



Intelligent Generation

How virtual power plants can meet the coming capacity crunch and transform energy from a runaway expense into a profit center

Paul Gazzolo

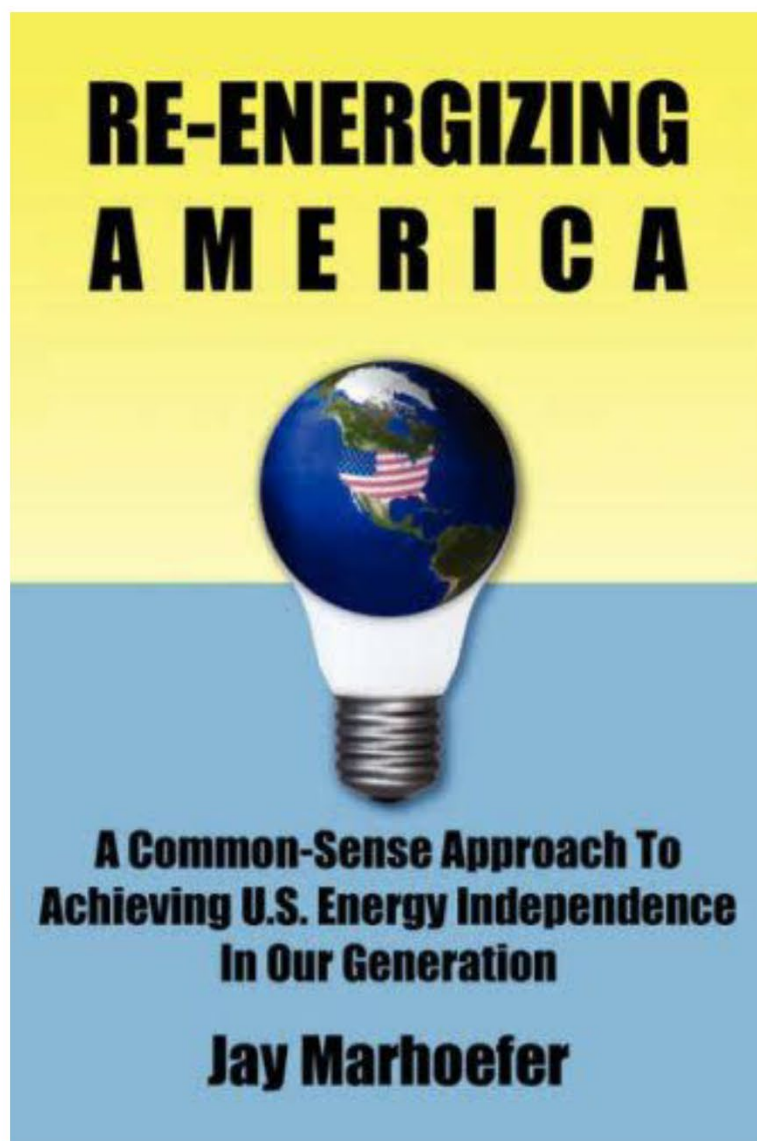
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**ILLINOIS
GREEN
ALLIANCE**

