UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Availability of E-Tag Information to Commission Staff	)))))	Docket No. RM11-12-000

JOINT COMMENTS OF THE NORTH AMERICAN MARKET MONITORS

This submission supports the Commission's proposal in the Notice of Proposed Rulemaking ("NOPR") issued in the above referenced docket on April 21, 2011,[1] to make available E-Tag information to Commission staff and urges that the Commission also require that this information be made available to the entities involved in market monitoring functions. These comments are filed jointly by Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM; Potomac Economics, Ltd., acting in its capacity as the Independent or External Market Monitor for the Midwest ISO, New York ISO, and ISO New England; the Internal Market Monitor, ISO-New England; Market Monitoring and Analysis, Southwest Power Pool, Inc.; Market Assessment and Compliance, Independent Electricity System Operator (Ontario, Canada);[2] and Market Surveillance Administrator (Alberta, Canada)[3] (collectively, the "North American Market

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1 135 FERC ¶61,052.

2 The Market Assessment and Compliance Division is a business unit within the Independent Electricity System Operator responsible to promote the fair, efficient and openly competitive operation of Ontario's wholesale electricity markets and enforce compliance with NERC reliability standards, NPCC regional criteria and Ontario market rules.

3 The Market Surveillance Administrator ("MSA") is an independent enforcement agency that protects and promotes the fair, efficient and openly competitive operation of Alberta's wholesale electricity markets and its retail electricity and natural gas markets. The MSA also works to ensure

Monitors") setting forth the general reasons why it is necessary to make available the e-Tag information available to them.

The North American Market Monitors all have responsibility for the day-to-day monitoring of wholesale electricity markets in the jurisdiction in which they are situated. As such they are the early warning system to identify anomalous behavior and potential market design flaws in their respective markets. The mandate and responsibilities of the individual market monitors varies to a certain extent depending on jurisdiction, but the core duties remain identifying behavior and practices that bear a closer examination.

As is well known organized electricity markets are complex and it is often challenging to assess the legitimacy of market outcomes because they are susceptible to influence by a variety of factors. As market monitors with several years of practical experience we agree with the Commission's statement that access to comprehensive e-Tag information "…will aid the Commission in market monitoring and preventing market manipulation, help assure just and reasonable rates, and aid in monitoring compliance with certain business practice standards…"

We believe that parallel access by the individual market monitors to the same information will enable us to strengthen the support provided to FERC and the equivalent authorities in Canada. To effectively identify and refer market manipulation, the monitors need access to information which is as complete as possible and in a form that allows efficient assessment and analysis.

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that market participants comply with the Alberta Reliability Standards and the Independent System Operator's rules.

While the individual market monitors are assigned to specific markets, electricity is a product that physically and economically respects no boundaries. To identify anomalous market outcomes requires an appreciation of transactions between markets and that is why the Commission's proposal to make available comprehensive e-Tag information is so germane to the effectiveness of the work performed by the market monitors. Under current arrangements the rapid insight into inter-market trade is missing from the monitors' toolkit.

Therefore, we strongly support the Commission's proposal and urge that the Commission require that the same information be made available to the individual market monitors by rule and/or through the RTO tariffs that govern the market monitoring functions.[4] Part II of our submission describes the rationale in more detail and identifies the specific data sets required using the example of the loop flows in the Eastern Interconnect.

Loop flows have long posed a reliability problem, but with the development of organized wholesale electricity markets covering a large portion of the Eastern Interconnection (and elsewhere) loop flows now raise significant market issues. Markets based on locational pricing are designed to more accurately reflect the fundamentals of system operations through the use of system flow models. When loop flows disrupt the ability of those models to reflect true flows, the result is faulty information that can compromise market efficiency. The first step to addressing the loop flow issue is to understand it comprehensively. This understanding is not possible without information about flows on the entire Eastern Interconnection, which includes data on transactions from

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[4] The Canadian entities that are signatories to this submission wish to make clear that they do not support the extension of FERC's jurisdiction reach into Canada. This is a separate matter that would require consideration of the usual principles of comity and sovereignty before moving forward.

the non-market areas and between and among market and non market areas as well as between and among market areas.

Accordingly, the North American Market Monitors endorse and support the NOPR and its purpose to ensure access to data that would allow comprehensive analysis of the loop flow problem, particular as it impacts market operations and design. This needed step will provide immediate public benefits in understanding the issue and allowing the Commission a basis upon which to evaluate potential remedial policies in the future.

I. COMMENTS

A. Background

Loop flow is the difference between actual and scheduled power flows at one or more specific interfaces. Loop flows result from multiple causes. Loop flows cannot be understood without complete data covering all scheduled and actual paths.

