Balanced Principles for Electric Transmission Planning and Expansion

Participants in the electric utility industry are debating how to get new transmission built and who should pay. This is an extremely important issue. Competitive wholesale markets will fail if they are not supported by a robust transmission infrastructure. A weak grid will not only imperil reliability, but will also cause major market power problems, deprive customers of choices and create opportunities for market manipulation through the exploitation of congestion. While managing congestion is important, the objective of the FERC should be to minimize congestion and maximize generation competition by ensuring prompt construction of the transmission infrastructure needed for broad regional markets to benefit consumers. Otherwise, increasing congestion will shrink the scope of markets, dampen or kill competition and create a need for constant policing.

TAPS supports a regional Planning Model that vests responsibility for planning and expanding the grid in large regional transmission organizations (RTOs), rather than relying on market forces to drive new transmission construction. Transmission is a natural monopoly characterized by network economies, and, in many instances, can be built only with the use of the public power of eminent domain. Siting can be extremely difficult and delays are common. Siting authority rests in the states, rather than in the FERC, which creates further difficulties for meeting regional needs. For these reasons, simply relying on market signals to get needed new transmission built will not work.

These factors also make it unlikely that too much transmission will be constructed. To the contrary, transmission is becoming increasingly congested throughout the country, with little major transmission constructed in the last 10 years. For these reasons, and also because a robust grid is essential to generation competition, TAPS believes that FERC should err on the side of encouraging the construction of new infrastructure, rather than waiting to see whether a market-based construction regime will work.

TAPS also believes that a market-driven, participant funding system is not likely to work well because transmission lines have multiple purposes and provide simultaneous benefits to diverse parties, rather than to a single party or set of parties. This will create a significant free-rider problem discouraging needed investment. Most new lines will provide local voltage support and reliability benefits, as well as allowing new generation to serve area load and increasing transfer capability for longer-distance transactions. The benefits of an upgrade in a network change over time, with changes in loads, generation and grid topography. These multiple and changing benefits suggest that the policy should be to roll-in the cost of most of the transmission improvements into rates, with all end-use load in the region paying its share of costs, in order to maximize reliability and competition for the benefit of everyone in the region, and not to wait until one or more participants agrees to pay the cost. Reliance on market participant funding is likely to result in upgrades that are pennywise, pound foolish – minimizing cost to the individual market participant funding the upgrade, instead of implementing more regionally useful alternatives. Efficiency and cost effectiveness will often require upgrades to be sized larger than is required for discrete, immediate needs.

With this background, TAPS proposes the following **Planning Model** for expansion of the grid:

1. **RTOs should develop least-cost expansion plans to meet regional needs**. An RTO should carry out its planning and expansion obligations pursuant to a least-cost plan designed to meet the needs of its region and developed through an open, public planning process. The plan should consider generation and demand-side alternatives to transmission construction and seek to balance the needs of different states within the region. If LMP signals prove insufficient to motivate efficient generation siting, the RTO should have the ability to propose credits for new generation that relieve constraints or otherwise avoid the need for expensive transmission construction and then roll the cost of such credits into its transmission rates.

2. **RTOs should be obligated to construct, or cause construction of, needed new facilities**. The types of transmission facilities that the RTO should have an obligation to construct, or cause to be constructed (through competitive bidding, where feasible), should encompass all facilities for which the incremental benefits for the region exceed the incremental costs and for which the benefits accrue to many market participants. These facilities should include:
   a) ***Reliability/adequacy***. Facilities needed to meet NERC, regional and state transmission reliability standards and to support the deliverability of required regional capacity and operating reserves.
   b) ***Accommodating load growth***. Facilities necessary to achieve and maintain reasonable quality of service standards, no less than current standards, as regional load grows.
   c) ***Preserving existing transmission rights***. Facilities necessary to provide for the simultaneous feasibility of FTRs for all existing firm transmission rights, if insufficient capacity exists to match all existing firm rights with equivalent FTRs when FTRs are initially assigned.
   d) ***Providing loads with access to the competitive market***. Facilities needed to provide all loads with reasonable access (that is, without significant congestion charges) to regional competitive generation markets. The RTO should construct and roll-in essential "four lane highway" facilities into and out of load and generation pockets and minimize existing inequities as a result of grid topography. Transmission upgrades should be constructed and rolled-in if they are needed to increase transmission capability into areas where market power mitigation is needed on more than an infrequent basis.
   e) ***Maintaining existing FTRs***. Facilities needed to maintain the simultaneous feasibility (but not the value) of existing FTRs that have been allocated or sold to market participants. This construction is crucial for the viability of long-term FTRs needed to support existing and future generation.
   f) ***Facilitating major regional, inter-regional power transfers*** through major transmission facilities that integrate markets within an interconnection.
   g) ***Integrating new generation into the regional grid.***

