

# Agree or disagree?

Organizations underestimate the importance of electricity demand management.

4.1

Strongly disagree

Strongly agree

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# Industrial demand management

Jay Mullin  
Goldfin Consulting

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Edgecom Energy

# Welcome our guest expert



Behdad Bahrami  
Co-founder  
Edgecom Energy

# Help you better plan to manage electrical demand



Opportunities for Demand Management



Common Demand Management Strategies



Future of Demand Management

# Follow along in the participant workbook!

Have the workbook open or printed out

Where to find the workbook:

- In the chat



# Agree or disagree?

Organizations underestimate the importance of electricity demand management.

4.1

Strongly disagree

Strongly agree

# Help you better plan to manage electrical demand



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# What is demand management?

16 responses

Amount of draw  
in a time period

Managing cost  
associated with  
demand charges

Saving money

Reducing  
demand at times  
of high use to  
ease load on the  
grid

Managing own  
demand

reduction in  
demand over  
time.GA cost  
management

understanding  
your peak  
demands

reducing peak  
load during peak

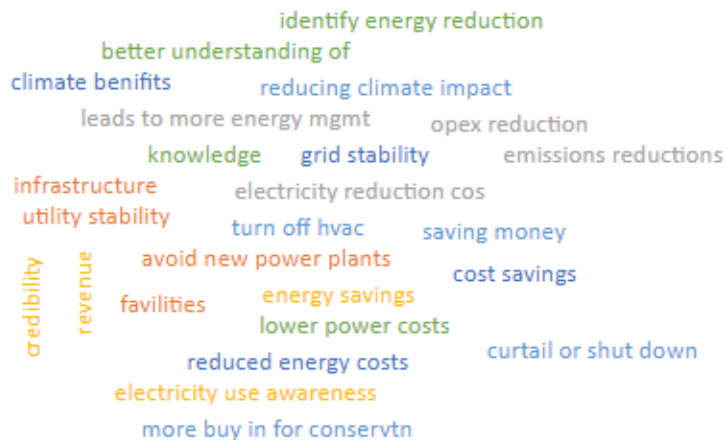
manage the  
electricity usage

Reducing load  
during the grid  
peak.



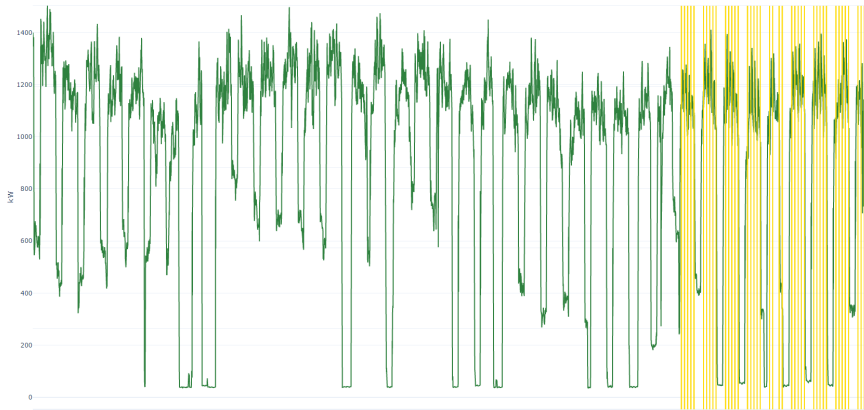
# What are some benefits of demand management?




25 responses

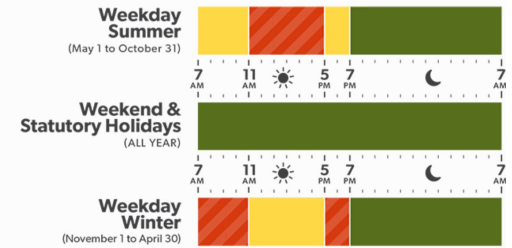


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# Time-of-use / defined peak periods



-  **TOU On-Peak**  
18.2¢/kWh
-  **TOU Mid-Peak**  
12.2¢/kWh
-  **TOU Off-Peak**  
8.7¢/kWh

