



Energy to do more®

WELCOME TO

Powering the Future

Natural Gas. Fueling Tomorrow's Energy Needs.

May 15, 2026 | UGI Utilities Learning Center, Reading, PA

Housekeeping Items:

- Emergency Exits are marked at the back and front of the space
- Bathrooms are out the back door and to the left
- This event is being recorded
- Scan the QR code to submit your questions for speakers and panelists. You can also find this code on your agenda.



Safety Moment



Rhiannon Hazzard
UGI Utilities
Manager, Strategic Growth

Andy Rohrer
UGI Utilities
Relationship Manager

Craig Blume
UGI Utilities
Relationship Manager

Joe Figueroa
UGI Utilities
Relationship Manager

Joe Calhoun
UGI Utilities
Technical Manager,
Strategic Markets

Welcome



Dan Adamo
UGI Utilities
VP, Customer Relations



The State of Energy

The Independent System Operation & Regional Transmission Organizations' Perspective



Brian Fitzpatrick
PJM Interconnection



UGI: Powering The Future

A View of The State of Energy from PJM

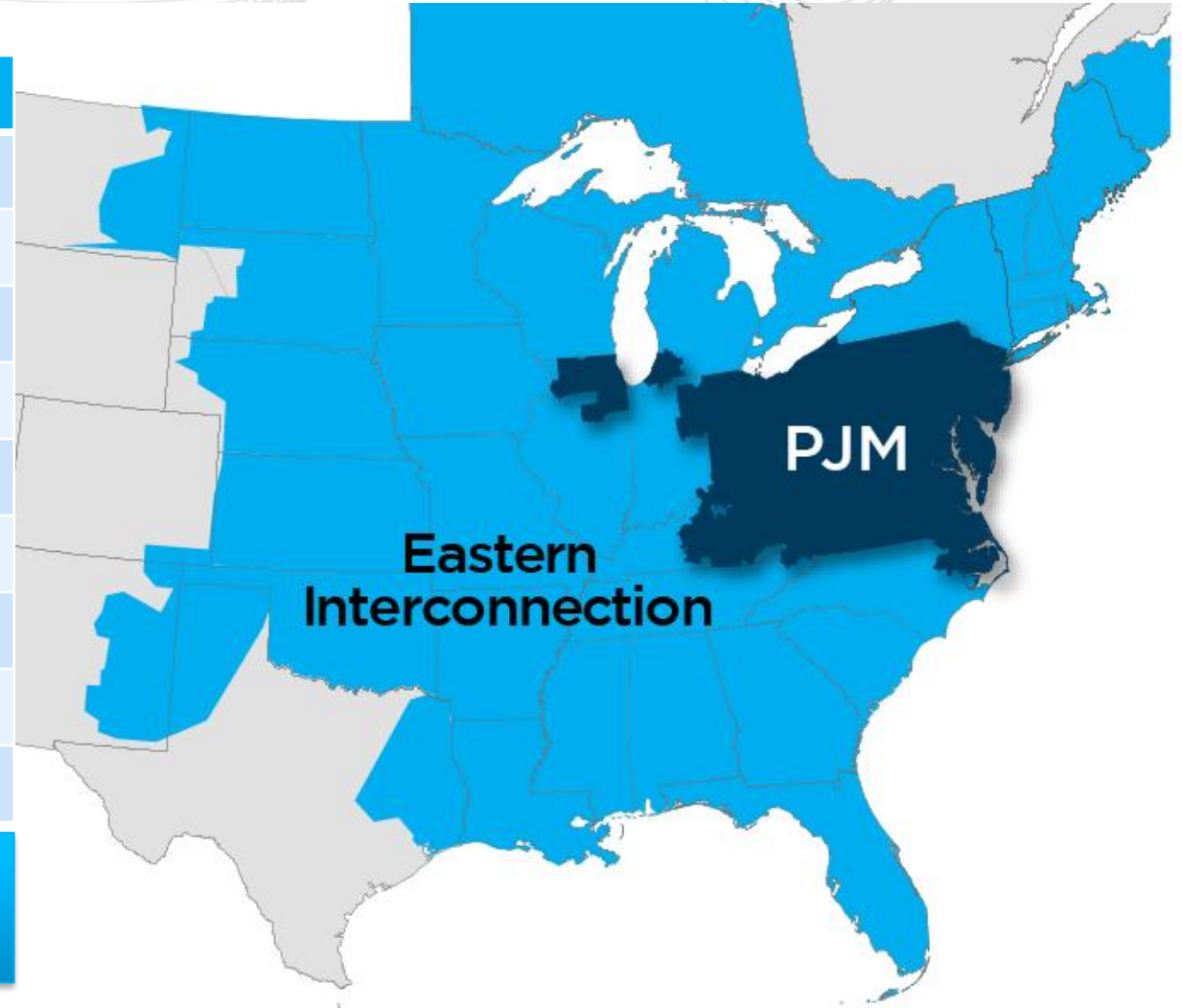
Brian J Fitzpatrick
Principal Fuel Supply Strategist
PJM Interconnection, LLC

May 15th, 2026

Key Statistics

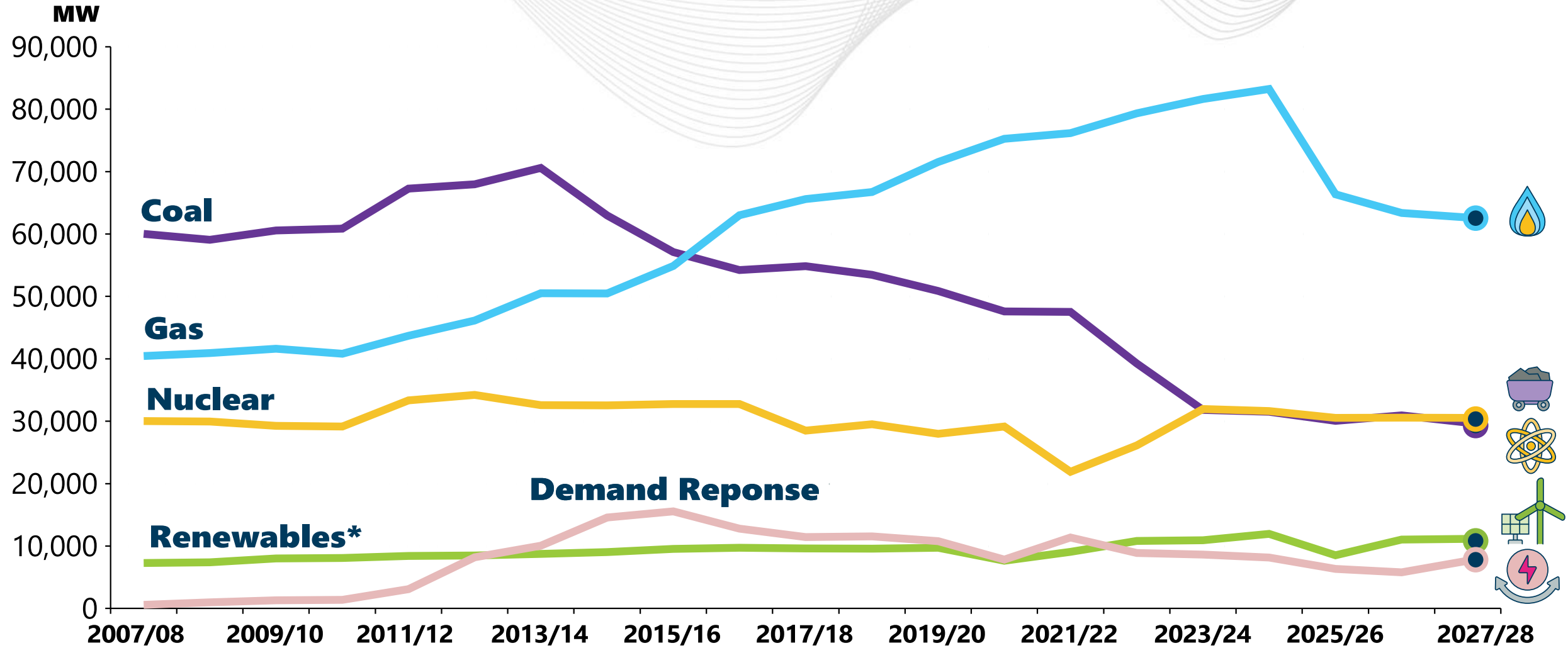
Member companies	1,116
Millions of people served	67+
Peak load in megawatts	165,563
Megawatts of generating capacity	185,989
Miles of transmission lines (Bulk Electric System)	88,417
Gigawatt hours of annual energy	828,161
Generation sources	1,673
Square miles of territory	368,906
States served	13 + DC

- 25.6% of generation in Eastern Interconnection
- 25.2% of load in Eastern Interconnection



As of 2/2026

Committed Unforced Capacity



*Renewables include solar, wind, hydro and wood. Note: All values include capacity cleared in RPM BRA or committed in FRR plan

Nuclear: **31.3%**

Coal: **16.5%**

Oil: **0.3%**

Other: **8.6%**

Gas: **43.3%**

Solar: **2.9%**

Water: **0.8%**

Waste: **0.4%**

Methane: **0.5%**

Wood: **0.2%**

Wind: **3.7%**

(% Annual Energy)

~ 90 GW
of installed gas
generation

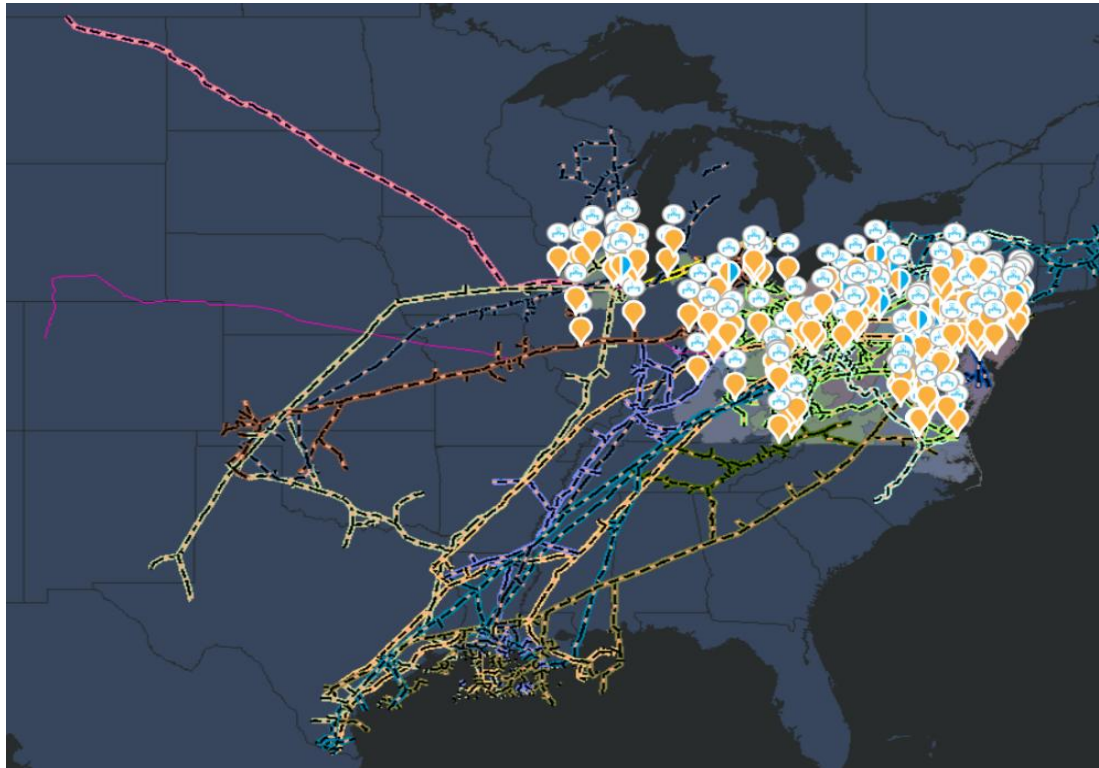
80%
served directly by
interstate pipelines

19.8%
served by local
distribution companies

0.2%
served via gas
gathering systems

29%
dual
fuel

51%
firm delivery –
gas only



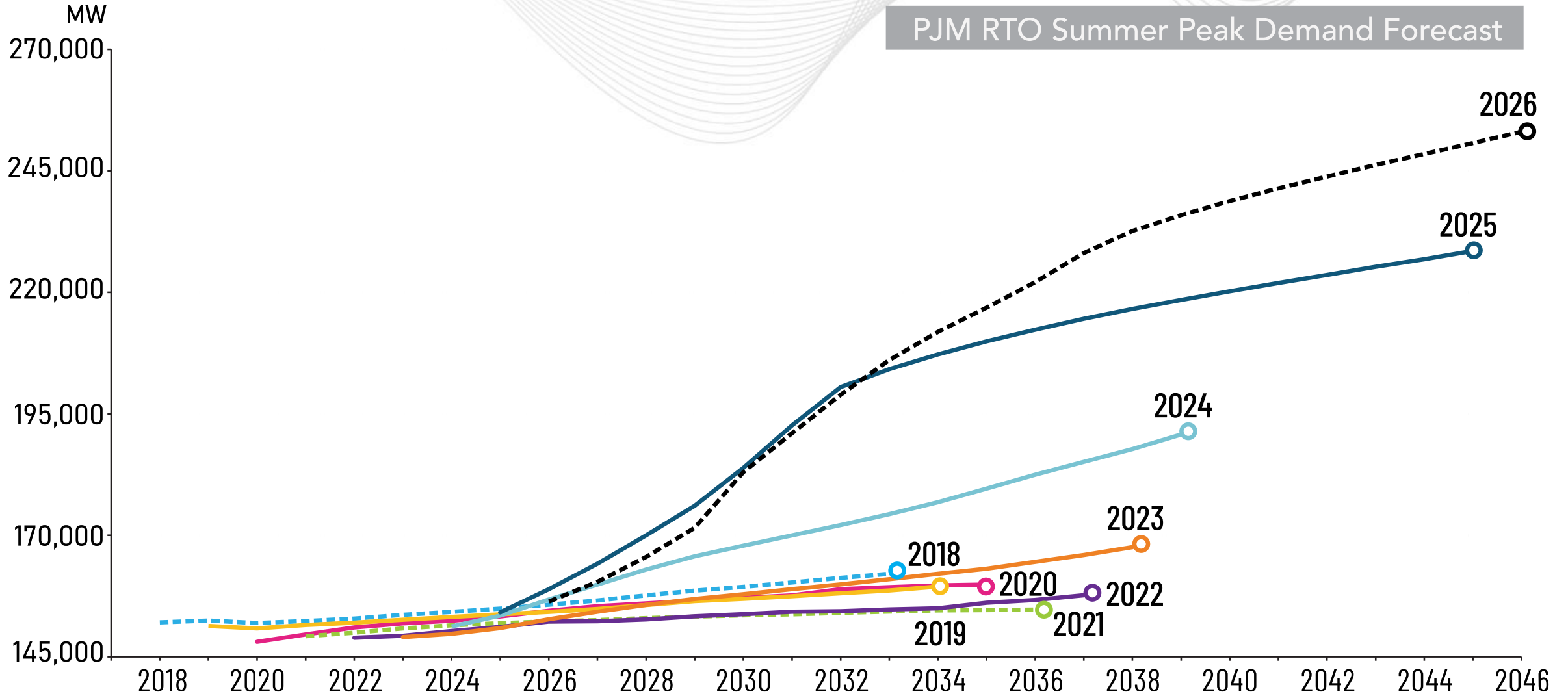
25
interstate
pipelines
serving the PJM
system

