

April 15, 2020

Ms. Jennifer Sterling, Chair
NERC Member Representatives Committee

Dear Jennifer:

I invite the Member Representatives Committee (MRC) to provide policy input on a matter of particular interest to the NERC Board of Trustees (Board) as it prepares for its May 13-14, 2020, meetings, which will occur via teleconference due to the coronavirus (COVID-19) outbreak. In addition, policy input is requested on any items on the preliminary agendas for the quarterly Board, Board Committees, and MRC meetings. The preliminary agendas are included in the [MRC Informational Session agenda package](#) (see Item 2) and are attached hereto (**Attachment A**). The MRC's May agenda includes an opportunity for MRC members to provide additional input to the Board on the final agenda and materials. **As a reminder, please include a summary of your comments in your response (i.e., a bulleted list of key points) for NERC to compile into a single summary document to be provided to the Board for reference, together with the full set of comments.**

Align Tool Delay and Establishment of Secure Evidence Locker System

The attached materials (**Attachments B, C, and D**) describe the need for key features, costs, and funding strategy for the ERO Enterprise Secure Evidence Locker (ERO SEL), as well as recognition of Align delay costs being incurred due to the need to have the ERO SEL in place for the Align rollout. As discussed in the attached materials, the combined projects (the Align tool and the ERO SEL) will provide the ERO Enterprise with a secure, effective, and harmonized platform with which to execute its Compliance Monitoring and Enforcement Program responsibilities.

The Board requests MRC policy input on the following:

- 1. Do the steps taken to segregate content and secure both the Align tool and the ERO SEL, which is being developed to adhere to the NIST 800-171 security control framework (the "gold standard" for data security for our use case), address the security needs associated with the highly sensitive information necessary for Regional Entities to review in support of registered entity CMEP activities?**
- 2. Are there remaining security concerns not yet sufficiently addressed by the design of Align and the design of the SEL? If so, what alternatives do you suggest to mitigate them that preserve a reasonable balance between the security of the information and the effectiveness of the ERO Enterprise processes?**

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3. Do you agree with the proposed strategy to minimize the Net Energy for Load (NEL) assessment impacts of the Align implementation delay and enhancement costs and the ERO SEL costs as set out in Attachment D? The plan is to draw approximately \$1 million from NERC's operating contingency reserve in 2020 to fund a portion of our remaining ERO SEL costs and to fund the rest of those costs through a borrowing in 2020 to take advantage of the current very low interest rate environment. In this way, NERC will be able to maintain debt service requirements in future years equal to or less than previous annual debt service projections. For the Align delay costs needed to accommodate development and implementation of the ERO SEL system, the plan includes a further draw from NERC's operating contingency reserve in 2021 to minimize assessment impacts.

Written comments in response to the input requested above, the preliminary agenda topics, and on other matters that you wish to bring to the Board's attention are due by **May 6, 2020**, to Kristin Iwanechko, MRC Secretary (Kristin.Iwanechko@nerc.net). The formal agenda packages for the Board, Board Committees, and MRC meetings will be available on April 30, 2020, and the presentations will be available on May 7, 2020. The Board looks forward to your input and discussion of these matters during the May 2020 meetings.

Thank You,



Roy Thilly, Chair
NERC Board of Trustees

cc: NERC Board of Trustees
Member Representatives Committee

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Attachment A

Member Representatives Committee (MRC)

Pre-Meeting and Informational Webinar
April 15, 2020

RELIABILITY | RESILIENCE | SECURITY



- Review schedule and preliminary agenda topics for:
 - May 13 Board Committee (open) meetings
 - May 14 MRC meeting
 - May 14 Board of Trustees
- Review policy input letter topics
- Receive updates on emerging and informational issues

Schedule of Quarterly NERC Conference Calls

Wednesday, May 13, 2020	
11:00-11:45 a.m.	Corporate Governance and Human Resources Committee Meeting — <u>Open</u>
12:30-1:30 p.m.	Technology and Security Committee— <u>Open</u>
1:45-3:00 p.m.	Finance and Audit Committee— <u>Open</u>
Thursday, May 14, 2020	
11:00 a.m.-1:00 p.m.	Member Representatives Committee Meeting— <u>Open</u>
1:30 p.m.-3:30 p.m.	Board of Trustees Meeting— <u>Open</u>

- Review Board Committees' Self-Assessment Survey Results
- 2020 ERO Enterprise Work Plan Priorities Update
- Update on Annual Review of Trustee Compensation
- Staffing and Recruiting Update

- E-ISAC Update
 - Strategic Plan Update
 - Preliminary 2021 Budget
- ERO Enterprise Business Technology Update
- Review Establishment of the ERO Enterprise Secure Evidence Locker

- Review and Recommend Acceptance of 2019 Financial Statement Audit Results
- Review and Recommend Acceptance of First Quarter Unaudited Statement of Activities
- Review and Recommend Approval of ERO Enterprise Evidence Locker Project Cost and Funding
- Approve Renewal of Capital Financing Agreement with PNC Agreement
- Update on 2021 Business Plan and Budget

- General Updates and Reports
 - Board of Trustees Nominating Committee Update
 - Business Plan and Budget Input Group Update
 - Regulatory Update
 - MRC Self-Assessment and MRC Effectiveness Survey Results Update
- Policy and Discussion Items
 - Responses to the Board's Request for Policy Input
 - Align Tool Delay and Establishment of Secure Evidence Locker System
 - Additional Policy Discussion of Key Items from Board Committee Meetings
 - MRC Input and Advice on Board Agenda Items and Accompanying Materials

- **Technical Updates**
 - Update on FERC Reliability Matters
 - Update on Cloud Computing
 - 2020 Summer Reliability Assessment Preview
 - 2020 State of Reliability Preview

- Committee Membership and Charter Amendments
 - Compliance and Certification Committee Charter Amendments
- Report on May 12, 2020 Annual Meeting of NERC Trustees and Regional Entity Boards
- Board Committee Reports
 - Accept 2019 Financial Statement Audit Results
 - Accept First Quarter Statement of Activities
 - Approve Renewal of Capital Financing Agreement with PNC Bank
 - Approve Align ERO Enterprise Evidence Locker Project Cost and Funding
- Standards Quarterly Report and Actions
 - Adopt Project 2016-02 Modifications to CIP Standards (CIP-002-6)
 - Adopt Project 2019-03 Cyber Security Supply Chain Risks
 - Adopt Project 2019-05 Modifications to PER-003-02

- **Other Matters and Reports**

- Discuss Policy Input and Member Representatives Committee Meeting
- Approve Regional Delegation Agreement
- E-ISAC Coronavirus Update
- 2020 ERO Enterprise Reliability Indicators Update
- Reliability Issues Steering Committee Update

- Update on NERC Efforts in Response to COVID-19
- Revised Schedule and Preliminary Agenda Topics for the May 2020 Board, Board Committees, and MRC Conference Calls
- Overview of Policy Input Letter
 - Align Tool Delay and Establishment of Secure Evidence Locker System

- **April 15:** Policy input letter issued
- **April 30:** Board and MRC agenda packages posted
- **May 6:** Written comments due on policy input topics and preliminary agenda topics
- **May 7:** Board and MRC presentations and policy input letter comments posted



Questions and Answers

Align Tool Delay and Establishment of Secure Evidence Locker System

Background

In 2014, the ERO Enterprise initiated a series of strategic efforts with the goal of improving and standardizing processes across the ERO Enterprise for the compliance monitoring and enforcement program (CMEP). As the ERO Enterprise continues to mature its risk-based approach for the CMEP, the need to develop a more comprehensive system to manage and analyze information is more acute.

Currently, each Regional Entity and NERC executes the CMEP supported by largely homegrown systems and evidence collection practices.¹ As a result, registered entity experience differs across the country and multi-regional registered entities have been highly frustrated by the range in practices.

To address these issues, the ERO Enterprise developed the Align tool. That process brought to light significant security concerns related to evidence provided and other information generated in connection with CMEP activities. The ERO Enterprise Secure Evidence Locker (ERO SEL) has been designed to address these issues. It is important to recognize that the CMEP evidence security issues identified in the implementation of Align exist with or without Align. The security of evidence under the current mix of systems is not acceptable today. Thus, the ERO SEL is a required step in all events and should not be viewed as simply a change to Align.

Together, these tools will provide a platform to enable harmonization of Regional Entity practices driving to a common registered entity experience, together with needed CMEP evidence security. To date, 53 CMEP processes have been harmonized and that work is ongoing. These efforts are also enabling alignment of documentation practices particularly as they relate to content of work papers.

There are two core pieces of this transformative set of projects (in addition to the CORES Registration System):

1. The Align tool, a work and data management system built from a governance, risk, and compliance platform that, when implemented, will be used to manage all ERO Enterprise developed work products. Further, it integrates with CORES and includes a repository of Reliability Standards. In 2018, NERC selected a vendor for the Align tool. During the development process, in mid-2019, NERC paused the project to evaluate the impact of the sale of the vendor designing the Align tool to a private equity firm. After significant forensic work and additional information gathering, NERC has concluded that the risks associated with the vendor's ownership can be effectively managed through a combination of technical and process controls rather than relying on vendor ownership

¹ These systems are unified by one of two "backbone" systems. One system provided by OATI is used by four Regional Entities and a second custom built system is used by two other Regional Entities. The information in these two systems are "synced" with a NERC-owned system for oversight and reporting purposes. Furthermore, these systems are also supplemented by various Regional work products, including auditor developed spreadsheets and word documents for data collection and organization which are collected and managed in differing ways with tools that have different security postures. Registration systems exist outside of the CMEP, as does the Reliability Standards repository. These two systems are therefore individualized for each Regional Entity.

as a control. These controls include data encryption, access controls (both user IDs and multi-factor authentication), dispersion of content, with evidence housed in a separate tool, and significantly enhanced work products. Importantly, part of the change management process associated with the implementation of the Align tool includes strict retention and destruction policies, and training on documentation of findings and work papers to prevent the duplication in those documents of sensitive information that is housed outside of the Align tool. NERC will engage an independent third party to evaluate the final code to provide configuration management assurance that the Align tool is built as designed.