Loop flows exist because electricity flows on the path of least resistance (Ohm's Law) regardless of the scheduled path specified. Loop flows arise from transactions scheduled into, out of or around a balancing authority on contract paths that do not correspond to the actual physical paths on which energy flows. Outside of LMP based energy markets, energy is scheduled and paid for based on fictional contract paths without regard to the path of the actual energy flows. Loop flows can also result from actions within balancing authorities.

Loop flows can have negative impacts on the efficiency of markets with explicit locational pricing, including impacts on locational prices, on FTR revenue adequacy and on system operations. Loop flows can also be evidence of attempts to game such markets. The explicit choice of a scheduled path that is profitable only on the scheduled path and not on the actual path can be and has been a trading strategy that reduces efficiency and is difficult

for market monitors or FERC to evaluate without adequate information. Inefficient pricing means faulty economic signals that frustrate the ability of the market to provide information to participants. This undercuts a key benefit of markets and regulation through competition. FTR revenue inadequacy reduces the value of FTRs as hedging tools.

Providing market monitors access to e-Tag information is consistent with the Commission's mandate for market monitors to identify and refer potential market violations.[5] The inconsistency between electricity schedules and actual flows can allow participants to engage in conduct that may constitute market violations that cannot be detected without more detailed and accurate information on the schedules, which is contained in the e-Tag data.

Loop flows also have poorly understood impacts on non-market areas. Incomplete or inadequate access to the required data prevents detailed understanding of the sources of identified loop flows. Non market areas will also benefit from more efficient dispatch and improved understanding of loop flows. Loop flows impose uncompensated costs in non market areas in the same way as in market areas.

Access to data allowing for a complete analysis of loop flows would provide the basis for a detailed understanding of the interactions between and among market and non market areas. A complete analysis of loop flow would improve the overall transparency of electricity transactions.

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[5] *See* 18 CFR § 35.28.

B. Types of Data Needed

For a complete loop flow analysis, several types of data are required from all balancing authorities in the Eastern Interconnection. NERC Tag data, dynamic schedule and pseudo-tie data and actual tie line data are required in order to analyze the differences between actual and scheduled transactions. The ACE data, market flow impact data and generation and load data are required in order to understand the sources, within each balancing authority, of loop flows that do not result from differences between actual and scheduled transactions. All data should be made available in downloadable format in order to make analysis possible. A data viewing tool alone is not adequate.

1. NERC Tag Data

An analysis of loop flow requires knowledge of the scheduled path of energy transactions. NERC Tag data includes the scheduled path and energy profile of the interchange transactions, including the Generation Control Area (GCA), the intermediate Control Areas, the Load Control Area (LCA) and the energy profile of all transactions. Additionally, complete tag data include the identity of the specific market participants.

a. E-Tag data should be made available to MMUs

Complete e-Tag access should be made available to MMUs. As the Commission explains, "access to this data would enhance the Commission staff's efforts to monitor market developments and prevent market manipulation, assure just and reasonable rates, and in monitoring compliance with certain NAESB business practice standards."[6] The same logic applies to access for market monitors.

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[6] NOPR at P 7.

In addition to the uses that the Commission suggests, access to this data would provide the market monitors with the ability to track requests for interchange from the time of submission through the implementation of the energy transfer. This ability would permit the evaluation of implemented energy transfers and provide the basis for real-time monitoring and analysis of denied requests for interchange which together could provide insight into the use of the transmission system as well as attempts at market manipulation.

b. E-Tag data should be provided to MMUs on a real-time basis.

Currently, the MMU has obtained some NERC Tag data via a set of "Tag Dump" files. The existing Tag Dump files include many data items from the overall NERC Tag data, but they also exclude key data items. Included in each file are the following data items: Tag Name, Tag Start Date/Time, Tag End Date/Time, Source Security Coordinator, Sink Security Coordinator, Source Control Area, Sink Control Area, Source, sink, Transmission Start Date/Time, Transmission End Date/Time, Transmission Provider Name, Priority, Transmission Product, OASIS Reservation, MW, Point of Receipt, Point of Delivery, Energy Start Date/Time, Energy End Data/Time, Schedule MW and Active MW. The Tag Dump files do not include the following data items: tag type, complete market path, miscellaneous information (token and value fields), tag creation timing, approval timing, denial reasons, denied tags, curtailment reasons, loss provision information, individual request information, and other data items including contact information. Of the data items not included in the Tag Dump files, the most important elements required for loop flow analysis are the complete market path and the loss provision information. These additional data items would complete the picture of the scheduled interchange among all balancing authorities and, therefore, should be provided to the market monitors.