32
local
distribution
companies across
the footprint



Electricity Demand Growth

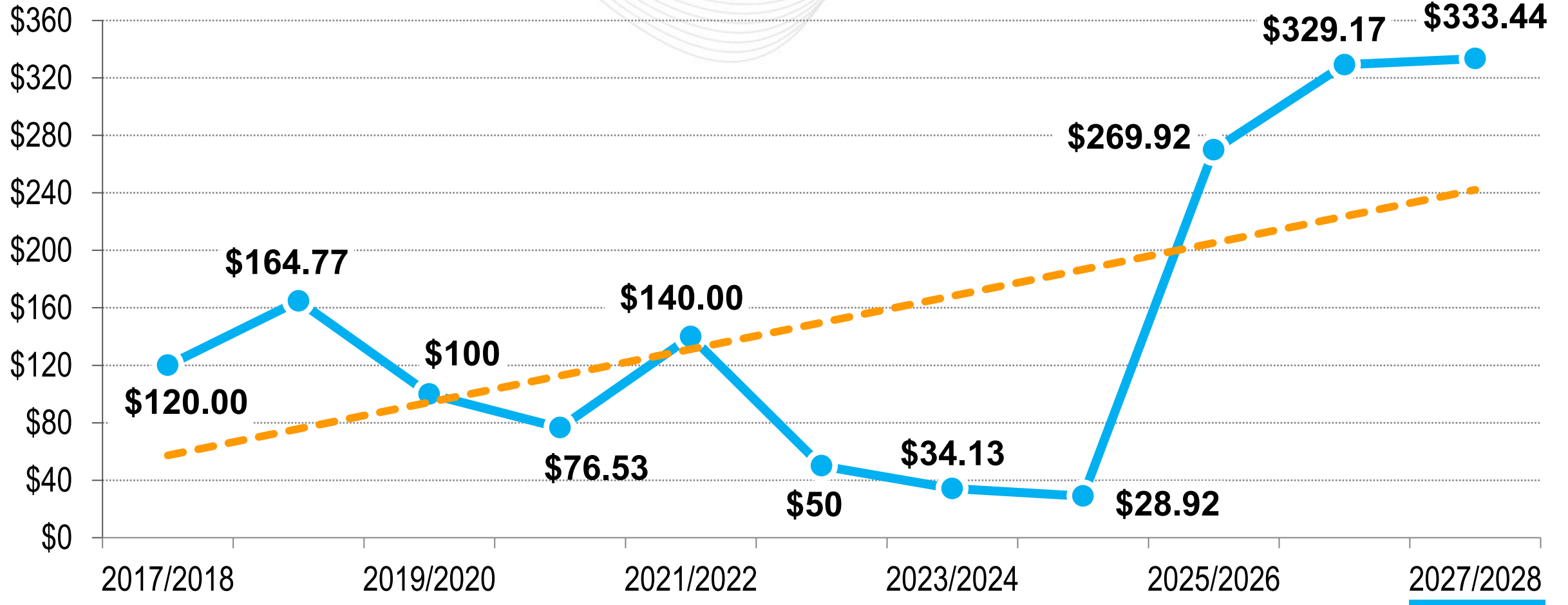
PJM RTO Summer Peak Demand Forecast

















2027/28 RPM Base Residual Auction RTO Clearing Prices

\$/MW-Day

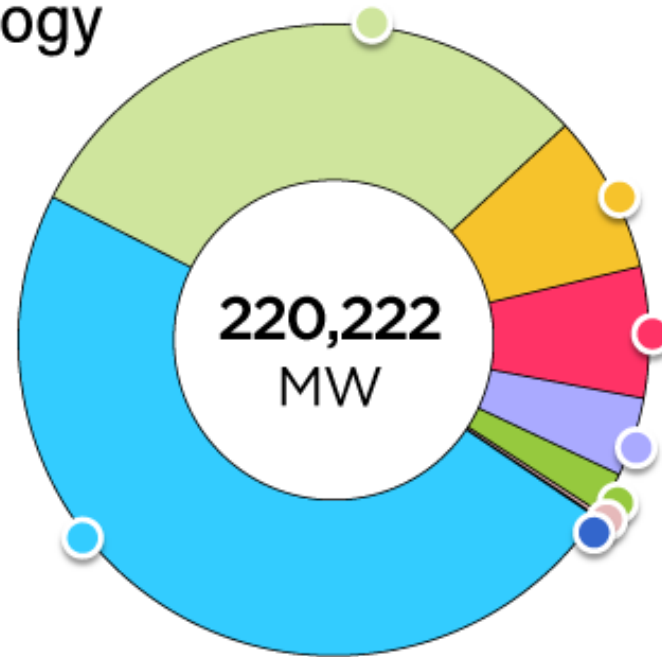


Action Taken	Associated Dates
 <p>Significant Load Forecasting Improvements</p>	 <p>In place for 2027 Load Forecast</p>
 <p>Price Cap and Floor</p>	 <p>Extended through Base Residual Auctions 28/29 and 29/30, <i>pending FERC approval</i></p>
 <p>Bring Your Own New Generation and Expedited Interconnection Track</p>	 <p>In place by August 2026</p>
 <p>Reliability Backstop Procurement</p>	 <p>Stakeholder discussions underway</p>
 <p>Curtailment of Data Centers Not Bringing New Generation</p>	 <p>In place by end of 2026</p>
 <p>Study on Market Incentives for New Supply</p>	 <p>Conduct analysis in first half of 2026</p>

Cycle 1 Submissions by Fuel/Technology Type (MWE)

No. of Units:

811
Generation
Interconnection
Submissions



● Natural Gas , 105,797 MW <i>Includes single and dual fuel</i>	157
● Storage , 67,465 MW	349
● Nuclear , 17,906 MW	27
● Solar , 14,781 MW	142
● Solar/Storage , 8,890 MW	45
● Wind , 4,726 MW	65
● Hydro , 151 MW	11
● Other , 506 MW <i>Biomass, Coal, Methane, Fusion</i>	15

As of April 28, 2026

- Will the load show up?
- State energy policy alignment
- Natural gas infrastructure buildout speed
- Competition for firm gas molecules (and pipeline/storage capacity)
 - LNG exports, gas-fired generation, data centers, LDC growth
- Physical component (i.e. turbines/generators) backlog
- Continued misalignment/inefficiencies in gas electric coordination space
- The role of AI and technical workforce needs

Presenter/SME:
Brian Fitzpatrick, brian.fitzpatrick@pjm.com



Member Hotline

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Combined Heat & Power

Overview and Energy Efficiency Rebates



Eric Burgis
Energy Solutions Center



Michael Schilthuis
UGI Utilities
Manager, EE&C





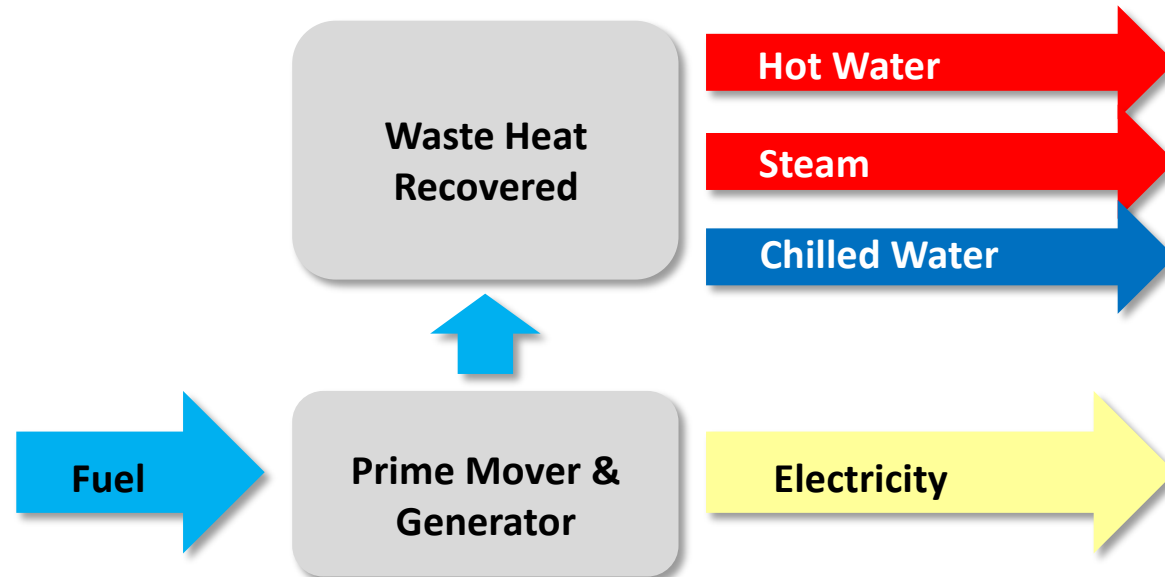
**ENERGY
SOLUTIONS
CENTER**

Combined Heat & Power Overview – May 15, 2026

Eric Burgis, Energy Solutions Center

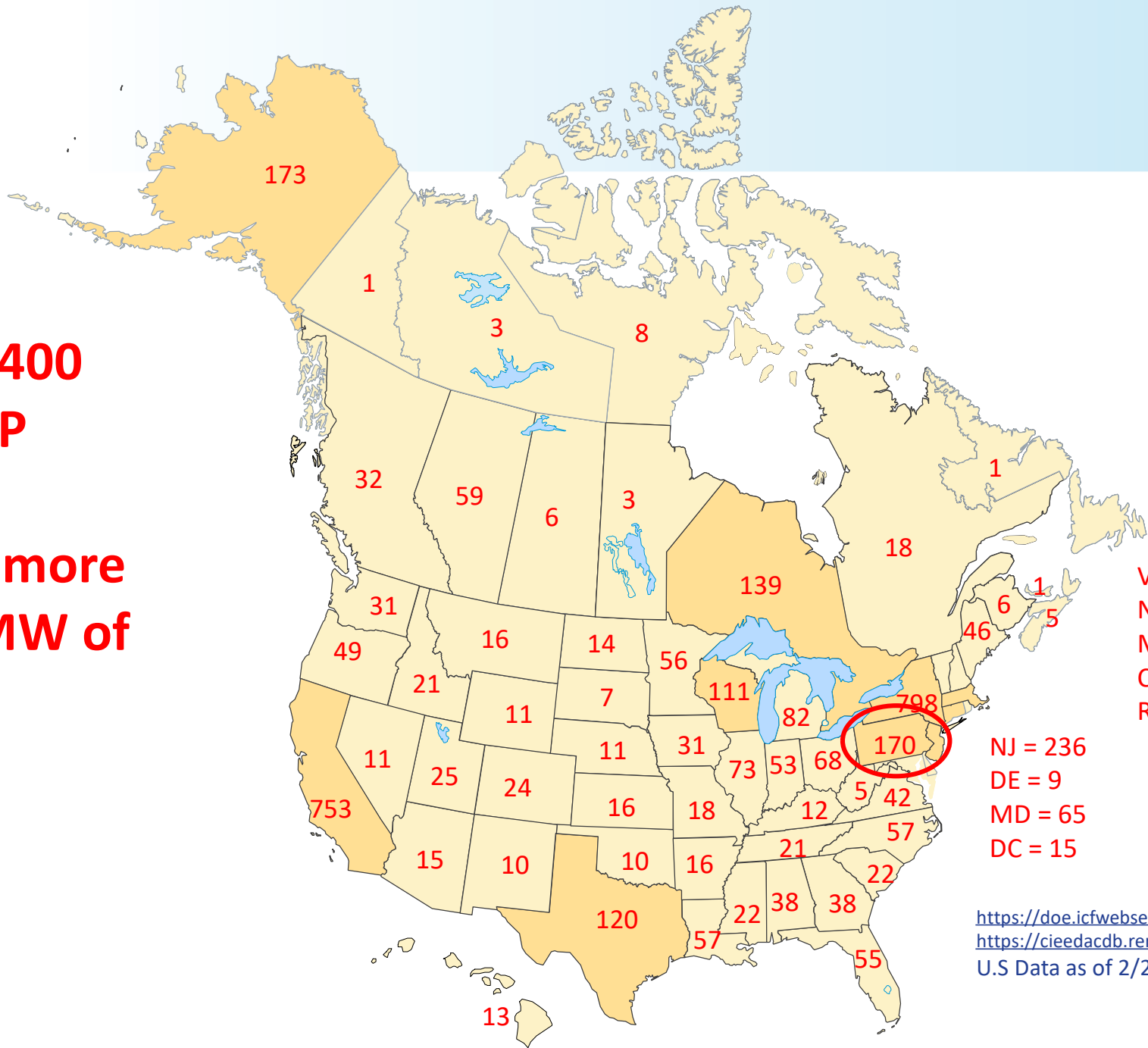
What is CHP?

Combined Heat and Power (CHP) by definition is the generation of two forms of energy from one common source of fuel also known as Cogeneration.



of CHP Sites

There are ~ 4,400 sites using CHP across North America with more than 86,000 MW of CHP Capacity.



In the U.S., CHP capacity is equal to about 6.1% of total power plant generation name plate capacity.

- VT = 33
- NH = 22
- MA = 247
- CT = 190
- RI = 29
- NJ = 236
- DE = 9
- MD = 65
- DC = 15

<https://doe.icfwebservices.com/downloads/chp>
<https://cieedacdb.rem.sfu.ca:8006/data-overview/>
 U.S Data as of 2/26/26, Canadian Data for 2025

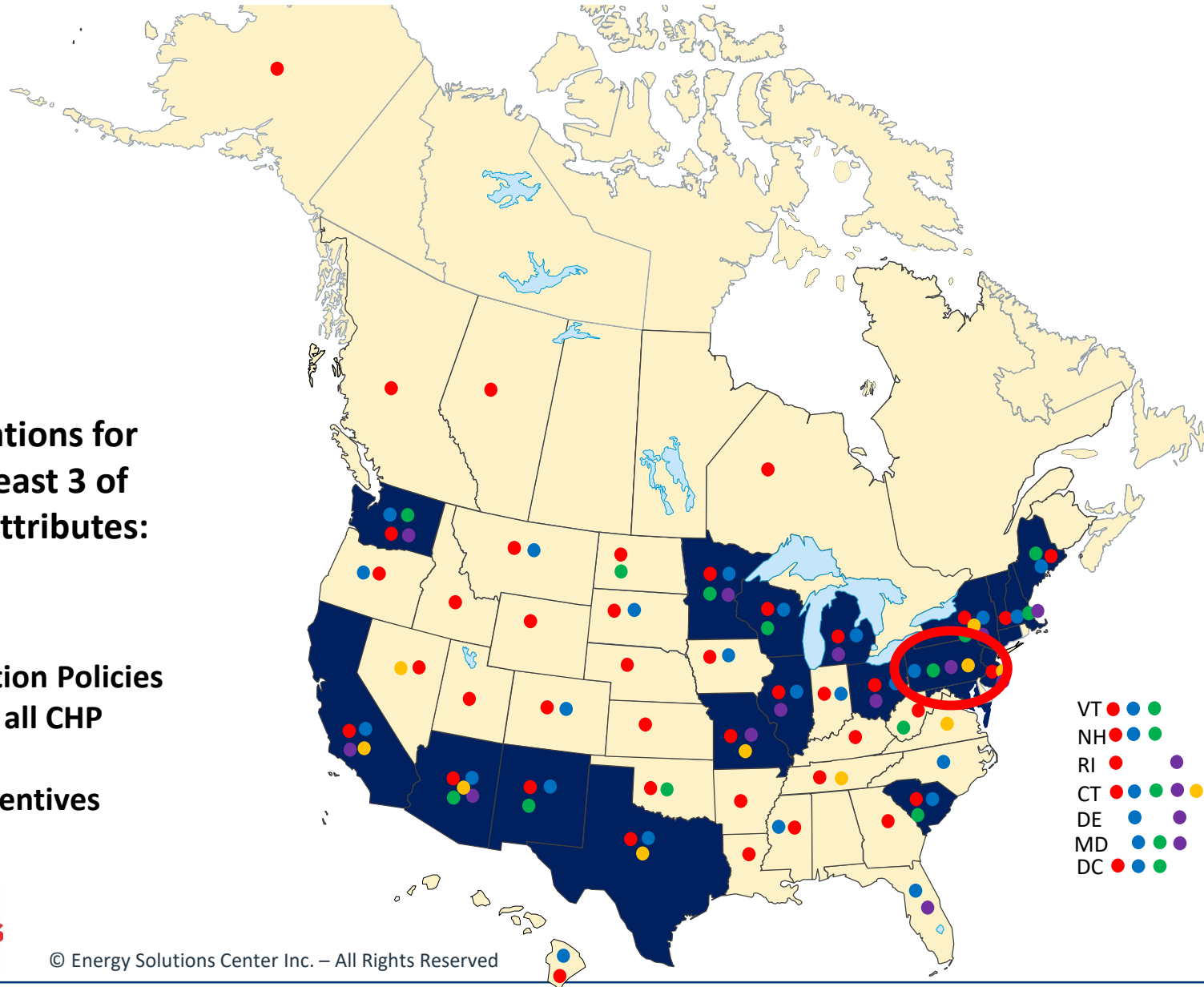


Best Locations for CHP

The 'Best' locations for CHP have at least 3 of the following attributes:

KEY

- Spark Spread > 3
- CHP Interconnection Policies
- Net Metering for all CHP
- CHP Tariff Rate
- State or Local Incentives



- VT ● ● ● ●
- NH ● ● ● ●
- RI ● ● ● ●
- CT ● ● ● ● ● ●
- DE ● ● ● ● ● ●
- MD ● ● ● ● ● ●
- DC ● ● ● ● ● ●

**PA Ave 2025
Commercial Spark
spread is 2.93**
(\$12.57/MMBTU Gas &
\$.1244/kWH)

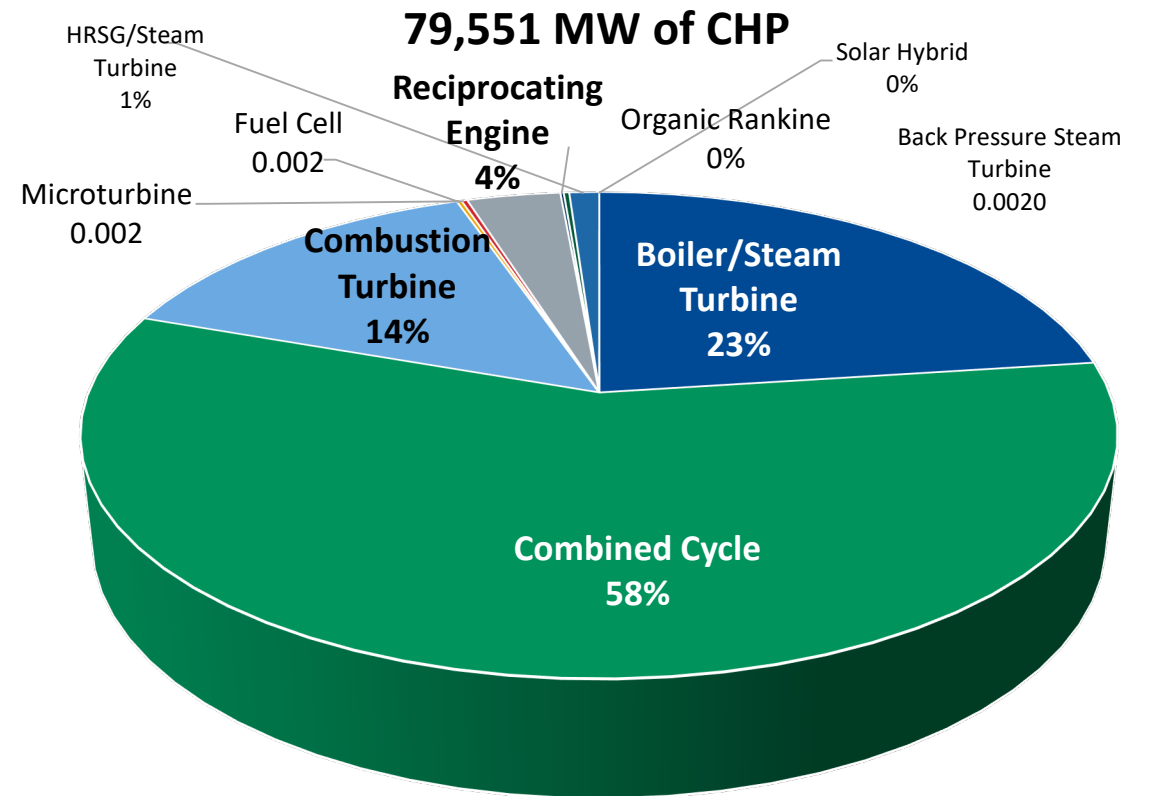
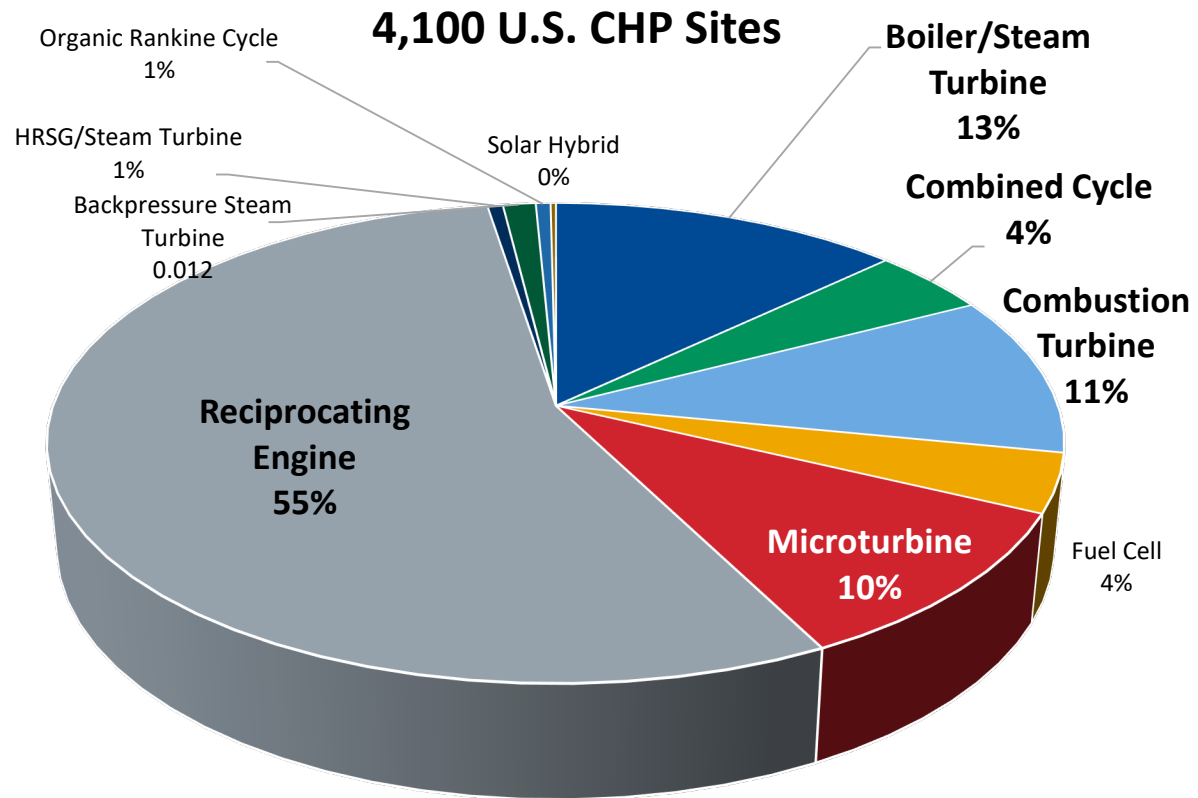
**PA Interconnection
Policies up to 5 MW**

**PA Net Metering
policies up to 3 MW**

**UGI Rebates at
\$750/kW not to
exceed 50% of project
cost or \$250K**

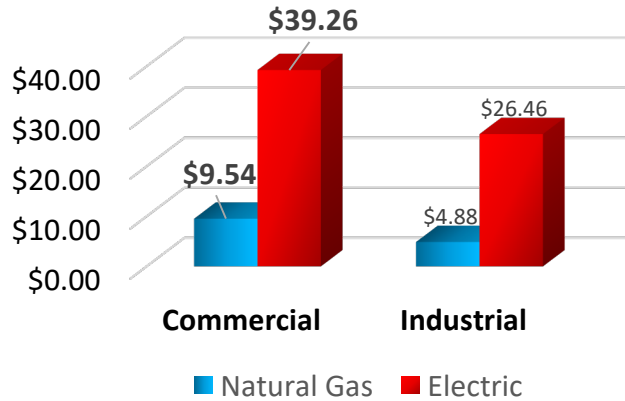


CHP Installations by Technology (U.S.)

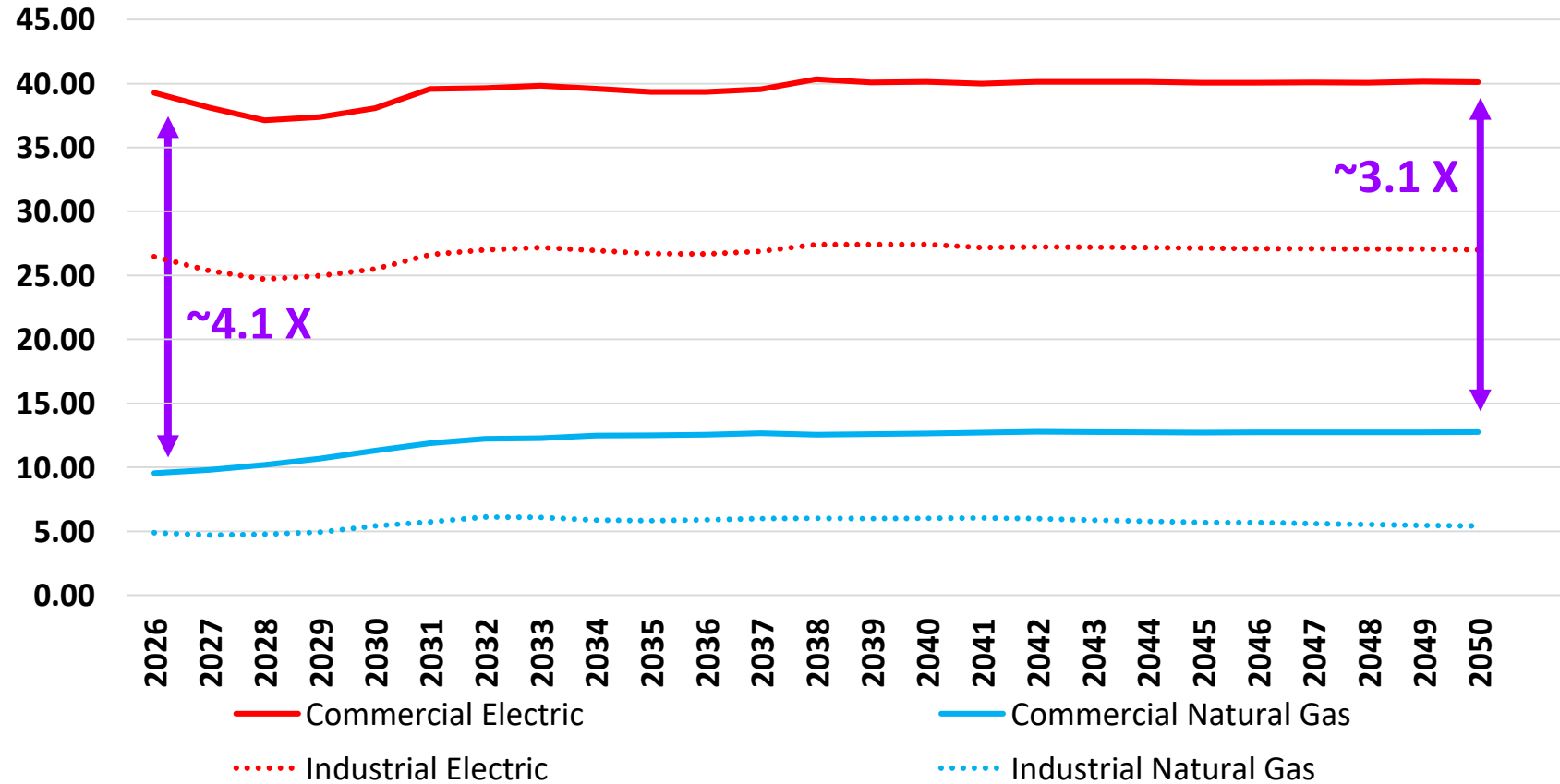


Source Efficiency Impacts Retail Costs

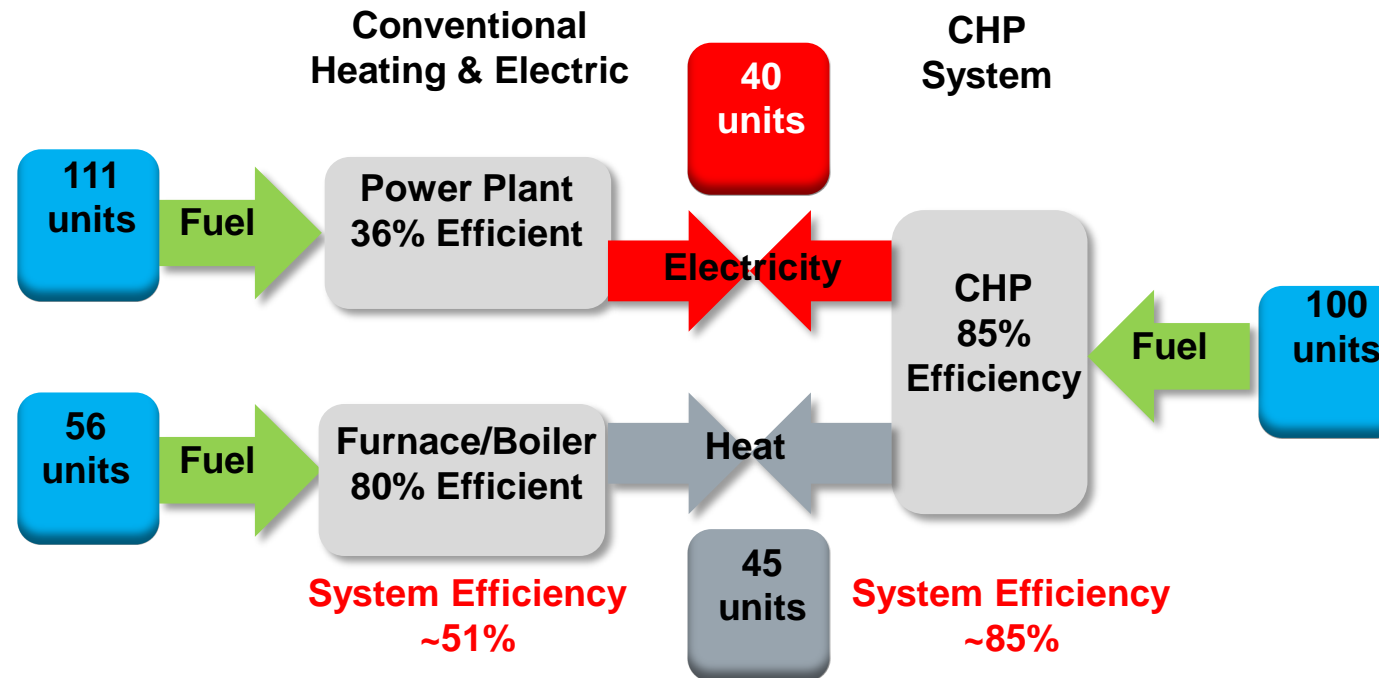
2026 Average Retail Energy Prices (\$/MMBTU)



