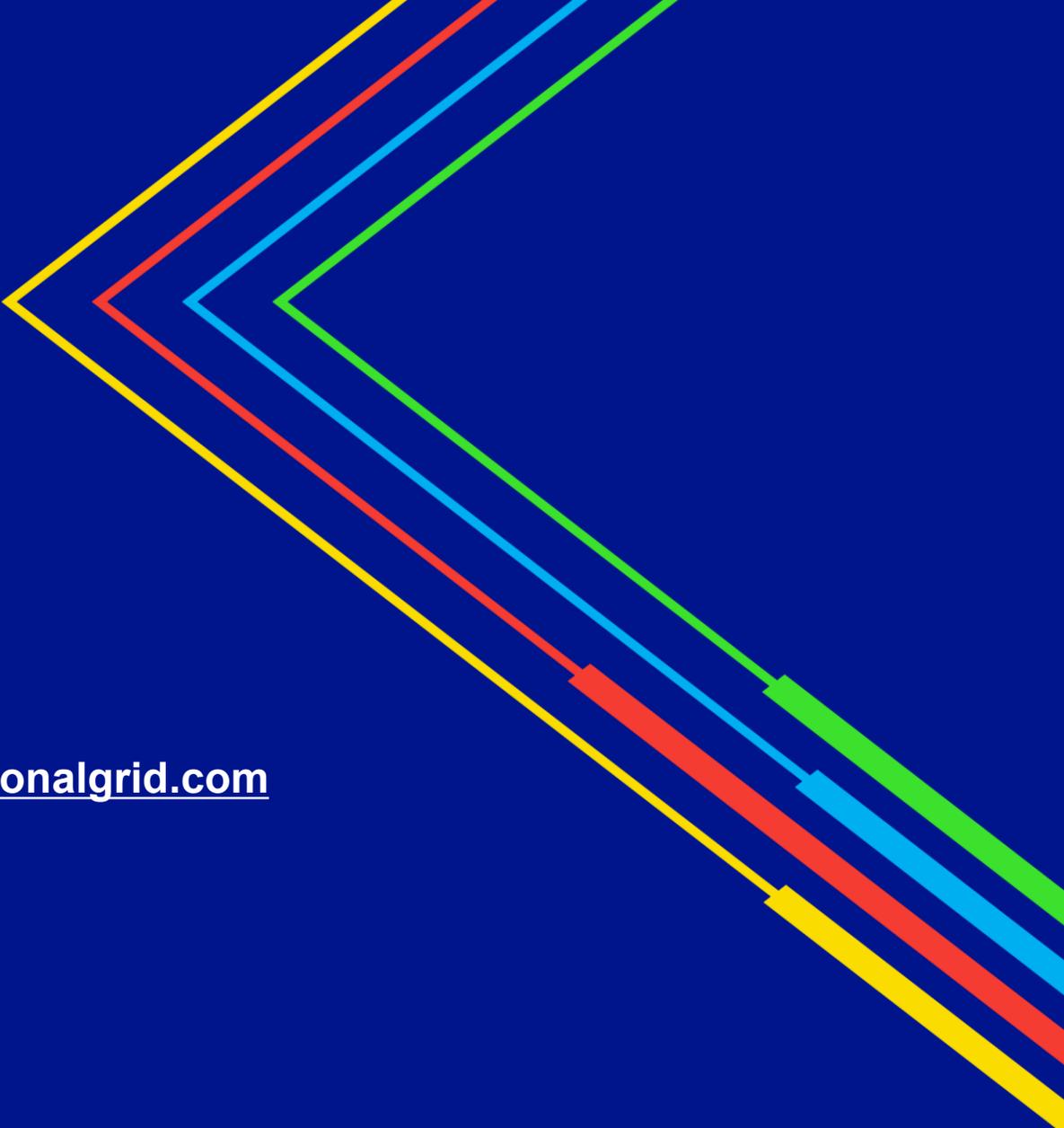


# September 2025 PEX Meeting



September 17<sup>th</sup>, 2025

Mathew McCarthy [mathew.mccarthy@nationalgrid.com](mailto:mathew.mccarthy@nationalgrid.com)

nationalgrid

# Contents

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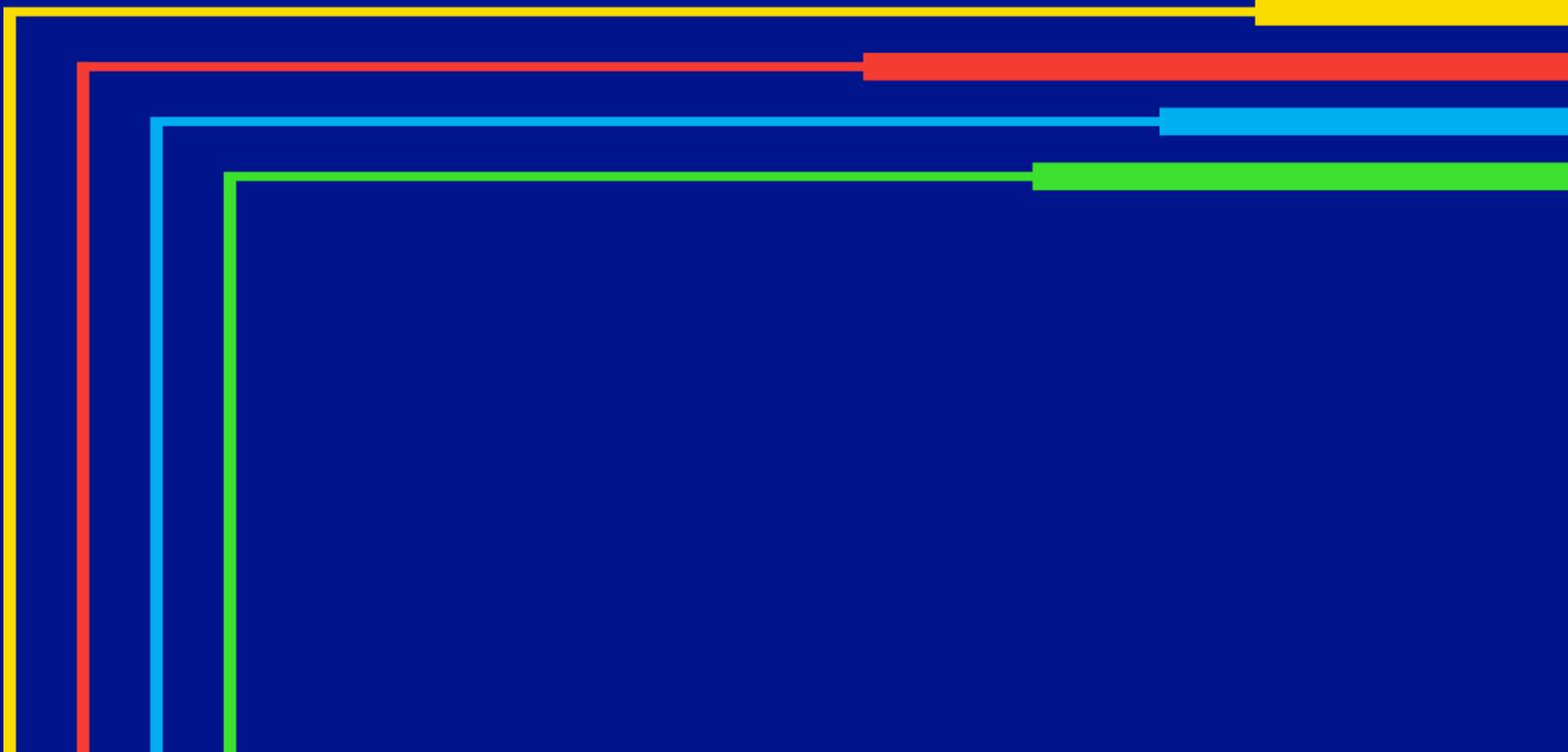
<b>01</b>	Safety Moment: Back to School - Driving Awareness
<b>02</b>	Heat Pump Applications – Updates to RCLs, Incentives Changes and Documentation Requirements
<b>03</b>	Thermal Energy Storage for Commercial and Industrial Facilities: Michaels Energy
<b>04</b>	PEX Program Progress – Mat McCarthy
<b>05</b>	Quick Hits, Reminders, and Next Meeting – Mat McCarthy

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01

# Safety Moment – Back To School – Driving Awareness

Nate Strong [nathan.strong@energysource.com](mailto:nathan.strong@energysource.com)





# Back to School – Driving Awareness

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- September traffic increases
- Kids at bus stops, riding bikes, and walking to school
- Be alert!
- Stay off the phone
- Look for school zone signs
- Slow down and plan for extra time

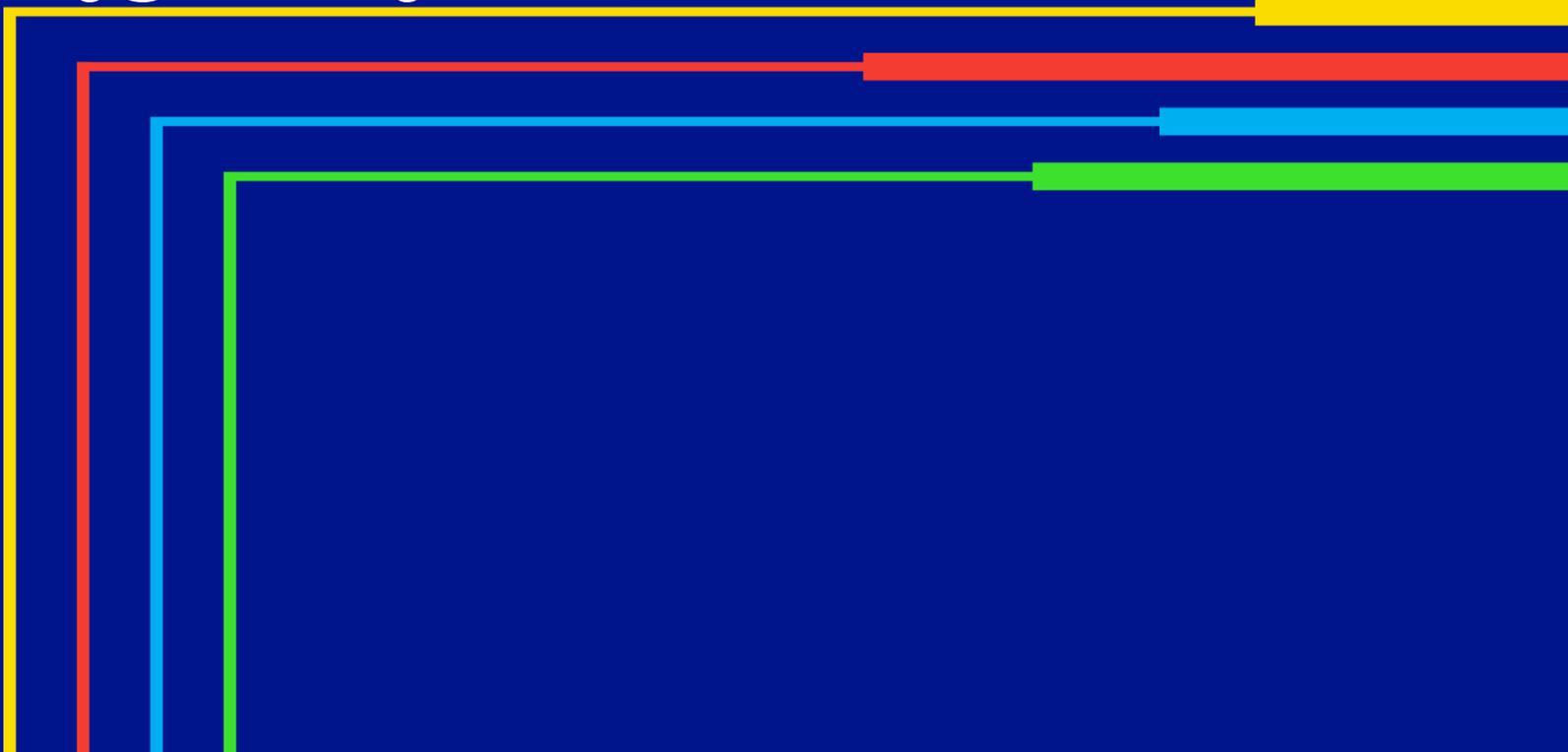


# 02

## Heat Pump Applications – Updates to RCLs, Incentives Changes and Documentation Requirements

Brian Richards [brian.richards@nationalgrid.com](mailto:brian.richards@nationalgrid.com)

