



# Utility Incentives for Healthier Buildings



**75F<sup>®</sup>**

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# Utility Incentives for Healthier Buildings

1. Introduction

2. Outside Air Systems &  
Demand-Control Ventilation

3. GRE Healthy  
Buildings Program

4. Efficiency Vermont Controls Program

5. Audience Q & A

# Utility Incentives for Healthier Buildings

## 1. Introduction

3. GRE Healthy  
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5. Audience Q & A

2. Outside Air Systems &  
Demand-Control Ventilation

4. Efficiency Vermont Controls Program

1



**Jill Eide**

Member Commercial Industrial  
& Agricultural Strategist



**Marcus Jones**

Energy Consultant

## Utility Incentives for Healthier Buildings

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# CDC: How COVID-19 Spreads

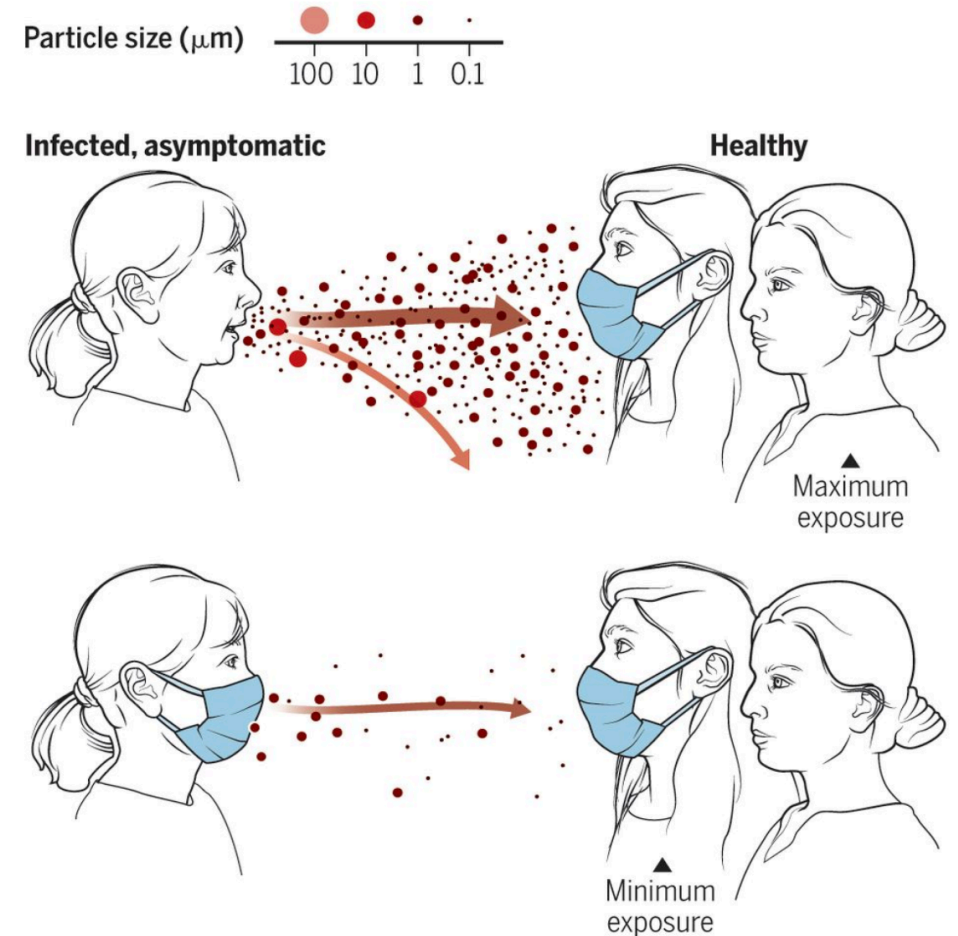
The virus is thought to spread mainly from person to person.

- Between people who are in close contact with one another (within about 6 feet).
- Through respiratory droplets produced when an infected person coughs, sneezes, or talks.
- These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.

