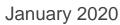
Business & Technology Resources





Business and Technology Strategies 2019 Articles and Advisories Summary

NRECA's Business and Technology Strategies *Surveillance* articles and *Advisories* provide up-to-date reviews on an array of energy issues affecting cooperative members. Below is a summary listing of those issued in 2019. You can find the full articles and advisories of these highlights below through the links provided.

Be sure to <u>visit us on cooperative.com</u> to see new resources available to NRECA members, and sign-up for our twice-monthly newsletter, <u>Business and Technology Update</u>.

Analytics

Contact for Questions: David Pinney, Principal Analytical Tools & Software Products –<u>David.Pinney@nrea.coop</u>

- Article: <u>AR/VR Technology Introduction</u>
- Advisory: <u>Project Advisor Opportunity CIGAR (inverter cybersecurity)</u>
- Advisory: <u>Opportunity to Participate in Co-op Technology Survey</u> (Invitation to Participate)
- Advisory: Project Advisor Opportunity PV Power Quality Phase Balance
- Advisory: Forecast Tool for Dynamic Load and Storage Control (OMF)
- Advisory: <u>Stacking Multiple Value Streams in Direct Load Control Programs (OMF)</u>
- Advisory: Improving Phase Balance Through Inverter Reactive Power Control (phaseBalance) OMF
- Advisory: <u>NRECA's Co-op Technology Survey</u> (Results Available)
- Advisory: Forecast Tool for Dynamic Load and Storage Control (OMF)
- Advisory: Stacking multiple value streams in direct load control programs (OMF)
- Advisory: Improving Phase Balance Through Inverter Reactive Power Control (phaseBalance) OMF

Cyber Security

Contact for Questions: Cynthia Hsu, Principal Cyber Security Solutions – <u>Cynthia.Hsu@nreca.coop</u>

- Advisory / Factsheet: <u>RC3 Cybersecurity Self-Assessment Do-It-Yourself Toolkit</u>
- Advisory: <u>Tabletop Exercises in Cybersecurity Help Cooperatives Prepare for 'The Real Thing'</u>

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- Advisory: Cooperatives Are Gaining Cybersecurity Skills with the RC3 SANS Voucher Program
- Advisory / Factsheet: <u>RC3 Cybersecurity Tabletop Exercise (TTX) Toolkit</u>
- Advisory / FAQ: <u>RC3 Cybersecurity Tabletop Exercise (TTX) Toolkit</u>
- Advisory / FAQ: <u>SANS Voucher Program (Cohort #3)</u>
- Advisory: <u>RC3 Self-Assessment Online License Program Advisory</u>
- Advisory / FAQ: <u>RC3 Self-Assessment Online License Program FAQ</u>

Distributed Energy Resources

Contacts for Questions: Jan Ahlen, Energy Solutions Director – <u>Jan.Ahlen@nreca.coop</u> Brian Sloboda, Consumer Solutions Director – <u>Brian.Sloboda@nreca.coop</u>

- Article: <u>Electric Vehicle Charging Control Strategies</u>
- Article: <u>Not Zero Energy: Why the Zero Net Energy Metric is Not Optimal for the Energy System</u> (<u>Public Utilities Fortnightly Article</u>)
- Article: <u>Evolving Energy Efficiency Programs to Incorporate Beneficial Electrification and Demand</u> <u>Response (Public Utilities Fortnightly Article: Toward A New Energy Efficiency World Order)</u>
- Article: <u>Today's Best Opportunities for Improving Manufactured Homes Energy Efficiency</u>
- Advisory: Opportunity to Lend Input on DOE RFI On Efficient and Flexible Building Loads (link unavailable as this is a past opportunity)
- Advisory: <u>Updated Battery Energy Storage Technology Overview Report Shows: Cooperatives Add</u> <u>Battery Storage Projects As Prices Fall</u>
- Advisory: <u>Spotlight on Community Assistance Programs: Meeting Core Community Needs Through</u> <u>Innovation - Advancing Energy Access for All</u>
- Advisory: <u>Advancing Energy Access for All Case Study: Cherryland Electric Cooperative</u>
- Advisory: <u>Opportunity for Cooperatives to Participate in DOE Grant Project to Reduce Solar</u> <u>Deployment Soft Costs (SETO)</u>
- Advisory: <u>Advancing Energy Access for All Ouachita Electric Cooperative</u>
- Advisory: <u>Electric Trucks Do They Make Sense?</u>
- Advisory: <u>Charging Infrastructure for Electric Trucks</u>
- Advisory: <u>Advancing Energy Access for All Case Study: Consolidated Cooperative</u>
- Advisory: <u>Saving Energy with Commercial Refrigerator and Freezer Systems</u>
- Advisory: Exploring the Value of Consumer Segmentation for Electric Cooperatives
- Advisory: <u>NRECA Is Official Supporter of EPRI 2020 Electrification Conference</u>
- Advisory: <u>Advancing Energy Access for All Case Study: North Carolina's Electric Cooperatives</u>
- Advisory: Preparing to Plug in Your Fleet 10 Things to Consider



