

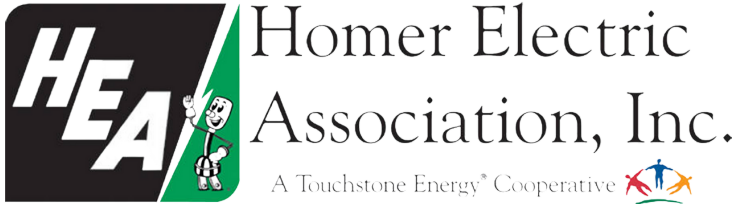
# A Worthwhile Investment for A Budget-Conscious Cooperative

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## ∨ A CASE STUDY:

Making Reliability and Resiliency  
Reporting Easier at Homer Electric  
Association

# BACKGROUND



Located in Homer, Alaska



25, 077 member-owners



35,865 meter locations



2,499 total miles of energized line



3,166 square-mile service area on the southern Kenai Peninsula



**Jim Cross**

**Homer Electric Association**

*Former Engineering Supervisor*

**Yampa Valley Electric Association**

*Current Engineering Supervisor*

**Milsoft Utility Solutions**

*Advisory Board Member - Engineering Analysis*



Source: <https://twitter.com/HomerElectric>

# CHALLENGES

***“We were struggling with our calculations.”***



Maintaining accurate and useful reports on reliability is a source of frustration. At Homer Electric Association, a 32,000-member cooperative in Homer, Alaska. Jim Cross, Homer Electric’s engineering supervisor, notes that over the years the cooperative had difficulty extracting data from various outage management software.



Trying to calculate the power reliability. Jim Cross spent hours manually calculating reliability using an Excel and Visual Basic programs. “We were struggling with our calculations,” he says.



Cross also says that Homer Electric was like a lot of cooperatives across the country. “It seems to be a common practice,” he says. “Co-ops calculate their SAIDI and CAIDI (Customer Average Interruption Duration Index) every few months. We show them to the Board and then it gets filed in a cabinet.” Most companies don’t really use the data to make intelligent long-term decisions.

## ACTION

# A More Productive Approach to Calculating Reliability

Two years ago, in a meeting with other co-ops and members of the research program at NRECA's Business and Technology Strategies (BTS) department, Cross found inspiration. "Tony Thomas [of NRECA's BTS] said to us – 'There is all this amazing information that you can coax out of your system data. Why aren't you doing it?'"

That is easier to say than do. The first step was to come up with a more efficient and effective way to capture the outage data. It had to be consistent clean data before he could consider data analysis. That's when Homer Electric decided to migrate to the PwrMetrix tool to calculate reliability.

The difference was immediately apparent. "I know firsthand how many hours I used to spend coming up with our reliability numbers using that old spreadsheet. PwrMetrix has taken care of the backend reporting. The PwrMetrix interfaces make it easy to use".



**“ I don't have IT guys tied up four hours a month uploading data – it's done quickly and in a more timely manner through PwrMetrix. I don't have to wait to the end of the month for the data I need. I have it ready to use the next day. ”**

# RESULT

It is delivered in a format that is effective when sharing with senior management and the board of directors. “We now have the ability to use geographic data and display it graphically,” says Cross. “When you put a table of numbers up on the screen, frankly that doesn’t engage decisionmakers. But if you can display the data in a visual format, where you can see the feeders throughout our service territory color-coded depending upon the relevant conditions, you get their attention.”

Homer Electric is starting to use data to **“geographically target where we’d be better off spending our dollars.”** Cross notes that “in cold weather we experience a high failure rate with porcelain, with cut-outs in particular. Our typical way of addressing these failures in the past was to change out equipment here and there as it failed. Now I’m starting to take our outage data and attach it to maps. We can determine where would we be better off replacing cut-outs as preventative maintenance.”

PwrMetrix has approached Homer Electric to work on the next phase. Becoming a data-driven organization can be done with artificial intelligence (AI) and getting proactive data analysis. “I think we have an opportunity to do more with big data and AI.”

Cross is impressed with Aerinet’s customer care. Purchasing PwrMetrix “is a cost to the co-op but our data is now in the cloud and we can do so much more with it. **Aerinet is very responsive to our needs. They provide outstanding support of their product,**” he says.

*“Like most co-ops we are facing pressures on our budgets. So, any time there is an opportunity to spend our dollars more wisely, we are very attuned to that.*

***PwrMetrix is a great example of an investment that is definitely worth the cost.”***