The AWC Project As a Test Case for the FERC NOPR Docket No. RM10–23–000

February 24, 2011
Topics to Be Covered

- A brief background
- Functional description of the AWC Project
- Project costs and benefits
- Development barriers
- The AWC and the NOPR
- Developing a workable cost allocation methodology
- No cost socialization
- The way forward
Electricity Demand Intensity
U.S. Offshore Wind Energy Potential
An offshore backbone is more achievable, & presents an entirely different failure mechanism.

Adding land-based transmission is virtually impracticable to implement, and vulnerable to random & induced outages.
The Atlantic Wind Connection transmission backbone would connect 6,000 MW of wind turbine capacity, built on the broad, windy spaces of the mid-Atlantic continental shelf, to population centers and transmission nodes on land.
Project Sponsors

Good Energies
Google
Marubeni Corporation

Project team

Dewey & LeBoeuf LLP
TE
DCI
DC Interconnect, Inc.
Multi-Terminal HVDC (MTH) Transmission-Generation (Trans-Gen) System: Think of the wind and the AWC transmission apparatus as one large (345 miles) generation/load system with several delivery/loading portals

- **A network transmission system (the Backbone)**
  - Enhancing the reliability of the regional grid
  - relieving transmission congestion
  - improving market operation efficiency

- **Integrated system of generation ties (the Laterals)**
  - Accessing remote offshore wind resources: Higher productivity
  - Large scale offshore wind development: Economy of scale
  - Regional wind integration: lower operation & delivery costs

**Extendable to in–land applications**
Project Costs & Benefits

Costs:
$30 billion for 6,600 MW of wind farms & AWC Project

Benefits:
- $12 billion: Production cost savings
- $17 billion: LMPs reduction
- $5.2 billion: CO2 decrease value – SO₂ and NOₓ also reduced

Job Creation:
$16 – 52 billion
AWC Development Barriers

1. Perception of high costs for wind & transmission
2. Presumption of cost “socialization”
3. Assurance of timely wind energy development
4. Inadequate PJM transmission planning process
5. Potential environmental review/permitting delays
The AWC and the NOPR

- NOPR’s scope affects 4 out of the 5 barriers the AWC faces

- The directly relevant NOPR propositions are:
  - Reforming regional transmission planning processes
  - Allocating costs to beneficiaries

- Recall: AWC is the model for economic access to renewables
The AWC & the NOPR (More)

- An intra-RTO Project: Inter-RTO planning not a primary issue
- A multi-state venture: Interstate cost allocation matters
- Significant Project costs: Socialization is automatically presumed
- Project benefits exceeding costs: Socialization can be avoided
- Benefits extend beyond proposed sponsors: Cost allocation issues
- Benefits require wind energy injections: AWC-wind coupling issues
- Assuming wind injections are ex ante available: Rationale required
- RTEP Process does not allow for ex ante resources: Reform needed
- No method to allocate costs among beneficiaries: Reform required
Developing a Workable Cost Allocation Methodology

- Relevant precedents
  - FERC NOPR
  - CAISO order
  - MISO order
  - Tehachapi decision

- Approach
  - Identify & quantify benefits, sources & sinks & allocate accordingly
  - Develop cost allocation methodology using ratioing techniques
No Cost Socialization

- Large transmission projects easily stigmatizable by socialization charges
- The AWC will not resort to socialization to pay for the investment
- We seek to minimize the free-rider problem; and
- We may demonstrate remedying (de-socializing) pre-existing socialization
Next Steps

- FERC (Section 219) rate treatment
- PJM transmission planning process
- BOEM environmental review and permitting
- State environmental review and permitting
- FERC Section 205 filing