Duquesne Light Company

Implementing Grid Planning Applications to Improve Analysis & Insights

BACKGROUND

Duquesne Light Company (DLC) partnered with Itron in 2020 to adopt advanced analytics solutions to enhance grid management and streamline their data analysis processes. Using Itron's Grid Planning solution, DLC now efficiently validates connectivity models and analyzes load profiles at the service point, neighborhood and system levels with the Grid Forecast & Planner application.

Challenge

Historically, the DLC team's processes included:

- Manually pulling data for each service point.
- Loading 24-hour trends and building graphs and metrics in spreadsheets—an arduous, error-prone process.
- Compiling results in Excel and manually building curves/trends.

This manual process was labor-intensive and sometimes prone to error. Additionally, while Grid Forecast & Planner was deployed, ensuring adoption across teams and aligning GIS feedback loops presented organizational and process challenges.

SOLUTION

With **Grid Forecast & Planner**, DLC was able to:

- Automate curve creation, eliminating the need for manual compilation.
- Provide faster and more accurate insights at both granular (meter-level) and aggregated (neighborhood/system level) views.
- Support teams in moving toward automated feedback loops between analytics and GIS.

The deployment was intentionally phased (a "crawl, walk, run" approach) to build confidence. Initially, GIS teams preferred to validate analytics outputs manually (which took hours) before enabling automated updates.

CUSTOMER

Duquesne Light Company

OVERVIEW

- Headquartered in Pittsburgh, PA
- Serves 600,000 electricity customers
- 812 square-mile territory

GOALS

- Validate grid connectivity
- Create load shapes or profiles based on AMI data

SOLUTION

- Itron Grid Planning (Grid Forecast & Planner)

IMPLEMENTATION INSIGHTS

- **User Adoption Challenge**: Even with the tools available, ensuring that field technicians and back-office staff consistently use them required change management. Some users preferred prior methods until confidence grew.
- **Collaboration Need**: Feedback highlighted the importance of engaging both frontline and senior staff to ensure broad adoption of updating GIS sources based on insights derived from Grid Forecast & Planner.
- **Long-Term Goal**: Establish an automated, analytics-driven feedback loop to maintain system accuracy as meters and services change over time.

Results & Impact

- Significant **time savings** by reducing manual data compilation from hours of manual calculation to few clicks.
- Improved **accuracy and efficiency** in curve and trend analysis.
- Better **situational awareness** for planning, troubleshooting and operational decisions.
- Ongoing conversations with different teams suggest **increasing adoption** across DLC.

Lessons Learned

1. Technology alone isn't enough — adoption requires engaging the right stakeholders at multiple levels.
2. Phased rollout builds trust — starting with manual validation before full automation helped ease concerns.
3. Continuous feedback loops between analytics and GIS are critical for keeping models accurate as system conditions evolve.

> "The insights we've derived from Grid Forecast & Planner have saved us hours of manual work and elevated the sophistication of our grid analysis. As we build confidence, the move to automated adjustments will be a game-changer."
>
> — *John Sala, Senior IT Manager of Metering and Operations Applications, Duquesne Light Company*

Itron

2111 North Molter Road
Liberty Lake, WA 99019 USA