The virus may be spread in other ways.

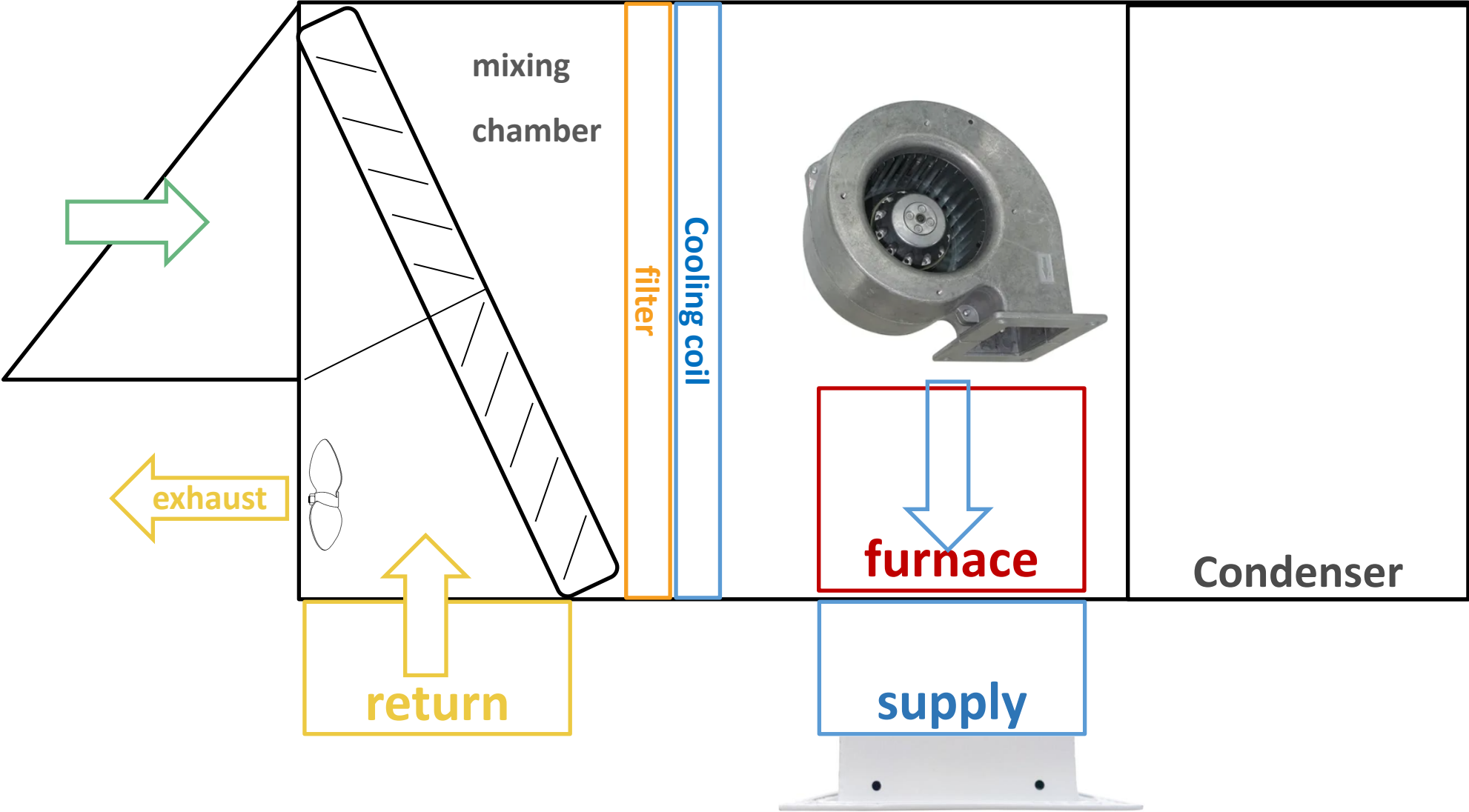
- Touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes. This is not thought to be the main way the virus spreads.

