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Sommario/riassunto	The smart grid interoperability reference model (SGIRM) was developed in IEEE Std 2030™-2011 for systems that integrate, among other assets, distributed energy resources (DER). DER management systems (DERMS) and microgrid controllers are examples of such systems applied in this guide. In the process of applying the SGIRM-2011, elements were added to reflect the changes that have occurred since 2011 in electric grids. These include the increasing deployment of DER both at the distribution system and, when aggregated, at the transmission system, the increasing role of electricity markets, and business and environmental considerations in their deployment. These elements were added to the SGIRM. The SGIRM defines three integrated architectural perspectives (IAP): power systems, communications and information technology, and business and regulatory requirements. The SGIRM facilitates the implementation of interoperability requirements by establishing relationships between elements of the complete installation, regrouped within IAPs, and by identifying the relevant and applicable standards and rules. The SGIRM can be used to complement design approaches for individual elements of a system and facilitates extensibility, scalability, and upgradeability.

