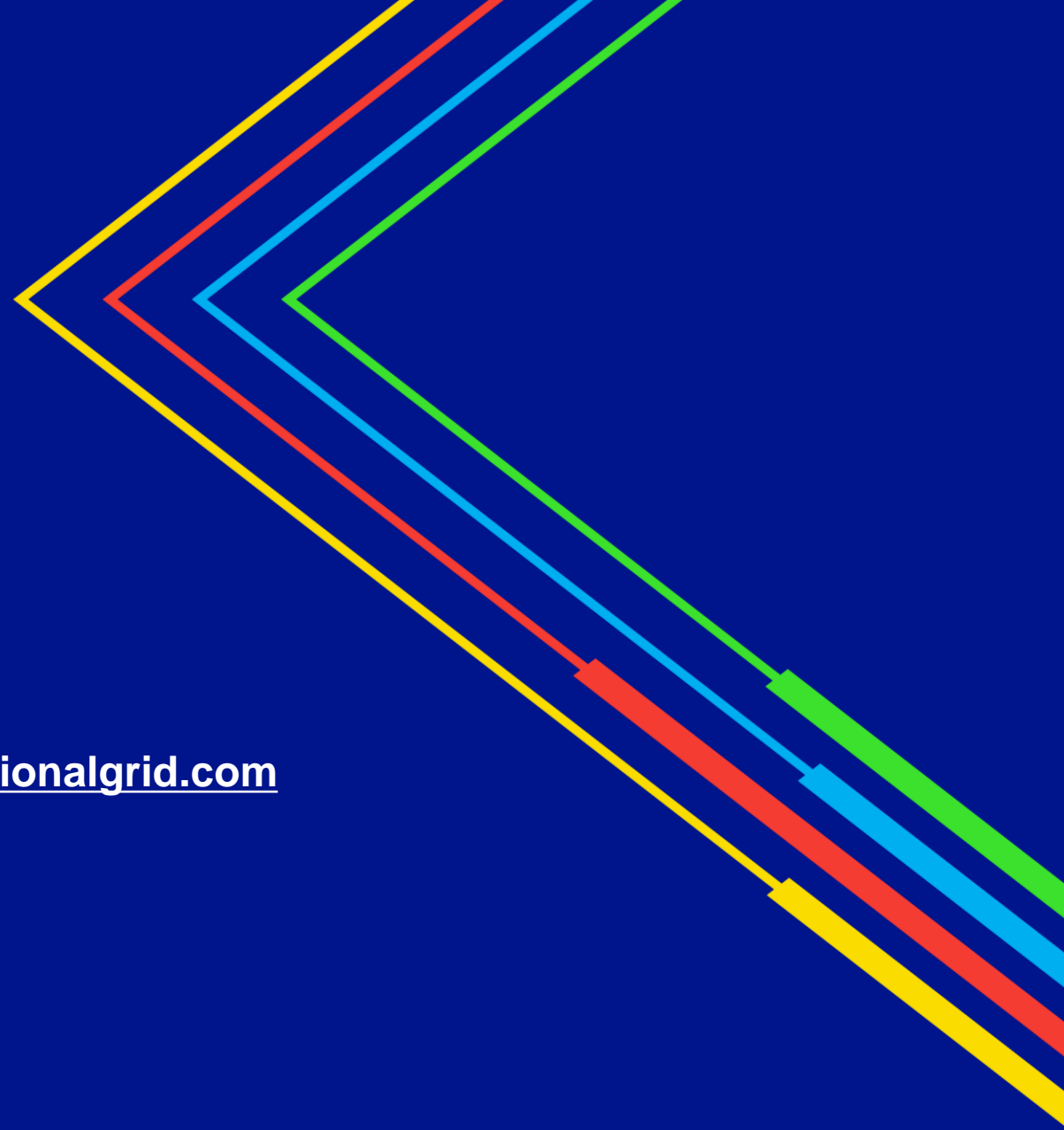


# May 2024 PEX Meeting

May 22, 2024

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

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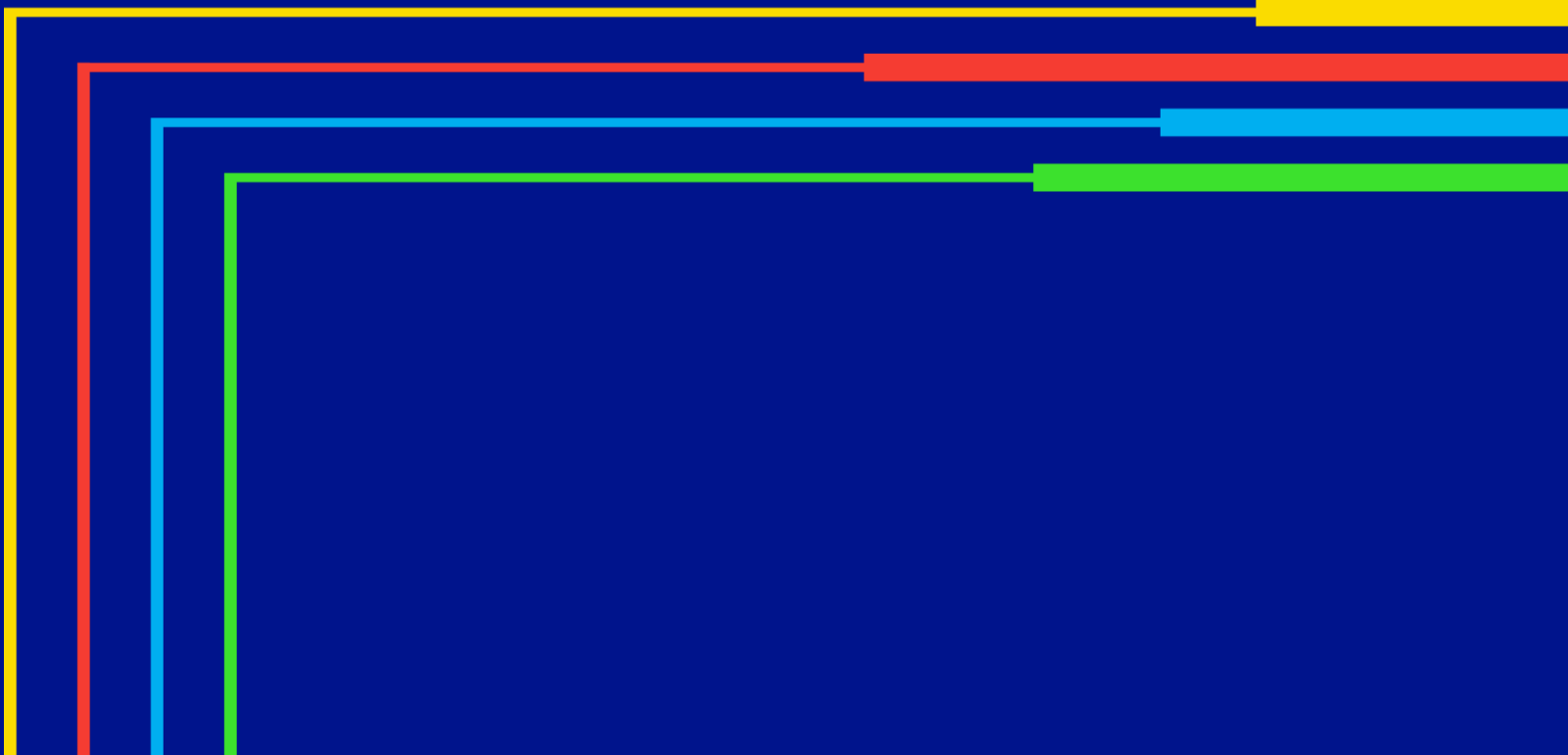
# Contents