Projected Energy Prices from EIA's Annual Energy Outlook (\$/MMBTU)

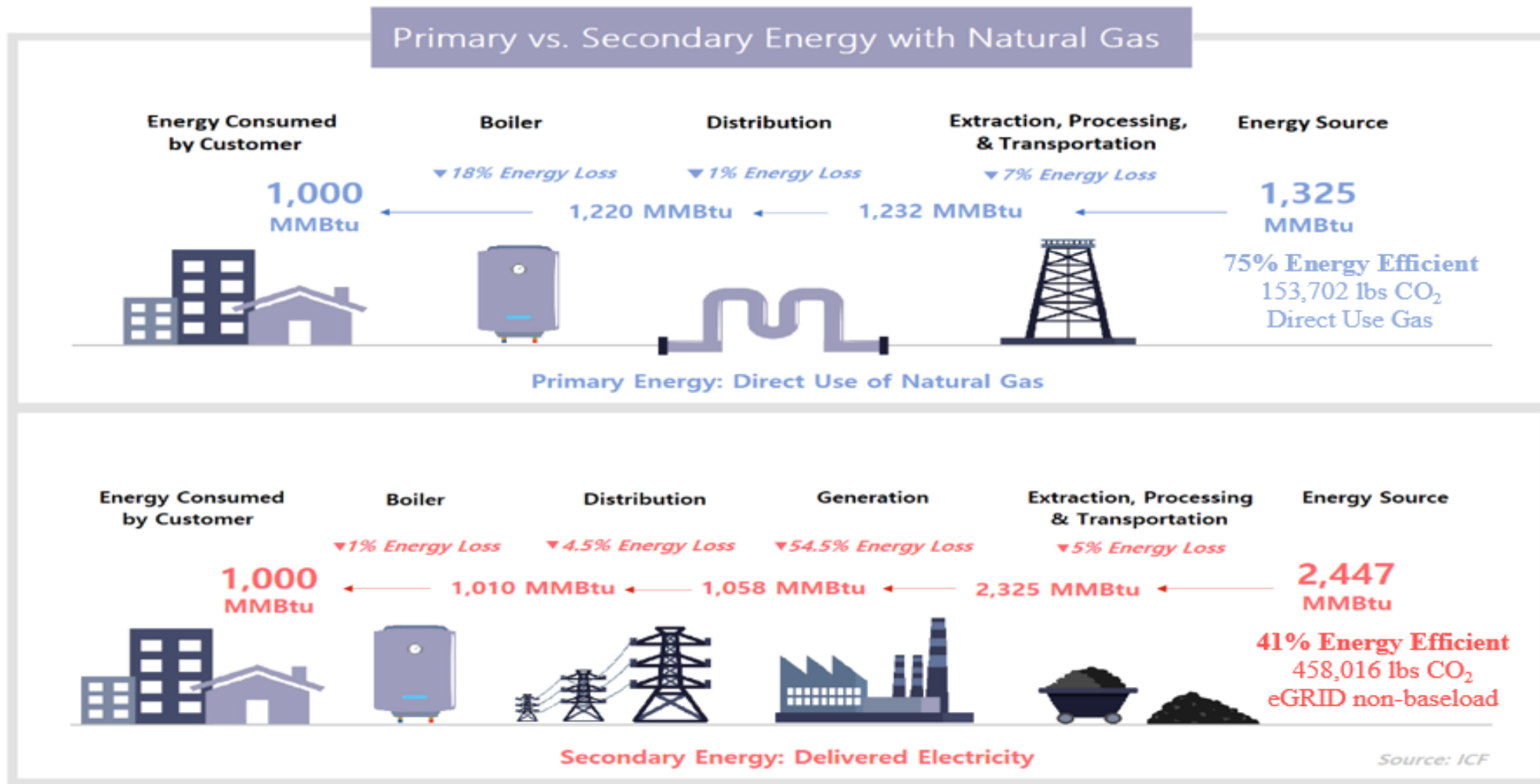


CHP is more Efficient



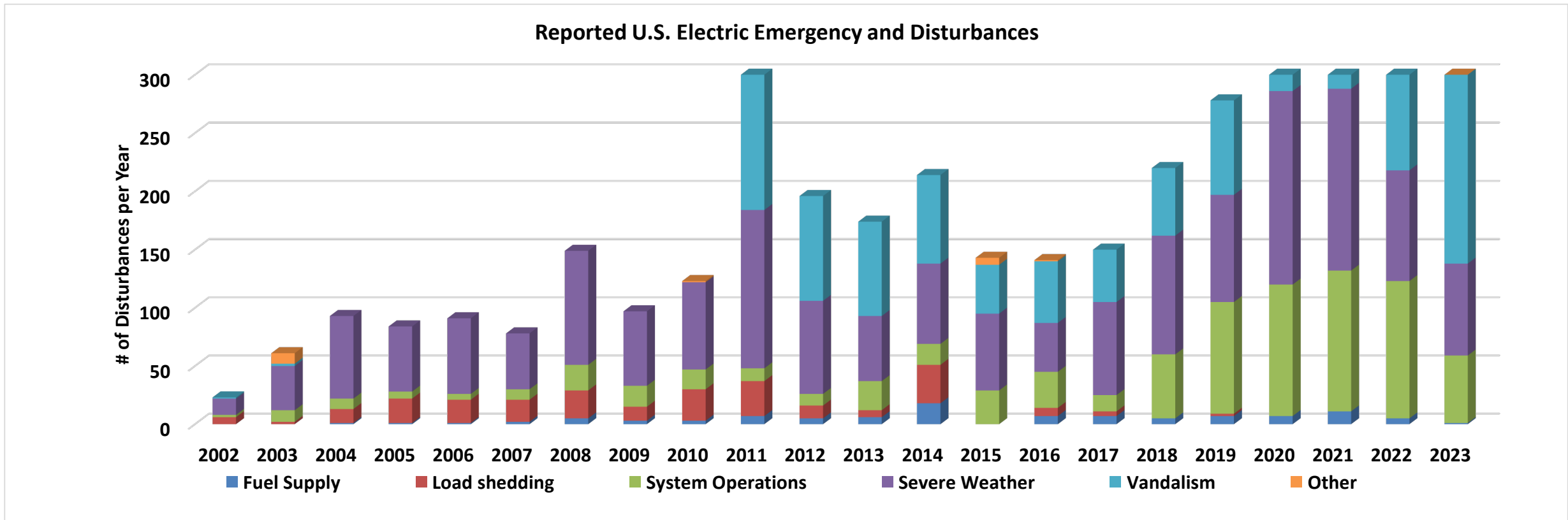
Compared to purchasing electric from the grid and producing heat with a furnace or boiler for the home or business, CHP is much more efficient.

CHP is more Efficient than Source Energy

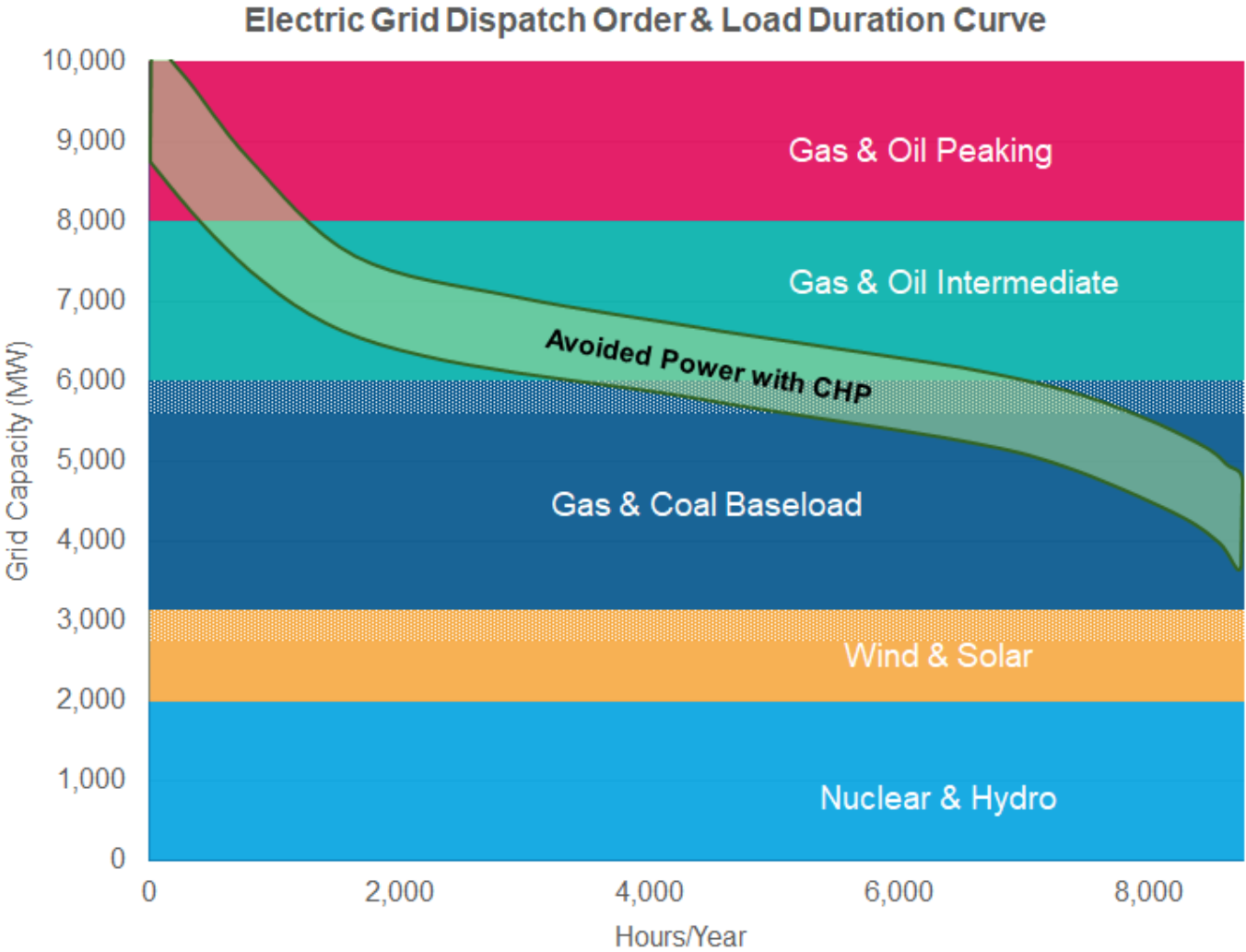


CHP Systems Reduce Grid Demand and Help Stabilize it

- The electric grid is stressed with congestion and constraints leading to more outages
- Offers reliability during outages – less downtime



Avoided Power with CHP Example



Life Cycle Cost & Emissions Calculator

Understanding
CHP



HOME ▾ OVERVIEW ▾ TECHNOLOGIES ▾ WASTE HEAT ▾ RESOURCES ▾ INSTALLATIONS ▾ BLOG 🔍

Combined Heat & Power – CHP Calculator Tool A Simple ROI Analysis Calculator for CHP Technology

This ROI calculator provides a simple payback calculation for various CHP technologies based on the size and energy rates. The calculations use average pricing, efficiencies, & maintenance costs provided in the CHP Technology Catalogs available from the Combined Heat and Power partnership of the EPA. This calculator also shows the carbon emissions reductions from a CHP system based off of eGRID data.

The results produced by use of this tool are intended solely as a preliminary evaluation of a potential CHP installation. For a more detailed and exact evaluation, you should seek the assistance of a qualified engineering firm with input from the appropriate manufacturers of power generation equipment.

Simple Payback
Analysis Tool (Excel)

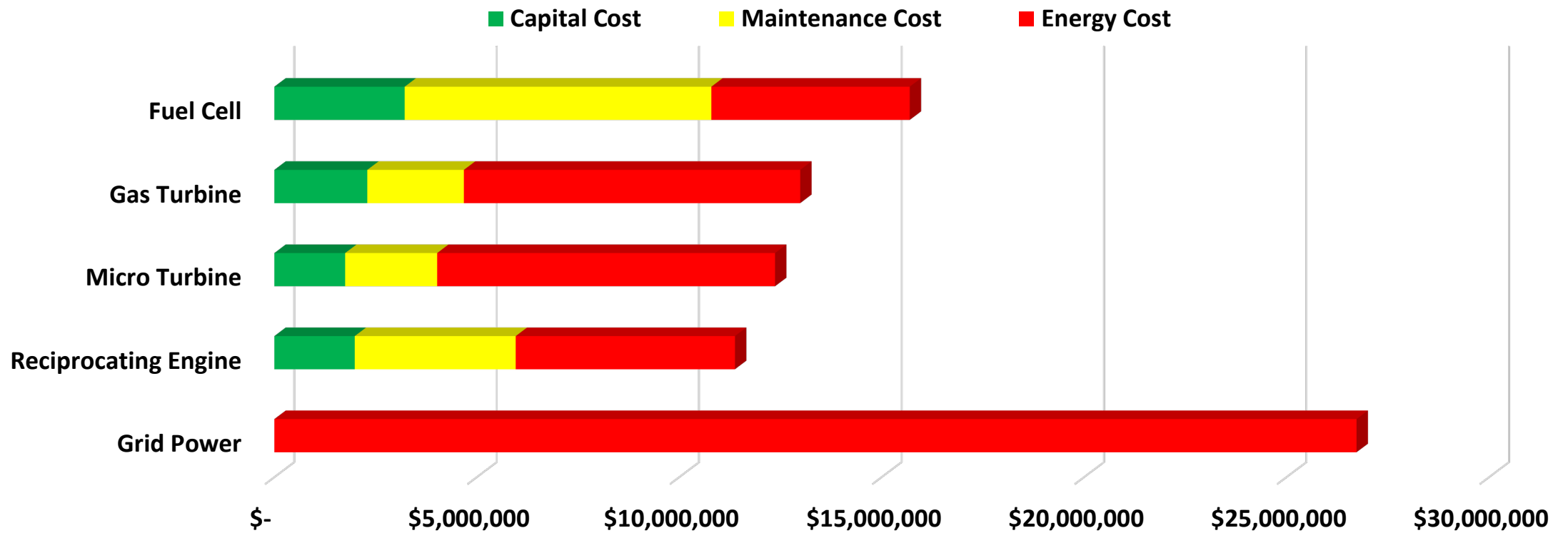
LAUNCH
CALCULATOR



<https://understandingchp.com/resources/payback-tool/>

CHP Life Cycle Cost Analysis

CHP 20 Yr Life Cycle Cost Analysis



Tool Assumptions & Simple Payback



Combined Heat & Power (CHP) Simple Payback Analysis

Use this tool to review various CHP equipment simple payback options.

