



# **Distributed Energy Resources**

Maximize Cost Saving & Sustainability

Paul Grod, CEO October 23, 2024

MAKING SUSTAINABLE, ATTAINABLE™





# Trusted Energy Partner



- Over 25 years of experience providing energy 25+ services in North America
- 1000+ MWs of DERs under management
- **75+ Utilities and ISO customer relationships**
- Power Producers nuclear, hydro, gas, wind, solar, 150+ storage
- Commercial, industrial, and institutional clients 200+



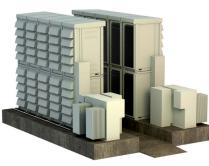


# **Reducing Energy Costs and Attaining Sustainability Goals**

Incorporating Distributed Energy Resources (DERs) for Commercial & Industrial Facilities







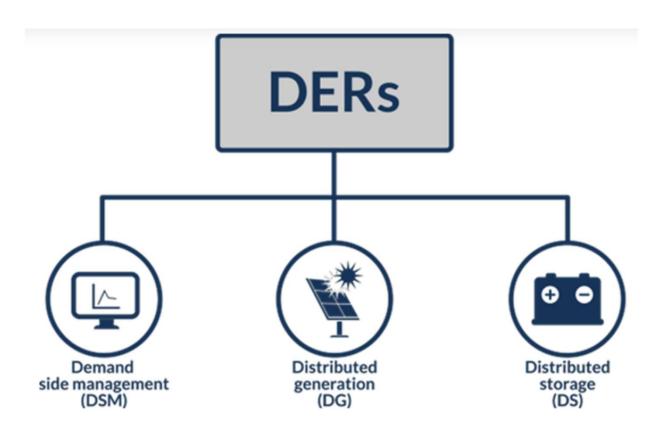


# Challenges Faced by Large C&I Facilities

- **High Energy Costs:** Rising capacity, transmission, energy and carbon costs
- Sustainability Goals: Shareholder and regulatory pressure to reducing carbon footprint
- Reliability Issues: Productivity impact form unplanned outages, intermittent power, power quality



# What are Distributed Energy Resources (DERs)?





### Benefits of DERs for C&I Facilities

- Cost Savings: Peak shaving (price response, system charges), demand response revenue
- **Sustainability:** Reduced carbon emissions, renewable energy integration
- Reliability: Backup power during outages, improved power quality



### **Energy as a Service**

- Optimized DERs: Behind the meter energy system (microgrid) designed to maximize facility performance, cost savings, grid efficiency, and environmental benefits.
- No Capital Cost: Developer scopes the opportunity, provides a shared saving scenario
- No Risk: Developer builds, owns, operates and maintains
- **Shared Savings:** Only upside with no downside. Shared savings significantly increased with federal (IRA) and state incentives (disincentives).



# Case Study: Successful Implementation

# Large glass manufacturer

- 2.4MW/2.07 MWh CATL BESS + Kehua UPS
- 24/7 Operations for Power Quality through Double Conversion and Backup Power



- Peak Avoidance, Demand Response, Facility Power Quality and Backup Power
- Full O&M Responsibilities for the whole asset (UPS/BESS/HVAC/HV Equipment/Transformers/etc...)



# Large Campus Spotlight

BTM battery storage client in Ontario



Reduced Energy Costs

**Earning** Revenue

Sustainability Goals



#### **System Overview**

2.6MW/5.2 MWh Tesla BESS + 13 kW of PV generation



- 24/7 Operations of optimizing Battery Output
- · BESS smart optimization charging
- GA Participation
- DR Participation
- Facility Peak Shaving
- Energy Arbitrage

#### **Overview of partnership**



The client is leveraging a behind-the-meter battery energy storage system to reduce their GA charges and participate in multiple demand-side management programs with Rodan Energy.







# JP2-John Paul II Microgrid Facility

#### **Optimization SCADA & Software**

**Rodan EOS** 

#### **Programs**

Net-Zero, Peak Avoidance, Energy Arbitrage

- Net zero -geothermal
- 1.1MW/2.2 MWh Tesla BESS + 625 kW of PV energy
- 24/7 AOS Operations of optimizing Solar, Battery output
- BESS smart optimization charging
- GA Participation for Summer 2023 (Class A)
- Energy Arbitrage with BESS/Solar Optimization from AOS
- · Export of energy onto grid
- Islanding Facility



## **Steps to Implement DERs**

- Feasibility Analysis: On-site visit, location, size, interconnection needs
- Business Case: Initial proposal, consumption pairing with grid programs
- Detailed Analysis: Best-fit DER technology selection
- Project Execution: Engineering drawings, installation, commissioning
- Optimization & Maintenance: Continuous operation, 24/7 NOC support



## What to look for in DER partner

- **Expertise:** Inhouse engineering, procurement and construction capabilities
- Track record: Operating history and success
- Staying Power: VC or PE funded? You don't want to be changing owners every 5 years.
- Energy Markets: inhouse EM team successfully operating DERs in multiple deregulated energy markets
- Systems and technology: Continuous operation, 24/7 NOC support, energy optimization software/tools
- Turnkey: one stop shop vs. a motley crew of subcontractors



### **Conclusion - DERs**

- Maximize energy savings
- Achieve sustainability goals
- Energy reliability and power quality
- No cost and negligible risk
- Provided you select the right partner



# **Questions?**

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