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Federal Energy Regulatory Commission
Western Governors' Association Summit
“Renewables Development: The Western and U.S.
Landscapes”
September 27, 2007

- I. Orders on CAISO's Proposed Financing Mechanism for Transmission to Location-Constrained Resources
- Initial order issued April 19, 2007; Rehearing order issued September 20, 2007 (Docket # EL07-33)
 - Orders address one of the most persistent barriers to widespread development of renewable generation.
 - Renewable generation such as wind and geothermal are usually found in economically developable quantities at dispersed locations remote from load centers.
 - Each discrete site is typically small in size relative to many central station fossil fuel plants or nuclear units

- Because of these unique characteristics, renewable generation must be aggregated in large scale to justify the high transmission costs that often accompany delivering power from remote locations
- With separate and often competing developers pursuing different timelines, the collective effort needed to finance required transmission facilities often becomes impossible
- Orders grant conceptual approval for CAISO's proposed mechanism for financing transmission facilities to "location-constrained resources," including wind, geothermal, and solar generators
 - Location-constrained resources are characterized by their location, relative size, and immobility of their fuel source
 - To qualify for financing mechanism, a proposed line must be approved through the CAISO's transmission planning process, and its sponsor must demonstrate a sufficient level of interest from location-constrained resources

- Under the financing mechanism, each generator that interconnects would be responsible for paying its pro rata share of the going-forward costs of the line. All users of the transmission grid would pay the costs of any unsubscribed portion of the line through their inclusion in CAISO's Transmission Access Charge, until the line is fully subscribed

- Key points in the orders
 - Challenges faced by developers seeking to interconnect renewable generation are real, are distinguishable from difficulties faced by other generation developers, and can thwart the efficient development of needed infrastructure.
 - The Commission's existing interconnection policies do not address the unique concerns of renewable generation. Therefore, flexibility in applying the Commission's interconnection policies is needed to recognize those unique characteristics.

- Recognizing the unique characteristics of renewable generation does not constitute undue discrimination against other generators
- The orders do not approve the construction or financing of any specific transmission lines. The Commission will consider specific lines on a case-by-case basis when a transmission owner seeks approval of its proposed rate recovery.
- The orders encourage similar proposals from other transmission providers, including both independent transmission providers like CAISO and vertically-integrated entities.

II. Order No. 890: Steps to Facilitate Use of Renewable Generation

- Establishes conditional firm transmission service
 - Prior to Order No. 890, the Commission's *pro forma* OATT allowed a transmission provider to deny a request for long-term firm point-to-point

transmission service if that service was not available in a single hour of the period requested.

- In Order No. 890 (issued in February 2007), the Commission established a “conditional firm” component of long-term firm point-to-point service to address situations where firm service can be provided for most, but not all, requested hours. Transmission providers must identify either defined system conditions or an annual number of hours during which service will be conditional.
- Conditional firm service will be beneficial for renewable generation, such as wind, that often can be constructed more quickly than the transmission upgrades necessary to delivery their power on a firm basis over the long-run.
- Conditional firm service will provide renewable generation with greater access to the transmission grid and will allow renewable generation to provide significant economic and environmental value, even if they are curtailed under limited circumstances

- Conditional firm service will also make more efficient use of existing grid capacity.
- Reforms energy and generator imbalance charges
 - In Order No. 890, the Commission found that existing energy and generator imbalance charges were excessive, too varied, and otherwise unrelated to the cost of providing service
 - The Commission revised the existing *pro forma* OATT Schedule 4 for energy imbalances and established a new OATT Schedule 9 for generator imbalances. The Commission required imbalances to be based on a three-tiered structure similar to imbalance provisions used by the Bonneville Power Administration.
 - The Commission recognizes that distinctive characteristics of intermittent generators warrant distinctive treatment
 - Because wind and other intermittent resources have limited ability to control their output, high penalties

will not lessen the incentive to deviate from their schedules. Therefore, intermittent generators are exempt from the third-tier deviation band.

- Variations from this *pro forma* OATT must account for the special circumstances presented by intermittent generators and their limited ability to precisely forecast or control generation levels.
- Requires open and coordinated regional transmission planning
 - In Order No. 890, the Commission amended the *pro forma* OATT to require coordinated, open, and transparent planning of transmission systems on a regional level.
 - Each transmission provider must add a new Attachment K to its OATT, describing a regional planning process that complies with nine principles identified by the Commission (coordination, openness, transparency, information exchange, comparability, dispute resolution, regional

participation, economic planning studies, and cost allocation for new projects).

- Commission Staff will convene three technical conferences next month to discuss transmission providers' draft planning proposals; the conference to discuss the draft proposals for the West will be held in Denver on October 23-24, 2007.
- Open and coordinated regional transmission planning will enhance the ability of customers to access renewable generation as part of their future resource portfolios.

III. National Interest Electric Transmission Corridors

- Section 1221 of the Energy Policy Act of 2005 (EPAct 2005) assigns responsibility to the U.S. Department of Energy (DOE) for designating National Interest Electric Transmission Corridors (NIETC).
 - DOE may designate as a NIETC "any geographic area experiencing electric energy transmission

- capacity constraints or congestion that adversely affects consumers”
- In April 2007, DOE issued two draft NIETC designations: (1) a Southwest Area National Corridor that includes parts of California, Nevada, and Arizona; and (2) a Mid-Atlantic Area National Corridor.
 - EPCRA 2005 Section 1221 also assigns to the Commission limited backstop siting authority for electric transmission facilities in NIETCs.
 - The Commission has issued a Final Rule to implement that provision (issued in November 2006, followed by an Order Denying Rehearing in May 2007)
 - Designation of NIETCs may help to alleviate transmission congestion. It is less likely that designation of NIETCs will have a notably beneficial effect on facilitating use of renewable generation.

- NIETCs are not focused on promoting renewable generation
- Several Members of Congress, however, have either introduced or are considering introducing legislation that would establish National Renewable Energy Zones.
- Senator Reid recently introduced the “Clean Renewable Energy and Economic Development Act,” with the goal of providing additional financing options for new transmission lines needed to carry energy from Renewable Energy Zones.
- Representative Inslee (D-WA) has discussed a similar proposal in meetings of the House Energy and Commerce Committee, and he is considering introducing similar legislation.

IV. Thoughts on Some of Governors Freudenthal's and Ritter's Questions

- Freudenthal Question #2: Why can't we consolidate control areas to enable the integration of more

renewables? I would like to know from our federal and state regulator panelists what actions you can take to encourage companies to consolidate control areas to save money and enable the integration of renewables?

- As you know, some regions of the country are developing organized wholesale electric markets, while other regions – including most of the West – feature only bilateral markets.
- Even in regions of the country that are not pursuing organized wholesale electric markets, the Commission is promoting enhanced coordination. The transmission planning requirements of Order No. 890 are one example of those efforts.
- Freudenthal Question #3: What should the government be doing to help integrate more renewables into the grid? I would like to hear the panelists' views on whether proposed transmission lines to wind and solar-rich areas should be “super-sized” to take advantage of economies of scale and reduce the need in the future for more transmission corridors and associated environmental

impacts. I would also like to hear the panelists' views on whether a governmental entity, such as the federal government or perhaps a state should put up the front-end capital to "super-size" a proposed line.

- As I stated earlier, renewable generation must be aggregated in large scale to justify the high transmission costs that often accompany delivering power from remote locations
- The Commission's orders on the CAISO's financing mechanism for transmission to location-constrained resources recognize that need and increase the likelihood that needed transmission lines will be constructed to wind and solar-rich areas.