

# Power Generation and Transmission Task Force

Chair: Mr. Jarad Daniels, USA

Co-Chair: Mr. Guo Wei, China



# Flagship Project: Best Practices for Power Generation

- The entire “chain” of power generation best practices peer review workshops and follow-on projects which implement best practices either through operational changes or installations of new hardware and reduce emissions.

# American Electric Power (AEP) Site Visit

- 30 October – 4 November
- 100 Attendees from all APP nations, including 40 Chinese and 33 Indians
- High level AEP Corporate and US Government Participation
- A great start that has generated substantial follow-up interest



# AEP Event: Two Technology Tracks

## Existing technology (Gavin, Muskingum plants)

- AEP engineers discussed technologies and best practices applicable to APP nations
- Plant upgrades
  - Hardware modifications
  - Implementing better O&M procedures
- Plant performance
  - Performance data after modifications
  - Economic and environmental impacts
- Simulator training

## Advanced Power Generation

- AEP engineers shared information on future generation projects and IGCC
- Met with technology providers (GE, GTI/Synthesis Energy, Shell, Siemens)
- PSDF – DOE/Southern Company
  - Advanced Transport Reactor
- IGCC – Tampa Electric Company
  - Walking tour of commercial IGCC facility

# AEP Event Photos



# AEP Event Participants



# Example AEP follow-up activities

- **Susan Tomasky (Exec VP, AEP)**  
**Visit to NTPC**  
**When:** February 20, 2007  
**Visit to:** NTPC HQ, Delhi  
**Reason:** Executive contact on continuing relationship and next steps
- **Confederation of Indian Industry**  
**When:** March 21-22, 2007  
**Visit to:** Amos Plant, Central Machine Shop & AEP Simulator Learning Center  
**Reason:** The objective was to get a basic overview of the power sector in US, operating culture, demand, technological advancements, etc.
- **Tata Power Visit**  
**When:** May 4, 2007  
**Visit to:** AEP HQ Columbus  
**Reason:** To discuss some of the SCR/FGD technologies AEP is pursuing
- **Hindustan Zinc Ltd**  
**When:** May 25-29, 2007  
**Visit to:** E-8 Workshop at AEP  
**Reason:** Additional training based on participation in APP Workshop
- **Slagging and Fouling Boiler after changing coal**  
**Reason:** Question on AEP experience

# Japanese Peer Review Workshop

- Ministry of Economy, Trade and Industry (METI) and the Federation of Electric Power Companies of Japan co-hosted a peer review activity 16-19 April 2007.
- About 50 participants, most of them plant engineers from all 6 APP countries.
- The goal of the peer reviews is to share best practices of operation and maintenance of coal-fired thermal plants with approximately the same operational period, through activities such as:
  - Open and frank discussion among plant engineers with consecutive site visits,
  - Development of a database of review items,
  - Development of a check-list for efficiency improvement, and
  - Development of a handbook for wider dissemination of accumulated knowledge.

# Japanese Peer Review Specifics

- Included classroom lecture style seminars, and
- Visits to:
  - J-Power's Takasago Thermal Power Station near Kobe,
  - TEPCO's Hitachinaka Thermal Power Station near Tokyo,
  - and a district heating and cooling facility called the "Harumi Island Triton Square" of the Tokyo Toshi Service Co. Ltd.
- Discussions on operation management, turbine maintenance, boiler water chemistry, environmental protection, and ash recycling.



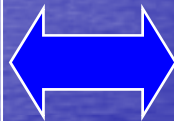
# Japanese Peer Review Process

## Sharing the Facts and Issues

(e.g.maintenance & improvement of thermal efficiency)

**Site Visit**(Review the common subjects such as operation, maintenance, environment)

Visit the power plant facilities



### Group Discussion

Operation

Maintenance

Environment

## Wrap-up

(Identification of best practices/ recommendation)

Dissemination of the Best Practices  
Through Consolidated Documents

Next Round Peer Review Activities in Other APP Countries

# Japanese Peer Review Participants



# Indian Best Practices Workshop

- In final planning stages
- Participation by all APP partner countries
- Visits to:
  - Kota Thermal Power Station, Kota
  - National Capital Thermal Power Project, Dadri
- Review of Operations using checklist developed as part of Japanese Peer Review Workshop
- Identification of Opportunities for Efficiency Enhancements to Facility Management

Thank you for your attention

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