

## SEPA 51ST STATE INITIATIVE:

Designed as an alternative to the contentious debates surrounding market and rate reform, the 51st State Initiative creates a platform for experts and industry leaders to discuss the future of energy in the electric industry and support the utility sector evolution.

1. *51st State Perspectives: The Integration of Distributed Energy Resources: California and New York (January 2017)*. In partnership with ScottMadden, this report examines the similarities and differences between the distributed energy planning processes for California and New York.
2. *51st State Perspectives: DERs are Coming and Illinois will be Ready for Them (June 2017)*. In partnership with ScottMadden, this report will focus on how grid modernization initiatives in Illinois apply across the swimlanes and address each of the doctrines.
3. *51st State Perspectives: The Colorado Settlement: An Oral History (August 2017)*. This report goes behind the scenes in the “global settlement” in Colorado that was negotiated in summer 2016 based on interviews with key participants focusing on the process.
4. *51st State Ideas: Role of the Utility Summary of Submissions (2017 November)*. This reading guide summarizes each of the 51st State Ideas submitted from leaders across the industry on the future role of the utility.
5. *The Future Role of the Utility in the 51st State (2018 April)*. Marking Phase 3 of the 51st State Initiative, this report distills from idea developed through the past two phases and provides a summary of proposed pathways forward for the role of the utility.
6. *51st State Perspectives: Massachusetts (2018 June)*. This report summarizes the current state of activities in Massachusetts via the lens of 51st state roadmap lanes, and positions existing activities among the key doctrines.

## SEPA RESEARCH PUBLICATION SERIES:

Best-in-class smart energy research offers data and insights that equip members with the knowledge they need to make educated decisions about solar power, demand response, energy storage and other enabling technologies.

### Beyond the Meter

7. *Planning the Distributed Energy Future, Volume 1: Emerging electric utility distribution planning practices for distributed energy resources (V.2) (2017 May)*. In partnership with Black & Veatch, this updated report shares the experiences of five U.S. utilities activities in proactive DER planning and integration, and provides step-by-step guidance on how a utility could more proactively plan
8. *Planning the Distributed Energy Future, Volume 2: A case study of utility integrated DER planning in the Sacramento Municipal Utility District (May 2017)*. In partnership with Black & Veatch, this report provided an example of a utility using the step-by-step guidance from Volume I to proactively plan for DER integration.
9. *Recommended Reading for a Modern Grid (June 2017)*. Co-authored with the Rocky Mountain Institute and Advanced Energy Economy, this report provides an annotated overview of key foundational studies on DERs and the positive value to the grid.

10. *Consumer Platform of the Future (January 2018)*. In partnership with the Smart Grid Consumer Collaborative, this research will focus on the changes in the volume and complexity of consumers’ decisions and provide insights into how best utilities can provide new services to their customers.
11. *Consumer Platform of the Future: Industry Insights Report (April 2018)*. Building on the Consumer of the Future report published in January, this research extracts additional insights from in-depth interviews with 16 industry insiders around platform options and business models.

### Market Snapshot

12. *2017 Utility Solar Market Snapshot (July 2017)*. Tracking record solar installation growth in 2016, this report covers national utility solar market trends, as well as solar economics, policies, programs, and technologies. Key discussion include grid modernization activities and community solar.
13. *2017 Utility Storage Market Snapshot (September 2017)*. In this first annual report, SEPA shares the results of the 2016 energy storage survey and include national market trends.
14. *2017 Utility Demand Response Market Snapshot (October 2017)*. In partnership with Navigant, this first annual report on utility-led demand response programs includes 2016 data and national demand response market trends.
15. *2018 Utility Solar Market Snapshot (May 2018)*. Tracking record solar installation growth in 2016, this report covers national utility solar market trends, as well as solar economics, policies, programs, and technologies. Key discussion include grid modernization activities and community solar.
16. *2018 Utility Storage Market Snapshot (June 2018)*. In this annual report, SEPA shares the results of the 2017 energy storage survey and include national market deployment trends.
17. *2018 Utility Demand Response Market Snapshot (July 2018)*. This annual report on utility-led demand response programs includes 2017 data and national demand response market trends.

