



3rd Conference on

# GAS-BASED POWER GENERATION

## New Challenges and Requirements; Strategies and Solutions

May 16-17, 2017, Hyatt Regency, New Delhi

Organisers:



Supporting partner:



Lead sponsor\*:



Co-sponsor so far\*:



\*Sponsorship slots available

# GAS-BASED POWER GENERATION

## Mission

- The grid-connected gas-based power generation capacity currently stands at 25,329 MW. This constitutes about 8 per cent of the total power capacity in the country. Clean burning fuel with lower carbon and particulate emissions, lower water consumption, shorter gestation period and lower land requirement make gas an attractive thermal fuel option for power generation.
- However, the potential of gas-based power plants remains vastly untapped due to the lack of domestic gas availability. The share of gas-based power in total power generation went down to 4 per cent in 2015-16 compared to around 12.5 per cent in 2009-10.
- As per estimates, around 25,000 MW of gas-based generation capacity has been stranded due to the lack of gas supply. The PLFs of existing gas-based plants have remained depressed in the past few years at around 22-23 per cent. Those of private sector gas-based plants are even lower at only 14.7 per cent (in 2016-17).
- Besides lack of gas availability, the other major factor for idle gas-based plants has been the unaffordability of imported gas-based power for discoms. Spot market prices have plunged to below Rs 3 per unit levels and renewable tariffs discovered in auctions have fallen to all-time lows. In such a scenario, the cost of power generated from gas-based plants (even after subsidies) at around Rs 4.70-Rs 5.50 per unit remains comparatively high and an expensive option for discoms to procure power.
- In March 2015, the government had introduced a reverse auction-based tariff subsidy scheme for both stranded plants with no gas supplies as well as those that were working at low PLFs with limited domestic gas. Four rounds of auctions have been completed so far; however, the scheme is due to expire in April 2017, which adds further to the uncertainty of plant operators.
- That said, the easing of global LNG prices has helped producers source imported gas for operating their plants. This, coupled with the supply of gas under the government's subsidy scheme, led to some improvements in gas-based generation. While nearly 15 per cent growth was recorded in 2015-16 over the previous year, generation for 2016-17 (April to January) has shown an increase of 7 per cent over the corresponding period of the previous year.
- Meanwhile, over the years, plant owners have increased their focus on O&M strategies and efficiency improvements to reduce the start time, improve plant life and allow greater flexibilisation. Larger turbines are being used, which is leading to lower costs. Auxiliary systems such as fuel, air intake and exhaust systems are also becoming technologically more advanced.
- **The mission of this conference is to highlight the key challenges facing gas-based power plants and the strategies to overcome them. The conference will focus on operational issues for power plants such as low PLFs, meeting load balancing requirements, O&M challenges and environmental concerns. It will also showcase new technology solutions that can help generators maximise plant performance.**

## Target Audience

The conference is targeted at:

- Gas-based power generators (central/state/IPPs/captive)
- LNG/Natural gas producers
- Gas marketers/suppliers
- Government and planning agencies
- Other power generators (coal/hydro/wind/solar)
- Regulatory agencies
- Power plant operations and maintenance providers
- Equipment manufacturers
- Technology providers
- Energy efficiency consultants
- Environmental engineering consultants
- Certification and inspection companies
- Investors and financial institutions
- Industrial consumers
- Infrastructure builders
- Transcos and discoms
- Pipeline operators
- Research and development organisations
- Consulting and legal firms
- Etc.

## Previous Participants

*The organisations that have participated in our previous conferences on "Gas-based Power Generation" include: 3i India, Adani Gas, Adani Power, AECOM, Aggreko Energy Rental, AGI Glas Pac, Aries Power, Assam Power Generation Corporation, Axis Bank, Baring Private Equity Asia, BGR Energy Systems, Bharat Forge, Bhartiya Marketing Revolution, BHEL, Brigade Infrastructure & Power, Camfil Farr Air Filtration, Caparo Power, Carbon Clean Solutions, Caterpillar, CERC, Chemtrols, Cinda Engineering & Construction, Clarke Energy, CLP India, Corporate Profiles, Corrtch Energy, CRISIL Infrastructure Advisory, Cummins India, Dalmia Cement, Deepak Fertilizers & Petrochemicals, DEIF, Economic Law Practice, Energy Infrastructure Management, Engineers India Limited, Ergonomix Power Consultants, Essar Power, Exelon, Exxon Mobil Gas, GAIL, GE Energy, GE Infrastructure Energy, Ginni International, GMR Energy, Godawari Power & Ispat, Green Infra, Green Power International, Gujarat State Electricity Corporation, GVK Power & Infrastructure, Haryana City Gas Distribution, Hazira LNG, HCC, Hero Honda Motors, Hindustan Electricity Generation, Hindustan National Glass & Industries, Hoerbiger, Honeywell Automation, ICF International, IDBI, IDFC Project Equity, IFCI, IMC, India Power Corporation, Indian Energy Exchange, IOCL, IOT Infrastructure & Energy Services, Isolux Corsan, Jakson, JSL, Jubilant Energy, Kawasaki Heavy Industries, KazStroyService Infrastructure, Kirloskar Brothers, Kirloskar Oil Engines, KRIBHCO, L&T Infrastructure Finance, L&T Sargent & Lundy, Larsen & Toubro, Link Engineers, Madhya Pradesh Urja Vikas Nigam, Madras Fertilizers, MahaGenco, Marsh India, Mechtech Group, Ministry of Power, Mitsui, Money Matters Financial Services, Moser Baer, Nagarjuna Fertilizers & Chemicals, NDPL, Nirmal Industrial Controls, NPTI, NTPC, Oil India, ONGC, ONGC Tripura Power Company, OPG Power, PE Consulting, Petroleum & Natural Gas Regulatory Board, Petronet LNG, Pietro Fiorentini, Power Finance Corporation, Power Trading Corporation, Pragati Power Corporation, Pratt & Whitney, Primove Engineering, PTC Energy, PTT International Company, Quippo Energy, Rai Industrial Power, Rajasthan Rajya Vidyut Prasaran Nigam, Reliance Energy, Reliance Infrastructure, RMG Autometers, SBI Capital Markets, Sew Infrastructure, Siemens, Sindya Power Generating Company, Siti Energy, Soma, Sterling & Wilson, Surya Roshni, Tata Power, Toshniwal, Total Projects, Trilegal, Triveni, UJVNL, Vandana Global, Wartsila, Wendt India, etc.*