2. The ERO SEL, hosted at NERC, is designed to facilitate the secure submission, review, and retention of evidence generated in connection with CMEP activities. Industry has provided very valuable and detailed support and insight in the development of this tool over the last year. The ERO SEL is a stand-alone system that will have no integration or network connection with the Align tool to increase security of both tools. Critical data protection is a significant concern for our industry. Developing and implementing the ERO SEL will harmonize the evidence collection processes across the ERO Enterprise. The proposed SEL architecture and operational model will adhere to the NIST 800-171 security control framework, established to protect Controlled Unclassified Information (CUI) in nonfederal systems, wherein Critical Energy Infrastructure Information (CEII) is classified as CUI. NERC believes this meets its commitment to establish a system that meets the “gold standard” for security of data. While the ERO will build and maintain the ERO SEL, registered entities may, if they so choose, build their own secure evidence lockers so long as they meet specified requirements for ERO Enterprise personnel access and data manipulation for analysis.² NERC believes that the ERO SEL is a prudent and necessary response to the continuously evolving security landscape the industry faces.

The combined suite of tools (Align and the ERO SEL) will provide the ERO Enterprise with a secure, effective, and harmonized platform with which to execute its CMEP responsibilities. These new tools will allow the retirement of the existing outdated legacy systems in use at NERC and the Regional Entities, substantially increase the security of registered entity data and ERO Enterprise work products, enable better oversight of Regional Entity processes, improve the quality and security of reporting, and provide substantial registered entity convenience with the integration to the Align tool (but not to the ERO SEL) with the CORES registry and the standards repository.

ERO SEL Details

NERC Information Technology and the Project Management Office engaged Presidio—a long standing NERC vendor—to serve as a “general contractor” to design, build, implement, and service/maintain the ERO SEL. NERC is looking to complete this project and bring the ERO SEL online by the first quarter of 2021. In addition to designing and building the ERO SEL, NERC will purchase hardware and software that will be incorporated into the ERO SEL by Presidio. Presidio will also engage third-party subcontractors to assist throughout the project. NERC will engage a third party to verify the code for the system meets NERC’s specifications before launch.

² Evidence that may not be collected pursuant to a standard will not be submitted through the ERO SEL. In addition, NERC will consider requests for alternative means of submitting certain specified types of evidence with proper assurances as to the availability of the evidence at the convenience of the compliance enforcement authorities.

The ERO SEL will have the following functionality:

- Enable submission by authorized and rigorously authenticated Registered Entity users;
- Provide compartmentalized analysis of evidence in temporary, isolated, and disposable environments;
- Users have access to specific portions of the ERO SEL;
- Prohibit interfaces with any other systems, including Align;
- Encrypt immediately upon submission;
- Isolate submissions per entity;
- Prohibit extraction and backups; and,
- Prescribe proactive and disciplined destruction policies.

NERC's use of virtualization technologies in the ERO SEL provides for an abstraction layer between server hardware and specialized use servers resulting in a one to many capability between hardware and server. This is an efficient and secure approach that meets the needs of the ERO SEL. Specifically, the design in conjunction with logical access controls implemented on the specialized use servers allows the Regional Entities to control their portion of the ERO SEL while NERC would perform the administrative functions.

As part of its outreach efforts, and following a series of discussions with industry regarding the structure and functionality of these tools, NERC presented, in an April 2020 webinar, details regarding the implementation process for the ERO SEL, related costs, and funding strategy. These details are in the attached set of slides (Attachment C).

NERC is seeking policy input from its Member Representatives Committee on the security controls and related concerns, as well as the funding strategy for associated costs. NERC management proposes a combination of an operating contingency reserve draw and debt financing to fund the ERO SEL capital investment in 2020, which will maintain annual debt service levels equal to or less than previous debt service projections in future years. NERC management also proposes a further draw from operating contingency reserves in 2021 to fund Align delay costs, as set forth in Attachment D.

NERC staff will seek approval of the investment in the ERO SEL and its intended financing approach from the Board of Trustees (Board) (preceded by review by two Board committees) in May 2020. Upon Board approval NERC will also seek approval by FERC of the associated 2020 budget variance required to acquire and fund the ERO SEL.

NERC expects to delay implementation of the ERO SEL and the Phase 1 Align release (focused on registered entity self-reporting and mitigation of noncompliance) until Q1 2021 to allow for fulsome discussion on the May 14, 2020, Board conference call, FERC approval. NERC also recognizes the potential for delays that could result from supply chain disruption due to the coronavirus health crisis.

ERO Enterprise Secure Evidence Locker and Align Tool Update

Stan Hoptroff, Vice President, Business Technology

Andy Sharp, Vice President, Interim Chief Financial Officer

April 15, 2020

RELIABILITY | RESILIENCE | SECURITY



- Problem Statement
- Solution Overview
 - Guiding Principles
 - ERO Enterprise Secure Evidence Locker (ERO SEL) Overview
 - NIST Standard
 - Project Justification
- Financial Summary
 - 2020 ERO SEL Investment, Costs and Funding Strategy
 - 2021 Budget and Assessment Impact
- Potential Risks and Next Steps
- Align Tool Timeline, Budget and Business Case Update

- Issues Discovered:
 - Inconsistent processes for requesting, handling and storage of evidence
 - Critical data protection requires additional capabilities beyond our current systems
- Recommended Solution:
 - Provide content separation in connection with CMEP activities
 - Create a highly secure ERO Enterprise evidence locker
 - Harmonize processes for evidence collection processes
 - Enhance ERO Enterprise work products to reduce risk of a critical data exposure
 - Conduct independent review prior to launch and prior to new releases

- Registered Entity provided evidence* will go into the Registered Entity or ERO SEL (any Registered Entity locker must meet certain criteria the ERO Enterprise develops for functionality, access, etc.).
- ERO Enterprise workflow and work products will be in the ERO Enterprise Align Tool.
- The ERO Enterprise will enhance ERO Enterprise work products (e.g., working papers) to support conclusions without the need to store evidence for extended periods, minimizing a data protection risk.

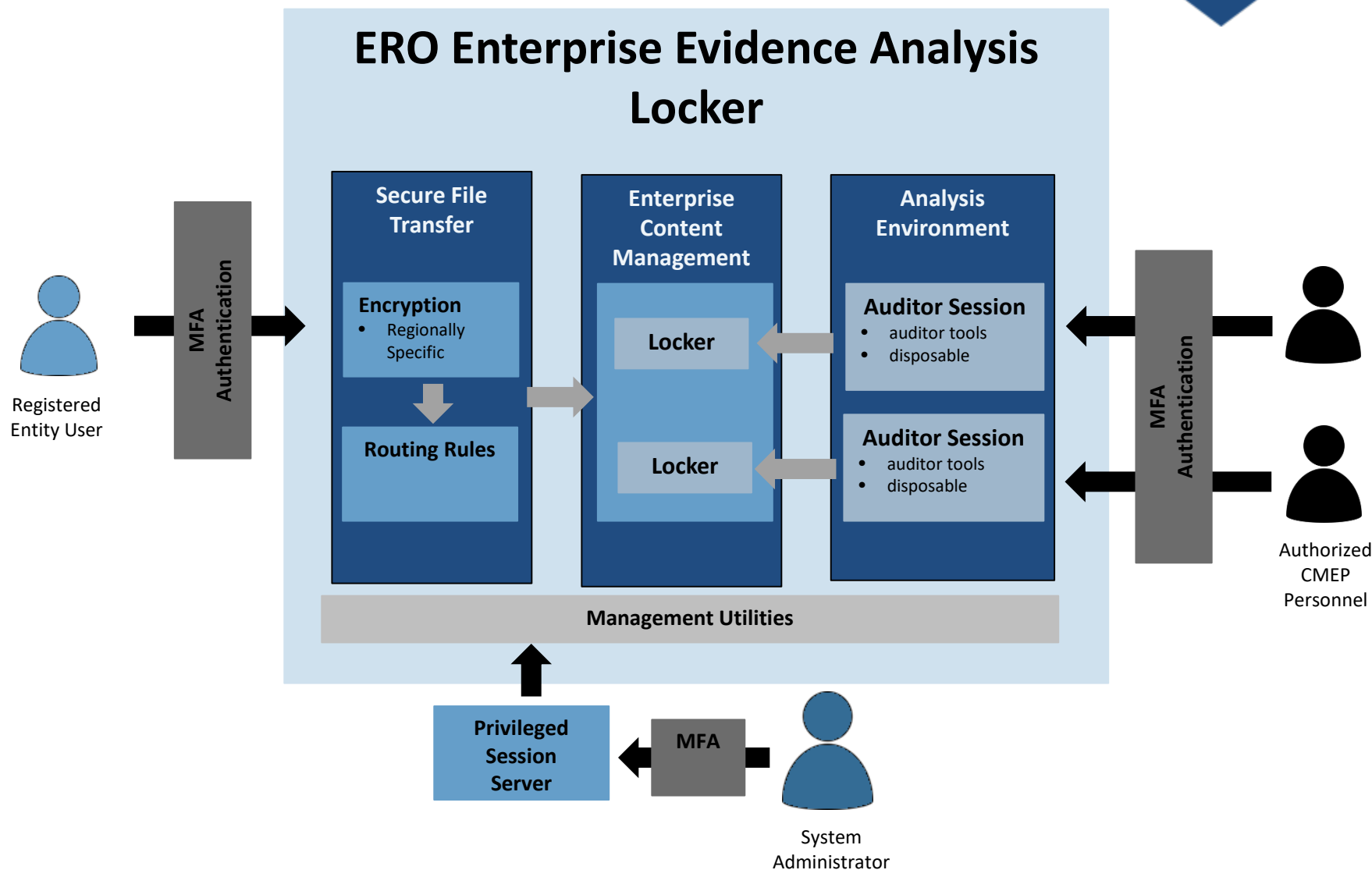
**Unless prohibited by a standard or otherwise agreed to by the ERO Enterprise*

NOTE: Achieving this will occur via training, guidance, oversight activities and other outreach.

- A highly secure, isolated environment
 - Purpose-built to collect and protect evidence
 - Enables submission by authorized and authenticated entity users
 - Provides compartmentalized analysis of evidence in temporary, isolated, disposable environments
 - Users have access to specific portions of the SEL
 - No interfaces with any other systems
- Evidence
 - Is encrypted immediately upon submission
 - Is securely isolated per entity
 - Is never extracted
 - Is never backed up
 - Is subject to proactive and disciplined destruction policies

ERO SEL - How will it work?

