

# Webinar Series: Greening the Grid (GTC)

## Webinar#1: Coal Generation Flexing Practices to Support Variable Renewable Energy Integration

*Date:* May 15, 2019 (Wednesday)

*Time:* 8:30-9:30 Hours (IST)

*Duration:* 60-minutes



### Who to attend?

- Electricity Authorities
- Electricity Regulatory Commissions
- Power Generation Companies
- Load Despatch Centers
- Grid/System operators
- Industry Professionals
- Manufacturers/OEMs
- Policy Think Tanks/Research Organizations
- Funding agencies (Donors, corporations, banks etc.)
- Researchers/Consultants
- Academia/Institutions

### Objective

The primary objective of the webinar is to provide an opportunity to build regional capacities of developing economies in Asia where renewable integration is of significant relevance. It is aimed at creating awareness amongst the relevant stakeholders by providing access to the general trends on flexible operations at coal fired power plants and best-practices followed by lessons emanating from Indian case studies. Specifically, the webinar will help participants in understanding the key learnings from the damage cost modelling pilot study outcomes including recommended changes in the operational practices, infrastructure improvements, cost implications and damage mitigation techniques to limit impacts caused by flexible operations.





## About the speaker

**Nikhil Kumar**, Managing Director and Principal,  
Engineering Consulting Practice, Intertek, USA



Nikhil is an internationally recognized expert in powerplant cost of cycling analysis, power generation reliability, risk assessment, and economic analysis. He is an engineer with extensive experience providing research and consulting services to electric utilities, merchant power plants, legal firms, national laboratories, system operators, and government agencies. He has conducted fleet-wide cost of cycling studies in the USA and internationally for different generation technologies including hydro, nuclear and fossil. These assessments include a thorough review of historical and planned maintenance activities, availability and reliability, outage events, high impact low probability events, and plant design.

## Context

Coal accounts for 37% of the global power supply. Particularly in Asia, it remains as a preferred choice due to its abundance and readily available well-developed coal-related infrastructure as compared to the developing renewable energy infrastructure. Doubling of electricity demand, however, in developing economies led by India, puts cleaner electricity at the center of strategies for economic development and emissions reduction. Sailing on the Government of India's ambitious nation-wide renewable energy capacity target of 175 GW by March 2022, renewable penetration will reach significant levels in the overall Indian power mix. The variability of renewable sources of energy presents a notable challenge to grid stability and reliability. Hence, the ability of the Indian coal fired power plants to achieve lower levels of technical minimums and to quickly ramp-up and ramp-down i.e. operate flexibly vis-à-vis baseload operations, gains unprecedented importance as a norm than an exception.

## GTG-RISE Pilots on Coal Based Flexible Power Generation

USAID/India is supporting a range of pilots to help establish a framework for Coal Based Flexible Power Generation in the country by conducting pilot studies (technically referred as 'Damage Cost Modelling Studies'). These pilots are being implemented in partnership with the National Thermal Power Corporation (NTPC) Limited, an Indian Public Sector Undertaking, engaged in the business of generation of electricity and allied activities; and Gujarat State Electricity Corporation Limited (GSECL), a public sector power generation company operating in the state of Gujarat, India. The studies examine the extent of plant retrofits/upgrades and operating practice changes required to improve ramp rates and achieve lower technical minimums for the identified units. USAID/India is also supporting development of a fleet-wide strategy for NTPC and GSECL followed by a scalability road-map to build the business case for policy and regulatory measures to implement flexible operations in coal-based power generating units in India. Further, pilot test runs at the identified units of NTPC and GSECL are being undertaken aimed at providing implementation support to the utilities.

## About the Program

USAID/India's Greening the Grid (GTG) is a five-year program implemented in partnership with the Ministry of Power (MOP), Government of India (GOI) under the ASIA-EDGE (Enhancing Development and Growth through Energy) Initiative. This program aims to support GOI's efforts to manage large-scale integration of Renewable Energy (RE) into the grid. The central component of GTG is Renewable Integration and Sustainable Energy (RISE) Initiative which involves the design, implementation, and scaling of a series of prioritized innovation pilots, including the one on flexible operation of coal-based power plants, that support the integration of RE into the grid.

## Implementation Team

GTG-RISE Initiative is implemented by Deloitte Consulting LLP. The pilot studies under the Coal Based Flexible Power Generation Pilot is carried out with technical assistance from Intertek AIM, USA.

## For Participation

Please click [here](#) or Email us at [communications@gtg-india.com](mailto:communications@gtg-india.com)

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