

# RELIABILITY FIRST

Issue 2  
2022 Q2

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## Increase Dialogue

## Note from the President

### Dear Stakeholders,

I hope you have been able to enjoy some sense of normalcy amid what has become the world's "new normal." At RF, we returned to having staff in the office at least one day per week in May and I can't begin to tell you how great it has felt to see everyone again. In June we were even able to have our quarterly all-hands meeting in-person at our offices here in Cleveland for the first time in two years. We have welcomed a host of new faces this year and are excited for them to join in our collective mission of keeping the grid reliable and secure.

In recent months we've also been stepping up our efforts to connect with leaders at the state level. I joined NERC CEO Jim Robb in presenting to the Indiana State Senate Utilities Committee on reliability issues and the rapidly changing electric grid, giving them a state-specific look at

these challenges. RF has delivered similar presentations to other States in the footprint with more planned in the coming months.

As you'll see in this issue, we hope that a focus on increasing the dialogue between RF and our stakeholders will help us be more equipped to face the challenges ahead. In "Enforcement Explained," we'll dig into the value of case manager relationships for entities and the importance of open communication. And in this quarter's "Continuous Improvement," we highlight our Assist Visit Program and how it can be a valuable resource for entities who have questions about standards, internal controls and various other subjects.

Communication will be as important as ever, as summer is here and 2022 is shaping up to be a tough one. It will be hot and with less generation resources due to unit retirements, the

grid will be challenged. NERC's 2022 Summer Risk Assessment spotlights what lies ahead. Within the RF footprint, MISO faces a capacity shortfall in its North and Central areas, resulting in a high risk of energy emergencies during peak summer conditions, NERC's report states. System operators in MISO's North, Central and South areas are more likely to need operating mitigations, such as load modifying resources or unplanned imports from neighboring areas to meet normal peak summer conditions. That means we'll all have to be at our best – the ERO is a network and with our shared might and collaboration efforts, we can get through the summer heat together and keep the grid secure.

Be safe and be well.

Forward Together,

Tim

# From the Board

RF is excited to welcome Nelson Peeler, Senior Vice President of Transmission and Fuels Strategy and Policy, Duke Energy representing the Transmission Sector.



**Please tell us a little more about your education background and professional experience.**

I received a Bachelor of Science in Electrical Engineering (BSEE) from North Carolina State University and a Master of Business Administration (MBA)

from Queens University of Charlotte.

I was a Professional Engineer for 34 years with Duke Energy where I held a variety of roles across transmission, distribution and fuels. I also held senior executive positions in transmission and operations including Chief Transmission Officer and Senior Vice President of Transmission and Fuel Strategy. In my current role, I lead the newly formed organization responsible for fuel supply, system optimization, long-term transmission planning and developing strategies and investment proposals to provide clean, affordable and reliable energy.

**What sparked your interest in joining the RF Board?**

I saw joining the RF board as an opportunity to be engaged with an effective and important organization at the forefront of the largest energy transition in our lifetimes. RF will play a critical role in ensuring the North American grid remains secure and reliable while transitioning to renewable energy.

**With the way the grid is transforming as well as all of the changes in how people accomplish their work that we see taking place, is there a particular area or issue you think we as an organization should prioritize in the coming years?**

The biggest challenge facing the industry in the coming years is the transition of the North American power system to low carbon, variable generation. RF will need to prioritize maintaining the highly secure and reliable grid that has evolved over the last 100 years throughout the transition.

**What is happening in the industry today that you are most excited about?**

I am eager to see how the fast pace of technology affects changes in the control systems, software tools and generation technology.

**What professional organizations and activities are you involved with?**

I am currently a member of the North American Transmission Forum (NATF) Board, Chair of the Foundation Leadership and Board Members (FRCC) Board, as well as the Immediate Past President of the North Carolina State University Engineering Foundation Board.

**Are you involved in any other activities outside of work?**

Outside of work, I enjoy cycling, road cycling and multi-day bike touring in particular.

**2022 Q3**

**ReliabilityFirst**

**Board of Directors**

**and Committee**

**Meetings**

**will be held**

**Aug. 24-25 at the RF**

**offices.**

**Click Here**



# Continuous Improvement

By Sam Ciccone, Principal Reliability Consultant



## The Assist Visit Program – Increasing Dialogue within the ERO The Journey to Security, Resiliency and Reliability

*“Ask for help not because you’re weak, but because you want to remain strong” – Les Brown*

Continuous improvement through dialogue with registered entities is an emerging theme. Dialogue is a “basic process for building common understanding”<sup>1</sup>. One way to achieve successful dialogue is to ask for help in understanding Electric Reliability Organization (ERO) Reliability Standards through collaboration with RF. RF offers a voluntary program that can help to accomplish this goal. RF’s assist visit program is a valuable resource for entities who have questions about standards, effective dates, implementation plans, internal controls and various other subjects. In other situations, other RF business units, e.g., Compliance Monitoring and Enforcement, can recommend an assist visit for items challenging the registered entity.

We want our entities to do their best to understand Reliability Standards on their own. However, if you are not sure about your solution, or cannot find one quickly enough, we encourage using the assist visit program to confirm your understanding or find the answer.

### **The process**

The process begins with a representative of the

registered entity filling out and submitting an assist visit request on RFirst.org on the Entity Engagement [Assist Visit Program website](#). We have one program leader for Operations and Planning (OPS) and another for Critical Infrastructure Protection (CIP). Once the request is received by the RF Entity Engagement department, the RF representative will coordinate available meeting times with the entity to discuss the questions. If necessary, RF will hold internal meetings among the subject matter experts (SMEs) to reach consensus before approaching the registered entity with guidance. Ideally, entities should provide as much detail, facts and insight into their question as possible when requesting the assist visit. Providing this information will expedite the process, especially when questions relate to NERC Reliability Standards implementation plans.

The program leader will seek the appropriate RF SMEs for the subject. These include SMEs from Compliance Monitoring (CoMo), Risk Analysis and Mitigation (RAM), Registration, Entity Engagement, among others. Most assist visits are conducted through conference calls; however, some may require in-person visits when the questions are

complex, or the situation demands onsite assistance.

The assist visit program classifies information into two categories: that which may be shared with the registered entities and that which cannot be shared or provided. The following are some examples:

### **Permitted**

- Answering general questions and providing clarification on the standards as appropriate (guidance but not direction on acceptance or audit compliance determination).
- Sharing RF’s general compliance, monitoring, and enforcement expectations (what we are looking for, including facilitating discussions around opportunities for strengthening internal controls).
- Pointing the entity to relevant guidance endorsed by the ERO and to specific regional guidance documents.
- Matchmaking with other entities with the same challenges to collaborate on the issues (if both entities agree to collaborate).

<sup>1</sup> [The Process of Dialogue: Creating Effective Communication](#)

# Continuous Improvement

Continued from Page 3

## Not permitted

- Conducting assist visits during an audit or spot check.
- Exchanging formal written responses from RF summarizing the assist visit. Please note that entities are welcome and encouraged to take notes during the assist visit and RF can review the notes to ensure mutual understanding.
- Opining whether a registered entity's specific evidence, documentation, or practices satisfy its compliance obligations.
- Drafting or detailed editing of specific compliance documents for a registered entity.

Certain assist visit subjects may rise to the level of requiring NERC and RF management and oversight committees for guidance and final decision on guidance for the entity. From these more complicated questions, RF may develop lessons learned or best practices as a result that can be shared across RF or the ERO. Upon determining that an assist visit provides a meaningful and generic lesson(s) learned, we can follow up with additional outreach; this might involve presentations, RF workshops, working with the ERO on a reliability guideline or practice guide, or a future newsletter article.

## OPS/CIP assist visit program leader and SME

Joseph (Joe) Jagodnik, RF Senior Reliability Consultant, leads the OPS portion of the assist visit program. Ron Ross, Principal Reliability Consultant, heads the CIP portion. Joe explains that the assist visit program is designed to engage registered entities, and that "The assist visit program helps entities expeditiously navigate through the Reliability Standards. No question is too big or small."