FOR MORE INFORMATION VISIT OUR WEBSITE

Company/Customer Name

Facility/Site Location

User Inputs:

1. Size CHP Electric Generator (KW)	1,000	8. Ave. Electric Usage Rate (\$/KWH)	\$ 0.14
2. Hours of Cogeneration (/Year)	8,500	9. Electric Demand Charge (\$/KW)	\$ 10.00
3. Number of months generating power	12.00	10. Ave. Natural Gas Rate (\$/MMBTU)	\$ 7.00
4. # Years CHP Plant will be Financed	20	11. Gas Rate for CHP (\$/MMBTU)	\$ 7.00
5. Interest Rate on Loan for Installed Cost	5%	12. Please select Emissions Profile	US Average Fossil
6. Investment Tax Credit	<input type="text"/>	and state/province/region	US Average
7. CHP Incentive (\$)	\$ -	e-GRID Sub-Region Map	
		Percent Carbon Free Gas Used	0%

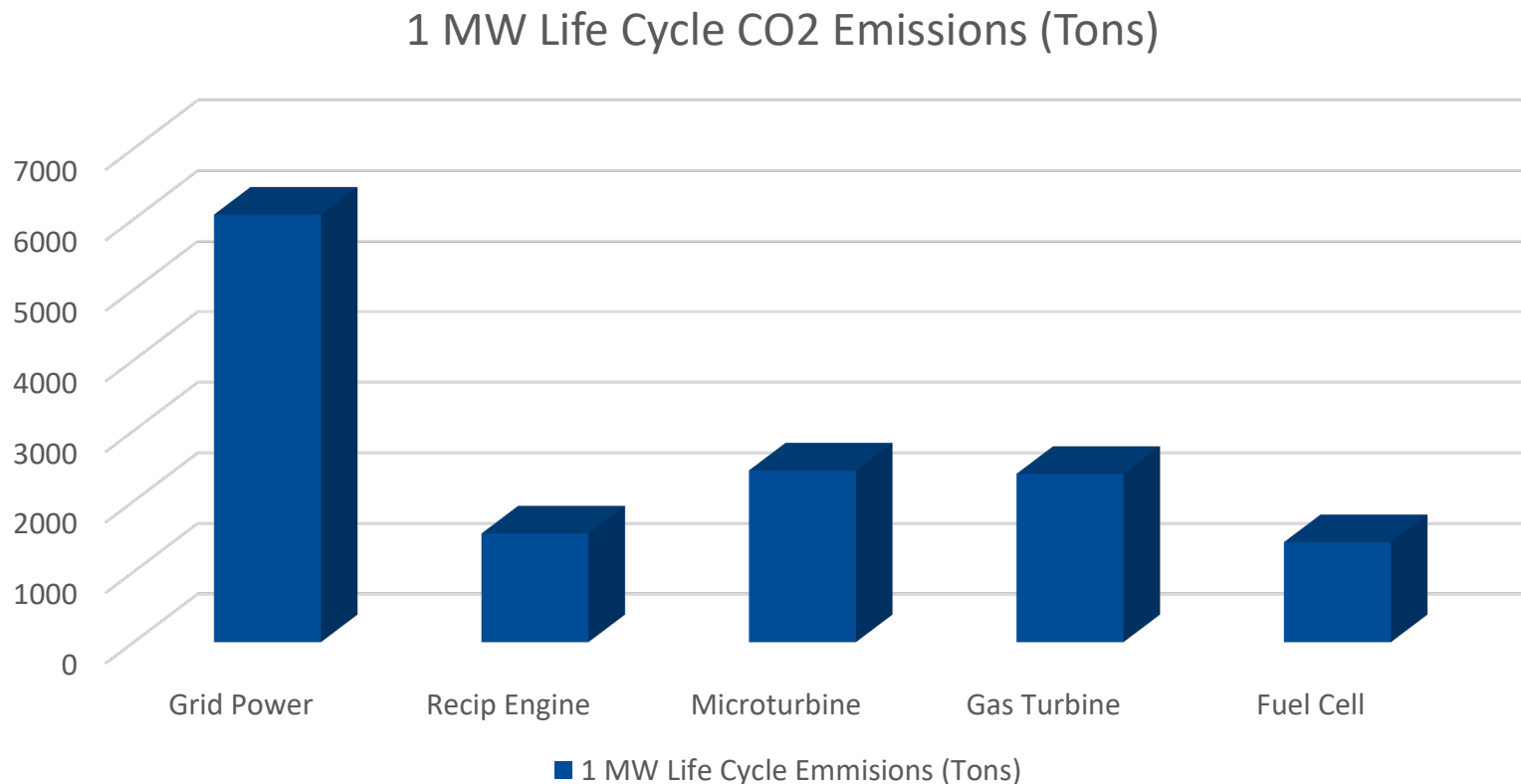
Simple Payback (Years)	3.5	3.5	4.6	6.7
------------------------	-----	-----	-----	-----

Recip. Engine Micro Turbine Gas Turbine Fuel Cell

CHP Size (KW)	1,000	1,000	1,000	1,000
Installed Cost	\$2,837,000	\$2,500,000	\$3,281,000	\$4,600,000
Federal CHP Investment Tax Credit	\$0	\$0	\$0	\$0
Cost Less CHP Incentive(s)	\$2,837,000	\$2,500,000	\$3,281,000	\$4,600,000
Ave. Annual Maintenance Cost	\$178,500	\$102,000	\$107,100	\$340,000
Power Produced (KWH)	8,500,000	8,500,000	8,500,000	8,500,000
Annual Electric Saved on Demand	\$120,000	\$120,000	\$120,000	\$120,000
Annual Electric Savings on Usage	\$1,190,000	\$1,190,000	\$1,190,000	\$1,190,000
Annual Gas Cost for Cogeneration	\$588,420	\$761,287	\$848,199	\$476,000
Recovered Heat (MMBTU/Year)	37,323	39,696	50,589	26,860
Annual Gas savings from waste heat use	\$261,259	\$277,870	\$354,123	\$188,020
Annual O&M cost CHP Plant	\$766,920	\$863,287	\$955,299	\$816,000
Electric and gas utility savings from CHP	\$1,571,259	\$1,587,870	\$1,664,123	\$1,498,020
Total Savings per year from CHP System	\$804,338	\$724,583	\$708,824	\$682,020

Lower Emissions

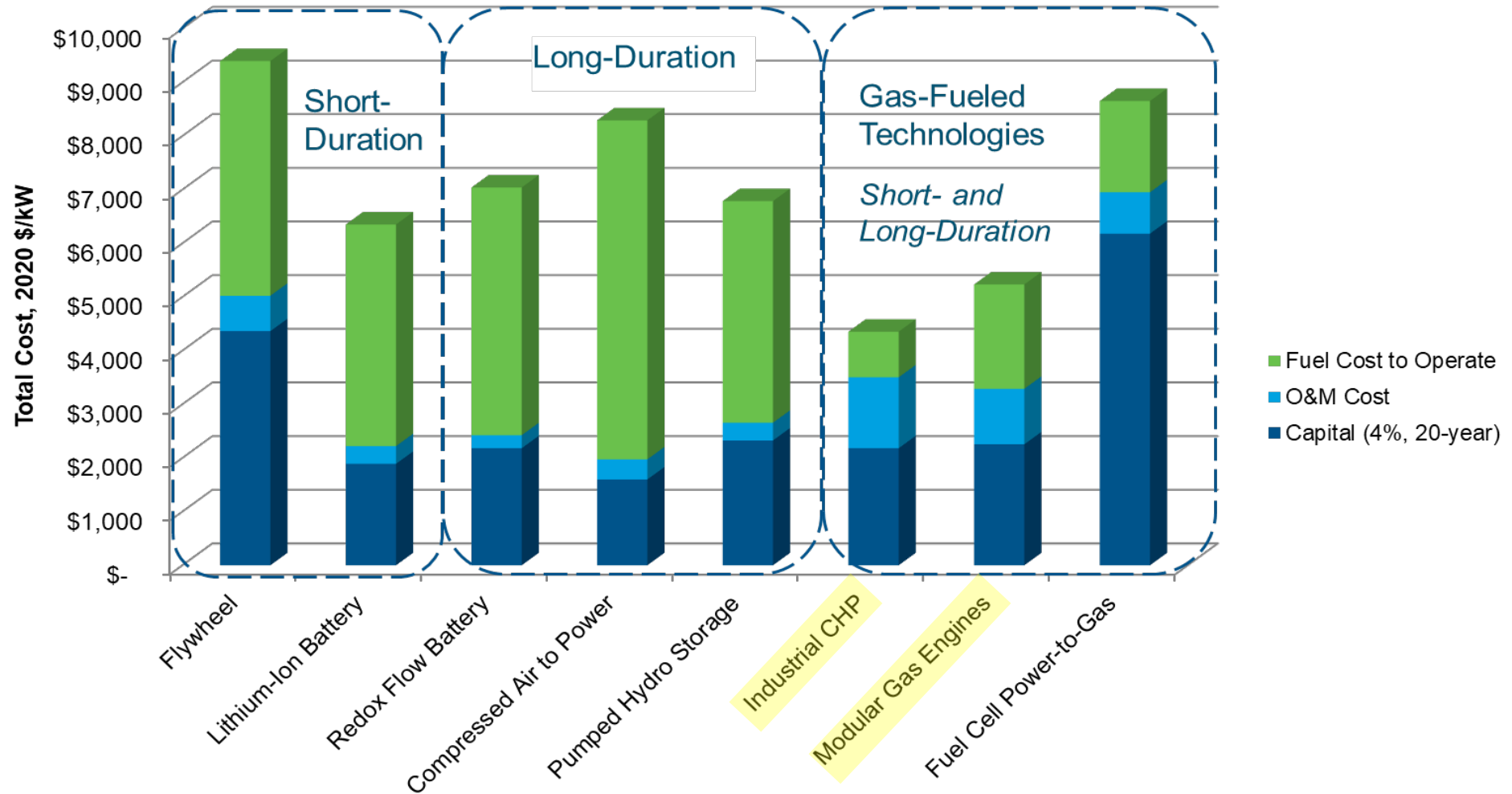
- Environmentally Responsible
 - Produces lower emissions compared to separate power and heat production
 - Conserves natural resources



Cost of Electric Storage

(CHP has lowest Life cycle cost compared to other forms of electric storage)

20-Year Life Cycle Cost Analysis





Thank You

Eric Burgis

eburgis@escenter.org



Energy to do more®

Powering the Future

May 15, 2026

UGI Gas Energy Efficiency Program

- \$68 Million Plan approved through October 2030
- \$50 Million budgeted for incentives
- Residential, and commercial N/NT, DS, and LFD customers
- Programs initially launched in 2012. Life-to-date has paid \$66 Million in customer rebates
- 1,757,792 mcf saved over lifetime of the program



Commercial Equipment Rebates

Equipment ¹	Minimum Efficiency	Rebate
Commercial Boiler (>= 300MBh)	ENERGY STAR®	\$2 / MBh + \$2,000
Unit Heater (Warm air / Low intensity infrared)	90% TE	\$2 / MBh
Commercial Water Heater	ENERGY STAR®	\$4 / MBh
Steam Trap	≤15PSIG	\$50
Commercial Fryer	ENERGY STAR®	up to \$750
Commercial Griddle	ENERGY STAR®	\$600
Dishwasher	ENERGY STAR®	up to \$1,110
Advanced rooftop controls (Gas heating equipment with no existing DCV control systems)	N/A	\$950

- Equipment rebates on a per unit basis
- Simple 10-minute application with proof of purchase
- Can apply for multiple pieces of equipment
- Average Rebate - \$3,900

¹All equipment must be powered by or control equipment powered by Natural Gas except commercial dishwasher. Must apply within 90 days of purchase. Rate Classes eligible are N, NT, DS or LFD.

Commercial Custom Rebate Program

- Rebates based on project financials and energy savings, up to \$100,000 per project.
- Contact UGI during the proposal phase so that UGI can provide an estimate and incorporate into your PO process.
- Recent projects include:
 - Building energy management systems
 - Steam plant de-centralization
 - Tank & Pipe Insulation
 - Linkageless Controls
 - Burner/Control Upgrades
 - Insulation upgrades

UGI's EE&C Rebate Impact



Multi-phase Projects

- Several customers have completed multi-phase projects over different fiscal years
- For example, a customer replaced (2) failing steam boilers with (3) high-efficiency steam boilers and received \$100,000.
- The following year, the same customer installed steam fitting insulation and received \$12,075.

Recent Commercial Project Rebates

- Large retailer installed 17 RTUs with advanced rooftop controls and received a \$16,150 rebate
- Hospital replaced (12) high-pressure steam traps and received a custom incentive of \$5,350
- Food manufacturer upgraded a boiler to linkageless controls and received a custom incentive of \$91,175.
- Manufacturing customer installed a stack economizer on a boiler and received a custom incentive of \$92,750.

Combined Heat and Power (CHP)



- \$1.7 Million through 2030
- Large load customers who have a need for 1-2 MW of electricity and can utilize waste heat
- Rebates of \$750/kW up to \$250,000
- Rate DS and LFD Eligible

For more information...

- Visit our website:
 - <http://www.ugi.com/rebates-for-business/>
- Contact us:
 - Michael Schilthuis, CPA | Manager – EE&C Programs
 - mschilthuis@ugi.com
 - 484-513-1143



Panel Moderator



Scott Staruch
Quantum Communications

Power Generation Panel

CHP, On-Site, Microgrids, & Behind-The-Meter



Jay Pignatello



Moe Barry



Al Neuner
CHP Consultant



Bob Ashton



ENGINUITY
POWER SYSTEMS

UGI – 15 May 2026

The Grid Crisis Is Here — Why CHP Is No Longer Optional



What does this mean for all of us?



PRICE INCREASES



GRID INSTABILITY



Business Risk

Operational Risk

Profit Evaporation

ENGINEUITY
POWER SYSTEMS



Where CHP Fits

Where Does CHP Fit?

