

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL REGULATORY COMMISSION

Preventing Undue Discrimination and) Docket Nos. RM05-25-000
Preference in Transmission Services) RM05-17-000

REPLY COMMENTS
ON PREVENTING UNDUE DISCRIMINATION AND PREFERENCE IN
TRANSMISSION SERVICES

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These Reply Comments are submitted on our own behalf in connection with the Commission's Notice of Proposed Rulemaking on Preventing Undue Discrimination and Preference in Transmission Services (NOPR) in electricity systems.¹ The purpose is to clarify several issues that arise from the dozens of initial comments filed by interested parties on August 8, 2006. Many of those comments are consistent with our initial comments, presented in the White Paper entitled "A Path to Preventing Undue Discrimination and Preference in Transmission Service" filed in these dockets.² Indeed, RTO transmission providers, transmission owners and load-serving entities that account

¹ Federal Energy Regulatory Commission, "Notice of Proposed Rulemaking on Preventing Undue Discrimination and Preference in Transmission Services," Docket Nos. RM05-25-000 and RM05-17-000, Washington D.C., May 16, 2006; hereafter, "NOPR."

² John D. Chandley and William Hogan, "A Path to Preventing Undue Discrimination and Preference in Transmission Service," August 2, 2006; hereafter "White Paper."

for more than half of the interconnected grid in the US, and who serve nearly two-thirds of the customer loads in this nation, are in fundamental agreement that security-constrained, economic dispatch is the essential transmission service, and that making this service available to all grid users while pricing this service at marginal costs is a prerequisite to ending undue discrimination and preference in the provision of transmission service.³

Access to security-constrained, economic dispatch is not the only issue in providing non-discriminatory transmission service, but it is essential, i.e., necessary. Since it is necessary, without such access there must be discrimination. With such access, incentives would reinforce rather than contradict other requirements for reliability. Hence access to security constrained, economic dispatch would stimulate a virtuous circle of other improvements in transmission service. Given a requirement to provide transmission access without undue discrimination, open access to security constrained, economic dispatch is a policy that comes with benefits and without costs.

Further confirmation comes implicitly from those like the Western Electricity Coordinating Council (WECC) and Bonneville Power Administration (BPA) who, while not RTOs or members of RTOs, nevertheless point out certain realities of grid operations

³ See, e.g., comments filed by PJM, Midwest ISO, Midwest ISO Transmission Owners, ISO-New England and New England Power Pool, Central Hudson Gas and Electric Co et al [includes other NY transmission owners operating under the New York ISO], California ISO, San Diego Gas and Electric, RTO/ISO Council, ELCON, E.ON US, among others. We also note the joint filing of PJM, owners, operators and users of the grid, along with environmental and renewable energy advocates, in support of an open and transparently priced redispatch function in real time. See comments of “Transparent Dispatch Advocates.”

that logically lead to the positions expressed in the White Paper and by the RTOs.⁴ There are others who oppose the remedies suggested by the White Paper, which would require that all transmission providers offer open access to their respective dispatches and price imbalances at marginal costs, as RTOs already do. Yet even some of these opponents implicitly acknowledge the inherent fairness, efficiency and consistency with reliable operations of these proposed remedies,⁵ while providing unconvincing and contradictory rationalizations for why non-RTO utilities should continue to be allowed to use the discriminatory approaches sanctioned by the Commission's Order 888.

Some parties oppose being required to offer third parties open access to their dispatch and redispatch service, arguing, for example, that offering redispatch would lead to curtailments in firm service and/or discourage the construction of new transmission upgrades. The notions that offering redispatch would lead to a decrease in firm service or would harm native loads have been contradicted by the experience of the RTOs who offer such service. To the contrary, offering dispatch or the equivalent redispatch relative to schedules increases firm service and extends native load benefits to all users. Of course, offering redispatch service might discourage unneeded transmission upgrades because redispatch allows greater use of the existing grid, without impairing reliability,

⁴ WECC comments regarding concerns that Order 888 mechanisms may be making it more difficult to maintain frequency in the West are particularly important. Below we discuss how open dispatch priced at marginal costs would solve these issues.