Jerry Song [jerry.song@nationalgrid.com](mailto:jerry.song@nationalgrid.com)



## Mass Save Commercial Heat Pump Offer Update

The Sponsors of Mass Save® are announcing updates to the Commercial Heating and Cooling heat pump rebate and incentive amounts, and commitment letter expiration period. These changes have been carefully considered in order to appropriately disperse funding through the duration of the 2025-2027 Energy Efficiency and Decarbonization Plan. Effective immediately, Rebate Commitment Letters will be issued with a 6-month expiration period vs 12-month. Effective **January 1, 2026**, Commercial heat pump rebate amounts for existing buildings will be as follows:

Equipment Type	Current Rebate Amount	Rebate Amount as of 1/1/2026	Efficiency Requirement
Air Source Heat Pumps (ASHPs)	\$2,500 per ton	\$2,000 per ton	Refer to <a href="https://masssave.com/HPQPL">MassSave.com/HPQPL</a>
Air Source Variable Refrigerant Flow (VRF)	\$3,500 per ton	\$2,800 per ton	
Ground Source Heat Pumps (GSHPs)	\$4,500 per ton	\$3,600 per ton	

Equipment installed on or before December 31, 2025, will qualify for the current rebate amounts. Rebate form and supporting documentation must be received by February 28, 2026. **This change does not affect residential heat pump rebates and incentives.**

Requests for Rebate Commitment Letters (RCLs) submitted on or before **October 27, 2025** will be approved for the current rebate amounts and will be honored until the letter's expiration date, 6-months from the issuance date. Any project not installed by the expiration date is subject to the rules and requirements of the program at the time of installation. Any equipment with an existing RCL will receive the incentive levels listed, provided the project is completed by the expiration date.

Contact your Mass Save Sponsor before installation if the proposed project is more than 150 tons. See [MassSave.com/CIHeatPump](https://masssave.com/CIHeatPump) for full rebate eligibility details.

### Questions?

The quickest way to get support is by emailing [HVAC@MassSave.com](mailto:HVAC@MassSave.com). Abode manages this inbox on behalf of the Sponsors and will ensure your request is triaged and directed to the right team. You may also reach out to your Mass Save Sponsor if needed.

# Prescriptive Heat Pump Timeline

Key dates	
9/15/2025	RCL timeline changes from 12 months to 6 months with current incentive levels
10/27/2025	RCLs change to new incentive levels with 6-month timeline
12/31/2025	Construction completion date to receive current incentive level (without RCL)
2/28/2026	Deadline for completed rebate form and required documentation for 2025 projects

# Prescriptive Heat Pump Rebate Application Submission Updates

Guidelines on statewide C&I Downstream Heat Pump Program requirements for complete and program compliant applications

# Mass Save Rebate Application Requirements

Fully completed Mass Save statewide rebate application including

- ▶ Integrated control model numbers and switchover temperatures for partial displacement installations. On-board controls will be accepted in lieu of integrated controls most used in dual fuel roof top units to be submitted as partial displacement
- ▶ Program compliant customer and contractor signatures, pre-existing fuel type check box, new construction check box (new), square footage
- ▶ Rebate payee information must match the program compliant payee W-9 submitted with the rebate application
- ▶ Electric account number always required - natural gas account number only required when displacing natural gas
- ▶ Payment Transfer Authorization when payment is being issued to someone other than the customer (contd.)

# Payment Transfer Authorization Requirements

Required if payment is going to anyone other than the customer - acceptable forms of payment transfer authorization must include one of the following

- ▶ Contractor listed as the rebate payee on the paper application with wet ink or Docu-Sign signatures by both the customer and the contractor
- ▶ Itemized discount on the contractor invoice showing the Mass Save rebate
- ▶ Signed letter from the customer stating they authorize the Mass Save rebate to be paid to an approved third party

# Contractor Invoice Requirements

- ▶ Indoor and outdoor model numbers or AHRI numbers
- ▶ Integrated control model numbers and switchover temperatures for partial displacement installations
- ▶ Installation date
- ▶ Installation address
- ▶ Total installation cost
- ▶ Installation company/contractor information

## Documentation Requirements

*Incomplete applications may delay rebate processing time.*

- Completed and signed rebate form
- Copy of invoice from a licensed heating vendor/installer, including:
  - Equipment model numbers (including indoor units, where appropriate) or AHRI numbers
  - Integrated control model number(s) (if required\*)
  - Installation date
  - Installation address
  - Total installation cost
  - Installation company/contractor information
- Copy of W-9, signed and dated
  - W-9 must be signed in wet ink or an E-Signature completed by DocuSign

# Sample Contractor Invoice

Invoice from a licensed heating vendor/installer, including



Equipment model numbers (including indoor units, where appropriate) or AHRI numbers



Installation address



Integrated control model number(s) (if required)



Total Installation cost



Installation date



Installation company/contractor information

## COMMERCIAL INVOICE

YOUR COMPANY LOGO HERE

<b>DATE</b> 2/6/2025	<b>INVOICE #</b> ABC123	Contractor Information
<b>Business Name</b> (if applicable) <b>Customer Name</b> 5 Savings Lane Energyville, MA 02155 (617) 867-5309	Installation Date (required)	<b>Installer Company:</b> 100 Energy Ave. Energytown, MA 02140 energysaversinc@email.com (617) 111-2222
	Installation Address (required)	

**REQUIRED:** Copy of W9, signed (wet ink or E-signature by DocuSign) and dated

SALESPERSON	JOB	PAYMENT TERMS	DUE DATE
Joe Everyone	22-0xxx	Due on Receipt	30 days Net

Outdoor and Indoor model number(s)  
OR AHRI number(s) required

EQUIPMENT	DESCRIPTION	OUTDOOR & INDOOR MODEL #s	AMOUNT*
BestHeatPumps, Inc.	7.5 ton condenser 2 ducted indoor units AHRI Certificate Number: 3333ABC445	Outdoor # TX90 Indoor # TY40 Indoor # TY50	\$52,000.00
BestHeatPumps, Inc.	2 Ton condenser 2 indoor units AHRI Certificate Number: 2223ABC445	Outdoor # CHP24 Indoor # CHP12 Indoor # CHP12	\$13,000.00
XYZ Integrated Controls	Approved integrated control for BestHeatPumps, Inc. Dual Fuel Thermostat	IC1234ABC	\$2,000.00

Integrated Control Model #s:  
If required, include either 1) Integrated Control Model #s or 2) Documentation that building controls operate the heat pumps and existing system.

<b>Subtotal</b>	\$67,000.00
<b>Mass Save® Rebate</b>	\$23,750.00
<b>TOTAL</b>	
<b>Remaining Balance</b>	<b>\$0.00</b>

Mass Save Rebate Amount: If the contractor will receive the rebate, include either 1) the rebate amount on the Invoice or 2) a signed customer acknowledgement.

\*Equipment and prices are for illustration purposes only.

# Rebate Payee W-9 Requirements

- ▶ Address on the W-9 must match the address on the rebate application
- ▶ W-9 must be for the rebate payee
- ▶ W-9 signatures must meet statewide program requirements being either a wet ink or Docu-Sign digital signature

# Sample Payee W-9

- ▶ Must be filled out completely
- ▶ Must be for the rebate payee
- ▶ Must be signed in wet ink or an E-Signature completed by DocuSign - no other form of digital signature will be accepted
- ▶ Rebate checks will be mailed to the address listed on the W-9
- ▶ Address on the application must match the address on the W-9

<p>Form <b>W-9</b> (Rev. October 2018) Department of the Treasury Internal Revenue Service</p>	<p><b>Request for Taxpayer Identification Number and Certification</b></p> <p>▶ Go to <a href="http://www.irs.gov/FormW9">www.irs.gov/FormW9</a> for instructions and the latest information.</p>	<p>Give Form to the requester. Do not send to the IRS.</p>																																																															
<p><b>1</b> Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.</p>																																																																	
<p><b>2</b> Business name/disregarded entity name, if different from above</p>																																																																	
<p>Print or type. See Specific instructions on page 3.</p>	<p><b>3</b> Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check <b>only one</b> of the following seven boxes.</p> <p><input type="checkbox"/> Individual/sole proprietor or single-member LLC    <input type="checkbox"/> C Corporation    <input type="checkbox"/> S Corporation    <input type="checkbox"/> Partnership    <input type="checkbox"/> Trust/estate</p> <p><input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____</p> <p><b>Note:</b> Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is <b>not</b> disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.</p> <p><input type="checkbox"/> Other (see instructions) ▶ _____</p>		<p><b>4</b> Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):</p> <p>Exempt payee code (if any) _____</p> <p>Exemption from FATCA reporting code (if any) _____</p> <p><small>(Applies to accounts maintained outside the U.S.)</small></p>																																																														
	<p><b>5</b> Address (number, street, and apt. or suite no.) See instructions.</p>		<p>Requester's name and address (optional)</p>																																																														
	<p><b>6</b> City, state, and ZIP code</p>																																																																
	<p><b>7</b> List account number(s) here (optional)</p>																																																																
<p><b>Part I Taxpayer Identification Number (TIN)</b></p> <p>Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see <i>How to get a TIN</i>, later.</p> <p><b>Note:</b> If the account is in more than one name, see the instructions for line 1. Also see <i>What Name and Number To Give the Requester</i> for guidelines on whose number to enter.</p>																																																																	
<table border="1" style="width: 100%;"> <tr> <td colspan="9" style="text-align: center;"><b>Social security number</b></td> </tr> <tr> <td style="width: 25px; height: 20px;"></td> </tr> <tr> <td colspan="3" style="text-align: center;">-</td> <td colspan="3" style="text-align: center;">-</td> <td colspan="3"></td> </tr> <tr> <td colspan="9" style="text-align: center;"><b>or</b></td> </tr> <tr> <td colspan="9" style="text-align: center;"><b>Employer identification number</b></td> </tr> <tr> <td style="width: 25px; height: 20px;"></td> </tr> <tr> <td colspan="3" style="text-align: center;">-</td> <td colspan="3" style="text-align: center;">-</td> <td colspan="3"></td> </tr> </table>			<b>Social security number</b>																		-			-						<b>or</b>									<b>Employer identification number</b>																		-			-					
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<p><b>Part II Certification</b></p> <p>Under penalties of perjury, I certify that:</p> <ol style="list-style-type: none"> <li>The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and</li> <li>I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and</li> <li>I am a U.S. citizen or other U.S. person (defined below); and</li> <li>The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.</li> </ol> <p><b>Certification instructions.</b> You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.</p>																																																																	
<p><b>Sign Here</b></p>	<p>Signature of U.S. person ▶ _____</p>																																																																
	<p>Date ▶ _____</p>																																																																