One SME involved in the assist visit program is Glenn Kaht, now a Principal Reliability Consultant within Entity Engagement. Glenn has significant experience in operations and has expertise in multiple Reliability Standard families (e.g., BAL, COM, EOP, IRO, TOP, VAR, etc.). Glenn and other RF SMEs will help the registered entity to navigate the Reliability Standards and requirements. In addition to Glenn, there are several other RF SMEs with various other expertise, including internal control program design, development and testing.

## Success Stories

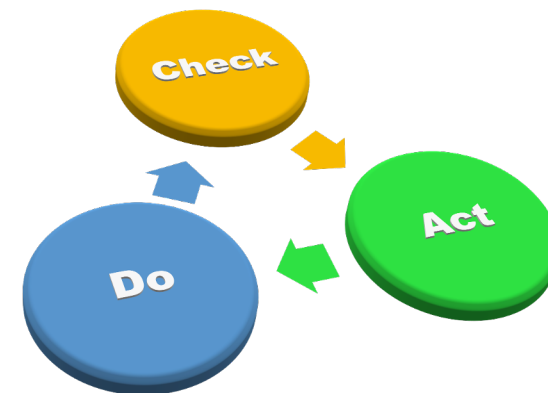
One recent success story resulted in NERC posting a revised Reliability Standards Audit Worksheet (an errata\_change for TPL-007-4). This change to the Reliability Standard Audit Standards Worksheet (RSAW) was a result of an assist visit with RF. RF SMEs provided input and the questions escalated to the ERO Enterprise. The ERO concluded that it was necessary to revise the RSAW to clarify the responsibilities of the registered entity (and all entities) for a particular NERC requirement.

Another success story is an extended assist visit with an entity challenged by systemic CIP issues. This assistance lasted multiple years, consisting of periodic in-person and remote meetings. The tireless work by our Entity Engagement CIP experts helped this entity revamp its CIP program and increase the security, resiliency and reliability of the Bulk Power System.

## Conclusion

The RF Assist Visit program is an important tool to increase collaboration and dialogue with our registered entities. This dialogue correlates to a Continuous Improvement concept called the Deming Wheel, or PDCA model (Plan, Do, Check, Act). The Plan (P) portion compares to a registered entity that is ensuring compliance to a requirement or the proper development of an internal control by seeking advice from RF SME before they "Do, Check and Act."

When questions arise involving the NERC standards, internal controls, reliability risks, or security risks, we advise our registered entities not to wait for help to arrive. We are always available to assist you in your journey to security, resiliency and reliability. "Engaging often and well with your regulators is the best path to complying with your regulatory [responsibilities]."<sup>2</sup>



<sup>2</sup> [Building Effective Relationships with Regulators](#)

# Summer 2022 Resource Reliability Risk Assessment

By Tim Fryfogle, Principal Engineer - Resources

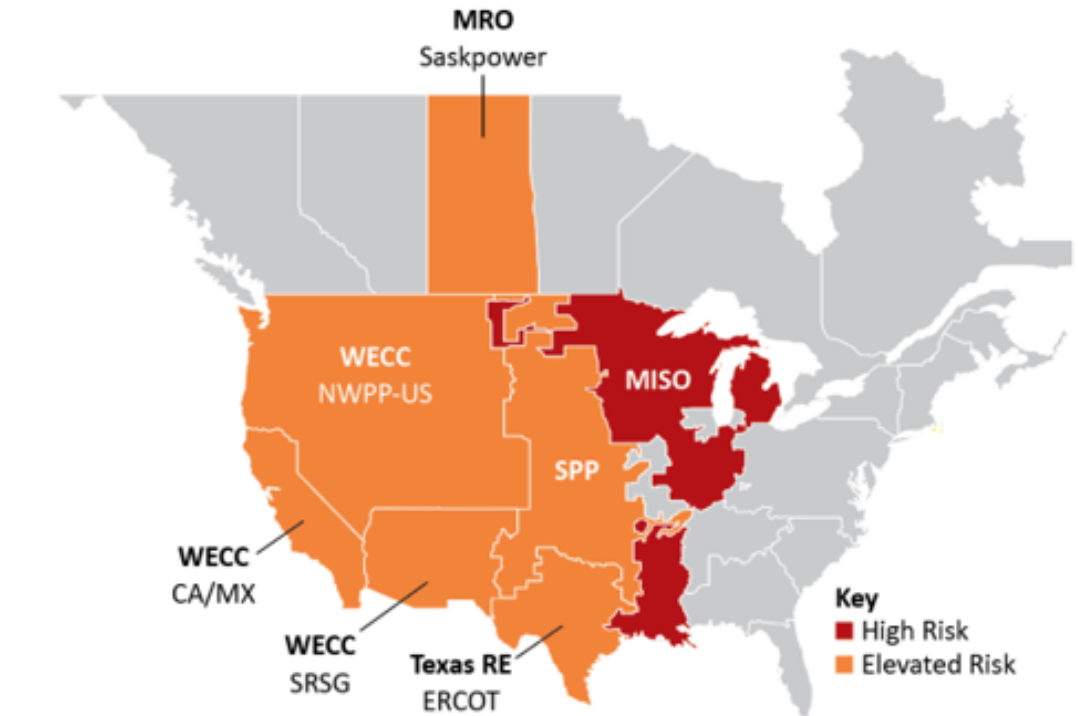
NERC conducts a Summer Reliability Assessment (SRA) each year in coordination with regional entities and industry partners, like PJM and Midcontinent Independent System Operator (MISO). The goal of the 2022 SRA is to identify, assess and report on areas of concern regarding the reliability of the North American Bulk Power System for the summer season.

As shown in the figure, the 2022 SRA identified the MISO study area as a high risk with the potential for a capacity shortfall from generator retirements and increased demand. The PJM study area was identified as a low risk with no anticipated resource shortfalls due to having excess installed capacity compared to expected demand.

RF performs an independent seasonal summer resource adequacy assessment based on data provided by PJM and MISO. The results from this assessment align with the NERC 2022 SRA. For the summer of 2022, under the expected demand forecast, PJM has an adequate number of resources to satisfy the amount of load under normal conditions, which qualifies them as being a low risk. However, if resource outages and/or higher demand is experienced beyond what is expected, then there is an increased likelihood that some load modifying resources need to be utilized.

System operators in MISO's North, Central and South areas are more likely to need operating mitigations, such as load modifying resources or unplanned imports from neighboring areas to meet normal peak summer conditions. More extreme temperatures, higher generation outages, or low wind conditions expose the MISO North and Central areas to higher risk of temporary operator-initiated load shedding to maintain system reliability. Due to an increased potential of multiple risk factors, MISO faces a high risk of energy emergencies during peak summer conditions.

For further information regarding all of the assessment areas, [click here](#) to view the full NERC 2022 SRA.



Seasonal Risk Assessment Summary	
<b>High</b>	Potential for insufficient operating reserves in normal peak conditions
<b>Elevated</b>	Potential for insufficient operating reserves in above-normal conditions
<b>Low</b>	Sufficient operating reserves expected

# Internal Controls

By: Mike Hughes, Principal Technical Auditor

## DO YOU HAVE DOCUMENTED INTERNAL CONTROLS?

*"Wait, what?" "Let me check..." "Maybe."*

Sound familiar? It's been said *"we all have internal controls; we may not call them that."* The discussion on internal controls often starts with the compliance department/primary compliance contact, then filters out to other departments; this approach can result in a shotgun pattern of awareness at the functional department or subject matter expert level.

And with that, a new internal control is born. No ceremonial banners. No formal title as an internal control. No controls mapping. No label as preventive, detective or corrective. Simply passed along as tribal knowledge. New hires will learn about the "fix" through on-the-job training.

The challenge with internal controls is not that they are created from necessity and passed along through informal or formal training, but that they rarely get labeled as an internal control. Is this wrong? The short answer is "no." But the long answer is that in today's world, where the compliance program is starting to focus on reasonable assurance of future compliance, regulators are often focusing more on how the entity's program helps to ensure future reliability and security of the bulk electric system. And really, isn't this where entities would rather have the discussion lead? From an entity perspective, isn't it better to be discussing the future as an academic discussion versus past compliance where the stakes (from a regulatory perspective) are higher?