We are Inventors, Designers, and Operators of Virtual Power Plants... that Pay

Published 2005



Founded 2009



US Patents

#7,444,189

#8,019,445

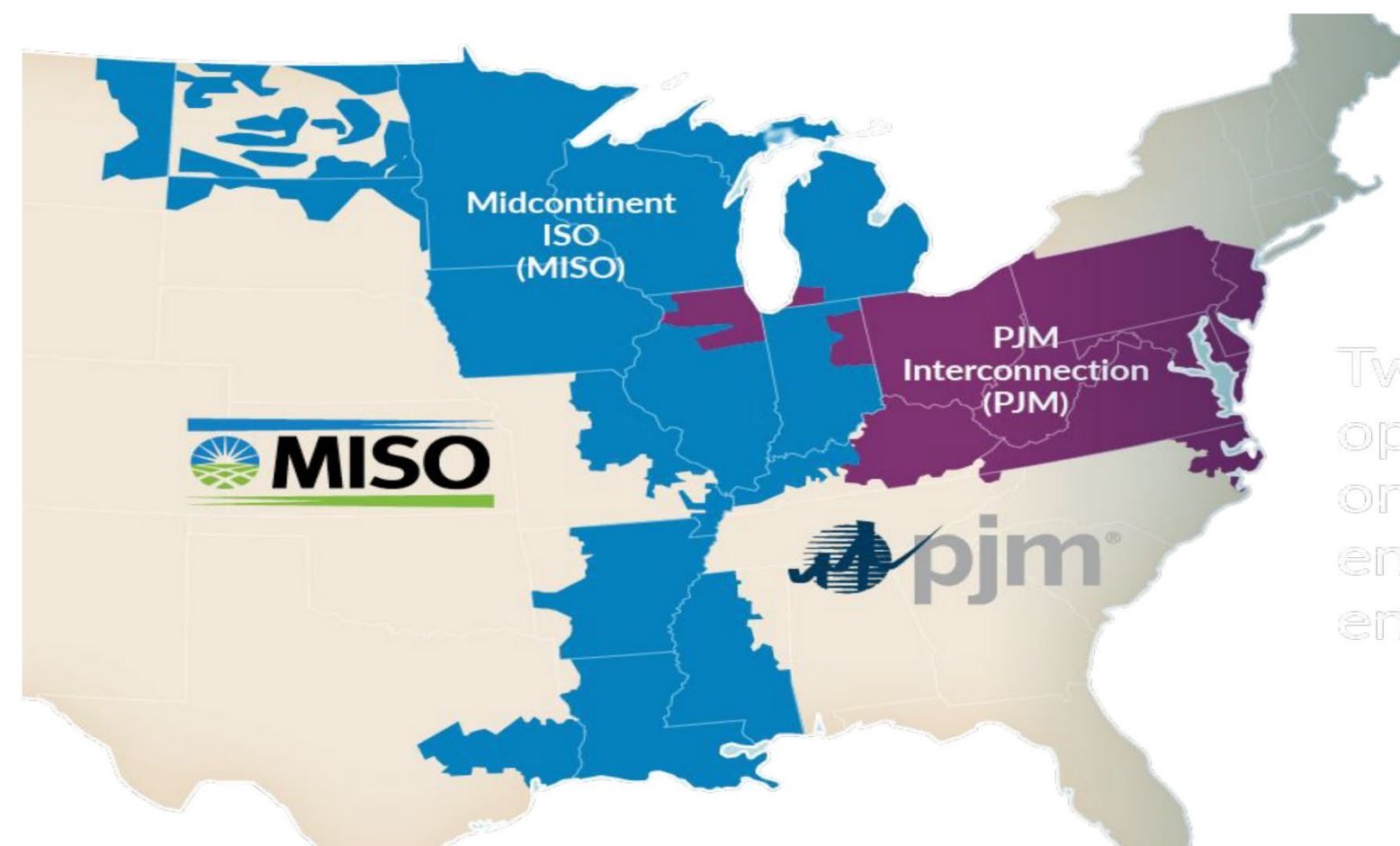
#9,300,141

#10,277,034

claiming an energy storage network and resulting value stack. Numerous inventions followed in perfecting the system.

Today:

Operating assets across two RTOs with over a Gigawatt in customer pipeline



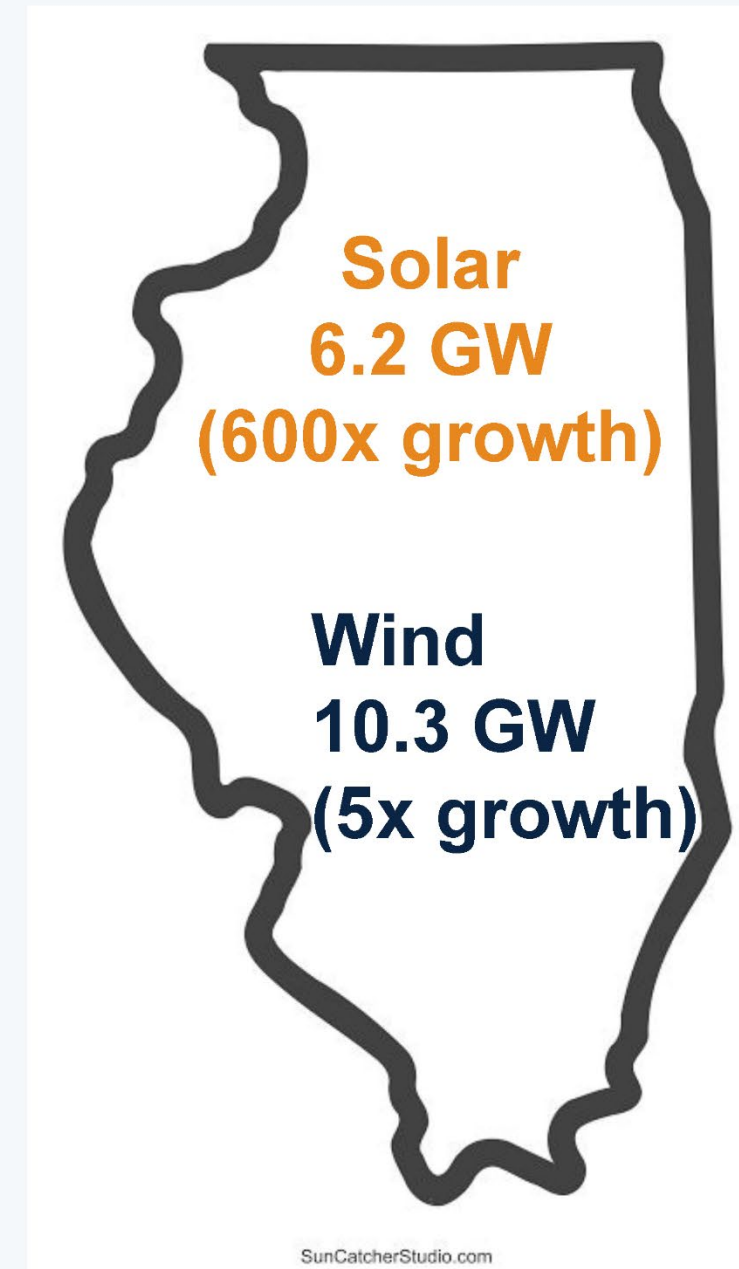
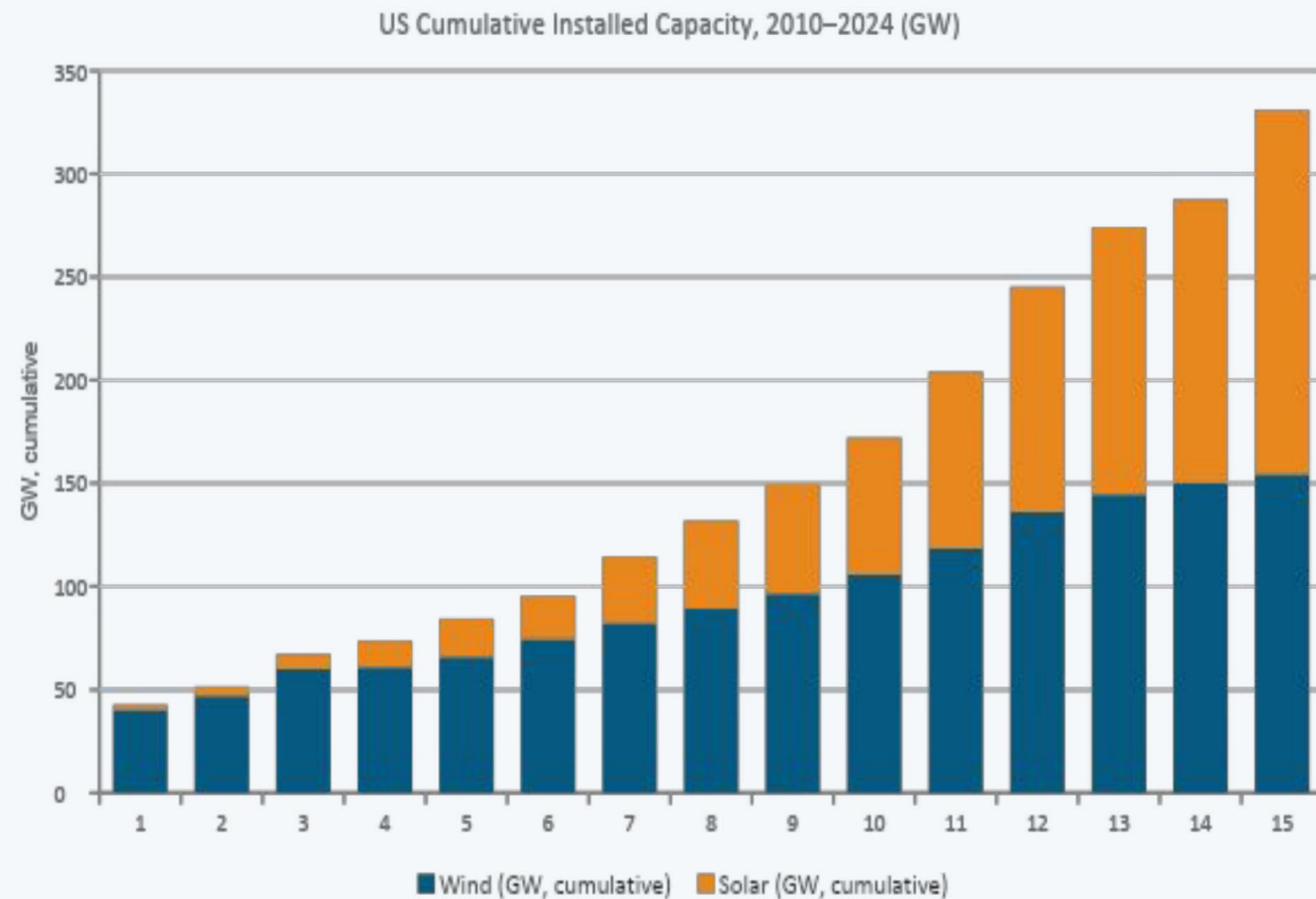
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97-99% PJM performance score

