

CooperativeInnovationCenter.org

Hoosier Energy Integrated Planning Initiative

Summary Brief

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The Electric Cooperative Innovation Center (ECIC) conducted a study on **integrated planning** and **distributed energy resources** (DERs) with Hoosier Energy and its 18 member cooperatives. The goal of the study was to identify best practices and policies for planning and implementing DERs at all levels with members and to identify critical next steps and policies for implementing a planning process that integrates across generation, transmission, and distribution planning, accounting for the rise of DERs across the member systems.

The ECIC research team interviewed 20 staff at Hoosier Energy and 22 staff across the member co-ops. Working from these interviews and other industry analyses, we developed recommendations for Hoosier Energy and its members to begin constructing an integrated planning process that incorporates DERs:

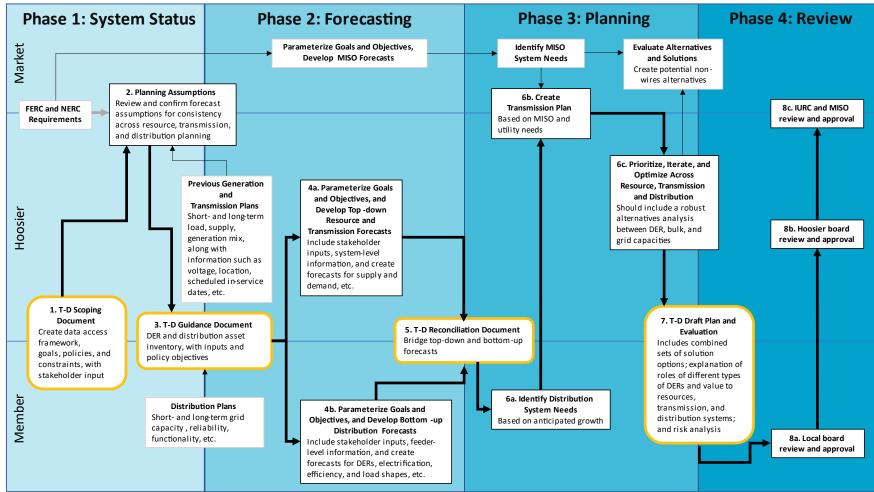
- 1. **Increase Stakeholder Engagement:** Create a DER advisory group and conduct stakeholder mapping.
- 2. **Consider Adaptive Modes of Governance:** Intentionally facilitate discussions to support DER education with the board and staff, including across levels.
- 3. **Create Integrated Grid Architecture Document:** Identify key technologies, roles, and responsibilities for cross-system interoperability.
- 4. **Expand DER Pilot Program Opportunities:** Work to identify additional DER pilots and programs for innovation and learning.
- 5. **Assess à La Carte Options:** Survey preferences among the membership for services from Hoosier and list out common or individualized service needs.
- 6. **Decide on Collective Data and Distribution Planning:** Utilize consistent data platforms and distribution planning practices across the co-ops.
- 7. **Create Integrated Planning Documents:** Begin the process of integrated planning by building shared understanding and emphasizing learning-by-doing because there is no blueprint for truly integrated planning.

Customer Analytics	Customer Choice Decision Customer Energy Information and Analytics, Outage			Customer Applications
-	Support Analytics	Information, and Customer DER Programs		
Grid Analytics	Locational Value Analysis Hosting Capacity Analysis Dynamic Analysis Probabilistic Planning	Optimization Analytics Advanced Metering Market Oversight	Market Settlement DER Portfolio Optimization Volt-var Management DER Management	Grid Applications
Core Analytics	Power Quality Analysis Fault Analysis DER and Load Forecasting Power Flow Analysis	DMS, OMS, GIS, Network Model SCADA, Automated Field Devices Advanced Protection		Core Comm
Core Hard - and Software	Operational Data Management Sensing & Measurement Operational Communications (WAN/FAN/NAN) Physical Grid Infrastructure			Communications
Technology Stack and Applications for DER Integration				

(Adapted from U.S. DOE, 2017)

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To assist with kicking-off an integrated planning process, we designed a map and pathway for Hoosier Energy and its members to spark discussion and help build towards implementation. The map, based on the National Association of Regulatory Utility Commissioners and the National Association of State Energy Officials, provides a broad overview of the life cycle of an integrated planning process tailored to electric cooperatives and building on the interviews we conducted.



Proposed Hoosier Energy Integrated Planning Process (Adapted from NARUC and NASEO, 2019)

For more information on this and other studies, please contact: Dr. Gabriel Chan (gabechan@umn.edu) or visit www.cooperativeinnovationcenter.org

