February PEX Meeting

February 21, 2024

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Contents

01	Safety Moment
02	Signify Interact Pro Wireless Controls Training/Update
03	PEX Program Updates
04	National Grid Demand Response Overview
05	Quick Hits/Reminders
06	Looking Forward - 2024 Meeting Dates

01

Safety Moment

Mike Regan Michael.regan2@nationalgrid.com

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02

Signify Interact Pro Wireless Controls Training/Update

Robb Rodriguez Robb.Rodriguez@signify.com

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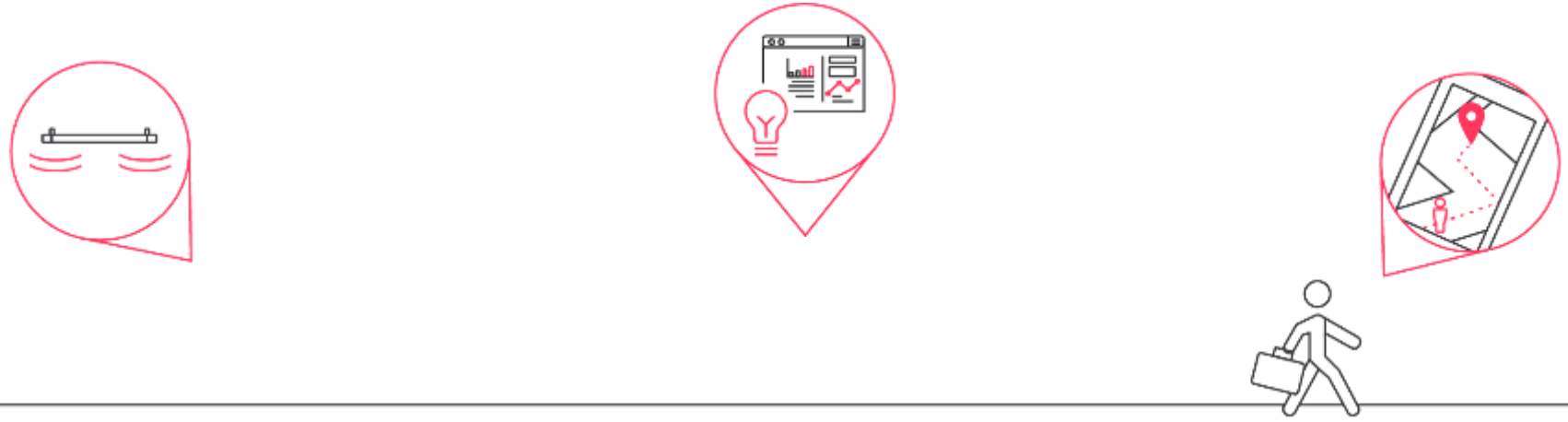
interact

Signify Wireless Lighting Control Solution
Easy. Effective. Smart

Robb Rodriguez, RCM Northeast Signify NA

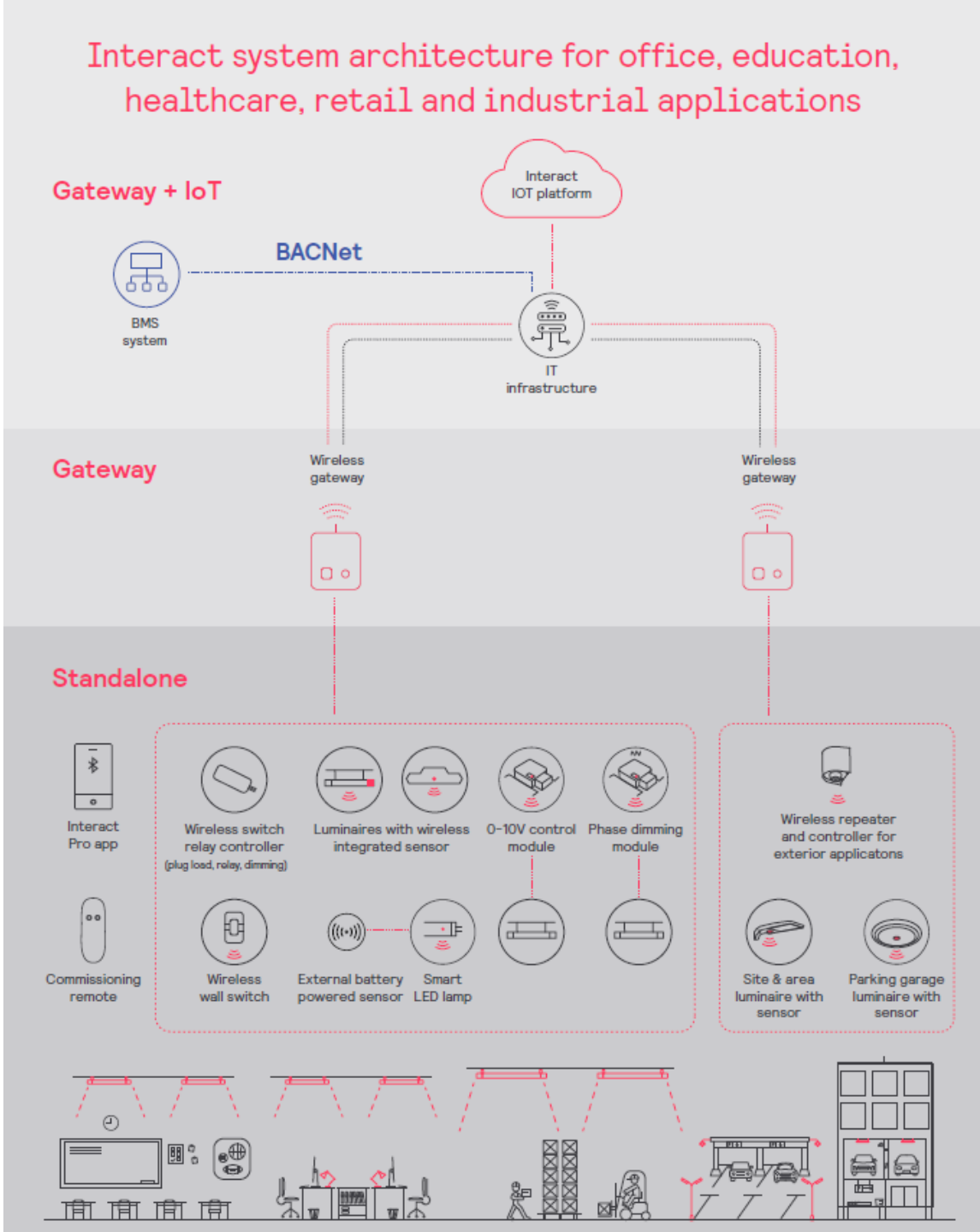
One simple, code-compliant, wireless solution for every step of your smart lighting journey.



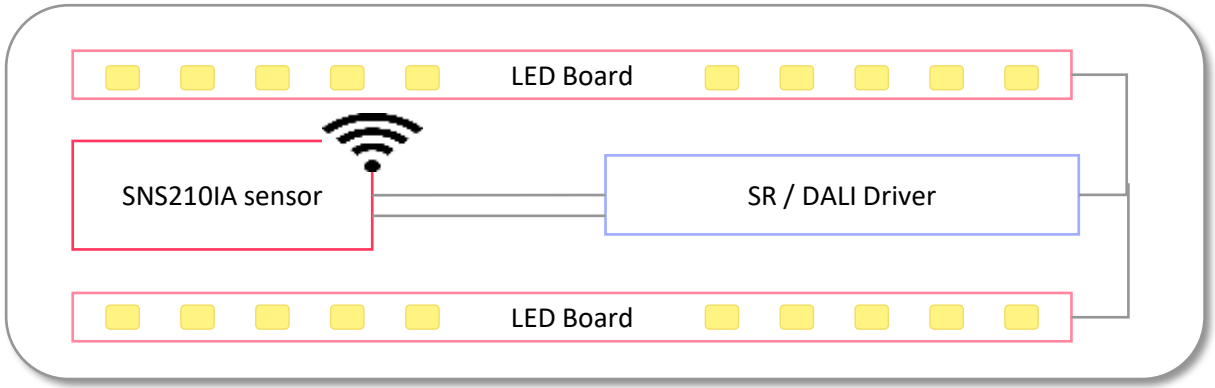
Interact – system options

for office, education, healthcare, retail and industrial applications

	Standalone	Gateway	Gateway + IoT
Dimming, grouping, and zoning	✓	✓	✓
Bluetooth and ZigBee enabled	✓	✓	✓
Motion sensing and daylight harvesting	✓	✓	✓
Integration with 0-10V and phase dimming fixtures	✓	✓	✓
Code compliance	✓	✓	✓
Adaptive dimming and dwell time	✓	✓	✓
Energy reporting and monitoring	-	✓	✓
Scheduling	-	✓	✓
Demand response	-	✓	✓
BMS integration (BACnet)	-	-	✓
Floor plan visualization	-	-	✓
IoT sensors for wellness	-	-	✓
IoT Apps for productivity	-	-	✓



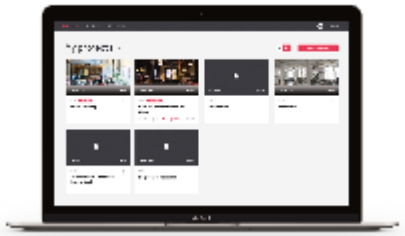
Key building blocks



Commissioning app & remote

Standalone

Wireless Gateway
LCN1840/05



Interact dashboard & portal

Gateway

Wireless Gateway
LCN1850/05

Interact dashboard & IoT apps

Gateway + IoT

interact

Standalone

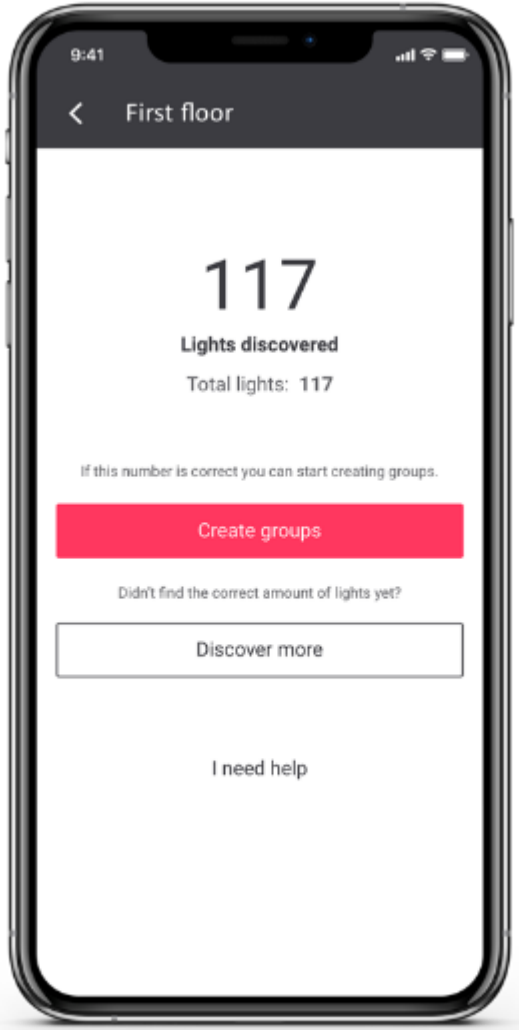
Start simple

Just light.

Simply specify and install your
Interact ready luminaires,
retrofit kits and LED lamps,
or integrate
with 3rd party luminaires.