<b>01</b>	Safety Moment – Holiday Travel Safety – Michael Blaney
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# 01

## Safety Moment – Holiday Travel Safety

Michael Blaney [arthur.blaney@nationalgrid.com](mailto:arthur.blaney@nationalgrid.com)



# Enjoy Your Vacation!

## 3 Reasons Why Using All Your Vacation Days Is Important (thomasnet.com)

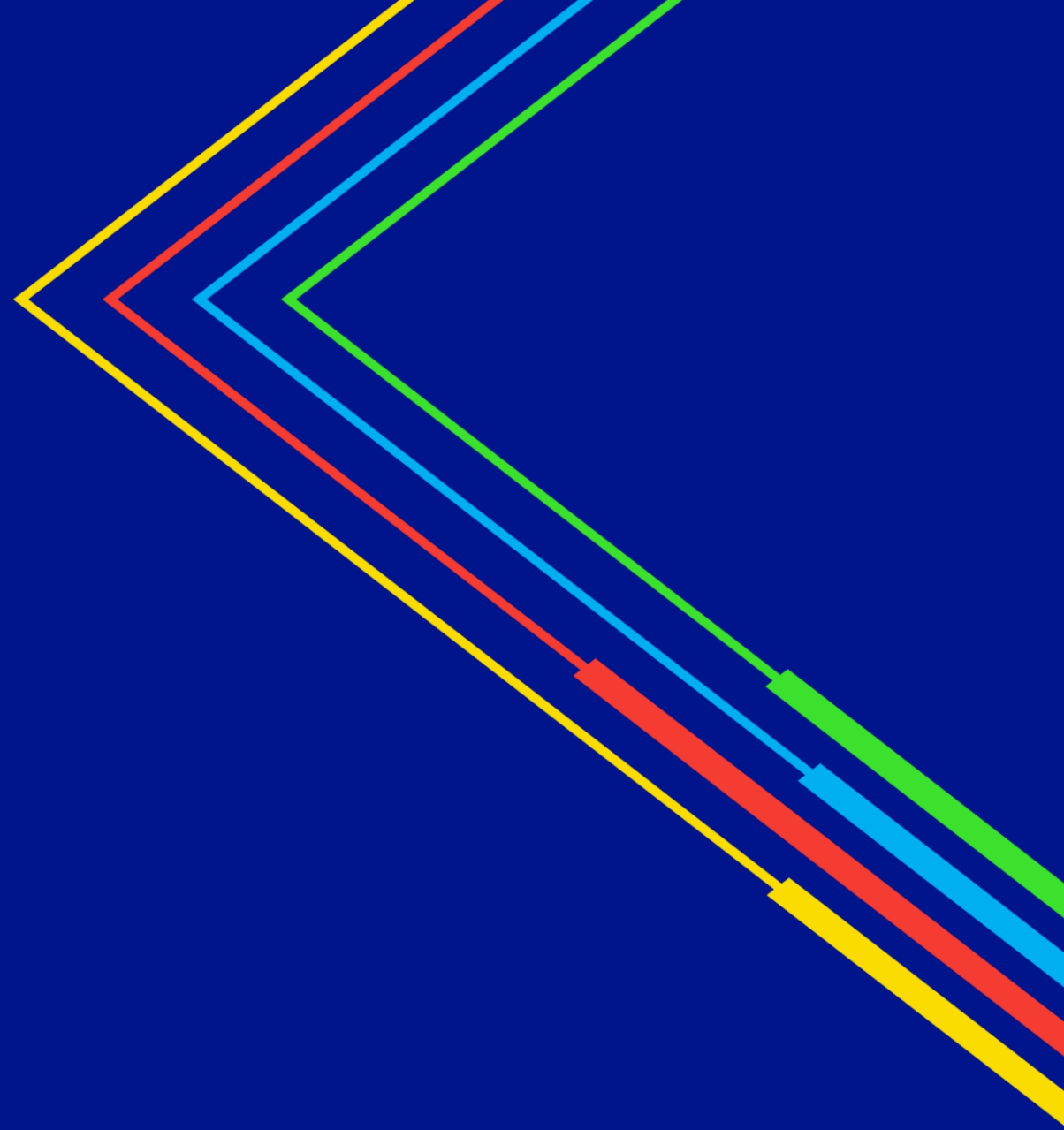
1. Better Physical Health
2. Better Mental Health
3. Better Performance



# Circle of Safety

Staying Safe Behind the Wheel

nationalgrid



# Circle of Safety

<https://www.kidsandcars.org/>

## Circle of Safety Video



Remember, a circle of safety inspection can prevent a serious and tragic incident. In the United States, on average 50 children are backed over every week by vehicles because the driver could not see them.

# Human Performance – Circle of Safety



## NationalGridUSAcademy/ Human Performance Program

Just another reason for us to do a vehicle CIRCLE OF SAFETY check before driving off in our vehicles



