SPP Participant Funding:
The Wind Industry’s Perspective

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The Wind Coalition

Wind Power Developers
• AEP Wind
• Cielo
• FPL Energy
• Gamesa
• PPM
• RES
• Shell
• Zilkha

Wind Equipment Vendors
• Bonus
• GE
• Trinity Towers
• Vestas

Other Interest Groups
• AWEA
• EDF
• Public Citizen
• TREIA
OUTLINE

1) Look at Big Picture (Mike Sloan)
   Benefits of Robust Transmission
   Homeland Security
   Transportation Systems Models
   Funding Proposal

2) Details of Position (Mike Jacobs)

Benefits of Robust Transmission:

- More Flexibility
- Increase System Reliability
- Reduce Generation Costs
- Access to Cleaner Resources
Challenge for CAWG:

Balance Cost Impacts of:

Fairness

– vs –

Effectiveness

Fair –vs – Effective:

Direct Assignment may be Fair, but it:

• Is Complex & Likely Contentious
• Introduces Uncertainties for Users
• Discourages New; Preserves Status Quo
• May result in Higher Overall Costs
Wind Electricity: Cheaper than Natural Gas Fuel?

Sources: NYMEX natural gas data, AWEA, dotted lines = rough projections
Assumptions: Natural gas usage heat rate averages 8,500 BTU/kWh; current wind price = $30/MWh

Homeland Security:

Robust Transmission Makes America Safer
How Are Other Transportation Systems Paid For?

Transportation of People
Roads – Costs Generally Spread to All

Toll Roads:
Standardized Fees

Airlines – Very Complex Cost Allocation
Many Different Prices for the Same Service

- How Project Future Air Travel Costs?

Transportation of Goods
Shipping – Standardized / Distance Sensitive

Standardized Rates with Moderate Distance Sensitive Adjustments
(e.g. Fedex, UPS)

U.S. Postal Service

Standardized & Uniform

Overall “effectiveness” is a higher priority than “fairness” of direct assignment of true cost of service.
History of U.S. Postal Rates

1792 – 9 tiers, distance sensitive
   6 ¢ < 30 miles
   25 ¢ > 450 miles

1799 – 6 tiers

1845 – 2 tiers
   5 ¢ < 300 miles
   10 ¢ > 300 miles

1855 – 2 tiers, stamps mandatory
   3 ¢ < 3,000 miles
   10 ¢ > 3,000 miles

1863 – uniform rate
   3 ¢ - any distance (1/2 oz)

1885 to 1932 – 2 ¢ per oz. (Historical Minimum)


Started out complex, increasingly standardized & simplified over time

Transportation of Information
Telephone:
- Standardized Rates
- Change was Slow

New Telecom
- Innovation
- Many Options
- Flat Fees common
Internet - Very Complex System, but Trackable

Usage is Standardized, Uniform & Free

Wind Proposal: Funding Proposal
Wind Industry Proposal for Participant Funding

Keep it SIMPLE – Pattern off Successful “Transportation Models”

New Generators – pay to get onto the transmission system (e.g. radial interconnection lines)

Network – spreads costs of the common carrier transmission system to all users by charging a flat usage fee ($/MWh)

Key Wind Issues

1) Wind Location dictated by Resource
2) Capital Intensive (Front-End Loaded)
3) Uncertainty is Killer
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1) Wind Location dictated by Resource
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If Transmission Cost Allocation considered “Risky”, Wind development in SPP will be Limited
CAWG Goal: Overall Cost Effectiveness?

Robust Transmission can enable New Generation & Fuel Options

<table>
<thead>
<tr>
<th>Generation &amp; Fuel</th>
<th>Transmission System</th>
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<tbody>
<tr>
<td>Majority of Costs</td>
<td>5% to 10% of Costs</td>
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<tr>
<td>Reliability issues</td>
<td>High reliability</td>
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<tr>
<td>Significant risks</td>
<td>Low operating risks</td>
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<tr>
<td>- fuel costs</td>
<td>Long life</td>
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<td>- environmental</td>
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<td>Volatility</td>
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<td>Innovations Likely</td>
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Wind Proposal: Details
What Windpower Entrants to the Market Hear, and Fear

Our differences illustrate many of the questions this group is wrestling with:

• location choices are made by the resource
• our contribution is economic energy
• construction is quicker than any thermal plant, or transmission expansion

These points will show where this debate needs to go: *to Roll-in of costs for higher voltages*

Generalized Wind Resources in SPP & ERCOT Footprint
Wind Power in SPP

ZONES

PROJECTS

• Existing

LOAD

Wind is Location Dependent

Kansas-Panhandle Plan

• 2,500 MW nameplate of wind
• 600 MW of coal
• Transmission expansion cost $345 million in Scenario A
Concerns with Pure Flowgate

Participant funding by the generators has 2 major burdens:

• If the allocation of costs is revisited during the period the plant is financed, the financing party will never be sure what the costs are on the generator: *it’s no deal.*
• If the generator raises the capital, takes the risk, and the TO owns the facility and earns the return: *it’s a bad deal.*

Wind is Mostly Economic Energy

Our Concern – *Emphasis of Transmission Planning on uncommitted Capacity Resources to find minimum transmission cost:*

• In CAWG review of Planning process, SPP will assume generic size and type of new plant (*Could this ever be Wind?*)
• Wind won’t be an element of a minimum cost plan for anything that *excludes* cost of energy
Concern for Participant Funding: Reliance on Service Requests

• Request for **Firm** Service a Pre-requisite for building Transmission?

• *Economic energy* means **non-firm** service. Our requests are for interconnections. We’d like to work on ways to request service, but there are no rights secured for funding the upgrade.

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**WIND = Economic Energy**

*White Deer – Near Amarillo, Texas*
Benefits/Costs

• We agree the calculation of Economic Benefits from upgrades is relevant.

• With wind, the economic benefits from upgrades will accrue to many parties because every wind-generated MWH will be near zero marginal cost, and should reduce demand for the most expensive energy source.

Our Concern with Economic Planning

• Will the identification of desirable economic upgrades be made only once the windfarms are built? Chicken and Egg!

• Agree that SPP runs a generation dispatch model to identify economic upgrades, but is this possible before wind is built?
Look at Rolled-in Costs

“Should there be a limit to the added costs that are rolled in to all customer rates, either based on location of the generator, or the costs that are excess of the benefits?”

• If benefits exceed costs, why limit costs when there is a rolled-in expense for network upgrade. 
  (If Kan-Handle Plan costs $400 million to move 2,000 MW & energy savings = $10/MWh, Result is $60 M in net savings per year, or $600 M in 10 years.)

• Limits on locations may be arbitrary and destroy the potential to reach low cost energy resources.

Speed of Savings

Major benefits from economic energy (and reduced demand for natural gas) can not come before the expansion of high-voltage

• Windfarm construction is a single season
  – Can cost allocation be done as fast?

• Transmission Planning and cost recovery need to be certain, and streamlined, to bring benefits to consumers
Thank You

The Wind Industry is committed to the SPP CAWG Process, please contact us if you have questions:

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