

MINUTES, PREVIOUS MEETING, Sept. 24th, 10 a.m. - 2 p.m.

Attendance: Wedad Elmaghraby, Dick O'Neill, Fred Murphy, Steve Gabriel, Udi Helman, Chung-Li seng, Bill Stewart, Boddu Venkatesh, Thanh Luong, Ben Hobbs

After introductions and distribution of a paper by Skip Laitner on energy forecasting, the morning was taken up by a brainstorm session on overall goals for this new ECEG group, short-term tactics, desired outcomes/products, and the types of substantive and methodological issues that we'd like to tackle. Here are the ideas that were generated:

Overall Goal:

- Build the energy modeling community, with D.C./ mid-Atlantic as a focus.
- Enhance our influence upon methodology development and policy, by identifying and publicizing new problems and approaches
- Encourage collaborations

Tactics:

- Regular informal discussion meetings with a theme ("reading/book club")
- Meetings in which researchers present their problems and questions in more depth and more informally than a formal conference (emphasize discussion)
- Themed, more formal workshops and meetings, with a product (such as a book, modeled on the "Next Generation of Unit Commitment Models" workshop in Rutgers in 2000)
- Build towards submitting proposal for NSF center or other institutionalized/funded structure
- Build private-public sector interface (so researchers can learn about problems), e.g., ISOs, consultants, agencies

Outcomes/Products

- Shared understanding/capabilities
- Framework for organizing groups to attack problems (resulting in papers, models)
- Qualitative analysis tools (game theory)
- Simulations (to answer questions)
- Books from workshops
- Web site as resource (See Harvard EPG and Berkeley UCEI as examples), with links, annotated bibliography
- Email discussion group

Possible Energy Problems to be addressed (Note: numbers refer to the number of times that they were mentioned as having 1st, 2nd or 3rd highest priority in a poll of the attendees):

- Electricity, Gas, and their convergence (3)
- Transport of Energy (1)
- Using prices in operational decisions (1)
- Environment (2)
- Security (Homeland, reliability, oil supply, contract risk vs vertical integration) (3)

- Capacity constrained commodity industries ("Stupid Industries" characterized by cycles of investment and prices--the immortal words of one participant, whose name I'll disclose only with their permission!) (2)
- Geographic focus (PJM): integrated look at all issues in market design, eek out more quantitative analysis (3)
- Financial transmission rights; dealing with seams/boundary issues in power markets (1)
- Transmission expansion (1)
- Resource adequacy (3)
- Control of strategic behavior (oil, power) (6)

Methodological Issues (Note: numbers refer to the number of times that they were mentioned has having 1st, 2nd or 3rd highest priority in a poll of the attendees):

- Modeling strategic behavior (equilibrium, agent-based, Nash vs. Repeated games) (9 -- exceeds number of voters, because some voted for overall topic and particular subtopic)
- Transportation modeling (1)
- Reconciling Financial vs engineering economic modeling (4)
- Unique structures of electricity markets and how should models be adapted to them (nonconvexities/0-1 decisions, Kirchhoff's laws) (6)
- Risk and equilibrium (uncertainty) (5)
- Market Design (1)

After some discussion, two general themes emerged:

1. The need to better model strategic behavior, recognizing the unique structure of the industry and uncertainties, considering forward and financial markets, in order to better evaluate policies and regulations designed to control strategic behavior
2. The need to better understand capacity addition decisions when markets have risk, strategic behavior, and financial instruments, in order to better evaluate policies addressing "resource adequacy"

These will be the focus of the next meeting. Other issues, especially environmental issues, can be the subject of subsequent meetings.

Meetings will be held every two months (5x/year, excluding summer months).

The meeting organizers thank Dick O'Neill for arranging a very nice conference room for the meeting.