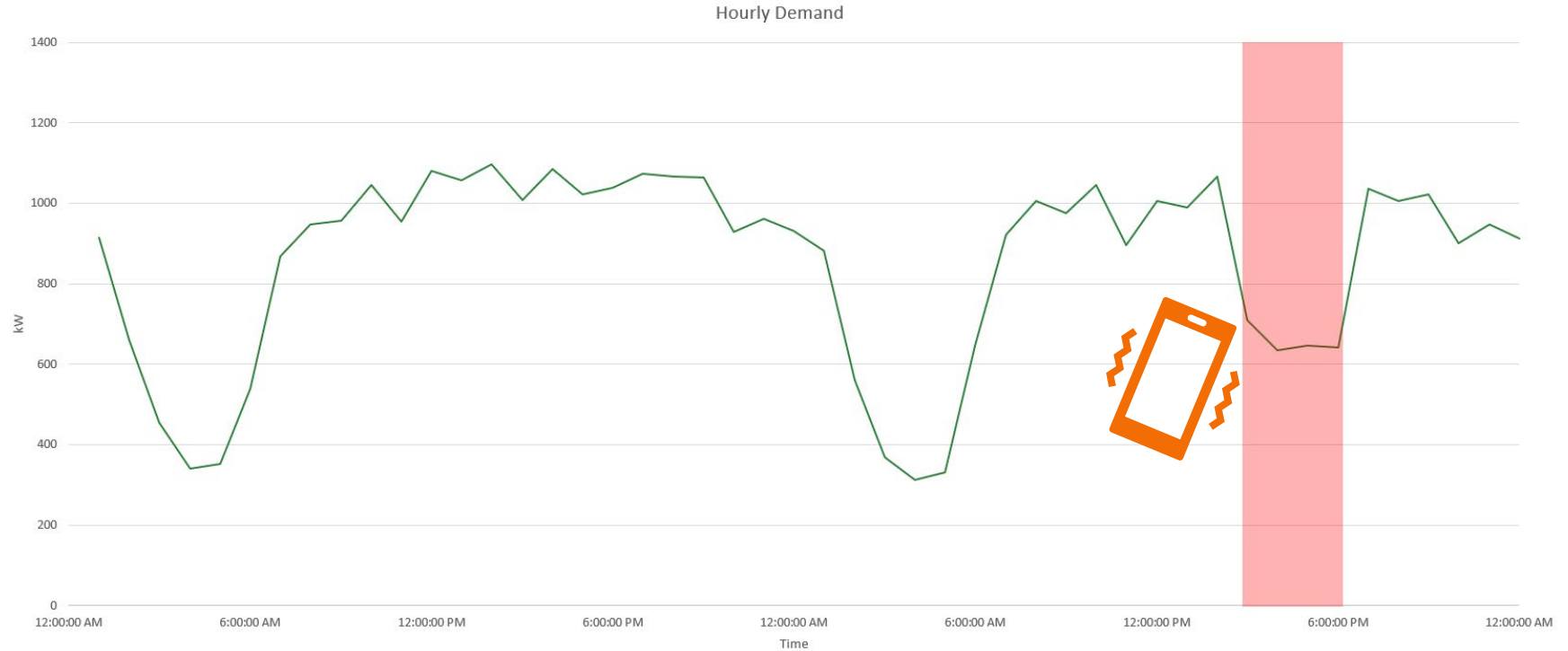


Source: Hydro One

# Monthly peak demand



# Demand response programs and capacity auction

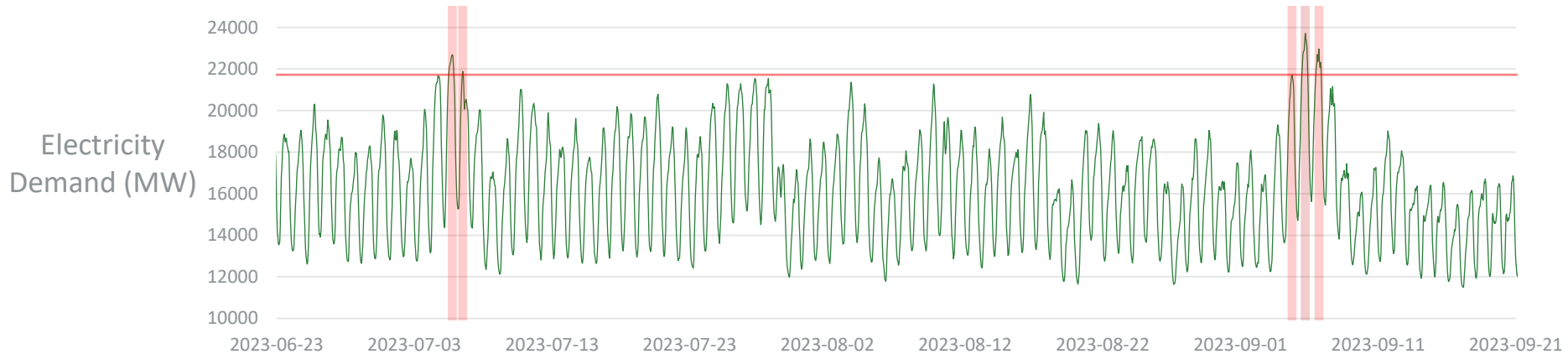


# Responding to Hourly Ontario Electricity Price (HOEP)

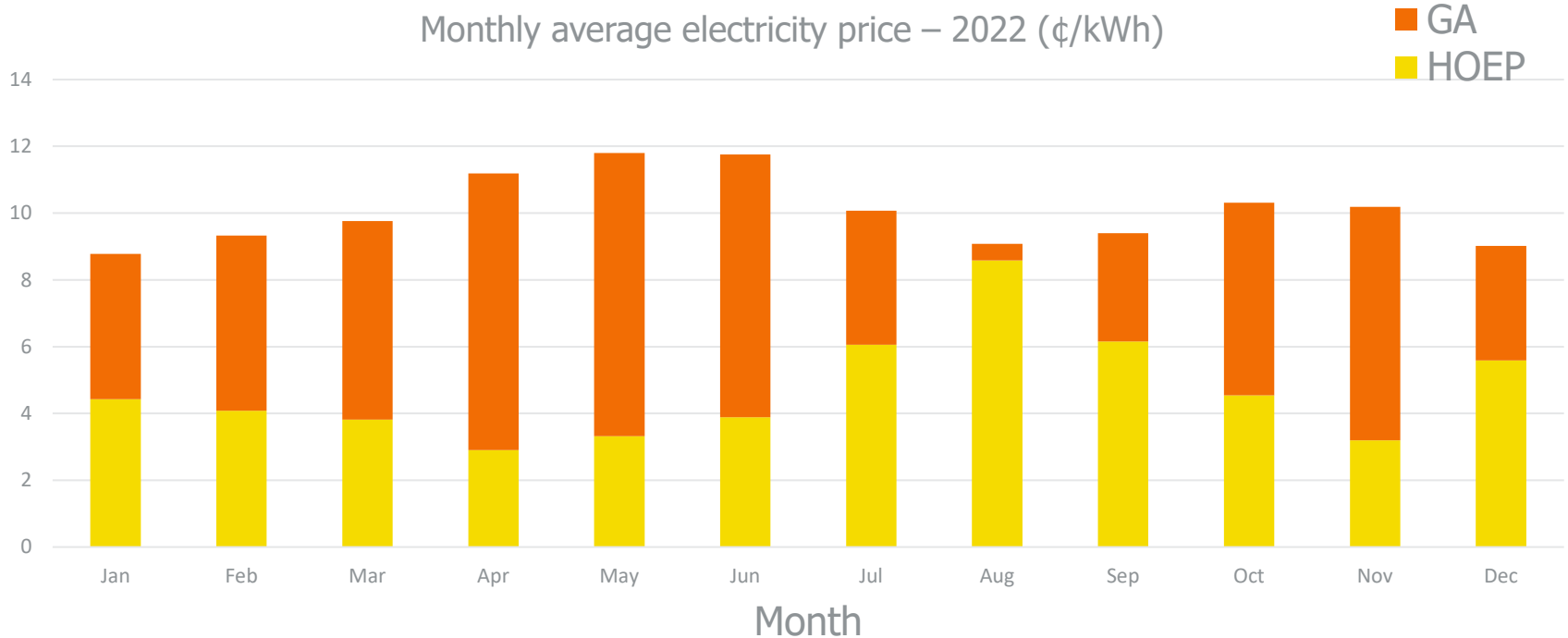


# Industrial Conservation Initiative

Ontario Peaks 2023



# Interaction of HOEP and Global Adjustment



# Help you better plan to manage electrical demand



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# What could you do to reduce demand during a peak period?

