**NORTH AMERICAN ENERGY STANDARDS BOARD**
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October 17, 2016
Filed Electronically

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street N.E., Room 1A
Washington, D.C. 20426

RE: Parallel Flow Visualization Project Status (Docket No. EL14-82-000)

Dear Ms. Bose:

The North American Energy Standards Board ("NAESB") voluntarily submits this report to the Federal Energy Regulatory Commission ("FERC" or "Commission") to provide the Commission with an update regarding the Parallel Flow Visualization ("PFV") effort. This report includes information on the transition in management responsibilities of the Interchange Distribution Calculator ("IDC") tool from the IDC Association to the Eastern Interconnect Data Sharing Network, Inc. (EIDSN), the progress of the PFV effort, and the continued coordination of NAESB, the North American Electric Reliability Corporation ("NERC") and EIDSN. Now under EIDSN, the IDC Steering Committee and IDC Working Group diligently continue to make preparations for the upcoming field trial of the PFV-related modifications to the IDC tool to support the proposed PFV-related modifications to the NAESB Wholesale Electric Quadrant ("WEQ") Business Practice Standards. The PFV project is currently on schedule, with the field trial expected to begin in August 2017.

This report, drafted by NAESB with the support of NERC and EIDSN, is intended to supplement the previous status reports filed by NAESB on July 11, 2014, January 28, 2015, March 25, 2015, and January 29, 2016. As previously indicated, NAESB will continue to file periodic status reports to inform the Commission on the progress of the PFV field trial and any PFV-related standards modifications. Once the field trial is completed and the NAESB membership has taken action to ratify the related standards, NAESB will file a report with the Commission containing the final version of the NAESB WEQ Business Practice Standards.

Respectfully submitted,

*Jonathan Booe*

Mr. Jonathan Booe
Executive Vice President & CAO, North American Energy Standards Board

cc: Chairman, Norman C. Bay, Federal Energy Regulatory Commission
Commissioner, Cheryl A. LaFleur, Federal Energy Regulatory Commission
Commissioner, Colette Honorable, Federal Energy Regulatory Commission

Mr. Michael Bardee, Office of Electric Reliability, Federal Energy Regulatory Commission
Mr. Max Minzner, General Counsel of the Commission, Federal Energy Regulatory Commission
Mr. Michael Goldenberg, Senior Attorney, Office of General Counsel, Federal Energy Regulatory Commission
Ms. Jamie L. Simler, Director, Office of Energy Market Regulation, Federal Energy Regulatory Commission

Mr. J. Arnold Quinn, Director, Office of Energy Policy and Innovation, Federal Energy Regulatory Commission

Mr. Cade Burks, Chairman and Chief Executive Officer, North American Energy Standards Board
Mr. Michael Desselle, Vice Chairman WEQ, North American Energy Standards Board
Ms. Rae McQuade, President, North American Energy Standards Board
Mr. William P. Boswell, General Counsel, North American Energy Standards Board

Mr. Gerry W. Cauley, President and Chief Executive Officer, North American Electric Reliability Corporation
Mr. Mark Lauby, Senior Vice President and Chief Reliability Officer, North American Electric Reliability Corporation
Mr. Charles A. Berardesco, Senior Vice President, General Counsel, and Corporate Secretary, North American Electric Reliability Corporation

Mr. Rich Mandes, Executive Director, Eastern Interconnect Data Sharing Network
Mr. Michael D. McMullen, Chair of the IDC Steering Committee, Eastern Interconnect Data Sharing Network

Enclosures (all documents and links are available publically on the NAESB website – www.naesb.org)