Technical Implementation



- Significantly reduces risk for evidence loss and exposure
- Solution design informed by stakeholder input
- Allows content segregation to significantly enhance security
- Highest commercially available design to conform to NIST 800.171 standard (“the gold standard”)

- NIST 800-171 contains 110 controls in 14 key areas including:
 - Access Control
 - Physical Protection
 - System and Information Integrity
 - Personnel Security
 - Incident Response
 - Risk Assessment

- 2020 ERO SEL Investment
 - Capital investment of \$3.8M, funded as follows:
 - \$1.0M from NERC Operating Contingency Reserves
 - Replenished with projected 2020 budget savings
 - \$2.8M from debt financing
 - Current interest rates are favorable
 - 60 month term proposed
 - Future debt service on locker investment will be at or below prior projections of debt service from 2020 BP&B
- 2020 ERO SEL Expense
 - Partial year support, license and maintenance expenses
 - Estimated at \$260k in Q4 2020
 - Can be absorbed into existing 2020 NERC budget
- No assessment impact in 2020

- 2021 budget impact of \$740k over prior projections
 - New annual debt service is **\$30k** below prior projections
 - Estimated annual debt service on new loan \$620k
 - 2019 debt service of \$650k annually embedded in 2021 and 2022 assessment projections
 - 2021 annual support, license and maintenance expense of **\$770k**
 - Support, license and maintenance ongoing in future years with escalation
- Re-evaluating NERC 2021 budget priorities funded by assessments
 - Targeting to be under prior assessment projection, including absorbing ERO SEL costs

- Required NERC board and regulatory approvals
- Licensing of new technologies
- Support of new technologies
- Delays created by the coronavirus pandemic
 - Potential supply chain delays (hardware)
 - Professional services (travel and collaboration)
 - Testing and in-person training

- April 2020
 - Policy input from Member Representatives Committee
 - Do the content segregation and security enhancements address the security needs?
 - Are there remaining security concerns? If so, what are suggested alternatives to mitigate them?
 - Do you agree with the proposed funding strategy for the 2020 ERO SEL capital investment and 2021 Align delay costs?
- May 2020
 - NERC Technology and Security Committee review project and recommend approval
 - NERC Finance and Audit Committee review investment and funding strategy; recommend approval to NERC Board
 - Board approval after opportunity for stakeholder comment
- FERC filing to seek approval of 2020 budget variance

- Revised Align implementation
 - First release of Align Tool rescheduled for Q1 2021
 - Second and third release by the end of 2021
- Project delay costs of **\$1.8M to \$2.0M**
 - Will seek 2021 budget and funding approval in the 2021 BP&B
 - Proposed funding of delay costs from Operating Contingency Reserves
 - No assessment impact of Align Tool project delay costs in 2021 or future years
- NERC Operating Contingency Reserve projected to be at mid-point of policy target range at end of 2021

- Align Tool business case payback updated
 - Delay costs will increase the Align Tool project payback from 5 years to 7 years
- Benefits of Align business case have not changed
 - Significant enhancements in security of the CMEP systems
 - Process consistency and harmonization throughout the ERO Enterprise
 - Single, common portal for registered entities, enabling consistency of experience
 - Real-time access to information, eliminating delays and manual communications
 - Improved capabilities, particularly for the monitoring function
 - Regional Entity annual cost reductions of legacy CMEP systems

A stylized map of North America, including the United States, Canada, and Mexico. The map is divided into three horizontal sections by a wide, semi-transparent blue band that runs across the middle. The top section, covering Canada, is a light purple color. The middle section, covering the United States, is the same semi-transparent blue band. The bottom section, covering Mexico, is a light gray color. The text "Questions and Answers" is centered within the blue band.

Questions and Answers

Cost Summary, Assessment Impact and Proposed Funding Strategy for the ERO Secure Evidence Locker System and Align Tool Delay

Background

The proposed implementation of the ERO Enterprise Secure Evidence Locker (ERO SEL) represents unbudgeted capital investments and operating costs for NERC in 2020, and ongoing operating costs for 2021 and beyond. Also, as a result of the work on the ERO SEL, the Align Tool implementation schedule has been delayed from 2020 to 2021, and delay costs for the Align Tool project will be reflected in the NERC budget for 2021. Below is a summary of the costs, impact on assessments, and proposed funding strategy for these two items.

ERO Secure Evidence Locker System

The ERO SEL project contains two primary cost categories: 1) Initial capital investment costs of \$3.8 million in 2020 for one-time implementation of the system (design, build, implement and test); and 2) Ongoing annual operating expenses related to software licensing, support, maintenance, and security review of the system. Partial year operating costs in 2020 are estimated at \$260k, and the first full year of operating costs in 2021 are projected to be \$770k. Future year operating costs are projected with a slight escalation. Below is a summary of the 2020 and future year costs through 2026:

	2020	2021	2022	2023	2024	2025	2026
One-Time Expenditures							
Professional Services and Consulting	\$ 1,805,000						
NIST 800-171b Procedure Controls Implementation	50,000						
Pre-Production Align and Evidence Locker Security Assessment	100,000						
Secure Key Management Solution	180,000						
Hardware Acquisition	345,000						
Software Acquisition	1,060,000						
Other Vendor Implementation Services	230,000						
Capital Investment	\$ 3,770,000						
Recurring Expenditures							
Software Licensing, Maintenance and Support	\$ 260,000	\$ 470,000	\$ 485,000	\$ 495,000	\$ 500,000	\$ 525,000	\$ 550,000
Additional Support Labor (Contract or one NERC FTE)	-	200,000	206,000	210,000	215,000	225,000	230,000
Annual Certification	-	100,000	100,000	100,000	100,000	100,000	100,000
Recurring Expenditures	\$ 260,000	\$ 770,000	\$ 791,000	\$ 805,000	\$ 815,000	\$ 850,000	\$ 880,000
Total Annual Annual Costs	\$ 4,030,000	\$ 770,000	\$ 791,000	\$ 805,000	\$ 815,000	\$ 850,000	\$ 880,000

NERC proposes to fund the initial \$3.8 million capital investment in 2020 with a draw of \$1.0 million from its operating contingency reserve, and obtain loan financing for the remaining \$2.8 million with a five-year amortization period. Structuring the reserve draw and loan financing in this manner will allow for annual debt service payments to be equal to or less than previously projected debt service on NERC's ERO software development projects. Due to budget

underruns and a strong working capital position in 2019, NERC did not obtain loan financing on ERO software projects in 2019. The proposed new debt service on the ERO SEL project will effectively replace the projected debt service from avoided 2019 borrowings, and will not increase the projected near-term assessments (2021 and 2022) beyond the amounts determined in the 2020 NERC Business Plan & Budget.

NERC proposes to fund the partial year operating costs of \$260k in 2020 with anticipated budget savings during the year. Future year operating costs beyond 2020 represent an increase in NERC's previous budget and assessment projections. However, NERC is prioritizing its resource and budget assumptions for the 2021 business plan and budget, with a target of absorbing the incremental ERO SEL annual operating costs into its existing budget projections to avoid an increase above previously forecasted assessments.

Align Tool Delay

As a result of the proposed ERO SEL system implementation, delay costs for the Align Tool project will be incurred and are estimated at \$1.8 to \$2.0 million in 2021. These delay costs were not included in prior budget and assessment projections for the 2021 year. NERC management is proposing to fund up to \$2.0 million for Align Tool delay costs with a draw from its operating contingency reserve in 2021. While the delay costs will raise the NERC budget in 2021, these delay costs will not affect assessments in 2021 since the costs will be funded from existing reserves.

NERC Operating Contingency Reserve

NERC's Operating Contingency Reserve balance at December 31, 2019 was \$5.8 million, or 8.2% of the 2019 NERC Budget excluding the Cyber Risk Information Sharing Program (CRISP) and Personnel Certification Governance Committee (PCGC), which was slightly above the reserve target range of 3.5% to 7.0%. With NERC's current operating projections for the 2020 and 2021 budget years, and assuming the proposed Operating Contingency Reserve draws in 2020 for the ERO SEL capital investment of \$1.0 million and Align Tool delay cost reserve draw of \$2.0 million in 2021 are approved, NERC management projects to remain within the policy target range for the Operating Contingency Reserve balance at December 31, 2021.

MEMORANDUM

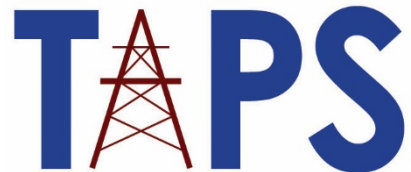
TO: Roy Thilly, Chair
NERC Board of Trustees

FROM: Jack Cashin, Director, Policy Analysis and Reliability Standards, American Public Power Association
John Di Stasio, President, Large Public Power Council
John Twitty, Executive Director, Transmission Access Policy Study Group

DATE: May 6, 2020

SUBJECT: Response to Request for Policy Input to NERC Board of Trustees

The American Public Power Association, Large Public Power Council, and Transmission Access Policy Study Group concur with the Policy Input submitted today by the State/Municipal and Transmission Dependent Utility Sectors of the Member Representatives Committee, in response to NERC Board Chair Roy Thilly's April 15, 2020 letter requesting policy input in advance of the May 2020 NERC Board of Trustees meetings.



NERC Board of Trustees Policy Input – Canadian Electricity Association

The Canadian Electricity Association (“CEA”) appreciates this opportunity to provide further policy input to the NERC Member Representatives Committee (“MRC”) and Board of Trustees (“Board”).

Summary of Key Points:

- CEA appreciates that NERC is working to ensure the security of sensitive member data.
- CEA encourages NERC to continue to engage with stakeholders, and to be responsive to stakeholder feedback, on this issue.
- CEA appreciates that NERC has shared an updated version of the business case for the Compliance Monitoring and Enforcement Program Technology Project, and would encourage NERC to allow time for stakeholder review and comment.
- CEA encourages NERC to ensure that the value proposition related to this endeavor is high for the ERO enterprise, and is communicated effectively.
- CEA is supportive of the policy input letter comments submitted by Lloyd Linke in his role as representative of the Portion of Sector 4 representing the Federal Utilities and Federal Power Marketing Administrations.