# Mass Save Documentation Links

## Mass Save Rebate Application

- ▶ updated semi-annually - needs to be filled out in full prior to submission
- ▶ <https://www.masssave.com/-/media/Files/PDFs/Business/rebate-forms/2025/2025-CI-Commercial-Heat-Pump.pdf>

## Mass Save Rebate Commitment Letter (RCL) Request Template

- ▶ updated semi-annually - please allow 24 to 48 hours processing time
- ▶ [https://www.masssave.com/-/media/Files/PDFs/Business/rebate-forms/24-MASG-0074\\_CI-HP\\_Comm-Letter-App.pdf](https://www.masssave.com/-/media/Files/PDFs/Business/rebate-forms/24-MASG-0074_CI-HP_Comm-Letter-App.pdf)

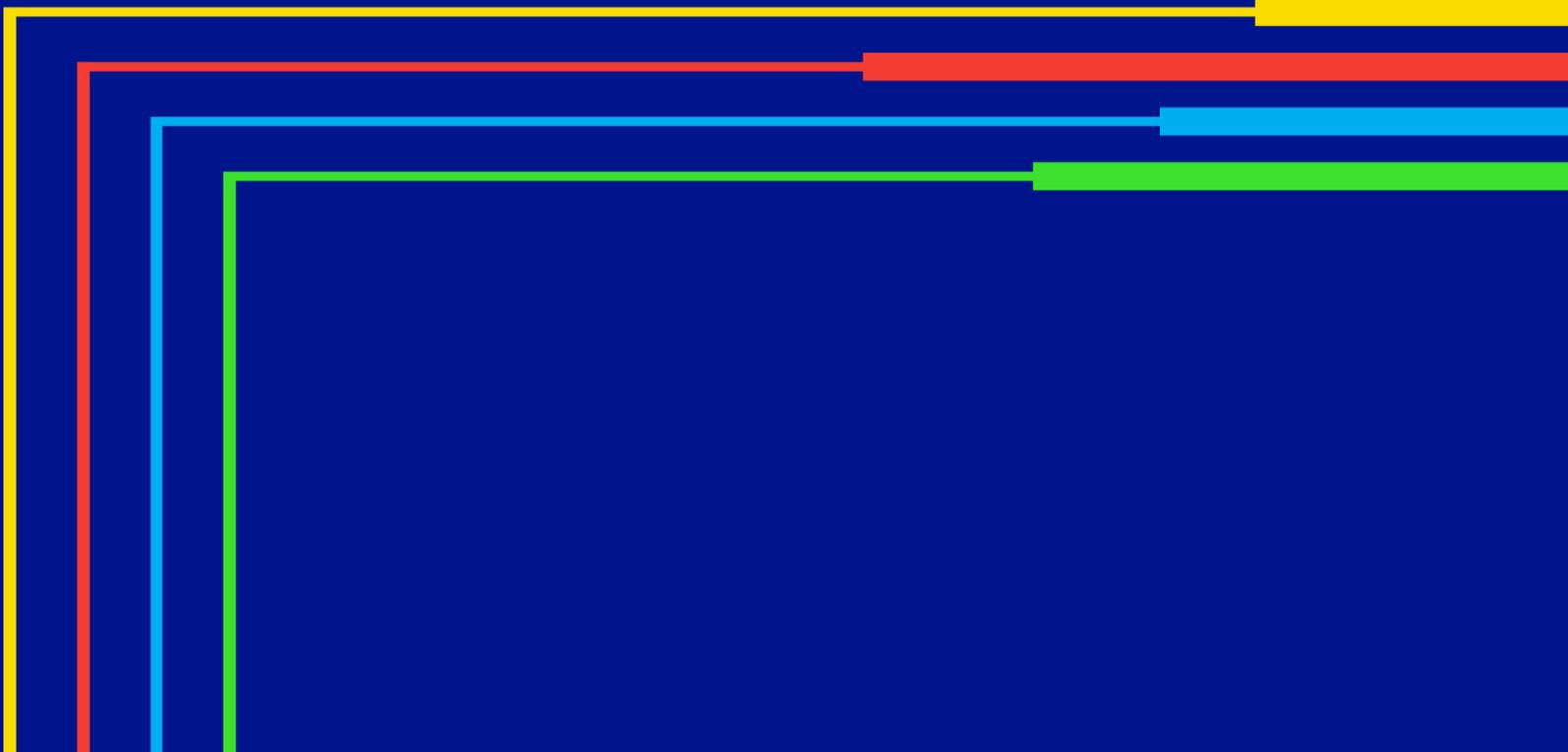
## Mass Save Qualified Product List (QPL)

- ▶ updated monthly - product must be listed on the QPL at time of installation or when an active rebate commitment letter is issued
- ▶ <https://www.masssave.com/cihpqpl>

# 03

## Thermal Energy Storage for Commercial and Industrial Facilities

Stan Nabozny [SPNabozny@michaelsenergy.com](mailto:SPNabozny@michaelsenergy.com)





# Thermal Energy Storage

In Commercial and Industrial Facilities



# Who We Are

## About

- Established in 1984
- Over 50% of staff are engineers
- 6,000+ GWh energy saved
- 14,000+ energy and load management projects

## Our Values

- Proactive & Responsive Service
- Collaborate Partnerships
- Intuitive Analysis
- Fanatical Execution

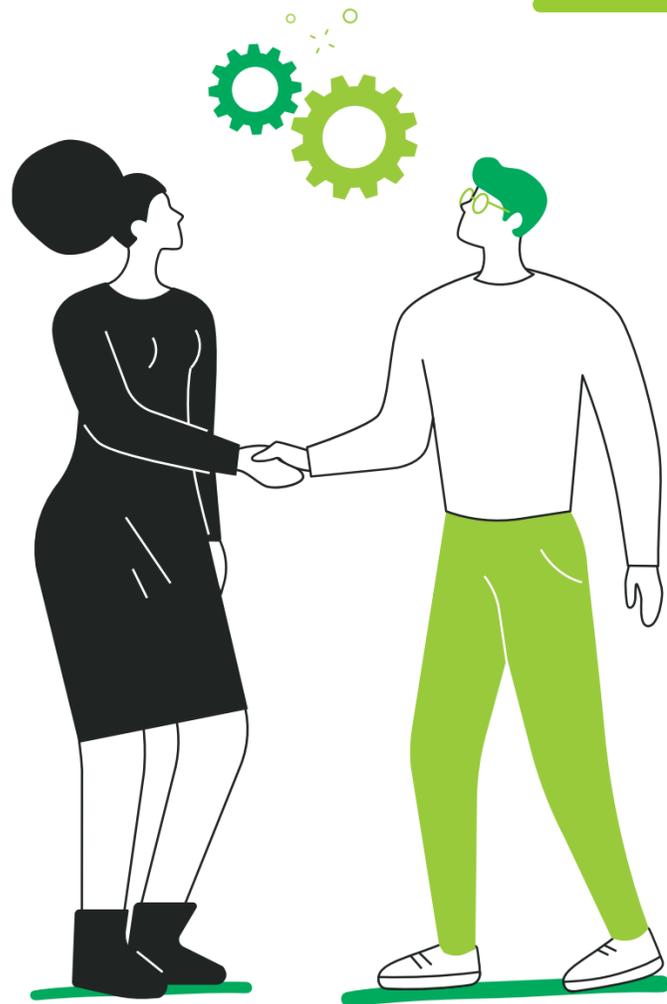


# The Michaels Crew

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## Top Strengths

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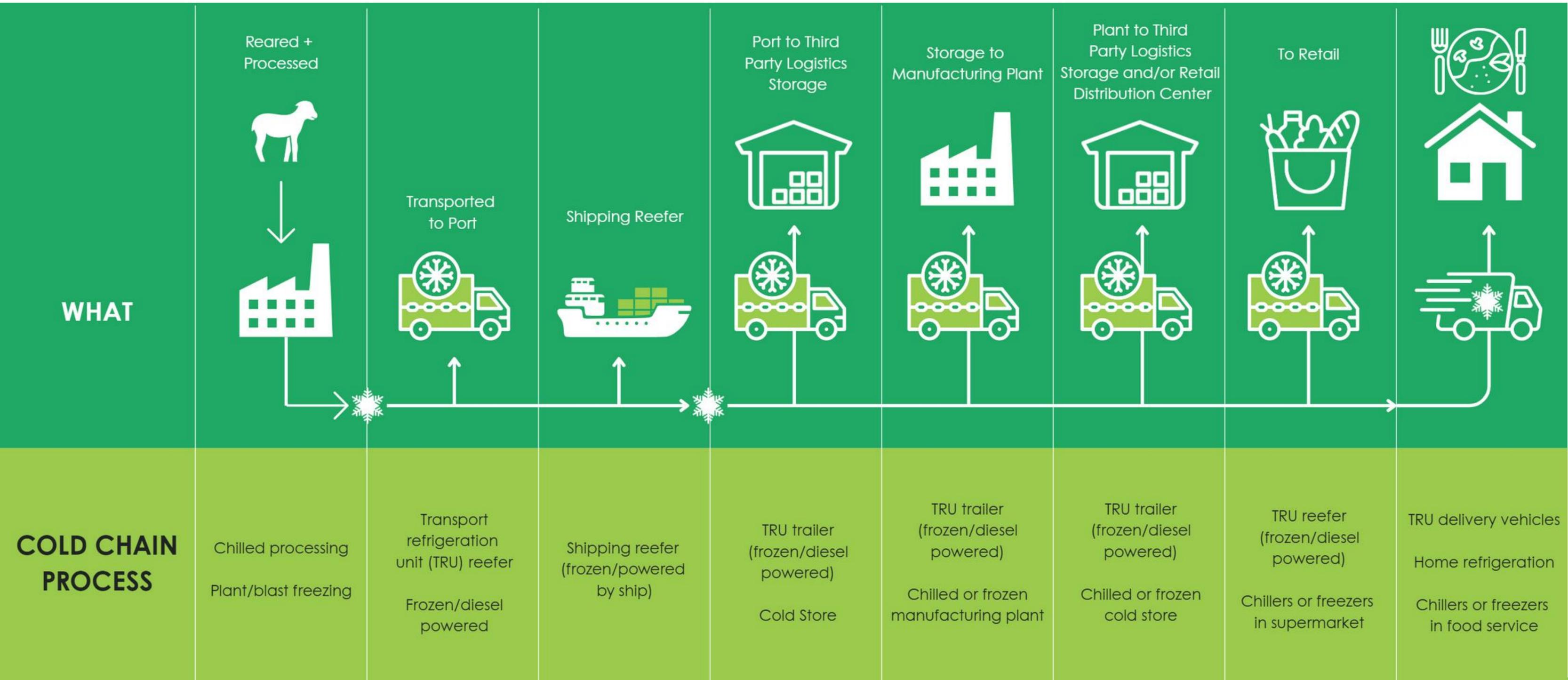
- Strategic Energy Management
- Decarbonization of Buildings
- Beneficial Electrification
- Thermal Energy Storage
- Energy Audits
- DOE ITAC Audits
- Retro-Commissioning (RCx)
- Demand Response

# The Rising Tide of Building Decarbonization Fines

- Cities globally are introducing substantial financial penalties for buildings that fail to meet mandated emissions or energy efficiency targets.
- These fines are rapidly becoming a powerful driver of decarbonization across building portfolios.