Appendix A Letter from EIDSN to NAESB

Appendix B Updated Parallel Flow Visualization Project Timeline

Appendix C NAESB Full Staffing Process

**UNITED STATES OF AMERICA**
**FEDERAL ENERGY REGULATORY COMMISSION**

# REPORT OF THE NORTH AMERICAN ENERGY STANDARDS BOARD

The North American Energy Standards Board ("NAESB") voluntarily submits this report to provide the Federal Energy Regulatory Commission ("FERC" or "Commission") with an update on the Parallel Flow Visualization ("PFV") effort. The report supplements the information provided in the previous status reports filed by NAESB on January 29, 2016, March 25, 2015, January 28, 2015, and July 11, 2014. The PFV project is a wholesale electric industry initiated effort supported with the coordination of NAESB, the North American Energy Standards Board ("NERC") and the Eastern Interconnect Data Sharing Network, Inc. ("EIDSN"). EIDSN oversees the management of the Interchange Distribution Calculator ("IDC") tool, an industry tool utilized in the Eastern Interconnection congestion management process. As reported in previous updates, "the intended goal of PFV is to enhance the congestion management process within the Eastern Interconnection by improving the availability of real-time data to the IDC tool and thus improving the visibility of the source and magnitude of parallel interchange flows on the bulk electric grid."[1] EIDSN is currently making preparations for a field trial of the PFV-related modifications to the IDC tool to support the proposed PFV-related modifications to the NAESB Wholesale Electric Quadrant ("WEQ") Business Practice Standards, endorsed by the NAESB WEQ Executive Committee on February 24, 2015. Included in this status report is information on the transition of the management responsibilities for the IDC tool to EIDSN, the progress of the preparations for the field trial on the PFV-related modifications to the IDC tool to support the related standards, and the continued coordination efforts of NAESB, NERC, and EIDSN regarding the PFV effort.

## Management of IDC Tool

On April 1, 2016, the IDC Association transitioned its responsibilities for the management of the IDC tool to EIDSN, a non-profit organization comprised of reliability coordinators in the Eastern Interconnection and Quebec Interconnection.[2] As discussed in the July 11, 2014 status report, the IDC Association assumed management of the IDC tool from NERC in 2013.[3] Under the IDC Association, the IDC Steering Committee managed the administrational aspects of the IDC tool while the IDC Working Group ("IDCWG"), which reported to the IDC Steering Committee, was responsible for the technical facets, including working with the tool's software vendor, Open Access Technology International Inc. ("OATI"), to identify and implement the necessary modifications for the PFV field trial.

After the transition of the management responsibilities for the IDC tool to EIDSN earlier this year, EIDSN reconstituted the IDC Steering Committee as an EIDSN committee and the IDCWG as a subcommittee of the IDC

[1] *NAESB Status Report on the Parallel Flow Visualization Project* was filed in Docket No. EL14-82-000 on January 29, 2016 and is available at the following link: https://naesb.org/pdf4/ferc012916_pfv_status_report.pdf
[2] More information regarding the formation of EIDSN can be accessed via the organization's website, available at the following link: https://eidsn.org/
[3] *NAESB Status Report on the Parallel Flow Visualization Project* was filed in Docket No. EL14-82-000 on July 11, 2014 and is available at the following link: https://naesb.org/pdf4/ferc071114_pfv_status_report.pdf

Steering Committee. Under the EIDSN structure, the IDC Steering Committee and the IDCWG have the same responsibilities regarding the day-to-day management of the IDC tool as under the IDC Association; however, EIDSN's Executive Director oversees the work of the IDC Steering Committee and IDCWG, and EIDSN's Board of Directors has ultimate authority over the IDC Steering Committee, the IDCWG, and management of the IDC tool. Regarding the PFV effort, EIDSN has committed to continued coordination with NAESB and NERC and has been supportive of IDC Steering Committee and IDCWG activities to move the project forward.

Progress on the PFV Effort

The previous PFV status report filed by NAESB on January 29, 2016 included an updated timeline and information on the preparations being undertaken for the PFV field trial.[4] As part of that status report, it was noted that the IDCWG was working on the enhancements to the IDC tool that were considered a prerequisite to conducting the PFV field trial. Since that time, the IDCWG and the IDC tool software vendor, OATI, have diligently continued efforts to put these enhancements in place and dedicated considerable time to testing and refining the necessary data submissions and data validations. Additionally, the IDCWG and OATI developed an assessment of the NAESB PFV-related standards to identify the necessary modifications to the IDC tool for the field trial, culminating in OATI's development of a change order for PFV related modifications to the IDC tool. EIDSN's Board of Directors approved the change order, which was executed by EIDSN's Executive Director, on April 29, 2016. The IDCWG and OATI are now working to develop and implement these modifications. Recently, EIDSN provided to NAESB a written update, included as part of this report in Appendix A, indicating that all project milestones as of the report date had been met or exceeded. As communicated in the previous status report to the Commission, the PFV field trial is currently slated to begin in August 2017 and expected to last eighteen months, concluding in January 2019. An updated project timeline containing the information discussed above is included as part of this report in Appendix B.

