UNITED STATES OF AMERICA BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Complaint of Michael Mabee and Petition to Order Mandatory Reliability Standards. for Equipment and Monitoring Systems Marketed from the People's Republic of China	))))	Docket No. EL21-99-000

SUPPLEMENTAL COMMENTS OF DAVID JONAS BARDIN
September 13, 2021

These Supplemental Comments to my Initial Comments of September 6, 2021, add references, expand my appended acronym list, and further discuss options and opportunities before the Commission (FERC).

COMPLAINANT, Michael Mabee, has posted his Complaint and Petition at https://michaelmabee.info/chinese-transformer-complaint-filed-with-u-s-government/ . COMPLAINANT invokes Commission statutory power to direct NERC to develop mandatory reliability standards (regarding equipment already imported or ordered to be imported from the People's Republic of China). If the Commission decides, after weighing comments received and results of subsequent Commission Staff investigations, to pursue any of the relief COMPLAINANT seeks, it might take years before NERC had new proposed mandatory standards ready to submit to the Commission for review and approval.

The Commission should consider whether, in the interim, Commission Staff could more quickly prepare and publish a useful Report or White Paper, drawing on needed help from subject matter experts (SMEs).

My background (repeated from Initial Comments)

My professional background includes 11 years as a civil servant at the Federal Power Commission, FERC's predecessor (rising to Deputy General Counsel); State cabinet service as New Jersey's second Commissioner of Environmental Protection (including Governor's alternate on Delaware River Basin Commission); Presidential, Senate-confirmed appointments when FERC and the Department of Energy were created and got started (as Deputy Administrator of the Federal Energy Administration and Administrator of the Economic Regulatory Administration).

NERC staff's December 2019 "Supply Chain Risk Assessment" report recommended a specific, standards amendment focused on "Low impact" BES Cyber Systems. (See Supplemental References, below.) NERC staff's Preface states:

> Electricity is a key component of the fabric of modern society and the Electric Reliability Organization (ERO) Enterprise serves to strengthen that fabric. The vision for the ERO Enterprise, which is comprised of [NERC] and the six Regional Entities (REs), is a highly reliable and secure North American bulk power system (BPS). Our mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid.
>
> Reliability | Resilience | Security
>
> *Because nearly 400 million citizens in North America are counting on us*

That NERC staff report gives concrete reasons and examples for its recommendation. Yet on March 24, 2021, the ERO Enterprise — asserting potential "confusion" — declined to endorse that NERC staff report recommendation as presented by NERC's standards drafting team (SDT) Implementation Guidance for CIP-013-2 "Supply Chain Risk Management Plans (2019-03 SDT)". My Initial Comments suggested the Commission have its Staff look into and "determine policy implications". Perhaps those "counting on us" are kept waiting in limbo because of complexities inherent in NERC's consensus-seeking processes. If so, the Commission's Staff should explain as much to the Commission and the public.

Molly Christian's July 12, 2019, S&P Global article (see Supplemental References, below) reinforces the points that both President Trump's EO 13920 of May 1, 2020, and the facts of NERC's reactive Alert and survey were publicized. My Initial Comments stated: "Commission Staff should assess clarity and contents of NERC's confidential Alert — and its effectiveness — in light of all Comments and Motions to Intervene received. Did some (or many) electric utilities simply disregard NERC?" In addition, COMPLAINANT asks FERC to "direct [NERC] to conduct a comprehensive survey of all registered entities in the Bulk Power System to determine what Chinese equipment or systems are currently in use in the Bulk Power System." Hopefully, NERC Comments will address whether NERC believes it has done that already (and, if so, how Commission Staff may access NERC's work and validate such conclusions). Commission Staff should also be enabled to check out and replicate COMPLAINANT's Bills of Lading data (and perhaps extend them). Mr. Mabee advises that he relied on data available (at no charge) from https://import.report .

FERC & NERC, Joint Staff White Paper dated July 12, 2020, was inspired by a 2012 bipartisan Congressional report. (See Supplemental References, below.). Although a White Paper is not binding, it might be influential. The Commission should consider whether preparation of a White Paper addressing issues in this Docket could be influential (or useful for other reasons), and whether it could be prepared and published relatively quickly.

Legislation. The Commission should probably inform itself of legislative proposals "outside the box" of FPA Section 215 as added in 2005 to Part II of the FPA. Commission Staff should be able to prepare an interesting paper, starting with Senator Ed Muskie's bill, after the first Northeast Blackout decades ago, which did not become law. Have there been proposals, for example, to increase federal responsibilities as to distribution system risks and vulnerabilities? Have there been proposals to extend protection to territories such as Guam and the Virgin Islands? No doubt, FERC and NERC are duty-bound to administer Section 215 as now on the books. But awareness of possible tweaks or alternatives could not hurt, might prove helpful in relationships with Congress and the Executive Branch, and might even open eyes to tweaked interpretations of Section 215.

What did NERC sacrifice in order to clear proposed EACMS amendment on third ballot?