1. Do the steps taken to segregate content and secure both the Align tool and the ERO SEL, which is being developed to adhere to the NIST 800-171 security control framework (the “gold standard” for data security for our use case), address the security needs associated with the highly sensitive information necessary for Regional Entities to review in support of registered entity CMEP activities?

- CEA appreciates the care NERC is taking to ensure that data submitted to NERC is segregated and secure, and that it is seeking stakeholder comment on if the steps taken to secure the Align tool and the ERO SEL address security needs and are the most effective and efficient options to do this.
- CEA encourages NERC to continue to consider stakeholder input on this issue, including on if there are alternate designs that can accommodate different sensitivities of data and on if there are other considerations regarding these steps that need to be considered.

2. Are there remaining security concerns not yet sufficiently addressed by the design of Align and the design of the ERO SEL? If so, what alternatives do you suggest to mitigate them that preserve a reasonable balance between the security of the information and the effectiveness of the ERO Enterprise processes?

- CEA encourages NERC to consider stakeholder input, and to further engage stakeholders on the design of Align and the SEL, and if there are alternatives to preserve a balance between security and effectiveness.

3. Do you agree with the proposed strategy to minimize the Net Energy for Load (NEL) assessment impacts of the Align implementation delay and enhancement costs and the ERO SEL costs as set out in Attachment D? The plan is to draw approximately \$1 million from NERC’s operating contingency

reserve in 2020 to fund a portion of our remaining ERO SEL costs and to fund the rest of those costs through a borrowing in 2020 to take advantage of the current very low interest rate environment. In this way, NERC will be able to maintain debt service requirements in future years equal to or less than previous annual debt service projections. For the Align delay costs needed to accommodate development and implementation of the ERO SEL system, the plan includes a further draw from NERC's operating contingency reserve in 2021 to minimize assessment impacts.

- CEA appreciates that NERC has shared an updated version of the business case for the Compliance Monitoring and Enforcement Program Technology Project, and would encourage NERC to allow time for stakeholder review and comment.

CEA thanks the Board for considering these comments. CEA and its members look forward to continuing the discussion going forward.

Dated: May 6th, 2020

Contact:

Francis Bradley
President & CEO
Canadian Electricity Association
Bradley@electricity.ca

**Policy Input for the NERC Board of Trustees
Provided by the Edison Electric Institute
May 6, 2020**

On behalf of our member companies, the Edison Electric Institute (EEI) appreciates the opportunity to provide the following policy input for the NERC Board to review in advance of the May 13-14, 2020, meetings. EEI perspectives on bulk-power system (BPS) reliability are formed by our CEO Policy Committee on Reliability, Security, and Business Continuity and the Reliability Executive Advisory Committee with the support of the Reliability Committee.

In the April 15, 2020 policy input letter, NERC Board of Trustees Chair, Roy Thilly, seeks input on the Align Tool Delay and Establishment of the Secure Evidence Locker System. EEI offers the following input.

Summary of Comments

Align Tool Delay and Establishment of the Secure Evidence Locker (SEL) System

- EEI agrees that NERC's proposed segregation of content between Align and the ERO SEL appears to be a more secure solution for protecting sensitive BPS information.
- EEI supports a comprehensive security and vulnerability review, by a qualified third-party, of the ERO SEL and Align tool prior to putting the ERO SEL and Align into production and prior to new releases.
- EEI recommends that NERC mitigate third-party identified security vulnerabilities prior to launching the Align tool or ERO SEL.
- EEI appreciates NERC allowing registered entities to manage certain sensitive information and evidence outside of the ERO SEL and registered entity SEL to address the differing registered entity risk tolerance levels and to mitigate industry-wide security risk.
- EEI supports in principle NERC's proposed funding strategy.

Prioritizing ERO Enterprise Development Activities

- EEI appreciates NERC's consideration and continued prioritization of projects for industry review.

Align Tool Delay and Establishment of the SEL System

The Board of Trustees seeks policy input on the segregation of content and security of both the Align tool and ERO SEL. The protection of industries' most sensitive data and information regarding vulnerabilities is critical to ensure reliability and security of the BPS. NERC's proposed segregation of content between the Align tool, a cloud-based application, and the ERO SEL, a virtual, on-premises virtual server, appears to be a more secure solution for protecting industry BPS information. However, to mitigate industry-wide security risk, it is important for NERC to recognize that certain sensitive BPS information may need to remain separate from the ERO SEL.

Regarding the Align tool, along with the technical security controls that NERC has stated they have implemented, it is equally important for NERC to ensure that the process, procedures, and training for the Align tool are robust and in place prior to implementation to holistically address security. In addition, EEI appreciates that NERC is willing to consider pre-production reviews for the Align tool. EEI recommends that NERC engage with a third-party, to perform a comprehensive, pre-production, full security review of the Align tool, which mirrors the review planned for the ERO SEL, prior to initial launch and that NERC develop a process for communicating, as appropriate, deficiencies and resolutions with registered entities. This will provide further confidence for registered entities in the security of industry's most critical and potentially sensitive data.

Regarding the ERO SEL, EEI appreciates NERC's willingness to allow registered entities to work with the appropriate Regional Entities to manage sharing certain sensitive information and evidence, (1) in the ERO SEL; (2) a registered entity SEL; or, (3) as part of onsite visit to examine information that resides in a registered entity's environment outside of the ERO SEL and registered entity SEL. This flexibility is a critical requirement for the IOU Sector to mitigate concerns with placing all of a registered entity's sensitive BES information and vulnerabilities in a single repository. The list of documents that the CCC developed in late 2018 and that NERC Senior Management approved in April 2020 is representative of sensitive information that may need to be managed outside of the ERO SEL and a registered entity SEL to address the differing entity risk tolerance levels and mitigate industry wide security risk. An agreement on data types that are potentially too sensitive to leave the control of registered entities is especially important given the uncertainty for registered entities to set up their own lockers based on the current NERC defined registered entity locker specifications. We appreciate the challenges associated with allowing registered entities to set up their own lockers. However, ensuring that registered entities are able to employ sufficient security measures to protect their sensitive information is paramount. Given these challenges, and that security risk lies with the registered entity, we request that NERC permit registered entities to protect sensitive information to the same degree that NERC is protecting the ERO SEL. EEI suggests refinements to the specifications that includes the ability to monitor lockers at all times, including data exfiltration, the use of each registered

entity's third-party remote access control procedures, and the ability to apply additional access provisions to the locker after normal business hours.

In addition, similar to the Align tool, robust and documented procedural controls for the ERO SEL should be in place prior to implementation of the ERO SEL, including notifications to registered entities regarding destruction of information in the ERO SEL. To further enhance and confirm the security of the ERO SEL, EEI supports NERC's recommendation to conduct a third-party, comprehensive, pre-production security review of the ERO SEL as well as security reviews prior to new releases, that considers the adequacy of data protection standards, controls, and threat modeling. If a third-party review identifies any security vulnerability(ies), EEI recommends that NERC mitigate identified issues prior to use of the ERO SEL and have a process for informing registered entities of deficiencies and resolutions.

EEI recommends that NERC continue working with Regional Entities to ensure the ERO SEL will be an effective tool for audits and other CMEP engagements with registered entities. EEI also recommends NERC continue collaborating with registered entities on the implementation of Align and ERO SEL and the identification of opportunities for continuous improvement.

Additionally, EEI recommends NERC establish a governance advisory committee that includes industry representation from various sectors to provide leadership, including CISO leadership, security expertise, and support for the Align tool and ERO SEL.

Furthermore, to maintain confidence in the ERO SEL, Align, and CORES, NERC should ensure its internal audit plans continue to prioritize review of security practices and adherence to policies and procedures to further mitigate risk related to these tools with comprehensive oversight by Board Committees, such as the Enterprise-wide Risk Committee.

EEI supports in principle NERC's proposed strategy to fund the Align implementation delay and enhancement costs and the ERO SEL costs.

Prioritizing ERO Enterprise Development Activities

We appreciate NERC and FERC's support as the COVID-19 pandemic continues to impact the industry. The guidance and delay in implementation of upcoming Reliability Standards has allowed industry to focus on reliable and secure BPS operations. In order to maintain the necessary focus during the pandemic and operating in extraordinary times, the subject matter expertise that in normal times provides input on NERC's comment requests for modification to Reliability Standards, Standard Authorization Requests, guidelines, and modifications to the Rules of Procedure, and other items for industry review are less accessible. EEI appreciates NERC's consideration for prioritizing projects for industry review and

recommends NERC continue to evaluate activities to determine if they can be delayed or provided additional comment time so that industry can balance providing valuable input and maintaining the reliable and secure operations of the BPS.

Thank you for the opportunity to provide policy input.



Sector 8 Policy Input for the NERC Board of Trustees & Member Representatives Committee

May 15, 2020

ELCON, on behalf of Large End-Use Consumers, submits the following policy input for the consideration of NERC's Board of Trustees (BOT) and the Member Representatives Committee (MRC). It responds to BOT Chairman Roy Thilly's April 15, 2020 letter to Jennifer Sterling, chair of the MRC.

SUMMARY

Item 1: Align Tool Delay and Establishment of the Secure Evidence Locker System (SEL)

- ELCON supports the steps taken thus far to segregate content and secure the Align tool and the ERO SEL. We encourage NERC and the ERO to continue to seek feedback and solicit ideas from security SME's within Registered Entity organizations to ensure a product meets the expectations and needs of both the ERO and industry. We believe the combined set of tools provides a secure, effective, and consistent foundation.
- ELCON has not identified additional security concerns in the design of the Align tool or the design of the ERO SEL. The security landscape is ever changing so we encourage NERC and the ERO to continue to seek feedback and solicit ideas from security SME's within Registered Entity organizations as this project moves forward.
- ELCON supports the proposed funding strategy and the attempt to minimize the Net Energy for Load (NEL) assessment impacts of the delay and enhancement costs.

Item 1: Align Tool Delay and Establishment of the Secure Evidence Locker System (SEL)

The Board requests MRC policy input on the following:

1. **Do the steps taken to segregate content and secure both the Align tool and the ERO SEL, which is being developed to adhere to the NIST 800-171 security control framework (the "gold standard" for data security for our use case), address the security needs associated with the highly sensitive information necessary for Regional Entities to review in support of registered entity CMEP activities?**

ELCON appreciates the effort the ERO has put into segregating and securing Align and the SEL, addressing the security concerns of industry that is charged with providing confidential information as evidentiary support of compliance. We support the steps taken thus far to segregate content and secure the Align tool and the ERO SEL. We encourage NERC and the ERO to continue to seek feedback and solicit ideas from security SME's within Registered Entity organizations to ensure a product meets the expectations and needs of both the ERO and industry. We believe the combined set of tools provides a secure, effective, and consistent foundation.