While subject matter experts may know the controls from a tribal perspective, the control activities may not be labeled as an "internal control" and are likely not documented. Thus, when staff turnover occurs, tribal knowledge is easily lost. This presents several challenges. First, how can controls be documented to the extent that tribal knowledge of internal controls is not lost with staff turnover? Second, how can internal controls address the risk of not only standards compliance, but also other risks to the Bulk Electric System? Finally, how can internal controls be demonstrated to outside regulatory staff to the extent that reasonable assurance is provided, not only for historical compliance, but also for future compliance?

In a future article expect to hear more about "maturity" of internal controls, and perhaps more aptly, the maturity of the internal control environment, within an organization.

Please share your internal controls success stories with RF Entity Engagement through the form on the [Contact Us page on our website](#); we want to recognize and celebrate your success!



## Let's see how staff at fictional "TOPGUN POWER COMPANY" deal with a recurring issue on the delivery dock:

Worker: Boss, another truck backed into the light pole.

Boss: The one we replaced last week?

Worker: Yes.

Boss: How bad?

Worker: Scraped, but if it got knocked over like last time it would have taken out Frank and a quarter million dollars' worth of breakers. I'd really miss those breakers.

Boss: What's holding up relocating that pole?

Worker: Budget hold-up for the pad extension. Could be years...

Boss: How can we prevent this from happening until we move the pole? We don't want anyone to get hurt.

Worker: It would take a little effort, but we could have a flagman on radio with the driver as he backs in.

Boss: Great – let's try that.

# The Seam

By MISO

## Recent developments underscore the need for the MISO Reliability Imperative



These are challenging and interesting times for our industry.

As you likely saw in NERC's recent [2022 Summer Reliability](#)

[Assessment](#), part of the MISO Region is at higher risk of experiencing energy emergencies during peak conditions this summer. This is due to a capacity shortfall of 1,230 MW that came to light in the most recent [Planning Resource Auction](#).

This is not cause for panic. It does not mean the public should expect the lights to go out in MISO this summer. But it does increase the likelihood that MISO will have to implement its NERC-mandated emergency operating procedures to keep the power flowing. This might include importing energy from neighboring systems or deploying emergency-only resources. In the worst-case scenario, MISO may have to implement temporary, controlled load sheds in order to prevent uncontrolled, cascading outages.

### Fleet change and extreme weather events pose major challenges in the MISO Region

While MISO did not predict the exact timing of this capacity shortfall, this scenario is consistent with the complex and urgent challenges to grid reliability that we must collectively address. The generation fleet in our region has been evolving in unprecedented ways, shifting away from conventional baseload resources toward weather-dependent renewables that may not be available when they are needed most. Thermal resources that remain in service can be more prone to outages due to their advanced age and/or difficulties in procuring fuel.

In addition to fleet change, another challenge to reliability in our region is the increasing frequency and severity of extreme weather events. As the Electric Power Research Institute [reported](#) last year, hurricanes, extreme heat events and extreme cold

events are all becoming more problematic for the energy sector.

MISO is policy-neutral regarding our industry's shift away from conventional resources and increasing reliance on renewables. But there is no doubt this shift and other trends are creating reliability challenges that we have a responsibility to address.

### We must manage the transition that's emerging due to retirements and other industry trends

For example, a [study](#) we published last November indicates that our members and states must build nearly 140 GW of new generation capacity to meet their publicly announced renewable and decarbonization goals by 2040 and that most of this new capacity must be non-carbon emitting. But as of today, there is a gap when less than half of that needed new capacity has been identified in our members' Integrated Resource Plans and signed generator interconnection agreements.

Our studies also indicate that our region needs a certain level of dispatchable and flexible resources to reliably manage the transition to a decarbonized energy future that many of our members and states are pursuing. While MISO is both fuel- and technology-neutral, fossil fuel generators are currently the best option to provide these needed resource capabilities and attributes. Yet some key existing resources are being retired to help meet decarbonization goals and some plans to build new flexible gas resources are being delayed or abandoned for the same reason. The gap between retirements and replacement capabilities and attributes is a growing reliability concern.

### The Reliability Imperative helps MISO Members to achieve their future resource plans and goals

MISO is addressing these and other challenges through our comprehensive [Reliability Imperative](#) initiative—the shared responsibility that states, utilities,

members and MISO have to address the complex challenges that are increasingly threatening electric reliability in our region. The Reliability Imperative consists of four main pillars: (1) Market Redefinition, (2) Long Range Transmission Planning, (3) Operations of the Future and (4) Market System Enhancements.

We believe the efforts we are pursuing in these areas will help mitigate the challenges our region faces, while also enabling our members and states to achieve their policy objectives—many of which relate to decarbonization. But we need to move faster, as our region is changing rapidly.

We also believe we have a responsibility to keep our stakeholders informed about our strategic priorities. To that end, we recently developed a tool called the [MISO Roadmap](#), which identifies the projects we believe are most urgently needed to reliably meet our members' plans and goals. The Roadmap is updated as new priorities and challenges emerge and it resides on MISO's public website to promote transparency.

The challenges we face are not anyone's "fault"—but they are everyone's problem. Developing solutions is not easy. That's why responding to the Reliability Imperative is a responsibility that's shared by MISO, our members and states.



# Enforcement Explained

By: Mike Hattery, Counsel

## Communicating with Your Case Manager



The theme for this Newsletter is “Increasing Dialogue with Our Entities” and when it comes to Enforcement, that element is driven via the Case Manager-entity relationship. Dialogue is a weighty word, perhaps bringing to mind Socrates’ exchange with Gorgias. But at its simplest, we are talking about

communication, and more specifically, communication that is open, transparent and continuous.

With this broader concept in mind, this article aims to discuss the practical ways in which communication with your Case Manager serves the shared responsibility of the reliability and security of the Bulk Power System.

### **Prior to Submission of Noncompliance**

Communication between entity staff and the Case Manager prior to submission of a potential noncompliance (i.e., Self-Report) can radically improve the efficiency of the enforcement process and quality of mitigation. Your Case Managers invite you to reach out to them to talk about any questions or concerns regarding a potential noncompliance or the enforcement process, whether it’s issues relating to registrations across multiple regions, which add complexity to the Self-reporting process, or questions about what information RF will need to assess the risk and dispose of the noncompliance.

Also, if you want to improve your understanding outside of calling your Case Manager, the [Registered Entity Self-Report and Mitigation Plan User Guide](#) is a great resource.

### **Key Discussions About Open Noncompliances**

Following submission of a Self-report or a noncompliance identified at a compliance monitoring engagement, communication is important for a variety of reasons.

#### **1. Optimal Mitigation**

The most important aspect of resolving a noncompliance is mitigation because it directly impacts risk to the grid. Robust communications with your Case Manager can help in constructing strong mitigation plans or mitigating activities that remediate the noncompliance and implement steps to reduce the probability of recurrence. Case Managers, in concert with subject matter experts, can provide strong support in identifying appropriate mitigating solutions in part because of our exposure to different mitigation strategies. Each Case Manager oversees hundreds of noncompliances involving a broad spectrum of standards and this provides Case Managers experience with different mitigating solutions for similar problems and requirements.

RF has a wealth of data and knowledge surrounding mitigation solutions and Case Managers can provide value by leveraging that data. Remediating and reducing grid risk is our first priority and that starts with our review of proposed mitigation. If you have concerns about the sufficiency of your mitigation approach or want to discuss potential approaches, please reach out to your Case Manager.

#### **2. Risk Discussion**

RF as the Compliance Enforcement Authority (CEA) has authority and discretion to assess the risk of noncompliances, which is a key input into determining if and what level of a sanction is appropriate. However, while the authority rests with RF, that does not mean risk assessment at RF is a black box. Case Managers and subject matter experts consider a variety of factors that relate to



# Enforcement Explained

*Continued from page 8*

(a) the probability of occurrence of harm resulting from a noncompliance and (b) the potential magnitude of harm associated with the noncompliance. The factors are highly context-specific to the facts and circumstances of the noncompliance and the intent of the implicated standard and requirement.