In addition, FERC has proposed expanding the e-Tag information to include an identification of the underlying contracts that are required to be filed with the Commission quarterly. We believe this is very useful as the ability to map schedules back to contracts can allow the Commission and the market monitors to better evaluate potentially manipulative trading strategies.

This data is posted in the hour following the operating hour, and includes tags that have implemented MWh for the posted hour and the next 24 hours. This tag information is valuable, but the data is insufficient for FERC and for market monitors. As an example, while tags with implemented MWh can provide a picture of what energy has transacted, it is also important to identify those transactions that were denied. Denied NERC Tags are not available in the tag dump files. Access to NERC Tag data should exceed the basic tag dump files, and should include all the tag data items. This will provide the means to monitor transactions in real time from the initial submission of the requests through implementation. Equally important, access to the data should be provided at reasonable cost in a manner that can be imported into databases for easy querying and analysis.[7]

Even for the information that is generally available in the NERC tag dump, it is frequently not a reliable source. As an example, a review of the tag dump files for May 3, 2011 shows that the tag dump files for hours 18 and 19 on May 3, 2011 were not generated, and that tag data is not available for analysis. While missing tag dump files on any particular day is not a common occurrence, it occurs often enough to make the files

[7] The NERC tagging software infrastructure was built by third party vendors.

unreliable when performing analysis. The missing data are available in the underlying tag data items that are requested.

c. Making E-Tag data available to MMUs would not raise confidentiality issues or require any specific confidentiality provisions in addition to what already exists.

The NERC Tag dump data is published on the Reliability Coordinator Information System (RCIS) page of the NERC Website. To access this data, entities must have signed a confidentiality agreement with NERC and have obtained access to this secure portion of the NERC Website. The confidentiality agreement and the control mechanism already in place at NERC are sufficient to ensure that only approved entities can access this market sensitive data. Traditionally, information has been made available to entities concerned to preserve system reliability. The need for NERC Tag dump data to study market impacts and attempt to improve market efficiency is something new. A clear policy directive that the NERC Tag dump data is needed to improve market efficiency, competitiveness, operations and design in addition to system operations and reliability would ensure that the market monitors have access to this information. Obtaining e-Tag data from individual market participants, rather than NERC, would be extremely burdensome and infeasible.

The Commission proposes to require the Electric Reliability Organization (ERO), the North American Electric Reliability Corporation ("NERC"), rather than individual market participants to provide access to the e-Tag data to avoid burdening market participants with a requirement to file the same data with both NERC and the Commission. The MMU agrees with this recommendation, with the proviso that the e-Tag data should be provided on a real-time basis in a format that makes downloads to a database possible.

E-Tag data items are initially created by individual Purchase-Selling Entities (PSEs), who create tags using their Tag Agent software, and who submit them through the Load

Control Area's Tag Authority application. The Tag Authority application then disseminates the tag to all parties on the market segment path. Those with approval rights to the tag will approve or deny the tag via their Tag Approval service. The approval or denial messages are then passed back to the Tag Authority application, which disseminates the individual approvals or denials to all relevant parties. Once all parties have approved the tag, the tag moves to the status of "implemented" and is then forwarded to the Interchange Distribution Calculator ("IDC").

An additional method for FERC and market monitors to obtain tag information is to require that all tags contain the registered FERC and MMUs within the market path of all tags. By doing so, all tags would automatically be forwarded to the FERC and the MMUs, but would not grant the Commission or the MMUs approval rights. This method of obtaining e-Tag data would require no additional work on behalf of market participants or NERC staff. This method of obtaining the e-Tag data should be implemented for individual MMUs only when specifically requested.

2. Dynamic Schedule and Pseudo-Tie Data

Dynamic schedule and pseudo ties represent another type of interchange transaction between balancing authorities. Although dynamic schedules are required to be tagged, the tagged profile is only an estimate of what energy is expected to flow. Dynamic schedules are implemented within each balancing authority's Energy Management System (EMS), with the current values shared over Inter-Control Center Protocol (ICCP) links. By definition, the dynamic schedule's scheduled and actual values will always be identical from a balancing authority standpoint, and the tagged profile should be removed from the calculation of loop flows to eliminate double counting of the energy profile. Dynamic

schedule data from all balancing authorities are required in order to account for all scheduled and actual flows.