Key takeaways

- ✓ **Lum integrated wireless sensor** – occupancy (PIR) & daylight sensing
- ✓ **Future ready** – add a gateway and get access to more capabilities
- ✓ **Vacancy mode** – configure for Manual ON / Auto OFF
- ✓ **High end trimming** – adjust max output
- ✓ **DLC compliant** – for networked lighting controls
- ✓ **Rebate complaint** – ROI of ~2 years
- ✓ **Fast Setup** - point to point commissioning is easier & more flexible than "discover" commissioning
- ✓ **Code Compliant** – ASHRAE, IECC, Title 24
- ✓ **UL924 Emergency compliant** – compatible with a generator



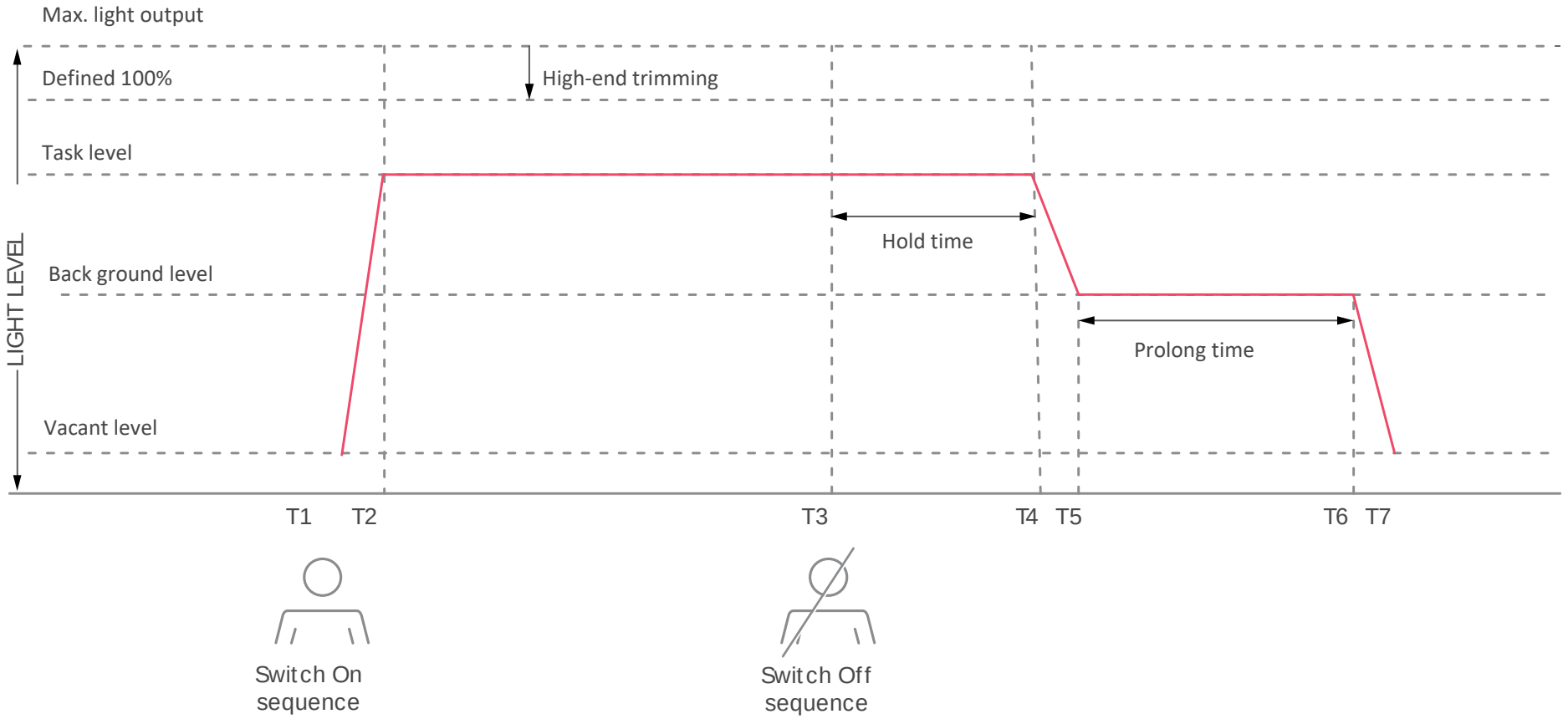
...and an app

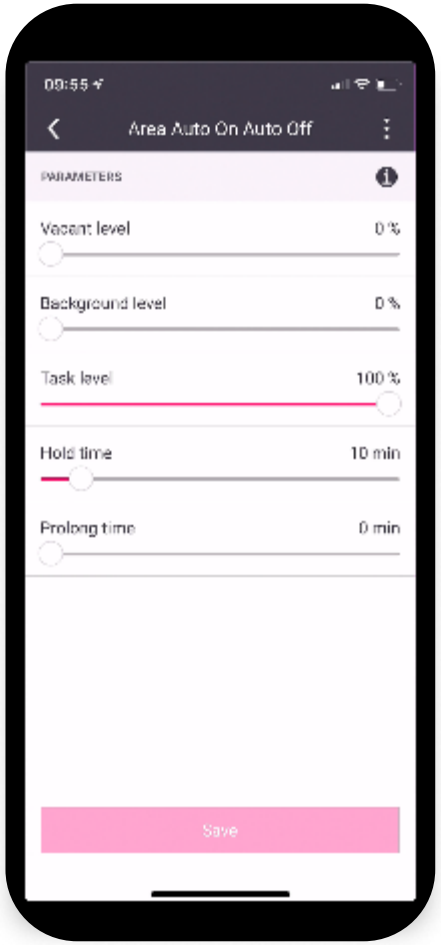
Connect your lights via Bluetooth with the intuitive Interact Pro app

interact

Switch on/off behavior

Controlling a group of lights with sensors

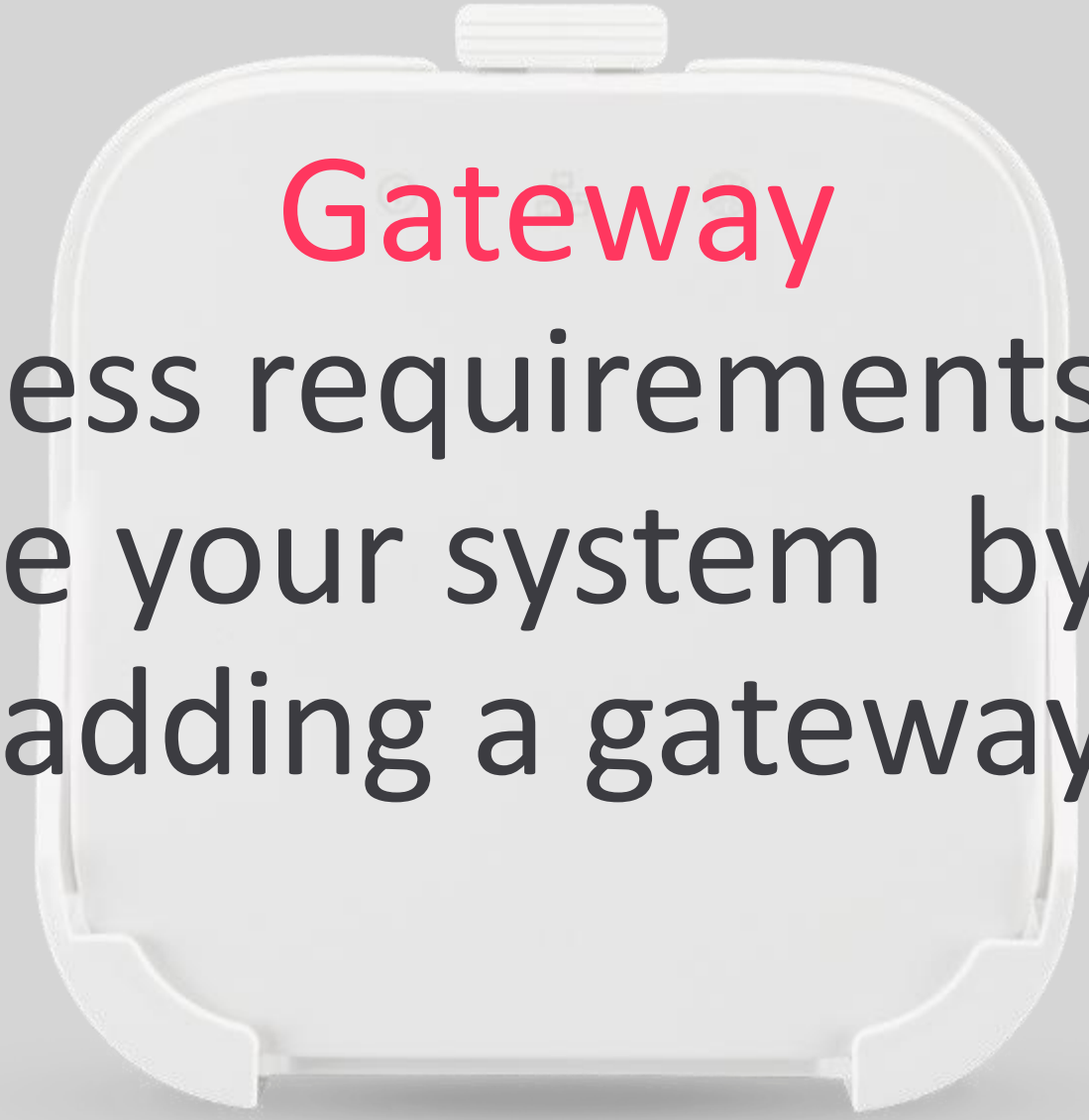




interact

Smart lighting is easy. Honestly.
No extra cables.
Easy-as-can-be commissioning.
Interact has it all.

Sounds good?
Well, it gets better.

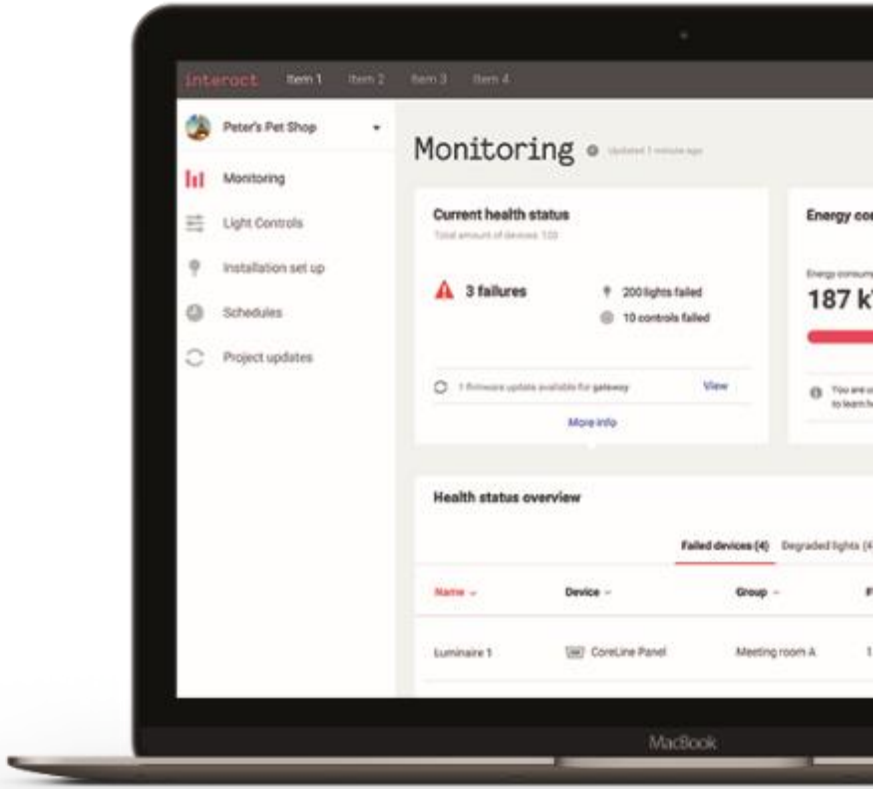


Gateway

As business requirements change, upgrade your system by simply adding a gateway

Gain instant access to cloud-based benefits and functionalities

- Scheduling of lighting for user comfort and energy savings
- Multiple screens/phones of users can connect to the gateway to change light settings and schedules
- Remote access, adaptation and energy monitoring for improved business operations
- Dashboard with lighting point information regarding lifetime and health for efficient post-installation service