Location	Regulation / Program	Penalty Details
NYC	Local Law 97 (LL97)	<b>\$268 per metric ton CO<sub>2</sub> over annual limit</b> ; e.g. large buildings may face \$1M+ annually
Vancouver	Greenhouse Gas Intensity (GHGi)	<b>\$350 per metric ton CO<sub>2</sub> over annual limit</b>
Colorado	HB 25-1269 Building Decarbonization	Fee <b>\$400/year + fines up to \$47,000/day</b> ( $\approx$ \$17M/year) for noncompliance
Denver	Energize Denver Standards	Penalties <b>\$0.30–\$0.70 per kBtu over target</b> ( $\sim$ \$5.7M–\$13.4M for a 150K sf building)
Atlanta	Building Performance Standards & Benchmarking	<b>\$1,000/month after 30 days late</b> on reporting; escalating with continued violation
Washington, D.C.	Building Energy Performance Standards (BEPS)	<b>Up to \$10 per ft<sup>2</sup> per cycle</b> ; $\sim$ \$500k per cycle for a 50k ft <sup>2</sup> building

# The Global Cold Chain



# Thermal Batteries and Grid Challenges

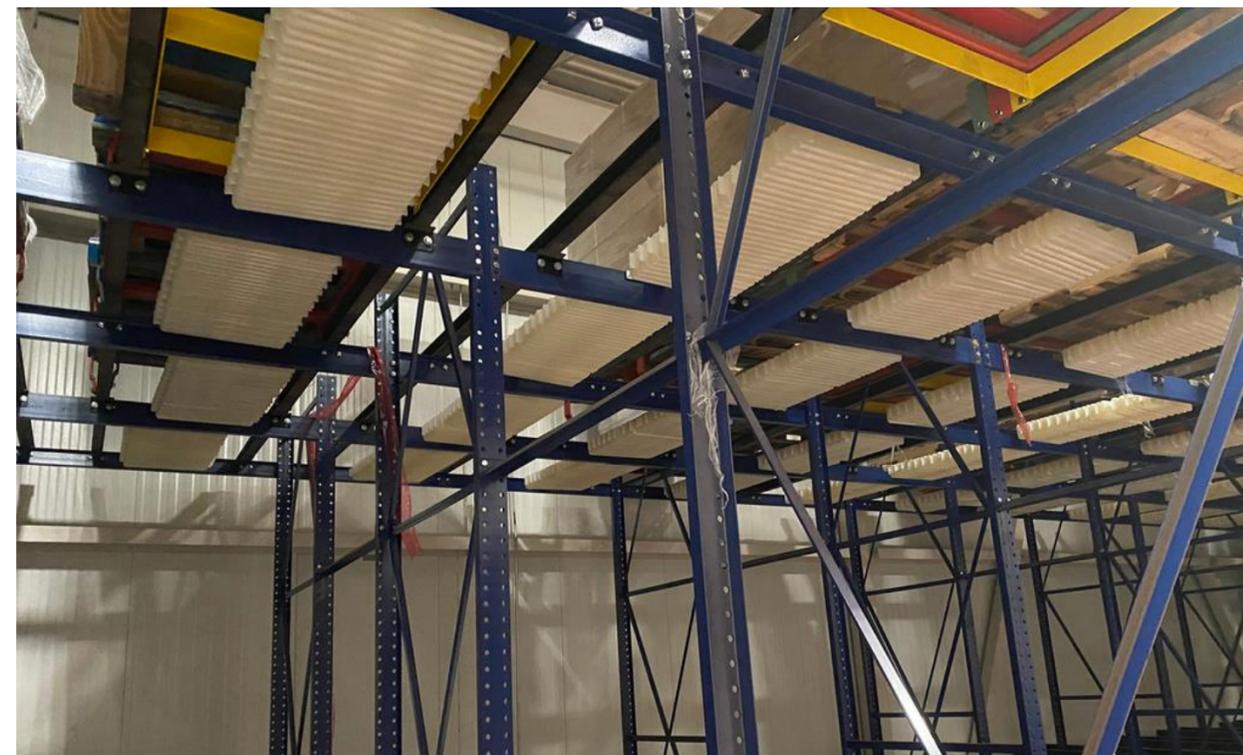
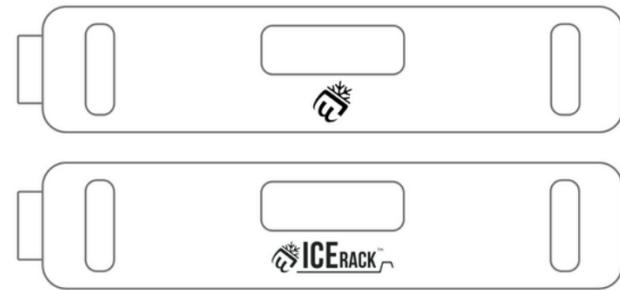


- 500,000 sq ft cold storage facility
- Refrigeration load of 3MW
- Up to 8 hours of load shift!

Source: Google Earth

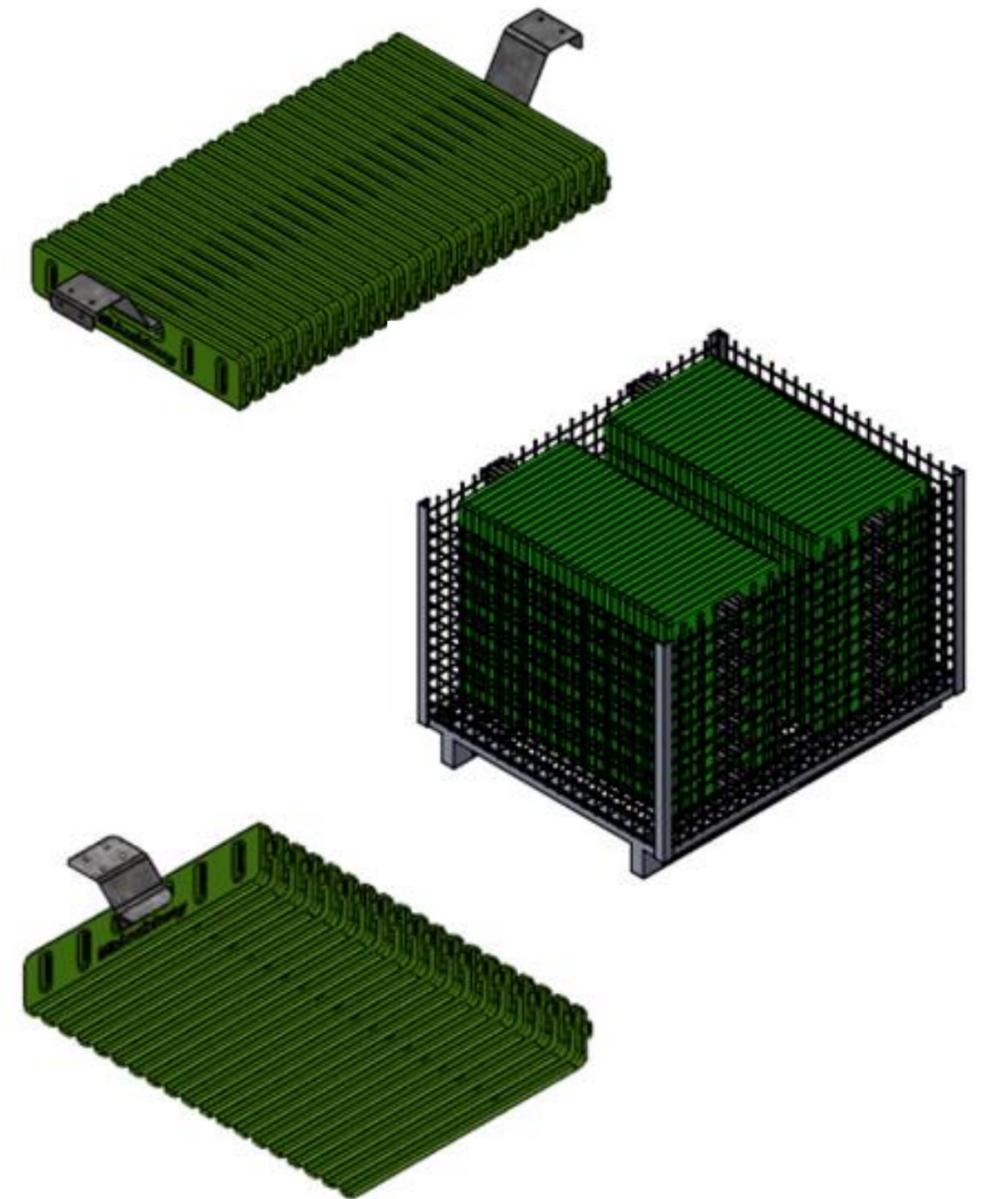
- The Cold Chain is ripe for decarbonization and load flexibility with over 44GW of potential
- Thermal energy storage has been used for flexible load management for over 30 years
- Avoids expensive grid upgrades and peaker plants
- Can reduce 70% of building load to address critical grid peaks
- Dispatchable and supports other grid services