2. Are there remaining security concerns not yet sufficiently addressed by the design of Align and the design of the ERO SEL? If so, what alternatives do you suggest to mitigate them that preserve a reasonable balance between the security of the information and the effectiveness of the ERO Enterprise processes?

ELCON has not identified additional security concerns in the design of the Align tool or the design of the ERO SEL. The security landscape is ever changing so we encourage NERC and the ERO to continue to seek feedback and solicit ideas from security SME's within Registered Entity organizations as this project moves forward.

3. Do you agree with the proposed strategy to minimize the Net Energy for Load (NEL) assessment impacts of the Align implementation delay and enhancement costs and the ERO SEL costs as set out in Attachment D? The plan is to draw approximately \$1 million from NERC's operating contingency reserve in 2020 to fund a portion of our remaining ERO SEL costs and to fund the rest of those costs through a borrowing in 2020 to take advantage of the current very low interest rate environment. In this way, NERC will be able to maintain debt service requirements in future years equal to or less than previous annual debt service projections. For the Align delay costs needed to accommodate development and implementation of the ERO SEL system, the plan includes a further draw from NERC's operating contingency reserve in 2021 to minimize assessment impacts.

ELCON supports the proposed funding strategy and the attempt to minimize the Net Energy for Load (NEL) assessment impacts of the delay and enhancement costs.

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TO: Roy Thilly, Chair
NERC Board of Trustees

FROM: Lloyd A, Linke
Federal Utility/Federal PMA Portion Sector 4

DATE: May 5, 2020

SUBJECT: Response to Request for Policy Input to NERC Board of Trustees

The Portion of Sector 4 representing the Federal Utilities and Federal Power Marketing Administrations (Federal PMA), appreciate the opportunity to respond to your January 2, 2020 letter to Ms. Jennifer Sterling, Chair NERC Member Representative Committee, requesting input on certain policy issues. The Federal PMA appreciates the opportunity to provide comments on the policy input on the matters of interest to the NERC Board of Trustees (Board) for their May 13-14, 2020 meeting.

The Federal PMA offer the following on the ERO Enterprise secure Evidence Locker and the delay costs associated with the Align project.

In summary the Federal PMA is in support of making sure the ERO Enterprise has a secure, effective, and harmonized platform with which to execute its Compliance Management and Enforcement Program (CMEP) responsibilities. The Federal PMA believes the combined suite of tools (Align and the ERO SEL) would provide better oversight of Regional Entity processes, improve the quality and security of reporting, and provide much better integration to these tools. We urge the Board to consider the following key elements;

1. Very strong security controls would be required given all the sensitive and highly secure data will be housed in one location.
2. A third-party audit of security controls should be conducted by a highly qualified entity prior to launch of the SEL.
3. Develop evidence handling protocols to allow NERC and Regional Entities the ability to destroy sensitive evidence after audits are completed.
4. The expansion of evidence handling protocols in place for CIP-014 to additional standards or types of evidence.

The Federal PMA have no further input on other Board preliminary agenda items listed in the Policy Input dated April 15, 2020. We hope the E-ISAC Coronavirus Update and 2020 ERO Enterprise Reliability Indicators Update agenda items will cover assessment of system performance and assessment of the protocols and procedures triggered in response to COVID-19 outbreak. And would present any recommendations to investigate adjustments that might be required for any future abnormal circumstances the industry might face such as reoccurrence of COVID-19 outbreak.

The following are more specific responses to questions asked by the Board on the Policy Input Letter;

- 1. Do the steps taken to segregate content and secure both the Align tool and the ERO SEL, which is being developed to adhere to the NIST 800-171 security control framework (the “gold standard” for data security for our use case), address the security needs associated with the highly sensitive information necessary for Regional Entities to review in support of registered entity CMEP activities?**

The Federal PMA believes the approach outlined by NERC Staff should provide and address the security needs associated with most sensitive information necessary for Regional Entities to review in support of registered entity CMEP activities, but it may not be sufficient for the protection of some highly sensitive data. Registered Entities may possess data that they consider to be highly sensitive and not suitable for storage outside of their facilities. In addition, the potential impact of the data proposed to be collected by NERC and stored in the ERO SEL is multiplied because the SEL is envisioned to house sensitive data for all Registered Entities across the ERO. This evidence repository would be of immense potential value to an attacker.

- 2. Are there remaining security concerns not yet sufficiently addressed by the design of Align and the design of the ERO SEL? If so, what alternatives do you suggest to mitigate them that preserve a reasonable balance between the security of the information and the effectiveness of the ERO Enterprise processes?**

NERC states that it will “engage a third party to verify the code” prior to launching the SEL. It is unclear to the Federal PMA what this will entail. We recommend a thorough third-party audit of the security controls conducted by a qualified organization.

Further, the Federal PMA recommends the expansion of evidence handling protocols in place for CIP-014, i.e. review only on premise at the Registered Entity, be expanded to additional categories of information that could be considered highly sensitive. The Federal PMA also proposes the development of evidence handling protocols that would allow for the destruction of certain sensitive evidence by Regional Entities and the ERO at the conclusion of audits.

- 3. Do you agree with the proposed strategy to minimize the Net Energy for Load (NEL) assessment impacts of the Align implementation delay and enhancement costs and the ERO SEL costs as set out in Attachment D? The plan is to draw approximately \$1 million from NERC’s operating contingency reserve in 2020 to fund a portion of our remaining ERO SEL costs and to fund the rest of those costs through a borrowing in 2020 to take advantage of the current very low interest rate environment. In this way, NERC will be able to maintain debt service requirements in future years equal to or less than previous**

annual debt service projections. For the Align delay costs needed to accommodate development and implementation of the ERO SEL system, the plan includes a further draw from NERC's operating contingency reserve in 2021 to minimize assessment impacts.

The Federal PMA appreciates NERC Staff recommendation on funding for these tools and minimizing assessment impact. We are concerned on potential shift in the priority list of tasks NERC and Regional Entities had planned as result of the COVID-19 outbreak. The protocols and procedures deployed to meet the reliability & security of the system under this COVID-19 outbreak might require several tasks such as performance assessment, what worked and did not work as planned, what actions NERC and Regional Entities need to be taken to adjust and prepare for the next outbreak. Such review and assessment might impact the priority of tasks and the overall assessment impact if changes on the tools would be required.

The Federal PMA support the comments provided by the Canadian Utilities in Sector 4.

ISO/RTO Council's (IRC) Policy Input to Board of Trustees

May 8, 2020

The ISO/RTO Council¹ (IRC) appreciates the opportunity to respond to the Board's request for policy input. The IRC offers the following input to the Member Representatives Committee (MRC) in response to Ms. Jennifer Sterling's letter dated April 15, 2020, regarding the Align Tool Delay and Establishment of the Secure Evidence Locker System.

Summary Comments

The IRC supports NERC's objective of streamlining and standardizing the Compliance Monitoring and Enforcement Program (CMEP) via the utilization of a common software tool. However, we are concerned that security issues related to the ownership and intended use of the Align tool remain, despite the planned development and use of a Secure Evidence Locker (SEL). There are two fundamental concerns that should be addressed before proceeding with further investments in the tool:

1. We do not support centralized storage of highly sensitive network, system architecture, and vulnerability assessment data for the NERC registered entities. We believe this type of data should only reside at the registered entity, with strictly controlled access, and only be reviewed on site. This type of highly sensitive information should not be stored in any SEL, because making this information accessible from the public internet is too risky. For information that is sensitive, but not highly sensitive, we would like confirmation that each registered entity would have the option of building its own SEL.
2. Consistent with the rationale underlying the May 1, 2020, Executive Order issued by the President of the United States, we believe that it is inadvisable to utilize a software tool from a vendor that is potentially controlled or influenced by a foreign adversary. Our understanding is that the company that owns the Align tool is ultimately owned and/or controlled by an entity in Hong Kong, a region of the People's Republic of China. We recommend seeking confirmation from the United States Department of Energy (DOE) or other federal agency that the Align tool is safe for the stated purpose, i.e. the continuous tracking of industry-wide compliance monitoring and enforcement data now and into the future.

In addition, the IRC has questions about the project delay and increased costs, primarily with regard to NERC's intention to utilize the SEL. If utilization of the NERC SEL is not mandatory, and highly sensitive information need not be stored in any SEL, then our security concerns are largely abated (apart from potential impacts related to the Executive Order). However, if the broader industry does not utilize the NERC SEL, and instead create their own individual SELs, we question the overall usefulness of a NERC SEL in light of increased costs.

¹ The IRC is comprised of the Alberta Electric System Operator (AESO), the California Independent System Operator Corporation (California ISO), Electric Reliability Council of Texas, Inc. (ERCOT), the Independent Electricity System Operator of Ontario, Inc., (IESO), ISO New England, Inc. (ISO-NE), Midcontinent Independent System Operator, Inc., (MISO), New York Independent System Operator, Inc. (NYISO), PJM Interconnection, L.L.C. (PJM), and Southwest Power Pool, Inc. (SPP).

1. Do the steps taken to segregate content and secure both the Align tool and the ERO SEL, which is being developed to adhere to the NIST 800-171 security control framework (the “gold standard” for data security for our use case), address the security needs associated with the highly sensitive information necessary for Regional Entities to review in support of registered entity CMEP activities?

No. We do not support centralized storage of highly sensitive network, system architecture and vulnerability assessment data for the NERC registered entities. We believe this type of data should only reside at the registered entity, with strictly controlled access, and only be reviewed on site. This type of highly sensitive information should not be stored in any 3rd party SEL, because making this information accessible from the public internet is too risky. For information that is sensitive, but not highly sensitive, we would like confirmation that each registered entity would have the option of building its own entity managed SEL. NIST 800-171 does not sufficiently safeguard against State sponsored espionage, nor does it ensure ongoing alignment with DOE/Federal policy – the addition of Federal Risk and Authorization Management Program (FedRAMP) accreditation should be pursued for the toolset(s).