The Commission should take notice of the fact that BPA, while claiming that redispatch service is not practical in hydro-based systems, nevertheless recently announced a pilot project to offer limited redispatch service to certain third parties as a more effective means for managing summer congestion. Compare BPA NOPR comments at 3 to the article "BPA outlines plan for handling congestion next summer with redispatch, not curtailment," Platts Power, September 11, 2006.

⁵ For example, Duke describes redispatch as "an invaluable short-term tool" for maximizing transmission usage. Duke Comments at 36-37. Indeed, most non-RTO utilities acknowledge they routinely use security-constrained, economic dispatch to balance their systems and manage congestion, when serving their own loads.

and thus makes fewer upgrades economic or “needed” for reliability reasons. In this case, open access to the security-constrained, economic dispatch creates a solution, not a problem.⁶

It is critically important that the Commission recognize the indisputable connection between security-constrained, economic dispatch and how transmission service is provided. Understanding this connection is the necessary first step in any serious effort to ensure reliable grid operations and reforming the Commission’s rules to ensure open, non-discriminatory access to the nation’s transmission systems.

With that understanding as foundation, the Commission could make sense of the seemingly inconsistent viewpoints filed by various parties. It would be clear that all grid users in RTO regions receive non-discriminatory transmission service, but the reason they do is because the RTOs offer dispatch services to all and function under Open Access Tariffs that differ radically from the Order 888 framework. It would be equally clear why non-RTO regions that follow the Order 888 framework still do not and cannot meet the basic prerequisites for preventing undue discrimination and preference when providing transmission service to third parties. Third parties consistently receive inferior service to that provided by the non-RTO utility when serving its own loads. The Commission could then focus on the real differences and fashion appropriate remedies.

⁶ See, e.g., comments of Southern Company generally, EEI at 101 - 107, International Transmission Company/Michigan Electric Transmission Company at 20. ITC’s comments are typical: “Relying on generation redispatch is a flawed approach to providing additional firm transmission service.” The reality is that every utility in the country routinely relies on redispatch to provide firm service to its own loads, and if they didn’t do this, electricity costs would be higher. Of course, without using redispatch, utilities would have to build and put into rate base more transmission investments. The Commission should reject these views calling for arbitrary restrictions on transmission service simply to create the artificial need to build more transmission.

What can the Commission conclude from the comments?

The largest percentage of comments appear to be good faith efforts to respond to the Commission's framing of the issues. There are extensive discussions of how and whether to standardize ATC calculations, who should oversee the effort, and whether regional variations are acceptable. Other comments focus on the NOPR's proposals for tweaking the *pro forma* tariff provisions of Order 888 and the merits of adding or revising the kinds of transmission service offered under that framework. There is much discussion of how imbalances should be discouraged, with many comments accepting without question that imbalances are to be limited, feared and punished, even though for over half the country, imbalances are routinely treated as innocuous and even beneficial spot purchases and sales in an RTO framework that uses these to balance the system. Thus, it is not correct to understand the balancing that comes from selling into the dispatch as a separate "procurement," as some have suggested. It is, instead, an essential ancillary service to providing FERC jurisdictional transmission service.

The success of the RTO framework in turning presumed "problems" under Order 888 into beneficial solutions is thus a reminder that any meaningful effort to end undue discrimination and preference in the provision of transmission service must necessarily focus on the dispatch – who controls it, who has access to it, how it is arranged, and how it is priced. This focus changes the conversation, because characteristics that appear problematic in the Order 888 framework suddenly become solutions and beneficial in the RTO world. For that reason, we focus here on what the comments are telling the Commission about how to understand and deal with the real problems of Order 888 and appreciate the remedies provided by the very different RTO framework. A review of the

range of comments filed in these dockets on this topic then allows the Commission to reach the following findings and conclusions:

1. The most essential transmission service for parties seeking to serve their loads at least cost is the control area system operator's security-constrained, economic dispatch.