With this context-specific understanding in mind, Case Managers welcome discussions with entities around the risk of a specific noncompliance. These conversations can improve RF's understanding of the risks related to specific facts and circumstances as the entity may have additional evidence or context it can provide affecting the issue at hand. Additionally, RF can provide the entity context as to what risk concerns RF may have from an entity and grid level perspective.

### 3. Setting Expectations

Over the past five years, 83% of noncompliances were disposed of as Compliance Exceptions or Find, Fix, Track and Reports (FFTs), which means that only 17% of noncompliances disposed of in that period have been addressed in the settlement space and only a portion of those included penalties. A central RF principle is transparency and that includes communicating to entities what might be viewed as "bad news."

For Case Managers, we make it a priority to ensure that penalties are not surprises and ideally the potential for a penalty is communicated before handing the entity a draft settlement agreement. Further, we are happy to communicate with entities where we believe items are not headed for a penalty. Frequent communication and calls with your Case Manager around open noncompliances help reduce "surprises."

But please note that expected outcomes can change as the facts and circumstances change, and therefore, a lot of what a Case Manager can provide is preliminary and subject to change. Because of this, your Case Manager will wait until they receive final approvals to communicate a specific penalty amount, if applicable.

### Case Manager as Connector

RF includes numerous departments with valuable roles and resources be it Operational Analysis & Awareness with insight on misoperations, Entity Engagement with best practice and program-level expertise, Risk Analysis & Mitigation with standard and requirement subject matter expertise, or Compliance Monitoring with guidance on the audit process. Your Case Manager can connect your team with the right individual to address their questions.

If you have a question or a concern, no matter how small or how large, please reach out to your Case Manager. If you do not know who your Case Manager is, reach out to me at [Mike.Hattery@rfirst.org](mailto:Mike.Hattery@rfirst.org) and I will point you to the right person.



# The Lighthouse

By Lew Folkerth, Principal Reliability Consultant

## CIP-014 Update

A lot has happened in the seven years since CIP-014, Physical Security, became effective. The ERO Enterprise (NERC and the six Regional Entities) now have significant experience with how industry implemented CIP-014. Note that on June 16, 2022, FERC approved CIP-014-3, which became effective on that date. As CIP-014-3 does not change any of the enforceable language of CIP-014-2, all references in this article will be applicable to both versions. In this article we'll discuss some of the things we've learned about CIP-014 and some new reference materials that apply to CIP-014. I'll review existing reference materials and bring out-of-date references up to date.

### CIP-014 Summary

CIP-014 was created in response to the attack on the Metcalf Substation in California on April 16, 2013 [link in Reference 1]. The purpose of CIP-014 is to identify and protect high-consequence BES targets, including substations and Control Centers. CIP-014 requires, in part, risk assessments to identify applicable substations and Control Centers (R1), threat and vulnerability analysis (R4), and development and implementation of physical security plans (R5).

### CMEP Practice Guide for CIP-014

A CMEP Practice Guide (PG) for CIP-014 R1 [link in Reference 1] was published on Nov. 21, 2021. This PG goes into depth describing how audit teams should evaluate an entity's performance of the risk assessments required by R1. The reason for this attention to R1 is that it is critical to have an accurate list of applicable Transmission stations and substations for the remainder of this Standard. The PG is divided into three main topics:

- **Reviewing the list of substations to be studied:** The PG details how to determine if CIP-014 is applicable to a given Transmission station or substation. The PG also discusses aspects of identifying assets that must be protected, including operating



Marquette Harbor, MI – Photo: Lew Folkerth

voltages, physical proximity, common facilities, diverse ownership and other considerations.

- **Selection and preparation of the models used in risk assessments:** The PG discusses topics such as the completeness of the model, characteristics of the model such as the load levels assumed and the appropriateness of the model for the risk assessments required.
- **Determining the completeness of the technical analysis performed:** The PG directs audit teams on how to review the entity's performance of system stability analyses, uncontrolled separation assessments and cascading analyses.

Although the CMEP Practice Guide's intended audience is CMEP staff (e.g., audit teams), the document is publicly available. You can gain a lot of insight into how you will be audited on CIP-014 R1 by studying it.

### RSAW

The first version of the CIP-014 Reliability Standard Auditor Worksheet (RSAW) [link in Reference 1] contained instructions to the auditors that presumed reliance on the third-party verifications required by CIP-014 R2 and R6. The RSAW is being revised to remove impediments to fair and consistent auditing, enabling use of the CIP-014 R1 CMEP Practice Guide and the Evidence Request Tool during the audit. I expect the RSAW including these revisions, and updated for CIP-014-3, to be published soon after the publication of this Newsletter.

In this recurring column, I explore various questions and concerns related to the NERC Critical Infrastructure Protection (CIP) Standards. I share my views and opinions with you, which are not binding. Rather, this information is intended to provoke discussion within your Entity. It may also help you and your Entity as you strive to improve your compliance posture and work toward continuous improvement in the reliability, security, resiliency and sustainability of your CIP compliance programs. There are times that I also may discuss areas of the Standards that other Entities may be struggling with and share my ideas to overcome their known issues. As with lighthouses, I can't steer your ship for you, but perhaps I can help shed light on the sometimes stormy waters of CIP compliance.

# The Lighthouse

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## Implementation Guidance

The ERO has endorsed three Implementation Guidance documents for CIP-014 pertaining to R1, R4 and R5 [links in Reference 1]. All three were authored by the North American Transmission Forum (NATF) and provide guidance on identifying and assessing Transmission Facilities (R1), identifying and assessing threats to Transmission Facilities (R4), and developing and implementing a physical security plan (R5).

The Implementation Guidance for R5, "NATF Practices Document for NERC Reliability Standard CIP-014-2 Requirement R5," contains a good list of resources for developing physical security plans. In Reference 2 I've provided updates to these references as well as my description of each reference. Reference 3 contains my suggested additional references for your use.

## Low Impact Considerations

If you compare the CIP-014 Transmission Owner applicability criteria 4.1.1.1 through 4.1.1.4 to CIP-002-5.1a Impact Rating Criteria 2.4 through 2.7 you will find they are identical. This may lead you to conclude that if you haven't identified any medium impact BES Cyber Systems at a substation, then you're not in scope for CIP-014-3. This is not necessarily correct. You should review these three considerations to determine if your substations are in scope for CIP-014:

1. Unlike CIP-002, CIP-014 is not about BES Cyber Systems, but

instead is about physical assets. You need to evaluate your substations for CIP-014 applicability independent of your CIP-002 evaluation.

2. If you own a substation that is physically near another substation, you and the owner of the other substation should assess whether the two substations combined will meet any of the CIP-014 applicability criteria. If so, those substations are in scope for CIP-014 and must comply with at least Requirements R1 and R2.
3. Also unlike CIP-002, you must consider existing substations and also substations planned to be in service within 24 months from the time of your assessment. If those planned changes will bring a substation into scope for CIP-014, you must perform the R1 assessment and R2 third-party review for that substation.

## Requests for Assistance

If you are an Entity registered within the RF Region and believe you need assistance in sorting your way through this or any compliance related issue, remember RF has the Assist Visit program. Submit an Assist Visit Request via the RF website [here](#). Back issues of The Lighthouse, expanded articles and supporting documents are available in the [RF CIP Knowledge Center](#).

