UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Preventing Undue Discrimination	**)**	
And Preference in Transmission	**)**	**Docket No. RM05-25-000**
Services	**)**	

COMMENTS OF THE AMERICAN WIND ENERGY ASSOCIATION

1. Introduction and Summary

The American Wind Energy Association (AWEA) appreciates the opportunity to suggest solutions to the severe problems with Open Access Transmission Tariffs (OATTs). We also include a statement by former FERC Commissioner William L. Massey putting these developments in an historical context. As Commissioner Massey's statement describes, most of the current problems result from the balkanized nature of the grid outside of RTOs and ISOs. We should keep in mind that the industry is only half of the way from its history of isolated load-generation pockets to its future as an integrated grid across interconnections, if not the nation. It is widely recognized that robust large regional grids would benefit reliability and efficiency. A third issue of national importance is the development of renewable energy, and that goal too requires robust large regional grids. FERC and the industry should strive in our reform of transmission tariffs to make the grid perform as close to an integrated national grid as possible. Pursuant to the Commission's request for specific, non-ideological suggestions, we recommend specific tariff reforms below.

AWEA is a national trade association representing a broad range of entities with a common interest in encouraging the expansion and facilitation of wind energy resources in the United States. AWEA members include wind turbine manufacturers, component suppliers, project developers, project owners and operators, financiers, researchers, renewable energy supporters, utilities, marketers, customers and their advocates.

In summary, AWEA's position is as follows:

- OATTs were known to be flawed from the start;
- As a first step, existing OATT provisions related to scheduling flexibility and commercial redispatch should be enforced;
- Significant reforms should be made to OATTs outside of RTOs and ISOs;
    - Imbalance penalties should be replaced;
        - Imbalance charges should be based on cost, not arbitrary and excessive penalties;
        - Imbalance charges should be part of transmission service tariffs, not interconnection agreements;

- OATTs waste valuable transmission capacity by not offering valuable services;
  - Performance-based assessments of transmission usage should be required;
  - Any valuable unused capacity should be released to the market;
- Transmission queuing processes waste valuable capacity and should be modified;
- ATC should be flow-based;
- Commercial re-dispatch should be required in support of point to point transmission service;
- Control areas should be consolidated virtually, if not physically, through dynamic scheduling;
- Rate pancaking should be eliminated;
- Balancing authorities should adhere to specific non-discrimination requirements.

2. OATTs were known to be flawed from the start

The attached statement by former Commissioner William L. Massey describes the history of the OATT and Order No. 888 on which he voted in 1996. The same day the Commission issued Order No. 888, it issued a proposed rule on a Capacity Reservation Tariff (CRT) (RM96-11). The Commission stated in the CRT NOPR:

> "Many commenters responded to our initial proposed open access pro forma tariffs by asking us to adopt either more flexible or more innovative tariffs in the Open Access Final Rule. Some commenters suggested that the basic design of the Open Access NOPR pro forma tariffs may be too inflexible to accommodate industry innovations. The capacity reservation tariff proposed here is an alternative that may better suit the needs of the changing electric power industry."[1]

The Commission noted that putting some customers (point-to-point) on a reservation basis and other customers (network) on a usage basis may not be comparable, and proposed putting all on the same basis, either usage or reservation. Order No. 888 was a smashing success legally, to establish the policy of open access. Its technical features were known to be lacking from the start. Former Commissioner Massey's statement describes this background and context.

3. As a first step, existing OATT provisions should be enforced

As the Commission inquires in the NOI, many provisions of the tariff are inconsistently applied and some are rarely followed. There is scheduling flexibility built into the tariff. For firm and non-firm point to point service, Sections 13.8 and 14.6 of the tariff allows transmission customers the flexibility to update their transmission schedules 20 minutes

[1] CRT NOPR, April 24, 1996, 75 FERC 61,079.

before the operating hour. This allows dynamic conditions such as weather-driven output to be taken into account. However, aside from Pacificorp and the Bonneville Power Administration, there are few if any other transmission providers who provide this flexibility.