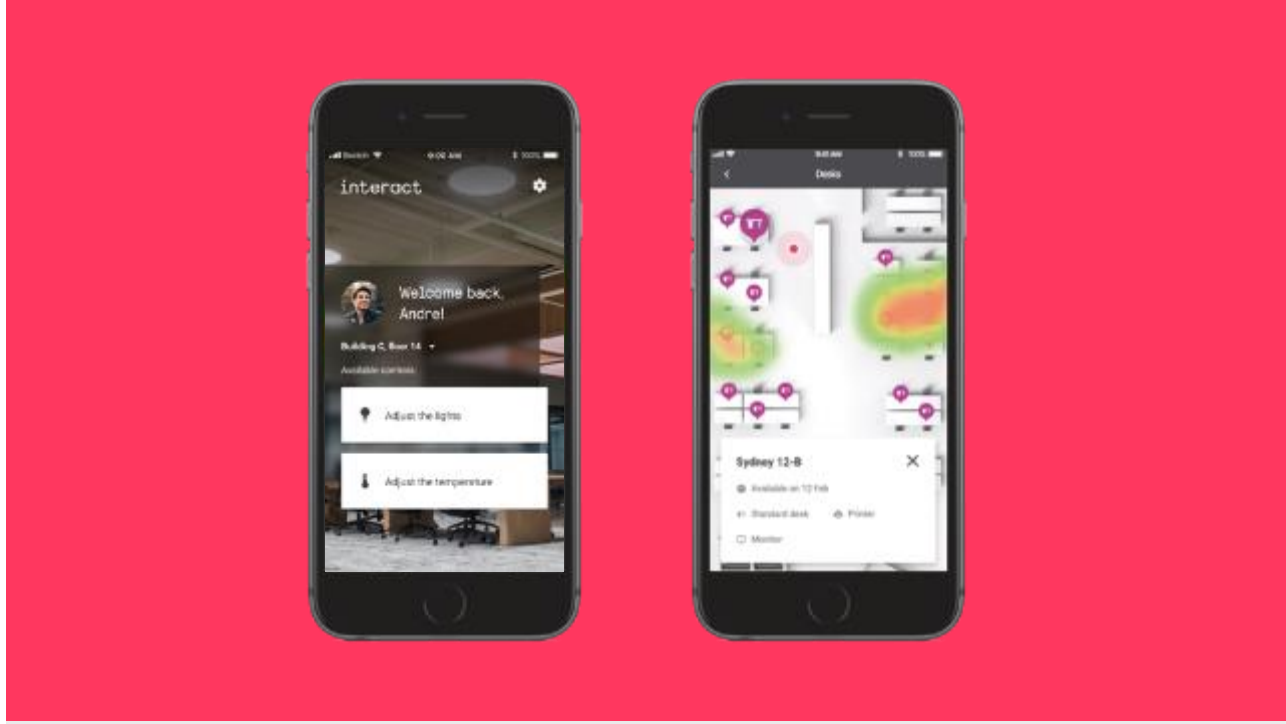


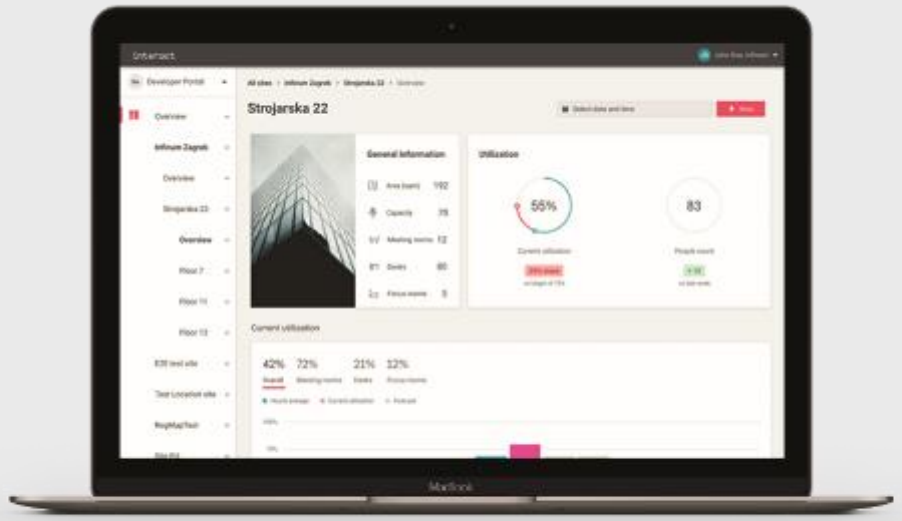
Gateway + IoT

Further upgrade your system and tap into the full potential of IoT

IoT benefits

- Optimize workspace utilization
- Minimize waste with real-time wayfinding and boost collaboration with desk/room booking tools
- Provide occupancy transparency across entire portfolio to optimize costs
- Improve occupational safety and productivity
- Personalize settings to boost employee comfort and wellbeing
- Unlock more savings with BMS integration





interact

The Interact system

Interact – system options

for office, education, healthcare, retail and industrial applications

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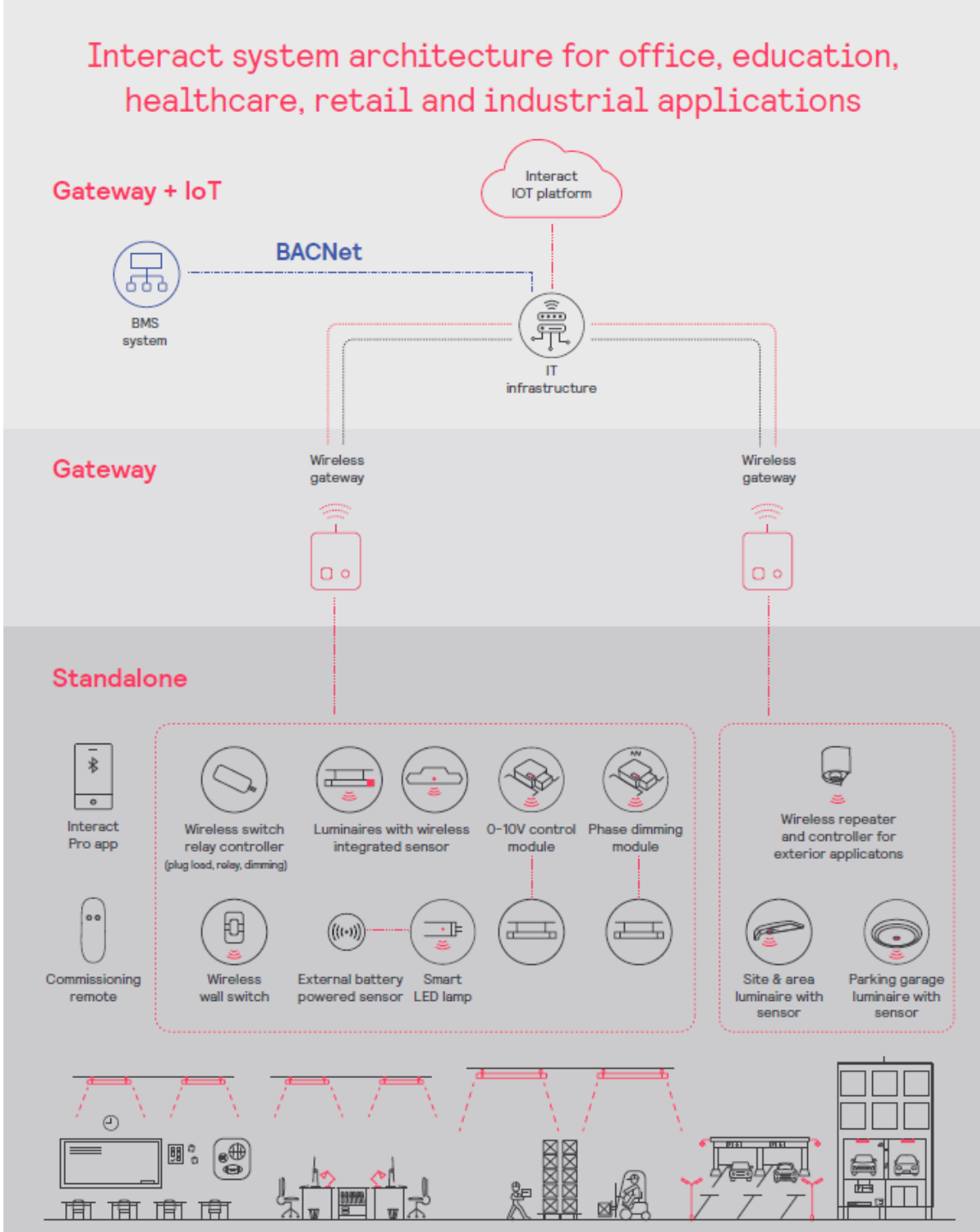


Building blocks

Interact ready wireless luminaires

Sensor SNS210IA (SWZCS)

Multi Sensor Bundle (SC1500)

Sensor SNH210IA (SWZCSH)

Wireless scene switches (SWS200)

Zigbee Green Power Switch and Scene Selector (UID8465/10)

0-10V or Phase control modules (SBAZ10-CS or SBAELV-CS)

UL924 shunt module (ER100/00)

Battery powered wireless IP42 sensor*

Battery powered wireless sensor (LCN3110/05: occupancy only LCN3120/05: occupancy + daylight)

Commissioning device (IRT9015)

RFSR20 RF Switch Relay

Wireless load controller with 0-10V (SWCS-RADIO)

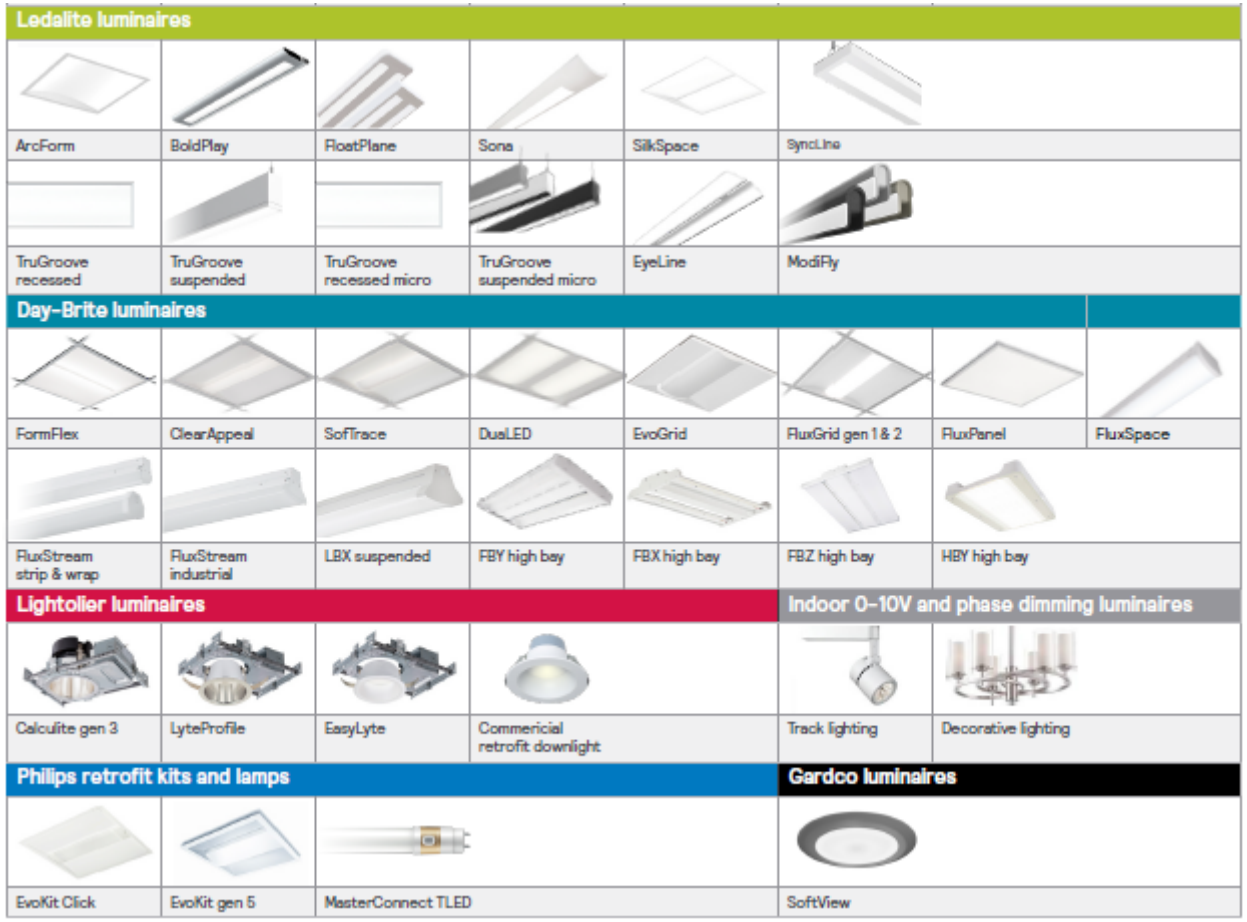
Outdoor parking sensor (LCN4120/05, LCN4120/15, LCN4150/05, LCN4150/15)

