



GridBeyond™

**Introduction to GridBeyond's
Battery Offering
Joe Hayden**

PJM

Our Global Presence

GridBeyond has built **the leading data-driven intelligent energy platform** to empower energy users and fleet operators, allowing them to generate additional **revenue** streams, **lower energy cost** and becoming more **sustainable**. Our customers form a virtual power plant that is essential in supporting the decarbonization of electricity networks globally.

Global Locations

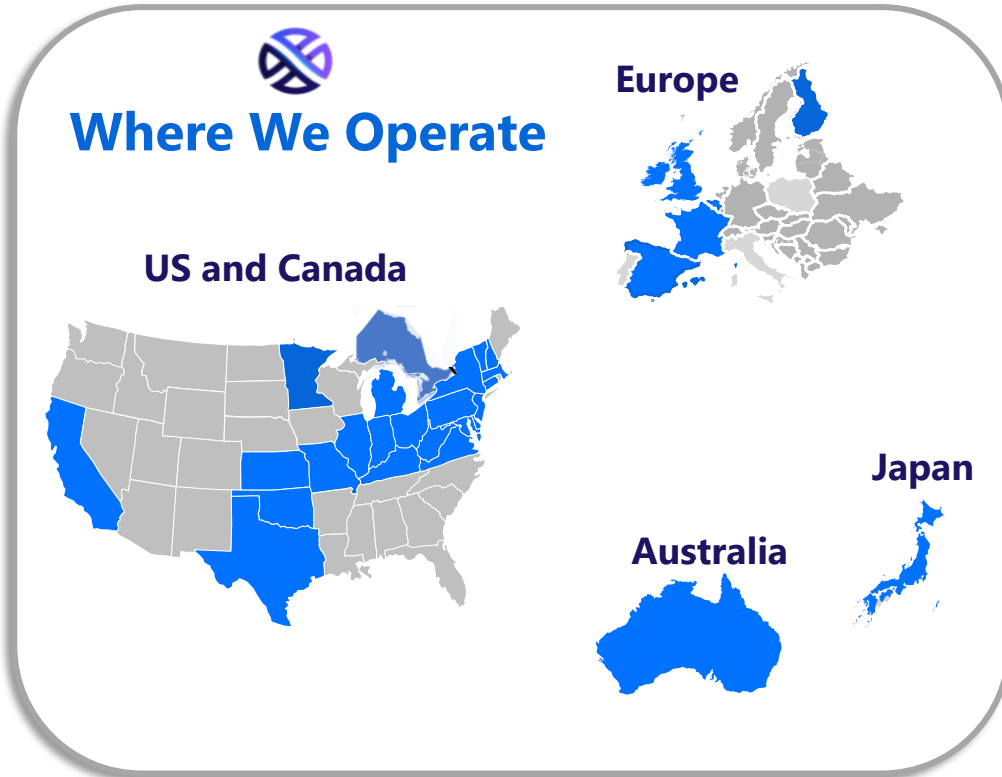
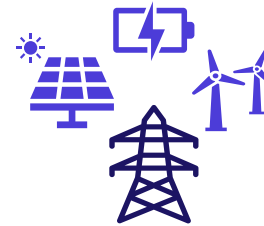
USA | Canada | Ireland | UK | Japan |
Australia

500+ Customers across 600+ Sites

120 team members across 6 Offices

200+ man years in Platform Development

~1,500+ MW DR portfolio (75% growth per annum)
400MW of batteries under management



Some of our Partners/Investors



DYNEGY

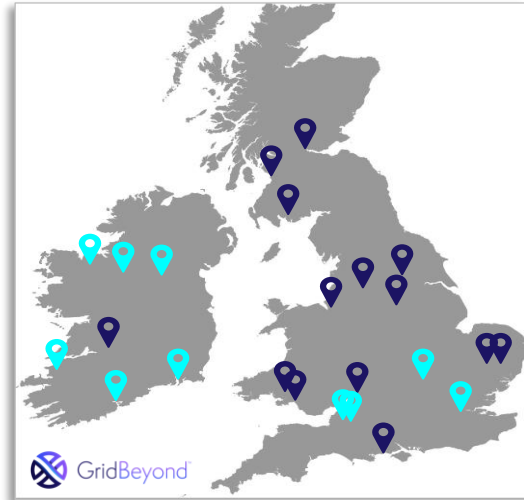


Strategically Aligned Partner with a Proven Track Record



Proven Track Record in Energy Storage Optimisation

Battery Optimization Portfolio (UK & IE)