Source: [CDC](https://www.cdc.gov)

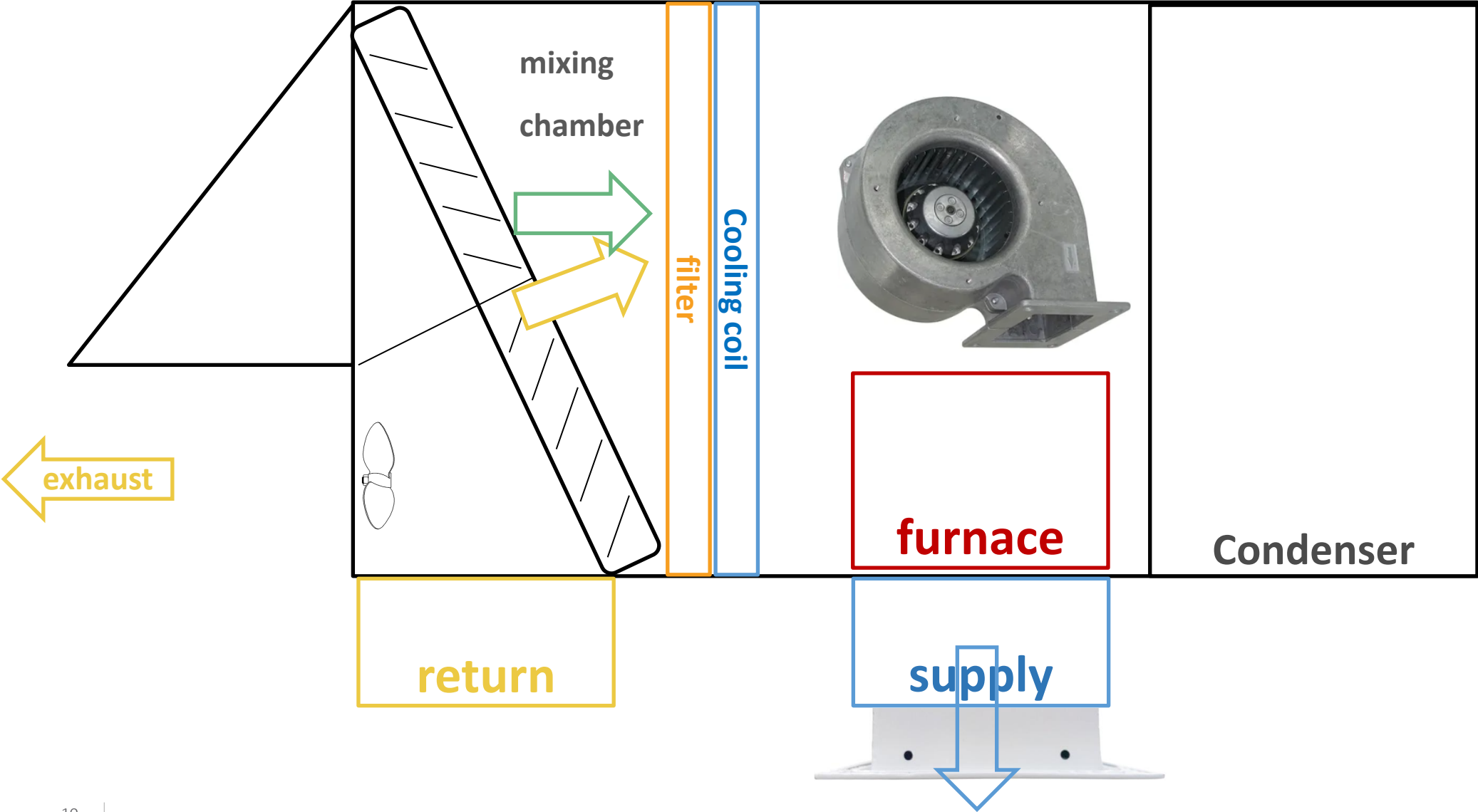


GRAPHIC: V. ALTOUNIAN/SCIENCE

# How Outside Air Fractions are Managed



# How Outside Air Fractions are Managed



