



Open Standards for Energy Storage

Utility grid technologies are undergoing a rapid evolution in response to changes in how power is being deployed on the electricity grid today. Changes over the last decade include the widespread integration of renewables, the addition of myriad types of energy storage, and the two-way flow of energy between distributed energy resources (DER). The adoption of open standards simplifies the integration of these technologies and increases the pace of their deployment in grid applications.

The **Modular Energy Storage Architecture Standards Alliance (MESA)** is an industry association comprised of electric utilities and technology suppliers whose mission is to accelerate the growth of energy storage through the development of open and non-proprietary communication specifications for energy storage systems. Members include a growing list of leading utilities and energy storage solution providers who work together to build interoperability into their respective products and ensure they are architected for grid system integration.

MESA specifications support safe, affordable, and scalable energy storage. The specifications provide the following benefits:

FOR UTILITIES

- ▲ Reduce costs of technology deployment
- ▲ Reduce risk by enabling supplier flexibility
- ▲ Simplify long-term maintenance and system upgrades
- ▲ Efficiently scale energy storage deployments on utility networks
- ▲ Reduce training costs and improve safety for field staff

FOR INDUSTRY

- ▲ Reduce engineering and agency compliance testing costs
- ▲ Provide interoperable products to your customer
- ▲ Increase the array of available partners for projects
- ▲ Focus resources on making your product better, rather than on system integration
- ▲ Streamline deployments and meet your customers' timelines

DEVELOPING A STANDARDS-BASED CONTROL SYSTEM

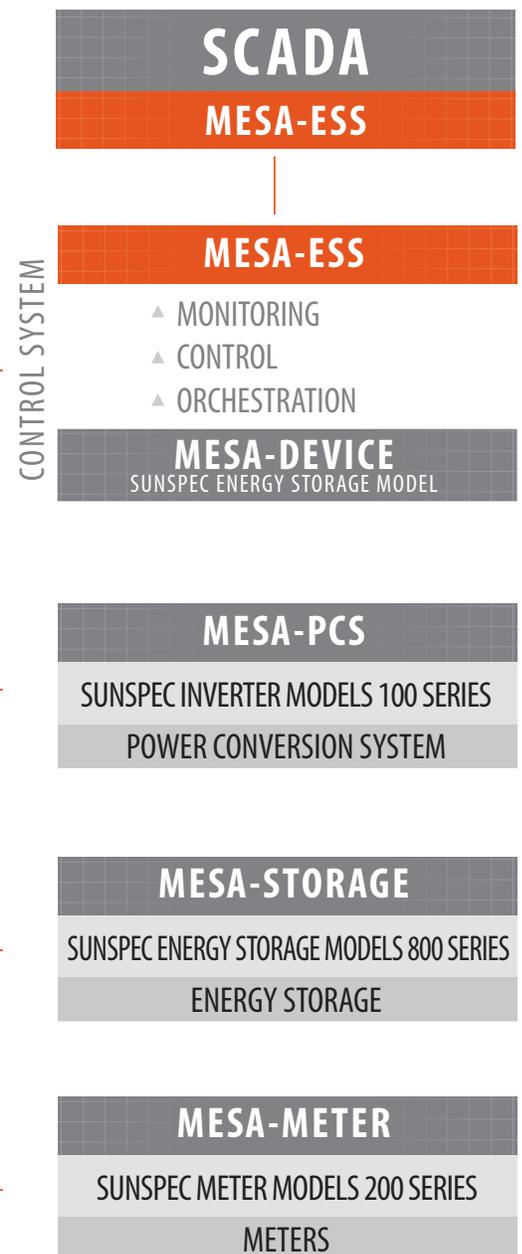
MESA publishes open, non-proprietary specifications and information models that enable utilities, software developers, and hardware manufacturers to achieve interoperability among grid-scale energy storage components, as well as between utility control centers and energy storage systems. All MESA specifications are free to download and available at mesastandards.org.

MESA-ESS provides a standard framework for utility-scale energy storage system (ESS) data exchange. The draft specification addresses ESS configuration management, ESS operational states, and the applicable ESS functions from the IEEE 1815 (DNP3) profile for advanced DER functions.

MESA-Device/SunSpec Energy Storage addresses how energy storage components within an energy storage system communicate with each other and other operational components. MESA-Device specifications are built on the Modbus protocol.

“Duke is committed to being a leader in developing standards that enable both vendors and utilities to deploy systems on a shorter timeline and at a better price point for customers. Standardizing the communication architecture for energy storage systems is integral to allowing these systems to integrate and facilitate the evolving smart grid.”

Mike Rowand, Director, Technology Development, Duke Energy



BECOME A MESA MEMBER

Join us in transforming the energy storage market. As a MESA member you can:

- ▲ **Contribute to the MESA Standard:** Participate in MESA working groups to guide the development of MESA specifications and ensure your energy storage solutions are architected for integration with other MESA-conformant devices
- ▲ **Participate in workshops:** Learn how to incorporate MESA specifications into your products and/or control systems, and share your own lessons learned along the way with other MESA members
- ▲ **Signal your support** for open standards to your customer and/or suppliers
- ▲ **Share knowledge with your peers:** Attend and participate in webinars to share and learn about the latest developments in grid codes and MESA specifications

TO LEARN MORE ABOUT HOW MESA IS ADVANCING THE ADOPTION OF ENERGY STORAGE TECHNOLOGIES, OR TO INQUIRE ABOUT BECOMING A MESA MEMBER, VISIT WWW.MESASTANDARDS.ORG OR E-MAIL INFO@MESASTANDARDS.ORG.