## Reference Documents

### Reference 1

- **CIP-014-3:** [Click here](#)
- **Metcalf sniper attack:** [Click here](#)
- **CMEP Practice Guide CIP-014-2 R1:** [TBD](#)
- **CIP-014-2, R1 Transmission System Risk Assessment (NATF):** [Click here](#)
- **CIP-014-2 R4 Evaluating Potential Physical Security Attack (NATF):** [Click here](#)
- **CIP-014-2, R5 Developing and Implementing Physical Security Plans (NATF):** [Click here](#)
- **Petition for Modification to Compliance Section of CIP-014:** [Click here](#)
- **Order Approving Modifications to the Compliance Section of Reliability Standard CIP-014, FERC Docket RD22-03-000, June 16, 2022:** [Click here](#)
- **RSAs:** [Click here](#)

### Reference 2

Reference List (Additional Resources) from *NATF Practices Document for NERC Reliability Standard CIP-014-2 Requirement R5* (Lew's Updates and Descriptions)

### ASIS

- **Physical Asset Protection Standard (ASIS PAP-2021):** [Click here](#)
  - Softcover Member \$35/Non-member \$70; eBook \$0/\$35
  - 61 Pages
  - The documents referenced by the NATF Practices Document, *ASIS Facilities Physical Security Measures 2009* and *ASIS Security Management Standard: Physical Asset Protection 2012* have both been replaced by *ASIS PAP-2021*. *ASIS PAP-2021* walks the reader through developing and implementing a continuous improvement framework for a physical security program. An annex (appendix)

# The Lighthouse

Continued from page 11

provides a high-level overview of physical protection techniques and technologies that can be employed.

## DHS/CISA

- **Energy Sector-Specific Plan 2015:** [Click here](#)
  - No charge
  - 39 Pages
  - While somewhat dated, the Energy Sector-Specific Program (SSP) provides a general risk overview that is still useful. It also provides a picture of where the Electric Subsector fits in the overall Energy Sector. This is one of the few documents in this list that mentions the importance of incident response.

## IEEE

- **IEEE Guide for Physical Security of Electric Power Substations (IEEE 1402-2021):** [Click here](#)
  - PDF \$49/\$61 Softcover \$61/\$76
  - 38 Pages
  - *IEEE 1402-2021* is a guideline written specifically to address considerations for physical protection of substations. Of particular interest are the sections on threat assessment, design considerations for threat mitigation, and a template for a substation physical security vulnerability assessment checklist.

## IES

- **The Lighting Library:** [Click here](#)
  - Annual Subscription \$400/\$800
  - *The Lighting Library* is the replacement for *The Lighting Handbook, 10th edition* (out of print, 1087 pages) referenced by the *NATF Practices Document*. *The Lighting Library* is a subscription-based service that provides access to the resources of the Illuminating Engineering Society. By my count, there are 140 documents in the *Library* covering all aspects of lighting science and engineering. I found the document listed below to be of particular interest.
- **Security Lighting for People, Property, and Critical Infrastructure:** [Click here](#)

- PDF \$84/\$120
- 87 Pages
- This document provides an in-depth look at the design of lighting for physical security purposes. It discusses basic principles of security lighting, visibility concerns, security zones, lighting equipment and applications.

## NERC

- **NERC Security Guideline for the Electricity Sector: Physical Security 2012:** [Click here](#)
  - 13 Pages
  - No longer available on the NERC website.
- **NERC Security Guideline for the Electricity Sub-sector: Physical Security Response 2013:** [Click here](#)
  - 13 Pages
  - This was a draft version of the above document. No longer available on the NERC website.

## Reference 3 – Lew’s Additions to the Reference 2 List and Other References from Around the ERO

### ASIS

- **Protection of Assets – Physical Security, 2021 edition (PoA):** [Click here](#)
  - \$159/\$225
  - 643 Pages
  - The standards and guidelines above discuss “what” to do to provide physical protection for assets, this volume provides the “how” and “why.” It provides an in-depth look at security risk management, security practices, design principles, tools, techniques and many other topics.
- **Implementing Physical Protection Systems, A Practical Guide, 2nd edition:** [Click here](#)
  - David G. Patterson, CPP, PSP
  - \$55/\$65 (also available in Kindle \$40)
  - 197 Pages
  - This book concentrates on the practical aspects of installation and operation of physical security systems.

# The Lighthouse

Continued from page 12

## O'Reilly

- **Incident Management for Operations: [Click here](#)**
  - Schnepf, Vidal & Hawley
  - \$18.41
  - 156 Pages
  - Beyond incident response there is incident management. This book discusses why incident management is needed and how to set up an incident management program.

## NERC

- **Security Guideline: Physical Security Considerations at High Impact Control Centers, December 12, 2018: [Click here](#)**
  - 13 Pages
  - This guideline discusses threat assessment, planning and security measures for control centers. While written with high impact BES Cyber Systems in mind, this guideline is useful at all impact ratings.
- **Physical Security Guideline for the Electricity Sector, June 2019: [Click here](#)**
  - *Assessments and Resiliency Measures for Extreme Events*
  - 22 Pages
  - This guideline takes a different look at physical security from the perspective of extreme events. It includes discussions of planning for extreme events, vulnerability assessments, physical security assessments, drills and exercises, and information sharing.

## MRO

- **CIP-014-2 R1 Assessment Observations and Common Practices, November 2019: [Click here](#)**
  - 10 Pages
  - This presentation discusses audit considerations and common practices for CIP-014.
- **CIP-014-2 Physical Security, R1, R2, R3 1st Quarter 2016 Guided Self-Certification 1Q 2016: [Click here](#)**
  - 13 Pages
  - This document was used for a 2016 self-certification in MRO. It contains a compliance checklist that may prove valuable.

- **CIP-014-2 R1 Assessment Observations and Common Practices - ATC Assessment Practices, October 2019: [Click here](#)**
  - 13 Pages
  - This is a discussion of considerations regarding the risk assessment required by R1.

## WECC

- **Internal Controls Failure Points and Guidance Questions CIP-014-2, September 2020: [Click here](#)**
  - 8 Pages
  - This paper discusses internal controls and possible failure points in CIP-014 compliance.

## RF

- **CIP-014 R1 Methodologies, September 2015: [Click here](#)**
  - 18 Pages
  - An entity's perspective of the NATF guidance.
- **CIP-014-X Update, April 2015: [Click here](#)**
  - 13 Pages
  - A discussion of the foundations of CIP-014.

## SERC

- **CIP-014-2 Audit Approach, September 2019: [Click here](#)**
  - 17 Pages
  - A discussion of audit approaches for CIP-014 with humorous touches.

## Feedback

Please provide any feedback you may have on these articles. Suggestions for topics are always welcome and appreciated.

Lew Folkerth, Principal Reliability Consultant, can be reached [here](#).

# Regulatory Affairs

## DOE Launches Grid Interconnection Initiative

In a continued effort to spur clean energy development, the DOE announced the launch of its [Interconnection Innovation e-Xchange \(i2X\) initiative](#). This initiative will develop solutions for faster, simpler and fairer grid interconnection through better data, roadmap development and technical assistance. It will also include a stakeholder “engagement center” that will bring stakeholders together in working groups, with a goal of identifying interconnection barriers, sharing best practices and testing solutions to interconnection challenges. The ultimate goal of the initiative is to develop a 5-year interconnection roadmap for improving interconnection processes, reducing interconnection timelines and costs and maintaining grid reliability.

## FERC Issues Order Approving CIP-014-3

On June 16, 2022, FERC issued an [Order Approving Modifications to the Compliance Section of CIP-014](#). The Order approves NERC’s petition to eliminate a provision in CIP-014 requiring that all evidence demonstrating compliance with the standard must be retained at the transmission owner’s or transmission operator’s facility. This change allows for compliance oversight of CIP-014 through the use of the ERO Secure Evidence Locker (SEL) or other remote means, instead of the onsite review.

## FERC Issues Two NOPRs on Extreme Weather Threats

On June 16, 2022, FERC also issued two Notices of Proposed Rulemaking (NOPR) aimed at protecting against extreme weather threats:

- The [NOPR on Transmission System Planning Performance Requirements for Extreme Weather](#) proposes to direct NERC to develop modifications to TPL-001-5.1 (Transmission System Planning Performance Requirements) to address transmission system planning for extreme heat or cold weather events. This would require entities to: (1) develop benchmark planning cases based on information such as major prior extreme heat and cold weather events or future meteorological projections; (2) plan for extreme heat and cold events using steady state and transient stability analyses expanded to cover a range of extreme weather scenarios; and (3) develop a corrective action plan with mitigation for instances where performance requirements for extreme heat and cold events are not met. The NOPR also seeks comment on whether drought should be included in the scope of TPL-001 in the future.
- The [NOPR on One-Time Reports on Extreme Weather Vulnerability Assessments](#) proposes to direct transmission providers to submit one-time informational reports describing their current or planned policies and processes for conducting extreme weather vulnerability assessments and mitigating identified extreme weather risks. However, the NOPR does not require transmission providers to conduct extreme weather vulnerability assessments where they do not already do so, or to change how they conduct or plan to do assessments.

