# **Business & Technology Resources**

January 2022



# **Business and Technology Strategies 2021 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 2021. 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 - David.Pinney@nrea.coop

Advisory: The Benefits of ODIN: Outage Data Initiative Network

## Cybersecurity

Contacts for Questions:

William Hutton, Principal - Cybersecurity - <u>William.Hutton@nreca.coop</u> Ryan Newlon, Principal - Cybersecurity - <u>Ryan.Newlon@nreca.coop</u>

- Factsheet: ESSENCE 2.0 Integrated Cyber/OT Protection Defending America's Energy Supply
- Advisory: Cybersecurity Information Sharing Pt 1: What is it and Why is it Important?
- Advisory: Cybersecurity Information Sharing Pt 2: Resources for Electric Cooperatives
- Advisory: Cybersecurity Information Sharing Pt 3: Barriers Experienced at Electric Cooperatives
- Advisory: Cybersecurity Information Sharing Pt 4: Risk to the Co-op
- Advisory: Cybersecurity Information Sharing Pt 5: External Sharing Uncertainty
- Advisory: Cybersecurity Information Sharing Pt 6: Policy and Culture

#### **Distributed Energy Resources**

Contacts for Questions:

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- Article: <u>Beneficial Electrification Gains Momentum</u>: <u>Strategies For Communicating with Consumer-</u> Members
- Article: Here Comes the (Electric) School Bus! Early Experience at Electric Co-ops
- Advisory: <u>Achieving Cooperative Community Equitable Solar Sources Case Study Orcas Power & Light Cooperative</u>
- Advisory: <u>Achieving Cooperative Community Equitable Solar Sources Case Study Oklahoma Electric Cooperative</u>
- Advisory: Rural Area Distributed Wind Integration Network Development Case Study San Isabel Electric Cooperative
- Advisory: <u>Rural Area Distributed Wind Integration Network Development Case Study Kotzebue</u> Electric Association
- Advisory: <u>Rural Area Distributed Wind Integration Network Development Case Study Cuming County Public Power District</u>
- Advisory: <u>Rural Area Distributed Wind Integration Network Development Case Study Fox Islands Electric Cooperative</u>
- Advisory: <u>Rural Area Distributed Wind Integration Network Development Case Study Homer Electric Association</u>
- Advisory: <u>Rural Area Distributed Wind Integration Network Development Case Study Iowa Lakes Electric Cooperative</u>
- Advisory: <u>Rural Area Distributed Wind Integration Network Development Case Study Lake Region Electric Cooperative</u>
- Advisory: <u>Rural Area Distributed Wind Integration Network Development Case Study Rural Electric Convenience Cooperative</u>
- Advisory: <u>A Unique Participation Opportunity: Rural Area Distributed Wind Integration Network Development (RADWIND) Project Year 2</u>
- Advisory: Run on Less Electric: A Medium and Heavy-Duty Electric Truck Demonstration
- Advisory: Run on Less Electric: Electric Truck "Bootcamp" Educational Series
- Advisory: Locating Electric Vehicles in Co-op Service Territories
- Advisory: Preparing for Public Electric Vehicle Charging Infrastructure Rollouts
- Advisory: Distributed Wind Toolkit



#### Generation, Environment, & Carbon

Contact for Ouestions:

Dan Walsh, Senior Director - Power Supply & Generation - <u>Daniel.Walsh@nreca.coop</u>