Another important and un-enforced provision is commercial re-dispatch. Section 13.5 of the tariff provides, in pertinent part, as follows:

> "To the extent the Transmission Provider can relieve any system constraint more economically by redispatching the Transmission Provider's resources than through constructing Network Upgrades, it shall do so, provided that the Eligible Customer agrees to compensate the Transmission Provider pursuant to the terms of Section 27. Any redispatch, Network Upgrade or Direct Assignment Facilities costs to be charged to the Transmission Customer on an incremental basis under the Tariff will be specified in the Service Agreement prior to initiating service."

This provision allows customers to "buy-through" congestion to allow their transactions to be accepted without curtailment. It is widely known as a matter of engineering that the grid can accommodate far more transactions with re-dispatch than it can by accepting only those transactions that pose no threat of congestion. It is inefficient and discriminatory for a transmission provider not to offer commercial re-dispatch when it is available. The attached statement by former Commissioner William L. Massey describes these lessons on market design and why re-dispatch, especially in its purest form through Locational Marginal Pricing, is more reliable and efficient.

Un-enforced provisions render the tariff discriminatory. Transmission providers that dispatch their own resources have an inherent advantage. They have complete scheduling flexibility and have full commercial re-dispatch opportunity. These features are built into their scheduling and dispatch function. The Commission should start its reform of OATTs by clarifying these requirements of current tariffs and enforcing them.

4. Significant reforms should be made to OATTs outside of RTOs and ISOs

As the statement by former Commissioner Massey attests, most of the flaws in OATTs result from the balkanized nature of today's power system and the immaturity of energy markets outside of RTOs and ISOs. While RTO and ISO markets are not perfect, sufficient processes are in place to improve tariffs in those areas over time. Outside of RTOs and ISOs a new and vastly improved pro forma tariff is required.

4.1. Imbalance penalties should be replaced

4.1.1. Imbalance charges should be based on cost, not arbitrary and excessive penalties

Pursuant to Schedule 4 of the Pro Forma tariff, current tariffs allow for penalties of up to $100 per MWh for deviations between schedules and actual delivery outside of a 1.5

percent dead-band. When applied to intermittent weather dependent resources such as wind, these unjust penalties produce no reliability benefits in the form of more accurate scheduling. Instead, their only real-world effect is to create a significant—indeed, usually prohibitive—economic barrier preventing intermittent technologies from entering certain markets.

The current $100/MWh penalty is unjust and unreasonable because that penalty level is vastly in excess of any cost caused by imbalances, and the penalty serves no behavioral purpose when applied to intermittent resources. The justification for a penalty must be based on encouraging a desired behavior. In this case, where output is weather-driven not operator-driven, the penalty has no justification in cost or behavioral effect.

In referencing the $100 MWh penalty, AWEA notes that there is both variation and confusion in the market regarding the source and amount of imbalance penalties. In Order 888, the Commission distinguished between generator imbalances and energy imbalances with the latter being addressed in Schedule 4 of the OATT and the former left to transmission providers to address in their interconnection agreements.[2] Subsequently, several providers sought and received approval from the Commission to include generator imbalance penalties along with energy imbalance penalties in their tariffs. (See, e.g., Niagara Mohawk Power Corp., 86 FERC ¶61,009 (1999); PacifiCorp, 95 FERC ¶ 61,145, order on reh'g and clarification, 95 FERC ¶61,467 (2001); Alliant Energy Corporate Services, Inc., 93 FERC ¶ 61,340 (2000) (orders on rehearing and court appeal sought on other tariff issues); Wolverine Power Supply Cooperative, Inc., 93 FERC ¶ 61,330 (2000); Commonwealth Edison Co., 93 FERC ¶ 61,021 (2000); First Energy Operating Cos., 93 FERC ¶ 61,200 (2000), order denying reh'g & granting clarification, 94 FERC ¶ 61,184 (2001); Tampa Electric Co., 90 FERC ¶ 61,330 (2000), reh'g denied, 95 FERC ¶ 61,101 (2001); Florida Power Corp., 89 FERC ¶ 61,263 (1999); and Consumers, 87 FERC ¶ 61,170.). These cases typically approve generator imbalance penalties that charge 110% of incremental cost for under-deliveries and pay 90% of incremental cost for over-deliveries with no dead-band. Subsequently, the Commission has issued varying opinions regarding whether generator imbalances should be addressed in tariffs or in interconnection agreements. As a result of this history, there is some confusion regarding the application of generator versus energy imbalance penalties. AWEA is mainly concerned with penalties including the $100/MWh minimum charge with a 1.5% dead-band, but the 110%/90% scheme with no dead-band is also unreasonably punitive when applied to intermittent generation.