High Customer Profile Match

High electricity demand

High thermal demands

Need resiliency

High local electricity pricing / low gas costs

High level of run-time planned

Less of a Fit

No need for therms, just electricity

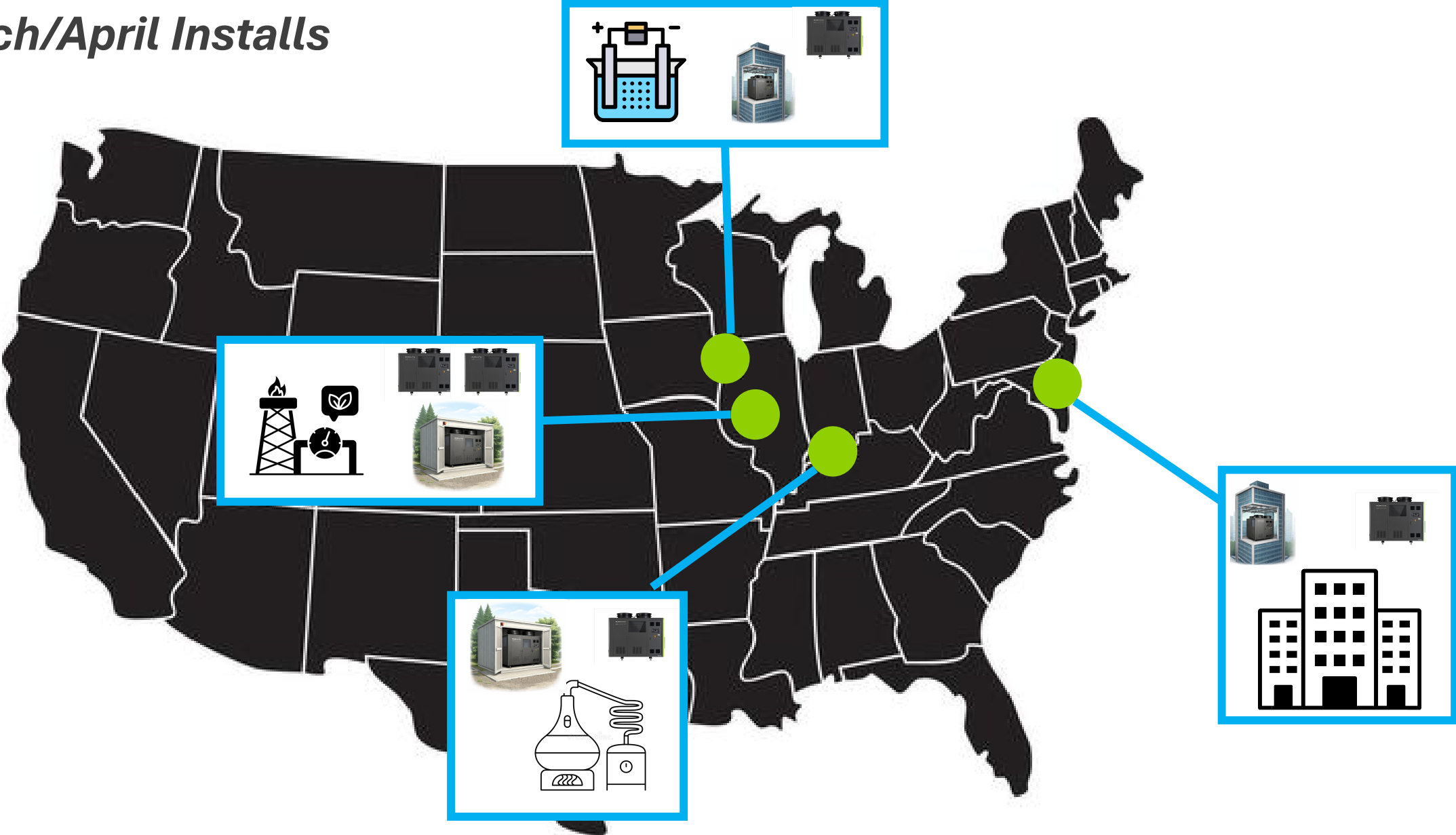
No easy access to natural gas or propane

Low “spark spread”

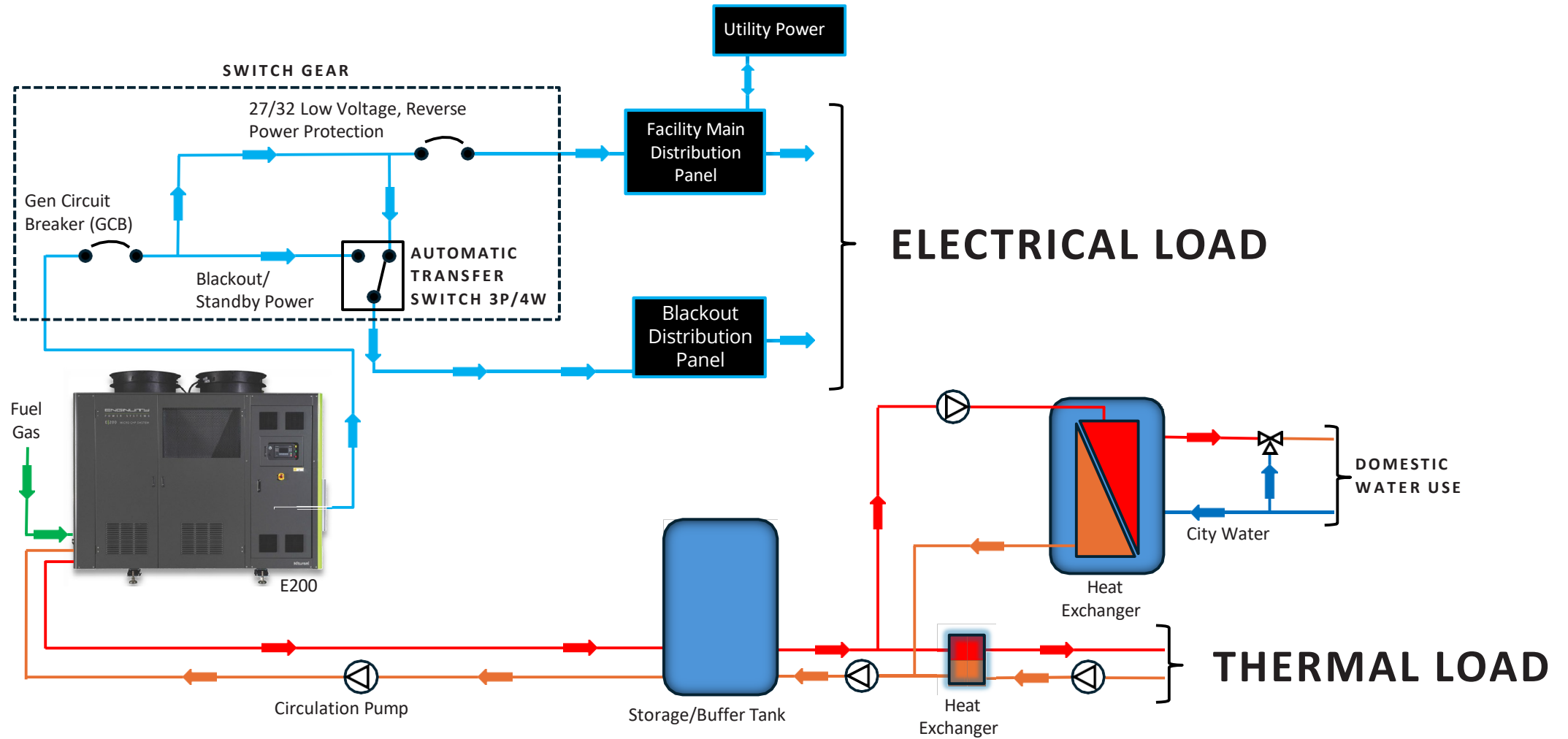
Not willing to handle maintenance cycle

Intermittent usage or less than 75% need

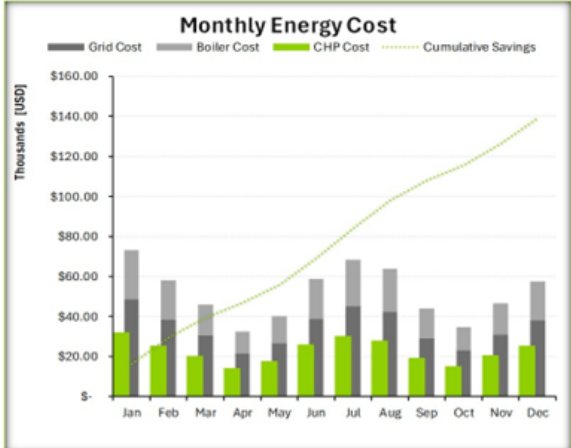
March/April Installs



CHP Integration Approach



ENGINUITY POWER SYSTEMS	
Project Details	
Enginuity ID:	24EPS117
Project Name:	Micro Grid Project
Site Location:	Atlanta, GA
Prepared By:	Peter Goldsmith
Date:	Wednesday, January 1, 2025
Payback Analysis	
Payback Period:	4.35 Years
Annual Savings:	\$369,097 /Year
Enginuity CHP	
Model Number:	Enginuity E200
Quantity:	2 CHP
Electric Output:	360 kWh
Heat Recovery:	2.109 MBH
Fuel Gas Consumption:	39.26 Therms/Hr.
Utilization of Recovered Heat:	100 %
Existing Boiler	
Efficiency:	65 %
Heat Output:	2.11 MBH
Fuel Consumption:	32.44 Therms/Hr.
Utility Rates	
Electricity Rate:	\$0.1435 /kWh
Fuel Rate (Base):	\$0.8100 /Therm
Fuel Rate (Generation):	\$0.8100 /Therm
Annual Operation	
CHP Operation Hours:	8,000 Hours
Location:	Atlanta, GA
Project Cost	
Equipment:	\$380,000
Installation:	\$380,000
Incentives:	\$0
Maintenance:	\$2,500 1000 Hr. \$30,000 28000 Hr.
Annual Energy Cost / Savings	
Initial Investment:	-\$1,520,000
CHP Operation Expense:	-\$254,405 \$/Year
Heat Expense Offset by CHP:	\$210,221 \$/Year
Power Expense Offset by CHP:	\$413,280 \$/Year
DISCLAIMER	
<p><i>This tool provides illustrative estimates only. Results depend on the inputs you provide and on factors outside our control, including fuel prices, utility tariffs, operating profile, site conditions, incentives, and regulations. Estimates are not guarantees of performance, savings, or payback and do not replace a site-specific engineering study. Estimates exclude tax advice and do not account for future regulatory changes. Enginuity Power Systems makes no warranty regarding accuracy or completeness, and you should not rely solely on these outputs for investment decisions.</i></p>	



CHP Delivers Results

- Every install requires analysis and design to predict and optimize ROI
- ROI break-even can be two years or fewer depending on the application and market

Onsite Independence

Practical Microgrid Solutions and Services

From Kinsley Energy Systems



The Kinsley Group

Putting the Pieces Together Offering Complete Solutions

Our focus on only power products provides customers with the broadest suite of solutions to meet their specific needs.



Microgrids for Healthcare

What is a microgrid?

A local power system that can run on its own, separate from the main utility, providing continuous power to essential places.

These systems combine sources like generators, batteries, solar panels, and other onsite generation equipment to operate as a **single, integrated system** for reliable and energy-independent operations.

Why microgrids?

1. Enhanced Resilience
2. Local Control & Independence
3. Tangible Cost Savings
4. Grid Infrastructure Modernization

A New England Example

Community Shelter in Southern CT

Goal: a fully resilient community emergency shelter for natural disasters.

Challenge: infrastructure lacked sufficient back up power to support facility's full electrical load.

Solution: CHP (power generation) + BESS (energy storage) + Manual Controls (load shedding).

Equipment: 285 kW CHP and 688 kWh Battery Energy Storage System

Result: Blackstart Capable Microgrid

- Independent onsite energy capable of supporting the facility's full electrical load.
- Built to the most strenuous safety specifications.
- 40% energy cost savings!



Steps to Delivering a Microgrid

1

Develop

- Energy Modeling
- System Design
- Project Financing

2

Construct

- Installation
- Commissioning

3

Supply

- Generators, CHP, BESS, Solar
- Integrated Auxiliary Equipment
- Complete Solutions

4

Operate & Maintain

- Comprehensive Lifecycle O&M

Selecting The Right Equipment

HIGH EFFICIENCY

Generates electricity and captures waste heat to significantly reduce energy costs

RESILIENCE & RELIABILITY

Provides on-site power and thermal energy that keeps facilities running during grid outages

FLEXIBLE APPLICATIONS

Supports hospitals, manufacturers, universities, and data centers with both power and thermal needs



Ensure Qualified Local Service



Keys to Ensuring Field Performance:

- Service response time.
- Experience with the equipment.
- Long-term contracts that ensure performance standards.
- Guaranteed uptime.

Thank You!

Moe Barry

Director of Development

Kinsley Energy Systems

mbarry@kinsleyenergy.com

959.258.1819





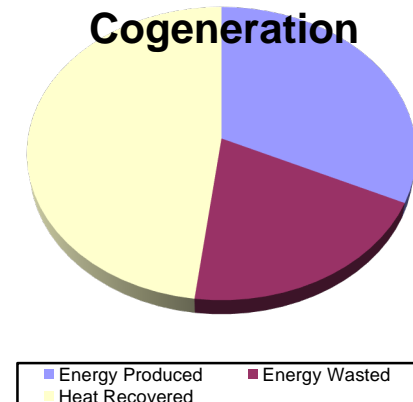
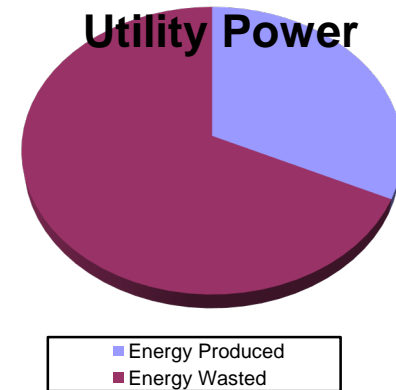
Cogeneration at Geisinger

Alan R. Neuner, CHFM

GEISINGER
HEALTH SYSTEM

Efficiency

- The electrical energy at your outlet at home is only 32% of the energy that was used to create it at the power plant
- Since cogeneration utilizes the heat that the utilities waste, 80% of the input energy is utilized as heat and electricity



Project Economics

Cost of Cogeneration Project	\$5,300,000
DEP EnergyWorks Grant PPL Act 129 Grant	\$2,250,000 \$ 500,000
Net Cost	\$2,550,000
Projected Annual Savings	\$1,400,000
Return on Investment	1.8 Years

GMC Quantitative Impacts

	<u>Pre</u>	<u>Post</u>	<u>Reduction</u>
Electricity (kWh)	138,908,830	22,400,000	116,508,830
Cost (\$.08/kWh)	\$11,084,924	\$1,792,000	(\$9,292,924)
Pollutants Generated			
<i>Sulphur dioxide (Tons)</i>	539.87	87.94	451.93
<i>Nitrogen oxides (Tons)</i>	114.60	18.67	95.93
<i>Carbon dioxide (Tons)</i>	74,220.33	12,089.43	62,130.90
<i>Mercury (Tons)</i>	6.25	1.02	5.23
Health Incidents per Million			
<i>Premature Death</i>	1.67	.27	1.4
<i>Chronic Bronchitis</i>	1.06	.17	.89
<i>Hospital Visits</i>	1.51	.25	1.26
<i>Asthma attacks</i>	34.27	5.58	28.69
<i>Respiratory Symptoms</i>	1,635.37	266.38	1,368.99
<i>Work Loss Days</i>	301.64	49.13	252.51
Societal Value	\$12,727,058	\$2,073,055	\$10,654,003
Direct Medical Costs	\$1,561,194	\$234,296	\$1,326,898

CO₂ Reduction
62,131 Tons/Year

NO_x Reduction
95.93 Tons/Year

SO₂ Reduction
451.93 Tons/Year

Hg Reduction
5.23 Tons/Year



QUAKER COLOR™

Manufacturing Highest Quality Resins, PUDs,
Specialty Coatings and Pigment
Dispersions for over 50 years

“We’re A Step Ahead”

All manufacturing and development located in the USA

Our History & Who We Are

- Located in historic Quakertown PA, Leather finishing from early 20th century
- 4th Generation family-owned & operated
- Quaker Color established in 1968 by Kenneth Brown Sr. (2nd Generation)



Our Business Units



Manufacturing:



Quakertown PA, USA

Global Warehousing:



Hungary
Shanghai
Hongkong

Export locations:



Canada	Hungary
Mexico	South Africa
Brazil	China
Uruguay	India
United Kingdom	South Korea
Germany	Japan
Italy	Taiwan
Austria	Thailand
Slovakia	Australia



Quaker Color – Sustainability

Affordable & Clean Energy



Providing energy to the Quakertown Community at discounted cost with less carbon footprint



Quaker Color Energy Sustainability & Improvement Solar & CHP (Combined Heat & Power)