Wireless Gateway (LCN 1840/05)

Wireless Gateway (LCN 1850/05)

Gateway for demand response (LCN1870/05)

Interact ready portfolio



- Daybrite & EvoKits: **SWZCS**
- Leadlite: **CS**
- Lightolier & 3rd party module: **Order to 0-10V + order an external controller (SBAZ10-CS)**

Support for wireless lamps
MasterConnect TLEDs

MasterConnect TLEDs

- Available as Type B (ballast bypass)
- Type A available upon request

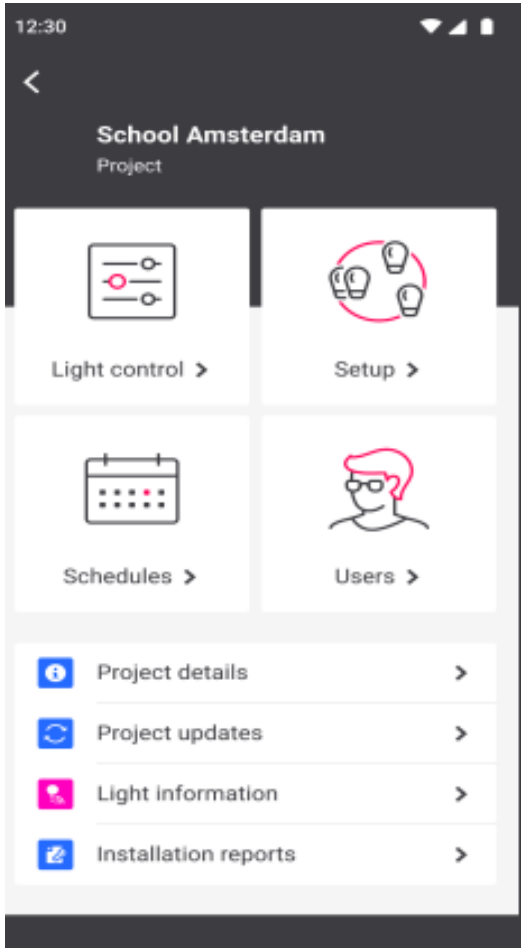
Coupled with battery powered sensors for sensing behaviors

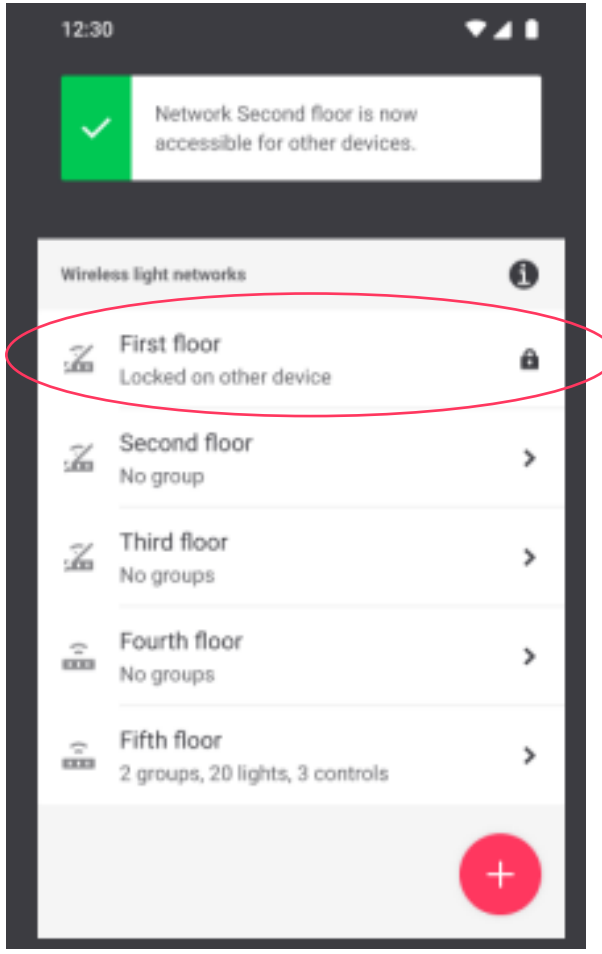
Self powered wireless switch
New UID8465/10

- One device – field configurable to be either 2 button or 4 button switch
- No batteries, no electrical power, self-powered using kinetic energy of button push action
- Wireless communication using ZigBee Pro protocol, and configured through Interact Pro App
- Interact rules applicable – up to 5 switches in a group and wireless range of 30’ between devices (mesh hopping)
- 12NC: 912401592204

App updates

- Tunable White
- New project landing page, updated UI
- Ability to simultaneously commission projects at network level
- Security lock is moved to network level from project level
- Locked by “whom” details displayed in case network is locked for you
- Simplified User Roles
- Control over personal data, allow users to initiate deletion of account from within the app





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Interact – outdoor sensor expansion

Gardco outdoor luminaire compatibility

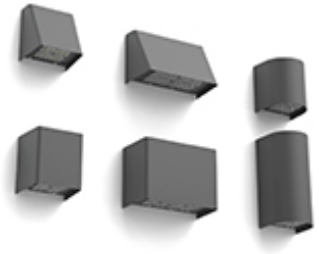
Wave 1

1H 2023

SoftView

Wave 2

2H 2023



GeoForm

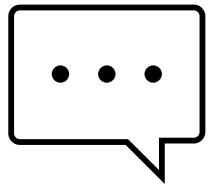
121 Wall Sconce

PureForm

EcoForm

OptiForm

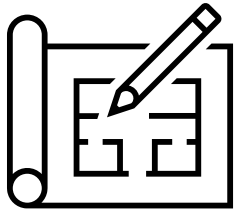
Support avenues to meet your specific needs



Live Chat

Best suited for quick qualification questions

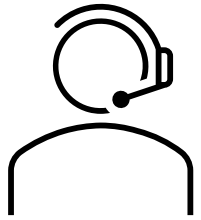
Integrated into Signify Portal (MyLighting)



Project review

Organized for design review, BOM guidance & crosses

Interact_technicalsupport@signify.com



Commissioning support

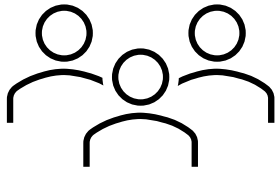
Speak with a Controls champion

Interact Pro technical support:

1-833-468-7776

(Monday – Friday, 8 AM – 8 PM EST)

Additional on-site support with a service request



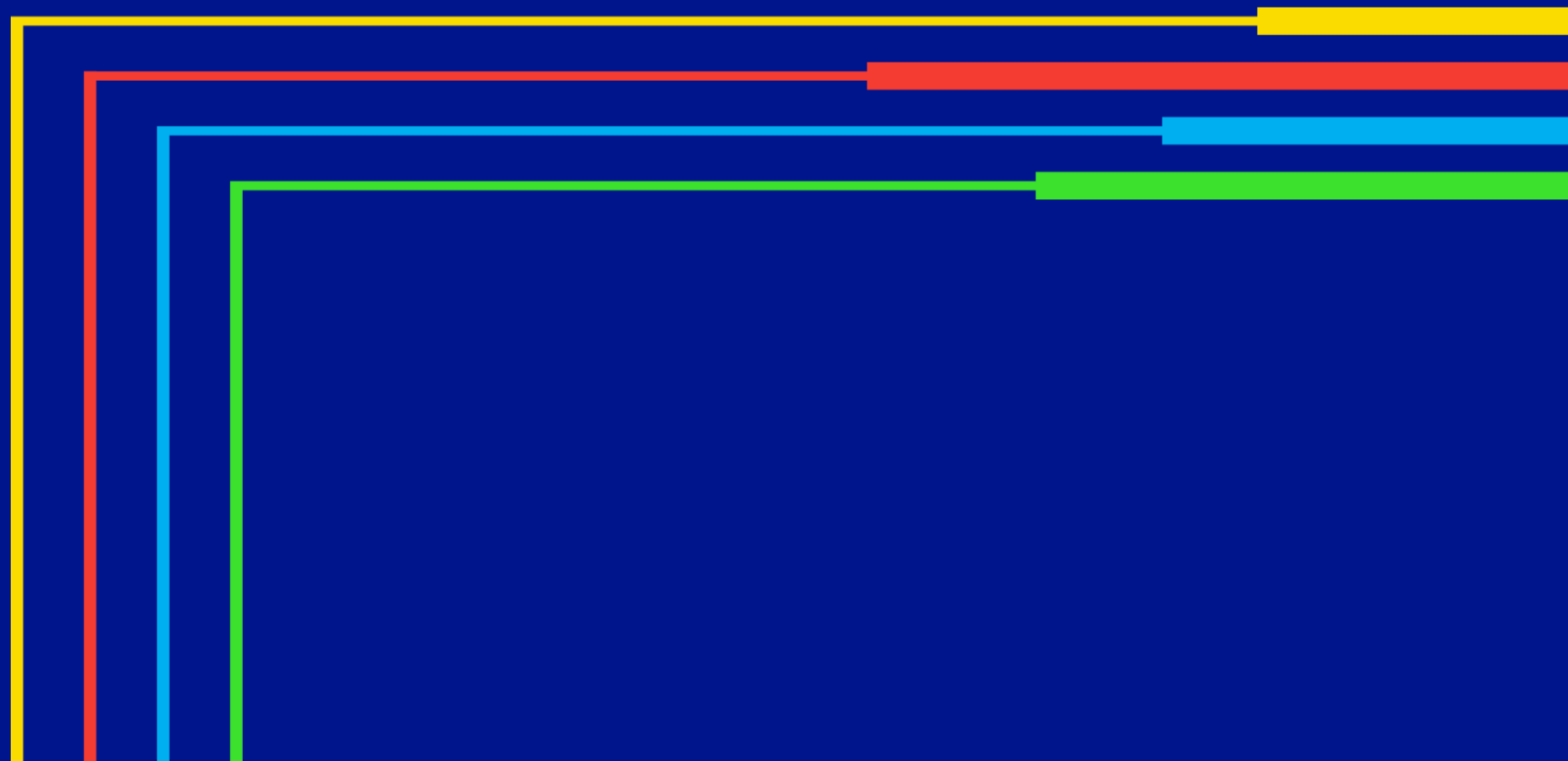
Local support

Apex Lighting Solutions

interact

03 PEX Program Updates

Mathew McCarthy Mathew.mccarthy@nationalgrid.com



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YTD Paid Electric and Gas Savings as of February 20, 2024