## FERC NOPR on Generator Interconnection Process

Also on June 16, 2022, FERC issued a [NOPR on Improvements to Generator Interconnection Procedures and Agreements](#). This NOPR addresses delays in the generator interconnection queue, which has been discussed during Federal-State Transmission Taskforce meetings between FERC and state public utility commissions. The proposed changes aim to streamline the integration of wind, solar and storage onto the grid. The NOPR proposes to:

1. Implement a first-ready, first-served cluster study process (rather than the current first-come, first served process);
2. Improve interconnection queue processing speed;
3. Incorporate technological advancements into the interconnection process; and
4. Update modeling and performance requirements for system reliability.

## FERC NOPR on Transmission Planning and Cost Allocation

On April 21, 2022, FERC issued a [Notice of Proposed Rulemaking](#) (NOPR) on transmission planning and cost allocation. The NOPR proposes some of the most significant changes in over a decade to the transmission planning process, which could help speed the development of high-voltage power lines considered critical for adding more renewable energy to the grid. Specifically, the NOPR proposes to require transmission providers:

- To conduct regional transmission planning on a sufficiently forward-looking basis to meet transmission needs driven by changes in resource mix and demand;
- To more fully consider dynamic line ratings and advanced power flow control devices in regional transmission planning processes;
- To identify transmission needs through multiple long-term scenarios that incorporate a minimum set of factors, such as federal, state and local laws that affect the future resource mix and demand; trends in technology and fuel costs; resource retirements; generator interconnection requests and withdrawals; and extreme weather events; and
- To seek the agreement of relevant state entities within the transmission planning region regarding cost allocation for transmission facilities selected as part of long-term regional transmission planning.

# Standards Update

This recurring column provides our Registered Entities with relevant and recent updates to the Reliability Standards and Requirements.

## General NERC Standards News

### CIP-012-1 Implementation Discussion Posted

On June 2, 2022, the ERO hosted a discussion of important CIP-012-1 topics including planning and implementation. The [presentation](#) and the [recorded webinar](#) are both accessible on the NERC website. Please stay tuned for the coming release of CIP-012-1 FAQ guidance.

Previously, NERC uploaded a Reliability Standard Audit [Worksheet](#) (RSAW) for CIP-012-1. For reference, an RSAW is a useful resource that the ERO provides to describe the types of evidence registered entities can use to demonstrate compliance with a specific standard.

### CMEP Centralization of CIP FAQs

In order to provide improved ease of access for entity and external staff, ERO staff consolidated all CIP FAQs into one searchable [FAQ page](#).

### Mapping CISA and NIST to CIP

During the fall of 2021, the Cyber Security Agency and National Institute of Standards and Technology created a Control System Goals and Objectives document laying out cybersecurity recommendations for control systems. NERC staff mapped this recommendation document to the NERC CIP Reliability Standards to track the relationship between the two.

The mapping document comparing the cybersecurity recommendations against the NERC CIP Reliability Standards is available [here](#).

## Notable NERC Filings

In April-June, NERC filed the following with FERC:

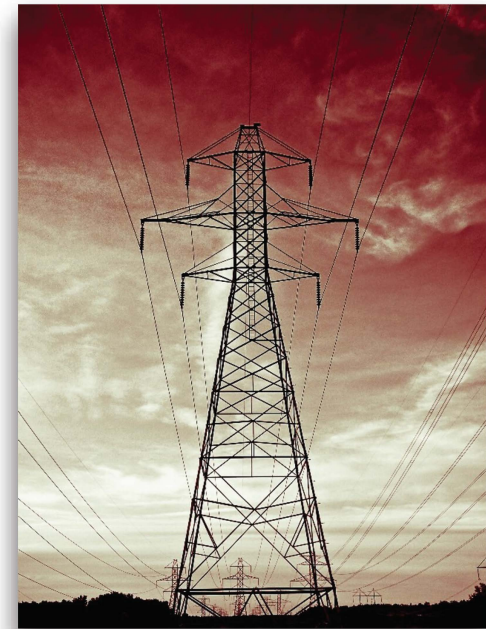
- On May 16, 2022, NERC submitted its quarterly budget [compliance filing](#). Three expense categories came in significantly below budget, including meetings and travel expenses.

## Notable FERC Orders

In April-June, FERC issued the following:

- On May 19, 2022, FERC filed [order 179 FERC 61,129](#), approving in part and denying in part revisions to the NERC Rules of Procedure.

FERC approved proposed revisions relating to the NERC ROP for the Personnel Certification and Credential Maintenance Program in ROP section 600, the Training and Education Program in ROP section 900 and Confidential Information in ROP section 1500. FERC denied certain revisions related to self-logging and compliance audits.



# Standards Update

## New Standards Projects

New Standards projects are described on the NERC [Standards](#) website, along with links to all drafts, voting results, and similar materials. Please take note that some Enforcement Dates relate to specific requirements and sub-requirements of the Standard and are detailed below. Recent additions include the following:

Project	Action	Start/End Date
<b>Project 2020-06 - Verifications of Models and Data for Generators</b>	Initial Ballots and Non-Binding Polls	6/27/22 - 7/6/22
<b>Project 2020-02 - Transmission - connected Dynamic Reactive</b>	Comment Period	5/31/22 - 7/14/22
<b>Recent and Upcoming Standards Enforcement Dates</b>		
<b>Jan. 1, 2022</b>	PRC-012-2 – Remedial Action Schemes (Requirement R9); TPL-007-4 – Transmission System Planned Performance for Geomagnetic Disturbance Events (Requirements R6, 6.1-6.4, R10, R10.1-10.4)	
<b>July 1, 2022</b>	PRC-002-2 – Disturbance Monitoring and Reporting Requirements (100% compliance for Requirements 2-4, 6-11) CIP-012-1 - Cyber Security - Communications between Control Centers	
<b>Oct. 1, 2022</b>	CIP-005-7 -- Cyber Security -- Electronic Security Perimeter(s); CIP-010-4 – Cyber Security – Configuration Change Management and Vulnerability Assessments; CIP-013-2 – Cyber Security – Supply Chain Risk Management; PRC-024-3 – Frequency and Voltage Protection Settings for Generating Resources	
<b>Jan. 1, 2023</b>	TPL-007-4 – Transmission System Planned Performance for Geomagnetic Disturbance Events (Requirements R3, R4, 4.1, 4.1.1-4.1.2, 4.2, 4.3, 4.3.1, R8, 8.1, 8.1.1-8.1.2, 8.2, 8.3, and 8.3.1)	
<b>April 1, 2023</b>	EOP-011-2 – Emergency Preparedness and Operations; IRO-010-4 – Reliability Coordinator Data Specification and Collection; TOP-003-5 – Operation Reliability Data	
<b>July 1, 2023</b>	TPL-001-5.1 – Transmission System Planning Performance Requirements	
<b>Jan. 1, 2024</b>	TPL-007-4 – Transmission System Planned Performance for Geomagnetic Disturbance Events (Requirements R7, 7.1-7.3, 7.3.1-7.3.2, 7.4, 7.4.1-7.4.3, 7.5, 7.5.1, R11, 11.1-11.3, 11.3.1-11.3.2, 11.4, 11.4.1-11.4.3, 11.5, and 11.5.1); CIP-004-7 – Cyber Security - Personnel & Training; CIP-011-3 – Cyber Security – Information Protection	

These effective dates can be found [here](#).