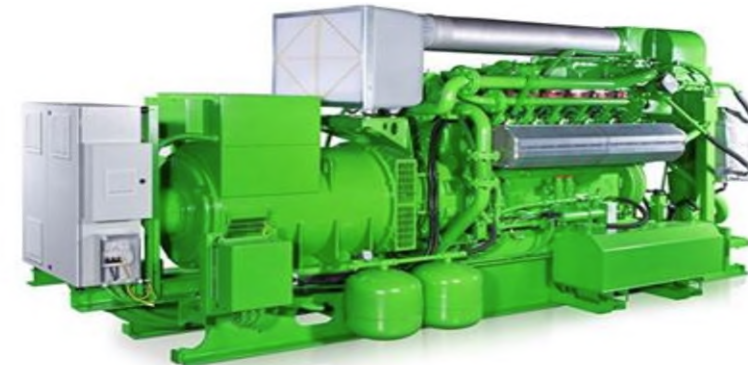
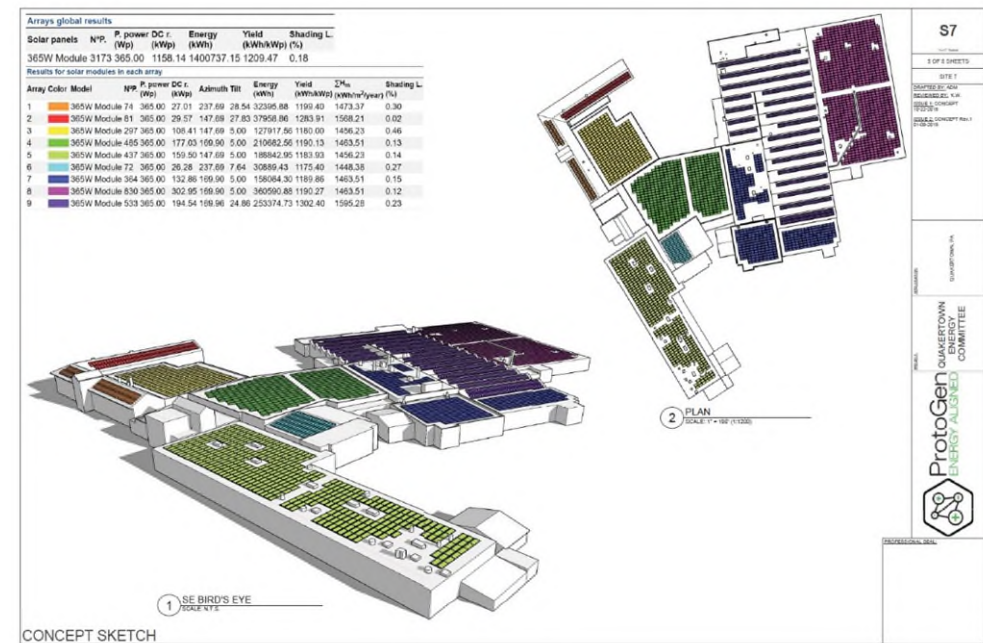


Visit

<https://www.youtube.com/watch?v=r46JHUX44cw>
<https://youtu.be/NX81GDyuJ9g>

Quaker Color has constructed a 1.8-megawatt Solar/CHP (Combined Heat, & Power) system consisting of:

- 600 KW Solar energy
- 1200 KW Natural gas generator
- Secondary 3000 lb per hr. process steam and hot water
- 20 gpm hot water circulation system capable



Quaker Color – Sustainability

Affordable & Clean Energy

7 AFFORDABLE AND
CLEAN ENERGY



Quaker Color Strategy:

- Eliminate dependence on non-renewable energy sources
- Reduce dependence on fuel-based heat and steam systems
- Reduce Nox emissions and carbon footprint
- Reduce energy consumption

Commissioned a 2.2 MW Solar/CHP System

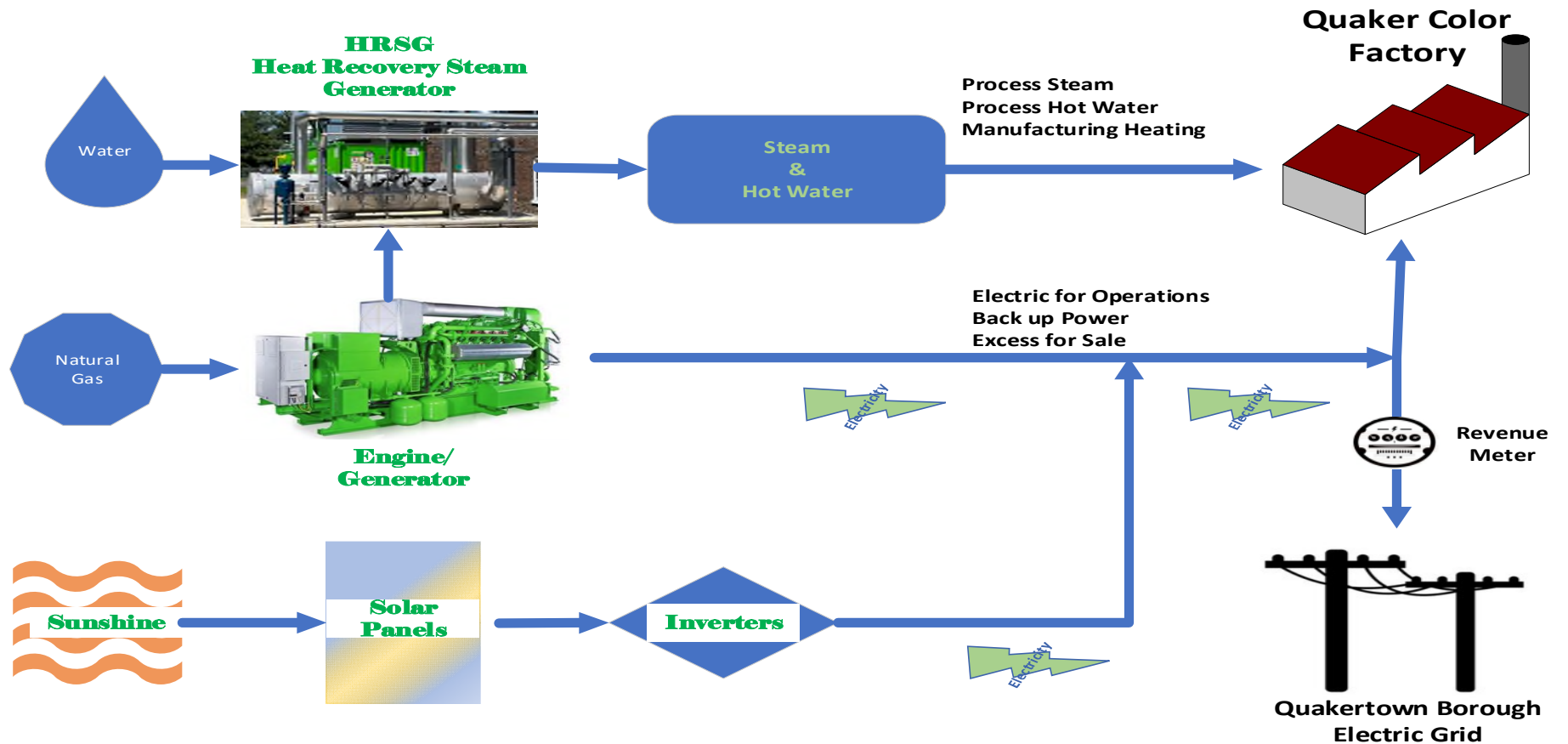
- CHP – Combined Heat & Power
- Facility electric 100% offset by solar system
- NG Generator offsets Coal and Oil fuels
 - Generator selected can burn 100% or blended Hydrogen for fuel
- CHP offset NG consumption for steam/hot water



Quaker Color Solar / Combined Heat & Power Flow Diagram



Quaker Color Combined Heat and Power (CHP) Microgrid System




Quaker Color – Sustainability

Building Management System



Real time monitoring of Solar, Generator, and CHP system performance




Quaker Color

Cogen Engine Steam System Electrical System Power Histories Energy Histories

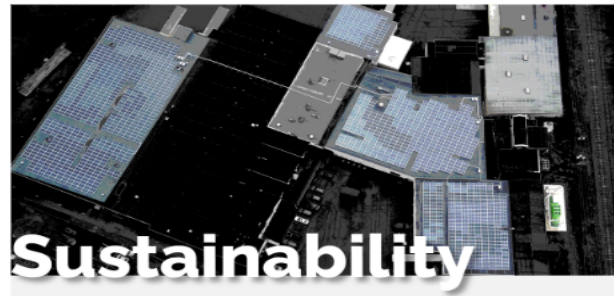
Home

59.0 °F
Partly Cloudy
01-May-26 1:59 PM EDT

Energy Management Control System



201 South Hellertown Avenue
Quakertown, PA 18951



PJM PPL LMP RealTime \$ 26.2100
PJM QUAK LMP RealTime \$ 26.2900

Site Power

	Power	Energy - Yesterday
NET METER	-1073.0 kW	-17270.0 kW-hr
SOLAR	491.9 kW	1922.0 kW-hr
COGEN	808.3 kW	19160.0 kW-hr
BUILDING	-222.7 kW	-3812.6 kW-hr

Weather

59.0 °F
Partly Cloudy

Tomorrow: 60.0 °F/39.0 °F
Mostly Cloudy
Precip: 16 %

Sunday: 59.0 °F/41.0 °F
Partly Sunny
Precip: 3 %

Monday: 68.0 °F/53.0 °F
Partly Sunny
Precip: 9 %

Steam System

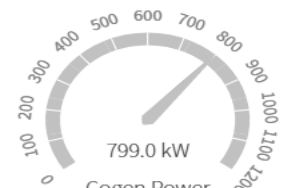
	Pressure	Flow	Low Water	Hi Pressure
HRSG	10.7 psi	805.1 lb/hr	<input type="checkbox"/>	<input type="checkbox"/>
Building	9.7 psi			

Boiler Status Running Alarm

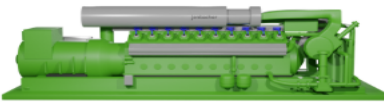
Control Air Pressure 106.6 psi

CoGeneration System

Engine Enclosure Temp is 84.9 °F



799.0 kW
Cogen Power



Engine Running

Gas Flowrate 2400.0 cfh

Partnered with UGI to qualify for a substantial CHP energy rebate

- NG engine operates 24/7/365
- Exports electric to Quakertown Borough at a reduced utility rate
- Heat exchanger creates 800 to 1800 lbs./hr. of low pressure (15 lb.) steam & hot water for:
 - Production processes
 - Building heating systems
- Facilitated the shutdown of (2) 60 HP NG Boilers
 - Now exist as standby-steam only



Power Generation Panel

CHP, On-Site, Microgrids, & Behind-The-Meter



Jay Pignatello



Moe Barry



Al Neuner
CHP Consultant



Bob Ashton



Vendor Networking

- Please take the next 45 minutes to visit our vendors in the café area!
- Go out the back door, and head to your left.
- Feel free to grab a coffee or beverage!

Question Form:



Low-Carbon Solutions Panel

Fuel Cell, Microgrids, Linear Generation



Danielle Ramaley



Mainspring

Maddie Julian

Bloomenergy[®]

Maryette Haggerty-Perrault





WATT Fuel Cell

Redefining the Future of Power

Danielle Ramaley – Chief Commercial Officer

WATT Fuel Cell

A Step Toward Energy Independence

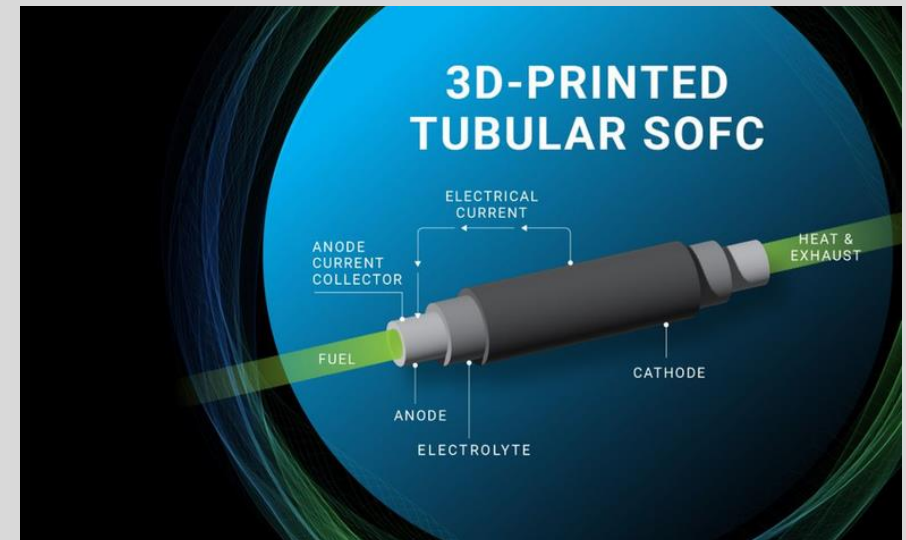
The Problem

- The grid is increasingly unreliable, aging, and expensive.
- Outages are rising nationwide. Infrastructure is stressed with new demands.
- Utilities and power users need new solutions - dependable, resilient power not tied to grid performance.



The Solution

Reliable, independent solid oxide fuel cell (SOFC) power at the point of use.



Clean Energy

No NO_x/SO_x; lower CO₂ than generators or grid power.



Low Maintenance

No moving parts = long life, low upkeep.



Whisper Quiet

Silent operation—no generator noise.

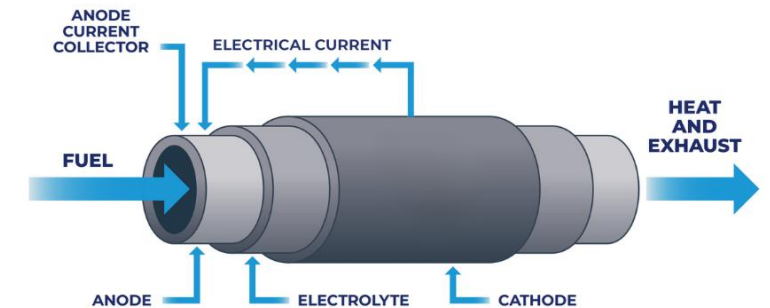


WATT's Fuel Cells

- Our **fuel cells are the foundation** of our technology and our company.
- WATT's SOFCs are ceramic-based and tubular, enabling them to **thermal cycle and load follow**.
- WATT SOFCs can **run on multiple fuels** including:
 - ✓ Natural Gas
 - ✓ Propane
 - ✓ Natural Gas/Hydrogen Blend
- WATT SOFCs versatile technology that can **flex between currently available and future fuel options**.



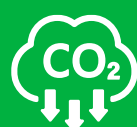
3D-PRINTED TUBULAR SOFC



High
Reliability



Fuel
Flexibility



Low
Emissions



No NO_x or
SO_x



Application
Scalable



Quiet
Operation

WATT Commercial Traction

Strong Customer Commitments Driving Scale



Deployment Progress

WATT is focused on a significant manufacturing ramp to meet growing commercial demand.