### Asset Management

18. *Proactive Solutions to Curtailment Risk: Identifying new contract structures for utility-scale renewables (January 2017)*. In partnership with ScottMadden, this report details new approaches to ease increasing curtailment risk in Hawai’i as its distributed solar penetration grows.
19. *Effective Asset Management for Solar and Energy Storage (February 2017)*. In partnership with Garnet3, this online slidedeck provides information for on components of solar and energy storage asset management, PV operation factors that may influence solar asset health, and how asset managers play a role to mitigate associated risks.
20. *Utility Solar+Storage Tax Manual: A comprehensive guide to federal incentives (April 2018)*. In partnership with Norton Rose Fulbright, this report is a fifth version of the manual and provides a 2018 update to reflect new federal tax and energy storage provisions for utility solar projects.

### Community Solar

21. *DOE Community Solar Case Study #1: Fremont, Nebraska (December 2017)*. As part of a U.S. Department of Energy (DOE) Solar Market Pathways Grant, this case study provides insights around the successful community solar project developed in Fremont, Nebraska through their small, local utility.

22. *DOE Community Solar Case Study #2: Village of Minster, OH (March 2018)*. The case study shows how an aim to add to the town's existing solar plus storage installation through community solar resulted in a partnership project with the local Dannon yogurt factory, the largest in North America.
23. *DOE Solar Market Pathways: Community Solar 2017 Update (March 2018)*. Co-published with the Coalition for Community Solar Access (CCSA), this report provides an update on the facts and figures of community solar's growth. The research pulls from SEPA's community solar tracking database, a survey of program administrators, and technical assistance projects that were completed under the grant funding.
24. *DOE Community Solar Financing Models (April 2018)*. As part of a DOE Solar Market Pathways Grant, this set of case studies provides examples of community solar financing models.

#### Other Technology-Focused Reports

25. *Utilities & Electric Vehicles: The case for managed charging (April 2017)*. This report provides an overview of the managed charging ecosystem, including lists of suppliers and platform providers, potential utility benefits/impacts, and examples of utility programs and automotive industry activities.
26. *Technical Challenges to DER Aggregation in Wholesale Power Markets (September 2017)*. In partnership with the Edison Electric Institute, this report assesses the Federal Energy Regulatory Commission Notice of Proposed Rulemaking on DER Aggregation and will provide a summary of key technical challenges based on stakeholder comments.
27. *Electromagnetic Compatibility Test Setups for Smart Grid Devices (November 2017)*. Written by SEPA's Electromagnetic Interoperability Issues Working Group, this report covers well-known and typically practiced electromagnetic compatibility tests under national and international test method standards.
28. *Interoperability Process Reference Manual -- User's Guide (November 2017)*. Authored by the Smart Grid Testing & Certification Committee, this publication offers an overview of the ANSI/NEMA standard SG-IPRM 1-

2016, with requirements and recommendations for implementing new testing and certification programs.

29. *Utilities & Electric Vehicles: A Review of Utility and Regulatory Activity (March 2018)*. This report provides a snapshot of the current state of the utility EV market by utility type and based around a survey of nearly 500 utility EV programs. It also provides recommendations on how the utility could more quickly transition from an 'early stage' to a 'late stage' and why.
30. *Non-wires Alternatives: A review of case studies (working title) (November 2018)*. This report, prepared in conjunction with the Peak Load Management Alliance, will provide an overview of non-wires alternative projects around the U.S. and compile lessons learned from activities to date.

#### SEPA MEMBER BRIEF SERIES:

Periodic short reads to keep SEPA members up to date with industry hot topics.

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31. *Are You Smarter Than a Thermostat? (February 2017)*
  32. *Low Income Solar 2.0: Serving All...Saving Money? (May 2017)*
  33. *Expanding the Scope of Low-Income Solar Program Models (April 2017)*
  34. *Will We Still Be Streamlining Interconnection 10 Years From Now? (June 2017)*
  35. *Can Electric Utilities Meet the Renewable Energy Goals of Corporate Customers? (October 2017)*
  36. *Lighting the way to DER Ownership: Creating a platform for regulated utility participation in a competitive environment (January 2018)*
  37. *Is Transactive Energy a Transformative Utility Business Model of the Future? (TBD 2018)*
  38. *Grid Architecture Part I: Fundamentals of Grid Architecture (TBD 2018)*
  39. *The State of Distributed Energy Resource Management Systems (TBD 2018)*