The purpose of imbalance penalties is to support the system operator's need to keep system-wide generation and load in balance in real time. AWEA supports this objective. Most electric systems appropriately balance *system* load and *system* generation. For example, vertically integrated utilities serving their native load allow their resource imbalances to be netted against each other. RTOs with markets allow generators and load to bid into a pool and manage pool-wide supply and demand. However in the transmission tariffs outside RTOs and ISOs, the system operators do not only practice appropriate system balancing but they require every generator to stay in balance. This

[2] 75 FERC ¶ 61,080 (1996)

requirement is inferior because typically some generators are over-scheduled while others are under-scheduled, thus causing no net imbalance and no reliability impact, while causing charges to be assessed twice, from the over-schedulers and the under-schedulers. AWEA supports cost-based imbalance charge, just not arbitrary and excessive penalties. Moreover, under this scheme, penalties are assessed regardless of the impact of the deviation on system costs, such that generators are penalized even where the deviation *reduces* system costs—a relative common occurrence.

4.1.2. Imbalance charges should be part of transmission service tariffs, not interconnection agreements

As noted above, many imbalance penalties have been put into interconnection agreements. AWEA believes that scheduling and imbalances are a delivery issue, not an interconnection issue. As such, this issue does not properly belong in interconnection agreements.

4.2. OATTs waste transmission capacity by not offering valuable services

The U.S. transmission grid is not used as fully as it could be. Strains on the grid and lack of investment are now widely understood and accepted. Given high and rising demand for transmission, every effort should be made to maximize use of the existing grid. According to the Department of Energy, "The national average load factor (the degree to which physical facilities are being utilized) is about 55%. This means that electric system assets, on average, are used about half the time."[3] As explained below, transmission over key interfaces that is posted as unavailable could be used more fully.

Valuable transmission paths are increasingly "sold out." Zero Available Transfer Capability (ATC) is posted, shutting off the opportunity for customers to secure long term contracts required to finance generation investments. AWEA members have faced charges of over 50 percent of the project cost to pay for the upgrades required to make firm capacity available. The shameful aspect of this situation is that the capacity typically *does exist* for these projects to go forward and deliver over these systems. In the West, the Seams Steering Group of the Western Interconnection documented utilization of key interfaces and found that all but two paths had flows less than 75 percent of the capacity 75 percent of the time.[4] In the Eastern Interconnect, a very desirable North Dakota Export limit flowgate has no firm ATC available but its average usage is only 519 MW out of a capacity of 1950 MW.[5] Studies have indicated that some resources including wind would use the capacity when it is available, and would not need it during those rare times when it is fully loaded.[6] We emphasize that customers not only

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[3] U.S. Department of Energy, "GRID 2030" A National Vision For Electricity's Second 100 Years, July 2003. p.7.

[4] http://www.ssg-wi.com/documents/320-2002_Report___final_pdf.pdf , Appendix A page 12.

[5] Minnesota PUC Certificate of Need proceeding Docket No. E-002/CN-01-1958, Exhibit is No. 643.

[6] http://www.nrel.gov/docs/fy05osti/38152.pdf

want the capacity to be offered, but financing requires that it be offered on a long-term basis with some certainty about its firmness.