# ASHRAE: Reopening Guidance and Building Readiness

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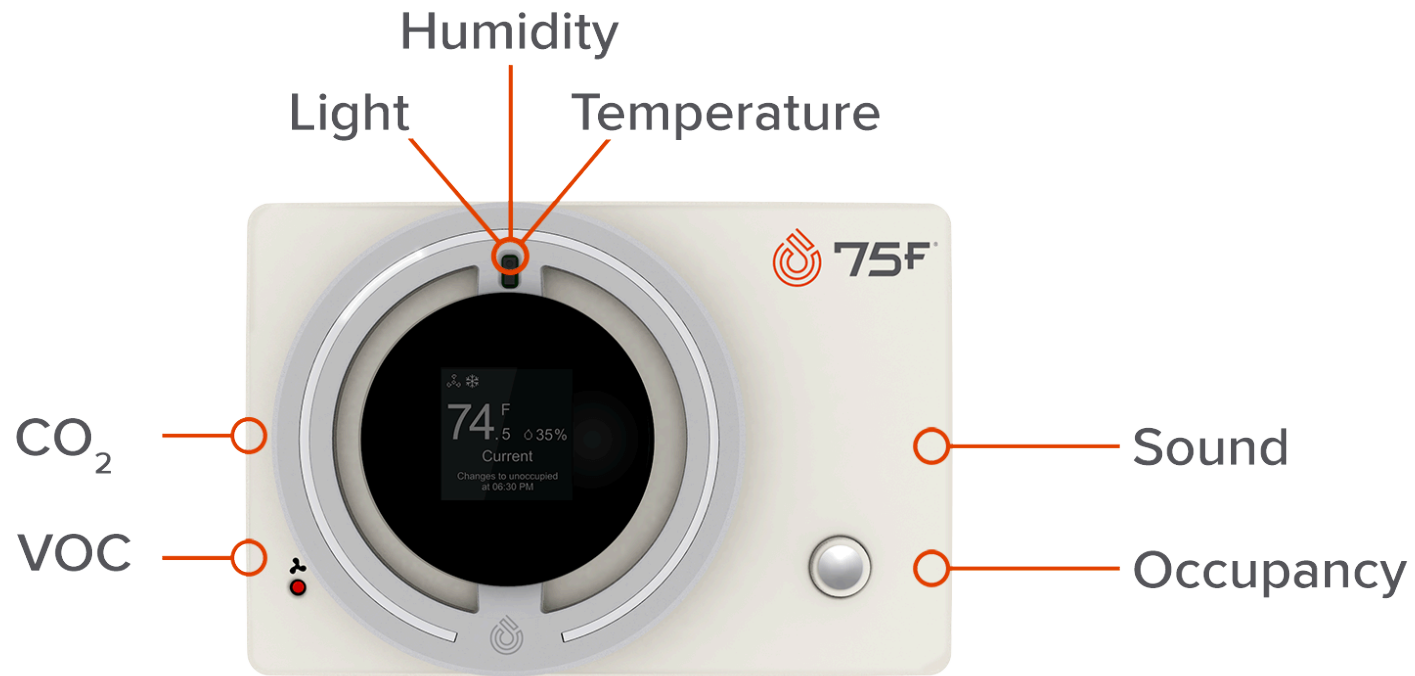
ASHRAE has issued guidance for commercial buildings.