Petition of the [NERC] for Approval of Proposed Reliability Standards CIP-03-2, CIP-005-7, and CIO-010-4 Addressing Supply Chain Cybersecurity Risk Management (dated 12/14/2020) under Docket No. RD21-2 [https://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/Petition%20-%20Supply%20Chain%20Risk%20Management_final.pdf] states:

> The development process is open to any person or entity with a legitimate interest in the reliability of the Bulk-Power System. NERC considers the comments of all stakeholders. Further, a vote of stakeholders and adoption by the NERC Board of Trustees is required before NERC submits the Reliability Standard to the Commission for approval.
> ....
> **E. Development of the Proposed Reliability Standards**
> As further described in Exhibit H hereto, NERC initiated a Reliability Standard development project, Project 2019-03 Cyber Security Supply Chain Risks ("Project 2019-03"), and appointed a standard drafting team (Exhibit I) to address the Order No. 850 directive and the NERC Supply Chain Report recommendations. On January 27, 2020, NERC posted the initial drafts of proposed Reliability Standards CIP-013-2, CIP-005-7, and CIP-010-4 for a 45-day comment period and ballot. The initial ballot did not receive the requisite approval from the registered ballot body ("RBB"). After considering comments to the initial drafts, NERC posted second drafts of the proposed Reliability Standards for another 45-day comment period and ballot on May 5, 2020. The second drafts did not receive the requisite approval from the RBB. On July 28, 2020, NERC posted the third drafts of the proposed Reliability Standards after considering comments on the second drafts. The third drafts received the requisite approval from the RBB with an affirmative vote of 80.78 percent at 79.93 quorum. NERC conducted a 10-day final ballot for the proposed

> Reliability Standards, which received an affirmative vote of 76.76 percent at 83.56 quorum. The NERC Board of Trustees adopted the proposed Reliability Standards on November 5, 2020.

The Commission should direct its Staff to determine exactly what modifications ("sacrifices") NERC agreed to in order to pass the third ballot, and to make Staff's specific analysis publicly available. At the time the Commission approved the NERC Board of Trustees' proposal, no such specific analysis was available to the public at large (only the raw data in thousands of pages of Exhibit H). As FERC observed:

> 8. Notice of NERC's December 14, 2020 filing was published in the *Federal Register*, 86 FR 2668 (2021), with interventions and protests due on or before January 28, 2021. No interventions or comments were received.

Letter order granting North American Electric Reliability Corporation's 12/14/2020 filing of a petition requesting approval of proposed Reliability Standards CIP-013-2 etc. under RD21-2. [https://elibrary.ferc.gov/eLibrary/filelist?accession_num=20210318-3030]

Follow-up to post-September 15 Commission Staff investigations (repeated from Initial Comments)

After September 15, I believe the Commission must have its Staff pursue unresolved questions because the Commission has *unique*, *independent* responsibilities under Section 215 of the Federal Power Act (which Congress added to FPA Part II in 2005). After Staff investigations are completed, the Commission would do well to schedule a carefully constructed public hearing or other public process that addresses the merits of issues raised in this docket.

Supplemental References

NERC, "Supply Chain Risk Assessment; Analysis of Data Collected under the NERC Rules of Procedure Section 1600 Data Request" (December 9, 2019) [https://www.nerc.com/pa/comp/SupplyChainRiskMitigationProgramDL/Supply%20Chain%20Risk%20Assesment%20Report.pdf]

Molly Christian, "NERC to ask utilities to inventory reliance on Chinese technology" (S&P Global Market Intelligence, 12 July 2019) [https://www.spglobal.com/marketintelligence/en/news-insights/trending/peha_2jR2jCRPAdm2DIX-w2]

FERC & NERC, Joint Staff White Paper on Supply Chain Vendor Identification - Noninvasive Network Interface Controller (July 31, 2020) [https://www.nerc.com/pa/comp/CAOneStopShop/Joint%20Staff%20White%20Paper%20on%20Supply%20Chain_07312020.pdf]

One of my Initial References (repeated for convenience)

Glossary of Terms Used in NERC Reliability Standards (updated June 28, 2021) [https://www.nerc.com/files/glossary_of_terms.pdf]. N.B., this website has four sections; each is alphabetical.

Service

Once these Initial Comments are uploaded to eFile, I shall serve them by emailing to:
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Respectfully submitted, David Jonas Bardin

Appendix: Acronyms used in Comments (or in cited documents), supplemental acronyms **bold-faced**

ARP address resolution protocol
BES Bulk Electric System
BPA Bonneville Power Administration (in Department of Energy)
BPS Bulk Power System
CAISO California ISO
CIPS Critical Infrastructure Protection Standards
DFR digital fault recorder
DHCP dynamic host configuration protocol
EACMS Electronic Access Control and Monitoring Systems
EAP electronic access point
EPRI Electric Power Research Institute
ERO Electric Reliability Organization certified by FERC. It consists of NERC + Regional Entities.
ESP Electronic Security Perimeter
FERC Federal Energy Regulatory Commission (successor to Federal Power Commission)
FBI Federal Bureau of Investigation (in the Department of Justice)
FPA Federal Power Act
IC integrated circuit chip
IDS intrusion detection system
IOs Information Operations (in Information Warfare, see Paul N. Stockton, ...
IP internet protocol
ISO Independent system operator
ISO-NE New England ISO
JSHP JiangSu HuaPeng Transformer Co., Ltd.
LIPA Long Island Power Authority
MAC media access control
MTI motion to intervene
NASPI North American Synchrophasor Initiative (see https://www.naspi.org)
NEISO New England ISO
NERC National Electric Reliability Corporation, a non-profit corporation (successor to National Electric Reliability Council)
NIC network interface controller
Nmap network mapper
NSA National Security Agency
ODNI Office of the Director of National Intelligence
OUI organizationally unique identifiers
PACS Physical Access Control Systems
PCA Protected Cyber Assets
PDC phasor data concentrators
PG&E Pacific Gas & Electric Company
PMU phasor measurement unit
PNNL Pacific Northwest National Laboratory (in Department of Energy)
RA IEEE Standards Registration Authority
RBB registered ballot body
REs Regional Entities (of the ERO)
SCE Southern California Edison
SNL Sandia National Laboratories (in Department of Energy)
SCADA Supervisory control and data systems
SDT Standard(s) drafting team
SMEs subject matter experts
STG Secure the Grid [Coalition]
WAPA Western Area Power Administration (in Department of Energy)

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