The following table is based on the impact definitions of the Federal Information Processing Standards (FIPS) publication 199 (FIPS 199)

Security Objective	Low	Moderate	High
Confidentiality; Preserving authorized restrictions on information access and disclosure, including means for protecting personal privacy and proprietary information.	Unauthorized disclosure of information could be expected to have a limited adverse effect on organizational operations, organizational assets, or individuals.	The unauthorized disclosure of information could be expected to have a serious adverse effect on organizational operations, organizational assets, or individuals.	The unauthorized disclosure of information could be expected to have a severe or catastrophic adverse effect on organizational operations, organizational assets, or individuals.

Using this common industry standard makes it easier to exemplify the types of audit information registered entities would be comfortable storing as noted in the table below. Entities and NERC can work together to confirm what audit data would fall into which category.

Storage Location/Impact	Low	Moderate	High
Align	Yes	No	No
NERC SEL	No	Yes	No
Entity managed storage	NA	NA	Yes

2. Are there remaining security concerns not yet sufficiently addressed by the design of Align and the design of the ERO SEL? If so, what alternatives do you suggest to mitigate them that preserve a reasonable balance between the security of the information and the effectiveness of the ERO Enterprise processes?



Yes. Ownership and administration of the Align tool remain concerns of the IRC. In addition to the concerns expressed above, we think that it is advisable to seek confirmation from DOE, which is tasked with implementing the May 1, 2020, Executive Order, that the selected software tool for housing industry wide compliance and enforcement data is safe for use for the expected lifespan of the toolset. U.S. FedRAMP accreditation for the selected software tool would provide a tangible and enduring independent assurance of alignment with Federal guidelines and ongoing security posture validation, and therefore should be pursued.

3. Do you agree with the proposed strategy to minimize the Net Energy for Load (NEL) assessment impacts of the Align implementation delay and enhancement costs and the ERO SEL costs as set out in Attachment D? The plan is to draw approximately \$1 million from NERC's operating contingency reserve in 2020 to fund a portion of our remaining ERO SEL costs and to fund the rest of those costs through a borrowing in 2020 to take advantage of the current very low interest rate environment. In this way, NERC will be able to maintain debt service requirements in future years equal to or less than previous annual debt service projections. For the Align delay costs needed to accommodate development and implementation of the ERO SEL system, the plan includes a further draw from NERC's operating contingency reserve in 2021 to minimize assessment impacts.

The IRC takes no position on the strategy to minimize assessment impacts, but has questions about the project delay and increased costs. It is unclear to the IRC whether the cost benefits are still on track as originally envisioned, particularly considering the intended construction and utilization of the NERC SEL. If utilization of the NERC SEL is not mandatory, and highly sensitive information need not be stored in any SEL, then our security concerns are largely abated. However, if the broader industry does not utilize the NERC SEL, and instead create their own individual SELs, we question the overall usefulness of a NERC SEL in light of increased costs.

**Policy Input to the NERC Board of Trustees
May 14, 2020 Teleconference
Provided by the North American Generator Forum**

The North American Generator Forum (NAGF) appreciates the opportunity to provide the following policy input in advance of the NERC BOT meeting.

Summary

Item 1: Align Tool Delay and Establishment of the Secure Evidence Locker System (SEL)

The NAGF appreciates the opportunity to provide policy input for the NERC Member Representatives Committee (“MRC”) and Board of Trustees (“Board”) in response to BOT Chair Roy Thilly’s letter dated April 15, 2020. The NAGF supports the development and implementation of the Align tool and ERO SEL to segregate content, secure evidence, and provide a consistent platform to address the Regional Entities security needs for registered entity CMEP activities.

Discussion

Item 1: Align Tool Delay and Establishment of the Secure Evidence Locker System (SEL)

The Board requests MRC policy input on the following:

- 1. Do the steps taken to segregate content and secure both the Align tool and the ERO SEL, which is being developed to adhere to the NIST 800-171 security control framework (the “gold standard” for data security for our use case), address the security needs associated with the highly sensitive information necessary for Regional Entities to review in support of registered entity CMEP activities?**

The NAGF supports the steps being taken to segregate content and secure both the Align Tool and ERO SEL. This combined set of tools will provide the ERO Enterprise with a secure, effective, and consistent platform for executing its CMEP responsibilities.

2. **Are there remaining security concerns not yet sufficiently addressed by the design of Align and the design of the ERO SEL? If so, what alternatives do you suggest to mitigate them that preserve a reasonable balance between the security of the information and the effectiveness of the ERO Enterprise processes?**

The NAGF has not identified any outstanding security concerns that need to be addressed in the design of the Align Tool or the design of the ERO SEL. The NAGF is supportive of delaying the Align Tool and ERO SEL implementation to allow for rigorous development environment testing and any potential delays resulting from the coronavirus health crisis.

3. **Do you agree with the proposed strategy to minimize the Net Energy for Load (NEL) assessment impacts of the Align implementation delay and enhancement costs and the ERO SEL costs as set out in Attachment D? The plan is to draw approximately \$1 million from NERC's operating contingency reserve in 2020 to fund a portion of our remaining ERO SEL costs and to fund the rest of those costs through a borrowing in 2020 to take advantage of the current very low interest rate environment. In this way, NERC will be able to maintain debt service requirements in future years equal to or less than previous annual debt service projections. For the Align delay costs needed to accommodate development and implementation of the ERO SEL system, the plan includes a further draw from NERC's operating contingency reserve in 2021 to minimize assessment impacts.**

The NAGF supports the proposed combination of operating contingency reserve draw and debt refinancing to fund the ERO SEL capital investments/implementation and Align delay costs for 2020 and 2021 as defined in Attachment D.



Policy Input
From a Northeastern North American Reliability Perspective
By the NPCC Board of Directors

1. Segregation of Compliance Evidence and Data in Align Tool and ERO Secure Evidence Locker (SEL)

- The NPCC Board supports the segregation and separate storage of registered entities' compliance evidence associated with critical bulk power system assets in a highly secure evidence locker that is built and third-party tested to conform to NIST 800.171 standards.
- The NPCC Board also supports the harmonization of the ERO Enterprise CMEP processes to securely access and review a registered entity's compliance evidence within the SEL, while separately documenting compliance monitoring data and audit results within the Align tool.

2. Identification of any Remaining Compliance Evidence Security Concerns

- The NPCC Board supports the ability of registered entities to build and house their own SEL, if they so choose at their own expense, consistent with the ERO Enterprise security requirements.
- The NPCC Board also supports the ability of Canadian Provincial governmental and/or regulatory authorities to develop and maintain such secure compliance evidence retention tools, as are consistent with their mandates, responsibilities and appropriate for their circumstances.
- The NPCC Board has not identified any outstanding security concerns, but recommends that a comprehensive training program for registered entities accompany the rollout of the SEL to assure that the rigorous safeguards put in place accomplish the objective of securing sensitive information.

3. Funding Strategy for SEL

- The NPCC Board supports the recommendation on funding strategy for the SEL as a means of leveling the impacts of projected 2021 NERC assessments on registered entities.

Affirmed by the NPCC Board of Directors

April 28, 2020

For submittal to the May 14, 2020

NERC MRC and BOT Meetings

Cooperative Sector Policy Input to the NERC Board of Trustees

May 6, 2020

The Cooperative Sector appreciates the opportunity to provide policy input to the NERC Board of Trustees (BOT) for policy issues that will be discussed at the May 13/14 NERC MRC, Board and Board Committee meetings.

Summary of Policy Input

- *The Cooperative Sector supports NERC's efforts to streamline its processes while maintaining its focus on ensuring the security and confidentiality of highly confidential and sensitive information.*
- *The Cooperative Sector supports NERC's use of the NIST 800-171 security control framework ("NIST Framework") in its design and implementation of the Align and Secure Evidence Locker tools; however, it seeks additional information about the internal processes and controls that are required to implement and maintain adherence to the NIST Framework.*
 - *The Cooperative Sector recommends that NERC provide additional information regarding its internal processes and controls that will be essential to the overall implementation of the NIST Framework.*
- *The Cooperative Sector is concerned about the lack of transparency provided to the relevant registered entity by the ERO Secure Evidence Locker implementation regarding the logging and reporting of activity within these lockers. A registered entity should have access to reporting and/or notifications of the logged access to and activities affecting its data as an additional safeguard against misuse.*
 - *The Cooperative Sector recommends that NERC take additional steps to infuse reporting and alerting functionality and to implement processes that would ensure that assessment reports are subject to appropriate reporting and oversight.*
- *The Cooperative Sector supports the proposed funding strategy that NERC put forth to address the additional costs associated with the Align and Secure Evidence Locker tools; however, it urges NERC to clarify and re-evaluate some of the line items set forth in its cost summary.*

Align Tool Delay and Establishment of the Secure Evidence Locker System

Question 1

- In the April 2020 Policy Input Request, the BOT requested input on whether the steps taken by NERC to segregate content and secure both the Align and ERO Secure Evidence Locker tools address security needs associated with highly sensitive information. Further reference was made to NERC's commitment to adhere to the NIST Framework as the primary means by which security would be addressed. The Cooperative Sector agrees that the NIST Framework provides an acceptable set of security standards and controls to protect confidential data and address security needs. The Cooperative Sector also respectfully acknowledges that the current tools provide a more secure mitigation to concerns that highly sensitive information would be disclosed as a result of the Freedom of Information Act.
- However, while the provided information indicates how the tools' security will be configured and addressed, security controls inherently require supporting procedural controls. How these controls and processes will be developed, evaluated, and maintained across the Electric Reliability Organization ("ERO") enterprise is not clear. NERC has indicated that a third party will evaluate the security configuration of the Align and the Secure Evidence Locker tools. Such evaluation should also be applied to the supporting procedural controls implemented across the ERO enterprise to ensure that they are complementary to each other and to the capabilities of the Align and the Secure Evidence Locker tools.
- Additionally, to ensure that there is not "drift" from the tools' security control configurations or the associated procedural controls implemented across the ERO enterprise, the Cooperative Sector would

recommend that NERC have an independent third party perform regular audits of the tools' security controls and those security controls and processes implemented in support to the tool's administration across the ERO enterprise. The Cooperative Sector further recommends that, at a minimum, NERC commit to providing a generalized summary of the results of such evaluations to industry and to providing more detailed reporting and information to the NERC Certification and Compliance Committee ("CCC") or a subgroup thereof. It further recommends that NERC consider what reporting capabilities would be needed to address registered entity needs where internal vendor risk management practices require copies of independent auditor assessments (similar to SOC-1/SOC-2-type reporting) an/or breach notification assurances from NERC.

