EDITION 28 • SPRING 2024

# THE LODESTAR • NEWSLETTER •

GUIDANCE FOR ELECTRIC UTILITIES

## Inside this Edition



**TO BE A TRUSTED PARTNER, LEADING THE ELECTRIC POWER INDUSTRY BY PROVIDING A PORTFOLIO OF INNOVATIVE ENGINEERING, TECHNICAL SOLUTIONS, AND UTILITY SERVICES.**

# Message FROM THE CEO

LOIS CROONQUIST, CEO

## STAR'S FEATURED ARTICLE

*Blane Walberg, an Electrical Engineer here at STAR, has contributed to this edition of the LodeSTAR Newsletter by explaining the importance of an engineering model. These models help simulate various scenarios, such as load growth, expansions, hazards, equipment failures, and assessing the reliability and resiliency of your network. An engineering model is crucial for an electric utility to effectively plan, design, operate, and maintain its infrastructure, ultimately enabling the utility to provide high-quality service while managing costs and risks.*

## STAR'S STAKING SERVICE

*We are excited to announce the expansion of our suite of services to include **Line Design and Staking**. This addition complements the services we currently offer and allows us to better serve our clients. Optimization of line design ensures materials and labor are used efficiently, helping minimize costs associated with construction and maintenance. Line design can also help maintain proper voltage levels and manage load distribution - improving reliability, enhancing safety, and better utilizing resources. Planning for scalability ensures the infrastructure can accommodate increased demand without significant disruptions and costly upgrades. Staking is not only lines on a map; it is a network that can withstand time, delivering dependable power to the communities your utility supports.*

***We have had many requests for this service, and our schedule is filling up. If you are interested in STAR's Line Design and Staking services, we will have availability in fall of 2024. Please keep us in mind when planning your projects in 2025.***

## STAR'S NEW APPLICATION

*STAR is excited to announce its newest application, Geotab to MultiSpeak® Connector. This application allows utilities to take information from their Geotab AVL provider and translate the data to a MultiSpeak® format. If you think this application could help your utility, please visit our website to learn more.*

**SEE LINK BELOW**

*Introducing:*

# GEOTAB TO MULTISPEAK® CONNECTOR

***STAR Energy Services' Geotab to MultiSpeak® Connector is an application that provides middleware functionality between a Geotab Automatic Vehicle Location (AVL) instance and a receiving MultiSpeak® interface (Version 4.1.6).***

***A common use for this application is to display vehicles on an existing GIS map.***

***The Geotab to MultiSpeak® Connector application and service converts current real-time location data and forwards it to a receiving interface at the utility via the method of "AVLChangedNotifications."***

**LEARN MORE AT:**

**www.star-energy.com/geotab-to-multispeak-connector**

*Engineering Corner*

# MODEL BUILDING

## AN ENGINEER'S MOST VALUABLE TOOL

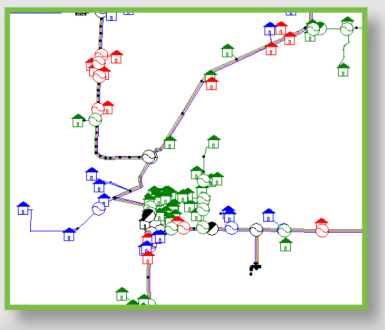
*AN ARTICLE BY **BLANE WALBERG**, ELECTRICAL ENGINEER, AT STAR ENERGY SERVICES*

*Engineering models play a vital role in maintaining an electrical system's safety and reliability. Building a model on an annual basis ensures an engineer stays up-to-date on a system's growth, transmission matters, emerging technologies, and various other elements. A current model is a useful and valuable tool used for day-to-day tasks such as backfeeds, DER interconnection reviews, and motor start analysis. It is equally helpful when creating work plans, arc flash studies, and sectionalizing studies.*

## THREE ESSENTIAL PARTS TO BUILDING AN ACCURATE ENGINEERING MODEL:

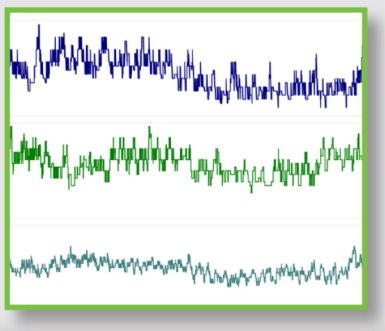
### 1 GIS DATA

- *Based on utility's GIS map.*
- *Ensure all conductors, sectionalizing devices, and other equipment are populated with correct equipment types and sizes.*
- *Items to watch for:*
  - *Missing sizes for reclosers or fuses.*
  - *No secondary drawn from transformer to consumer service point.*
  - *Incorrect or unknown phases.*
  - *Disconnected line equipment or switches identified in the wrong position.*
- *Models, maps, and GIS data are continually improved.*



### 2 SUBSTATION LOAD DATA

- *After data is entered and edited, system peak data is gathered for each substation.*
- *Data gathered includes per-phase amps, demand, and power factor.*
- *Repeat for each of the four seasons.*
- *Methods most commonly used for collecting substation load data are:*
  - *Substation meter readings via G&T.*
  - *SCADA points from substation electronic reclosers.*



### 3 MEMBER LOAD DATA

- *When seasonal peaks are determined, consumer usage (kWh) and demand (kW) for each seasonal model are exported.*
- *Consumer data is imported into the model.*
- *Each substation's load data is allocated by the consumer's usage or demand.*
- *Consumer locations are assigned a larger or smaller share of the system demand based on their peak load and factors assumed in the model.*

| Month_1 | kWh_1 | kW_1 |
|---|---|---|
| 202201 | 807 | 5.8 |
| 202201 | 536 | 2.763 |
| 202201 | 510 | 6.206 |
| 202201 | 2553 | 14.912 |

energy services

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• COMPANY ANNOUNCEMENT •

# NOVA | POWER PORTAL™

## Exciting Update:

*STAR Energy Services is pleased to announce that NOVA Power Portal™, our DER interconnection application management tool, is now available for use by utilities in Minnesota, Iowa, North Dakota, South Dakota, and Wisconsin. NOVA Power Portal™ allows utilities to manage their interconnection process in the web portal while enabling consumers and installers to submit DER interconnection applications through an interactive interface.*

**LEARN MORE AT:**

**www.star-energy.com/nova-power-portal**