Energy Supply: Wind and Solar Capacity Has Grown 300 GW Since 2010

US Wind & Solar 331 GW today

(8x growth since 2010)



Illinois Policy Support

2016 Future Energy Jobs Act

2021 Climate & Equitable Jobs Act

2026 Clean & Reliable Grid

Affordability Act

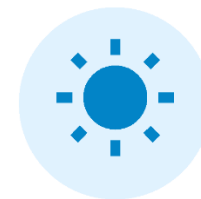
Sources: Wind — EIA Preliminary Monthly Electric Generator Inventory / ACP Land-Based Wind Market Reports. Solar — EIA Electric Power Monthly/Annual & NREL (total utility + small-scale, AC basis); 2011–2022 are year-end estimates reconciled from annual capacity-addition data; 2023–2024 as published. Illinois — EIA Illinois Renewable Electricity Profile (2010); Wikipedia/EIA (2020); Illinois Clean Energy tracking dashboard, cleanenergy.illinois.gov (Q1 2025).

How the Value Stack Lowers Energy Expense and Carbon



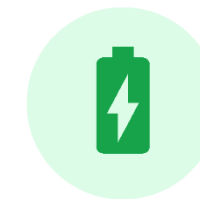
EARN

six figure income from stabilizing
the Grid



SAVE (30–50)%

on energy with PV solar and
power charges with battery



PROTECT

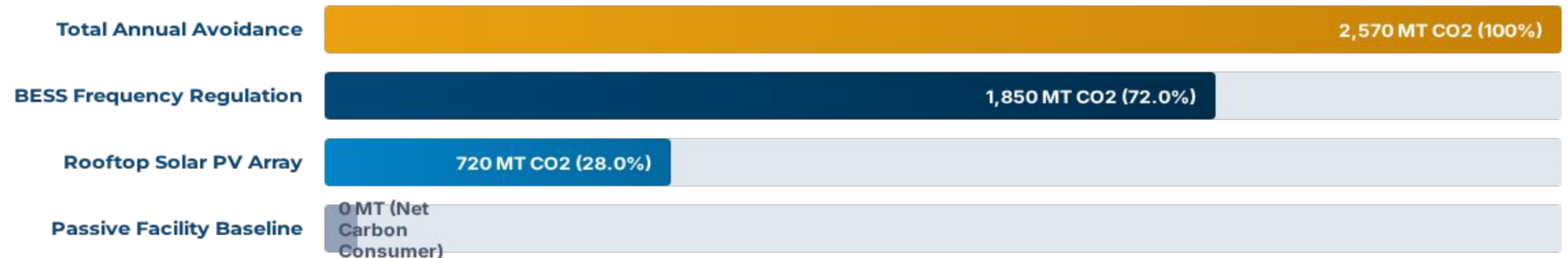
critical systems with battery
backup

IG is paid for up-front consulting plus an ongoing share of customer savings/earnings