Access to transmission is inherently discriminatory unless all parties receive efficiently priced, open access to this dispatch. Yet the Commission's NOPR ignores this fundamental fact.

2. In every US RTO, open, non-discriminatory access to transmission is guaranteed to all users by providing open, non-discriminatory access to the RTO's regional security-constrained, economic dispatch. This is not the case for non-RTO utilities.

Every grid user within an RTO's footprint receives fair and open access to transmission service through this dispatch mechanism. However, because non-RTO utilities do not provide comparable access to their respective dispatches to third parties (while using the dispatch freely when serving their own loads), there is no other logical conclusion than that those utilities do not provide third parties with open, non-discriminatory access to their respective transmission systems. This inescapable conclusion, which applies both to jurisdictional public utilities and to historically non-jurisdictional utilities, has profound implications for how the Commission should approach genuine reforms to Order 888 in compliance with the Federal Power Act and the Energy Policy Act of 2005.

3. Because rules for implementing open access relate directly to the dispatch used for reliable system operations, all transmission providers, whether “jurisdictional” or “non-jurisdictional,” should function as far as practicable under the same open access approach.

Historically non-jurisdictional utilities operate transmission systems that are embedded in and highly interconnected with jurisdictional utilities and RTOs in the rest of the Eastern or Western Interconnections. Electricity flows travel freely from/to every system throughout each Interconnection in accordance with the laws of physics, and without any regard to jurisdictional boundaries. For these reasons, there is a compelling logic to requiring all transmission service providers in each Interconnection to function under the same rules. In fact, all system operators already use security-constrained economic dispatch; but not all allow comparable access to that dispatch to third parties. Order 888 allows contiguous utilities in the same interconnection to use different approaches for handling congestion and keeping flows within security limits. The result is that essentially arbitrary patches of the same interconnected system function under the uncertain rules for ATC-based service denials and TLR curtailments, instead of using the more reliable security-constrained dispatch tools their RTO neighbors are using for solving what are in fact regional security and regional dispatch problems. Aside from the added costs of relying on such an inefficient system, having two different sets of rules for operating what is in reality a single, interconnected grid will increasingly become a threat to reliable operations, because the degree and difficulty of the required inter-utility coordination are greater and thus the risks of failure when coordination breaks down increase.

In authorizing the Commission to apply consistent, comparable rules to *all* US systems, Congress seems intuitively to understand this simple, compelling logic. Carving out non-jurisdictional entities, and declining to apply consistent comparability rules across each interconnection despite Congress' clear intent that the Commission do so, is no longer a sustainable position.⁷

4. All US RTOs currently (or plan to) price their dispatch, and the imbalance and congestion management services that directly result from that dispatch, using principles of locational marginal cost pricing.⁸

By pricing all imbalances and congestion management services using locational marginal pricing (LMP), RTOs both ensure reliable operations and provide efficient access to the most essential transmission services to every grid user, without discrimination or preference, and without any party leaning financially on any other party. In contrast, non-RTO utilities are still permitted by Order 888 to deviate, in some cases substantially,

⁷ When examined closely, the frequent response that “one size does not fit all,” proves to be technically wrong and legally irrelevant, as well as poor public policy. As a practical necessity, all segments of the interconnected grid must function under a consistent set of operational rules. The grid would collapse if this were not done. Flows across the interconnection must be kept within security limits, regardless of jurisdictional boundaries and legal distinctions. Keeping flows within security limits can be accomplished by using ATC before the fact to deny access and TLR after the fact to curtail access, which is permitted under Order 888; or it can be accomplished at lower cost, more quickly and with greater certainty by using redispatch to accommodate flows as long as redispatch is possible. The first solution is incompatible with principles of open access and non-discrimination. Hence the first solution is incompatible with principles that are the law of the land. And the first solution is more expensive. The second option is fully compatible with the principles and the law, and it has the added advantages of producing a more reliable system and lower costs. The Commission can follow the law, support reliability and lower costs.