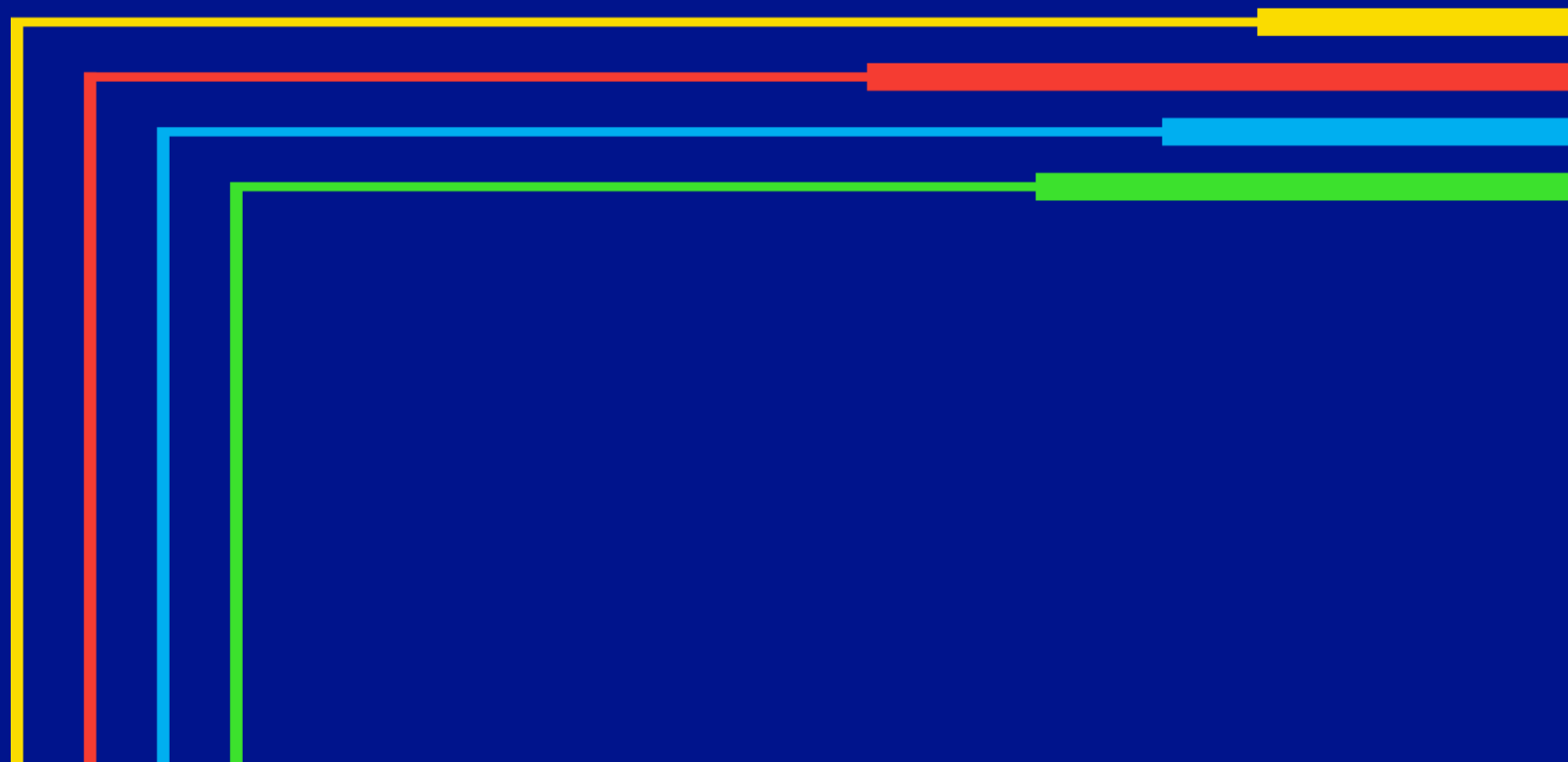
2023 MA Electric EE Savings (LtMWh)						
Sector	Filed Goal	Forecast	Paid	Pipeline	P(%G)	Fc(%FG)
C&I	1,407,093	899,197	755,899	19,089	53.7%	64%
Resi	590,930	576,153	257,524	0	43.6%	97%
LI	110,084	129,107	189,827	0	172.4%	117%
2023 Total	2,108,107	1,604,457	1,203,250	19,089	57.1%	76%

MAGas 2023 EE Portfolio Claimed Savings and Forecast (Net Lifetime Therms)						
	Goal	Paid	P (%G)	Pipeline	Forecast	F(%G)
Commercial & Industrial	64,182,790	29,689,146	46%	2,075,264	31,693,397	49%
Income Eligible	*31,969,952*	*34,974,268*	*109%*	-	*29,962,239*	*94%*
Residential	*101,410,766*	*92,169,370*	*91%*	-	*101,725,139*	*100%*
2023 Portfolio Total	197,563,508	156,832,783	79%	2,075,264	163,380,775	83%

- **Still waiting on final 2023 numbers.**
- **PEX competition results will be announced once 2023 results are finalized.**
- **Individual PEX reports are available by request.**
- **1:1s will be held in March. If you haven't already, please schedule your 1:1.**
- **A huge thank you for helping National Grid meet 2023 project year end deadlines and continually working with your sales reps throughout the year so ECDs were accurate.**

04 National Grid Demand Response Overview

Paul Wassink Paul.Wassink@nationalgrid.com



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C&I Demand Response

2024 – PEX Training

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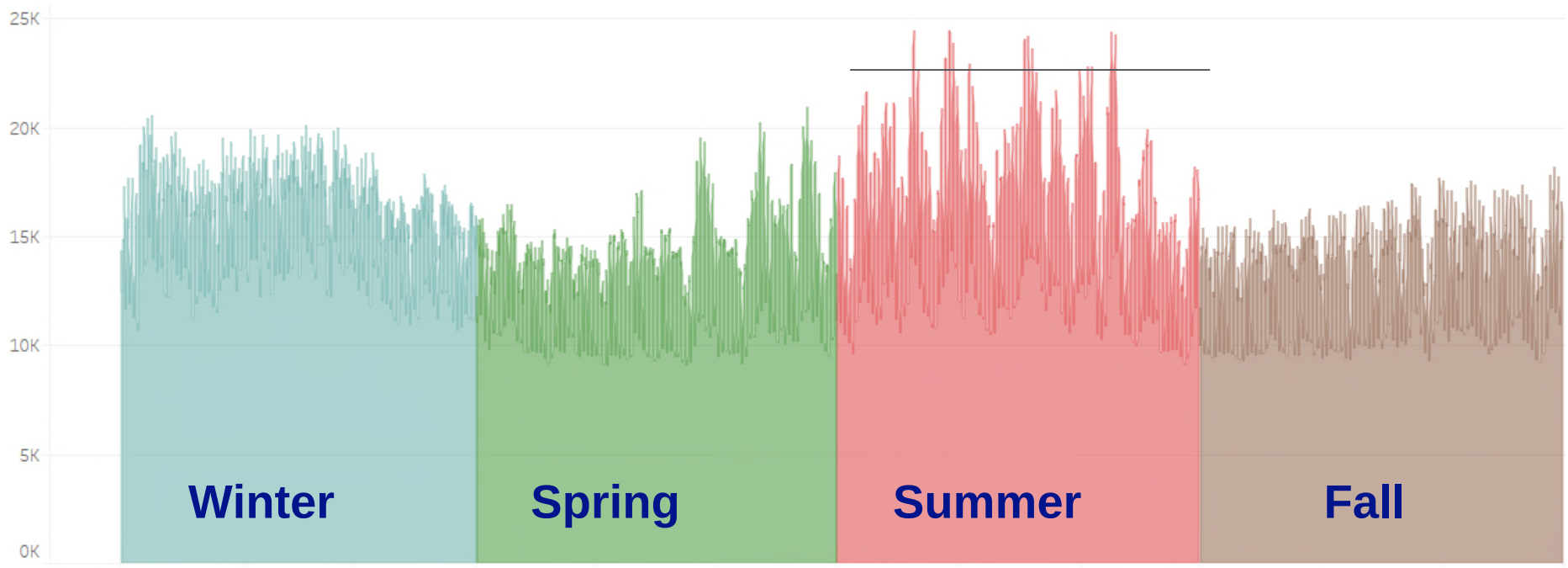
What is Demand Response and Why do We Do It?



The whole grid is sized to meet the peak.

"The top 10% of hours during these year, on average, accounted for 40% of the annual electricity spend…"

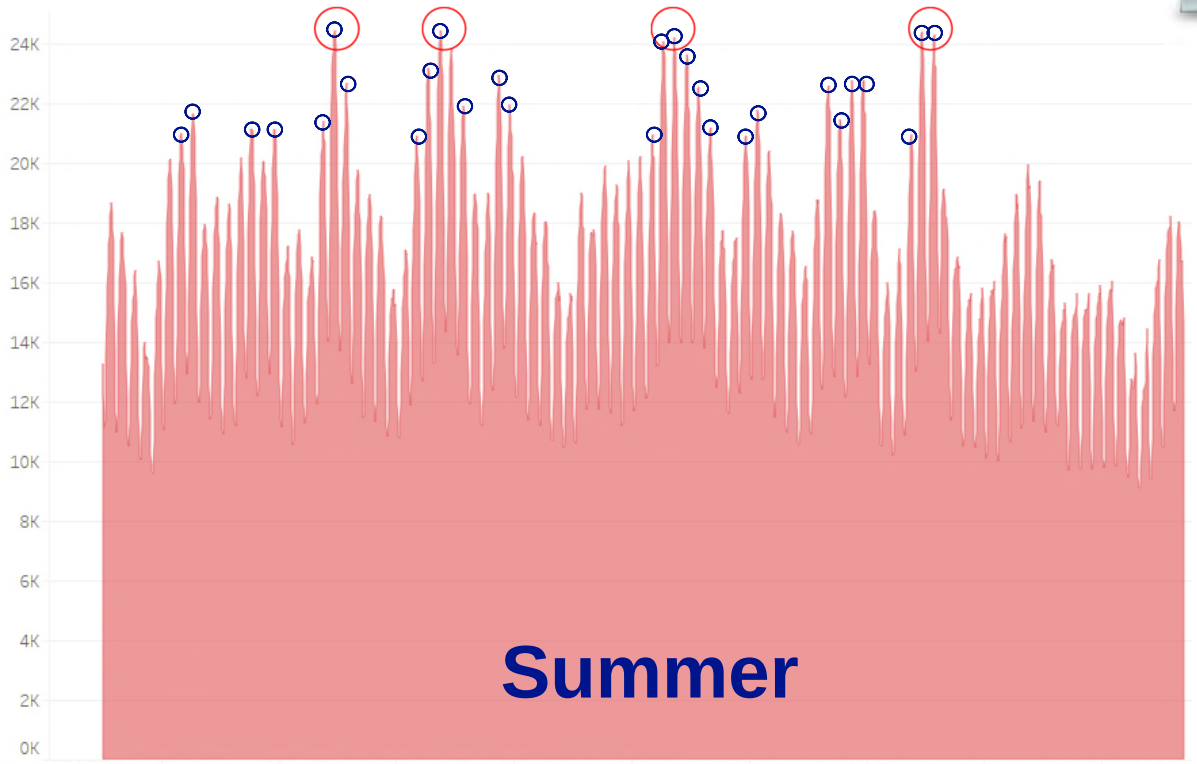
Source: State of Charge – MA Energy Storage Initiative

Commercial Programs

Residential Programs

Targeted Dispatch

Daily Dispatch

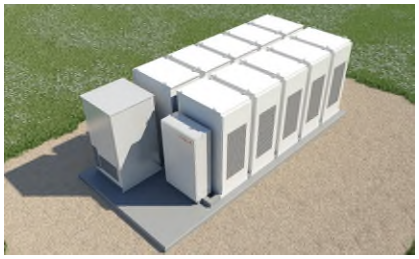


Thermostats

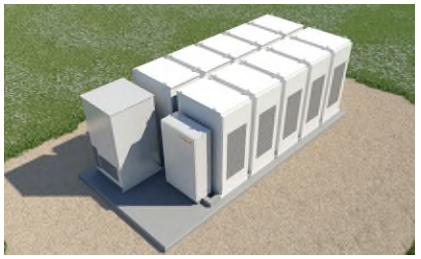
Residential Batteries

Measuring Performance

2 Options to Curtail

	Program Parameters	Typical Application
Targeted Dispatch	• 3 - 6 events per summer • 3 hours per event • **$35/kW-summer**	
Daily Dispatch	• 30 - 60 events per summer, • 2 - 3 hours per event • **MA: $200/kW-summer**	