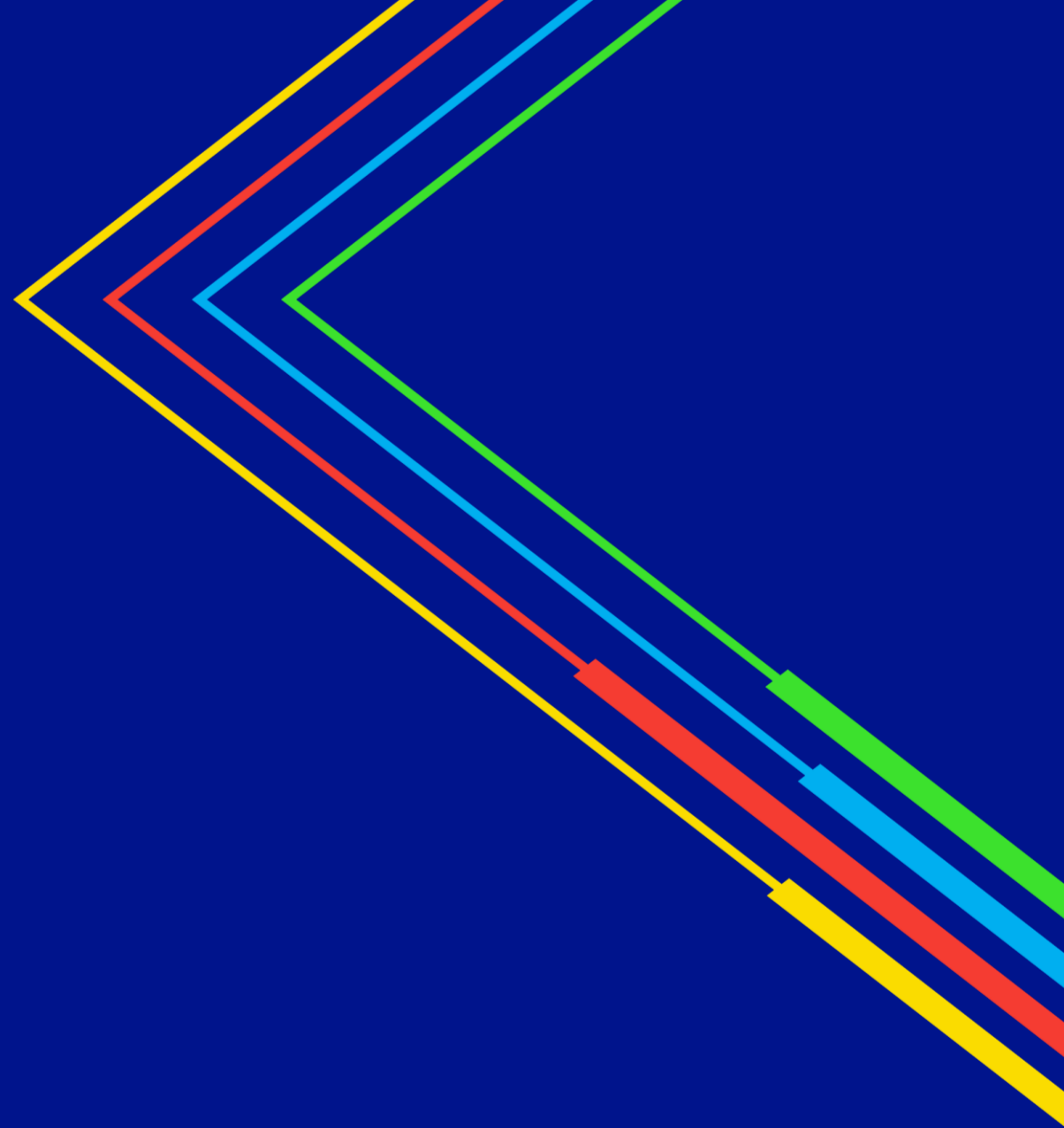
A crew working for a utility company found this young child in the wheel well of their truck while conducting a "CIRCLE OF SAFETY" of the company truck the crew members were driving before moving the vehicle.

I don't want to think about what would have happened if the employee had gotten in the truck and drove off without doing a walk around. Please share this eye opening, bone chilling photo and experience with your crews.

This crew has also reported children climbing into the back of company vehicles. Keep in mind children are out of school on summer break, so be sure to watch out for them!!

# Smith Safe Driving System

Keys to Safe Driving





# Smith System – 5 Keys

## **1. Aim High in Steering**

Look 15 seconds into your future. (Don't just look at the vehicle in front of you)

## **2. Get the Big Picture**

Look for Hazards. (Other Motorists, Pedestrians, Vehicle doors opening)

## **3. Keep Your Eyes Moving**

Don't stare. (Use your peripheral vision)(Stop the fixed habit stare)

## **4. Leave Yourself an Out**

Monitor the space cushion around you and your bike.

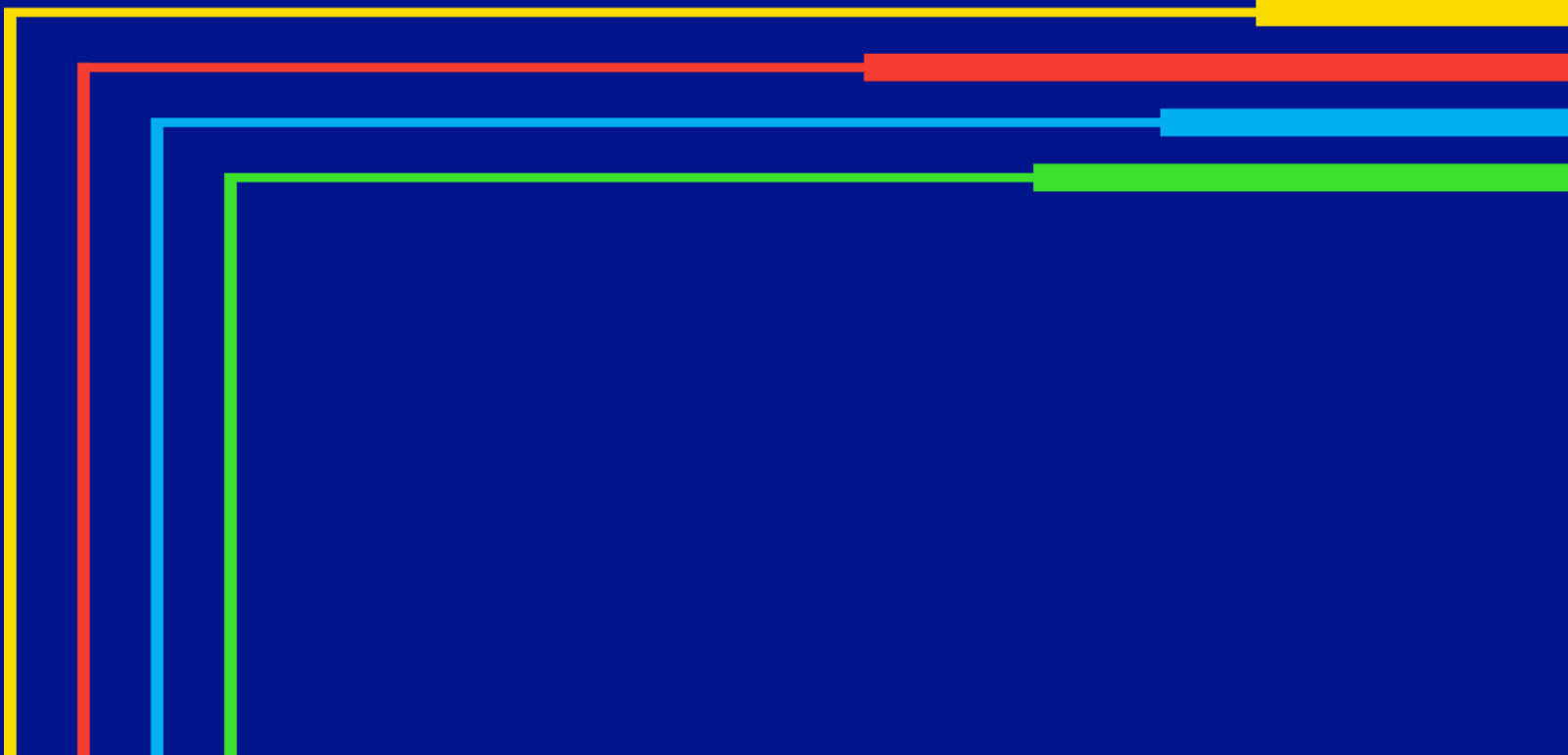
## **5. Make sure They See You**

Use your signals- (Directionals, 4-Way Flashers, Head Lights, Brake Lights, Horn, Hand Signals) Make Eye Contact.