The Rocky Mountain Area Transmission Study initiated by the Governors of Utah and Wyoming found the following:

> "In the RMATS region (as in many others), there is no firm Available Transfer Capacity (ATC) available on many transmission paths, even while some paths may be congested for less than 20-50 hours per year. Further, this minimal physical congestion often is during times of low wind output. There may be physical capacity on some paths in the current system to move significant amounts of wind energy, but no access to it under Order 888 tariffs. Wind projects cannot be financed using short-term, non-firm point-to-point service, (the only current alternative to firm service) because non-firm transmission service has no curtailment priority." RMATS Phase I Report, p. 5-10.

4.2.1. Performance-based assessments of transmission usage should be required

AWEA notes the statement of the Western Interstate Energy Board, an organization of twelve Western states and three Western Canadian provinces that serves as the energy arm of the Western Governors' Association:[7]

> "The Western Interstate Energy Board requests that the Commission:
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> - Examine unused transmission capacity available in the Western Interconnection and evaluate the effectiveness of current policy under Orders 888/889. The examination should begin with an analysis of actual flows on major Western transmission paths, compare Available Transmission Capacity (ATC) postings with actual flows, and perform audits where there are recurrent large disparities between actual flows and ATC. This will provide the Commission with an understanding how Orders 888/889 are being implemented and thereby enable it to make informed decisions about whether and what types of changes are needed.
> - Pursue the development of new transmission products to enable greater utilization of existing wires. Such products may be particularly helpful in enabling development of remote, high-quality wind resources in the West."

AWEA believes that WIEB's recommendations above regarding performance assessments to identify wasted transmission capacity are appropriately placed on transmission providers. While we would support any effort by FERC or DOE to perform such assessments, this proceeding provides an appropriate vehicle to put the obligation

[7] Statement of the Western Interstate Energy Board to the Federal Energy Regulatory Commission's Technical Workshop on Assessing the State of Wind Energy in Wholesale Markets, AD04-13, December 1, 2004.

where it belongs, on transmission providers. We suggest that the following language should appear in all OATTs: "Each year the transmission provider shall collect and report historical transmission usage over any interface where ATC is zero or where requests have been denied. These reports will calculate and display the percent of hours in which usage on the path was above 90 percent, 75 percent, and 50 percent of rated capacity." With this information market participants and policy makers can assess the extent of unused capacity and opportunities for new service offerings.

4.2.2. Any valuable unused capacity should be released to the market

Using performance reports identified above, if valuable capacity is found to be available but not offered, transmission providers should have an obligation to create a new service to offer such capacity, including on a long-term basis. In AWEA's experience, transmission providers often support this concept because their motivation is to sell more valuable transmission service but many were awaiting an RTO in their region to solve the problem.

The current Order No. 888 OATT requires transmission providers to offer customers both firm and non-firm transmission service. Long-term firm service must be for a year or longer, while short-term firm and non-firm service are for service terms under a year. Developers need long-term transmission contracts in order to finance new wind projects that have a life of 20+ years. Therefore short-term firm and non-firm contracts do not meet their needs. However, many areas of the country still functioning under the 888 tariff have very limited transmission capacity available on a long-term basis. But requirements for long-term transmission contracts require that the ATC (available transfer capability) is available 8760 hours of the year, prohibiting transmission providers from offering any additional long-term firm service.

The RMATS report identified "conditional firm" and "priority non-firm" as new services to release valuable capacity to the market:

> "The work group found, after comparing wind output and existing flow data on three specific transmission paths in the region, that there is substantial physical capacity available at most times of the year that current operational practices and tariff requirements do not make available to wind on a long-term basis. Additional study work will be required to take into account the scheduled use of the transmission system as well as the actual power flows. There is potential for wind to make better use of the existing system through innovative tariff products. A "conditional firm" product would offer firm service except for certain defined periods, and a long term "priority non-firm" product would offer a high priority non-firm service on a long-term contractual basis. Other resources may find this product attractive also."[8]

[8] http://psc.state.wy.us/htdocs/subregional/FinalReport/ExecutiveSummary.pdf page 2.