Following the PFV field trial, the IDCWG will evaluate the field trial data and develop a report on the commercial metrics of the project. This report will be used by the NAESB WEQ Business Practices Subcommittee ("BPS") to determine if any additional modifications to the standards are needed for commercial purposes. The NERC Operating Reliability Subcommittee ("ORS") will also evaluate the results of the reliability metrics used during the PFV field trial. Earlier this year, the NERC ORS finished the development of the reliability metrics and communicated them to the IDCWG. While no adverse reliability impacts are anticipated, if any are identified, NAESB will coordinate with both the NERC ORS and EIDSN to ensure that they are resolved and any necessary revisions to the standards are made by the NAESB WEQ BPS. As part of the NAESB full-staffing process (see Appendix C), following the PFV field trial, regardless if any additional revisions are made to the standards, the recommendation for the PFV-related modifications to the NAESB WEQ Business Practice Standards will be re-presented to the NAESB WEQ Executive Committee for consideration. If adopted by the NAESB WEQ Executive Committee, the standards will then be submitted to the NAESB WEQ membership for ratification. Once the standards are ratified, NAESB will file the standards with the Commission.

[4] *NAESB Status Report on the Parallel Flow Visualization Project* was filed in Docket No. EL14-82-000 on January 29, 2016 and is available at the following link: https://naesb.org/pdf4/ferc012916_pfv_status_report.pdf

Continued Coordination Efforts

NAESB and NERC, now with EIDSN, will continue their strong working on this multi-year effort to ensure continued coordination and that the organizations' activities in support of the PFV effort are aligned. NAESB and NERC staffs hold monthly calls to discuss ongoing industry coordination activities, during which any updates regarding the PFV project are provided. NAESB staff also continues to coordinate directly with the lead of the NERC ORS PFV Reliability Metrics Task Group, responsible for the development of the reliability metrics for the PFV field trial. Since the management transition of the IDC tool, NAESB staff, the Chair of the IDC Steering Committee, and the Executive Director of EIDSN hold periodic calls to discuss the progress of the PFV project. Additionally, a co-chair of the NAESB WEQ BPS acts as a liaison between the subcommittee and the IDCWG, and the WEQ BPS has a standing agenda item to discuss any PFV-related coordination issues from the IDCWG.

NAESB will continue to file status reports with the Commission to provide updates on the progress of the PFV effort, any delays in the communicated timeline, or any modifications to the standards.

Appendices:

A. Letter from EIDSN to NAESB

B. Updated Parallel Flow Visualization Project Timeline

C. NAESB Full Staffing Process

Eastern Interconnect Data Sharing Network, Inc.

September 13, 2016

VIA EMAIL

Caroline Trum
Deputy Director
North American Energy Standards Board
801 Travis, Suite 1675
Houston, TX 77002

Re: IDC Parallel Flow Visualization Timeline Update

Dear Caroline:

As requested, EIDSN is communicating the latest timeline for the Interchange Distribution Calculator Working Group's (IDCWG) and IDC Steering Committee's (IDCSC) Parallel Flow Visualization (PFV) efforts.

Since the February 2015 NAESB Executive Committee approval of the WEQ-008 Standard, the IDCWG has continued their work related to IDC Change Order (CO) 283 titled "Generation to Load Reporting Requirements," while reviewing and approving the IDC COs for the Parallel Flow Visualization project. A large amount of effort by the IDCWG in 2016 has gone toward refining necessary data submission, data validation and testing of CO 283, which is a prerequisite to PFV. This testing consists of working meetings, along with software updates by Open Access Technology International (OATI), the software vendor, as needed enhancements are found.

Eastern Interconnect Data Sharing Network, Inc. (EIDSN) and OATI executed the PFV CO on April 29, 2016. Since then, the project milestone dates have been met in the software development cycle. The attached updated timeline continues to show acceptance testing starting in early 2017 and the 18 month PFV field trial beginning in August 2017. While there is schedule risk in any project this size, EIDSN, the IDC SC, and the IDCWG recognize the significance of the PFV to the industry and continue to work with OATI on completing the required milestones on time.