3 Options to Curtail

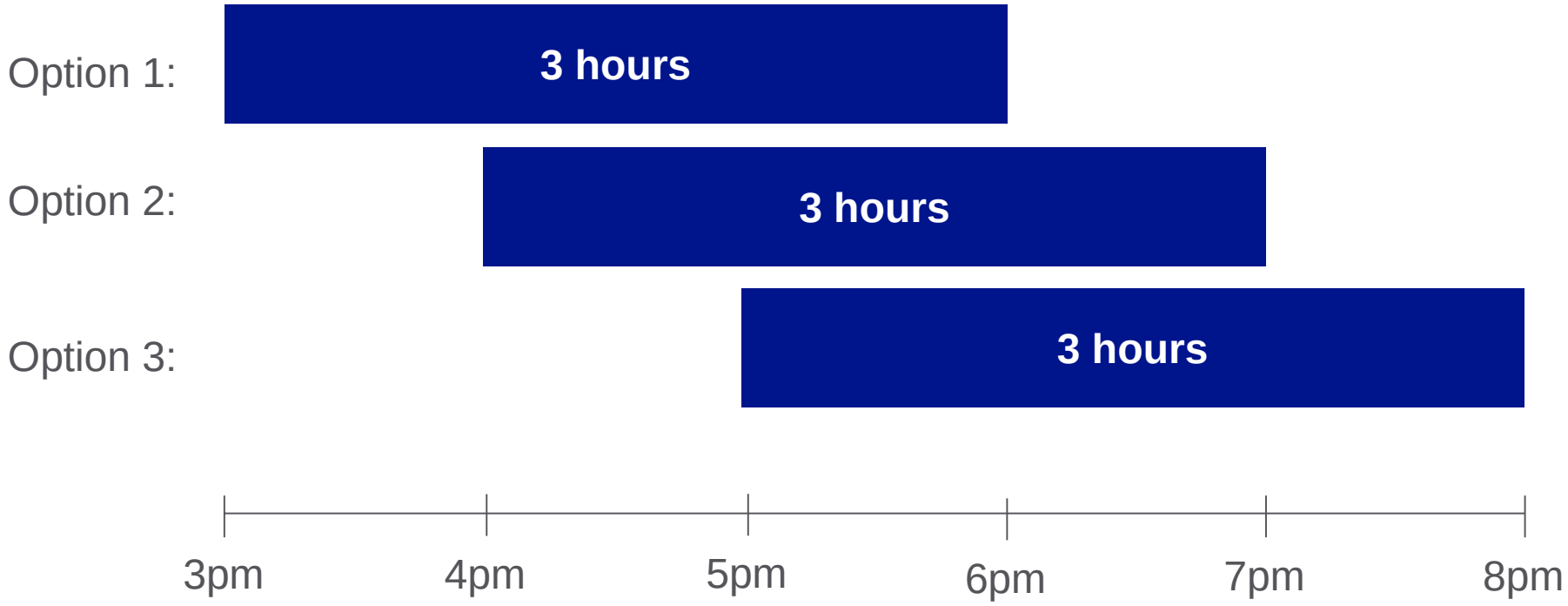
	Program Parameters	Typical Application
Targeted Dispatch	• 3 - 6 events per summer • 3 hours per event • **$35/kW-summer**	
Daily Dispatch	• 30 - 60 events per summer, 5 events per winter • 2 - 3 hours per event • **MA: $200/kW-summer**	

Basics of Targeted Dispatch

- Typically 3 – 6 events per summer
- 3 hours per event
- Between 3 – **8**pm
- Customers/Vendors are notified the day before.
- Weekdays and **Weekends**
- Not Holidays
- Paid by performance $35/kW-summer

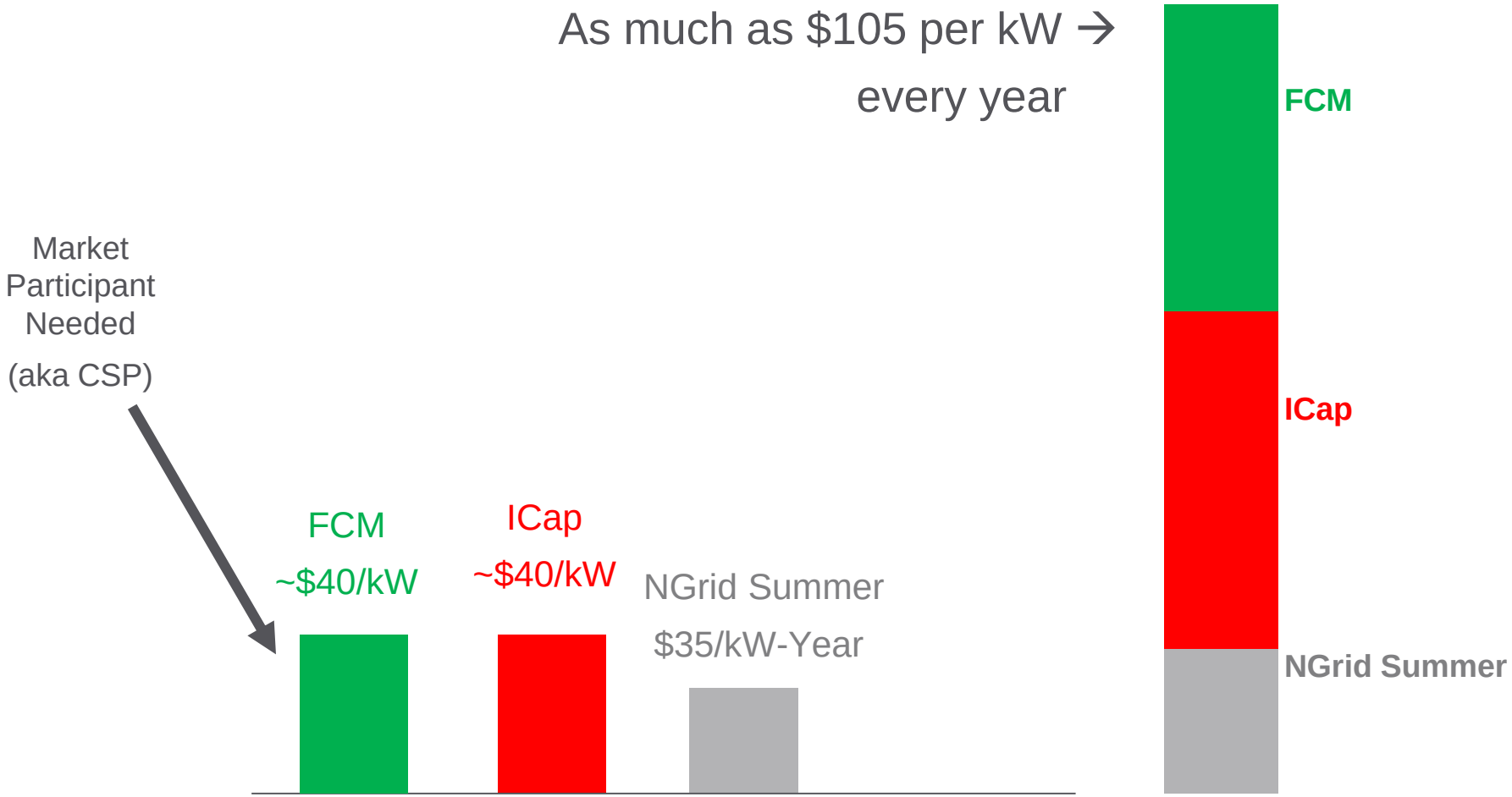
Event Windows (New)

Events are still only 3 hours long, but now they can happen between 3pm and 8pm.



Other Benefits of Demand Response

As much as $105 per kW → every year



Weekend Bonus

1. Weekend Events are very rare
2. Every Customer is Automatically Enrolled
3. There is no penalty if customers don’t participate for a weekend event
4. Customers can make more money if they curtail during a weekend event.

$10/kW-Summer

Example of How DR Can Help EE

A 200,000 sf facility has about 1 cfm/sf. This would lead to ~150kW of fan energy

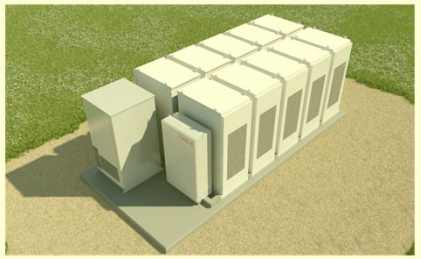
$$200{,}000sf \cdot \frac{1cfm}{sf} \cdot \frac{1hp}{1000cfm} \cdot \frac{0.75kW}{hp} = 150kW$$ **fan**

Dialing down a VFD from 80% speed to 60% speed for DR events would save ~ 87kW

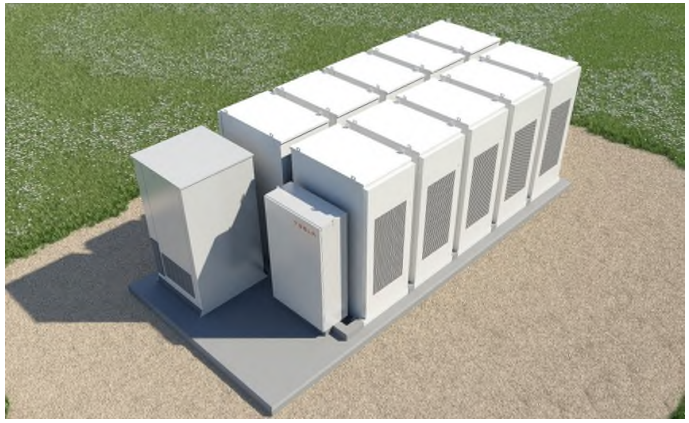
$$P_2 = 150kW \cdot \left(\frac{60\%}{80\%}\right)^3 = 63kW$$

That is worth about $3,000 per year in DR incentives in addition to the energy savings and standard incentives.

3 Options to Curtail

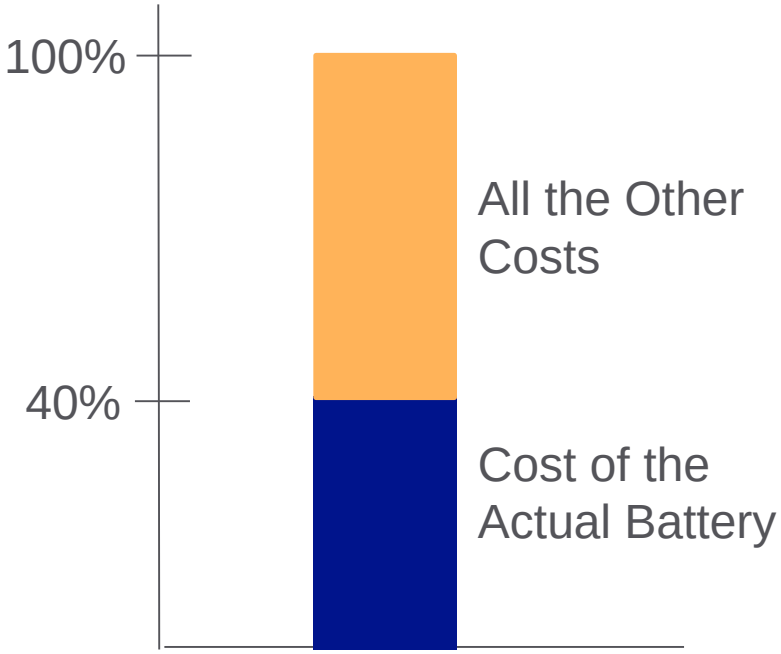
	Program Parameters	Typical Application
Targeted Dispatch	• 3 - 6 events per summer • 3 hours per event • **$35/kW-summer**	
Daily Dispatch	• 30 - 60 events per summer, • 2 - 3 hours per event • **MA: $200/kW-summer** • **RI: $300/kW-summer**	

Basics of Daily Dispatch



- Typically 30–60 events per summer
- 2 - 3 hours per event
- Between 3 – 8pm
- Customers/Vendors are notified the day before.
- Weekdays and Weekends
- Paid by performance MA: $200/kW-summer

Batteries and Daily Dispatch



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Batteries and Daily Dispatch

Batteries in Daily Dispatch can only earn an incentive up to 150% of it's site load.