Question 2

- The April 2020 Policy Input Request also asked whether industry had any remaining security concerns that were not sufficiently addressed by the design of Align and Secure Evidence Lockers and, if so, what alternatives might mitigate them in a manner that preserves a reasonable balance between the security of the information and the effectiveness of the ERO enterprise processes. The Cooperative Sector agrees that the NIST Framework is a well-respected, well-established, applicable body of security controls. However, as mentioned above, these controls and their supporting procedural controls must be regularly evaluated across the ERO enterprise by independent third-party auditors to ensure that no "drift" has occurred and that they continue achieve their stated objectives as the software and ERO enterprise processes evolve. The Cooperative Sector has identified three security needs that it requests that NERC address.
- First, the Cooperative Sector remains concerned about the lack of transparency once evidence is loaded into the Secure Evidence Locker tool. While the Cooperative Sector understands that a registered entity could host their own locker, such option requires registered entities to meet, manage, and maintain additional, potentially burdensome requirements and controls. Regardless of whether an entity decides to host their own Secure Evidence Locker or to utilize the ERO Secure Evidence Locker, the Cooperative Sector strongly recommends that the transparency and logging/alerting functionality of the Secure Evidence Lockers be consistent between ERO and registered entity Secure Evidence Lockers.
 - The addition of the same or similar transparency and reporting relative to activities associated with the Secure Evidence Locker tool could significantly alleviate concerns regarding the use of these tools. That the NIST Framework incorporates audit and accountability controls (Section 3.3) as well as system and communications protection controls (Section 3.13) that could be leveraged to provide registered entities with high-level access and activity reports for the Secure Evidence Locker tools is instructive and indicates that such logging, alerting, and reporting should be incorporated into the overall design of the Secure Evidence Locker tool.
 - More specifically, stakeholders have previously discussed with NERC the potential for automated notifications around data upload and reporting, e.g., notification that data has successfully loaded, notification that data has been accessed, notification that data has been destroyed pursuant to retention guidelines, etc. Ideally, to ensure that activities being undertaken are successful, a user would get a confirmation of activity, e.g., notification that data has been uploaded or that an upload attempt has failed. Further, a notification to the appropriate regional entity that a registered entity has completed an expected upload would provide significant benefits to efficiency. For these reasons, the Cooperative Sector requests that NERC strongly consider incorporation of these capabilities into their initial design.

- Second, the Cooperative Sector notes that questions remain regarding the applicability of CIP-011 to registered entity Secure Evidence Lockers. NERC should provide compliance and implementation guidance on the applicability of CIP-011 prior to implementation of these tools so that registered entities can make informed decisions regarding their use of the Secure Evidence Locker tool. Registered Entities will have to make decisions regarding whether to utilize the ERO Secure Evidence Locker or create an entity-specific Secure Evidence Locker. Hence, a full understanding of the applicability of CIP-011 and any other requirements that must be met is critical to registered entity decision-making processes.
- Third, the Cooperative Sector remains concerned regarding ensuring that confidential information remains segregated between Align and the Secure Evidence Lockers. Certain ERO processes require review of confidential information in the context of collaboration amongst team members, e.g., audit team members, certification team members, etc. As confidential and sensitive information is reviewed and notes are taken for collaboration and use during these processes, there is a risk that confidential and sensitive information could be transcribed or copied into notes or other work product. Accordingly, procedural and security controls must also recognize and manage these risks to the security and confidentiality of information.

Question 3

- Finally, the April 2020 Policy Input Request requested that industry indicate whether it agrees with the proposed strategy to minimize the Net Energy for Load (NEL) assessment impacts of the Align implementation delay and enhancement costs and the ERO SEL costs as set out in Attachment D to the April 2020 Policy Input Request. The Cooperative Sector appreciates NERC's sensitivity and thoughtful consideration of the potential impacts of the delay and enhancement costs for the Align and Secure Evidence Locker tools on the NEL assessments to registered entities. The Cooperative Sector agrees with the financial strategy set forth and would like to request that NERC provide additional information to address concerns regarding the estimated costs for long-term maintenance, annual certification, and professional services and consulting associated with implementation of the Align and Secure Evidence Locker tools.
- More specifically, the Cooperative Sector would appreciate clarification on the adjustment factors utilized to estimate the maintenance costs through 2026, as a more typical, fixed percentage of cost adjustment is not observed. Additionally, the Cooperative Sector noted the inclusion of approximately \$100,000 annually for certification. The Cooperative Sector requests clarification regarding what activities are anticipated to be funded with this allocation and whether such costs are merely anticipated or have been identified through receipt of an estimate. Finally, the Cooperative Sector is concerned regarding the professional services and consulting costs that were estimated for implementation of the Align and Secure Evidence Locker tools. The April 2020 Policy Input Request indicated the use of a known, established vendor as well as third party validations of configuration and design. The Cooperative Sector requests clarification as to whether the estimated professional services and consulting costs are inclusive of both activities; whether NERC administered a request for proposal process to evaluate costs across the vendor community; and whether NERC received estimates of costs from any other vendors.

Submitted on behalf of the Cooperative Sector by:

Barry Lawson

Senior Director, Regulatory Affairs

National Rural Electric Cooperative Association (NRECA)

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NERC Board of Trustees
Teleconference
May 13-14, 2020
Policy Input of the Merchant Electricity Generator Sector

Sector 6, Merchant Electricity Generator Sector, takes this opportunity to provide policy input in advance of the upcoming North American Electric Reliability Corporation (NERC) Member Representatives Committee (MRC) and Board of Trustees (Board) meetings.

In a letter to MRC Chair Jennifer Sterling dated April 15, 2020, Board Chair Roy Thilly requested MRC input on three questions about the Align Tool delay and the establishment of the Secure Evidence Locker System (SEL). Sector 6 makes the following comments in response.

Key Point

- The Merchant Electricity Generators support the current strategy for the Align Tool and the Secure Evidence Locker. The approach is reasonable and appears to provide improved security in protecting sensitive industry information.
- The Merchant Electricity Generators agree in principle with the funding plan for the Align Tool and the SEL projects.

Sector 6 Comments for Policy Input

1. *Do the steps taken to segregate content and secure both the Align tool and the ERO SEL, which is being developed to adhere to the NIST 800-171 security control framework (the “gold standard” for data security for our use case), address the security needs associated with the highly sensitive information necessary for Regional Entities to review in support of registered entity CMEP activities?*

The Merchant Electricity Generators believe that the steps taken to segregate content and address the RE’s security needs are reasonable. However, the tool’s security measures should continually be evaluated using a risk-based approach to address new vulnerabilities and the ever-changing threat landscape. Moreover, we recommend NERC continually evaluate its security practices – and adherence thereto – through internal auditing and independent third-party review, with oversight by the Board.

2. *Are there remaining security concerns not yet sufficiently addressed by the design of Align and the design of the ERO SEL? If so, what alternatives do you suggest to mitigate them that preserve a reasonable balance between the security of the information and the effectiveness of the ERO Enterprise processes?*

At this time, we find no security concerns that are left unaddressed by the design of Align or SEL. As we noted above, the tool’s security measures should continually be evaluated using a risk-based approach and independent oversight to address any new potential threats and vulnerabilities.

3. *Do you agree with the proposed strategy to minimize the Net Energy for Load (NEL) assessment impacts of the Align implementation delay and enhancement costs and the ERO SEL costs as set out in Attachment D? The plan is to draw approximately \$1 million from NERC's operating contingency reserve in 2020 to fund a portion of our remaining ERO SEL costs and to fund the rest of those costs through a borrowing in 2020 to take advantage of the current very low interest rate environment. In this way, NERC will be able to maintain debt service requirements in future years equal to or less than previous annual debt service projections. For the Align delay costs needed to accommodate development and implementation of the ERO SEL system, the plan includes a further draw from NERC's operating contingency reserve in 2021 to minimize assessment impacts.*

The Merchant Electricity Generators generally support the proposed funding plan as written. It is a reasonable use of resources to achieve the funding goal.

Sincerely,

/s/

Sector 6 Merchant Electricity Generator Representatives:

Martin Sidor
NRG Energy, Inc.

Sean Cavote
PSEG

MEMORANDUM

TO: Roy Thilly, Chair
NERC Board of Trustees

FROM: Carol Chinn
William J. Gallagher
Roy Jones
John Twitty

DATE: May 6, 2020

SUBJECT: Response to Request for Policy Input to NERC Board of Trustees

The Sector 2 and 5 members of the NERC Member Representatives Committee (MRC), representing State/Municipal and Transmission Dependent Utilities (SM-TDUs), appreciate the opportunity to respond to your April 15, 2020 letter to Jennifer Sterling, Chair of the MRC that invited MRC member sectors to provide input on the Align tool delay and Secure Evidence Locker (SEL) system. The SM-TDUs have provided policy input on those items and some additional issues. We look forward to discussing the Align and SEL issues along with the other items during the virtual meetings of the Board of Trustees (Board), Board committees, and the MRC, on May 13-14, 2020.

Summary of Comments

➤ **Align Tool Delay and Establishment of SEL System**

SM-TDUs believe NERC should delay the project until a more comprehensive business case, that includes both Align and SEL system can be vetted with stakeholders.

- To answer the BOT's questions, stakeholders need to make assumptions about what has been done and what remains to be accomplished (CMEP goals versus NIST Requirements).
- Knowing which highly sensitive items that will be included in the system (or not) and what is their availability vis-à-vis the SEL is important for registered utilities to know.

➤ **Standard Implementation Deferrals**

- SM-TDUs appreciate NERC's willingness to monitor the COVID pandemic to consider the need for further or new standard implementation deferrals.

➤ **Rules of Procedure**

- The Sectors appreciate NERC attentiveness to stakeholder issues regarding the proposed Rules of Procedure changes and look forward to NERC's response.