ASHRAE > COVID-19 > Buildings > Commercial

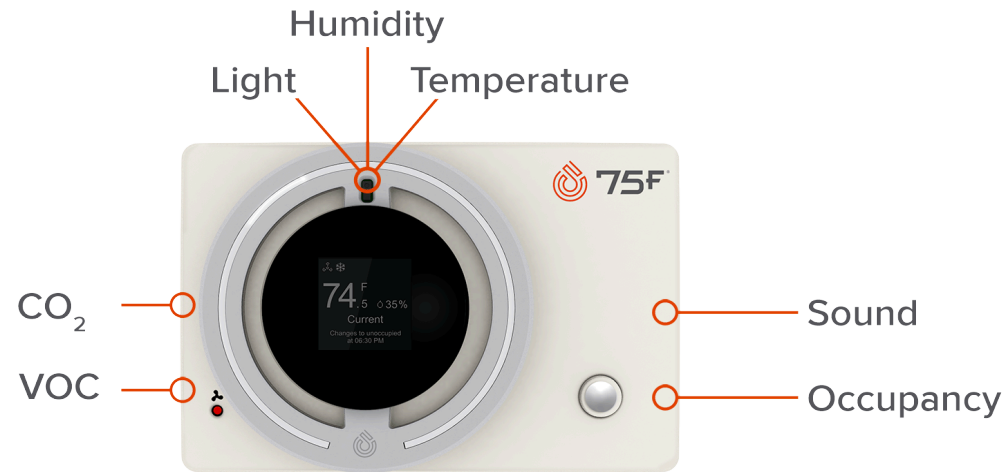
- Flush the air in a building for two full hours before and after occupancy.
- Open Outside Air (OA) to the maximum possible while maintaining acceptable indoor conditions.
- Disable Demand Control Ventilation.
- Divert outside air to occupied spaces.
- Maintain relative humidity levels between 40 and 60%.



## 75F Smart Stat



# 75F IAQ and Wellness Rapid-Results Test Kit



## Streaming IAQ data in 15 minutes

### Selection Pane

#### Select Site

- ☐ Select all
- ☐ Diamond Hill
- ☐ Flipkart ETV
- ☒ Mikros Engineering

#### zone

- ☐ Select all
- ☒ Main\_Floor\_Smart\_Stat
- ☐ Main\_Zone\_2

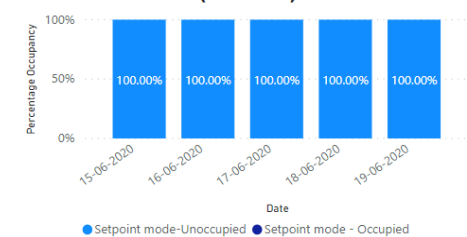
#### Select Date:

6/8/2020 6/29/2020

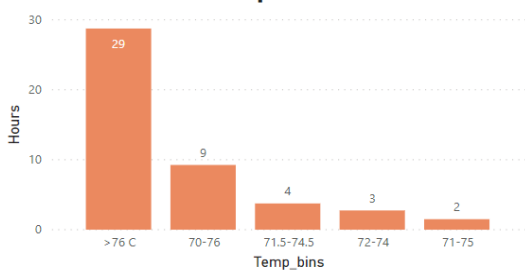


### Indoor Air Quality Monitoring

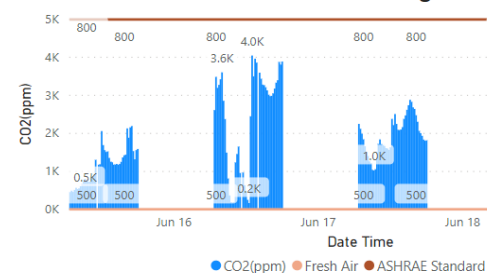
#### Zone occupied duration in Setpoint mode (Minutes)