Typical Facility Type	Typical Site Load	Battery Incentive Cap
Data Center Grocery Store	1 MW	1.5 MW
Large Hospital Large Office Building	2 MW	3 MW
7 Customers	3.3+ MW	5+ MW

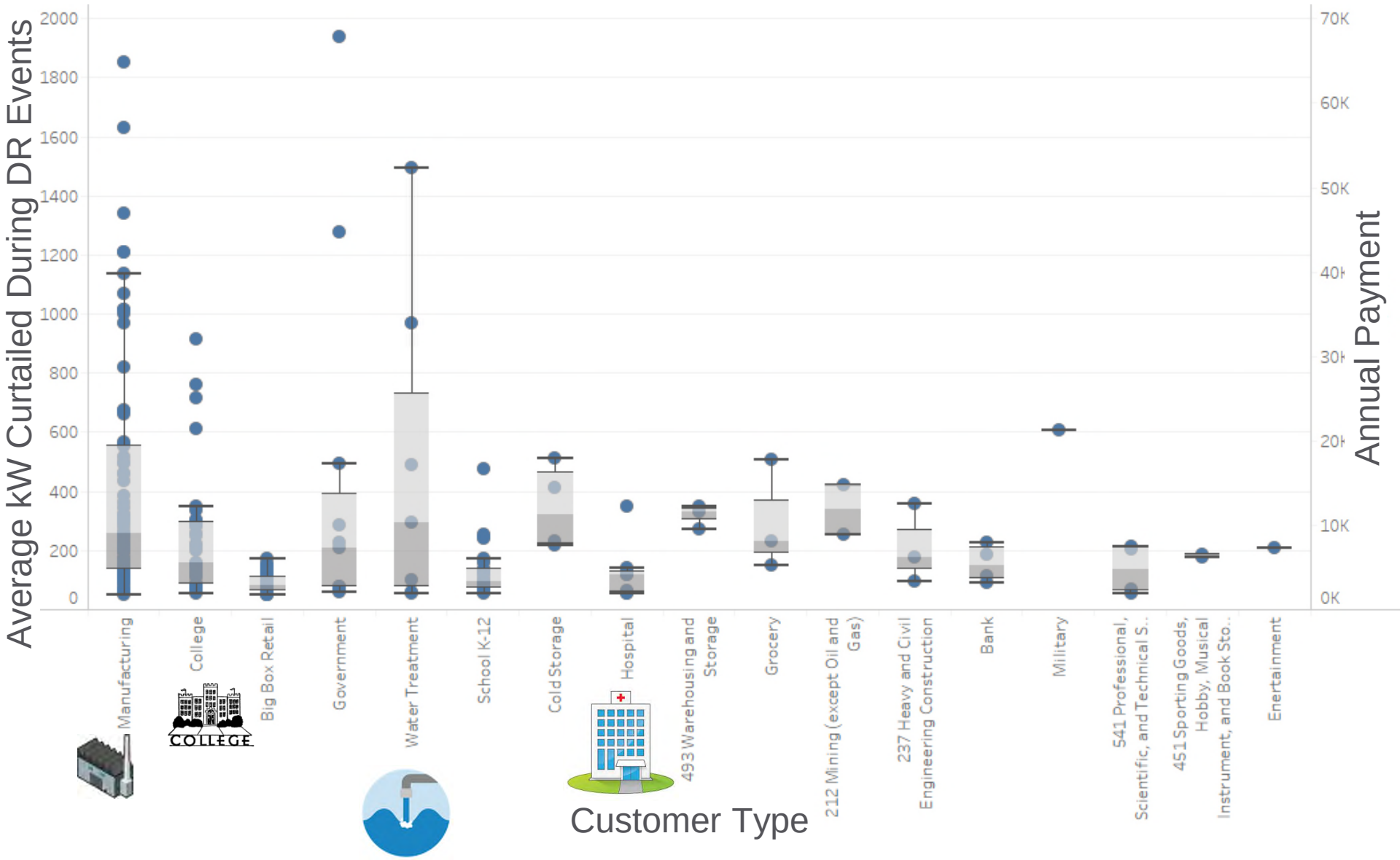
How Demand Response is Implemented

Targeted Dispatch	Daily Dispatch
• Usually Manual • Temperature setback ~3F • VFD speed limiting • Early setback • Process Changes • Rarely Lighting	• Usually Automatic • Batteries • Thermal Storage • Industrial Freezers • V2G

TECHNOLOGY AGNOSTIC *

*Update for Generators and Batteries next year

Current Customer Mix (Under 2MW)



Pre-Approved Vendors

CPower	1-844-996-4743 NGRID@CPowerEnergyManagement.com
enel x	1-617-535-7482 NationalGridNE@enernoc.com
IPKeys SECURE TECHNOLOGY INTEGRATION CONSULTING & SOFTWARE	1-855-475-3970 NGSales@ipkeys.com
voltus LESS ENERGY • MORE CASH	1-415-463-4236 NGRIDNE@voltus.co
Direct Participant	

Curtailment Service Providers – What do they do?

1. Explain the basics of demand response
2. Complete an audit to estimate the customer's curtailment potential
3. Give the customer an estimate of DR revenue from ISO's program, National Grid Program, and ICap Reduction
4. Make sure customers are contacted on event days
5. Give customer post-event feedback on performance
6. Double check the incentive calculations

Curtailment Service Providers – Who's Who?

CPower

Keith Black
VP for NE
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(860) 241-5537

Phil Ciulla
Account Executive
Philip.Ciulla@CPowerEnergyManagement.com
(781) 214-7519

Enel-X

Christina Driscoll
Regional Sales Manager
Christina.Driscoll@enel.com
(781) 775-5913

Daniel (Dan) Schultz
Sr. Business Development Manager
Daniel.Schultz@enel.com
(513)-227-7908

Patrick Grogan
Business Development Manager
Patrick.Grogan@enel.com
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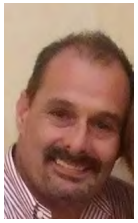
IPKeys



Dave Paradis
Sr. Operation Executive
dparadis@ipkeys.com
(267) 670-5822

Voltus

Serena Fagan
Sales Director
sfagan@voltus.co
(857) 753-1276

Erik Roth
Sales Director
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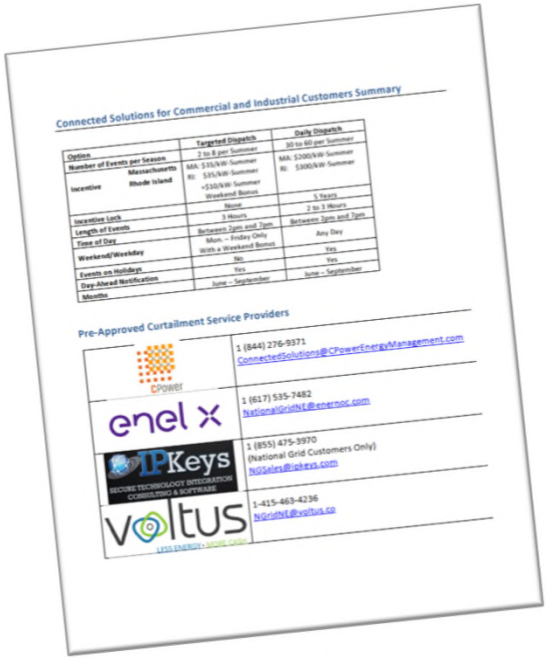
(917) 456-7503

John Wells
Sales Director
jwells@voltus.co
(508) 517-5104

Marketing Materials

Summary Sheet



Connected Solutions for Commercial and Industrial Customers Summary

Option		Targeted Dispatch	Daily Dispatch
Number of Events per Season		2 to 8 per Summer	30 to 60 per Summer
Incentive	Massachusetts	MA: $35/kW-Summer	MA: $200/kW-Summer
	Rhode Island	RI: $35/kW-Summer +$10/kW-Summer Weekend Bonus	RI: $300/kW-Summer
Incentive Lock		None	5 Years
Length of Events		3 Hours	2 to 3 Hours
Time of Day		Between 2pm and 7pm	Between 2pm and 7pm
Weekend/Weekday		Mon. – Friday Only	Any Day
Events on Holidays		With a Weekend Bonus	Yes
Day-Ahead Notification		No	Yes
Months		Yes	Yes
		June – September	June – September

Pre-Approved Curtailment Service Providers

CPower	1 (844) 276-9371 ConnectedSolutions@CPowerEnergyManagement.com
enel X	1 (617) 535-7482 NationalGridNE@enernoc.com
IPKeys Secure Technology Integration Consulting & Software	1 (855) 475-3970 (National Grid Customers Only) NGSales@ipkeys.com
voltus Less Energy. More Life.	1-415-463-4236 NGridNE@voltus.co

PDFPlus Document

Targeted Dispatch Flyer

Massachusetts

Participate in the Targeted Dispatch Summer option and receive incentives!

1 to 8 Curtailment Events per Summer

Working together to lower peak energy demand.

There are times throughout the summer when electricity use in Massachusetts reaches its highest levels. By reducing overall peak energy demand during these times, we can decrease the need for infrastructure upgrades and minimize carbon emissions. That's why the sponsors of Mass Save® are working with experienced curtailment service providers (see reverse) to offer our commercial and industrial customers incentives to reduce the peak!

Reducing energy is even more rewarding when you curtail electricity use during Targeted Dispatch events.

INCENTIVE PAYMENT

$35 per average kW reduction per summer

For example, if you curtailed an average of 100 kW of electricity over the summer, the incentive your sponsor would make available would be:

100kW x $35/kW = $3,500 every summer

EVERSOURCE nationalgrid Unitil energy for life

mass save

About the Incentive

- Incentives will be paid out in November of each year.
- Incentives will be based on the customer's average curtailment amount for all events called that summer.

PDFPlus Document

Daily Dispatch Flyer

Massachusetts

Participate in the Daily Dispatch Summer option and receive incentives!

30 to 60 Curtailment Events per Summer

Working together to lower peak energy demand.

The electric grid is sized on more than just peak hours of the year. Every daily peak in the summer is used to calculate to site requirements for grid infrastructure. By reducing peak electric use and daily peaks in July and August, we can reduce the site requirement of the grid – lowering long terms costs and carbon emissions. That's why the sponsors of Mass Save® are working with experienced curtailment service providers (see reverse) to offer our commercial and industrial customers incentives to reduce daily peaks!

Reducing energy is even more rewarding when you curtail electricity use during Daily Dispatch events.

INCENTIVE PAYMENT

$200 per average kW reduction per summer

For example, if you curtailed an average of 100 kW of electricity over the summer, the incentive your sponsor would make available would be:

100kW x $200/kW = $20,000 every summer

EVERSOURCE nationalgrid Unitil energy for life

mass save

- Incentives will be based on the customer's average curtailment amount for all events called that summer.

