



2013 Foreign Service Officers' Coal and Power Training Course Overview

Venkat K. Venkataraman, Ph.D

Senior Advisor & Project Manager,
Office of Major Demonstrations, Strategic Center for Coal
July 15, 2013





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Introductions: NETL Coordinators

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2013 FSO Course Participants

Introduction of 2013 Participants:

- Seth Pfeifer, U.S. Department of State Coordinator
- Matt McManus, Deputy Director for Public Diplomacy and Policy Analysis/Bureau of Energy Resources

DOS PARTICIPANTS:

For logistical (including hotels) questions,

Contact: Ms. Anika Davis
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- U.S. Department of State
- U.S. Department of Energy, FE, NETL

Important Reminders:

- Please wear your course badge for all course activities.
- Guidance for appropriate dress is provided on the agenda for each day and should be followed.
- Please be prompt and adhere to the schedule.
- All foreign nationals should bring their passports and Visas.

The Week Ahead



Monday – July 15, 2013

Speaker Topics:

- Opening Remarks (DOE)
- Welcoming Remarks(DOS)
- Fossil Fuel Formation and Coal Preparation
- Coal Mining Overview
- Coal Mining Environmental Issues: Reclamation of Mineland Hazards
- Electricity 101 & An Introduction to Advanced Power Generation
- Pulverized-Coal and Fluidized-Bed Combustion
- Shale Gas Fundamentals
- International Energy Challenges
- International Fossil Fuel Panel Discussion
- International Shale Plays
- Worldwide carbon Capture, Utilization, and Storage
- International Coal Trade
- International Oil and Gas Markets

Tuesday – July 16, 2013

Tour:

AES Corporation's Warrior Run Power Plant

- Coal-Fired
- Carbon Capture



**Carbon Capture at AES
Warrior Run Power Plant**

Tuesday – July 16, 2013

Tour:

Vindex Energy Corporation's Cabin Run Mine



Wednesday – July 17, 2013

Speaker Topics:

Environmental Issues 101: NO_x, SO_x, and Particulates

Overview and Tour:

**Penn Power's Bruce
Mansfield Power Plant**



Bruce Mansfield Coal-Fired Power Plant
Photo by Kiyoko Komoda

Wednesday – July 17, 2013

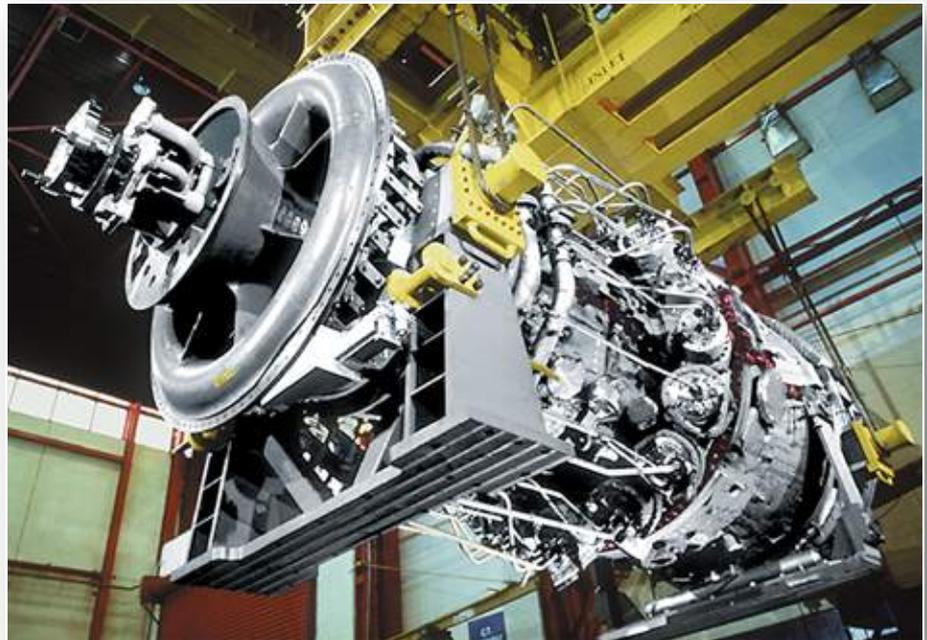
Speaker Topics:

Gas Turbines

Tour:

First Energy's Springdale
Power Plant

- Gas-Fired



A Siemens SGT6-5000F Gas Turbine

Thursday – July 18, 2013

- **Overview of Alcoa Global Energy Operations**
- **Overview of Consol Energy's Coal, Natural Gas, and Water Treatment Operations**
- **Unconventional Natural Gas issues – Marcellus Shale Coalition**

Thursday – July 18, 2013

Tour:

Range Resource's Shale Gas Activity

- Active drilling site
- Reclaimed site after operations completed and wells in production



Thursday – July 18, 2013

Tour

MarkWest Energy Partners, L.P

Largest processor and fractionator of natural gas in the Appalachian Basin, with fully integrated processing, fractionation, storage and marketing operations



Source: <http://www.markwest.com/operations/northeast>

Friday – July 19, 2013

Speaker Topics:

- **NETL Welcome & Overview**
- **Integrated Gasification Combined Cycle (IGCC)**
- **CO₂ Capture and Storage**
- **NETL International Activities**
- **Energy and Water Nexus**
- **Transmission and Distribution Overview: Technology & Regulatory issues**
- **Smart Grid Overview**
- **Coal Bed and Coal Mine Methane**
- **Alternative Fuels – Coal, Natural Gas, and Biomass to Liquids**

Friday – July 19, 2013

Non-Fossil Power Generation Facilitated Panel Discussion

- **Introductory Remarks and World Energy Demand**
- **International Nuclear Power Generation**
- **Nuclear Power: Post-Fukushima Initiatives**
- **Hydro Power Generation**
- **Closeout Questions & Answers**

Summary

- **Acknowledgement of Speakers**
- **Acknowledgement of Facilities Visited and Facility Hosts**
- **Completion of FSO Course Evaluation Form —
Any suggestions for improvement?**



Thank you for participating!

**2013 Foreign Service Officers'
Coal and Power
Training Course**

Organized by NETL

<http://www.netl.doe.gov>

A satellite-style image of the Earth, showing the Americas (North and South America) in shades of green and brown, surrounded by blue oceans and white clouds. The text is overlaid in the center of the image.

**Technology is one of the
Government's tools to
ensure a sustainable,
secure, and affordable
energy future**

Visit Our Websites

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Office of Fossil Energy

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SERVICES SCIENCE & INNOVATION MISSION

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DOE-Sponsored Research Improves Gas Turbine Performance

Small Business Innovative Research Grants Achieve Commercialization Goals for Novel Gas Turbine Manufacturing Technology.

[READ MORE](#)

OUR MISSION

Ensuring that we can continue to rely on clean, affordable energy from our traditional fuel resources is the primary mission of DOE's Office of Fossil Energy.

[Read More >](#)

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OUR NEWSLETTER

Fossil Energy Today

Fossil Energy Today is a free digital newsletter published quarterly by the U.S. Department of Energy's Office of Fossil Energy. Fossil Energy Today provides you with updates on important activities, progress and other developments within Fossil Energy.

NETL
FE's National Energy Technology Laboratory

NEWS

JUNE 17, 2013
DOE-Sponsored Research Improves Gas Turbine Performance

MAY 17, 2013
Energy Department Authorizes Second Proposed Facility to Export Liquefied Natural Gas

MAY 14, 2013
Expedition Provides New Insight on Gas Hydrates in Gulf of Mexico

[More News](#)

POPULAR TOPICS

LNG Exports

Our Research Successes

Shale Gas 101

BLOG

JUNE 13, 2013
DOE Lab Receives Award for Work on Drilling Technology

MAY 31, 2013
NETL Scientist Earns Prestigious Technical Achievement Award

MAY 20, 2013
Modeling Through Shared Resources, No High-Fashion Experience Required

[More from the Blog](#)

Office of Fossil Energy
<http://energy.gov/fe>

the ENERGY lab
Where energy challenges converge and energy solutions emerge

Site Map

NATIONAL ENERGY TECHNOLOGY LABORATORY

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NEWS

- New NETL evaluation assesses and virtual tours of NETL laboratory facilities are now available.
- Recycling Carbon Waste to Save Dollars
- Expedition Provides New Insight on Gas Hydrates in Gulf of Mexico
- Breakthrough Industrial Carbon Capture, Utilization and Storage Project Reaps Full-Scale Operations
- NETL Scientist Earns Prestigious Technical Achievement Award
- Carbon Storage Atlas Equipped for Greater Earth Interaction Communications Awards

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