Pseudo-ties also represent a transaction between balancing authorities. They are handled within the EMS systems, and data are shared over the ICCP. Pseudo-ties differ from dynamic schedules only in how the generating resource is modeled within the balancing authorities' ACE equations. Dynamic schedules are modeled as resources located in one area serving load in another, while pseudo-ties are modeled as resources in one area moved to another area. Unlike dynamic schedules, pseudo-tie transactions are not required to be tagged. Pseudo-tie data from all balancing authorities are required in order to account for all scheduled and actual flows.

The North American Market Monitors recommend that FERC ensure that all dynamic schedule and pseudo-tie data among balancing authorities in the Eastern Interconnection are reported to NERC and provided in a downloadable format to the Commission and market monitors.

3. Actual Tie Line Flow Data

An analysis of loop flow requires knowledge of the actual path of energy transactions. Currently, a very limited set of tie line data is made available via the NERC IDC and the Central Repository for Curtailments (CRC) website. Additionally, the available tie line data, and the data within the IDC, are presented as information on a screen, which does not permit downloading of the underlying data.

The North American Market Monitors recommend that FERC ensure that tie line flow data between all balancing authorities in the Eastern Interconnection are reported to NERC and provided in a downloadable format to the Commission and market monitors.

4. Area Control Error (ACE) Data

Area Control Error (ACE) data provide information about how well each balancing authority is matching their generation with their load. This information, combined with the scheduled and actual interchange values will show whether an individual balancing authority is pushing on or leaning on the interconnection, contributing to loop flows.

NERC makes real-time ACE graphs available on their Reliability Coordinator Information System (RCIS) website. This information is presented only in graphical form, and the underlying data is not available for download.

The MMUs recommend that FERC ensure that the ACE data for all balancing authorities in the Eastern Interconnection are reported to NERC and provided in a downloadable format to the Commission and market monitors.

5. Market Flow Impact Data

In addition to interchange transactions, internal dispatch can also affect flows on balancing authorities' tie lines. The impact of internal dispatch on tie lines is called market flow. Market flow data are imported in the IDC, but there is only limited historical data, as only market flow data related to TLR levels 3 or higher are required to be made available via a Congestion Management Report (CMR). The remaining data are deleted.

There is currently a project in development through the NERC Operating Reliability Subcommittee (ORS) called the Market Flow Impact Tool. The purpose of this tool is to make visible the impacts of dispatch on loop flows. The North American Market Monitors support the development of this tool, and recommends that FERC ensure that the underlying data are provided by NERC in a downloadable format to the Commission and market monitors.

6. Generation and Load Data

Generation data (both real-time scheduled generation and actual output) and load data would permit analysis of the extent to which balancing authorities (or individual generation owners) are meeting their commitments to serve load. If a balancing authority is not meeting its load commitment with adequate generation, the result is unscheduled flows across the interconnections to establish power balance.

Market areas are transparent in providing real-time load while non-market areas are not. For example, PJM posts real-time load via its eDATA application. Most non-market balancing authorities provide only the expected peak load on their individual web sites. Data on generation are not made publicly available, as this is considered market sensitive information.

We recommend that FERC ensure that scheduled and actual generation as well as actual load data for all balancing authorities in the Eastern Interconnection be provided by NERC in a downloadable format to the Commission and market monitors.

C. MMU Access to Data

The MMU requests that, in order to permit a complete analysis of loop flow, FERC ensure that the identified data are made available to the Commission and market monitors. The MMU has been attempting to obtain access to this data for several years without success. Attempts to obtain the data from NERC or tagging vendors have either been denied or limited to the option of very expensive subscriptions that would still require obtaining approval from every entity registered in the NERC Transmission System Information Network (TSIN), including Transmission Providers and Market Participants, due to data confidentiality agreements. No substantive reason has been offered to deny access to this data.

MMUs have extraordinary experience preserving confidential information, and this data would be no exception. The need for this data is strong. In addition to the general need of the Commission and the MMUs to fully understand how the markets operate, there is strong reason to believe that significant efficiency gains could result from a complete analysis of data on loop flows and the policies that could be created by the Commission based on that data. The solution proposed in the NOPR is, accordingly, in the public interest and consistent with the Commission's interest in providing informed and effective regulation.

II. CONCLUSION

The North American Market Monitors respectfully request that the Commission afford due consideration to these comments as it resolves the issues raised in this proceeding.

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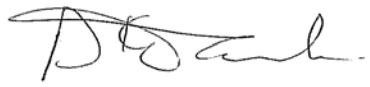

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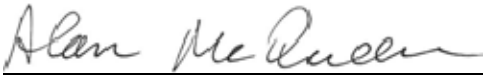

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