# Thermal Batteries

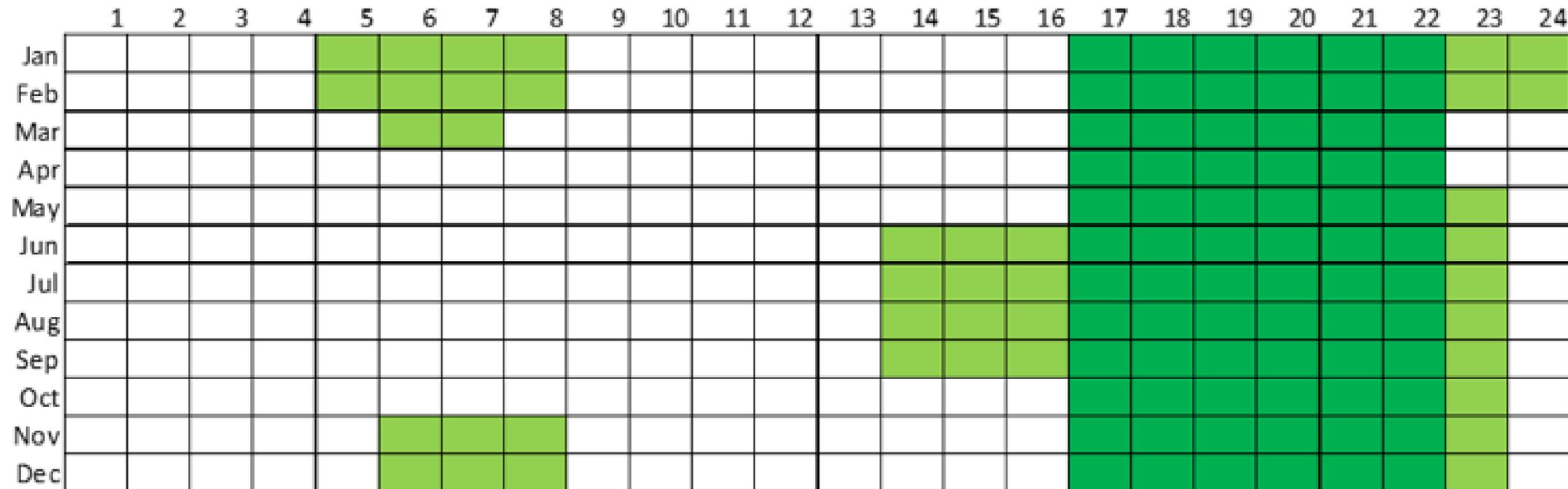


# What is Thermal Energy Storage (TES)?

- A “convective” Thermal Battery stores and absorbs 298x more heat per pound than frozen food
- No mechanical components, no heat exchangers, no piping
- Refrigeration equipment turned off during the expensive part of the day to shift load and save energy
- Compatible with any existing refrigeration system
- Cloud-based wireless sensors provide visibility to facility performance and energy usage with notifications



# Long Duration Fundamentals

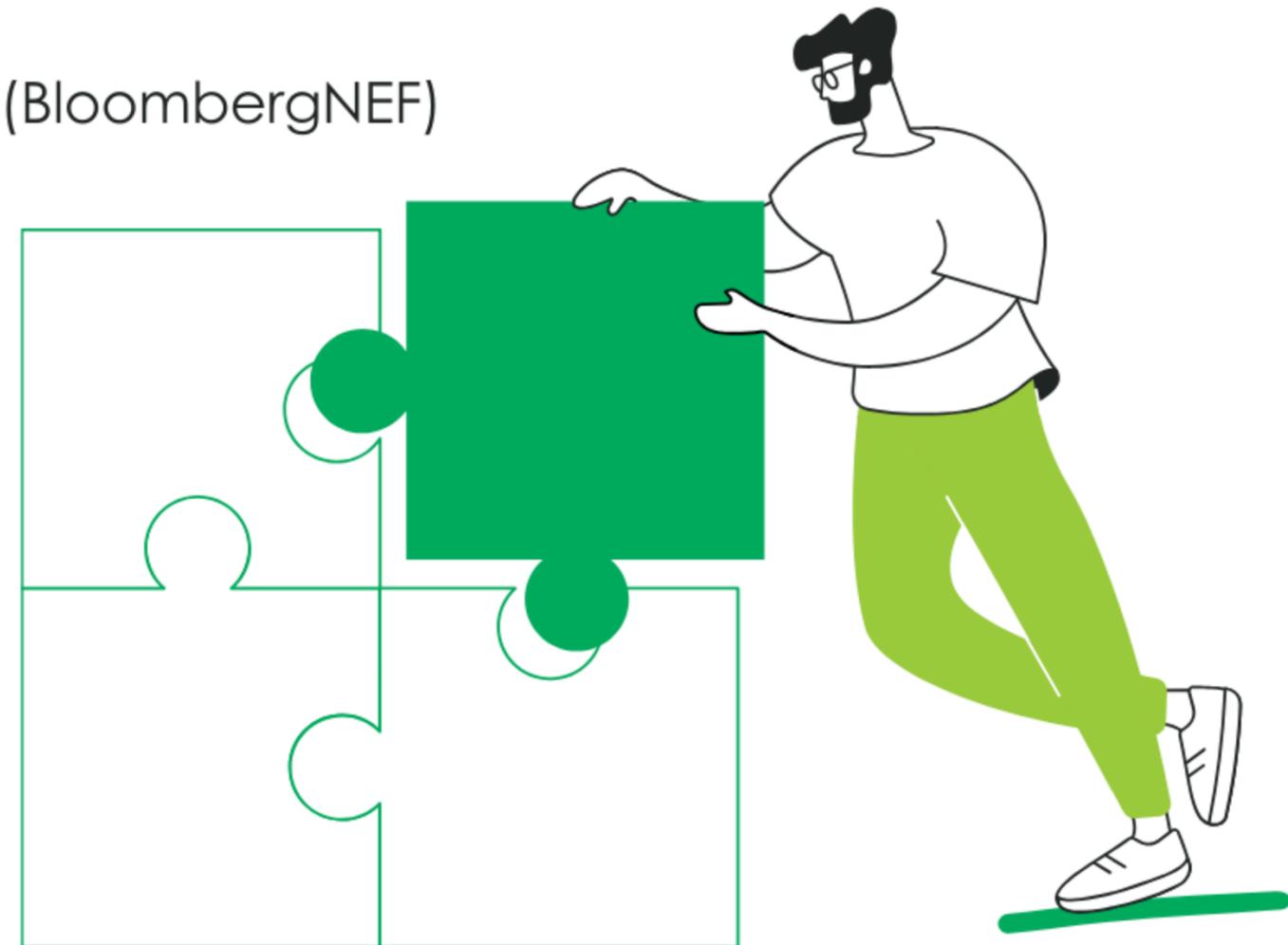


## Long-Duration Energy Storage – Heat Map Example

- Recharges in ~ 50% of the time it takes to discharge (capacity dependent)
- Enough energy storage to discharge for 8 contiguous hours plus additional dispatch, 12 hours total
- LCOE for TES 4¢ per kWh Li-Ion batteries require additional utility infrastructure and take up to 3 years to install and is a 4-hour resource, LCOE for 20¢ per kWh

# Benefits of Thermal Batteries

- ✔ Lasts 20+ years with minimal maintenance
- ✔ 1/4 the cost of a Li-ion battery
- ✔ Lowest cost long duration energy storage battery (BloombergNEF)
- ✔ Customer installable, 90-120 days
- ✔ Payback periods <2 years in most of the USA
- ✔ Manufactured in the USA
- ✔ 100% round trip efficiency



# Paying for Thermal Energy Storage



## Savings Opportunities

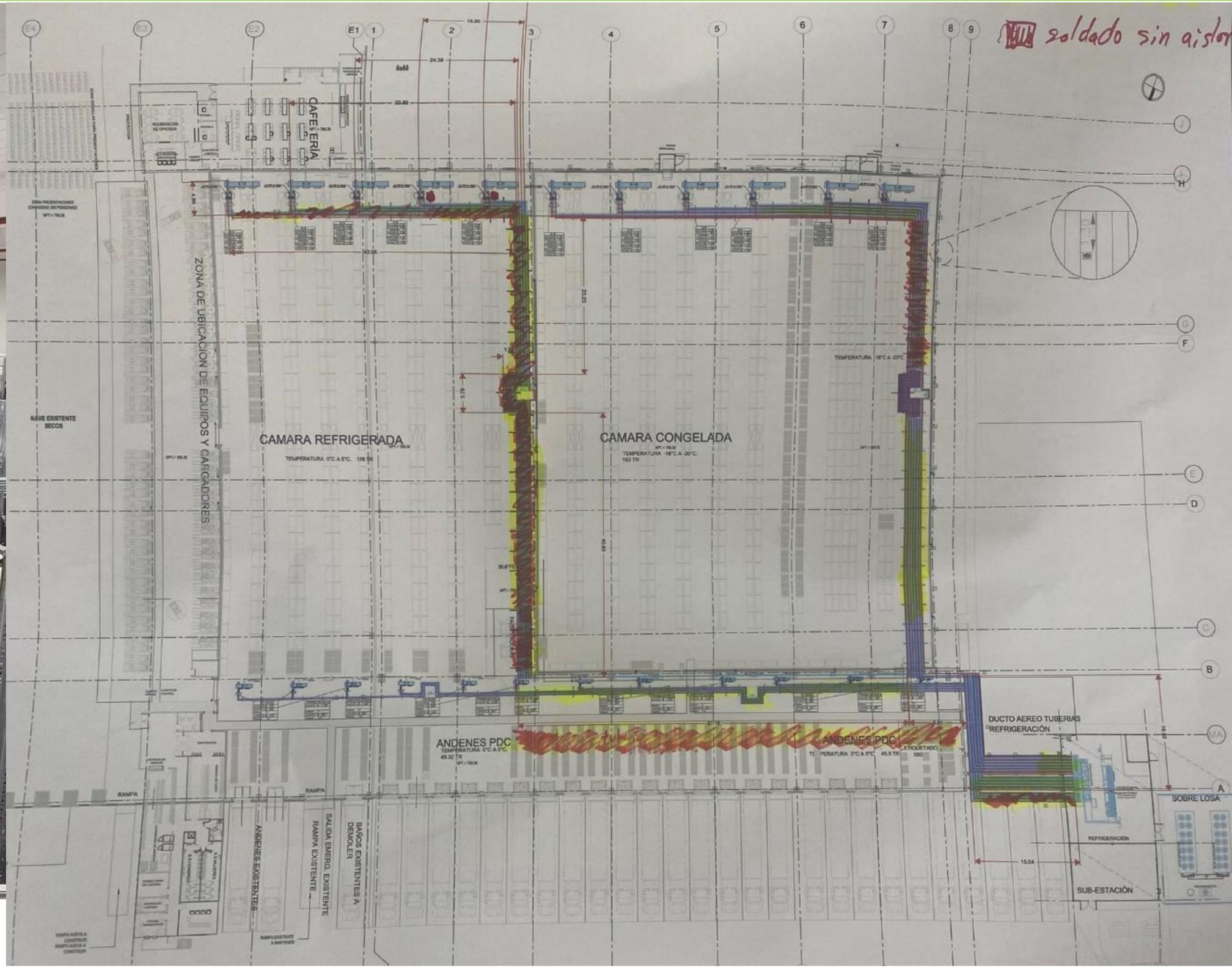
- 30-40% tax credit for battery storage
- Utility incentives
  - Real-time energy management
  - Demand reduction
  - Energy efficiency
- \$300,000 DOE ITAC Grants