## AGENDA/STRUCTURE

### KEY TRENDS AND OUTLOOK

- ❖ What have been the key trends in gas-based power generation?
- ❖ What is the expected contribution of gas in the fuel mix for power generation?
- ❖ What have been the key challenges faced by the sector? What is the outlook?

### GAS SUPPLY OUTLOOK

- ❖ What is the current status of gas supply?
- ❖ What are the current sourcing options? Have they changed over the past few years?
- ❖ What is the outlook for gas supply?

### DEVELOPER/OPERATOR PERSPECTIVE

- ❖ What has been the performance of existing gas-based plants?
- ❖ How are developers coping with low PLF levels?
- ❖ What is the outlook? What is the way forward?
- ❖ Is R-LNG a viable option?

### GOVERNMENT'S PERSPECTIVE

- ❖ What are the government's plans and perspective with regard to gas-based power and its overall contribution to the power mix?
- ❖ What is the current allocation of gas from various sources for power plants?
- ❖ What is the government's perspective on making gas available for peaking power?

### COSTS AND TARIFFS

- ❖ What have been the trends in generation costs and fuel costs for gas-based plants?
- ❖ How have these changed with a revision in domestic gas prices and a fall in spot prices?
- ❖ What have been the tariffs discovered in recent competitive biddings?

### FOCUS ON STRANDED ASSETS UTILISATION SCHEME

- ❖ What has been the experience under the four phases of auctions conducted so far? How has the bidding scenario been?
- ❖ How much gas has been allocated so far under the scheme? How has it benefited power availability?
- ❖ What have been the key challenges?

### O&M NEEDS AND CHALLENGES

- ❖ What are the industry practices related to the O&M of gas-based power plants in India?
- ❖ What are the new and changing requirements?
- ❖ What are the key issues and challenges? How are these being addressed?

### PEAKING POTENTIAL AND REGULATIONS

- ❖ What is the role of gas-based power plants in meeting load balancing requirements?
- ❖ What are the policies and regulations under consideration to encourage this role?

### PROMISE OF TECHNOLOGY

- ❖ What have been the new technology developments in the gas turbine/engines space?
- ❖ Which of these technologies are the most relevant in the Indian context?
- ❖ What is the future demand scenario?

### ROLE IN LOAD BALANCING

- ❖ What are the advantages of using gas-based plants for load balancing?
- ❖ What has been the extent to which gas-based plants have been used for load balancing so far?
- ❖ What are the implications for gas-based plants with greater variable loads in the grid?

### ENVIRONMENTAL BENEFITS

- ❖ What would be the role of gas-based plants in India's low carbon future strategies?
- ❖ What are some of the environmental advantages of gas-based plants vis-a-vis clean coal technologies?
- ❖ What have been the recent technological developments to lower emissions and improve efficiency?

### FLEXIBILISATION REQUIREMENTS

- ❖ What are the flexibilisation measures that can be considered for gas-based plants?
- ❖ What has been the experience so far?
- ❖ What are the key drivers?

### FOCUS ON LNG MARKET

- ❖ What are the key trends in global LNG prices? How have the buying strategies changed due to falling spot prices?
- ❖ What are the current LNG import options? What are the future sourcing options?
- ❖ What is the update on the current LNG terminals? What are the planned investments/projects in this segment?

### CAPTIVE POWER OPTIONS

- ❖ Are gas-based captive plants a viable option?
- ❖ What is the economics for industrial energy users?
- ❖ What are the customer requirements, issues and challenges?

## Organisers

The conference is being organised by **India Infrastructure Publishing**, the leading provider of information on the infrastructure sectors. The company publishes **Indian Infrastructure** (a magazine on infrastructure policy and finance), **Power Line** (India's premier power magazine) and **Renewable Watch** (covers the entire spectrum of renewable energy). It also publishes the **Gas in India report**, **Oil & Gas News** (a weekly newsletter), and the **Oil & Gas Directory and Yearbook**.

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### Registration Form

I would like to register for the conference. I am enclosing Rs \_\_\_\_\_ vide cheque/demand draft no. \_\_\_\_\_ drawn on \_\_\_\_\_ dated \_\_\_\_\_ in favour of **India Infrastructure Publishing Pvt. Ltd.** payable at New Delhi.

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### Registration Fee

Delegates	Fee			
	INR	Service tax @ 15%	Total INR	Total USD
One delegate	25,000	3,750	28,750	479
Two delegates	40,000	6,000	46,000	767
Three delegates	55,000	8,250	63,250	1,054
Four delegates	70,000	10,500	80,500	1,342

- There is a special low fee of Rs 10,000 per participant for the gas-based power plants. Service tax of 15 per cent is applicable on the registration fee.
- Registration will be confirmed on receipt of the payment.
- To register online, please log on to <http://indiainfrastructure.com/conf.html>

#### Payment Policy:

- Full payment must be received prior to the conference.
- Conference fee includes lunch, tea/coffee and conference materials.
- Conference fees cannot be substituted for any other product or service being extended by India Infrastructure Publishing Pvt. Ltd.

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