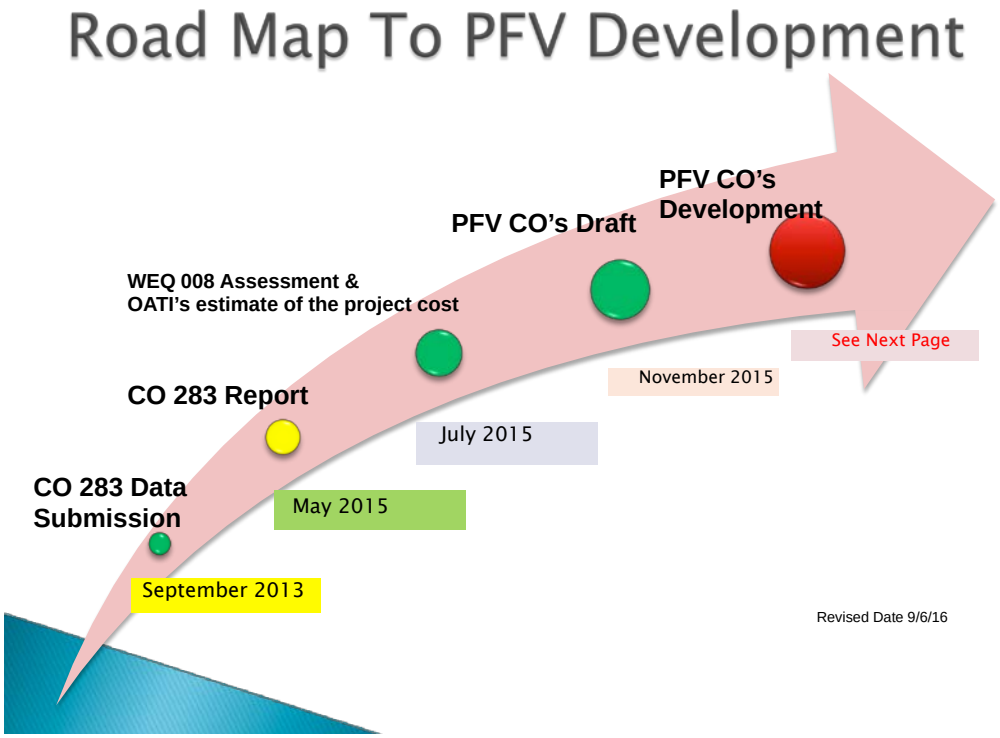
Please don't hesitate to contact me should you have any questions or need further information.

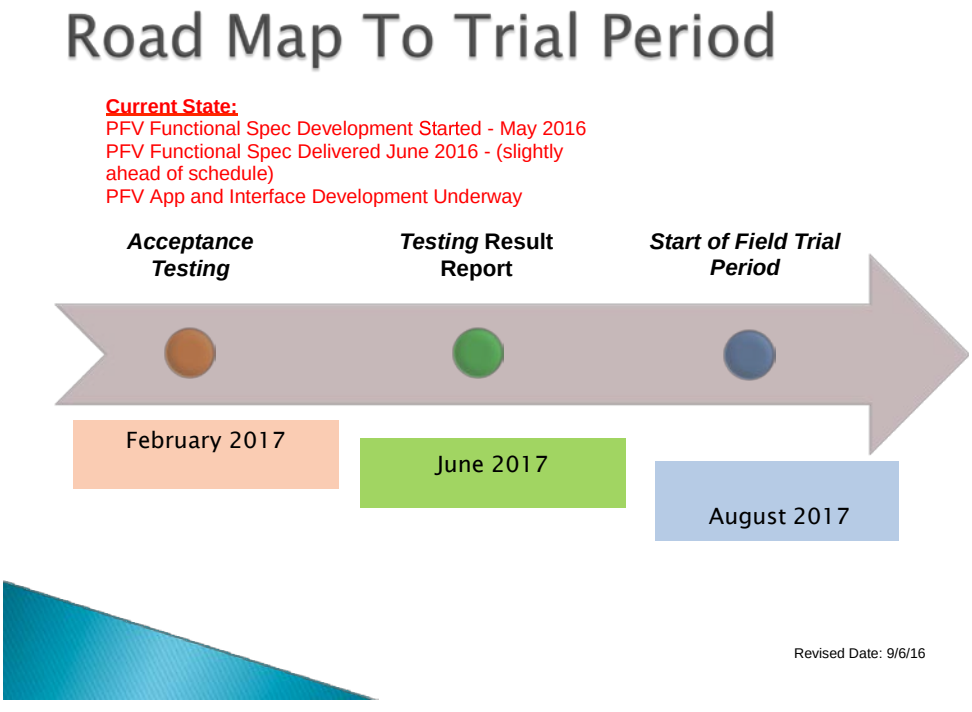
Kind regards,

Richard J. Mandes, Jr.
Executive Director
EIDSN, Inc.