We propose details of a conditional firm service that should be required of all transmission providers in the attached appendix. We note BPA has been developing details of this service. The proposed Conditional-Firm (CF) product would be a long-term transmission service that provides for as many months of firm service as possible during the year, combined with a specified number of hours over a set number of "conditional" months, weeks, or days when firm transmission service may not be provided at pre-schedule.

4.3. Transmission queueing processes waste valuable capacity and should be modified

Transmission queues are frequently jammed with many projects holding each other up. Often there are "zombie" projects blocking the queue, without a Power Purchase Agreement or other indication that they are serious projects. Many developers do not know where they will be selling their power when they first submit transmission service requests so they submit requests for many Points of Delivery. Another common problem is that capacity is reserved for transmission service or interconnection requests high in the queue awaiting new capacity, when customers lower in the queue would gladly take the capacity that is available. For example less than the full amount of the higher level project request could be offered, or the full amount could be offered on a seasonal or conditional basis. Under current protocols, such services cannot be offered. The result is inefficiency and underutilization of the grid because valuable transmission service is not offered to the market.

These problems are largely the same for both interconnection queues and transmission service queues. The NOI in this proceeding asks about more closely coordinating the queues, and AWEA believes such coordination would be helpful. For example, there have been cases where transmission service was offered before a project's interconnection agreement had been signed, creating a risk for the customer.

AWEA recommends the following protocol to begin the discussion of queue reform:

- if a customer's full request cannot be met, the transmission provider should offer them a partial or seasonal long term firm service;
- if the customer turns down this offering, the transmission provider shall offer the alternative long term service to the next customer in the queue and the declining customer does not retain any queue rights to this capacity, although they retain their queue position.

4.4. ATC should be flow-based

We propose a common flow-based ATC methodology used among transmission providers, as well as regional flow-based ATC methodology to assess available capacity among all transmission providers in an area. BPA recently updated their ATC methodology and identified hundreds more MW of ATC along certain paths in their

control area. This is one of the quickest and cheapest methods of providing more transmission capacity on a constrained system, if in fact analysis can show that such capacity is available. And analyzing ATC across multiple control areas, much like treating them as a single control area, can give a much clearer picture of actual flows across the system, as well as provide efficiencies that result in greater capacity than can be seen when analyzing each control are individually.

It is critical the transmission providers move to flow-based analysis rather than using outdated contract path methodologies not only because it provides a more realistic picture of how the system is actually being used and the amount of capacity really available for use, but it offers the first step to eliminating congestion through flow-based rights and nodal curtailments. Ultimately, it will be useful for transmission providers to move from contract path based transmission rights to flow-based rights. Flow-based rights are more easily traded among customers with diverse POR/POD pairs and can more easily reflect the true value of rights across a congested path. Even prior to moving to flow based rights, transmission providers should be required to ensure that the full value of a transmission customer's rights over congested paths is transferred during capacity reassignment and redirects. Flow-based analysis and rights can also give the transmission provider clearer information about which transmission customers and schedules affect congested paths during periods of high use. With this information transmission operators will be able to more effectively and efficiently eliminate congestion when it begins to impede reliability. This can allow transmission providers in non-RTO regimes to begin to address congestion in a more effective way without moving to financial rights.

4.5. Commercial re-dispatch should be required in support of point to point transmission service

Transmission providers should be required to offer re-dispatch services to enable additional transmission service availability. Re-dispatch of generators in a control area can provide congestion relief during periods of peak transmission usage across constrained paths. Re-dispatch service should provide payments between transmission customers whose service is maintained during congestion, and those generators that adjust their output to accommodate these customers. This solution can be implemented more quickly than building new transmission lines and can provide a bridge to such time as there are enough new transmission customers along a path to provide funding for new line construction. As noted above, the current tariffs contain a provision on commercial re-dispatch which has been largely unimplemented. The Commission should refine and enforce this important requirement as part of this rulemaking.

4.6. Control areas should be consolidated virtually, if not physically, through dynamic scheduling

The balkanized grid in the U.S., especially outside of RTOs and ISOs is characterized by many small control areas that limit integration of some resources, especially wind. The attached statement by former Commissioner Massey describes the problematic state of

the industry in this regard. The grid would be much more reliable and efficient in the long run if these small control areas were merged together.