15 responses

Shut down non-essential processes

renewable energy

storage

Shift load to off peak

Load shifting

Run on generator.

shut machinery down, have people work from home, move to a battery

Turn the Air down

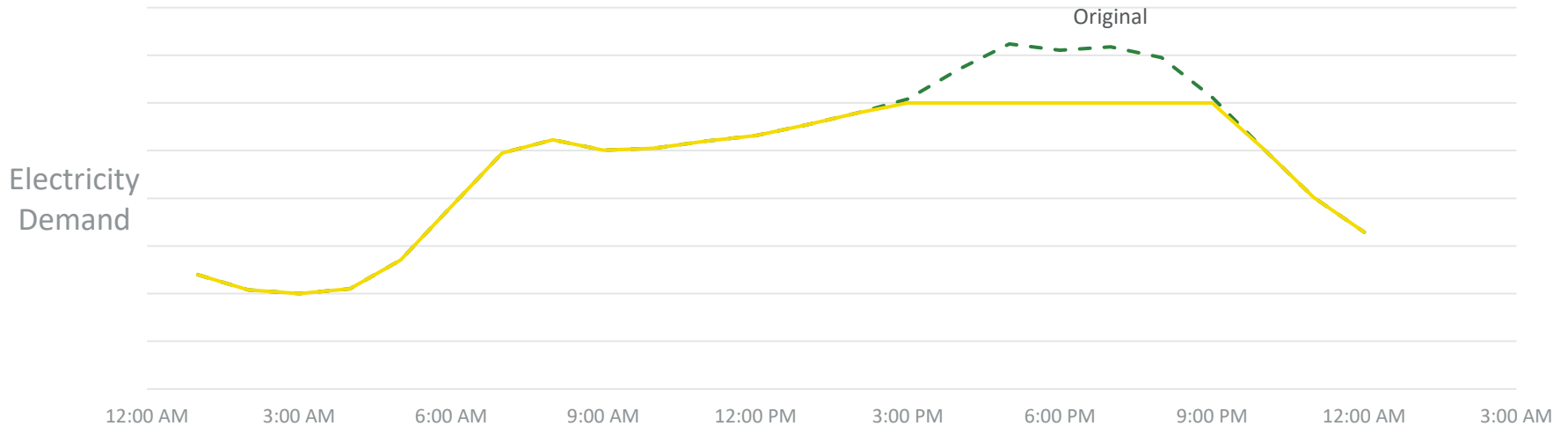
Battery system

Scheduling, generator

efficiency

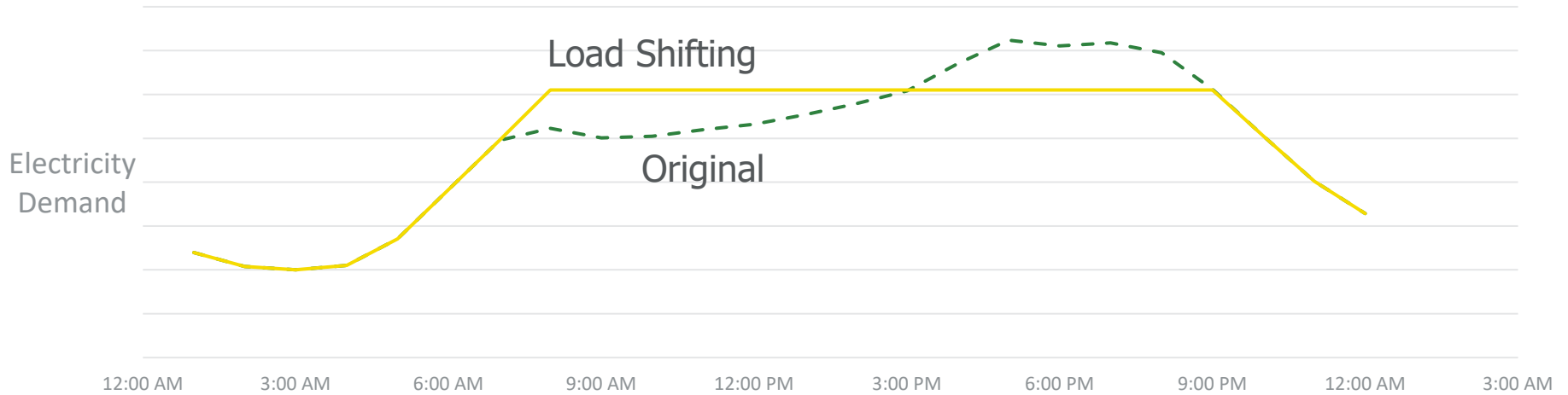
# Load shaving

Reduce demand during peaks by curtailment or on-site generation



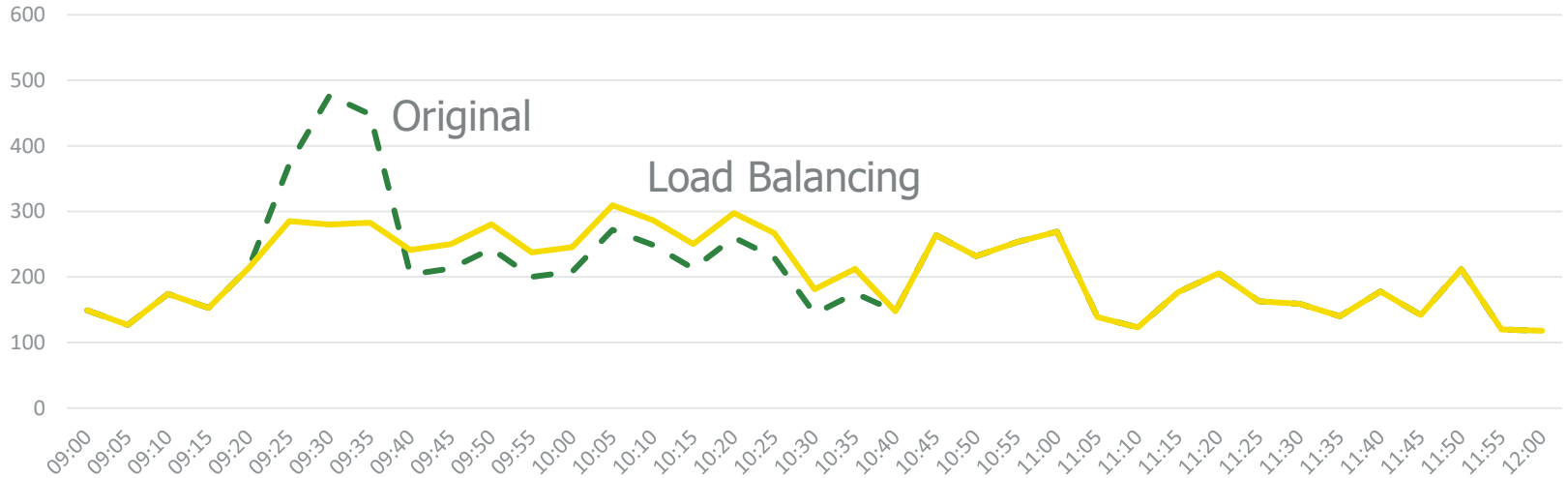
# Load shifting

Shifting demand from peak hours to off-peak hours

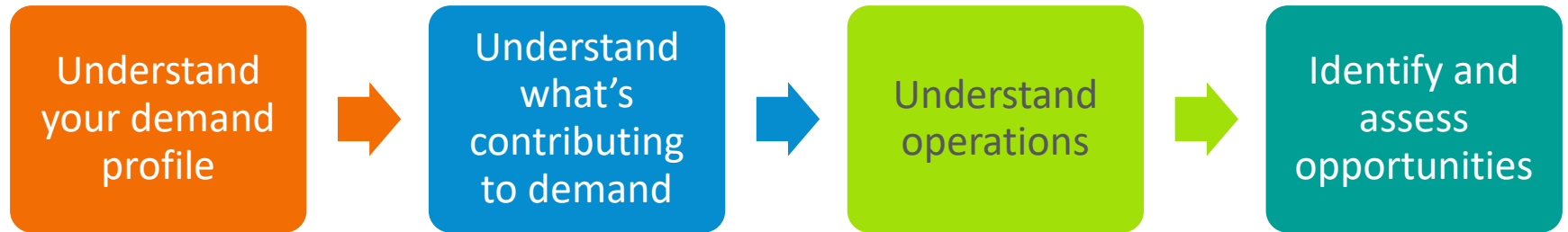


# Load balancing

Coordinate individual loads to reduce spikes in demand



# Developing a demand management plan: Part 1



# Case studies

## Cement plant

- 24-7 operations, 3 shifts
- 2 large ball mills crush rock into piles that is then fed into the kiln.
- After exiting kiln, clinker then proceeds via conveyor to additional crushing and then storage.
