

## Brian Lydic Bio

Brian Lydic, Regulatory Engineer for IREC, holds a B.S. in Electrical Engineering from the University of Michigan and has been active in renewable energy since 2005. He started out designing and installing residential and small commercial PV, solar thermal and wind energy systems for a company based in Ann Arbor, MI. In 2007, he joined Fronius as an Applications Engineer for solar electronics, supporting customers with design and field issues as well as leading numerous trainings for installers, designers and salespeople. In his role as Sr. Standards & Technology Engineer, Brian tracked standards, regulatory, technology and market issues as they related to product development for Fronius. As Regulatory Engineer for IREC, he continues to work with regulatory stakeholders to further the organization's mission to increase access to sustainable energy and energy efficiency, particularly through interconnection rule proceedings. He is a member of UL 1741 and IEEE 1547 working groups, helping to improve the grid integration of PV systems. Brian is a founding member and chair of the Forum on Inverter Grid Integration Issues (FIGII), an ad-hoc consortium of PV experts which seeks to address emerging high penetration issues through research and standardization. Working with utilities, manufacturers and experts, Brian helps to craft and revise technical requirements for grid interconnection in states across the country.

### Selected Speaking Engagements

- Presenter, Fall Distributed Generation Users Group Meeting, Utility Variable-Generation Integration Group (now Energy Systems Integration Group), Portland, OR, 2013.
- *Short Course: Microgrids and Distributed Generation Integration*, Electric Power Research Center, Iowa State University, Ames, IA, November 2015 (CE credited).
- *Building a Smarter Grid*, Intersolar North America, San Francisco, CA, July 2016.
- *Microgrids and Advanced Inverter Functionality*, North American Board of Certified Energy Practitioners Continuing Education Conference, San Diego, CA, April 2016 (CE credited).
- *Case Studies – Energy Storage and Rule 21 Advanced Inverter Functions*, North American Board of Certified Energy Practitioners Continuing Education Conference, Dallas, TX, March 2017 (CE credited).
- *Performance of Smart Inverters in Residential Solar PV Applications*, Solar Power International, Las Vegas, NV, September 2017.
- *Standards Driving Smart Inverter Development and Deployment*, EUCI Smart Inverter Summit, Denver, CO, September 2017.
- *Deployment of Smart Inverter Functionality*, IEEE PES Innovative Smart Grid Technologies Conference, Washington, DC, February 2018.
- *Interconnection Workshop*, Solar Power Southeast, Atlanta, GA, May 2018.
- *State of Smart Inverters: Adoption and Considerations for Implementation*, Intersolar North America, San Francisco, CA, July 2018.
- *What's New in Inverters*, Solar Power International, Anaheim, CA, September 2018.
- *Codes & Standards: The Ever-Changing Regulatory Environment Affecting Energy Storage Systems*, ESA Energy Storage Annual Conference and Expo, Phoenix, AZ, April 2019.

### Technical Working Group Participation

- IEEE P1547 Working Group, member and balloting committee
- IEEE P1547a Working Group, member and balloting committee

- IEEE P1547.1 Working Group, member, subgroup lead and balloting committee
- IEEE P1547.1a Working Group, member, subgroup lead, and balloting committee
- IEEE P1547.2 Working Group, member and subgroup lead
- IEEE P1547.7 Working Group, member
- IEEE 1547.9 Working Group, member
- PV Industry Forum, writing group lead for NEC 690 part III “Disconnecting Means” public inputs to NEC 2020
- PV Industry Forum, writing group lead for NEC 690.12 “Rapid Shutdown of PV Systems on Buildings” and 690.56 “Identification of Power Sources” (initiation and indication) public inputs to NEC 2017
- UL 1741 Standards Technical Panel, member and writing group member for Supplement SA
- Manufacturing Alliance of Inverters Technical Assessment of Integration Issues, lead/chair – worked with Hawaiian Electric and stakeholders on updates to Rule 14 and Rule 22, and gave input on inverter function research by NREL
- Forum on Inverter Grid Integration Issues, lead/chair – contributed to research projects at NREL and engaged with utilities and commission staff on various matters