# 02

## C&I Midstream Updates

Laurie Acone [laurie.acone@nationalgrid.com](mailto:laurie.acone@nationalgrid.com)



# C&I Midstream Offerings

2024

**national**grid



# What's New

- **Boilers**
  - Also still downstream
- **PTHPs (Packaged Terminal Heat Pumps)**
- **Lawn Equipment** (via online marketplace)
- **Vending Miser** (formerly downstream)
- **PEI Pumps**



# PTHP (Packaged Terminal Heat Pumps)

Equipment	Size Category	Full Load Cooling Efficiency	Heating Efficiency	Customer Discount*	Distributor Stipend
Packaged Terminal Heat Pumps	$\leq 10,000$ BTUh	12.1 EER	3.5 COP	\$500 / unit	\$50 / unit
	$> 10,000$ BTUh	10.7 EER	3.1 COP		

## Battery Powered\* Lawn Equipment:

Lawn Mowers	\$ 75
Leaf Blowers	\$ 30
String Trimmers	\$ 30
Chain Saws	\$ 30

Retail Grade - property managers or businesses who use lawn equipment for a short period of time during the day.

\* Must be battery-powered and have a battery capacity less than 500-watt hours

# Vending Misers

Equipment	Per Unit Incentive
Refrigerated Beverage Vending Machine	\$115.00
Non-Refrigerated Snack Vending Machine	\$45.00
Glass Front Refrigerated Coolers	\$115.00





# PEI Rated Efficient Water Pumps

Pump Type	Pump Size Category (Rated HP)	Measure Efficiency (PEI)	Energy Rating (ER)	Customer Incentive (\$/HP/ER)	Distributor Stipend (\$/unit)
Constant Speed	≥ 1 HP and < 5 HP	< 0.96	≥ 5	\$5.00	\$40
	≥ 5 HP and < 50 HP	< 0.96	≥ 5	\$2.50	
	≥ 50 HP and < 200 HP	< 0.96	≥ 5	\$0.50	
	≥ 1 HP and < 5	< 0.49	≥ 52	\$1.50	



# Midstream Water Heating

Incentives are available for qualifying high efficiency equipment in the chart below:

## Natural Gas Water Heaters

Water Heater Type	Fuel Type	Input Rating	Required Efficiency	Customer Discount
Storage	Natural Gas	$\geq 75$ Mbtuh	Thermal Efficiency $\geq 94\%$	\$2.00/Mbtuh
Tankless (On Demand)	Natural Gas	$< 200$ Mbtuh	Energy Factor $\geq 0.94$ <b>or</b> Uniform Energy Factor $\geq 0.91$	\$1.00/Mbtuh
Volume (Domestic Hot Water Boiler)	Natural Gas	$\geq 75$ Mbtuh	Thermal Efficiency $\geq 94\%$	\$2.00/Mbtuh
Indirect	Natural Gas	N/A	N/A	\$200/unit

## Heat Pump Water Heaters

Equipment	Existing Water Heating Fuel Type	Size	Required Efficient	Customer Incentive (\$/Unit)
Electric Heat Pump Water Heater (HPWH)	Electric, Propane, Oil, or Natural Gas	$\leq 80$ Gallon	UEF $\geq 3.2$	\$1,000
		80-120 Gallon	COP $\geq 3.6$	\$2,200

# Online Marketplace

**Dehumidifiers**

**Air Purifiers**

**Thermostats**

**Water Saving Devices** faucet aerators  
low flow showerheads  
DHW pipe wrap

<https://www.poweredbyefi.org/masssavebusiness/>

# Lighting

- Linear Replacement Lamps (TLEDs)
- Stairwell Fixtures
- Troffers & Troffer Retrofit kits with and without controls
- High & Low Bay fixtures with and without controls
- Linear Fixtures with and without controls
- Exterior Fixtures with and without controls