⁸ Locational marginal cost pricing is already in effect in the ISOs covering New England, New York, PJM and the Midwest RTOs. California is in the process of implementing the same pricing system, beginning next year, as is ERCOT (2009). (SPP plans are unclear on this point.) Together, these ISOs operate regional security-constrained economic dispatches priced at LMP for well over half the US interconnected grid and two thirds of all loads. These implementations are changing and improving. The differences within and among the RTOs are important, but they are minor compared to the differences between the RTOs and the non-RTO utilities that do not provide open access to the security constrained, economic dispatch.

from actual dispatch marginal costs when pricing imbalances. As a result they continue to discriminate and/or tolerate cross subsidies (both ways) between utility loads and third party loads.

Further, by allowing non-RTO utilities to net out imbalances over periods longer than the dispatch interval (or spot pricing interval), when the marginal costs of imbalances vary considerably between such intervals (especially within so-called “peak hours” when differing heat rates for marginal units and other factors can produce large changes in marginal or opportunity costs), the Order 888 scheme remains a continuing source of cross subsidies, allowing subsidized leaning on the system (which in turn encourages transmission providers to discourage third parties from using the utility’s dispatch as an efficient balancing system).

EEI comments are particularly helpful in explaining the perverse incentive problems and potential for cost shifting that arise from netting of imbalances:

“It is important for the Commission to incorporate the distinction between imbalances in high load periods and imbalances in low load periods. Otherwise, energy imbalance customers will have an incentive to underschedule in high load periods when costs and prices are high and to repay energy in low load periods when costs and prices are low; and to overschedule when costs and prices are low and receive payback energy when costs and prices are high. Similarly, generator imbalance customers will have incentives to overschedule in high cost periods and underschedule in low load periods. If the transmission system has less energy delivered than was scheduled or load is higher than was scheduled during high load periods, there can be reliability implications because there typically is less on-line generation available to compensate for deficits in energy deliveries in high load periods. Also, since the transmission provider’s native load customers bear the financial burden of any cost differentials between when tariff customers take imbalance energy and when they return the energy, it is important to ensure that such cost differentials are minimal.”⁹

⁹ EEI comments at 71.

Having framed the problem correctly, EEI then implicitly concedes that hourly financial settlements at marginal costs would largely solve the incentive problem:

“Numerous transmission providers have adopted tariff provisions providing for hourly settlements of imbalances in the first deviation band. Hourly financial settlements is the most efficient way for many transmission providers and customers to address imbalances, and the economic impact on both customers and transmission providers of financial settlements instead of monthly netting is negligible.”¹⁰

Unfortunately, EEI proposes to reintroduce the same incentive problem by having financial settlements for imbalances be based on the transmission provider’s *monthly average* incremental or decremental costs in the time period in which the imbalances occurred.¹¹ Many of the perverse incentives that EEI correctly identifies as problems with monthly netting would reappear if such monthly average costs were used for financial settlements. Moreover, this solution would apply only to the first of three tiers of error bands.¹² Endorsing the BPA tiered approach, in subsequent error bands, settlements would stray even further from principles of marginal cost, but this would further discourage open access to the dispatch. The Commission should recognize that these non-economic notions, common in Order 888 systems, but rejected in all RTOs, are holdovers from a regime designed to discourage and prevent third parties from gaining comparable access to the dispatch. They should be discarded for that reason.

5. In every RTO, all load-serving entities wishing to use the grid are treated as native loads; thus, all loads receive all of the benefits and protections of native

¹⁰ EEI at 72. EEI notes that “as a practical matter, when customers net their overschedule imbalances against their underschedule imbalances for a month, it is impossible to ascribe any net imbalances that remain at the end of the month to any specific hour.”

