



## GRID NAVIGATOR and GRID FLOW OVERVIEW



Grid Navigator and Grid Flow allow you to discover your low-voltage network infrastructure from the transformer to the meter sensing quality of supply to the customer and throughout the low-voltage grid.

- Become Grid Aware through Distributed Intelligence in your low-voltage network and enable any meter to act as a sensor.
- Evolve your AMI solution to drive your operational excellence, focus on customer experience and your reputation, increase distribution efficiency and control infrastructure investment.
- Integrate low-voltage network health information into your business and technology decision making process.

This solution provides visibility of the low-voltage network to make the business decisions that will drive return on your smart grid investment.



### FOCUS ON BUSINESS OUTCOMES

- Understand your customer’s experience and focus the organization on reputational and revenue impacting events
- Reduce operational costs through better field-force utilization and more informed back-office orchestration
- Reduce and defer infrastructure investment through better utilization of current infrastructure and reduced need to maintain “head-room”
- Manage your regulatory compliance better
- Reduce your technical losses in your network
- Improve health and safety for field-force
- Quickly achieve these benefits through integration with your existing OSGP infrastructure
- Leverage your investment in smart grid technology to achieve new business advantages and extend your return on investment

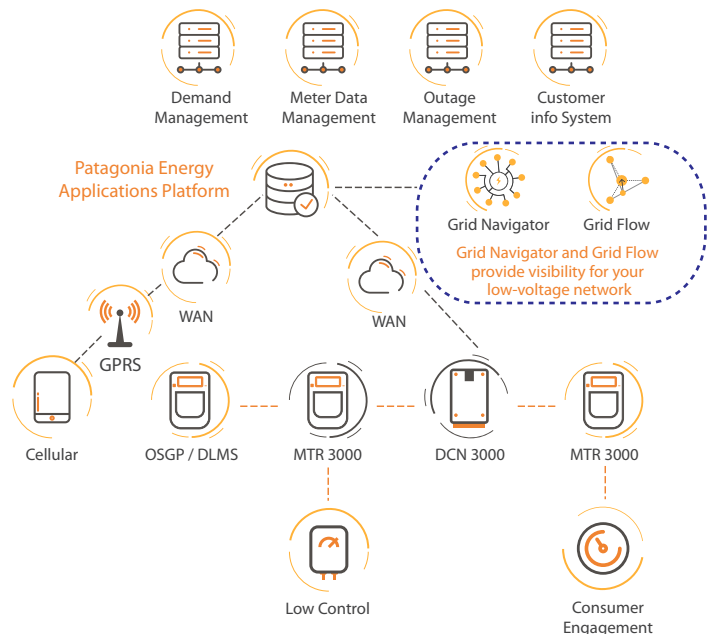
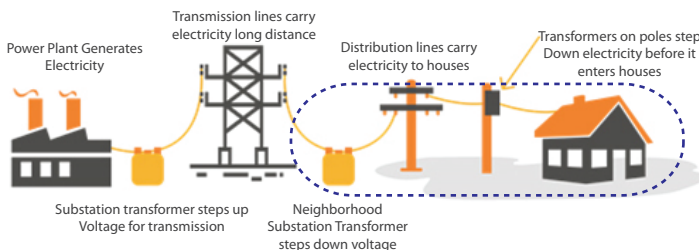


### EXTEND TECHNOLOGY CAPABILITIES

- Directly measure a wide spectrum of technical parameters to provide exceptional visibility
- Balance power distribution across phases and monitor power factor to make best use of existing infrastructure
- Identify faults, isolate and localise the root-cause, assess impacts, restore service and initiate resolutions faster
- Challenge compensation claims resulting from perceived supply problems
- Assess how the growth of DG and EV will change the demand on the low-voltage infrastructure
- Initiate effective proactive maintenance programs to increase the mean time between failure of equipment
- Reduce the need to deploy 3<sup>rd</sup> party sensors and back-end analytics tools to gain insight of low-voltage supply and status

## PRE-INTEGRATION WITH OSGP MAKES IT SIMPLE

- Deploy into any existing OSGP infrastructure
- Deploy anywhere, leverage local data processing and distributed intelligence and automation
- Deploy faster and with no disruption
- Achieve benefits on day one through in-built “know-how”
- Develop your own analytics to differentiate your services
- Integrate low-voltage network information with your business decision support tools
- Integrate low-voltage network information with your customer facing systems



## PATAGONIA ENERGY APPLICATIONS PLATFORM

Grid Navigator and Grid Flow are part of NES Patagonia Energy Applications Platform; a pre-integrated, cloud-ready and secure suite of analytics, operations and business support tools. The Patagonia Energy Applications Platform is a combination of technologies and an ecosystem that provides secure and interoperable software and communications solution for you to improve customer service, grid reliability, and efficient operations. The Patagonia Energy Applications Platform has the OSGP standard as its foundation.