ATTRACTIVE PROJECT ECONOMICS

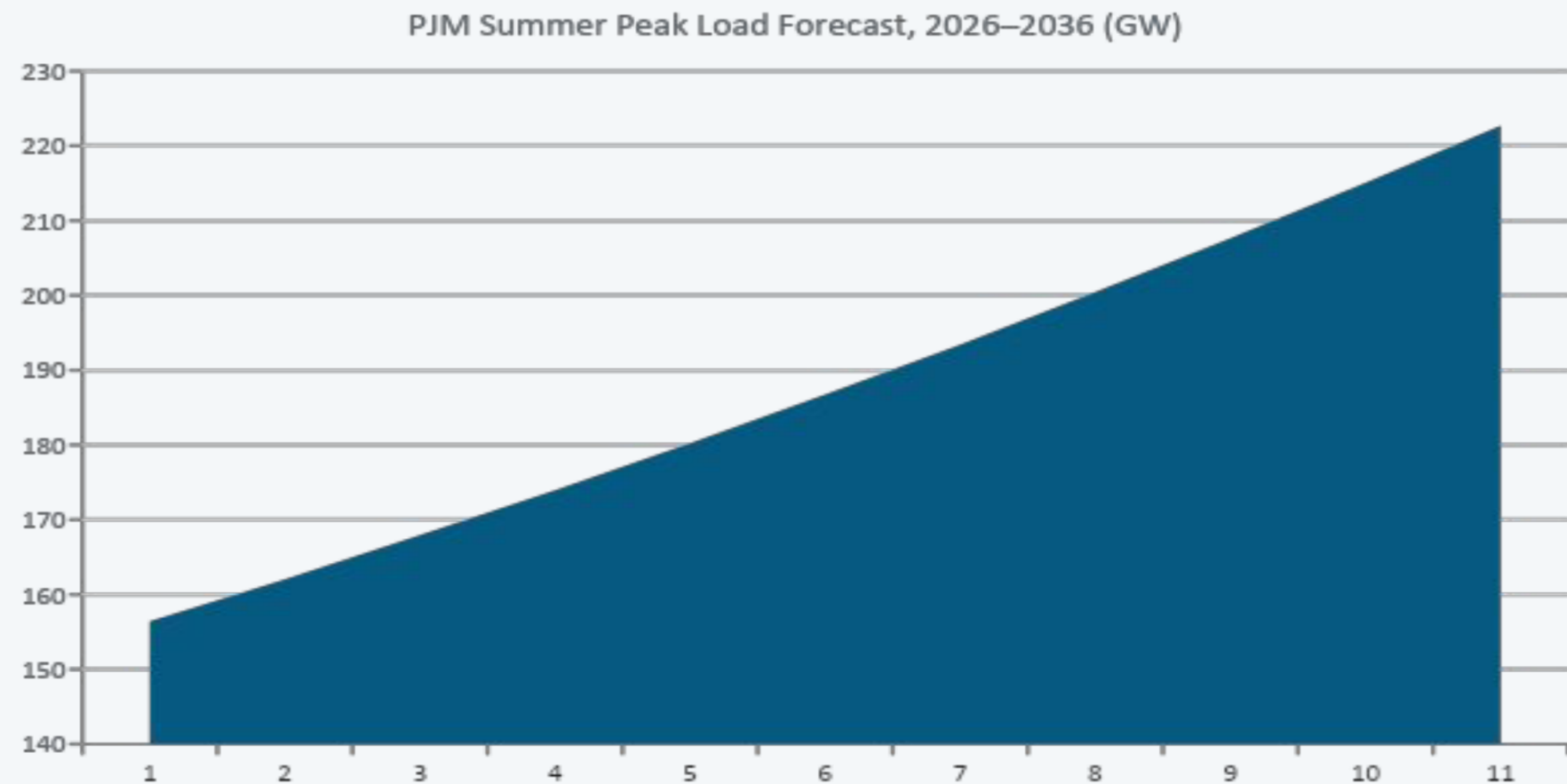
Initial system investment:	\$2-5M (depending on peak load etc.)
Payback time in IL:	2-3 years (after tax, depreciation)
Rate of Return	15-30%
Recurring savings:	30-50% off energy expense for 10-15 yrs

EMISSIONS AVOIDANCE PROFILE



GRID-LEVEL CARBON ABATEMENT: In an illustrative project (600 kW PV + 750 kW / 3 MWh BESS), fast-responding battery storage achieves 1,850 metric tons of CO2 offset annually—over 2.5x the generation of the solar array alone.

AI Speed to Power: ~43% increase Predicted in PJM Peak Load



+224 GW nationally

NERC's 10-year forecast for US summer peak demand — a 24% jump from 2025, driven mostly by data centers.

156 → 223 GW in PJM

PJM's own 2026 Long-Term Load Forecast: summer peak up ~43% by 2036,

43 GW / ~14 GW

PJM's projected new-storage need by 2045 (Brattle Group), and MISO's potential capacity deficit by summer 2029 (RTO Insider) absent faster builds.

How will we: 1) individually shield from further spiraling of energy costs; and 2) collectively finding cleaner capacity solutions that strengthen the Grid?

Illustrative compound path consistent with PJM's published 156.4 GW (2026) and ~222 GW (2036) anchors at its reported 3.6%/yr average; PJM's actual year-to-year path is non-linear (a near-term dip through 2032, then steeper growth).

Sources: PJM 2026 Long-Term Load Forecast Report (Jan. 2026); NERC 2025 Long-Term Reliability Assessment; Brattle Group analysis for the US Energy Storage Coalition (via Convergent Energy and Power); FlexGen / RTO Insider (MISO).

How will we meet the AI capacity challenge?

BYO Generation



OR

Intelligent Generation VPP





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