¹¹ EEI at 72.

¹² EEI at 73.

loads and all face comparable, non-discriminatory prices for their actual grid usage.

Because RTOs apply a regional security-constrained, economic dispatch across their footprints, all loads served by RTOs can receive the benefits of the lowest as-bid cost dispatch for balancing the system and managing congestion. By definition, denying access to the least-cost dispatch would inherently lead to higher costs for parties who do not receive comparable access. Thus, in non-RTO systems, utilities who, in following Order 888, deny access to their respective economic dispatches for imbalances and congestion management systematically deny the benefits and protections to the native loads of third parties, while preserving those benefits for their own loads.

6. When faced with congestion, every US RTO offers to every grid user an efficiently priced redispatch service to manage that congestion, so that at a price every grid user can avoid ATC-based denial of service or subsequent TLR curtailments.

If transmission access is to be dependable, every grid user needs access to an effective mechanism for managing congestion and avoiding curtailments. RTOs provide that mechanism through redispatch, which is priced at marginal costs. But Order 888 allows non-RTO utilities to deny third parties access to this essential transmission service, and to subject third parties to ATC-based service denial and/or involuntary TLR curtailments, even though the same utilities control and routinely use this redispatch service to manage congestion and avoid curtailments when serving their own loads. This difference in treatment is inherently discriminatory, but it is tolerated by Order 888 and would not be remedied by the NOPR's reform proposals.

7. When dealing with imbalances, every RTO has rejected (with an unbroken chain of Commission approvals) Order 888's imbalance error bands and escalating penalties that deviate from marginal costs.

RTOs have concluded that these Order 888 mechanisms undermine the incentives system operators and generators need to ensure reliable operations, or they unfairly penalize users by imposing arbitrary penalties that exceed the actual marginal costs of imbalances. The result of arbitrary penalties is a perverse incentive system.

In the Western Interconnection, WECC recognizes the same issue. The Western Electricity Coordinating Council is responsible for ensuring reliability standards for the Western Interconnection that covers half the country. According to WECC, the use of arbitrary error bands and deviations from marginal cost principles to penalize imbalances are creating perverse incentives that may be contributing to the deterioration of frequency response in the West.

“If the manner of implementing generator imbalance charges in the West does not consider the need for generators to respond to frequency deviations, these charges could produce incentives that will undermine reliability. Generators that use set-point controllers to override governor action will be less likely to incur imbalance charges and penalties, while those with properly operating governors may be punished for deviating from scheduled output to respond to system reliability needs. The WECC believes that this has in fact been happening in the West, and that this is one of the reasons that frequency response in the Western Interconnection has deteriorated in recent years.

“The WECC urges the Commission consider how generators can be given appropriate incentive to meet their obligations to supply energy to load . . . but also to support system reliability by effectively responding to frequency deviations. . . .”¹³

¹³ WECC comments at 18.

In other words, reliability entities in the West and system operators in RTO regions of the country are telling the Commission that Order 888's somewhat arbitrary mechanisms for penalizing imbalances may be posing a threat to grid reliability. At the same time, RTO parties are explaining that using locational marginal cost pricing to settle imbalances and price congestion management aligns pricing incentives with reliability, because the settlements at marginal costs encourage generators to follow system operator's dispatch instructions. This approach thus eliminates the perverse incentives and solves the reliability problem, but without arbitrarily restricting access to the dispatch as non-RTO utilities do in the WECC region outside California ISO. There has been no disagreement with this important RTO claim, and none is possible that can withstand serious scrutiny; nor has any party offered any alternative approach that can come close to matching the favorable attributes of the RTO approach. In the past (e.g., Order 2000), the Commission has recognized these important findings. Given this history, the successful record of LMP-based solutions, and the clear and consistent warnings about the perverse incentive effects on reliability of the Order 888 approach, there is no justification for the NOPR to propose continued use of imbalance deviation bands and uneconomic penalties for imbalances.