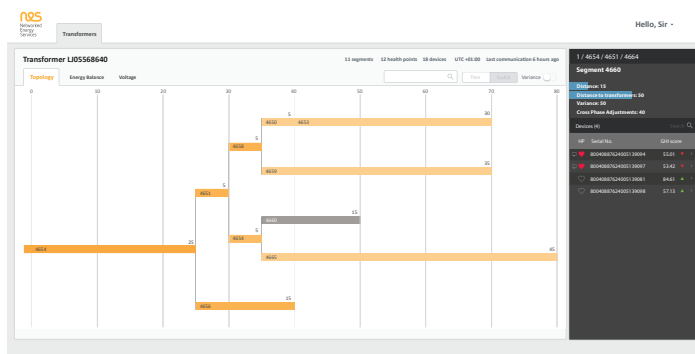
### GRID NAVIGATOR

NES Grid Navigator analytic solution provides you with insight by mapping the topology of your low-voltage distribution network for other outcome based analytics.

The distribution model is created using automated topology mapping algorithms in NES field devices that are continuously updated even as equipment or physical changes are made to the grid.

The topology data can be exported to distribution management and GIS platforms to update asset information and identify discrepancies. With Grid Navigator, you can be sure that your operations team are using up-to-date and accurate information, and that efficiency of back-office and field operations will improve as a result.

In addition, the solution displays your distribution model and assigns grid health points to improve outage analysis nested within segments.



#### KEY FEATURES

- Discover your low-voltage grid topology and connectivity
- Track changes in configuration over time
- Understand the phase wiring across the low-voltage grid
- Use patented technology only available through your OSGP deployment



#### BENEFITS

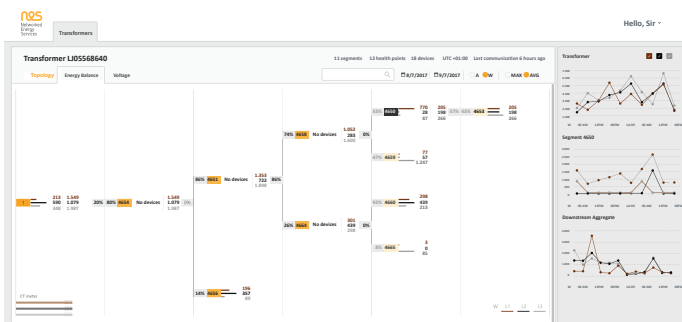
- Remove dependency on paper records and cumbersome schematics
- Reduce wasted field-force visits
- Identify phase mis-assignment and imbalances
- Identify changes which may have introduced faults
- Expose topology information into other management tools to improve your decision making processes

### GRID FLOW

NES Grid Flow application is a modular analytic tool that leverages the topology created by Grid Navigator and identifies energy balance issues within the low-voltage grid.

The application monitors, analyses, and provides alerts and reports on the selected distribution substations for energy balance per phase over time. With Grid Flow, you can configure which meters are acting as sensors for your low-voltage grid, and so fine-tune monitoring for problem hot-spots or as issues develop over time.

This dynamic allocation of monitoring points allows you to shift your focus to achieve more resolution where and when you need it.



#### KEY FEATURES

- Provide power flow model for each phase of the grid
- Detect and alarm on phase imbalances within the low - voltage grid
- Identify transformer under or over utilization
- Identify meter mis-wiring
- Record current and historic low-voltage grid parameters



#### BENEFITS

- Optimise use of low-voltage distribution assets
- Improve health and safety
- Avoid equipment failures and outages
- Balance transformer loading, increasing life-time
- Increase customer satisfaction
- Improve regulatory compliance
- Reduce the need for expensive sensors