## ITAC Grants

- Funded by the DOE
- Small to medium manufacturers and cold storage facilities
- Need an ITAC-equivalent audit first
- Less than \$100 million in sales
- Less than 500 employees

# Industrial Application



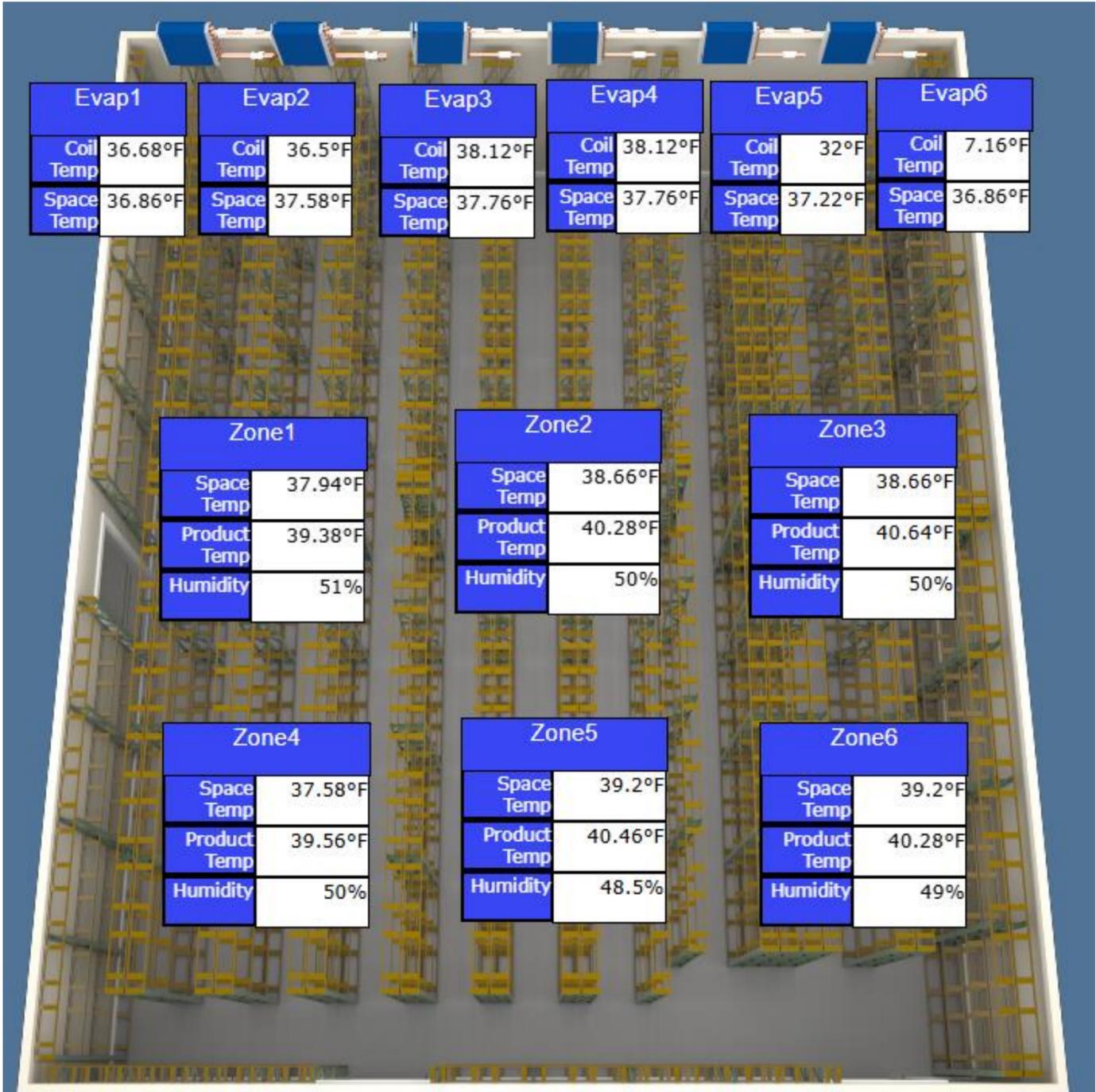
# Industrial Monitoring



# Dashboard Screen



**Michaels**Energy



- Real time dashboard with evaporator and zone temperatures
- Can play back previous data to be examined using the DVR feature
- Can be further customized and tailored as needed
- Displays the current daily trend for product and space temperature
- Go to the main menu and run the Visualytk application

# Space and Product Temperature Report



**Michaels**Energy

- Accessed from Analytics > Favorites
- Used to analyze Space and Product Temperature for a time period
- Product Temperature band in Red with Space Temperature in Purple
- Report can be Shared via Hyperlink or downloaded into Excel or other formats



# Analytic Rule: Zone Temp Too High



**Michaels**Energy

- Accessed from Analytics > Home > Sparks
- Analytic Rules find exceptions in the cloud database to drive operational improvements
- This rule is used to analyze Zone Space Temperature higher than a predefined limit
- Can accommodate multiple sites and multiple rooms and multiple zones sorted in priority order
- Report can be Shared via Hyperlink or downloaded into Excel or other formats

Select your room or site      Time Period - User defined      Select the rules to search the database      View Menu - Share this with a hyperlink

Site	Rule	Duration	Cost	1a	2a	3a	4a	5a	6a	7a	8a	9a	10a	11a	12p	1p	2p	3p	4p	5p	6p	7p	8p	9p	10p	11p	Equip
	Zone temp too high	19.3hr	\$1,061.50																								x 6

Duration and Cost      When the exception occurred      To the detailed report

# Cloud Intelligence Platform



## Actionable Intelligence

- 24/7 real-time data and analysis with notifications
- Performance tracking, KPIs, and rules
- Identify equipment issues before costly problems
- Visibility, energy analysis, and optimization



## Energy Management System

- Equipment usage optimized against utility rate structure
- Intelligent notifications and alarms
- Predicts failure before it happens
- Works with existing building management systems



## Efficiency & Demand Reduction

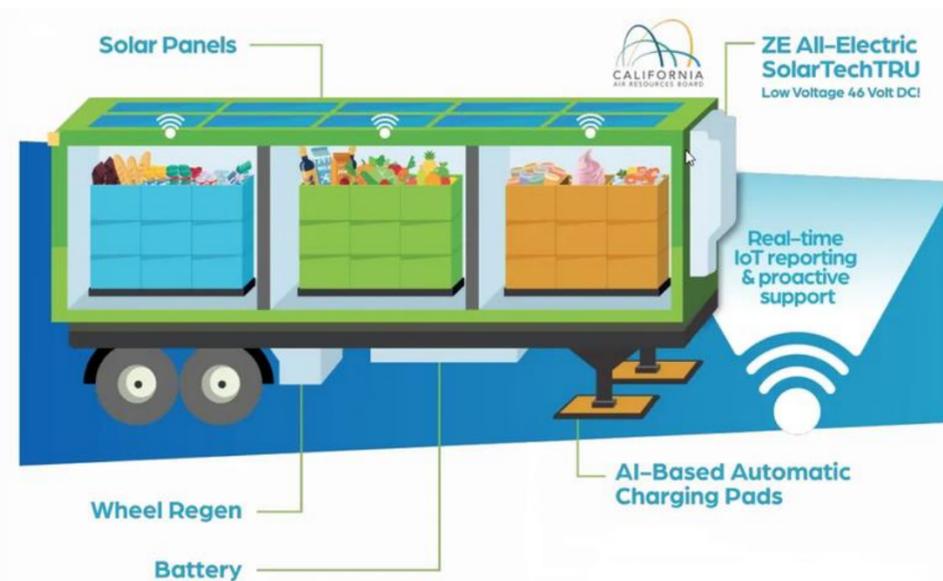
- Provides continuous commissioning for long-term performance
- Adapts for seasons and new rate structures
- Cost avoidance: demand, time-of-use, peak
- Operational efficiencies

# Hunts Point Project

NYSERDA grant to be implemented in Hunts Point using innovative energy solutions in refrigeration and transportation.

This project integrates several advanced technologies with AI forming an AVPP, including:

- **Solar Power** – Utilizing solar to optimize energy use.
- **Thermal Energy Storage (TES)** – Reducing peak electricity demand by shifting refrigeration loads to off-peak hours
- **Electric Transport Refrigeration Units (eTRUs)** – Supporting the transition to cleaner, more efficient refrigerated transport by integrating eTRU infrastructure which includes solar
- **Demand Response Capabilities** – Reducing operational costs and improving grid reliability.



Confidential and Proprietary



# Linear Generator

Utility-scale performance for any project size on both sides of the meter

Easy, Modular Installation  
Inverter-based Technology  
15 MW per Acre Scalability



