

GENERAL

Utilities face several serious challenges: 1) a shift to renewable energy and net zero, 2) intermittency due to local solar & plug in electric vehicles, and 3) risks associated with supply interruptions.

*Wunderlich-Malec experts will work directly with your team to devise a phased and optimal strategy for leveraging the mGrid, tools, microgrids, innovative rates, new riders, local generation and advanced procurement strategies to put your electricity system on a path to 100% renewable or **Net Zero**.*

City Scale Net Zero simulation surprises:

- Annual demand does not decline
- Significant utility involvement and investment is required
- ~80% of renewable power from remote sources via utility distribution system
- Net zero power procurement can be achieved at competitive prices

ACHIEVING GOALS

Wunderlich-Malec will provide the tools and assist with simulations, analysis, and pilot projects that provide the framework and business case for utility investment. Pilot demonstration projects that make the case for new utility investments, incentives, and rates that help your state, cities, and customers reduce the timeframe for achieving renewable and net zero goals – competitively. Examples include:

- Investment in net zero ready distribution systems (two-way power flow and self-healing)
- Utility investment in solar PV, plug in vehicles (PEV), and electric boilers
- Investment in substation power to manage the influx of solar PV and PEV
- Innovative rates and riders to accelerate adoption of solar PV, PEV, and electric water heaters
- Innovative procurement strategies that enable the power grid to deliver net zero power

SERVICES

The process is made simple through facilitated demonstration pilot projects. We provide the tools, methods, and training for performing pilot projects that build use cases, analysis, simulations, and results that will identify and make the case for new utility investment opportunities. Results that can be used to garner support from leadership and stakeholders.

Demonstration Project Scope and Deliverable Options

Perform demonstration or pilot projects via a series of working training sessions using a suite of WM mGrid™ simulation, modeling, and planning tools.

1. Identify use cases, analysis boundaries, and required inputs
2. Gather inputs and build preliminary simulations and models for training session
3. Conduct facilitated training/working sessions leveraging WM mGrid tools. Options include:
 - Perform a city scale net zero grid simulation providing a plan, timeline, costs, and impacts
 - Develop distribution system renewable delivery and two-way power flow concept and costs
 - Perform a substation demand and cost impact analysis for a wide array of use cases including PEV, electric water heating, storage, demand response, and gas generation
 - Customer distributed energy impact analysis to optimize rates, incentives, and utility on-bill financing
 - Review advanced renewable procurement options and costs including Power Purchase Agreements and the patented mGrid power simulator and solution; a real-time wholesale power procurement solution providing dispatch signals to adjust to changing conditions, rates, weather, demand, and market prices
 - Develop a city resilience plan and strategies for substation generation
 - Perform city scale pilots that generate joint utility renewable delivery and City net zero plans