

POWERSMITHS

Solutions for
Net Zero Buildings



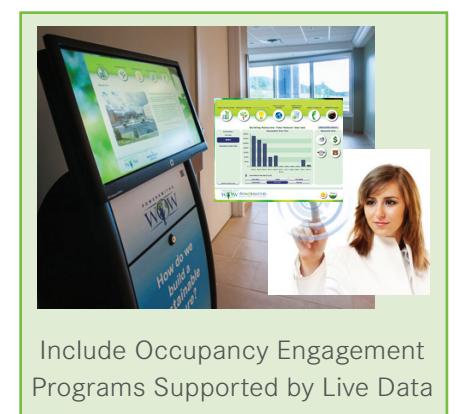
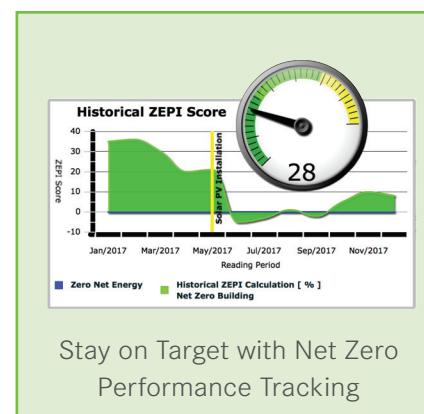
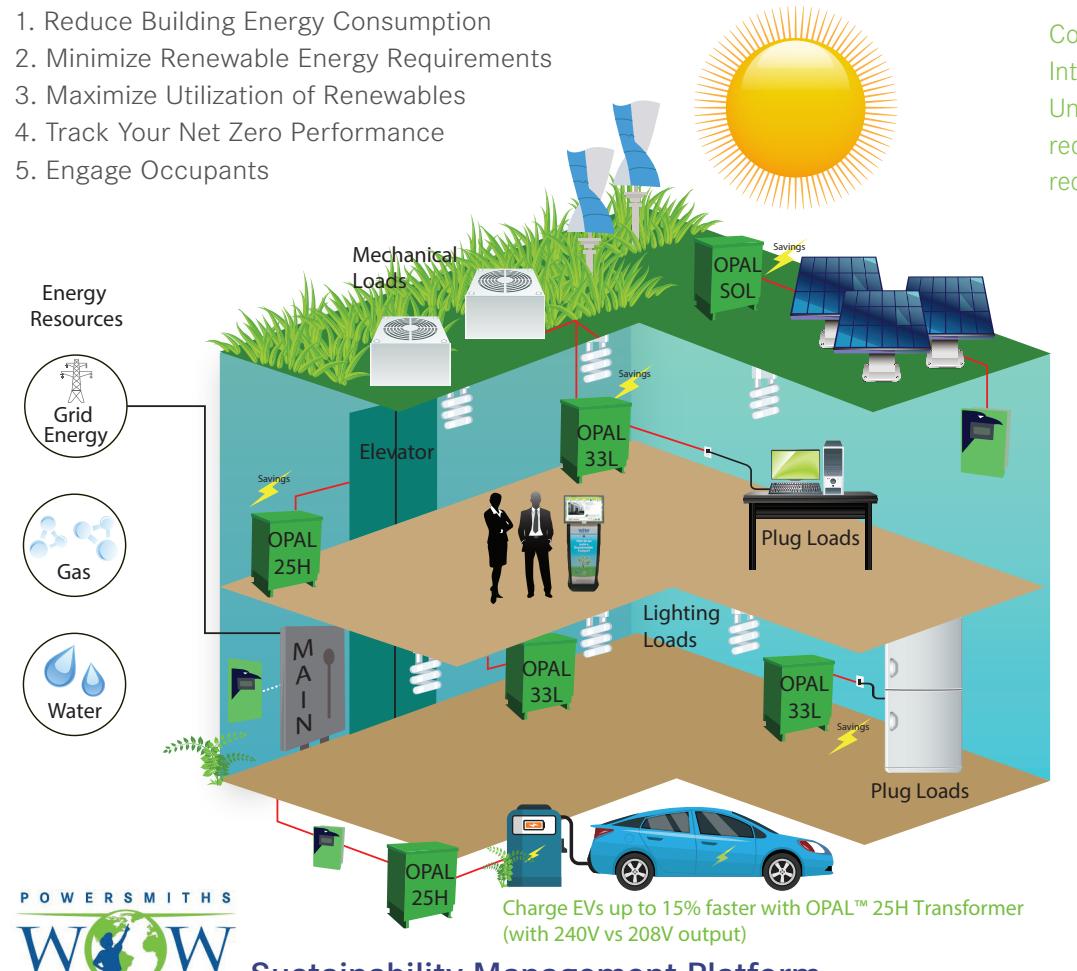


Let Us Help You Get to Zero

Building developers and owners are always looking for innovative ways to improve building efficiency and energy performance. Energy leaders are seeking to achieve net zero or even net positive energy use. Net Zero Buildings have dramatically reduced energy consumption that is fully offset by renewable production. Weather patterns and occupancy have a significant impact on building energy consumption. Powersmiths products and services help you meet your Net Zero goal.