Each package contains two linear generator cores, operating in tandem



**Breakthrough design enables an unmatched combination of features and benefits.**

**High Efficiency**  
Direct conversion of linear motion into electricity.

**Fuel Flexibility**  
Continuous, adaptive control without mechanical constraints.

**Near-Zero NOx**  
Low-temperature, non-combustion reaction without a flame or burning.

**Fully Dispatchable**  
Load-tracking, fast on/off, black start, and islanding.

**Turnkey Packaging**  
Built-in grid tie inverters and auxiliaries.

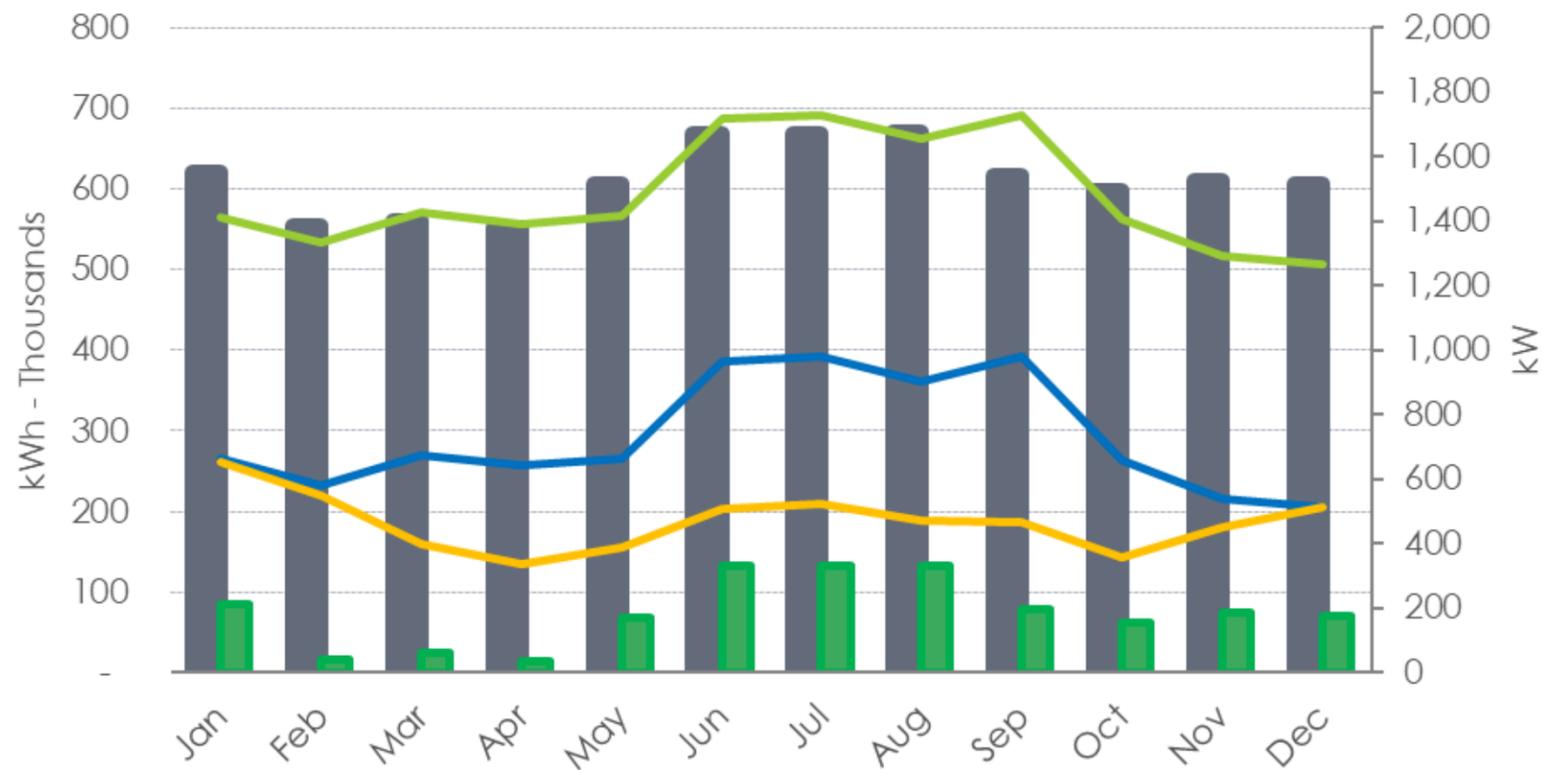
## Performance Specifications

<b>Outputs<sup>1</sup></b>	Power (net AC)	230 kW	<b>Environment</b>	Temperature Range	-20 to 50 C
	Electrical	480 V, 3 Phase, 60 Hz		Humidity	0 to 100%
<b>Inputs<sup>2</sup></b>	Fuels	Natural Gas or Biogas with Hydrogen blend up to 30%	<b>Grid-Parallel</b>	Load Tracking	20 kW/second up/down
	Input Pressure	8-25 psig (15 psig nominal)		Power Output Range	0 to 100% power output
	Water Consumption	None	<b>Backup<sup>5</sup></b>	Grid Parallel to Island Transfer	< 10 sec
<b>Efficiency<sup>3</sup></b>	Electrical (LHV, net AC)	45%		Maximum Step Load	120% nameplate kVA
	Heat Rate (HHV, net AC)	8,416 BTU/kWh	Building Soft Start Capability	Yes	
<b>Emissions<sup>4</sup></b>	NO <sub>x</sub>	< 2.5 ppm (<0.07 lb/MWh)	<b>Other</b>	• UL 2200 package	• Remote monitoring
	Noise	< 70 dBA @ 6 feet		• UL 1741 SA grid-tie inverter	• Secure customer portal
<b>Physical</b>	Weight	20 tons	<small><sup>1</sup> Projects greater than 1.5 MW can be optimally designed with the use of external inverters. <sup>2</sup> 100% hydrogen and 100% ammonia capable with field UL certification. <sup>3</sup> Measured according to ASME PTC 50 at 15 C and 1 atm. <sup>4</sup> Products comply with emissions limits in South Coast AQMD. <sup>5</sup> Performance with purchase of internal backup kit and additional site relays and controls equipment.</small>		
	Dimensions (L x W x H)	20.5' x 8.5' x 9.5'	<small>All data is subject to technical development and modification. R30020</small>		

- The Mainspring Linear Generator delivers **flexibility for the transition to Net Zero**, including the ability to switch between fuels like hydrogen, natural gas, ammonia, and biogas with software to track renewable generation and fill in where needed. Fully dispatchable.
- Uses a cold reaction and dual piston configuration to generate power, 250kW per generator in a 20ft. X 8ft. X 9.5ft. footprint.
- No/Low emissions < 2.5ppm NO<sub>2</sub>
- Read more here: <https://spectrum.ieee.org/mainspring-energy>

# TES and Linear Generator Results

Monthly Electric Energy



2024 Electric Consumption (kWh)

Energy with Linear Generators (kWh)

2024 Electric Demand (kW)

Demand with Linear Generators (kW)

Demand with TES and Linear Generators (kW)



Installing three 250-kW Mainspring linear generators can reduce 90% of the consumption of the building and 51% of the demand.



Adding the TES system to the Linear Generators can reduce demand by ~70%.

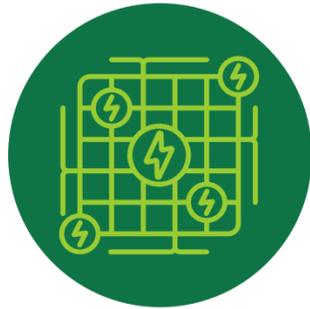


Adding PV to this solution can make net zero achievable.

## Results:

- Electrical Savings: 6,439,000 kWh/yr
- 1012 KW Demand Savings
- GHG Reduction of 4,328 Metric Tons
- 40% tax credit of \$766,000 plus bonus depreciation
- \$5.5M implementation cost

# Why TES for Refrigeration?



## Immediate Grid Relief

TES reduces peak electricity demand and stress on aging grid infrastructure—supporting reliability during critical hours.



## Fast Deployment

Systems can be installed in under 120 days, delivering near-term impact while other solutions remain years away. Behind-the-meter design avoids lengthy and costly utility interconnection processes.



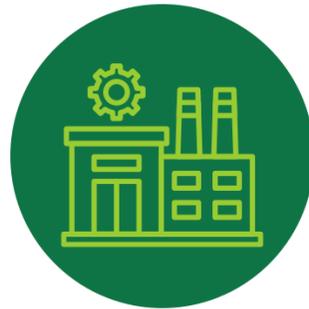
## Lower Cost of Energy

TES provides permanent load shifting at an LCOE of ~\$0.04/kWh—cheaper than batteries or peaker plants.



## Stackable Incentives

TES qualifies for the 40–50% Investment Tax Credit (ITC), demand response payments, and utility capacity incentives.



## Multi-Sector Scalability

Proven across cold storage, food processing, and refrigerated warehouses—TES is modular and retrofit-ready.



## Climate & Economic Resilience

Cuts CO<sub>2</sub> emissions, lowers operating costs, and enhances food security and supply chain reliability.



Stan Nabozny

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Director of Energy Solutions

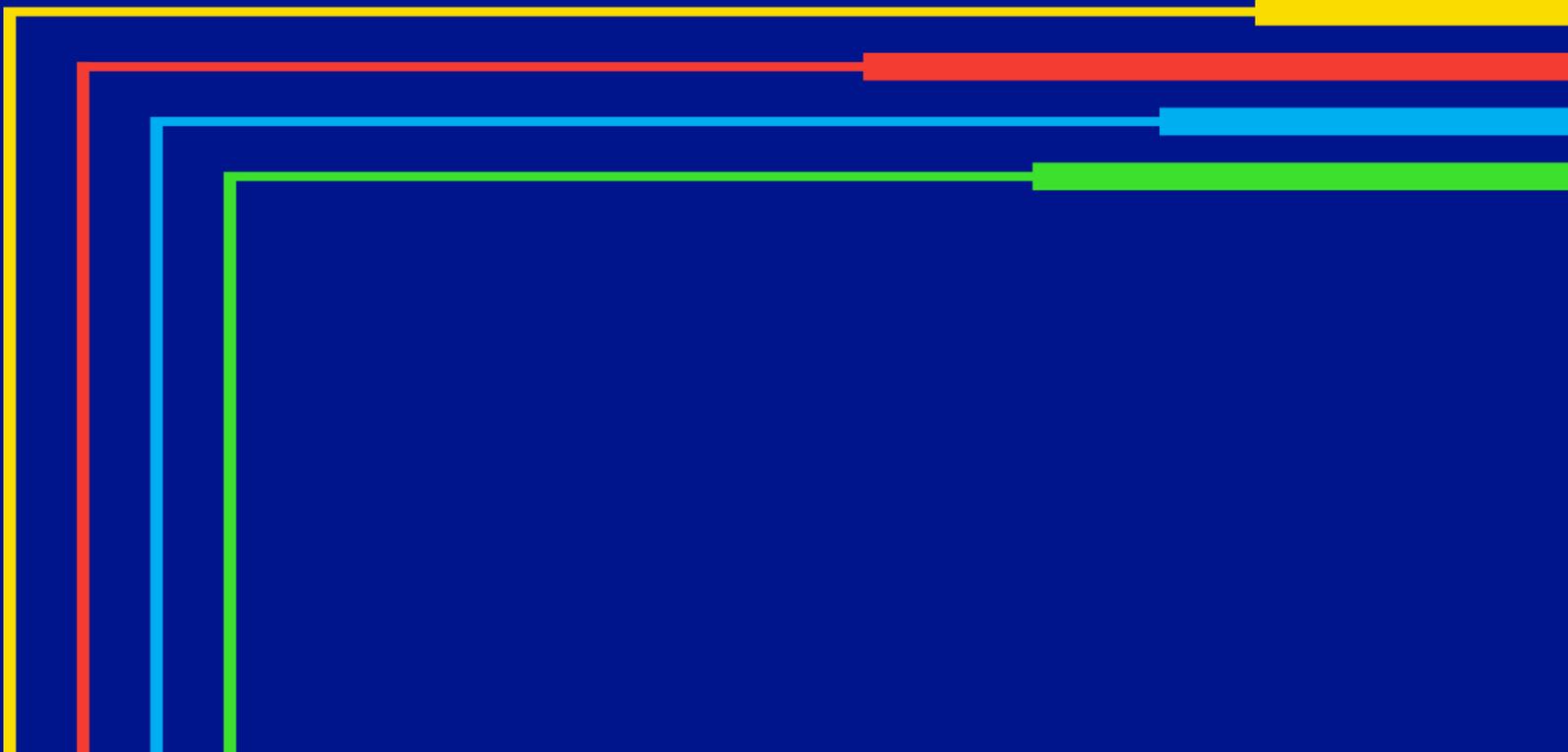
281-362-9900

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# 04

## PEX Progress and Goals for 2025

Mathew McCarthy [Mathew.mccarthy@nationalgrid.com](mailto:Mathew.mccarthy@nationalgrid.com)