Align Tool Delay and Establishment of SEL System

The SM-TDUs recognize the importance of the Align Tool and SEL System project to the Electric Reliability Organization (ERO). However, the confluence of significant project changes, cost increases, security concerns around the project, the Executive Order (EO) on securing America's bulk power system (BPS) and the COVID-19 event point to the need to pause and take stock of a project that SM-TDUs believe has many unanswered questions, as we explain below.

The Align and SEL project is multi-faceted and complex. The security, information system technology and financial issues require subject matter experts (SMEs) from each area of the industry to appropriately assess the Align and SEL projects. NERC has conducted periodic outreach and public power utilities have seen general presentations and therefore have a general understanding of Align and the SEL system. SM-TDUs believe, however, that additional efforts are required to provide public power representatives with important detailed information about the Align and SEL projects.

In 2019, following a classified briefing associated with the project, NERC sought industry representatives to look at the technical specifications for the project. Public power volunteers came forward but were asked to sign non-disclosure agreements (NDAs) to participate. Because public power utilities' need to comply with state sunshine laws, this prevented them from signing the NDAs and participating in any technical specification discussions conducted under those NDAs. Therefore, any further technical specification review by public power representatives has only been done at the level of publicly-available information.

On May 1, President Trump signed an Executive Order with the goal of securing America's bulk power system (BPS). The Executive Order prohibits Federal agencies and *U.S. persons* from acquiring, transferring, or installing BPS equipment in which any foreign country or foreign national has any interest and the transaction poses an unacceptable risk to national security or the security and safety of American citizens. The scope of the EO is something that entities such as the ERO need to closely examine to best understand potentially affected services and products from foreign countries that could be impacted by the Order. This examination would include the Align/SEL project and ensuring that next steps will not include equipment inclusive to the Order.

While NERC has provided information on its website and conducted January and March 2020 presentations on Align and SEL, these were broad industry outreach efforts that took place as the COVID-19 emergency unfolded and began to take priority. Consequently, many in Sectors 2 and 5 were unable to fully engage in the NERC outreach. And even then, the presentations were primarily updates on the status of the project, and not intended for collaborative input by the industry. Therefore, as the ERO has ramped up its Align and SEL outreach, it has been late in the project's development process and industry's attention has been focused on COVID-19.

SM-TDU MRC representatives have a responsibility to the NERC Board of Trustees to provide accountability. Moreover, they have a responsibility to their constituencies to communicate the sectors' concerns to the NERC Board. What the SM-TDU MRC representatives are hearing from their constituencies are questions about the Align and SEL, rather than input on its effectiveness and efficiency. The questions relate to issues such as security, technical specifications and project financing. Specific to financing, MRC representatives engaged in the NERC business plan and budget process were informed of the financing plan and budget implications for the Align/SEL project in recent weeks and still have many questions. Consequently, the SM-TDU

MRC representatives and their constituents need additional information about the project before they can provide fully-informed responses to the Board's questions.

The SM-TDUs recognize that NERC feels the need to act expediently on the Align and SEL project. However, the sectors believe there are many open questions and how the COVID-19 event has played a part in distracting stakeholders getting full information just as NERC was ramping up outreach on changes to the Align and SEL. Therefore, we encourage the Board to only reach a decision after further detailed outreach so that the full implications of the project can be fully understood by the ERO and stakeholders.

1. Do the steps taken to segregate content and secure both the Align tool and the ERO SEL, address the security needs associated with the highly sensitive information necessary for Regional Entities to review in support of registered entity CMEP activities?

The background materials state that it was recognized in 2014 that establishing an efficient and effective Compliance Monitoring and Enforcement Program (CMEP) would require consolidating multiple regional platforms into one. This change would require a significant information system change for the ERO. This information system change has come to be known as the Align Tool. Currently, the Align Tool launch is being delayed until 2021 due to addition of the SEL system designed to address concerns regarding the security of highly-sensitive information. NERC asserts that the SEL is a required step and is part of Align.

From the information provided in the policy input letter package, SM-TDUs can only assume that the steps taken by NERC will address the CMEP evidence security issues. Of the three discernable security items from the Board letter materials -- the abstraction layer, third-party review and data protection (CUI/CEII designation) -- specifics are lacking regarding timing and next steps. Therefore, answering the question requires stakeholders to make assumptions about what has been done and what remains to be accomplished. For example, the steps that will be implemented to segregate content and secure the Align/SEL project will use the NIST framework that has 110 criteria and is used by many sophisticated entities to structure their security programs. Therefore, to answer the question appropriately stakeholders would need to understand how many of the 53 CMEP processes that have been harmonized currently meet the 110 NIST gold standard criteria. Further, how many processes are left to be harmonized and what's the timetable?

The security of CMEP data is a broader issue than just the protocols described for the Align/SEL project. The SM-TDUs believe that the CMEP will need to establish security process protocols for engagements to mesh with the new Align/SEL technology. The collection and storage of data in a single location can create a target for bad actors and makes such data more open to potential breaches. NERC has stated that "highly sensitive" data will be required to be in the SEL, and that, due to the SEL's security, registered entities need not be concerned about that data being compromised. Registered entities nonetheless do have concerns about the highly sensitive data that NERC apparently contemplates will be held in the SEL. SM-TDUs believe that the SEL data requirements need to be clear and reviewed by stakeholders. The January and March presentations and meetings with the Compliance and Certification Committee did not include review of specific data item lists. SM-TDUs should have more detailed information about what highly sensitive data might or might not be required by NERC to be stored in the SEL. NERC has said this will be an

issue that utilities can take up with their Regions. While SM-TDUs agree that the ability for industry to work with their Regional Entities to ensure flexibility of how certain sensitive information and evidence is shared in and out of the SEL will be critical, NERC's expectations are also important. That is why knowing which items are highly sensitive or not and what is their availability vis-à-vis the SEL is important for registered utilities to know and should be detailed on a granular level and understood prior to the program going into effect.

The SM-TDUs support use of cloud technologies and believe the FedRAMP and private clouds protocols are considered the best practices for sensitive data storage. It appears that cloud technology is part of the Align/SEL implementation and therefore the SM-TDU's hope that the Board and MRC discussion will explain how NERC's cloud security with the project compares with the compliance obligations registered entities currently face regarding cloud technology implementation.

In summary, we are concerned that the NERC Board is asking stakeholders to approve the Align solution and provide additional funding when this project hasn't received adequate review and vetting by industry. Although there has been a separate CMEP/Align stakeholder initiative, it has had limited engagement and many of public power's industry policymakers are not aware of the project's details, and registered entities have not been involved in the Align tool or SEL development.

2. Are there remaining security concerns not yet sufficiently addressed by the design of Align and the design of the ERO SEL?

As mentioned above, public power has not been directly engaged in addressing security concerns with the Align tool or the design of the SEL. The question assumes that we know how all initial concerns have been addressed; which we do not. SM-TDUs are hopeful that the materials NERC provides to stakeholders in preparation for the May 14, 2020 meeting include details about the security concerns that have been addressed and will be addressed.

3. Do you agree with the proposed strategy to minimize the Net Energy for Load (NEL) assessment impacts of the Align implementation delay and enhancement costs and the ERO SEL costs as set out in Attachment D?

It is difficult for SM-TDUs to fully address the cost increases associated with Align/SEL project and the current and future implications for the NEL assessment, given the lack of complete information on the project. The SM-TDUs are still trying to develop a clear picture of the cost impact of the Align/SEL project. It appears that the Align piece costs approximately \$10 million and the SEL will cost almost \$4 million. Going forward the maintenance cost will approach \$1 million annually. While SM-TDUs can appreciate that NERC believes that it is beneficial to take advantage of timing and lower assessment impacts, SM-TDUs still need to understand the action in the context of the overall ERO budget, both short and long-term. Budget increases associated with the E-ISAC have been a focus of budget discussions in recent years. Has that concern been met in full, or should it be evaluated with the current Align/SEL funding strategy? Being able to measure the NEL impacts in the context of the overall ERO budget would be helpful. Moreover, being able to measure the ERO versus NERC budget, with and without the impacts of the E-ISAC would provide a fuller understanding of the overall Align/SEL impact.

Along with a clearer assessment of the budget impacts, a clear presentation of the business case that includes both the Align/SEL would assist appropriate evaluation. While SM-TDUs understand that security issues exist for the ERO CMEP system regardless of Align, it is not clear what alternative costs and benefits were weighed to measure the change from the original Align effort compared to what is now presented as the full cost for the Align/SEL. Because the Align/SEL has been presented as the only alternative without any discussion of other options and alternatives, the project lacks a comprehensive business case. This is not to say that SM-TDUs necessarily believe that the cost and scope of the Align/SEL are excessive or unjustified. Clearly, significant security is going to be implemented; the SM-TDUs' point is that there is not enough information to determine if the cost of that security is excessive or appropriate in the context of other alternatives. Having the appropriate context information on that question is integral to responding to the Board's question about the project's financial timing/impact.

SM-TDUs have many important questions that we believe would need to be answered to provide an adequate response regarding the financial questions the Board poses. In light of the COVID-19 emergency, which is having adverse financial impacts on most utilities under the purview of the ERO, a prudent financial evaluation must include alternatives to which the proposed project can be compared. For example, there could be an option to delay the financial decisions until NERC and stakeholders can better assess the project and its impact on NERC's budget. Even though there are currently favorable rates to take-on debt, these rates could last for some time and if this project is a priority, there will likely be other sources of funding. Any cost that the NERC Board authorizes will add to the burden that financially-strapped consumers across North America are now experiencing. Careful consideration must be given before any additional expenditures are approved.

If it can be securely and safely done without raising costs, SM-TDUs believe NERC should consider delaying the project until a more fulsome business case can be provided for the Align/SEL project.

Standard Implementation Deferral

We appreciate NERC's filing at FERC seeking delay of the implementation dates for seven reliability standards. COVID-19 has caused novel issues for utilities and industry, and the delay is important for maintaining reliability. The SM-TDUs appreciate that NERC is continuing to monitor the ongoing impacts of the pandemic to assess whether extension of the existing deferrals or new deferrals will be needed.

Rules of Procedure Changes

As expressed at the April NERC trades meeting, the SM-TDUs have significant concerns about the proposed NERC ROP changes. We look forward to NERC's response and further collaboration on this issue.

Thank you for the opportunity to provide this policy input. We look forward to the discussion at the meetings.