📍 Front of the meter 📍 Behind the meter

25 Batteries across UK and IE (0.5MW-100MW)
410MW of Batteries Contracted

- ▶ **Behind the meter:**
Multiple sectors: Food/Bev, Metal, Glass, EV charging hubs
- ▶ **Front of the meter**
Grid-scale stand alone and co-located storage projects

Numerous opportunities to cross sell storage systems to

- Oil and gas
- Industrial manufacturing
- Retail/commercial
- EV hubs
- Data centers
- Grid scale asset owner/operators.



Large Customer Base – C&I

550+ C&I Customers

> 2GW managed by GridBeyond VPP

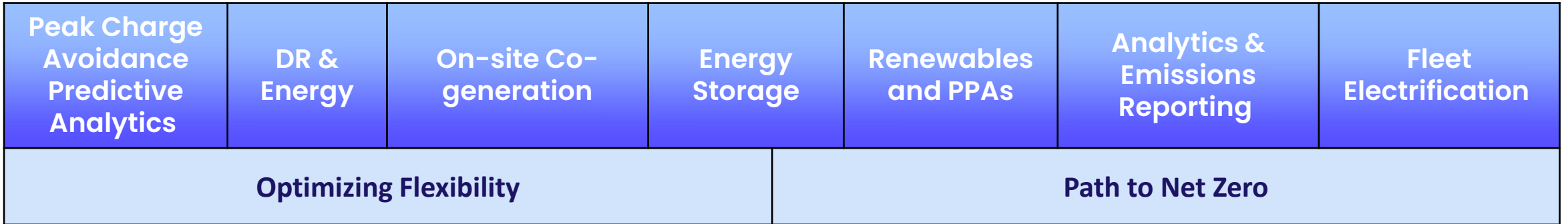
Renewable Developers	Food / Logistics	Glass & Metal	Aggregate Oil / Gas	Chem/ Water	Data Centers/IT	Pulp & Paper
GREENCOAT RENEWABLES	abp Food Group	outokumpu	TARMAC A C&I COMPANY	INEOS Inovyn	eir	Smurfit Kappa
Hydrock	brakes	GFG ALLIANCE	CEMEX	AIR PRODUCTS	TIFCO HOTEL GROUP	HOLMEN IGGESUND
HERON BROS.	GXO	MAT FOUNDRY GROUP LTD	IMERYS	UISCE WATER	DUNNES STORES	UPM BIOFORE BEYOND FOSSILS
ION	americold	ArdaghGroup	Kilsaran INTERNATIONAL	Dŵr Cymru Welsh Water	RANDOX	MEDITE
aldustria ENERGY STORAGE	Lineage	WEIR	PENNEY SUPPLY	northern ireland water	AVIVA STADIUM	bronnspann



Grids We Serve

Europe	North America	APAC
700MW contracted	20MW contracted	15MW Contracted
nationalgrid	California ISO ercat	AEMO
EirGrid GROUP	New York ISO Independent System Operator pjm	OCCTO
	SPP Southwest Power Pool MIS	

Navigating the Energy Transition



Typical Challenges

⚡ Reducing Cost

- Have you considered Real Time Peak Avoidance?
- Are you sure you are maximizing the value from your energy flexibility?

⚡ Enhancing Sustainability

- How valuable is GHG emissions tracking?
- Wider ESG Strategy?

⚡ Enabling Resilience

- Cost of resilience to you?
- How much backup do you need?

⚡ Grid Constraints

- Peak Power Requirements?
- Delays? Charges?

Battery Product Offering



Asset Funding

We will fully fund the asset through our financial partners.

Engineering/Installation

Our team manages the entire end-to-end process of scoping & design, installation and commissioning



Battery Product Offering

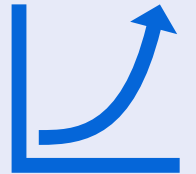


Technology Sourcing

We partner with market leading equipment to find the most optimum solution for your site

Asset O&M

We will manage the asset after installation with our team of engineers and 24/7 NOC Desk



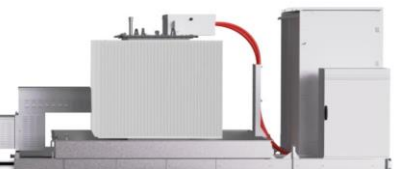
Batteries



PCS Inverter



MV Skid



Customer Value Benefits



Battery Benefits

1. **Costing Savings:** The battery can deliver energy savings of \$65k per MW by reducing your 4CP energy costs
 2. **Resiliency:** The battery can protect against voltage dips on site.
 3. **Path to Net Zero:** Co-locate with solar and EV chargers
- **Flexible Sites:** Minimise number of site shutdowns for cost savings with peak predicting tool, turn down 10 times on flexible load to hit all 4 peaks.
 - **Mission Critical Sites:** Realise new cost savings by flexing your critical assets with a battery.