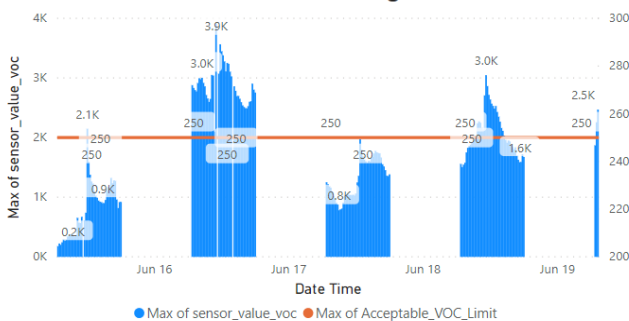
#### Comfort -Temperature based



### CO2 Monitoring



### VOC Monitoring

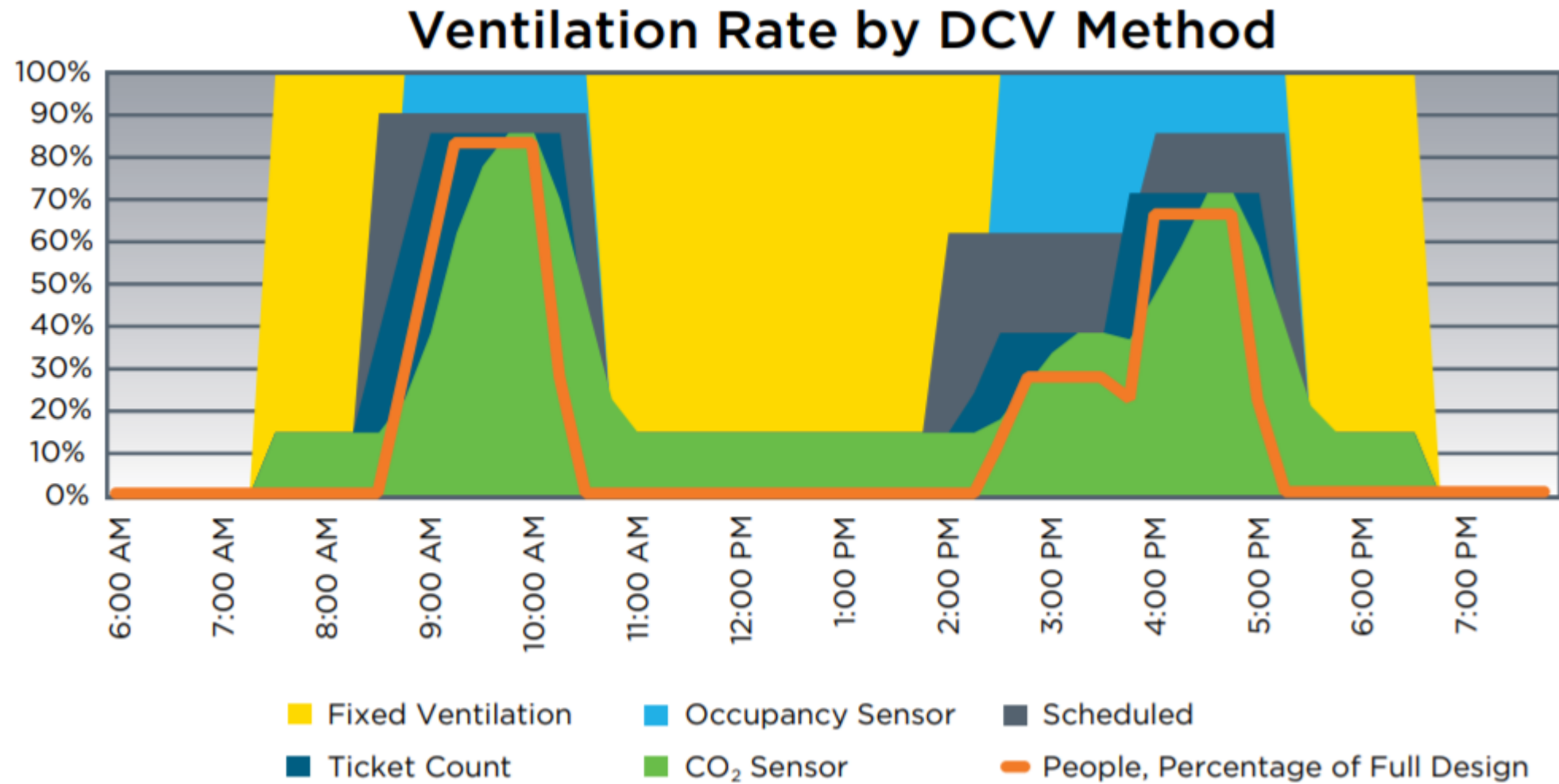


## 75F Epidemic Mode™

- **Smart Purge™** automatically flushes the air in the building prior to occupancy.
- Maximize outside air intake based on equipment and weather.
- Sequences are automatically updated as CDC and ASRAE guidelines change, or to meet state or federal regulations.



