



NOLIN RURAL ELECTRIC  
COOPERATIVE  
CORPORATION  
(Nolin-RECC)

**CASE STUDY**

**JUNE 2018**

# Nolin RECC is the first electric cooperative to achieve PEER Gold certification globally.

*“PEER certification shows that Nolin RECC is performing above most utilities. We’re the first electric co-op in the nation to obtain PEER. That means we’re at an elite level of service performance.” - Mickey Miller, president and CEO, Nolin RECC*

Nolin RECC, headquartered in Elizabethtown, has 47 full-time staffs to serve approximately 35,000 homes and businesses across parts of nine Kentucky counties. It was first incorporated in 1938, since then Nolin RECC ensures delivering safe, reliable, and affordable power to its owner-members. Through PEER, Nolin RECC was effectively able to benchmark with other utilities on its continuous improvement and strategic planning efforts.

## Key Highlights of Nolin RECC

- Integrated SCADA, AMI and OMS System
- **92.86%** of distribution feeders redundant with power back feed options from different substations
- **\$ 1,567, 789 cost savings** through AMI and voltage reduction measures.

## STATE OF THE ART INTEGRATED OMS - SCADA SYSTEM

Nolin RECC has deployed a Supervisory Control and Data Acquisition (SCADA) system integrated with the Outage Management System (OMS) to assess and report system outages. SCADA monitors the overall health of distribution system and communicates with the generation and transmission operator to provide data on the status of the local transmission grid. In 2016, Nolin RECC integrated Advanced Metering Infrastructure (AMI) system with the OMS system to provide more enhanced visibility of the distribution system. The electric cooperative reviews the hourly data captured through AMI to observe trends and identify abnormalities. Nolin’s routine review and analysis of reliability



*Figure 1. Nolin RECC - OMS integrated SCADA systems*

data has helped to address failure trending, cause analysis and corrective actions and helped to achieve a cumulative cost savings of **\$1,567,789** through AMI and voltage reduction measures.

The AMI system currently monitors and reports various power quality events and the utility has deployed both fixed and switched capacitor banks on the distribution system to improve the voltage profile and provide reactive power support. Further, Nolin has ensured redundancy through power back feed options for nearly 92.86% of distribution feeders on their network from different substations.

## BEST IN CLASS INDUSTRY PRACTICES

Nolin has incorporated several preventative maintenance mechanisms to reduce financial waste, maximize the equipment life, and thereby improve reliability of their grid infrastructure. Through predictive maintenance strategies and periodic safety review meetings, Nolin was able to reduce the equipment failures and manage resources most efficiently.



*Figure 2. Routine inspection of substations*

## CUSTOMER FRIENDLY PROGRAMS AND SUPPORT MEASURES

Nolin RECC hosts an interactive website that allows customers to access billing information, community programs, energy savings, and renewable energy options. Customers can view their energy usage data for any billing period in monthly, weekly, daily, or hourly intervals.

Further, Nolin conducts free energy audits to aid in determining energy usage and ways to enhance energy efficiency for both commercial and residential customers. The cooperative has introduced several tariff rebates including cash rebates for Energy Star appliances, appliance recycling, heat pump retrofits, button-up program, and commercial lighting retrofits. Such measures could ensure reduction of peak load demand and tariff structures and helps improve customer connectivity in the long-run. All of this programs and measures are in-line with the PEER requirements on Grid services category helping Nolin to achieve higher points.

## PEER CERTIFICATION

Performance Excellence in Electricity Renewal is a certification program that measures and helps improve power system performance of electricity delivery systems. Through application of PEER, Utilities (DISCOMs) can gain a competitive advantage by differentiating their performance, documenting the value produced and demonstrate meaningful outcomes. The PEER rating system includes four credit categories:

- ▶ Reliability and Resiliency (RR)
- ▶ Energy Efficiency and Environment (EE)
- ▶ Operations, Management and Safety (OP)
- ▶ Grid Services (GS)

Out of a possible 110 points, Nolin RECC earned **61 points** achieving **GOLD** certification under version 2 of the PEER rating system (Utility).

Thus, through PEER, Nolin RECC was able to evaluate their power quality performance over its 3,000-mile system, verify their enhanced operational measures to reduce equipment failures and evaluate their risks using PEER template, thereby setting benchmarks and performance improvement goals to further accelerate the ongoing sustainability efforts of the electric cooperative.

PEER Certification for Utility Projects	
Certified 21 June 2018	
<b>Total Points Achieved</b>	<b>61</b>
Reliability and Resiliency	19
Energy Efficiency & Environment	06
Operations, Management & Safety	19
Grid Services	14
Innovations & Regional Priority	03
<b>Total Possible Points</b>	<b>110</b>