**2025 will incentivize controlled fixtures only**

# Don't forget:

**Food Services**

**Cold Storage/Lab Equipment**

**Water Heaters**

**Pool Heaters** (going away 9/30/24)

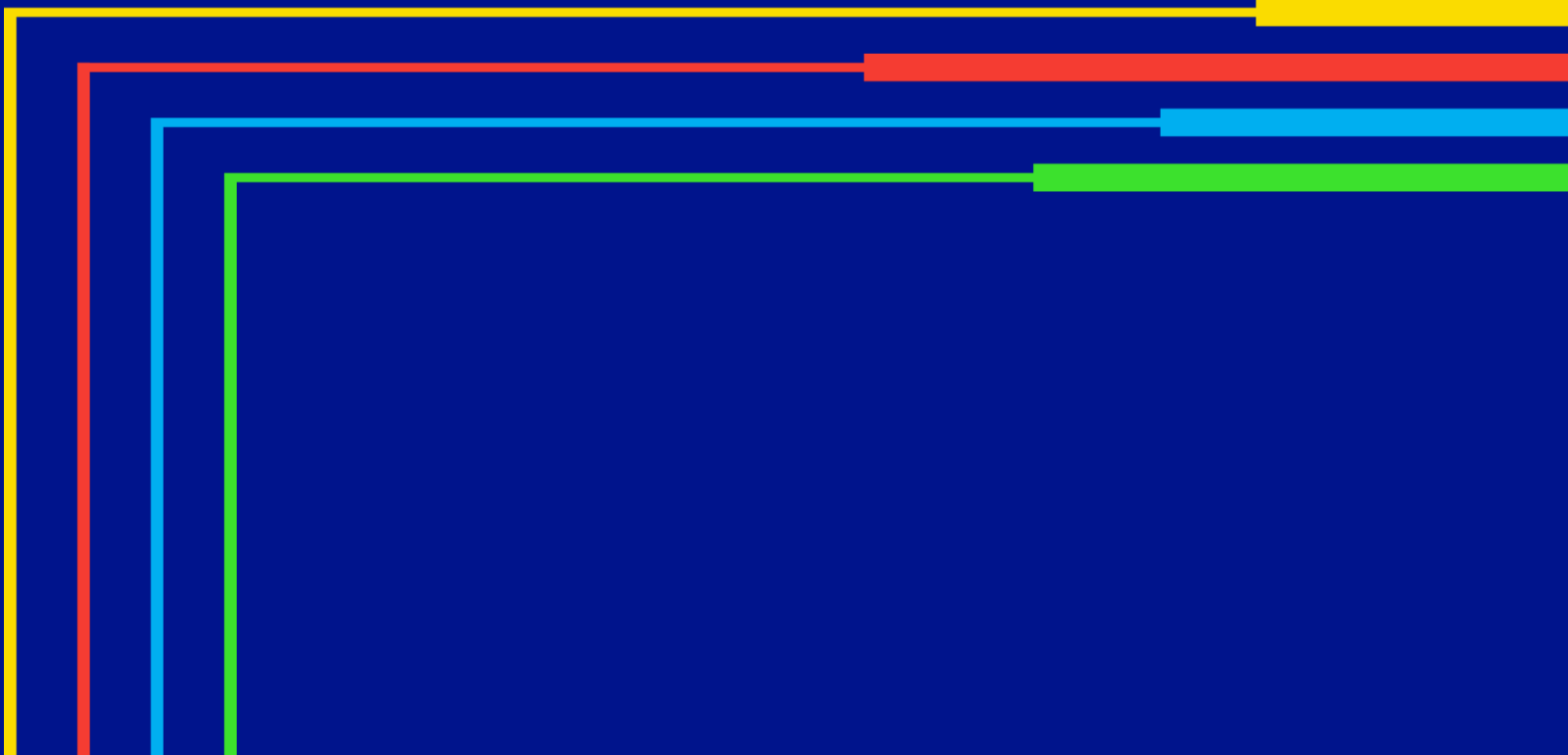
**Laundry Equipment (High G washer)**



# 03

## New Construction Overview and Classifying Major Renovations and Retrofits – Eileen Barrett

Eileen Barrett [eileen.barrett@nationalgrid.com](mailto:eileen.barrett@nationalgrid.com)



# Commercial New Construction/Major Renovation Program

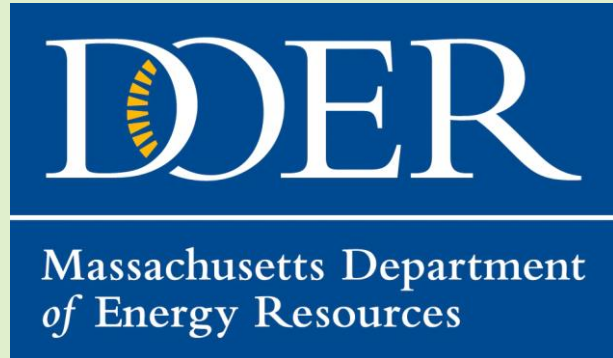
Supporting  
Electrification and  
Ultra Low EUIs with  
Enhanced Incentives

**nationalgrid**



# Legislative/Regulatory/Policy Context

## New Building Codes



## Local Ordinances/Policies



Zero Net Carbon Building Zoning Initiative

## State Legislation


AN ACT CREATING A NEXT-GENERATION ROADMAP FOR MASSACHUSETTS CLIMATE POLICY.

## Federal Policy

**INFLATION REDUCTION ACT  
OF 2022**

Biden's Goal: Net zero emissions economy  
by no later than 2050

# Definitions



## ZERO NET ENERGY BUILDING

**Buildings that produce as much energy as they consume over a year**

Heat pumps, LED lighting, improved insulation – lead to lower building energy needs that can be offset by solar energy production



## EUI (Energy Use Intensity)

**A measure of a building's total annual energy use divided by its square footage (Annual kBtu/sf)**

Similar to a miles per gallon metric, but for buildings



# Mass Save Commercial New Construction & Major Renovation Program Overview



**Building  
Electrification/Decarbonization  
(Heat pumps)**



**Low Energy Use Intensity (EUI)  
and Net Zero**



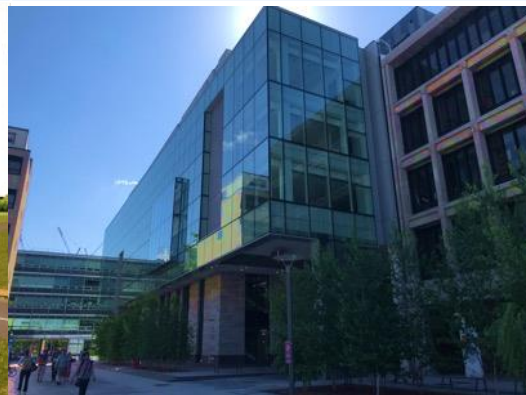

**Three paths to accommodate  
project types and customers**

## Heat Pump Support Levels are Significant

### Heat Pump Incentives for Commercial New Construction/Major Renovation Projects

Air source heat pumps:	\$800/ton
Variable refrigerant flow (VRF):	\$1,200/ton
Ground source heat pumps:	\$4,500/ton

# New Building/Major Renovation Participation Pathways

Path 1	Path 2	Path 3
Net Zero & Low EUI Buildings	Whole Building EUI Reduction	High Performance Buildings
		



Low EUI Pathways

# Path 1: Net Zero & Low EUI Buildings



## **INTENT: For buildings 10,000 sf and greater**

Drive projects toward net zero, low carbon and low EUI in operation - focus on performance

## **KEY PROGRAM DRIVER:**

- Achieve a target site EUI in design, construction and operation
- Electrified systems

## **NET ZERO TECHNICAL SUPPORT**

- Net zero design support
- Mass Save Sponsors will pay 50% up to \$10,000
- Mass Save Sponsors will pay for optional Verification Incentive - 50% of fee up to \$10,000



## **ACTON-BOXBOROUGH DOUGLAS-GATES ELEMENTARY SCHOOL**

Opened Fall 2022 | All electric

# New Program Rules

---

1. Emergency Generation (Diesel or Propane)

---

2. Natural Gas in emergency facilities

---

3. Natural gas allowed in major renovations for emergency generation where previous gas service existed

---

4. No path will give incentives for gas equipment unless it is “hard to electrify”

---

5. Path 1 is the only pathway where there is a limit on gas use for major renovations.



# Path 1

## Path 2: Whole Building EUI Reduction

### **INTENT: For buildings 50,000 sf and greater**

Large or complex projects, interested in setting an EUI reduction target, but not good candidates for Path 1

### **KEY PROGRAM DRIVER:**

- Lowest possible site EUI
- Building electrification

### **TECHNICAL ASSISTANCE**

- Provide energy savings and decarbonization advice
- Sponsors of Mass Save will pay for energy modeling, charrette support, and mid design review - up to 75% of the cost/Customer pays 25%
- Sponsors of Mass Save will pay for optional Verification Incentive - 50% of fee up to \$10,000

**Note:** This design-focused pathway does not have a post occupancy performance component, which is the hallmark of Path 1

# Path 3: High Performance Buildings



## INTENT:

Reduce building energy and decarbonize – measure by measure approach versus an EUI-based approach

## TECHNICAL ASSISTANCE:

Expert support in identifying energy conservation and decarbonization strategies

## TYPICAL PROJECTS

Customers with small and fast paced projects where customers do not wish to set and pursue an EUI target

Projects that are not whole buildings (e.g., tenant fit outs, open air parking garages).