# Watt's Up at RF

## Outreach Recap



ReliabilityFirst is committed to providing timely and pertinent information to our entities and stakeholders. Our monthly open webinars provide a forum to address topics and questions relevant to reliability, resilience and security. During our Technical Talks with RF, typically held the third Monday of each month, we host a range of speakers and subject matter experts across the electric power industry. Our calendar of upcoming

events, with agendas and Webex links to join, can be found on our website [rfirst.org](https://www.rfir.com).

As we go into the summer months, we continue to offer engaging topics and speakers. Some of the speakers thus far this year have included:

- Elizabeth Emanuel and Mike Hattery, RF Counsel, presented with Farzaneh Tafreshi, Manager of Analysis and Reporting, NERC, on the aggregation of violations, intake and disposition trends. The presentation identified considerations and inputs for settlement agreements and penalties.
- Mallory Carlone, RF Technical Auditor for Operations and Planning, presented on the key changes related to the modification of PRC-024 (effective Oct. 1, 2022).
- Dr. Seemita Pal, PhD, Pacific Northwest National Laboratory (PNNL) Research Engineer, presented on the importance of a cybersecurity-focused verification and validation framework implemented during procurement and maintained throughout the lifecycle of the product.
- Tony Jablonski, RF Sr. Manager RAM, provided monthly Align updates.
- Curtis Holland, WECC Staff Reliability Specialist and Tim Fryfogle, RF Principal Engineer Resources Engineering & System Performance, presented on the loss of PV solar resources in California in 2021, the impact, causes and mitigation activities.
- Johnny Gest, RF Manager, Engineering & System Performance, presented on RF operations, planning committees, subcommittees, workplans and how to get involved.

If you have missed any past Technical Talks with RF, the presentations can be found on our website under "[Technical Talk with RF](#)".

### Facility Ratings Webinar

On April 4, RF also hosted a Facility Ratings webinar with many engaging speakers from RF, FERC, PJM, MISO, AEP, Aurora Generation and PPL. If you missed the event, the full agenda and presentations can be found on our website at [rfirst.org](https://www.rfir.com).

## Upcoming Events

### Upcoming July Technical Talk with RF

Join us for our upcoming winterization Technical Talk with RF, titled *Christmas in July* on Monday, July 18, 2 – 3:30 p.m. EST.

The presentations will include a Generation Availability Data System (GADS) update and outreach plans from RF, as well as success stories and lessons learned from WEC Energy Group (GO) and PSEG (TO).

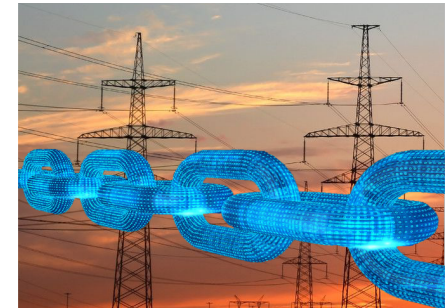
### "The Scoop on Supply Chain" with SERC

Join SERC for "The Scoop on Supply Chain" on July 19.

This webinar will feature RF's Shon Austin, an auditor on our Critical Infrastructure Protection team, as a speaker. Austin will take part in a monitoring panel with other cyber and physical security experts from SERC and Texas RE.

The virtual event will take place from 1 to 5 p.m. on Tuesday, July 19, and will focus on supply chain risks to the electric utility industry.

[Click here](#) to register.





## CSO Corner

By Marcus Noel, Chief Security Officer

Last month here at RF, we conducted our own internal security tabletop exercise in order to practice our incident response plan. We tried a few new things and it turned out amazing. Here's why.

### What was special

- Our scenario was crafted by a team of subject matter experts. This meant that enough was known about our procedures and controls to be able to craft a plausible scenario for our specific environment, but also it allowed for the rest of the IT and security teams to be able to play instead of plan.
- We had full commitment from our senior leadership team. This allowed us

to have two separate sessions - one

### Conduct your own tabletop exercise

Want to conduct your own tabletop exercise to test your network's security? Check out RF's Incident Response Preparedness Assessment Tool (IRPAT), available to all entities in the RF footprint for free! The IRPAT is a qualitative self-assessment tool based on relevant cyber-physical scenarios customized from current threats. For more information [click here](#). And to sign up, complete the form on the [Contact Us](#) page on our website and choose "Resilience" from the "Area" drop down list.

tactical/technical session to test containment, eradication and communication strategies, and a second executive session that focused on things like cyber insurance, communication with external stakeholders and other tough calls that would fall upon senior leadership to make.

### Key takeaways

- Practice, practice, practice. "You practice how you play and you play how you practice."
- More playbooks. There are a handful of techniques that the majority of attacks will have in common. Define a plan for those in advance.
- Know your cyber insurance policy backward and forward.
- Create some external communication templates that can be reviewed by legal in advance. Things will happen quickly during a real incident - every minute saved has value.

Most of us have done countless tabletop exercises and the usefulness can vary from "Meh, ok, here's something to improve," all the way to "Why am I wasting my time?" This one was different. It showed that if you're thoughtful and intentional with the applicability and relevance of the scenario and you have positive attitudes toward participation, the benefit can be staggering.

## Top Workplace

RF is thrilled to be ranked as one of the top places to work in Northeast Ohio by the [Cleveland Plain Dealer and Cleveland.com](#).

We ranked among the top 75 in workplaces with 149 and fewer employees, based on staff surveys from employee engagement firm Energage.

Explore opportunities to work with us on our [Careers page](#) at [RFfirst.org](#).



# Watt's Up at RF



## 2022 Protection and HP Workshops - Register Today

Webex login information will be emailed to registrants closer to the event date.

### 8th Annual Protection System Workshop for Technical Personnel

Aug. 3, 2022 | 1 - 5 p.m.

[Register](#)

The event will cover a diverse range of topics and discussions related to Protection Systems tailored to the needs of technical personnel. Speakers include experts from RF and the industry.

There is no fee to attend this workshop and it is open to anyone interested. It will be held in-person at our offices in Independence, Ohio, along with a virtual option.

Should you have any questions, please contact Thomas Teafatiller, Principal Engineer.

#### Intended Audience

- Substation Electricians/Supervisors
- Substation and Transmission Maintenance personnel
- Protection and Controls experts
- Operations Control Rooms, including tools support personnel for EMS, SCADA, etc.
- Asset Design Groups (substation and transmission)
- Asset Management Groups
- Internal Control Champions and Specialists
- Company Trainers
- Leadership and others interested in these topics

### 5th Annual Human Performance (HP) Workshop

Aug. 4, 2022 | 8 a.m. - 12 p.m.

[Register](#)

This workshop will focus on the practical application of HP techniques and concepts for front-line activities that attendees can retain and use in transmission reliability-related work areas, such as operations, asset management, design, protection, maintenance and others.

There is no fee to attend this workshop and it is open to anyone interested. This will be held in-person at our offices in Independence, Ohio, along with a virtual option.

Should you have any questions, please contact John Idzior, Principal Engineer.

#### Intended Audience

- Substation and Transmission Maintenance personnel
- Protection and Controls experts
- Operations Control Rooms, including tools support personnel for EMS, SCADA, etc.
- Asset Design Groups (substation and transmission)
- Human Resource Professionals
- Asset Management Groups
- Internal Control Champions and Specialists
- Company Trainers
- Leadership and others interested in these topics

# Watt's Up at RF



## Annual Reliability and Compliance Workshop

Tuesday, Sept. 27 | 1 p.m. - 5 p.m. • Wednesday, Sept. 28 | 8 a.m. - 12 p.m.



The theme of this year's workshop is **Embracing the Transformation**. Our world and industry are evolving at a rapid pace, including the associated risks. The changing generation mix, inverter-based resources, virtualization, cloud computing, extreme weather, plus evolving cyber and physical security threats, all amid a pandemic, impact every aspect of how we perform our jobs to preserve and maintain reliability,

resilience and security. This workshop will help entities and stakeholders gain a deeper understanding of how we can collaboratively mitigate the known risks while anticipating emerging risks.