8. Providing access to security constrained, economic dispatch used by RTOs does not require an RTO.¹⁴ The principles and policy can apply to any control area, and need not require complete redesign of all transmission scheduling practices.

¹⁴ The additional benefits of creating RTOs arise from expanding the geographic reach of security-constrained economic dispatch, so that balancing and congestion management can be accomplished at the lowest cost over a wider region.

A question arises about whether open access to the dispatch would present a fundamental incompatibility for non-RTO regions that use Order 888 scheduling practices for firm and non-firm transmission. In particular, there is a concern that somehow the same generators and loads could not both schedule transmission according to the contract-path methodology and subsequently participate in the balancing market through open access to the security constrained, economic dispatch.

Although there are practical details to address, the fundamental question appears to arise from confusion about the nature of paper schedules and physical dispatch. In a system without consistent pricing of imbalances and without access to security constrained, economic dispatch, there is good reason to try to compel reliable behavior by creating artificial distinctions between those third parties scheduling transactions and the dispatch used by the control area operator providing the transmission service.

However, the distinction is artificial. The transmission schedules by themselves are inherently paper transactions, separate from the physical dispatch. For schedules within a control area, it would be an easy matter to treat third party schedules and (re)dispatch in the same way the transmission provider treats its own dispatch. The formality is simply that participation by generators and loads who have paper transmission schedules would be expressed in terms of increments and decrements relative to the schedule that would be feasible and economic to meet the balancing requirements.

For schedules between control areas, the Order 888 system requires that each control area operator maintain its net interchange with each neighboring control area. But each control area operator must and will adjust the dispatch within its control area to

maintain its aggregate balance and meet its local security constraints. In real-time, this means that paper schedules are replaced by the physical dispatch, and all generators and loads deviate from the *ex ante* schedules at some time and to some degree. Hence, the only issue is how the deviations will be managed and priced. Open access to the control area security-constrained, economic dispatch provides a broader set of options and better tools for the control area operator in meeting these responsibilities at the lowest cost. Pricing the results of the necessary dispatch at marginal cost provides the right incentives for third parties in controlling their physical deviations from paper schedules to the extent possible and desirable. All the while the operator seeks to maintain the scheduled net interchange.

Only when the anticipated transmission constraints or actual physical imbalances appear to be beyond the scope of management through the control area dispatch would the control area operator need to appeal to Order 888 type TLR mechanisms to alter the anticipated or actual net interchange between control areas. But for all other situations, the more responsive and exact security-constrained dispatch would replace TLR curtailments as the means for keeping flows within security limits.

Hence, even for non-RTO control areas, providing access to the control area security-constrained economic dispatch would solve many problems and meet some of the necessary requirements of open access without undue discrimination. Such access is not inherently incompatible with contract-path scheduling.

Open access to the control area security-constrained, economic dispatch with locational marginal cost prices would not by itself eliminate all the problems of electricity trade between regions. But it would make other improvements possible and

provide a coherent foundation for further reforms. For example, extending the scope of the security constrained, economic dispatch by coordinating across control areas,¹⁵ or merging the control areas, is possible and could be desirable. But these are logically distinct steps from the incremental reform of providing open access to the control area security constrained, economic dispatch.

9. Despite a few continuing claims that “conditions here are different” or “the Western systems operate differently from the Eastern systems,”¹⁶ none of these claimed differences is relevant to the issues here, and none justifies allowing any transmission provider anywhere to deny open, comparable access to third parties.