Attachment under separate cover: PFV_Timeline 090616.pdf

Cc: Mike McMullen, MISO, IDC SC Chairman
Yasser Bahbaz, SPP, IDCWG Chairman


Road Map To PFV Development
PFV CO's Development
PFV CO's Draft
WEQ 008 Assessment & OATI's estimate of the project cost
See Next Page
November 2015
CO 283 Report
July 2015
CO 283 Data Submission
May 2015
September 2013
Revised Date 9/6/16


Road Map To Trial Period
Current State:
PFV Functional Spec Development Started - May 2016
PFV Functional Spec Delivered June 2016 - (slightly ahead of schedule)
PFV App and Interface Development Underway
Acceptance Testing
Testing Result Report
Start of Field Trial Period
February 2017
June 2017
August 2017
Revised Date: 9/6/16

**Updated Timeline for the Future of the Parallel Flow Visualization Project**

- February 24, 2015 – The NAESB WEQ Executive Committee voted to adopt the recommendation of the NAESB WEQ BPS for the PFV-related modifications to the NAESB WEQ Business Practice Standards and initiate the full-staffing process. The standards will be held in abeyance for the entirety of the full-staffing period to allow for the IDC Association (now EIDSN) to conduct the PFV field trial.
- March 2015 to December 2015 – The IDCWG performed its assessment on the PFV-related modifications to the NAESB WEQ Business Practice Standards and communicated its evaluation of the necessary changes to the IDC tool to OATI through a draft change order.
- December 2015 to February 2016 – OATI reviews the IDCWG's assessment and evaluates the change order for the necessary modifications to the IDC tool.
- February 9, 2016 – OATI presents the change order to the IDC Association Steering Committee for consideration.
- April 1, 2016 – The IDC Association transitions management structure to EIDSN.
- April 29, 2016 – EIDSN executes the PFV-related change order for modifications to the IDC tool with OATI.
- May 2016 to February 2017 – OATI, working with the IDCWG, develops the PFV-related modifications to the IDC tool. During this time period, the IDCWG will also create the test plan for the PFV field trial.
- February 2017 to June 2017 – OATI and the IDCWG will conduct acceptance testing on the implemented modifications to the IDC tool in preparation for the PFV field trial, making any necessary adjustments.
- August 2017 to January 2019 – The eighteen month PFV field trial is conducted. The PFV field trial will be conducting in a parallel testing environment.
- As indicated in the July 2014 filing, the NAESB WEQ BPS, the NERC ORS, and EIDSN will all work together to address any adverse reliability impacts. Following the conclusion of the PFV field trial, the NAESB WEQ BPS will evaluate the report on the commercial metrics provided by EIDSN to determine if any revisions to the standards are necessary. The recommendation either as originally presented to the NAESB WEQ Executive Committee in February 2015 or with any additional modifications deemed necessary by the NAESB WEQ BPS will be submitted to the NAESB WEQ Executive Committee for approval. If the NAESB WEQ Executive Committee takes action to end the full-staffing period and to adopt the recommendation, the standards will be submitted for NAESB WEQ membership ratification. Once ratified, NAESB will file the standards with the Commission.

Appendix C - NAESB Full-Staffing Process

Excerpt from the NAESB Operating Practices as approved via Board Resolution September 11, 2015 (Section C3)

Section C. Standards Development and Maintenance

3. Full Staffing

The NAESB practice of full staffing is to be employed when there are interdependencies in the development of standards that would require an iterative approach.

This process is applied when the technical standards developed to support business practices may require changes to the business practices, or it is impractical to implement the business practices without the supporting technical standards completed. The business practices are adopted by the applicable quadrant EC(s), but they are not ratified until the technical standards are complete. In this manner, there is an opportunity to change the business practices if needed, and an indication of industry support is attained through the EC vote on the business practices prior to undertaking the technical development.

Similarly, implementation of business practices that may be dependent on other organization's or other quadrant's work products can use the process of full staffing to approve the business practices yet begin the ratification process after the dependent activity is complete, thus providing an opportunity for the business practices to be modified to take into account the other organization's or quadrant's work products. By doing such, the standards development in NAESB may be more effectively coordinated and timed for release with other organization's or quadrant's work products.

For the applicable EC(s) to use the full staffing process, first there will be a simple majority vote to determine if full staffing is required, which would imply a delay of ratification until the interdependent development is completed. Following the full staffing vote, the business practice standard(s) would be adopted pursuant to a super majority vote. Prior to ratification, should it be determined that additional change(s) are required to the EC adopted standard(s), the change(s would follow the existing process for standards development. At any time, the applicable EC(s) can determine to stop the full staffing process and begin the ratification process through a simple majority vote.