“Pain Drives the Opportunities and the Speed of Change”
Problem: Visability, Peak Energy & Demand

Typical Daily Profile

- Demand w/o LV Microgrid
- Demand w/ LV Microgrid

Power kW

Time (HH:MM)
Problem:
Standby Capacity is Inefficient & Expensive

- Peak load typically only occurs <10% of hours in a year
Problem: Grid Outages (Cyber, Weather, Age)

- 80% of power outages lasted less than 1 h *(addressable today)*
- Annual costs for outages in US range from $104 - $164B
Solutions to the Problem

Centralized to Distributed to Ubiquitous and Cheap

2016

Internet of Things (IoT)
51 Billion Devices coming to Every Building

The Grid
Smart Meters + Distributed Energy Resources (DER)

2020

IT, ET, IoT & Data

Opportunities
Acceptance of Standards and Protocols will accelerate the adoption of DER & IoT creating WANs and LANs for Energy. (Energynet)
The Power of Data Science

Analytics, Modeling, Simulation and Machine Learning for 99% accuracy

Current Conditions

Waste Eliminated With ECM’s

EIM Optimized and Predicable