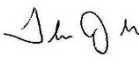


TO: NERC Board of Trustees (BOT)

FROM: Thomas J. Galloway, NATF President and CEO 

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

Attachments: 1. NATF Focus and Activities
2. NATF/NERC Coordination Summary

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. To augment our strategic goals, the NATF has focused on several topics that serve as the base for trilateral collaboration between NATF, EPRI and INPO. The 2015 focus areas are:

- Resiliency (including Physical and Cyber security)
- Human Performance/Error Reduction
- Equipment Performance and Asset Management
- Operating Experience Exchange – including cause analyses and lessons learned
- Continuous performance improvement – mechanisms/processes including risk reduction

Some of the specific activities associated with the above are expanded upon in attachment 1 and summarized as follows:

- CIPV5 standards transition guidance
- Detailed CIP-014 reference documents and cross-member calibration on results
- Switchyard reliability assistance visits and self-assessment tools
- Protection system mis-operation reduction
- Risk assessment and controls self-assessment tools
- Risk assessment and controls training webinars
- Resiliency workshops – comprehensive and topic-specific (GMD, EMP, etc.)
- Transmission line Right of Way (ROW) maintenance superior practice
- Modeling reference documents
- Member assistance for event review and corrective action
- Cold weather lessons learned / preparation webinar

The NATF shares many common objectives with NERC. To advance these common objectives, and avoid redundant or conflicting efforts, we have undertaken periodic coordination meetings between the senior leadership of both organizations.

A summary of the current coordination topics and NATF status/actions are presented as attachment 2.

Also, given the extremely complex and dynamic nature of the industry currently the NATF has decided to make certain, specific work-products available beyond the membership. Two noteworthy areas involve recent NATF work on both physical security and modeling.

NATF member subject matter experts (SMEs) 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 Modeling Data Request Guide (MOD-032) – New!**
- NATF Reference Documents - CIP-014 R1, R4 and R5
- NATF Reference Document – Generator Specifications
- NATF Reference Document – Power Flow Modeling
- NATF Reference Document – Reporting and Verification of Generating Unit Reactive Power Capability for Synchronous Machines

We anticipate making other NATF work-products available beyond the membership on a case by case basis.

cc:

NERC: G. Cauley, M. Lauby, J. Merlo, A. Koch, S. Noesse, C. Edge

NATF: R. Carter, K. Berent, C. Sills, Letter Log

Attachment 1 - NATF Focus and Activities

NATF/EPRI/INPO

- Five focus areas as framework for trilateral 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)

- 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

NATF/EPRI specific

- 2014: Conducted a series of topic-specific Resiliency workshops and comprehensive Summit
- 20161Q: Follow-up Resiliency Summits
- 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

- Shared Operating Experience/LOOP Reductions (IER 13-53)
- Nuclear plant switchyard self-assessment tools
- Emergency power runtime/fuel supply replenishment/blackstart

Attachment 1 - NATF Focus and Activities (Continued)

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
 - Train-the-Trainer workshop
 - Vegetation Management – detailed benchmarking/compliance template
 - Cold weather preparation webinar
 - Using a comprehensive peer challenge board concept for selected member events

Attachment 2 - NATF/NERC Coordination Summary

Topic	NATF Status/Details
Protection System Mis-operations	<ul style="list-style-type: none"> • A formal NATF reliability initiative was created specifically to help reduce mis-operations 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 Working Groups (WGs) are developing, implementing, and reinforcing related “superior practices”, delivering related training, improved metrics for: <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
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 help 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 several years. • Risk/Controls are a standard peer review element since 2013. • Risk/Controls 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 externally to preclude the need for NERC/Technical Committees to generate similar documents.
Facilities Rating Alert follow-up activities	<ul style="list-style-type: none"> • Superior practices drafted for ongoing ROW maintenance. • Sharing of lessons learned / best practices for ongoing ROW maintenance