Electric Utility Industry Update

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Investor-Owned Electric Companies

- Membership includes
  - 200 US companies,
  - More than 65 international affiliates and
  - 170 associates

US members

- Serve more than 95% of the ultimate customers in the investor-owned segment of the industry and
- Nearly 70% of all electric utility ultimate customers, and

Our mission focuses on advocating public policy; expanding market opportunities; and providing strategic business information
Agenda

- Significant Industry Trends
  - Utility Infrastructure Investments
  - Generation and Fuel Landscape
  - Electricity Model Changes

- Industry Priorities with our Federal Gov’t/DoD customers in 2012
Utility industry has embarked on a major investment cycle, driven by the need to address:

- Generation, Transmission, and Distribution to ensure reliability
- Energy Efficiency and deploying new technologies (SG, renewables)
- Significant Environmental CAPEX

Increasing concerns about the Environment has Changed our Power Supply Mix

- Short –term: Rely on Energy Efficiency, Renewables, and Natural Gas
- Medium-term: Targets should be harmonized with the development and commercial deployment of advanced technologies and measures (e.g., Nuclear Energy, Advanced Coal Technologies with Carbon Capture and Storage, Plug-in Electric Vehicles, and Smart Grid)

We are no longer a declining cost industry
By 2030, the electric utility industry will need to make infrastructure investments of $1,830 Billion. This level of investment is nearly triple the US Shareholder-Owned Electric Utilities' current net plant value of roughly $650 billion (12/3 1/10 = $737 B).

Source: Transforming America’s Power Industry, The Brattle Group, November 2008
Environmental Regulatory Challenges: 2012 and Beyond

**Air**
- Utility MACT
- Interstate Transport (CAIR/CSAPR)
- Regional Haze/Visibility
- Multiple NAAQS
- New Source Review (NSR)

**Climate**
- NSPS- New & Modified Sources
- NSPS- Existing Sources
- BACT Permitting
- International Negotiations

**Water**
- 316(b)
- Effluent Guidelines Limitations
- Waters of the United States
- NPDES Pesticide Permits
- Waterbody-Specific Standards

**Land & Natural Resources**
- Transmission Siting and Permitting
- Avian Protection
- Endangered Species
- Vegetation Management

**Waste & Chemical Management**
- Coal Ash
- PCBs in Electrical Equipment
- HazMat Transport
Paradigm Shift with Generation/Fuel:

- Coal retirements

- Natural Gas: Path of Least Resistance
  - **Short term:** Stay giddy: shale, pipelines, high inventories
  - **Long-term:** Watch closely
    - LNG exports will take time
    - Dash to Gas in the electric sector (est. 10-15 billion tons/day in next 10 years)
    - Development of Gas in the transportation sector

- Nuclear(?): future RPS and storage would make investments more attractive

- Renewables
  - Wind/solar will get more cost effective overtime
  - Cheap Natural Gas, production tax credits, credit worthiness
  - Emerging back-generation, storage concerns
    - Stand-by, back-up charges could get higher for end-user

- Industry still must diversify to hedge against future price risks
Business Model Shift

EPRI’s Perspective – Future Industry

Tomorrow’s system must handle two-way flow of electricity and info, to automate controls for a widely distributed energy delivery network

- No longer primary dependence on central station power and one-way flow to power
- Increased dependence on distributed and central station renewables/storage
- Increased demand response
Industry and Federal Customer Priorities in 2012
Extend and Clarify UESC Authorization

- Extend term to 25 years via legislation and/or broader Areawide Umbrella authorization
  - To reach RE goals and significant EE goals paybacks are going to beyond 10 years

- Promote Efficiency Policies that Encourage Deep Savings to Help You Reach Aggressive Goals
  - Put a premium on appropriately using financing options with appropriated dollars (blend)
  - vs. using appropriated dollars for projects with short term paybacks
Develop a More Standardized Approach with the Services

- **Standard Forms**
  - To fill out for projects and training describing how we can present projects in a way that makes your jobs easier.
  - Clarify expectations so they are made clear to utilities.
  - Currently this varies from Service to Service and even from region to region within a Service.

- This could reduce:
  - Contracting time and effort.
  - and can gain economies if the Services are clear about what the installation wants for information and how it wants that information presented.
Resolve Issues Associated with State Electricity Retail Laws

- Usurping state electricity laws regulations creates a negative environment.
  - Commissions will be very concerned about cross subsidization.

- Focus on how utilities can help the Services meet their RE goals in a manner that benefits the military and other customers.
  - Not on an impending battle for supremacy that has the potential to result in significant state-federal conflicts.

- As a practical matter, developers would not want to wade into this battle.
Continue to Emphasize that Installations Should Work Closely with Utilities Early in the RE Planning Process

- Utility’s need to study how projects impact system
- Where and how renewable projects are developed and interconnected can have a strong influence on the reliability and integrity of the utility grid.
- Back-up and stand-by concerns will grow as more RE added to system
- We want to help the Feds/DoD understand these critical issues
- Good communications will lead to both the utility and DoD in knowing upfront the operational issues before wrong and costly decisions are made.
- Eliminate the unknowns
Always consider the utility option (fashioned after Warner-Robins and Tinker model)

EEI developed a model agreement for siting utility projects on installations that installations and utilities can use a template.
- Premium for renewable power may be required in some states

Won’t always be the silver bullet, but in this budget environment, it is a proven solution that should be consider.
- In short, start with utilities to explore synergies
We look forward to your suggestions as to how we can improve our working relationship with our Federal and DoD customers.