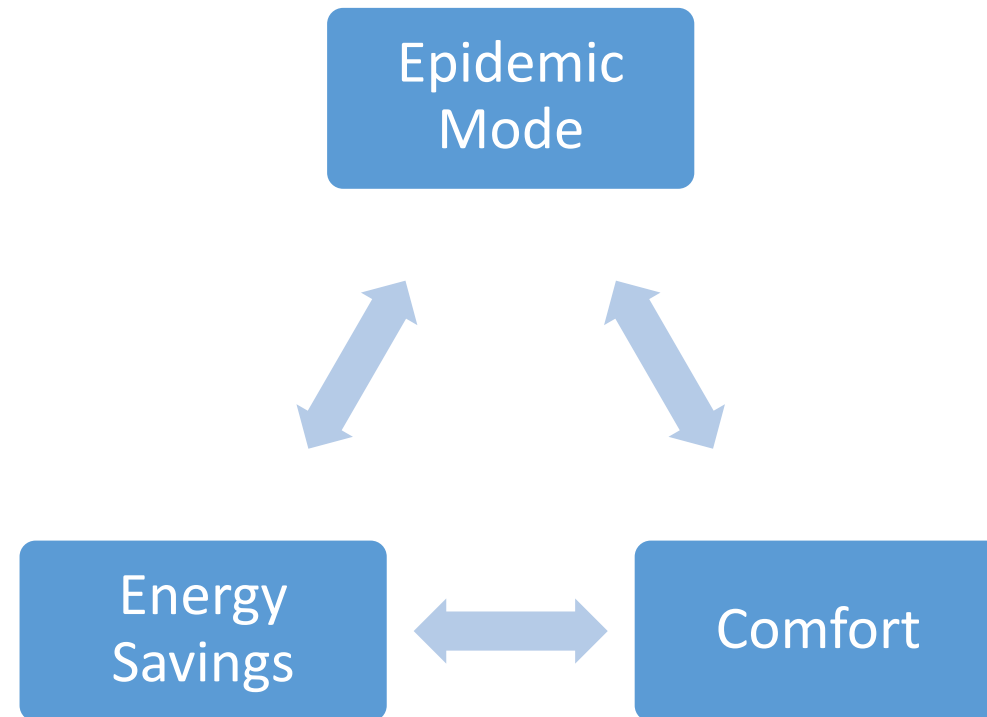
## Demand Control Ventilation (DCV)





Protect your employees and customers **today** while saving energy

Save the **planet** with 30-50% energy savings



**Q&A**

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# Healthy Buildings Program

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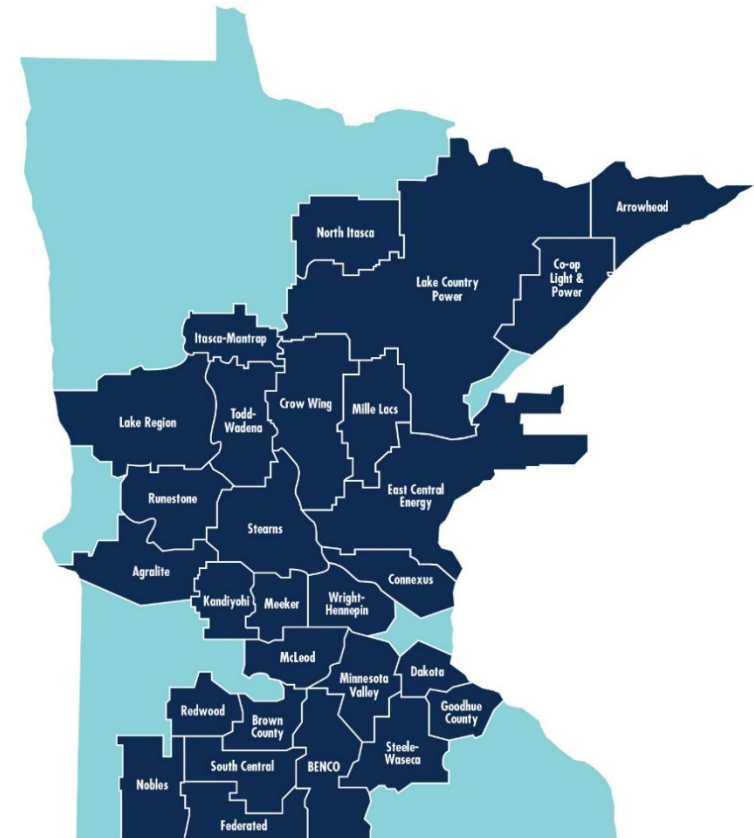
**Jill Eide**