#### Rulemaking Docket Participation and Working Group Membership

- California PUC, Docket No. R11-09-011, Order Instituting Rulemaking on the Commission’s Own Motion to Improve Distribution Level Interconnection Rules and Regulations for Certain Classes of Electric Generators and Electric Storage Resources
- California PUC, Docket No. R-17-07-007, Order Instituting Rulemaking to Consider Streamlining Interconnection of Distributed Energy Resources and Improvements to Rule 21.
- California PUC, Smart Inverter Working Group
- Hawaii PUC, Smart Inverter Technical Working Group
- Minnesota PUC, Docket No. E-999/CI-16-521, Updating the Generic Standards for the Interconnection and Operation of Distributed Generation Facilities Established under Minn. Stat. §216B.1611
- Maryland PSC, Docket No. RM61, Revisions To COMAR 20.50.02 and 20.50.09 - Small Generator Facility Interconnection Standards
- Massachusetts DPU, Technical Standards Review Group, Energy Storage Subgroup
- Nevada PUC, Dockets Nos. 17-06014 & 17-06015, Revisions to Tariff Rule No. 15
- North Carolina Utilities Commission, Docket No. E-100 Sub 101, In the Matter of Joint Petition for Approval of Model Small Generation Interconnection Standards & Associated Application to Interconnect & Interconnection Contract Forms
- Massachusetts DPU, Docket No. 19-55, DG Interconnection
- Illinois Commerce Commission, Docket No. 20-0700, Amendment of 83 Ill. Adm. Code 466 and 83 Ill. Adm. Code 467

#### Publications

Brian Lydic, Energy Storage News, The long-awaited IEEE standard that paves the way for more energy storage on a smarter grid (August 3, 2020), <https://www.energy-storage.news/blogs/the-long-awaited-ieee-standard-that-paves-the-way-for-more-energy-storage-o>

Brian Lydic, Solar Novus Today, Making the Grid Smarter (June 3, 2019), [https://www.solarnovus.com/making-the-grid-smarter\\_N11975.html](https://www.solarnovus.com/making-the-grid-smarter_N11975.html) Kelsey Horowitz, Zac Peterson, Michael Coddington, Fei Ding, Ben Sigrin, Danish

Saleem, Sarah Baldwin Auck, Brian Lydic, et al., National Renewable Energy Laboratory, *A Guidebook for Distributed Energy Resource (DER) Interconnection* NREL/TP-6A20-72102 (April 2019), <https://www.nrel.gov/docs/fy19osti/72102.pdf>

Brian Lydic and Sara Baldwin Auck, Interstate Renewable Energy Council, Inc. *Making the Grid Smarter, State Primer on Adopting the New IEEE 1547-2018 Standard for Distributed Energy Resources* (January 2019), <https://irecusa.org/publications/making-the-grid-smarter-state-primer-on-adopting-the-new-ieee-standard-1547-2018-for-distributed-energy-resources/>

Brian Lydic, Home Power Magazine, *Get Smart: Advanced Inverters* (issue #185 May/June 2018)

Brian Lydic, Solar Builder, *How California's Rule 21 inverter requirements expand grid capacity, limit energy (revenue) generation* (June 18, 2016), <https://solarbuildermag.com/featured/california-rule-21-inverters-explained/>

Brian Lydic, Fronius USA, Inc., *Things to Expect with NEC 2017* (2016), [https://www.fronius.com/~/downloads/Solar%20Energy/Technical%20Articles/SE\\_TEA\\_Expectations\\_NEC\\_2017\\_EN\\_US.pdf](https://www.fronius.com/~/downloads/Solar%20Energy/Technical%20Articles/SE_TEA_Expectations_NEC_2017_EN_US.pdf)