- Kiln takes up to 6 hours and a lot of fuel to warm up if it's allowed to cool down.

## Plastic extrusion facility

- 24-7 operations, 3 shifts
- Multiple extrusion lines that need at least an hour to warm up, then a high-powered screw extrudes the plastic.
- Vacuum system delivers resin pellets to extruders.
- Battery forklifts used to move finished product to warehouse.

## Retail shopping mall

- Operate 9 a.m. to 9 p.m. 7 days a week.
- Large chiller system supplies chilled water to all fan coils throughout the facility.
- Other major loads include lighting and escalators.

# Assess demand management opportunities

## Instructions

1. Review your assigned case study on pages 6-8 in your participant workbook
2. Identify as many possible strategies as you can to reduce demand under ICI.

## Case study assignments

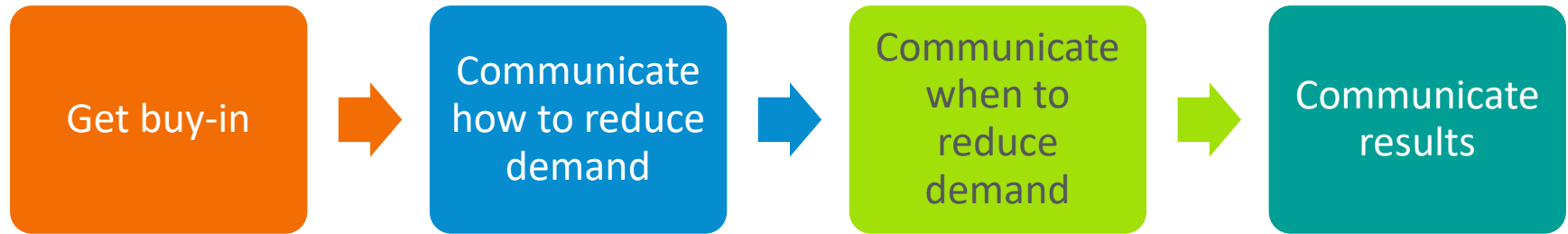
Breakout room	Case study
Room 1	A
Room 2	B
Room 3	C
Room 4	A
Room 5	B
Room 6	C



# Teach back: Demand reduction opportunities



## Developing a demand management plan: Part 2



# Communication plan

## Instructions

1. Review your assigned case study
  - Pages 6-8 in participant workbook
2. Develop a communication plan to implement the demand response strategy.

## Case study assignments

Breakout room	Case study
Room 1	A
Room 2	B
Room 3	C
Room 4	A
Room 5	B
Room 6	C



# Teach back: Communication plan

# Help you better plan to manage electrical demand



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# The future of demand management



Behdad Bahrami  
Co-founder  
Edgecom Energy

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in the Q&A panel!**



Chat



Q&A



People

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# What is your key takeaway from today's workshop?

6 responses

Learning from other attendees about their approaches

energy saving strategies

Importance of communication

Proper planning.

I know next to nothing about HOEP, Monthly Prak, Capacity

Better understanding of energy strategies