- Article: <u>Summary of CEATI Report: Methodologies to Maximize the Value and Amount of Energy Storage: Economic and Technical Evaluation Part 1 of 3: Maximizing Energy Storage Value:</u>
   Literature Search
- Article: <u>Summary of CEATI Report: Methodologies to Maximize the Value and Amount of Energy Storage</u>: <u>Economic and Technical Evaluation Part 2 of 3: Maximizing Energy Storage Value</u>: Market Research
- Article: <u>Summary of CEATI Report: Methodologies to Maximize the Value and Amount of Energy Storage</u>: <u>Economic and Technical Evaluation Part 3 of 3: Maximizing Energy Storage Value: Valuation Tool and Case Study</u>
- Article: <u>Carbon Capture</u>: <u>Which Post-Combustion Technology Could Meet a Co-op's Needs</u>
- Article: Carbon Use and Storage: What Do Cooperatives Need to Know?
- Article: Summary of the CEATI Thermal Generation Interest Group's (TGIG) Report: Technologies
  to Improve Plant Performance: An Industry-Wide Review—Part 1 of 3: Advanced Monitoring and
  Diagnostic Technologies to Improve Thermal Power Plant Performance
- Article: Summary of the CEATI Thermal Generation Interest Group's (TGIG) Report: Technologies to Improve Plant Performance: An Industry-Wide Review—Part 2 of 3: Inspection and Repair Technologies to Improve Thermal Power Plant Performance
- Article: Summary: CEATI TGIG Report: Technologies to Improve Plant Performance: An Industry-Wide Review—Part 3 of 3: Asset and Operation Management Technologies to Improve Thermal Power Plant Performance
- Article: Summary of the CEATI Thermal Generation Interest Group's (TGIG) Report: Optimization
  of Coal-Fired Power Plant Modifications to Improve Cyclic Performance—Part 1 of 4: Coal Plant
  Cycle Operation: Equipment Failure, Damage Mechanisms, and Effects on Forced Outages
- Article: Summary of the CEATI Thermal Generation Interest Group's (TGIG) Report: Optimization
  of Coal-Fired Power Plant Modifications to Improve Cyclic Performance—Part 2 of 4: Coal Plant
  Cycle Operation: Major Equipment Modifications
- Article: Summary of the CEATI Thermal Generation Interest Group's (TGIG) Report: Optimization
  of Coal-Fired Power Plant Modifications to Improve Cyclic Performance—Part 3 of 4: Coal Plant
  Cycle Operation: Balance of Plant Modifications
- Article: Summary of the CEATI Thermal Generation Interest Group's (TGIG) Report: Optimization of Coal-Fired Power Plant Modifications to Improve Cyclic Performance—Part 4 of 4: Coal Plant Cycle Operation: Modification Cost Estimates and Economic Value
- Article: Summary of CEATI TGIG Report: Optimization of Natural Gas Fired Combined Cycle Gas
   <u>Turbines Power Plant Modifications to Improve Cycling Performance—Part 1 of 4: NGCC Plant
   Cycle Operation: Cycling Effects on Forced Outage Hours and Modifications Requiring Extensive
   OEM Involvement
  </u>



- Advisory: <u>DOE Issues Funding Opportunity for Front-End Engineering Design Studies for Carbon</u>
   Capture Systems at Industrial Facilities and Natural Gas Plants
- Advisory: New Decommissioning Library Offers Co-ops a Wealth of Practical Information

#### **Resource Adequacy & Markets**

Contact for Questions:

Michael Leitman, Director - System Optimization - Michael.Leitman@nreca.coop

- Factsheet: America's Cooperative Electric Utilities The Nation's Consumer Owned Electric Utility Network
- Factsheet: <u>Utility Privatization Case Study: Tyndall Air Force Base</u>
- Advisory: <u>Co-ops Continue to Lead Industry in AMI</u>
- Advisory: Co-op Fuel Mix Update (2018 data)
- Advisory: <u>Co-ops Added Record New Renewable Capacity in 2020</u>
- Advisory: <u>Rural Energy Storage Deployment Program (RESDP) Case Study: Poudre Valley REA</u> <u>Microgrid at Red Feather Lakes</u>

#### **Transmission and Distribution**

Contacts for Ouestions:

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

- Article: The Role of Smart Inverters as a Grid Asset in Future Distribution Systems: Field Testing with Electric Cooperatives
- Advisory: EPRI Papers on DER and Interconnections
- Advisory: Mobile Substation Pool Offers Savings for Cooperatives
- Advisory: Power Equipment Oil Analysis: Lab Performance / Sampling Techniques Study
- Advisory: Overview of the CEATI Design Guide for Station Electromagnetic Interference Protection

### **Management Services and Consulting**

Contact for Questions:

Ginny Beauchemin, Managing Director - Business Optimization - Ginny, Beauchemin@nreca.coop

• Advisory: Addressing Risk in the Cooperative Part 1 of 3: What is Risk?

