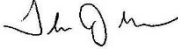


TO: NERC Board of Trustees (BOT)

FROM: T.J. Galloway, NATF President and CEO 

SUBJECT: NATF Periodic Update to the NERC BOT – August 2015

Attachments: 1. Summary of NATF / NERC Coordination Topics
2. NATF near term focus and activities

The North American Transmission Forum (NATF) mission is to promote excellence in the reliable operation of the electric transmission system, with the vision to see reliability continuously improve. As such, the NATF shares many common objectives with NERC. To advance these common objectives, and avoid redundant or conflicting efforts, we have undertaken periodic (roughly quarterly) coordination meetings between the senior leadership of both organizations. The next such meeting is tentatively scheduled for September 2015. A summary of the coordination topics and NATF status/actions are presented as attachment 1.

In addition to specific points of coordination, the NATF has a number of activities underway that benefit reliability, security, and resiliency that are likely of interest to the NERC BOT. These activities and initiatives are detailed in attachment 2.

Two particularly noteworthy areas involve recent NATF work regarding both physical security and modeling. NATF member subject matter experts have produced high quality work products on both these topics. And, with NATF Board concurrence, we have decided to make selected documents public – to the benefit of the entire industry. Such documents are available via www.natf.net and are listed below.

[NATF CIP-014-1 R1 Guideline V1](#)
[NATF Practices Document – NERC Reliability Standard CIP-014-1 Requirement R4](#)
[NATF Practices Document – NERC Reliability Standard CIP-014-1 Requirement R5](#)
[NATF Reference Document – Generator Specifications](#)
[NATF Power Flow Modeling Reference Document – V.1.1.1 06-13](#)
[NATF Reference Document – Reporting and Verification of Generating Unit Reactive Power Capability for Synchronous Machines](#)

cc:

NERC: G. Cauley, M. Lauby, J. Merlo, A. Koch, S. Noesse
NATF: R. Carter, K. Berent, C. Sills, Letter Log

Attachment 1 - Summary NATF / NERC Strategic Coordination Topics

Topic	NATF Status / Details
Protection System Mis-operations	<ul style="list-style-type: none"> • NATF has a longstanding system protection practices group. • A formal NATF reliability initiative was created specifically to help reduce misoperations by performing detailed analysis of data from a member subset. • Principle causes identified matched NERC’s MisOp task force results, namely: <ul style="list-style-type: none"> • Relay setting errors • Communication channel problems • Relay failures • Several contributors were identified to these causes, including: <ul style="list-style-type: none"> ○ Application and setting of Directional Comparison Blocking Schemes ○ Failure rates of electro-mechanical relays ○ Complexity, knowledge/skills gaps regarding micro-processor settings ○ Impedance modeling, quality checks and lack of relay setting templates • NATF has created several related working groups (WGs) and is developing, implementing, and reinforcing related “superior practices” and delivering related training. Current WGs: <ul style="list-style-type: none"> ○ Powerline Carrier Application / Maintenance ○ Short Circuit Impedance Modeling ○ Relay Settings Training ○ DC Trip Circuit Design and Maintenance ○ Mis-operations Data and Analysis ○ Relay failure • Definite interest in working together on common metrics and improvement goals
Security (Cyber and Physical)	<ul style="list-style-type: none"> • CIP-014, R1, 4, and 5 guides were developed/posted on NATF public site for industry use. • Extensive member survey conducted to identify CIP-14 relevant/critical assets and details in member methodologies. Feedback provided to reduce outliers. • Active member coordination is ongoing for CIP-014 implementation. <ul style="list-style-type: none"> ○ Joint NATF/EEI CIP-014 workshops October 30th and Nov 5th, 2014. ○ In October 2013 a physical security work group was added. ○ Physical security assists commenced 1Q15 • Longstanding, active, and well-attended security practices group. • Cyber/Physical are now both standard parts of NATF peer review scope. • Project team efforts produced a comprehensive CIPV5 implementation guide. • Member SME technical feedback on CIPV5 CAMs provided to NERC • Significant increases planned regarding NATF security related assistance visits.
Risk Based Compliance Assurance Initiative	<ul style="list-style-type: none"> • Risk/Controls (R/C) has been a topic of heavy focus over the last two years. • Risk/Controls were added as a standard peer review element in 2013. • R/C focus has evolved to a broader focus of Governance, Risk, and Controls. • NATF evaluating “endorsing” certain aspects of members GRC programs.
Modeling	<ul style="list-style-type: none"> • Some NATF Modeling practices were shared with NERC (January 2014) to preclude the need for NERC/Technical Committees to generate similar documents. T <ul style="list-style-type: none"> ○

Topic	NATF Status / Details
Geomagnetic Disturbance (GMD)	<ul style="list-style-type: none"> • NATF administered detailed member surveys to better gauge member understanding of GMD and actions towards mitigation. Generic results were shared with NERC GMDTF to help hone focus. • Conducted two GMD workshops (October 2013 and February 2014). • Ongoing, periodic coordination with the GMDTF to preclude duplication.
Facilities Rating Alert follow-up activities	<ul style="list-style-type: none"> • Superior practices drafted for ongoing ROW maintenance.

Attachment 2 - Other NATF Near-Term Focus and Activities

NATF / EPRI / INPO

- Joint NATF/EPRI/INPO Summit: Transmission – Nuclear Switchyard (May 27-28, 2015)
 - Approximately 100 attendees
 - Identification of risk elements
 - Actions to quantify various levels of risk
 - Actions (assists) to reduce highest risk areas
 - **Switchyard self-assessment tool issued for broad member use**
- Five focus areas as framework for tri-lateral collaboration
 1. Resiliency (including cyber/physical security)
 2. Equipment performance / asset management
 3. Human performance error reduction
 4. Operating experience exchange
 5. Performance improvement (mechanisms/processes)

NATF / EPRI specific

- Conducted a comprehensive NATF / EPRI Resiliency Summit October 7-8, 2014
- Biannual Resiliency Summits contemplated – starting Jan 2016
- Using a comprehensive, “all hazards” approach including:
 - Severe Weather
 - Cyber / Physical Security
 - GMD/EMP/IEMI
 - Single point / common mode failures
 - Severe workforce reduction / pandemic
- Equipment Performance and Maintenance
 - Shared insights on failure rates, causes, and corrective actions
- Strategy Sessions: Grid Operations and Planning Synergies

NATF / INPO specific

- NATF CEO presentation at Engineering VP workshop
- Shared Operating Experience / LOOP Reductions (IER 13-53)
- Nuclear plant switchyard self-assessment tools
- Emergency power runtime / fuel supply replenishment / blackstart

Other / General

- Systematic interaction with Members / ERO on Reliability Assurance Initiative (RAI)
 - Sharing of Key Principles and Lessons Learned
 - Strong Risk / Controls focus in Peer Reviews
 - Preparing Members for risk-focused audits
 - Interacting with ERO Staff (workshops, etc.)
- NATF 2015 Peer Review Program fully integrates:
 - Risk Assessment and Internal Controls
 - Human Performance Error Reduction
 - Operating Experience Exchange
 - Physical Security
- Other recently completed / near term activities:
 - Human Performance Symposium
 - System Operations – EMS focus
 - Vegetation management – detailed benchmarking / compliance template
 - Cold weather webinar
 - Using a comprehensive peer challenge board concept for selected member events