No party claims that the laws of physics are different in their region, that electricity flows across an interconnected network differently in their region compared to others, or that somehow, parties using the grid in the West react differently to a set of incentives from how they would respond in the East under the same conditions. When reviewing these claims about “differences,” the most relevant fact is that security-constrained, economic dispatch is not an exclusively Eastern system phenomenon, nor is it an approach dreamed up by Eastern RTOs. As the Commission recognized in its July 31, 2006 report to Congress, security-constrained economic dispatch is instead the long-established US (and world-wide) standard for how system operators coordinate grid usage, balance the

¹⁵ Inter-control area dispatch coordination is already occurring in varying degrees between neighboring RTOs, such as between the Midwest ISO and PJM, and between ISO-New England and the New York ISO. With open access to the dispatch, the same principles could be applied between non-RTO control areas to improve regional reliability and solve inter-control area congestion at lower total costs.

¹⁶ See, e.g., comments submitted by WECC at 4-7. It appears that the primary difference claimed between Eastern and Western operations is the manner in which each region calculates ATC – that is, the flowgate versus rated path approach. This oft-cited difference is more a distraction than a reason for not focusing on the correct problem. If both regions consistently offered redispatch service to third parties as the means to manage congestion, instead of using ATC (however calculated) to deny service in the absence of redispatch, such differences, where they exist, would have much less importance, if any.

system, manage congestion and keep the lights on. To be sure, the relative mix of transmission constraints (e.g., thermal, voltage or stability limits) and the types of facilities (e.g., base, intermediate and peak; or thermal and hydro) are different and produce different results. But the basic principles and physics are the same, and this is what determines the design of the security constrained, economic dispatch. Given different inputs, the same model produces different outputs. But the one model is the same for all. It is the principal mechanism for operating any modern transmission grid. The Commission has recognized these basic elements in many previous settings. It is long passed time for the Commission to act on the necessary and logical implications of this universally recognized mechanism and to define open access reforms in ways that ensure all parties receive comparable and efficient access to the dispatch as the quintessential transmission service.

What should the Commission do next?

The most important next step is for the Commission to refocus its attention on how non-RTO transmission providers arrange, offer to third parties, use and price their security-constrained, economic dispatch. A refocused conversation on these topics will get to the heart of the real problems in eliminating undue discrimination and preference in the provision of transmission service. Efforts to improve and make more transparent the calculation of transmission capacity may continue, but these efforts should not be the primary focus nor should the Commission have any illusions that an ATC focus will solve the remaining problems of discrimination. By focusing on how transmission is actually provided, and recognizing how Order 888 has become a safe harbor for denying

access to the grid, the Commission can begin a constructive dialogue with the industry that will both improve access and enhance reliable grid operations.

In our White Paper we explained that the Commission's NOPR had systematically and fundamentally confused how transmission service is actually provided in most of the United States, and that as a result, the Commission's analyses of perceived problems in the provision of transmission service were flawed, inconsistent with network realities and the laws of physics, and incompatible with reliable operations. Further, we explained that while the Commission expresses a desire to end undue discrimination and preference in the provision of transmission service, its actual policies were not merely inadvertently tolerating discrimination, they were sanctioning and requiring systematic discrimination.

The core problems, we emphasized, were embedded in the heart of Order 888 (and the NOPR's analysis of that paradigm), which embraced the fictional concept of contract-path scheduling and the misleading and essentially circular calculation of "available transmission capacity" (ATC). We explained, as many have before (and the Commission itself has acknowledged), why the contract path approach is based on fiction and thus incompatible with network physics and safe, reliable operations. Because transmission networks are not highways, simple transportation analogies, such as trucks moving products along selected paths, are misleading. Such fictions are not just unhelpful; they can obscure the problem and mislead the search for solutions.

The White Paper also urged the Commission to reconsider its focus on standardizing the calculation of ATC. We noted that while it is likely true that different utilities use inconsistent and non-transparent ways to calculate ATC, the more basic ATC

calculation problem could not be fixed, because the concept ignores the inherent impossibility of calculating any meaningful number *ex ante*, when the actual capacity of many network transmission elements to accommodate flows is unknowable until one knows how the entire grid is used (i.e., dispatched) in real time. Other parties noted the same problems;¹⁷ no comments from any party disputed these facts.