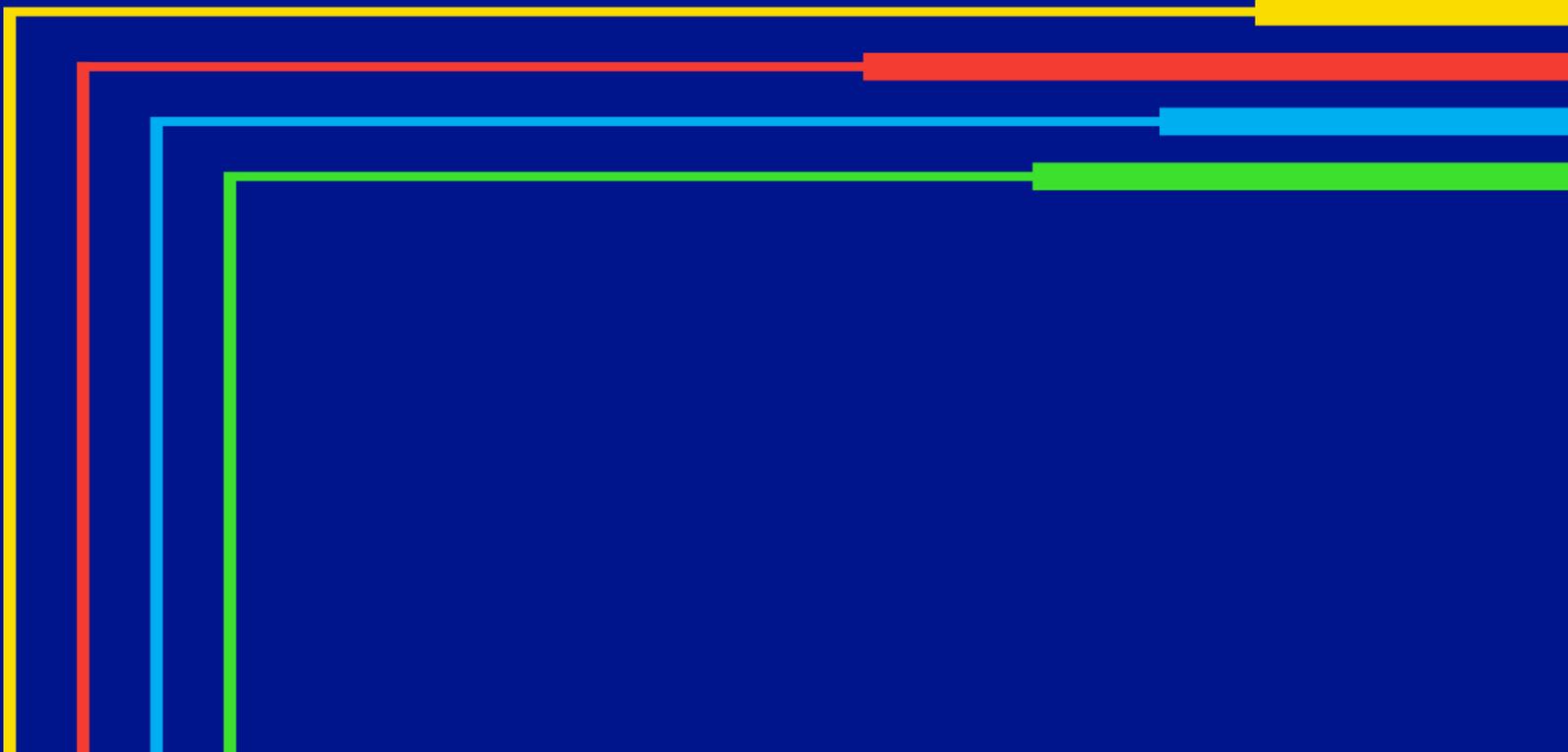
Key Performance Indicators	Goal	Paid	Paid % to Goal	Forecast	Forecast % to Goal
Electric Savings (NLT MWH)	85,600	49,810	58%	99,276	116%
Gas Savings (NLT Therms)	1,587,000	789,129	50%	2,000,000	126%
Electrification (NLT MMBTu)	37,900	30,000	79%	40,000	106%

- **Ensure ECDs are consistently updated to reflect current project status and progress.**
- **Individualized PEX reports are available upon request—just send me an email. These reports include:**
  - Personalized goals
  - Progress tracking
  - A detailed list of all projects assigned to you as an installer in InDemand

# 05

## Quick Hits/Reminders/2025 Meeting Dates

Mathew McCarthy [Mathew.McCarthy@nationalgrid.com](mailto:Mathew.McCarthy@nationalgrid.com)



## Quick Hits/Reminders/2025 Meeting Dates

- **Upcoming Trainings/Events:**
  - Mass Save events and trainings can be found on the Mass Save website [here](#).
  - MAEEP
    - September 30: 8:30 am – 4:00 pm - Upgrading to Heat Pumps from Existing Commercial HVAC Systems - [Registration Link](#)
    - October 28: 9:00 am – 4:00 pm – Existing Building Commissioning – [Registration Link](#)
- **PEX Landing Page:**
  - <https://www.nationalgridus.com/MA-Project-Expediter-Program>
- **2025 Meeting Schedule**
  - October PEX Meeting – October 15<sup>th</sup> 9-10AM (Invite Sent)
  - November PEX Meeting – November 19<sup>th</sup> 9-10AM (Invite Pending)
- **2025 Energy Solutions Summit –10/23/25 from 8AM-6PM – Booths are available!**

# Quick Hits/Reminders/2025 Meeting Dates

## Pipe Insulation Promotion

- **Eligibility:** Applies to all prescriptive and custom pipe insulation projects that meet cost-effectiveness and screening criteria.
- **Incentives:**
  - Eligible projects *may* be offered incentives up to 50% of total project costs, capped at \$0.50 per Net Lifetime therm saved.
  - For prescriptive projects, customers may receive either up to 50% of project costs or the standard prescriptive incentive—whichever is greater.
  - Please note: Offering incentives is at the discretion of the deal teams
- **Promotion Period:** Projects must be “sold” between September 1, 2025 and December 31, 2025. A project is considered “sold” once it reaches ‘Under Construction’ status in InDemand.
- **Resources:**

The pipe insulation page includes participation guidance, eligibility requirements, a custom application, and the Pipe, Tank, and Valve Insulation Savings Calculator:

<https://www.massave.com/business/rebates-offers-services/water-heating-and-pipe-insulation/pipe-insulation>

## Priority Target Markets:

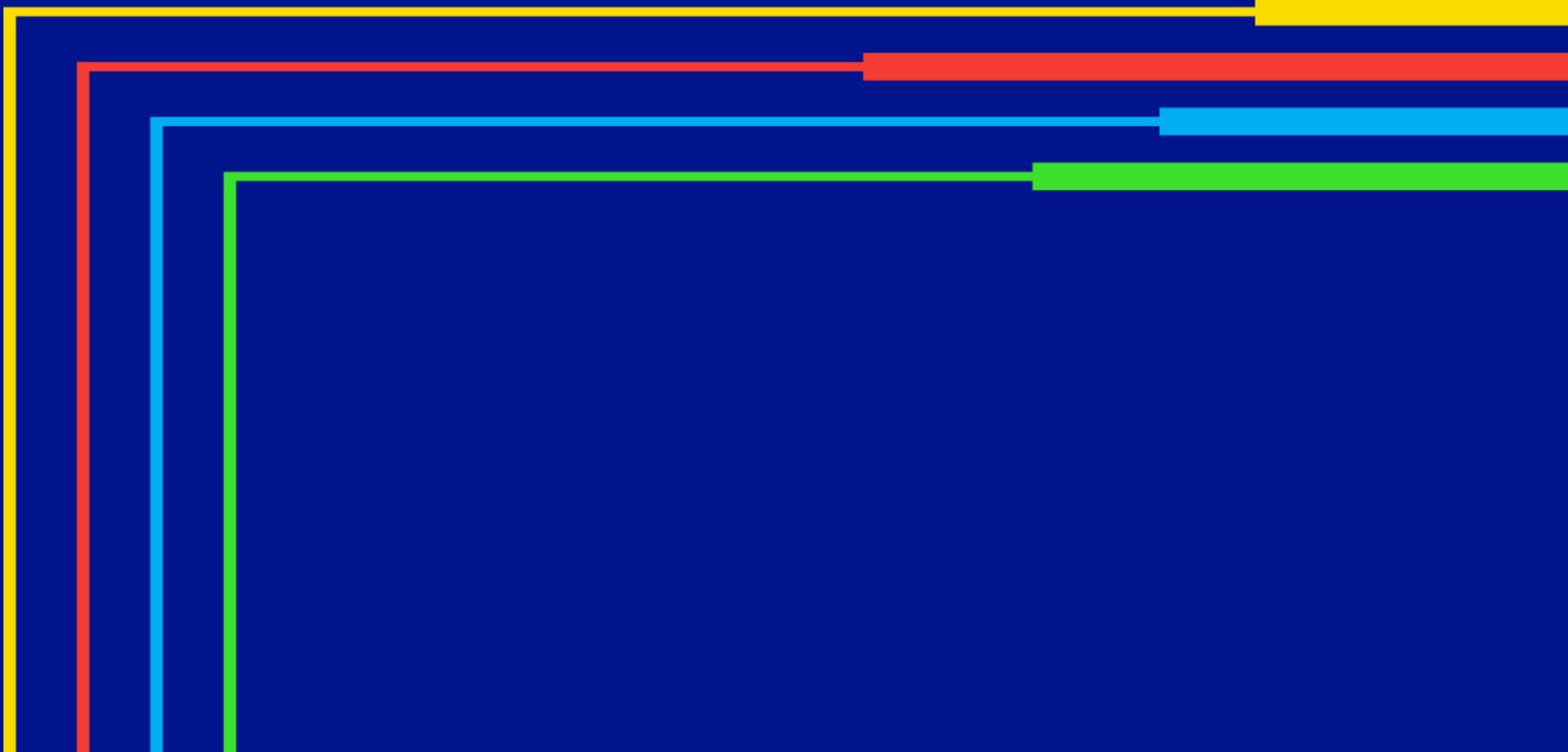
- Schools and other municipal buildings
- Colleges, universities, and hospitals
- Manufacturing facilities
- Buildings utilizing steam rather than hot water

## Quick Hits/Reminders/2025 Meeting Dates

- **Lighting Updates**
  - Effective September 1, 2025, new, lowered incentive levels will apply to Networked Lighting Controls (NLC) and LLLC controls for large commercial & industrial lighting projects. Projects with a signed Letter of Agreement (LOA) dated before September 1, 2025, and completed by December 31, 2025, will still qualify for current incentive levels. These updates do not impact products purchased via Midstream, or for Municipal or Small Business Turnkey projects.
- **One on Ones**
- **Updated Sales Rep Lookup Tool and Deal Team Summary Sheet**
- **New Measure – HVLS (High Velocity Low Speed) Fans**
- **Custom Express Tools**
  - Please refer to the [Mass Save Business Rebates and Incentives page](#) for the latest rebate/incentive applications and custom express tools.

# Thank You!

Be Safe



national**grid**