3. **Transmission expansion costs should be recovered in rates, primarily on a rolled-in basis, but using a rate design that assigns a portion of the revenue requirement to generation.**
   a) The costs of new transmission facilities should be recovered in RTO transmission rates on a rolled-in basis, offset by any incremental assignment of network upgrade costs to load-serving entities (LSEs) for long-term, network resources or to generators, as described below, and also offset by revenues from sales of short- and

intermediate-term financial transmission rights (FTRs). Auctions of short- and intermediate-term FTRs should come after assignment of long-term FTRs, as described below. Long-term FTR holders should be allowed to sell their FTRs on a short- or intermediate-term basis in a secondary market.

b) In order to avoid saddling local load with an inequitable share of the costs of transmission that enables long distance sales of power and energy, transmission rate design for network access service should distinguish between (i) regional highway facilities, (ii) local load-serving facilities and (iii) supply-related facilities assigned to generation, including generators used for out-of-area export sales, consistent with the rate design concept proposed by TRANSLink. This rate design appropriately seeks to spread costs for regional highway facilities to everyone in the region and costs for the local area grid to the local area load and generators.

4. **Recovery of the costs for facilities needed for new generation may have an incremental cost assessment component.** TAPS supports roll-in of network upgrades to integrate a new generator into the regional grid, unless the costs of the upgrades are extraordinary and the facilities required are not consistent with the RTO's long-term plan to meet its other planning and construction obligations described above. If an assignment of incremental costs is determined to be appropriate under this test, an RTO may use a hybrid rate approach. A hybrid approach may also be appropriate in the RTO context where some incremental cost assignment is found to be necessary in order to provide a price signal for efficient generation siting.

Under this hybrid approach, a portion of the costs of the upgrade that would not be otherwise incurred ("but for" costs), after taking account of system benefits that the upgrade will provide to others, may be assigned to the LSE that has designated the generator as a long-term network resource and/or to the generator itself to the extent the generator is not designated as a long-term network resource by an LSE. In the case of very large regions, similar incremental cost assignment would apply for upgrades outside of the sub-regional grid required due to an LSE designation of a new network resource outside of the sub-regional grid or a generator request for long-term access to a control area system or node beyond the sub-regional grid.

The cost of facilities interconnecting a generator to the grid may be directly assigned, provided that comparable rate treatment is put into effect for existing generators.

5. **Long-term FTRs should be assigned to LSEs for long-term network resource commitments**. In addition to assigning long-term FTRs to preserve existing firm transmission uses and generation commitments, the RTO should allocate long-term FTRs (that is, three years or greater, depending on the availability of a workable market for FTRs of shorter terms) for new network resources dedicated to meeting a load-serving obligation in order to assure the transmission availability and price stability necessary to support and finance new long-term generation commitments at reasonable cost. An LSE should be entitled to an assignment of a long-term FTR for delivery of the full capacity of a network resource to its load, up to the life of the resource commitment, if transmission capacity is available without a network upgrade or as a result of an upgrade that qualifies for rolled-in cost treatment. An LSE also should be entitled to a long-term FTR for the full capacity of a new network resource if the LSE is willing to bear incrementally any "but for" costs that qualify for incremental cost assignment, as described above.

6. **Long-term FTRs also should be available to generators that bear incremental upgrade costs**. To the extent a generator is (i) subject to an assignment of incremental "but for" costs for a network upgrade that does not qualify for full rolled-in treatment, and (ii) has not been designated as a long-term network resource by an LSE to whom the incremental "but for" cost has been assigned, the generator should be entitled to receive a long-term FTR matching the increased transfer capability created by the upgrade whose cost it has borne in part incrementally.

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