Projects where heavy process loads are the major energy savings focus (e.g., cannabis, industrial).

Projects where customers have interest in discrete measures only

Projects engaging too late in design to participate in Path 1



# New Program Rules

---

1. Highly ventilated buildings

---

2. Healthcare facilities

---

3. Labs or vocational technical schools  
(scientific research or instructional purposes)

---

4. Emergency facilities where natural gas can only  
be used for emergency generation.

---

5. Mass Save Sponsors can still serve major  
renovations that include new gas equipment but  
will not provide any support for that equipment.



## Path 2 & 3

# Major Renovation Projects

In general, a major renovation handled by the New Construction team is a capital project that a customer undertakes for reasons other than just energy efficiency or decarbonization considerations, but where our programs work to include energy efficiency and decarbonization into an ongoing design.



## Major renovations typically fall into one of these 3 buckets:

### 1. A change of use of the space

Example: Building was an office and will be a manufacturing facility

**2. Complete gut renovation of a space within customer's own building** – Major renovations can sometimes occur in a customer's own building (no change of use of space *type* or *customer*).

**3. Reconstruction of a vacant building** (vacant is defined as unoccupied—no people in the building, abandoned, empty, and unable to be used as initially intended).

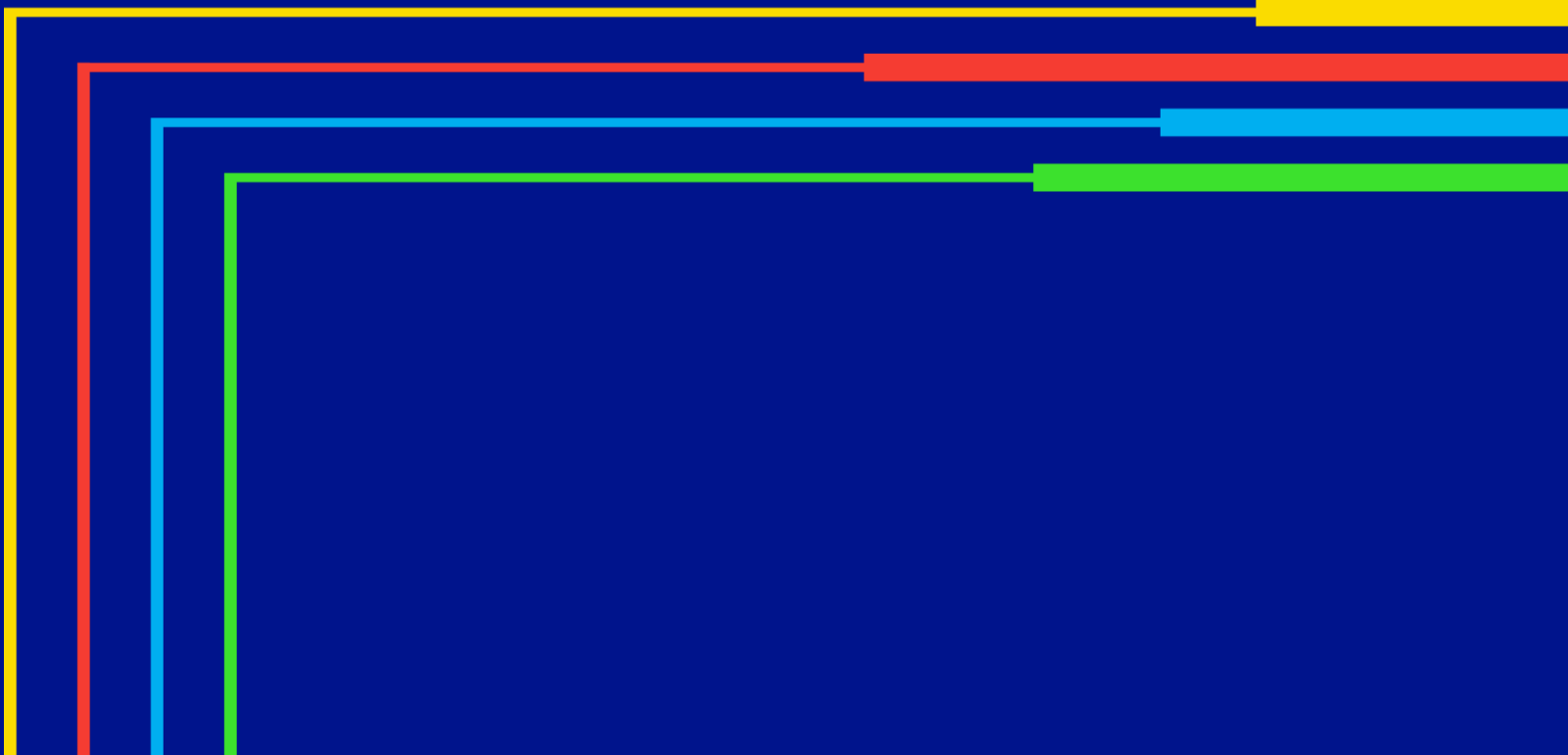
## **Scope includes multiple end uses:**

Gut renovation scopes of work for whole buildings include (1) complete removal/replacement/redesign of the entire HVAC system including distribution AND (2) complete redesign/replacement of all lighting (there might be very limited spaces where lighting could remain, such as a small area in a basement, for example, but these existing-to-remain areas would typically be very limited), AND (3) scope related to one or more of the following: DHW heating equipment, building envelope or process equipment.