This event will be a hybrid workshop, meaning that we will host guests both in-person and virtually. The in-person meeting will be limited to 125 RF Registered Entity guests at our newly renovated facility on the 5th floor of our offices. To accommodate as many Registered Entities as possible, we are limiting the in-person attendance to four persons per **NCR number**. We understand that there are many stakeholders looking forward to meeting us in-person, but we also want to ensure we allow for adequate spacing amid the pandemic.

For those of you who cannot join us in-person, we are dedicated to offering a dynamic virtual experience as we have done the past two years. We will provide a detailed agenda of our topics and speakers and have polling and virtual Q&A to allow you to participate during the sessions.

### Intended Audience (In-person)

We would like to ensure all our entities can attend and will limit the in-person registrations to four persons per Registered Entity. In-person guests are invited to attend both Day 1 and Day 2 as the days will not be separated by topic or focus area. We encourage those attending the CIPC and/or CUG meetings to stay in-person for the RF Fall Workshop. We would also like to invite Primary and Alternate Compliance Contacts, members of the Reliability Committee and its subcommittees, and interested SMEs to attend in-person; however, with a limit of four persons per Registered Entity NCR number.

### Intended Audience (Virtual)

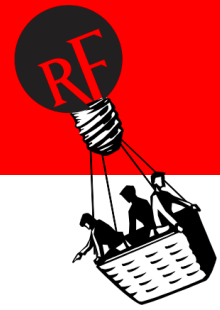
The information, ideas, suggestions and stories of challenges and best practices shared at this event are especially relevant for the following roles, so please encourage your colleagues to join us virtually. Virtual registration is also open to those who work at federal agencies, regional entities and anyone wanting to learn more about how RF's members are addressing the emerging risks in our footprint.

- Primary/Alternate Compliance Contacts who cannot attend in-person
- Directors, VPs, Executives and Managers of all levels
- Internal Control Champions
- Protection & Control Engineers
- IT/OT Support
- Supply Chain Specialists
- Cybersecurity Personnel
- Operations and Planning SMEs

[Register](#)

Click to register for additional meeting details

# Watt's Up at RF



## Fostering a Culture of Inclusion at RF



At RF, we want all employees to feel valued, appreciated and free to be their authentic selves. We are committed to promoting a workplace that fosters these values and celebrates

individuality. In Q2, we hosted several speakers on the topics of disability inclusion, mental health and LGBTQ inclusion in the workplace in celebration of June as Pride Month.

Dr. Malvika Iyer, a bomb blast survivor and award-winning disability rights activist, presented on disability inclusion. We learned about the myths and stereotypes around people with disabilities and how to be an advocate for changing attitudes and resilience.

RF employees also learned from Health Works about the practice of being aware of your mind, body and feelings in the present moment and picked up tips for practicing mindfulness every day.

Kicking off Pride Month, we hosted a Lunch n Learn with Amanda Cole, Executive Director of Plexus LGBT Chamber of Commerce and Education Foundation, which serves the LGBTQ and allied business community and advocates workplace equality issues in Northeast Ohio. In this training, we learned how to use inclusive language, how and when to include gender pronouns in workplace communications, and more.



## RF Volunteers at Food Bank



RF is proud to support the Greater Cleveland Food Bank by volunteering three times a year sorting and packing food to be sent to local communities. The first group packed 2,031 lunches to be sent to schools and senior homes, and the second group packed 400 boxes of non-perishable food to be distributed to the community. We will be making another trip back to the Cleveland Food Bank in December of this year. Thank you to our generous volunteers!

RF supports and encourages our employees to give back to the community. We recently created a Volunteer Time Off policy and a company wide Day of Giving. The Volunteer Time Off policy allows employees to take an additional four hours every quarter to volunteer at an organization of their choice while the Day of Giving allows the whole company to take a half day to provide each employee the opportunity to volunteer in their local community.



# Calendar of Events

The complete calendar of RF Upcoming Events is located on our website here.



Date	RF Upcoming Events - All 2021 Events will be conducted virtually
June 20	Facility Rating Webinar
July 18	Technical Talk with RF
Aug. 3	8th Annual Protection System Workshop
Aug. 4	5th Annual Human Performance Workshop
Aug. 15	Technical Talk with RF
Aug. 24-25	Board of Directors and Committee Meetings
Sept. 19	Technical Talk with RF
Sept. 27-28	Annual Reliability and Compliance Workshop

## Industry Events

Date	Industry Upcoming Events
July 20	Fourth Meeting of the Joint Federal State Task Force
July 25	MISO Board of Directors Meeting
July 27	PJM Markets & Reliability Committee Meeting and Members Committee Meeting
July 28	FERC Open Meeting
July 28	MISO Reliability Subcommittee Meeting
Aug.17-18	NERC Board of Trustees Meeting
Aug. 27	PJM Markets & Reliability Committee Meeting and Members Committee Meeting
Sept. 1	MISO Reliability Subcommittee Meeting
Sept. 8	New England Winter Gas Electric Forum
Sept. 21	PJM Markets & Reliability Committee Meeting and Members Committee Meeting
Sept. 22	FERC Open Meeting

# ReliabilityFirst Members

AEP ENERGY PARTNERS  
AES NORTH AMERICA GENERATION  
ALLEGHENY ELECTRIC COOPERATIVE, INC  
AMERICAN ELECTRIC POWER SERVICE CORP  
AMERICAN TRANSMISSION CO, LLC  
APPALACHIAN POWER COMPANY  
BUCKEYE POWER INC  
CALPINE ENERGY SERVICES, LP  
CENTERPOINT ENERGY  
CITY OF VINELAND, NJ  
CLOVERLAND ELECTRIC COOPERATIVE  
CMS ENTERPRISES COMPANY  
CONSUMERS ENERGY COMPANY  
DARBY ENERGY, LLP  
DATACAPABLE, INC  
THE DAYTON POWER & LIGHT CO  
DOMINION ENERGY, INC  
DTE ELECTRIC  
DUKE ENERGY SHARED SERVICES INC  
DUQUESNE LIGHT COMPANY  
DYNEGY, INC  
EXELON CORPORATION  
FIRSTENERGY SERVICES COMPANY  
HAZELTON GENERATION LLC  
HOOSIER ENERGY RURAL ELECTRIC COOPERATIVE, INC  
ILLINOIS CITIZENS UTILITY BOARD  
ILLINOIS MUNICIPAL ELECTRIC AGENCY  
INDIANAPOLIS POWER & LIGHT COMPANY  
INTERNATIONAL TRANSMISSION COMPANY

Forward Together  
  
ReliabilityFirst

LANSING BOARD OF WATER AND LIGHT  
MICHIGAN ELECTRIC TRANSMISSION CO, LLC  
MICHIGAN PUBLIC POWER AGENCY  
MIDCONTINENT INDEPENDENT SYSTEM OPERATOR, INC  
MORGAN STANLEY CAPITAL GROUP, INC  
NEPTUNE REGIONAL TRANSMISSION SYSTEM, LLC  
NEXTERA ENERGY RESOURCES, LLC  
NORTHERN INDIANA PUBLIC SERVICE COMPANY  
OFFICE OF PEOPLE'S COUNSEL, DISTRICT OF COLUMBIA  
OHIO POWER COMPANY  
OHIO VALLEY ELECTRIC CORPORATION  
OLD DOMINION ELECTRIC COOPERATIVE  
PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE  
PJM INTERCONNECTION, LLC  
PPL ELECTRIC UTILITIES CORPORATION  
PROVEN COMPLIANCE SOLUTIONS, INC  
PUBLIC SERVICE ENTERPRISE GROUP, INC  
ROCKLAND ELECTRIC COMPANY  
SOUTHERN MARYLAND ELECTRIC COOPERATIVE, INC  
TALEN ENERGY  
TENASKA, INC  
TENNESSEE VALLEY AUTHORITY  
UTILITY SERVICES, INC  
WABASH VALLEY POWER ASSOCIATION, INC  
WISCONSIN ELECTRIC POWER COMPANY  
WOLVERINE POWER SUPPLY COOPERATIVE, INC