In the absence of actual physical control area consolidation, virtual consolidation of control areas should be adopted. This may include dynamic scheduling and metering of reserves and regulation resources, software enhancements to facilitate reserve sharing, and other technological advances that promote broad and efficient markets for clean and diversified resources.

4.7. Rate pancaking should be eliminated

A separate $3 to $5/MWh charge on transactions for each transmission system renders many otherwise efficient transactions uneconomic. These charges can easily double the cost of a power purchase given the long distances of economic trade today. There have been a variety of proposals for regional tariffs aside from forming a single RTO tariff. For example, MISO and PJM eliminated the pancaked charge on the seam between them. Translink proposed a distance-based transmission charge for the Midwest. Entities that insist on not joining an RTO or keeping some assets out of FERC jurisdiction should not be off the hook for removing inefficient pancaked charges. There need not be cost shifts in the process. For example, license plate rates could be used instead of applying the same access charge for all systems in order to hold transmission providers harmless.

4.8. Balancing authorities should adhere to specific non-discrimination requirements

Balancing authorities, or "control area operators" as they have traditionally been known, sit at the controls and have immense power over which resources are allowed to run. This power must be recognized and should be subject to clear requirements. The authority has long been recognized as FERC jurisdictional, and the ancillary services requirements under Order No. 888 began to establish such standards. However the OATT's requirements are only the tip of the iceberg.

5. Conclusion

The balkanization of the U.S. electric grid endangers the important national policy objectives of reliability, efficiency, and renewable energy development. RTOs would advance these objectives far better than changing words in the individual tariffs of the many transmission providers. However, in lieu of rapid RTO development, the industry and FERC should endeavor to reform tariffs in ways that make them perform *as if* they were regional tariffs. Consistent with the request in the NOI for specific, non-ideological suggestions, we have provided a number of modest and specific changes that we encourage.

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Respectfully submitted,

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Appendix: Elements of the Conditional Firm (CF) Product

- This CF product would be available for long-term PTP transmission service offered in transmission service queue order. A limited number of offers will be available for this product based on historic usage data and studies of projected future conditions.

- A CF product would be offered only to a customer who has submitted a request for long-term firm service that cannot be filled due to lack of ATC on one or more flowgates. If there is some CF available over the flowgates requested, then an offer of CF will be made to the customer.

- The CF product would provide a year round, long-term transmission product.

- The CF product would identify the months where the CF customer will have service identical to any other firm PTP service Agreement. Certain months, weeks, or days of the year would be identified as "conditional" where firm transmission service may be limited or unavailable. The CF product would also identify the number of potential hours during those conditional times, when the CF customer could have their reservations cut or reduced prior to any firm customer reductions. This identified limit would not be exceeded. In the hours when the CF customer does not receive their full reservation as firm service, the customer is responsible for acquiring non-firm service or making other arrangements.

- The CF contract would indicate an annual cap to the hours of potential reservation reduction and/or monthly caps for each conditional month. (Example: A CF contract could specify an annual maximum of 440 potential hours of reservation reduction, combined with monthly caps of 180 hours in each of three conditional months. This clarifies that all 440 hours will not fall in one month.) These caps would be identified when the Agreement offer is signed and would not change for the duration of the Agreement. Any reductions after the limit is reached would be done on a pro rata basis along with all other firm Agreements.

- Real time curtailment or pre-schedule reductions should be made in the following order until such time as the CF customer has reached the annual or monthly caps:

  Pre-schedule reductions/Curtailments:
  1. Non-firm
  2. Conditional Firm
  3. Firm

- It is critical that capacity commitments for CF service are accounted for in the ATC calculations prior to new sales of STF transmission service, thus not degrading the value of the conditional firm transmission product. All CF contract amounts should be treated as firm obligations when determining the amounts of STF and nonfirm transmission available for future periods. CF customers should be treated as firm customers with no option for curtailment or schedule reduction prior to firm

customers during any period that STF has also been sold on the same constrained path.