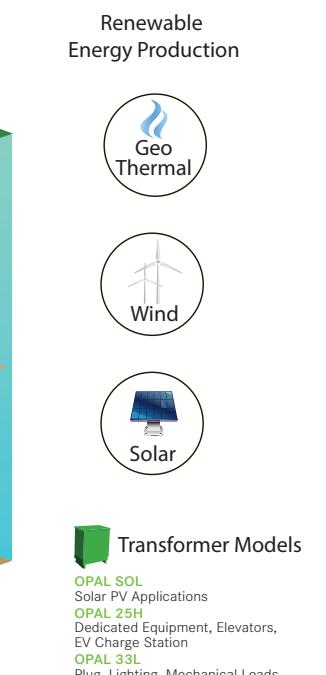
How Can Powersmiths Help Your Building Achieve Net Zero?

1. Reduce Building Energy Consumption
2. Minimize Renewable Energy Requirements
3. Maximize Utilization of Renewables
4. Track Your Net Zero Performance
5. Engage Occupants



Tight on Space?

Consider an Energy Station™ Integrated Power Distribution Unit (PDU). They significantly reduce the amount of space required in your electrical room.



1. REDUCE BUILDING CONSUMPTION

Transformers are a critical component of a building's electrical infrastructure, feeding all plug loads, electric vehicle (EV) charging stations and other key loads. In a Net Zero building, plug loads represent a significant opportunity to reduce energy waste. Off-the-shelf DOE2016 transformers minimize first cost, but not operating losses (energy waste).

With OPAL™ transformers these losses are reduced by 30-50%, and up to 80% when replacing older transformers. Fewer energy losses = less heat, which results in lower HVAC demand, and a further reduction in building energy requirements. With transformers operating 24/7, the energy savings potential is significant.

2. MINIMIZE RENEWABLE REQUIREMENTS

By lowering total building energy consumption, OPAL transformers lead to a reduction in the amount of renewable energy required. With less required energy, fewer solar panels are needed to meet a building's energy load. Powersmiths offers a tool to further understand solar PV cost avoidances.

Powersmiths ZNE Calculator™

The ZNE Calculator has been designed specifically to support the net zero planning process. This tool helps estimate the potential for energy savings, solar cost avoidance, carbon emissions reductions, and return on investment (ROI) when OPAL transformers are specified.

3. MAXIMIZE UTILIZATION OF RENEWABLES

Some solar PV systems need a transformer to connect to the building electrical system. OPAL SOL™ transformers are designed to reduce waste by up to 50% compared to a typical transformer. In the net zero world, maximizing renewables means getting you closer to your net zero goal. Choose the OPAL SOL to utilize more Solar PV generated energy.

4. TRACK YOUR NET ZERO PERFORMANCE

Once a building is operational and occupied, there are many variables that can be overlooked that can challenge a Net Zero goal. Extreme hot or cold weather can increase energy use by 10% compared to the design model; occupant behavior and plug load selection significantly impacts energy use; annual variance in cloud/rain can reduce

PV production by 10% versus model data that's based on long-term averages.

Reduce these and other energy debt risks by tracking zero net energy (ZNE) progress, actual vs. the design model, as the year progresses. Powersmiths WOW™ provides ZNE buildings with real-time continuous building performance monitoring and analytic solutions.

Scalable Net Zero Performance Tracking Solutions

Start simply by tracking the essentials: main electricity, gas, EV charger consumption, and renewable energy production. If your analytic requirements grow, you can add sub-system performance reports to track data vs. the design model, as well as occupant engagement kiosks at any time.

Get ahead of any shortfalls with live building energy reports, including energy consumption, production and sub-system performance. Initiate an energy conservation plan, corrective action or occupancy engagement program to get back on track before year-end. With WOW all building performance data can be accessed securely, onsite or remotely, with customized, easy-to-read reports.

Powersmiths WOW Professional Support for ZNE

Our group of ZNE trained professionals provide ZNE projects with technical support to help deliver a simplified end-to-end building performance and data reporting solution for your Net Zero building. Our goal is to ensure that your WOW system supports your Net Zero's unique performance monitoring and tracking requirements.

5. ENGAGE OCCUPANTS

Once a building is occupied, keeping up with the data becomes more challenging. Net Zero goals can quickly become buried under daily work tasks, or lost due to lack of responsibility, expertise, or time.

Powersmiths WOW Professional Services

Our ZNE trained engineers can oversee your live data, providing analytics and performance reports to help you track building performance and identify if things go wrong. To keep on track in a positive way, occupancy engagement is key. Our professionals can support your engagement initiatives with live data and multi-media tools within WOW.

Powersmiths Product Lineup for Net Zero Applications



OPAL™ Series
Transformers
Models 33L & 25H



OPAL SOL™
Series
Transformers



Energy Station™
Compact PDU



Powersmiths WOW™
Submeters & Comm.
Devices



Powersmiths WOW™
Sustainability
Management Platform

END-TO-END SOLUTIONS WITH BEST PRACTICES FOR TOP RESULTS Behind these effective products and systems stands a company that believes in supporting the main objective of any project. This means our professional engineers and support staff work with you from project planning to product selection, installation/commissioning activities, and training stakeholders all based on the customer's goals. For over 20 years, Powersmiths' Best Practices ensure that customers have access to professional support and expert advice for every step of a project.

OUR COMMITMENT TO SUSTAINABILITY Powersmiths is ISO 14001 Certified to reduce the environmental impact of its products and day-to-day operations and is dedicated to developing products and services that have a positive impact on our environment.

CORE VALUES As an industry leader, Powersmiths is firmly built on a foundation of core values: Respect. Customer-Centric Innovation. The Pursuit of Excellence.



Serving Commercial, High Tech, U.S. Federal, Government, Municipal, Education and Healthcare Buildings with Guaranteed Energy Performance for over 20 Years

POWERSMITHS

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