

IEEE Standard for the Specification of Microgrid Controllers

IEEE Power and Energy Society

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IEEE Std 2030.7™-2017

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Approved 6 December 2017

IEEE-SA Standards Board

Abstract: A key element of microgrid operation is the microgrid energy management system (MEMS). It includes the control functions that define the microgrid as a system that can manage itself, operate autonomously or grid connected, and seamlessly connect to and disconnect from the main distribution grid for the exchange of power and the supply of ancillary services. The scope of this standard is to address the functions above the component control level associated with the proper operation of the MEMS that are common to all microgrids, regardless of topology, configuration, or jurisdiction. Testing procedures are addressed.

Keywords: distributed energy resources, distributed energy storage, distributed generation, electric distribution systems, energy management system, IEEE 2030.7™, interconnection agreement and requirements, islanding, microgrid, microgrid controller, power quality

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3 Park Avenue, New York, NY 10016-5997, USA

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PDF: ISBN 978-1-5044-4608-2 STD22950
Print: ISBN 978-1-5044-4609-9 STDPD22950

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