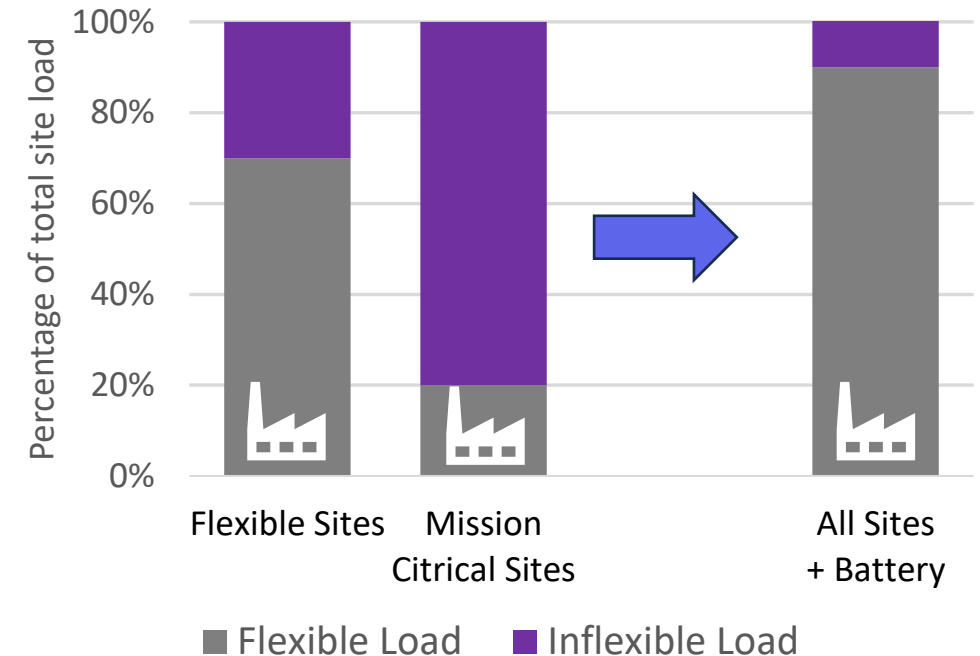
Typical Customers

- Precision Assembly
- Manufacturing
- Glass
- Oil & Gas
- Water
- Mining
- Universities
- Food & Bev
- Plastic Manufacture
- Airports
- Hospitals & Health
- Data Centres

Key Points of Offering

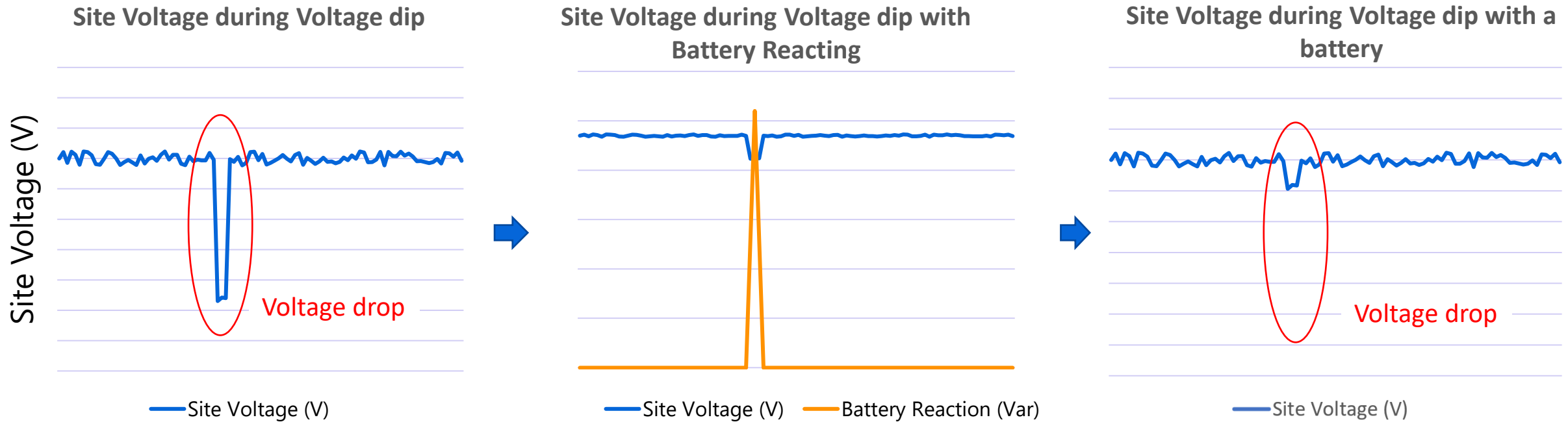
- **ZERO CAPEX** – Requires no capital or annual payments
- **Turnkey:** Feasibility → Design → Funding → Supply/ Install → Management

