

# NERC

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# Space Weather Information User Survey

U.S. Space Weather Advisory Group (SWAG)

NERC-EPRI GMD Workshop  
August 15, 2023

**RELIABILITY | RESILIENCE | SECURITY**



- Reliability Coordinator, Transmission Operator, Planning Coordinator, and Transmission Planner representatives are encouraged to participate in a live webex survey on August 15
  - Participants will provide feedback on their use of space weather information and how space weather information services can be improved
  - Conducted by an [advisory group](#) appointed by the U.S. National Oceanographic and Atmospheric Administration (NOAA)
  - Supports the *Promoting Research and Observations of Space Weather to Improve the Forecasting of Tomorrow Act of 2020* ([PROSWIFT](#))
- RCs/TOPs | August 15, 1:30 – 3:00 pm central
- PCs/TPs/other NERC entities | August 15, 3:20 – 4:30 pm central
- **In-person and Remote Participants:** [Workshop Registration](#)

- Conducted in a workshop-discussion format.
- Participation from all webex attendees is strongly encouraged.
- **No right or wrong answers.** All experiences and opinions are valued and important. We want to hear a range of views.
- The survey is a closed discussion among participants.
- Recording will be used for note-taking purposes. Survey participants will not be identified by name or entity in reports.

*Information is being collected by the U.S. Space Weather Advisory Group to identify research, observations, forecasting, prediction, and modeling advances required to improve space weather products*

1. How familiar are you with space weather products and services?
2. How do you consider space weather conditions in planning and operating the power system and equipment?
3. What space weather information do you use?
4. Where and how do you get the space weather information?
5. How satisfied are you with the quality and utility of current space weather observations, products, and services?
6. Based on your experience with current space weather products and services, what feedback do you have for providers to help them meet your needs?

7. What do engineers and operators within the power grid sector need in future space weather information?
8. How do you use other environment or system data (e.g., GIC data, geomagnetic field variation) or information to support engineering design or operating actions?
9. How long is the information and/or data kept?
10. Can this information be shared outside of the application, company, or community?
11. How has space weather affected your systems and components?
  - a. Based on how space weather has affected your systems, what are the requirements for your systems and components?

12. Are there any new technologies, research, instruments, and models that are needed to address space weather in the power sector?
13. How is space weather information used in operating procedures to reduce risk and improve resilience?
14. How is space weather information used for engineering designs that have been adopted to reduce risk and improve resilience?
15. What improvements or additional space weather products are needed to assist in increasing the resilience of the power system? Please consider both short-term (within next 1-2 years) and longer term (within 5-10 years).

16. What may be limiting the power sector's ability to take actions to reduce risk and improve resilience?
17. How could better education and training improve the sector's ability to take action?
18. Are there any other inputs that you wish to share?

- This concludes the Space Weather Advisory Group Survey – Power Sector.
- Feedback will be analyzed by the SWAG and included in a report along with responses from other end-user groups.
- Information is being collected to identify the space weather research, observations, forecasting, prediction, and modeling advances required to improve space weather products.
- Individual and organization names will not be included in a report without permission.



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Mark Olson, Manager, Reliability Assessments  
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