# Grid Planning

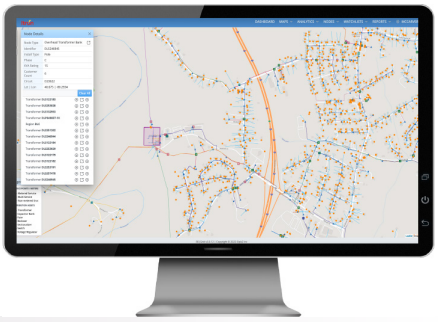
## Helping utilities transform data into clarity and action

### USHERING A NEW ERA OF EFFECTIVE UTILITY PLANNING, ENGINEERING, AND OPERATIONS

Itron Grid Planning solutions transform questionable data into dependable insights. With the volume of data on the rise from digitalization across the grid, data accuracy has become difficult to maintain. Setting a new foundation with reliable data ensures the right decisions are made at the right time. From today's operations to future planning, our Grid Planning solution aligns features with cross-functional utility needs to maintain reliability and provide users with the actionable intelligence they need.

The utility industry faces various challenges, including significant demand growth, more flexible distributed energy sources integration and an unprecedented increase in data usage from intelligent electronic devices. Unifying SCADA, outage management and distribution management systems are critical, but often result in implementation delays. Itron Grid Planning supports system integrators, leverages reliable data and reduces time to deployment.

| Grid Planning User Groups | Utility Planning | Utility Engineering | Utility Operations | System Integrators |
|---|---|---|---|---|
| **Model Validator**<br>Validates the digital network model and in-field state | • | • | | • |
| **Grid Forecast & Planner**<br>Provides forecasting and planning tasks | • | | • | • |
| **Power Flow Analyzer**<br>Analyzes load flow with short-circuit studies | • | • | • | |
| **Hosting Capacity Analyzer**<br>Identifies system capacity constraints and potential transmission needs | • | • | | |



## MODEL VALIDATOR

Model Validator ensures accurate representation between the digital network model and the in-field state to improve data accuracy for fast access to verified, actionable information. Focus areas include:

- Medium voltage and secondary network phase relationships
- Transformer-meter connectivity
- Conductor size continuity
- Asset-attributed data verification

### Features

- Native mapping engine to visualize validation analysis results
- Customizable user dashboard summarizing key data issues
- Automation schedule continuously synchronizes data

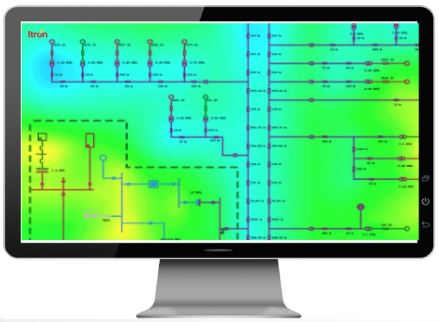
## GRID FORECAST & PLANNER

Grid Forecast & Planner unifies critical system planning tasks combined with distribution forecasting under one platform for heightened situational awareness, delivering an accurate, multi-level view of system status. This includes:

- 8760 load profile data cleansing and normalization
- Long-term capacity forecasting
- Waterfall forecasts and heatmaps
- Load shapes/curves library

### Features

- Profiles and normalizes interval load data at different feeder aggregation points
- Export profiles for ADMS state estimation, annual regulatory filing and load forecasting
- Load forecasts with adjustable input such as weather, DER contacts, economic drivers and more



## POWER FLOW ANALYZER

Power Flow Analyzer simplifies complexity with system-wide analysis using big data ecosystems to enhance future grid reliability. This includes:

- Time-series based power flow engine
- High-speed distributed computing architecture
- Best-case mitigation option identification

### Features

- Time-series power flow analysis based on the forecasted load output
- Supports balanced and imbalanced radial networks
- Short circuit and fault-protection studies

Utility Planning

Utility Engineering

Utility Operations

System Integrators

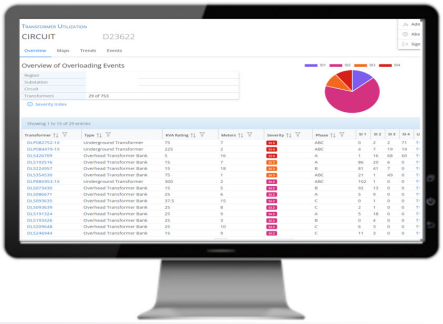
## GRID PLANNING SUITE DELIVERS

### Unparalleled Intelligence

- Improved data accuracy
- Heightened situational awareness
- Enhanced reliability
- Unmatched customer satisfaction
- Increased efficiency

### Equipped Next Generation, Data-Driven Applications

- Library of pre-configured data and system adapters
- Default and customizable data mappings
- Business logic for data handling
- Data governance rules
- Continuous monitoring and reporting of system health
- Standard cyber security best practices



## HOSTING CAPACITY ANALYZER

Hosting Capacity Analyzer helps in the identification of system capacity constraints and potential transmission needs to support DER proliferation. This includes:

- Determining max load or generation that can be connected
- Analyzing sensitivities and evaluating how changes in system parameters affect hosting capacity
- Analyzing integrated capacity

### Features

- Iterative power flow calculations
- Mitigation project modeling
- Time series-duct thermal analysis

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