Transform your Site



- **Energy Bill Savings: \$65'000 per MW**
- +
- **Site Resiliency against Voltage Dips**

Benefits of Resiliency from a Battery



What is the financial cost of poor Power Quality?

Automotive

\$6,000/MW/Minute

Plastics

\$85,000/event

Telecoms

\$35,000/minute

Glass

\$4,750/MW/Minute

Paper

\$6,000/MW/Minute

Data Centre

\$850,000/event

Drinks

\$290,000/year

Pharmaceutical

\$25,000/MW/Minute

Time



Equipment Cost



Production loss



Maximizing Value for the Cement Sector (PJM)

Site Profile: Fully Integrated Cement Mill

Site Load: 20MW

Flexible Load: 10MW (Cement & Raw Mill)

Inflexible Load: 10MW

Stacking Demand Response with RTPA

⚡ Greater savings on energy cost through

- Real Time Peak Avoidance (RTPA)
- Peak predictor and Battery for optimized 4CP avoidance

⚡ Increase existing DR value with

- Automation
- Granular Asset Control
- Powerful VPP: AI based Load/Price Forecasting

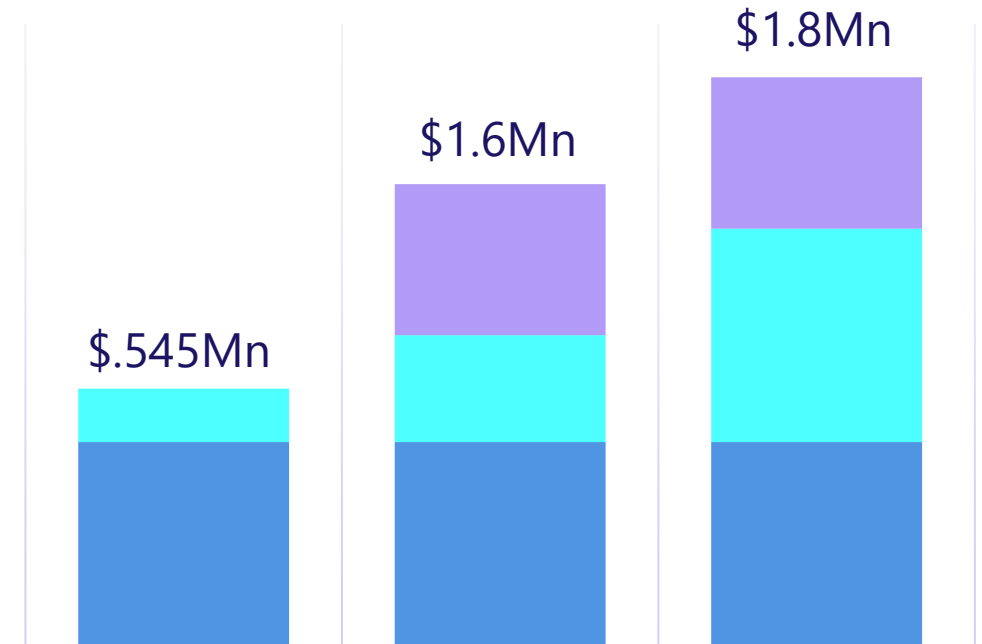
Funding The Path to Net-Zero

⚡ Pool DR revenue into a Net-Zero fund to enhance your sustainability strategy.

