Electric Transmission Planning under FERC Order No. 1000

The Essentials:
- The Federal Energy Regulatory Commission (FERC) regulates interstate electricity commerce over long-distance transmission lines.
- FERC recently issued Order No. 1000, with an initial compliance deadline of October 11, 2012.
- The purpose of FERC Order No. 1000 is to create more competitive wholesale electricity markets by removing barriers to building new interstate transmission lines.
- The new ruling is partly aimed at enabling regions to make transmission investments necessary to meet state renewable energy policies.

Background and Policy Summary:

The Electric Transmission System
Transmission lines are used for sending electricity over long distances.

The Role of FERC
The Federal Energy Regulatory Commission (FERC) regulates wholesale electricity sales across transmission lines. FERC’s regulatory actions over the last few decades have attempted to move the electric power industry towards more competitive wholesale markets by removing barriers to interstate transmission. In principle, these efforts will provide customers with more just and reasonable electricity rates, in accordance with the Federal Power Act of 1920.

Roadblocks to New Transmission
One of the roadblocks to more competitive wholesale electricity markets is the difficulty in building new transmission lines. Policies to ensure adequate development of new transmission are increasingly relevant because most states now have renewable energy standards (RES). When renewable energy resources needed to meet...
these standards are located in remote areas, their utilization will depend upon the construction of new transmission lines. However, efforts to build new transmission lines are often stymied by three key problems:

1) lack of successfully coordinated transmission planning efforts to prioritize which transmission projects should be built,
2) lack of a cost allocation mechanism to ensure that transmission developers can reliably recover project costs, and
3) impediments to siting new transmission facilities.

In recognition of these primary challenges, FERC issued Order No. 1000 which pertains to the first two areas of concern: planning and cost allocation. FERC Order 1000 requires regional transmission planning groups to agree upon a transmission planning process. In the U.S. there are entities at many scales that already participate in transmission planning (Figure 2). WestConnect is one of the primary transmission planning groups in the Southwest and is likely to assume the role of the regional entity to comply with FERC Order No. 1000.

![Current Transmission Planning Regions](image)

Figure 2. Planning upgrades and expansions to the transmission network requires regional cooperation. In most of the U.S., this responsibility lies with a Regional Transmission Organization, an Independent System Operator, or some other regional planning entity. This map shows existing regional transmission planning groups throughout the U.S. (Source: FERC).
In addition to planning, one of FERC Order No. 1000’s main provisions is a requirement for regional entities to agree on a uniform cost allocation procedure that adheres to a specific set of principles outlined in the order.

Opportunities

If FERC Order No. 1000 successfully spurs new transmission development, it could provide a variety of benefits:

1) **Increased Reliability** -- By increasing the number of power supply options available to grid operators, transmission lines can increase reliability and help prevent blackouts.

2) **Better Integration of Renewable Energy** -- Transmission is needed to transport wind and solar energy from remote areas to urban centers where it’s needed. Transmission can also help utilities gain access to a larger pool of generation resources across a larger geography – a key characteristic for balancing intermittent renewable resources.

3) **More Competitive Energy Markets & Lower Costs for Some Service Areas**
   In theory, transmission can provide more wholesale competition for electricity and thus lower rates.

Challenges

1) **Legal Challenges** -- FERC Order No. 1000 may face legal challenges as the compliance process progresses. These challenges are likely to center on whether FERC has jurisdiction over transmission planning and thus the ability to preempt the states’ traditional role.

2) **Regional Planning & Cooperation** -- As regions move forward with planning and cost allocation agreements, disagreements are bound to arise. In the Western U.S., the issue of regional cooperation is particularly salient since it is a region that has not traditionally seen such cooperation through the Regional Transmission Organizations that exist in the Eastern U.S. Each stakeholder will thus have incentive to assert a strong voice in the compliance process or else they will likely lose out to competing interests.

3) **Cost Allocation** -- Transmission lines are large investments that ought to be paid for by customers who benefit from them. Investors that take on the risk of building transmission lines need a way to recoup the costs of these investments. This need to recoup investment costs can sometimes lead to a need to increase electric rates. Finding a way to distribute these costs among beneficiaries can be very difficult and contentious. However it’s important to remember that transmission is a very small part of each customer’s utility bill, and this cost can also be outweighed by enabling access to cheaper sources of electricity generation.

4) **Increased Energy Costs for Some Service Areas** -- Transmission lines built between areas with very different costs for electricity may enable more electricity to be traded between the two regions, which has the tendency to equalize costs. Creating more regional markets in this manner may be better for the region as a whole by making electricity more cost-effective and reliable.
However it will also make some individuals worse off in the short term. For example, customers with initially higher rates will pay less for electricity and customers with initially lower rates will probably pay more. Arizona has lower rates than some of its neighboring states like California. Thus, customers in Arizona may end up paying higher rates if more transmission lines are constructed between the two states. In contrast, providers of electricity in Arizona may benefit by being able to sell energy at higher prices in California, which could benefit Arizona in a number of ways.

Read more
• FERC Order No. 1000
• Western Electricity Coordinating Council (WECC): WECC is the Regional Entity responsible for coordinating and promoting bulk electric system reliability in the Western Interconnection – one of the three major interconnected power grids in the U.S. WECC plays an overarching role in transmission planning as it relates to reliability in the Western Interconnection.
  o Transmission Expansion Planning website
  o WECC 10-year plan:
  o FERC 1000 Board briefing [PDF]:
• WestConnect: WestConnect is a regional planning group composed of utility companies providing transmission of electricity in the Southwestern United States.
  o WestConnect FERC 1000 Planning website
  o WestConnect 10-year plan:
  o SWAT: Within WestConnect, smaller subregional planning groups exist, such as Southwest Area Transmission (SWAT), which covers territory mainly in Arizona and New Mexico.
• Western Governor’s Association
  o Report on Western Renewable Energy Zones
• Arizona Corporation Commission
  o Line Siting Committee: In 1971, the Arizona Legislature required that the Committee situate power plants and line siting committee. The Committee provides a forum to evaluate applications to build power plants (of 100 megawatts or more) or transmission projects (of 115,000 volts or more) in the state. The Committee holds meetings and hearings that are open to the public. This committee’s roles and responsibilities are established in A.R.S. § 40-360
  o Biennial Transmission Assessment
• WIRES University:
  o This trade group has a series of recorded lectures on transmission basics. For a good tutorial on how transmission helps support both reliability and renewable energy sources, refer to this video presentation (starting at 12m 30s):
• Energy Central:
  o This business news service recently held a webinar on legal issues pertaining to FERC Order 1000.
• MIT: Future of the Grid study

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Latest developments
Recent:
• October 11, 2011: FERC Order 1000 became effective
• January 24, 2012: Arizona Corporation Commission Staff Meeting
  o The A.C.C. discussed Commissioner/Staff participation in FERC Order 1000 regional coordination meetings (Agenda Item #10). Audio link
• February 8, 2012: WestConnect FERC 1000 Planning Meeting:
  o See www.westconnect.com for details
Upcoming:
• October 11, 2012: FERC Order 1000 Compliance Deadline for public utility transmission providers