# 04

## PEX 2024 Goals and Progress

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



# PEX 2024 Goals and Progress

## CY 2024 PEX Progress (As of 5/22/24)

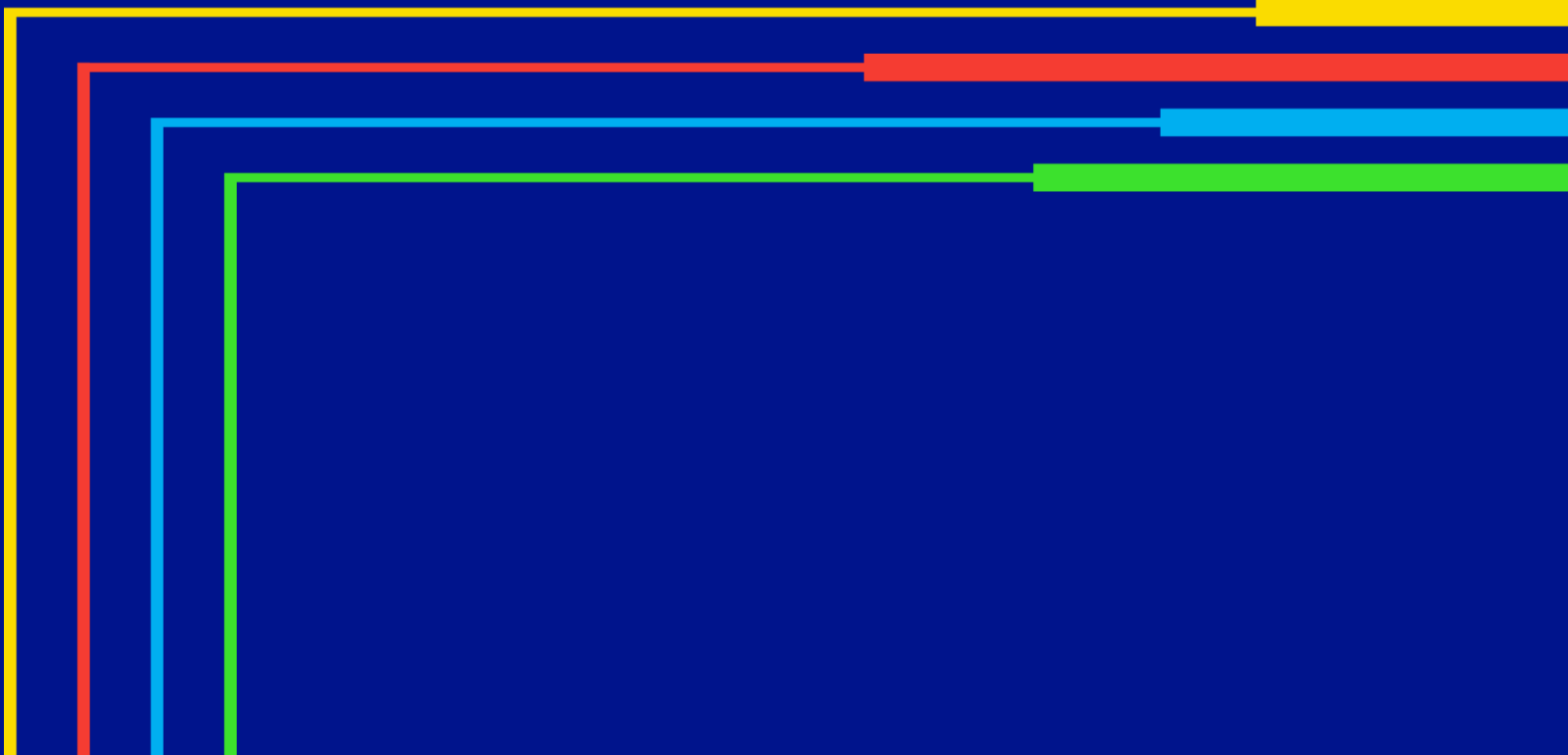
Key Performance Indicators	Goal	Paid	P(%G)	Forecast	Fc(%FG)
Electric Savings (NLT MWH)	82,450	27,052	33%	114,970	139%
Gas Savings (NLT Therms)	1,674,970	112,528	7%	3,431,395	205%
Electric Electrification (NLT MMBTu)	49,510	4,185	8%	24,361	49%
Gas Electrification (NLT MMBTu)	64,490	13,774	21%	85,010	132%

- **Standard EE goals are down:**
  - Electric EE down about 50% when compared to 2023
  - Gas EE down about 25% when compared to 2023
- **Electrification (ELX) goals are up:**
  - Electric ELX goal is 4 times higher than it was in 2023
  - Gas ELX goal is 2 times higher than it was in 2023
- **Need to improve report accuracy, newer PEXs need projects reassigned to their new InDemand Vendor ID**

# 05

## Quick Hits and Reminders

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



## Quick Hits and Reminders:

- **Upcoming Trainings:**
  - Mass Save events and trainings can be found on the Mass Save website [here](#).
  - Mass Save C&I Weatherization Offer - New Tools and Funding (Training) is scheduled for this afternoon!
  - BERDO/BEUDO Training - Please provide specific topics of interest for organizing the session.
  - 2024 BMS Program and Tool Changes - The training session recording is now available. The newly released 2024 program requires a pre-inspection form to provide documentation that the existing system controllers are over 15 years old.
- **Individual PEX Goal Communication:**
  - Please review and provide feedback or raise any concerns regarding your assigned goals.
- **Co-Branding License Agreement Update:**
  - Ensure compliance with the co-branding guidelines and submit marketing materials for review and approval.
- **Commercial Heat Pump Application:**
  - All PEXs should use the National Grid specific heat pump application, available [here](#).
  - Avoid processing PEX applications through third-party vendors. Work directly with your account representative.
- **InDemand Application:**
  - For gas applications and associated apps, mention your PEX status when emailing your National Grid deal team apps and supporting documentation.

# Quick Hits and Reminders:

- **Certificates of Insurance (COIs):**
  - Gather updated COIs if the ones on file are expiring.
- **PEX Landing Page**
  - <https://www.nationalgridus.com/MA-Project-Expediter-Program>
- **Tech Check Requirement:**