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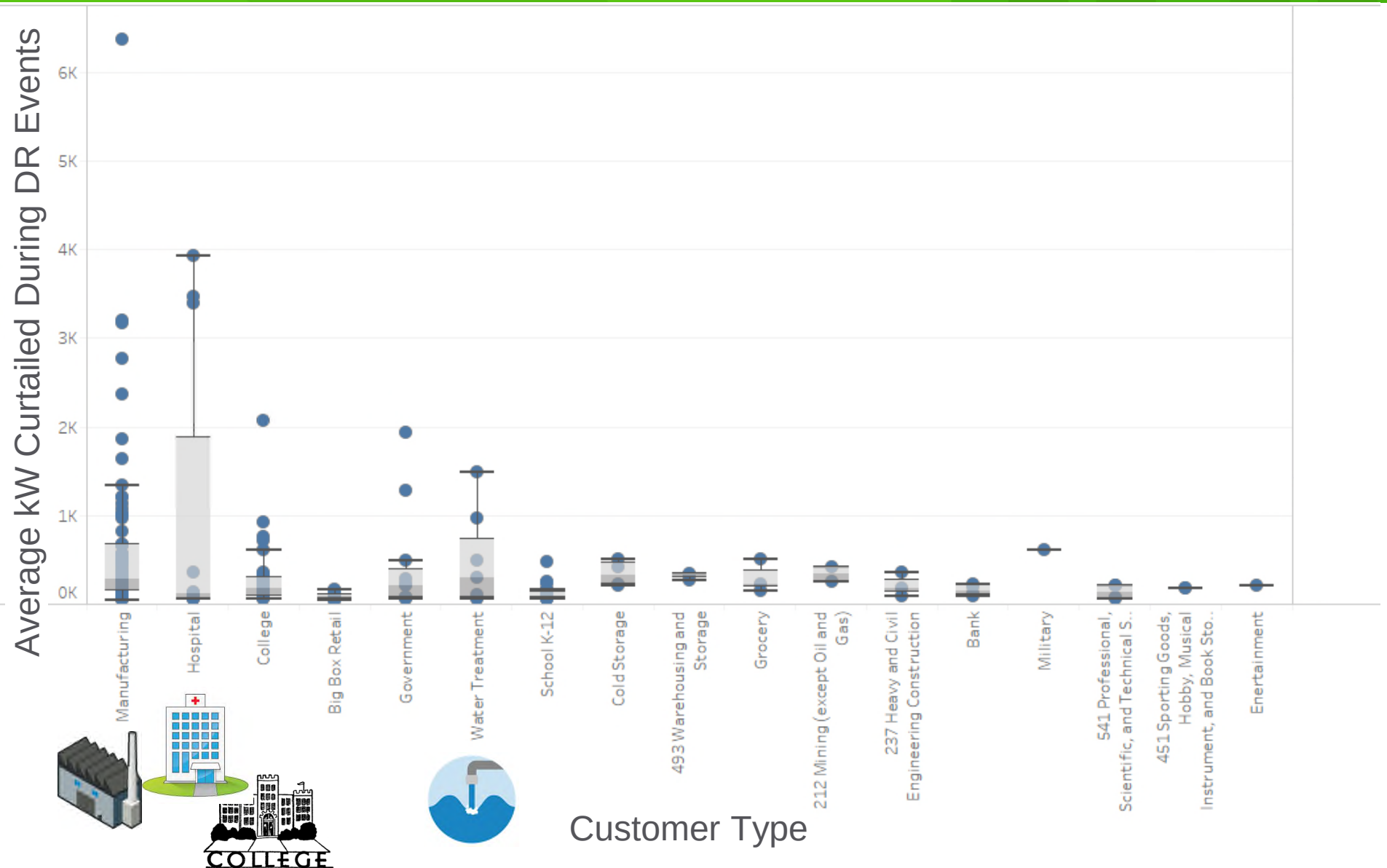
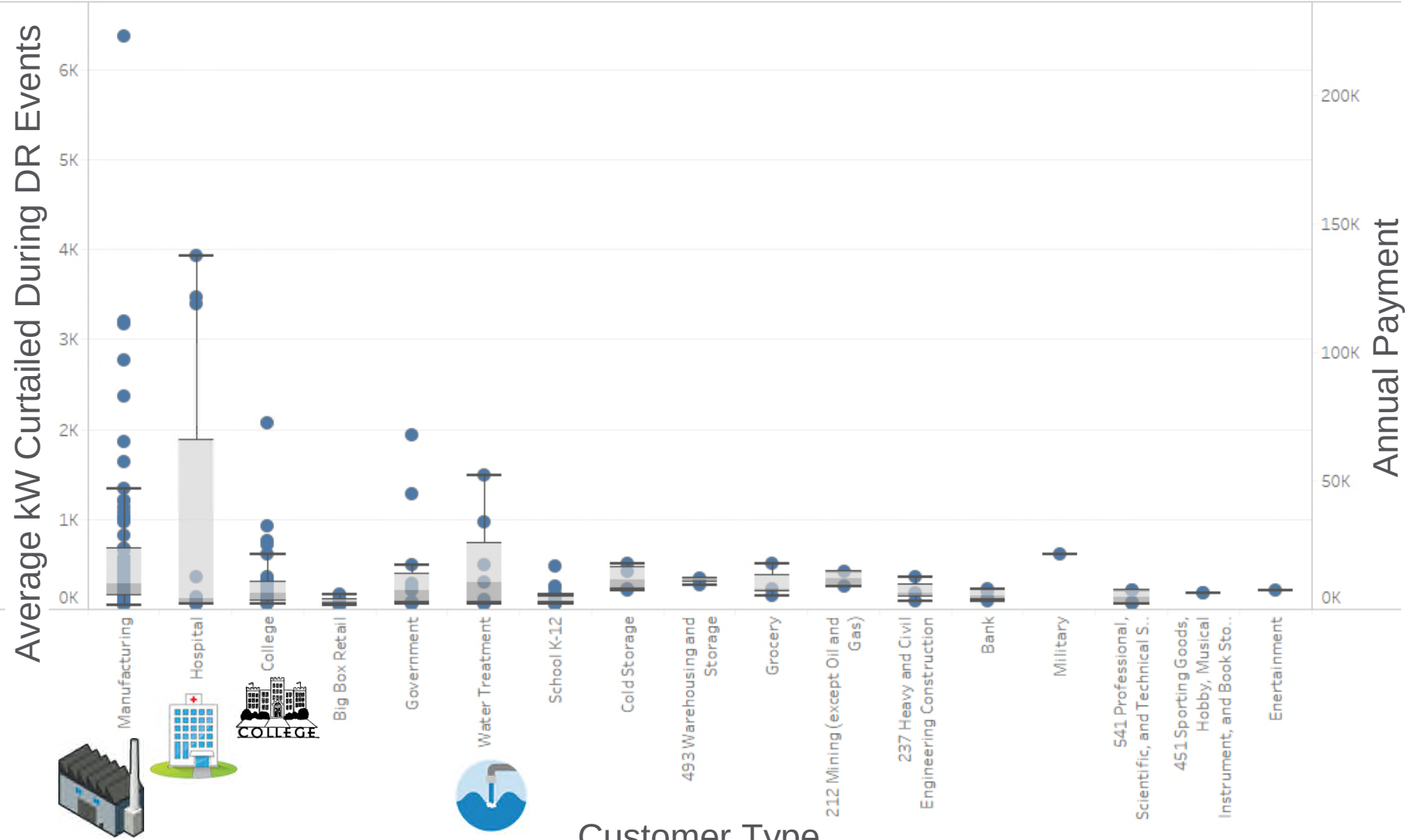
Current Customer Mix



Current Customer Mix



05 Quick Hits and Reminders

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Quick Hits – Reminders

Upcoming Trainings

- Mass Save events and trainings can be found here.
- Custom/Prescriptive lighting tool training – recording is available on the PEX landing page.
- NEBFM 2024 - The 18th Annual Northeast Buildings & Facilities Management Conference is scheduled to take place April 23rd & 24th at the DCU Center in Worcester, MA. If you are interested, please click here to register.

Updated National Grid MA Sales Representative Lookup Tool

- An updated sales representative look up tool is now available.

Project Expediter Landing Page

- www.nationalgridus.com/MA-Project-Expediter-Program

PEX Finder Tool Update

- https://www.nationalgridus.com/project-expediter#perfectPartner

Quick Hits – Reminders

National Grid Projects

- **All PEX Gas Applications and Associate PEX Applications – If you are submitting a gas application or if you are an associate PEX, please note your PEX status when emailing your National Grid sales rep applications and associated documentation. This will help ensure the application is entered as a "PEX" application so it will show up in our PEX reporting.**

Green Communities Updates

- **Key dates/deadlines for Green Communities (GC) are available here.**

2024 Commercial National Grid Heat Pump Rebate Form

- **The 2024 C&I National Grid heat pump rebate form is ready for use.**

Background Checks

- **New PEX employees require Level 2 background checks (with 4-panel drug screening) if they have direct contact with National Grid customers on their property and/or access National Grid database. Contact Accurate Background checks for more details.**

06 Looking Forward – 2024 Meeting Dates

Mathew McCarthy Mathew.McCarthy@nationalgrid.com

nationalgrid

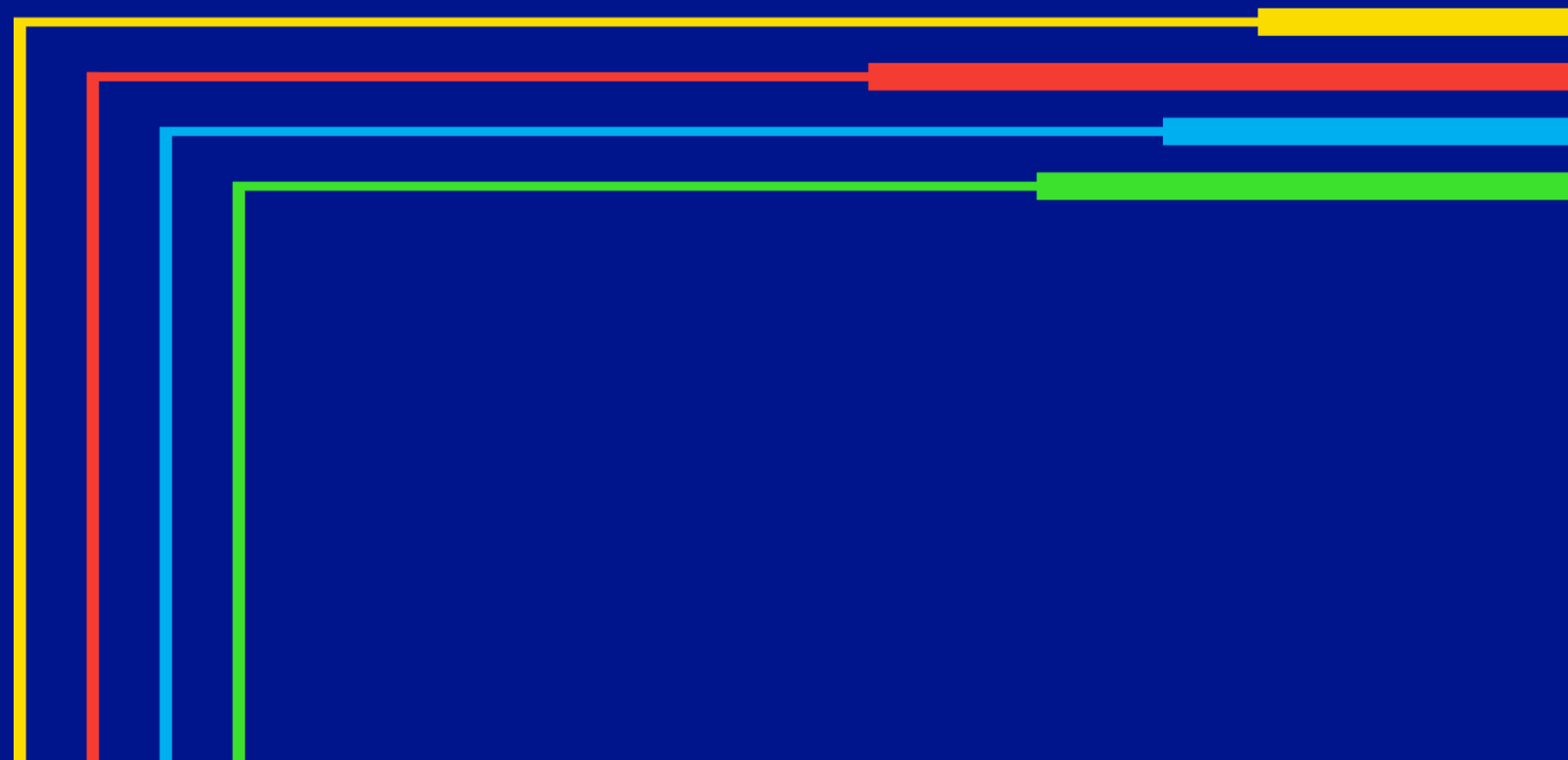
2024 Meeting Dates

Meeting Schedule

- March 20, 2024
- ~~April 17~~ April 16, 2024 (Tuesday In-Person)
- May 22, 2024
- June 26, 2024
- July 24, 2024
- August 21, 2024
- September 18, 2024
- October 23, 2024
- November 20, 2024

Thank You!

Be Safe



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