- Baseline Platform (Emissions management)
- CPPAs/RECs (Turn-key service)
- Strategy and Consulting

Annual Value

Demand Response Value Stack 20MW Cement Mill



Competitor Value GridBeyond Value GridBeyond Value (with Battery)

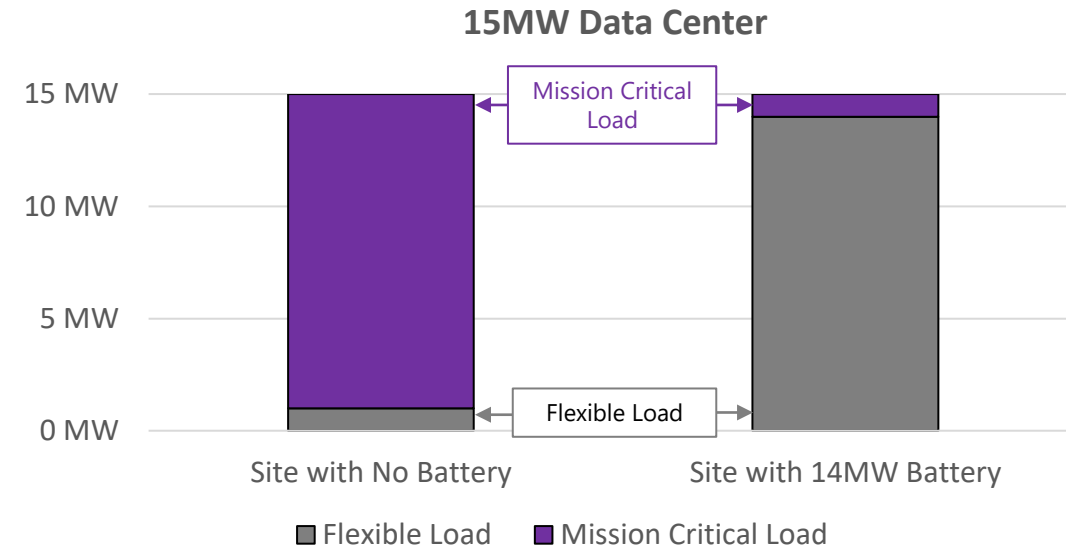
■ DR Program (RRS) ■ 5CP ■ RTPA

Case: Data Centre (Non-Flexible Site)

Battery Benefits

- **Total Average Site load: 15 MW**
 - Mission Critical Load: 14 MW
 - Flexible Load: 1 MW
- Profile of Load Flat Energy Consumption, 24/7
- Battery Size: 14MW – 28 MWh
- Energy Assets: Servers, Storage, Networking Equipment, Rack PDUs, Patch Panels, Chillers, Air Handling Units, UPS

- Energy Bill Savings: \$910'000 per Year
- +
- Cost savings from Voltage Dips \$850,000/event



The Next Steps

Feasibility Assessment

- 1 **First meeting** around feasibility and identifying any site challenges.
- 2 **An audit** to determine site specs and initial battery sizing.
- 3 **Commercial proposal** issued to client. Revised specs, if required
- 4 **Lease Agreement** signed and returned by customer to commence project

Feasibility Assessment: Next Steps

1. HH OR QH Data
2. SLD (Single Line Diagrams)
3. Electricity bill
4. Fixed or day ahead contracts
5. Any other generation On-site?
6. MIC & MEC constraints

Thank you



Biographical Information

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Joe Hayden is the VP of Revenue for North America for Ireland/UK based GridBeyond, and has lead businesses in demand response over the last 5 years during what he terms an industry transformation.

GB is the world's leading technology platform for helping companies manage distributed and flexible energy resources. The transition to a Net Zero economy is driving significant change in the energy sector and GB helps navigate the opportunities resulting from this transformation. From the rise of renewables generation to the ever-increasing need for grid balancing services that go well beyond traditional Demand Response. The result is a significant requirement for scalable and real-time solutions to manage the carbon friendly, energy system of tomorrow through an automated AI controls based grid services solution.

Joe will attempt to explain where we are in the transformation of the grid's generation makeup, how carbon reductions have been made significant strides balanced against reliability and resiliency challenges not seen in quite some time.

Joe has been mesmerized by arguably what is the first, high-tech industry, the electric utility industry, for over 20 years. He resides as a native Texan and is a graduate of Texas Tech University.