## **Out of Scope:**

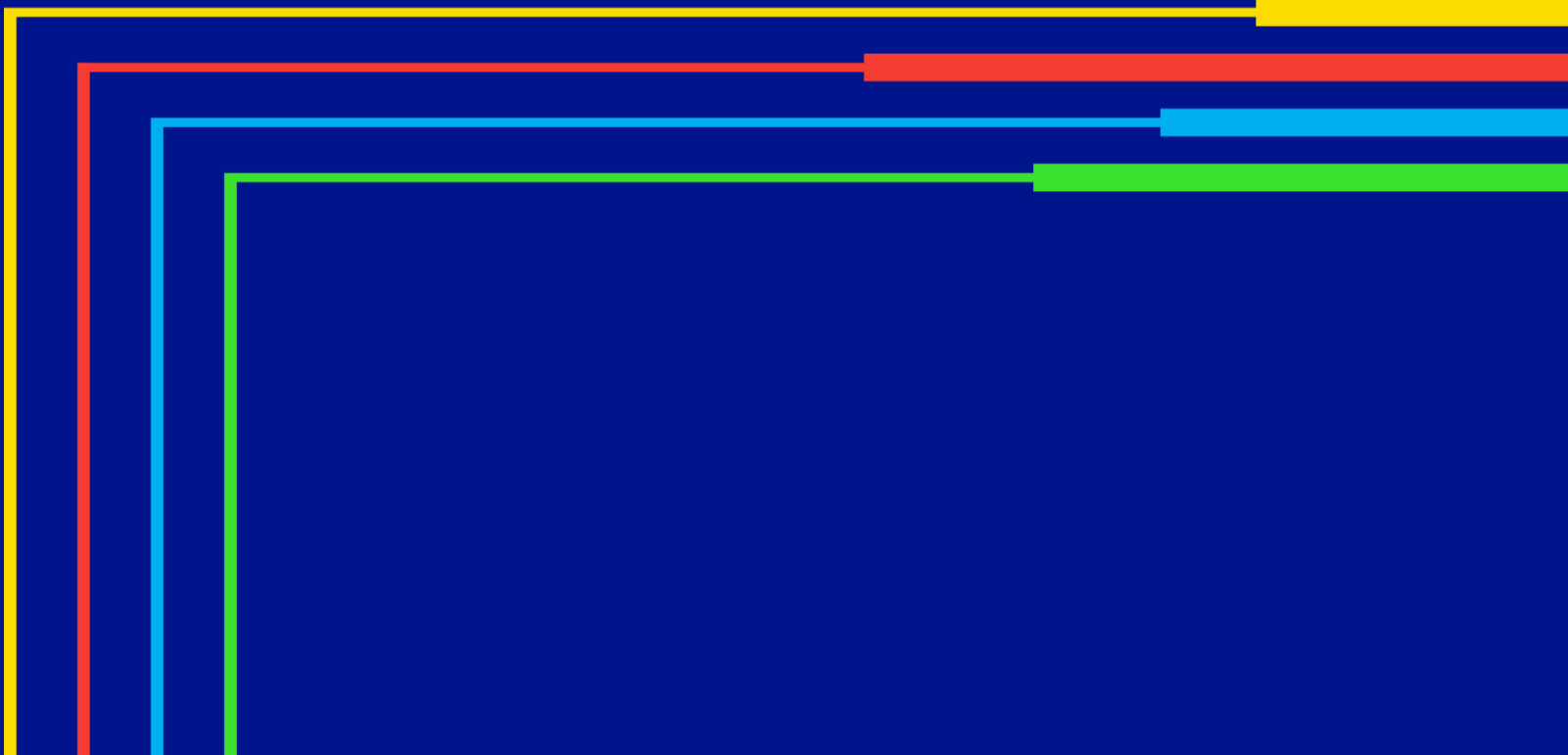
The following measures do not require a Technical Check form to be completed:

- |                   |  |
|-------------------|--|
| • Steam traps     | • Kitchen hoods                                  |
| • Custom lighting | • EMS/BMS  |
| • Transformers    | • Custom expedited measures and ESPO measures in |
| • Weatherization  | Energy Smart Grocer (ESG) & Serve Up Savings     |
| • Pipe insulation | (SUS) Programs                                   |
|                   | • New Construction                               |

# 06

## Looking Forward – 2024 Meeting Dates

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





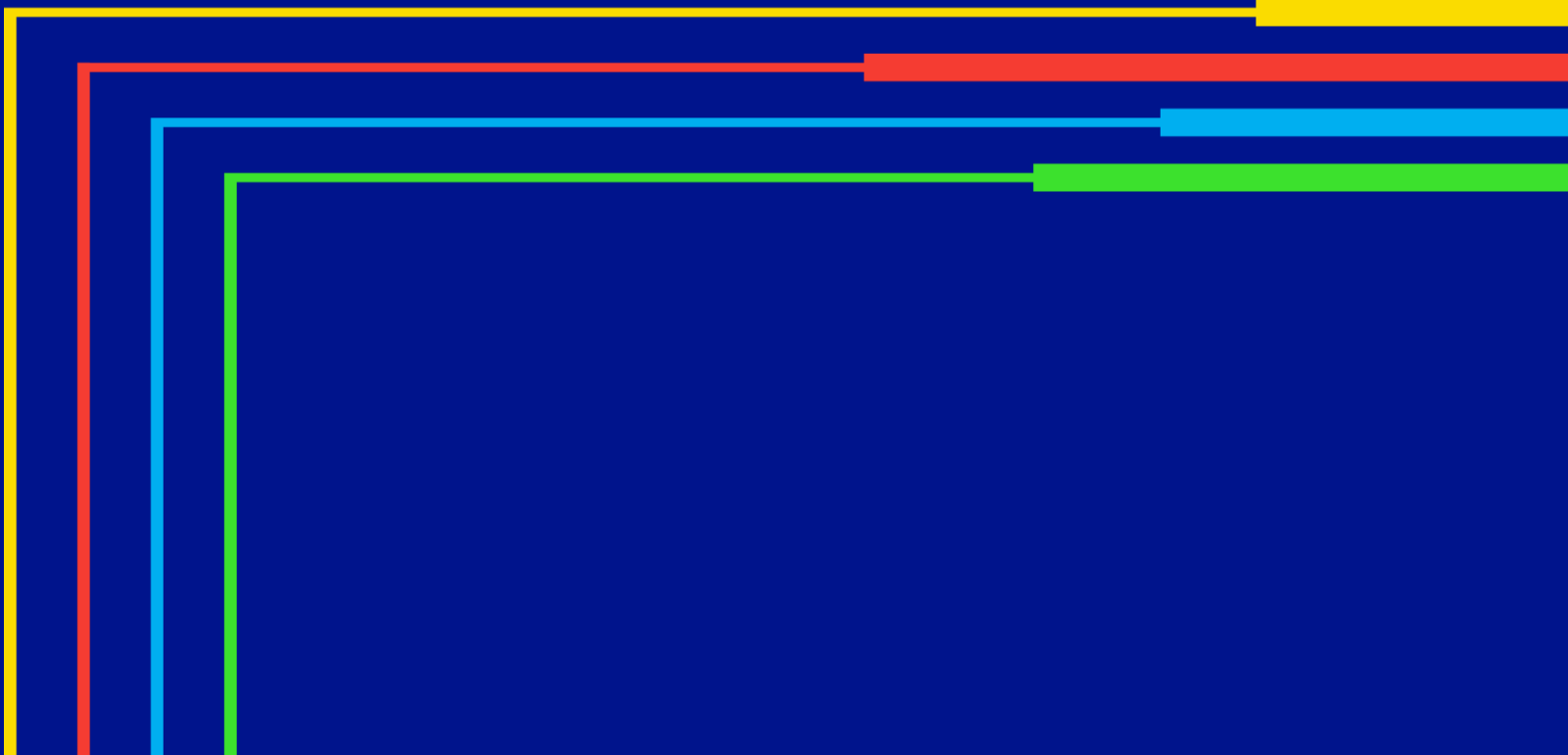
# 2024 Meeting Dates

## Meeting Schedule

- June 26, 2024
- July 24, 2024
- August 21, 2024
- September 18, 2024
- October 23, 2024
- November 20, 2024

# Thank You!

Be Safe



national**grid**