in manufacturing capacity and production of water treatment plants?

## Agenda / Structure

- The two-day conference will have **twelve** sessions: **Key Trends and Outlook, Industry Perspective, Developer Perspective, EPC Contracting of Balance of Plant, Contracting/Procurement Issues, Air-Handling Systems Requirements, Focus on Coal and Ash Handling Plants, BOS for Renewable Plants, Spotlight on Cooling Towers, Spotlight on Electrical BoP, Focus on Civil and Structural BoP and Market for Water Treatment Plants.**
- Most of the sessions will have two parts. The first part will feature presentations by speakers. The second part will be devoted to Q&A and floor discussions. The conference features the viewpoints of the key stakeholders including power generators, policymakers, and technology and solution providers.

## Participants

- The conference has attracted a diverse group of officials and managers from:
  - Thermal power generators
  - Fuel oil system suppliers
  - Independent power producers
  - Ash-handling plant suppliers
  - Government and regulatory agencies
  - Captive plant operators and developers
  - BoP equipment and service providers
  - Coal-handling plant equipment manufacturer
  - EPC firms
  - Renewable Energy Developers
  - Technology providers
  - Water systems suppliers
  - Equipment manufacturers
  - Other power producers
  - State electricity boards and gencos
  - Research institutes and organisations

## Organisers

- The conference is being organised by ***Power Line*** (the premier magazine for the Indian power sector). It is published by **India Infrastructure Publishing**, a company dedicated to providing information on the infrastructure sectors through magazines, newsletters, reports and conferences. The company also publishes ***Indian Infrastructure*** and ***Renewable Watch*** magazines, **Power News** (a weekly newsletter) and reports on sectors including **Coal-based Power Generation, Hydro Power Generation, Power Equipment in India, Power in India, Solar Power in India** and **Wind Power in India**.

## Distinguishing Features

- Our conferences are known for their focus on sharing of information, expertise and exchange of views. There is enough time for discussion and networking. There are no lamp-lighting ceremonies.

## Sponsors

- The sponsors for the event are **ABB**, **L&T Power** and **Sunil HiTech Engineers**. The event has been made possible by their support. We thank them for the same.