Equally important, we emphasized that the distracting quest for a standard, more transparent approach to calculating ATC was fundamentally asking the wrong question.¹⁸ The ATC approach asks, “how much capacity is left for third parties, if one assumes no further redispatch is offered to accommodate their requested uses?”¹⁹ when the more important questions, the ones every transmission providers asks when serving its own loads, begin with “how can security-constrained economic (re)dispatch be arranged to

¹⁷ As an example of how ATC can vary depending on how the system is used, WECC comments at 6 describe the initial step of defining total transfer capability (TTC) as a preliminary to calculating ATC. The description illustrates how the number for any path will vary depending on loads on parallel lines and other factors:

“Where calculation of TTC on a given path varies with loading on parallel or interconnected paths, parties in the WECC apply nomograms. A nomogram is a graphic expression of the relationship among two or more paths where loading on one path decreases available capacity on the other path(s).”

It is not uncommon for such variability to range from zero ATC to hundreds or thousands of megawatts on some interfaces.

¹⁸ The Commission should pay particular attention to the comments filed by WECC (and Appendix A) and CREPC and other parties from the Western Interconnection, who remind the Commission that they already have standardized and more transparent methods for calculating ATC. While other regions might improve their ATC calculations by considering similar efforts, it should be clear from these comments that whatever underlying discrimination remains in the West arises primarily from causes *other* than the lack of standardized and transparent ATC calculations. The Commission is focused on the wrong problem.

¹⁹ As described by WECC at 7:

“Once the allocation of a transmission path’s TTC is established, the third step is for the transmission provider to calculate the ‘Committed Uses’ that apply to its portion of TTC. [footnote omitted] The 2001 ATC Guide defines ‘Committed Uses as the sum of existing transmission commitments . . . The 2001 ATC Guide explains how transmission providers are to calculate [these values.] Using these values, a given transmission provider’s ATC is calculated as follows: ATC = TTC (allocated) – Committed Uses.”

It seems clear that the ATC does not assume the transmission provider has any obligation to offer redispatch service to a third party.

accommodate each schedule and serve all loads at lowest cost, and how should this service be priced?” Once access to the security constrained, economic dispatch is available for the balancing function for all, the Commission could turn to how the same tools would apply to scheduling, long-term transmission rights, interregional transactions, and other important issues that otherwise elude coherent analysis.

Given the NOPR’s flawed premises, we observed that it is not possible for the Commission’s proposed remedies to address the pervasive underlying discrimination in how most non-RTO transmission providers provide – or more accurately, *deny and curtail* – transmission service to third parties. The underlying reason is simple: Order 888 does not require non-RTO utilities to provide the most essential transmission service – access to and efficient pricing of the transmission provider’s dispatch and redispatch – that these utilities provide to themselves when serving their own loads. This fundamental difference in how the most basic and essential of all transmission services are provided to some and denied to others reveals how inherently discriminatory the Order 888 framework remains.

The White Paper observed that every transmission provider in the United States, whether a Regional Transmission Organization (RTO) or a non-RTO utility (public or otherwise) provides transmission service *to its own loads* through the mechanism of a security-constrained economic dispatch. It is this security-constrained economic dispatch (including “redispatch” for managing congestion) that is the basic transmission service that keeps the lights on; it determines how the grid is used and who uses it. These dispatch services are therefore the essential transmission services for ensuring that all parties receive open access to the grid.

Access to transmission means access to the dispatch. If it wants to ensure open transmission access the Commission must completely reorient its thinking to acknowledge this fact and abandon the fictions in Order 888's flawed approach. Until the Commission refocuses its attention on the dispatch -- who provides it, how is it arranged, who gets access to it, and how it is priced – its efforts to end undue discrimination and preference in the provision of transmission service will fail.

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