WATT HOME™ Power Solution

- **Features & Benefits**
 - FC1 and UL 1741 Certified
 - Integrates with Solar and Energy Storage
 - App Connectivity for Continuous Monitoring
 - Integrated Passive Safety Features



WATT Keystone Customers

Utility-Scale Validation

Hope Gas

- Lease agreement for **7,250 units**
- Largest U.S. residential fuel cell deployment
- Shipments and installs underway
- Hope Gas provides all installation and maintenance



HIPAWA

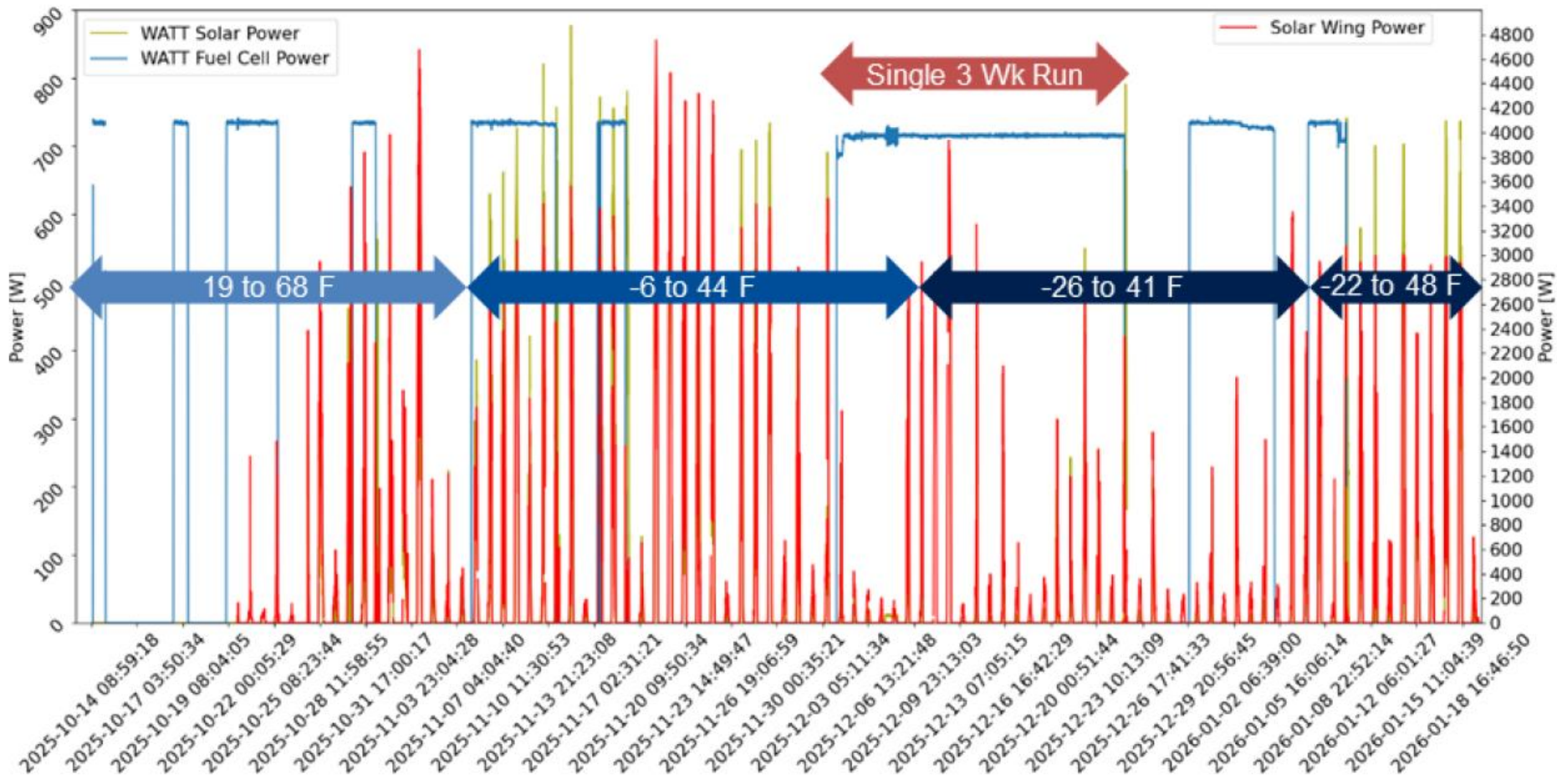
- Letter of intent for **5,800 microgrid systems**
- Expected to be about 50% lower cost than utility power
- HIPAWA provides all installation and maintenance



What about extreme conditions?

Field data from WATT REMOTE applications see power demands in extreme environments

- The ACE95 YETI equipped a WATT REMOTE system and solar provides reliable power backup to off-grid well pads in British Columbia
- During a brutal cold snap in December 2025, the WATT REMOTE-equipped solution was *the only well pad to not go down*, of 1000+ pads in the Peace region.

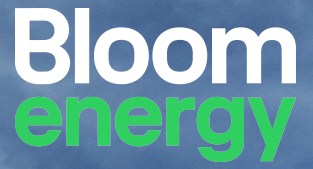




CONTACT ME

THANK YOU

724-547-9170 — WATTFUELCELL.COM — INFO@WATTFUELCELL.COM



Maryette Haggerty Perrault
Senior Policy Manager

Bloom Energy at a Glance

Mission: To Make Clean, Reliable Energy Affordable for Everyone in the World

Global Footprint



Serving Customers Since

2008

Deployed

>1.8 GW

Largest Site Announced

2.45 GW

Global Headcount

~2,200 FTE

Cumulative R&D

\$1.2B+

Patents¹

>600

For over 25 years, Bloom has powered the world's most visionary companies

1. As of February 5, 2026: Active US & International patents

Diverse Customer Ecosystem

Cloud Services & Technology



Consumer Retail, Food & Beverage



WILLIAMS-SONOMA, INC.



the Wonderful company™



Telecom, Media, & Entertainment



Manufacturing



Biotech & Pharma



Higher Education

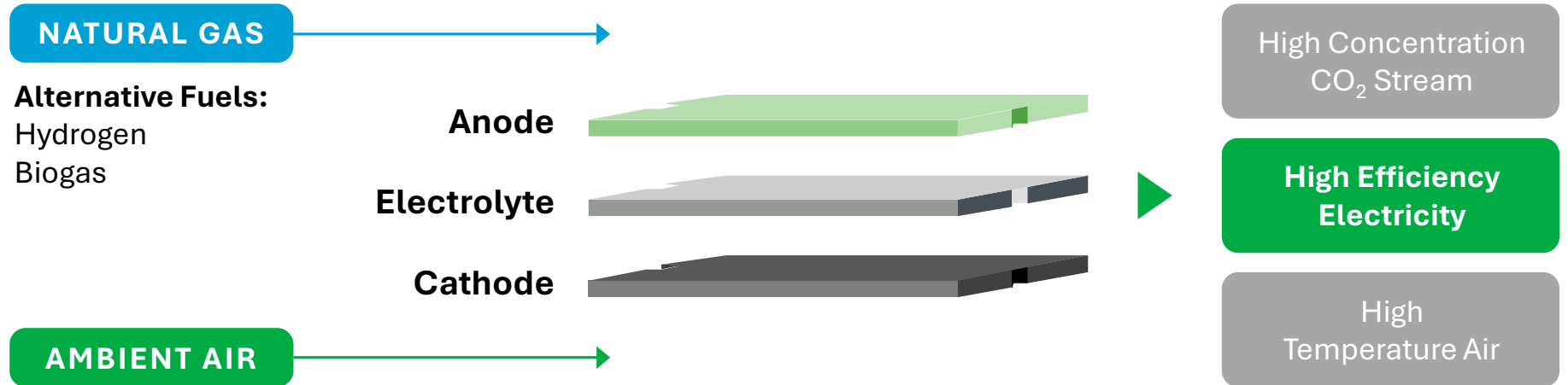


How Bloom Fuel Cells Work

Non-combustion reaction generates high-efficiency electricity

How it Works

Solid-oxide fuel cells convert fuel into electricity without combustion



How it Scales

Modular building blocks come together to meet small or large-scale power needs



Solutions for Varying Use Cases & Goals

Choose an interconnection type:

Choose add ons:

	Primary Power	Microgrid	Advanced Microgrid	Off-Grid	Carbon Capture	Combined Heat & Power
Value Proposition	Baseload Power Low cost, clean, distributed	Resilient Power Power critical loads thru grid outages	Uninterrupted Power Premium power quality	Load-Following Power Premium power quality	Zero Carbon Power Meet sustainability objectives	Cogeneration Highest efficiency heat & power
Key Capabilities & Use Case	Lower CO ₂ emissions & near zero criteria pollutants, savings on power generation	Cleaner power for business-critical loads through extended grid outages	Complete protection for sensitive loads from grid outages & disturbances	Self generate, independent of the grid with readiness to connect in future	Capture 95% pure food grade CO ₂ in the exhaust stream for productive utilization (food & beverage, agriculture, etc.) or sequestration	Utilize thermal energy in fuel cell exhaust to provide heating or cooling loads for use in building or process loads for up to 90+% efficiency
Profile Schematic						
Architecture						

Pick fuel : Natural Gas, Biogas, H₂

Coherent Case Study

Photonics manufacturing in NJ & PA

Challenges



The local electric utility was unable to supply power quickly, **threatening revenue growth**

Coherent needed to power a new facility in a matter of months, not years



Seamless operation of manufacturing facilities **without downtime due to outages**

Coherent had used distributed UPSs with limited runtime, serving only part of the facility

Goals



An energy solution to support their rapidly **growing electricity needs** as they increase their **manufacturing capacity**



A commitment to reduce its **global carbon footprint**

Coherent was facing significant opportunity costs if they did not get access to reliable & resilient power

Reliable Onsite Power, Faster & Cleaner than the Electric Grid

Time to Power Solutions

COHERENT

+

**Bloom
energy**

**Bloom Energy
Server System
Size**

**Operational
Advantages**



Warren, NJ

2.5 MW



Saxonburg, PA

1.5 MW



Easton, PA

7.8 MW

Enabled operations to ramp up based on manufacturing needs & timelines, not electric grid availability – Easton systems operated fully off-grid until utility substation was completed

Proven microgrid capable of powering critical loads during grid outages

Displaces higher marginal emissions power plants that supply the grid reducing emissions*

Cost protection compared to utility prices driven upwards due to capacity market increases

*RFCE eGRID subregion 2023 non-baseload output emissions rate of 1,177 lbs/MWh compared to 818 lbs/MWh for Bloom Energy Servers



Thank You!

Maryette.Haggerty-Perrault@bloomenergy.com

857-408-8681

Affordable, Reliable, Efficient Onsite Power

May 15, 2026



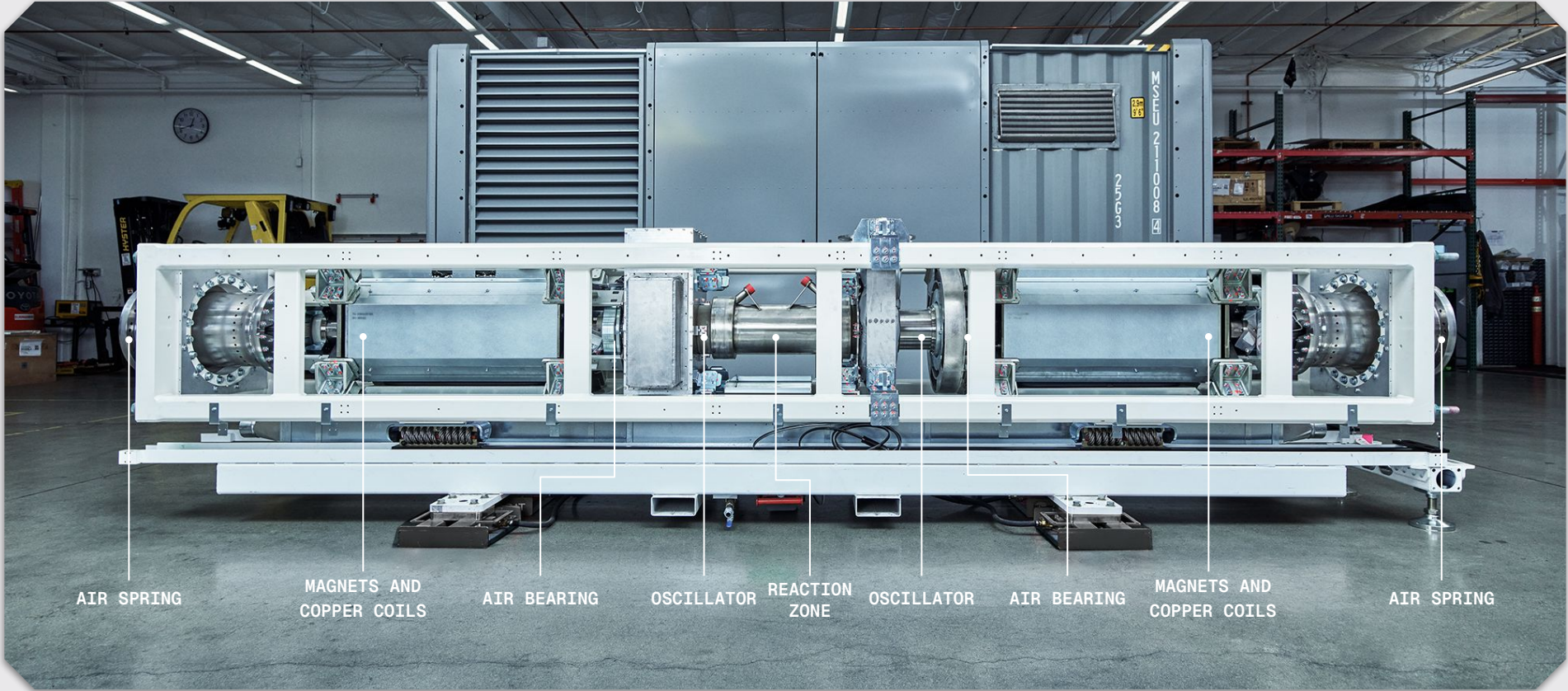
Maddie Julian

Account Executive, Channel Sales

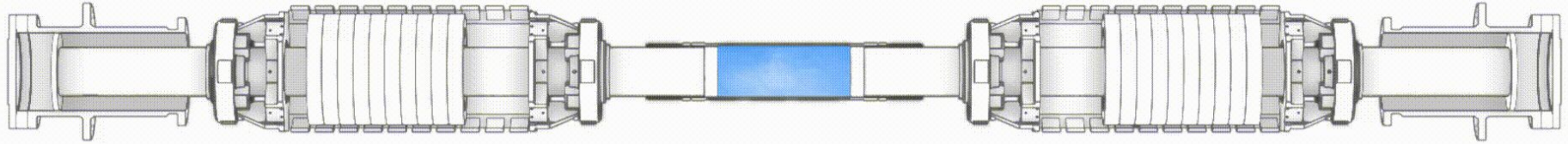
This presentation contains confidential material. Do not
distribute without authorization by Mainspring Energy.



The Linear Generator core



Air and gaseous fuel are compressed until a uniform, non-combustion reaction occurs.



An unmatched combination of benefits

Low LCOE (ITC Eligible)

Low Emissions

Dispatchable

Flexible

Modular



Delivering solutions across markets

ENTERPRISE



UTILITIES



DATA CENTER



INDUSTRIAL



Reliable power generation delivering savings to cold storage

Firming solar

Aligned with net-zero commitments

Grid-connected microgrid eliminates outages

Exceeding energy cost savings targets



16 MW OF LINEAR GENERATORS ACROSS 18 LOCATIONS
PAIRED WITH SOLAR TO POWER COLD STORAGE



／ The power conversation
starts here.

US HEADQUARTERS

3601 Haven Avenue
Menlo Park, CA 94025

CONTACT US

Maddie Julian
Account Executive, Channel Sales
maddie.julian@mainspringenergy.com
(408) 621-3496

Pick Up Lunch & Submit Your Questions

- Please pick up your lunch from the café, and return to your seat for the moderated Q&A Session
- Submit any final questions that you have – panelists will be answering questions over lunch
- Door prize winners will be pulled at the end of the Q&A session!
- After lunch, we will direct you to your tour if you opted in

Question Form:



Q&A Session

Door Prizes



Joe Calhoun

UGI Utilities

Technical Manager, Strategic Markets



Thank You

- **Tour groups meet up in the lobby**
 - You will find your group number on your name badge
 - No number? See Virginia at the front!
- **We want your feedback!** Keep an eye out for an email on Monday with a brief survey.
- **Safety Kits are available for customers on your way out**