

Press Release

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IEEE Publishes IEEE 1815.2—the DER Profile for DNP3 Communications Protocol to Standardize Distributed Energy Communications

This joint effort builds upon the MESA-DER Profile and DNP3 DER App Note to develop an International Standard that will speed the deployment of renewable energy, energy storage, and microgrid projects by facilitating easy integration into utility systems.

San Francisco, Calgary – February 5, 2026 – The Modular Energy System Architecture (MESA) Standards Alliance, a leader in standardizing communications between utility systems and distributed energy resources (DER), and the DNP User Group (DNP-UG), the owner, developer and supporter of IEEE 1815™ (DNP3) and related standards, are pleased to announce the release of IEEE 1815.2™¹ – a new communications standard needed to augment worldwide smart grid capabilities. IEEE is the world's largest technical professional organization advancing technology for humanity and international standards widely used across the energy industry. IEEE 1815.2 is the “Bluetooth” for utility scale distributed energy resources (DER) communications. Broad adoption of IEEE 1815.2 will allow utilities to more seamlessly “talk” to a variety of DERs, microgrids, and aggregators – ensuring the smart grid can function and expand efficiently.

Specifically, IEEE 1815.2 standard specifies the communications profile using the DNP3 protocol for DER and Inverter-Based Resource (IBR) power plants with solar, storage, and loads and allows these plants to meet IEEE 1547™ and/or IEEE 2800™ grid interoperability requirements, as well as providing grid

¹ IEEE 1815.2-2025's full name is: Standard Profile for Communications with Distributed Energy Resources, using IEEE 1815, Standard for Electric Power Systems Communications – Distributed Network Protocol (DNP3).

services to utilities. Utilities in the U.S., Canada and many other countries, commonly utilize DNP3 for their Supervisory Control and Data Acquisition (SCADA systems), making the adoption of this standard easy for them. Power plant implementers can simplify their interoperability requirements by using this standard for all their DNP3 interconnections and significantly lower their integration and implementation costs.

“IEEE is continually updating its standards and developing new standards to address the needs of utilities around the world as they integrate new technologies and upgrade their systems to meet current and future operational and service objectives for smart grids,” said Ravi Subranmaniam, Senior Director, IEEE SA. “The new IEEE 1815.2 communications standard will support the growth and evolution of the smart grid industry globally.”

“IEEE 1815.2 creates standard, non-proprietary specifications and information models that utilities, DER developers, and manufacturers alike can use to achieve interoperability for distributed energy—this is an essential step for reducing ratepayer costs. The MESA-DER profile was foundational to developing IEEE 1815.2 and MESA will continue to lead in this space. I encourage utilities across the country to take steps to ensure that their vendors work with UL and MESA to be IEEE 1815.2 /MESA-certified,” said Scott Gibson, Manager - Energy Storage & Emerging Technologies Department, Snohomish Utility District (a MESA founding member).

“IEEE 1815.2 is the result of an effective collaboration between DNP-UG, MESA and the *IEEE Standards Association* to define a DER specific profile of DNP3, while also adding important functionality such as scheduling to provide a feature-rich communications solution. This effort also builds upon our *DNP3 DER App Note (2018)* which itself was an expansion of our earlier app notes. The DNP-UG offers our members a range of additional services including conformance certification, training, technical support and a Utility Council,” said Tianling Wu, Chair, DNP-UG Board of Directors.

To purchase the new IEEE 1815.2 standard, visit: <https://standards.ieee.org/ieee/1815.2/7731/>

MESA and UL have formed an alliance to provide IEEE 1815.2 testing services to certify that this protocol is implemented correctly.

For more information about MESA testing and certification, visit: www.mesastandards.org. DNP-UG operates the Conformance Certification Program. Implementors of IEEE 1815.2 are strongly encouraged to have their DNP3 implementations certified by DNP-UG prior to MESA testing and certification.

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About IEEE Standards Association

IEEE Standards Association (IEEE SA) is a collaborative organization where innovators raise the world's standards for technology. IEEE SA provides a globally open, consensus-building environment and platform that empowers people to work together in the development of leading-edge, market-relevant technology standards, and industry solutions shaping a better, safer and sustainable world

About the MESA Standards Alliance

The MESA Standards Alliance is an industry association comprised of electric utilities and technology suppliers whose mission is to accelerate the growth of distributed energy resources and energy storage through the development of open and non-proprietary communication specifications. Members include a growing list of leading utilities and distributed energy and storage solution providers who work together to build interoperability into their respective products and ensure they are architected for grid system integration. More information: www.MESAStandards.org.

About the DNP User Group

DNP3 has grown to be the most widely used protocol for electric transmission and distribution communications in North America and other regions of the world. The DNP Users Group (DNP-UG) owns and maintains DNP3 and supports our user community and the industry by enhancing and promoting DNP3, also known as IEEE Std. 1815™. Our members include utilities, suppliers, consultants, and individuals (including students). Many of our initiatives support greater interoperability between suppliers' products and systems and/or enhance cyber security. On-going refinements also add new features and time-saving capabilities which are then included in the next update of IEEE 1815. Our growing library of Standards, Application Notes, Guides, Security Notices, and Technical Bulletins provide essential information for our members.