- Advisory: <u>Consumer Expectations of the Connected Home</u>
- Advisory: <u>Advancing Energy Access for All Case Study: Cobb EMC</u>
- Advisory: <u>Consumer Expectations on Electric Vehicle Owners</u>
- Advisory: <u>Advancing Energy Access for All Case Study: North Dakota Association of Rural Electric</u> <u>Cooperatives</u>
- Advisory: <u>Distributed Wind Project Participation Opportunity</u>

Generation, Environment, & Carbon

Contact for Questions: Dan Walsh, Senior Power Supply & Generation Director – <u>Daniel.Walsh@nreca.coop</u>

- Article: <u>Advanced and Emerging Technologies for Wind Generation</u>
- Article: CEATI Report Summary Pt 1: Generator Failure Mechanisms What Can Go Wrong
- Article: CEATI Report Summary Pt 2: Off-line and On-line Testing: How to Find Generator Faults
- Article: CEATI Report Summary Pt 1: <u>Steam Condensers How to Find and Fix Leaks and Tube</u>
 <u>Fouling</u>
- Article: CEATI Report Summary Pt 2: <u>Steam Condensers How to Assess Integrity and Improve</u>
 <u>Performance</u>
- Advisory: <u>Wind Turbine Leading Edge Erosion</u>
- Advisory: <u>NRECA Joins the National Carbon Capture Center (NCCC)</u>
- Advisory: <u>AREGC Annual Conference Highlights</u>
- Advisory: <u>NREL Report: Increasing Wind Turbine Tower Heights: Opportunities and Challenges</u>

Resource Adequacy & Markets

Contact for Questions:

Michael Leitman, Senior Analyst Economics & Business - Michael.Leitman@nreca.coop

- Advisory: <u>Strategic Sourcing Case Study: Sandhills Utility Services (Cooperative Opportunities To Work</u> <u>With The Military)</u>
- Advisory: <u>Innovations in Pricing Energy Service Subscription Pricing</u>
- Advisory: <u>Analysis of 2017 Cooperative Retail Fuel Mix</u>
- Advisory: <u>Electric Co-op Fact Sheet</u>
- Advisory: <u>DOE Funding Opportunity for Energy Infrastructure Deployment on Tribal Lands</u>
- Advisory: <u>Broadband Case Study: Allamakee-Clayton Electric Cooperative</u>
- Advisory: <u>Broadband Case Study: Blue Ridge Mountain Electric Membership Corporation</u>



- Advisory: <u>Strategic Sourcing Case Study: Building A Cooperative Sourcing Alliance In Texas</u>
- Advisory: <u>Broadband Case Study: Jackson County REMC</u>
- Advisory: <u>ERCOT Summer Reserve Margin Below Reference Level for Second Year</u>
- Advisory: <u>Broadband Case Study: United Electric Cooperative</u>
- Advisory: <u>Broadband Case Study: Central Virginia Electric Cooperative</u>
- Advisory: <u>Dynamic Line Ratings</u>
- Advisory: <u>High-Voltage Direct Current (HVDC) Transmission for Greater Renewable Energy</u>
 <u>Development</u>
- Advisory: <u>Broadband Case Study: Guadalupe Valley Electric</u>
- Advisory: <u>Broadband Case Study: Sho-Me Power</u>
- Advisory: <u>Broadband Case Study: Blue Ridge</u>
- Advisory: <u>NERC's Annual Long-Term Reliability Assessment</u>
- Advisory: Strategies for Peak Demand Pricing

Transmission and Distribution

Contacts for Questions:

Robert Harris, Senior Principal Transmission & Distribution Engineering – <u>Robert.Harris@nreca.coop</u> Patti Metro, Senior Grid Operations & Reliability Director – <u>Patti.Metro@nreca.coop</u>

- Article: <u>Revision of IEEE Standard 1547.1® (The DER Interconnection Testing and Verification</u> <u>Standard)</u>
- Article: <u>Sandhills' Deployment of Grid Energy Router</u>
- Article: Defining a Microgrid Using IEEE 2030.7
- Advisory: <u>PV Safety Concerns and PV Impact Guide Online Courses</u>
- Advisory: <u>Station Battery Update National Fire Protection Association Standard 855 for Energy Storage</u>
- Advisory: <u>NFPA Technical Committee Votes Down Exclusion for Utilities Under Standard 855</u>