**Commercial, Industrial, & Agricultural Strategist**

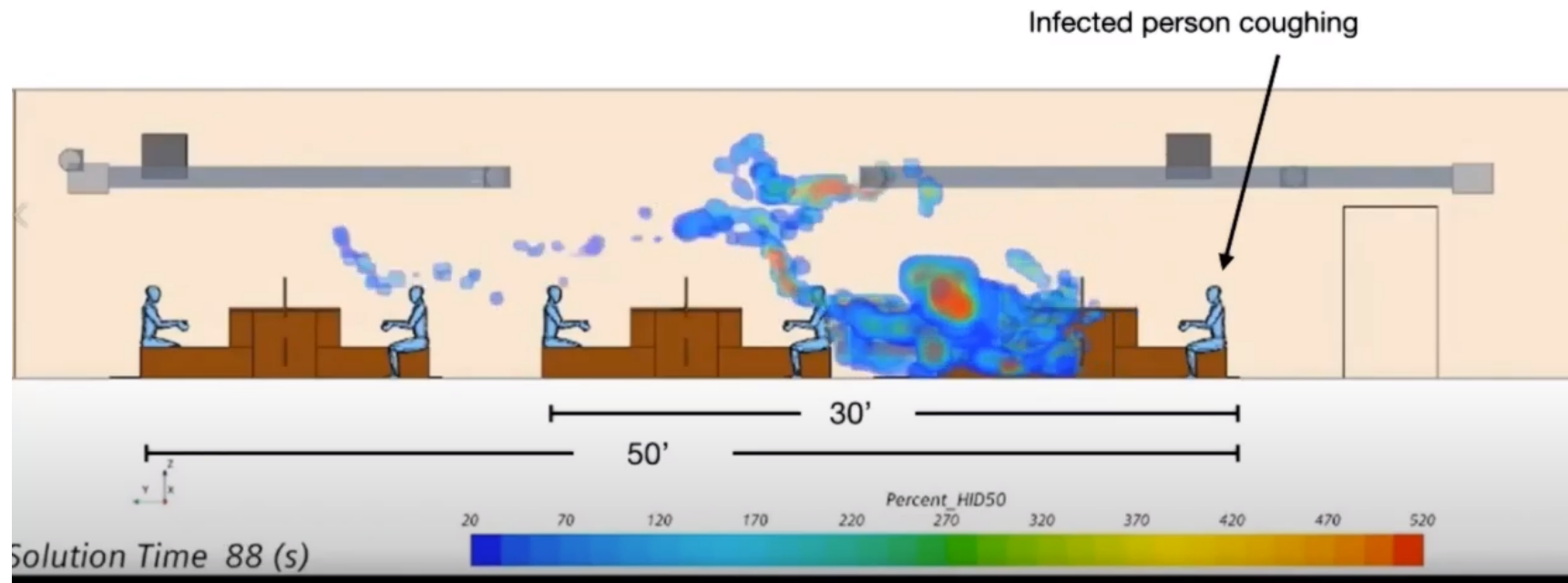


# GRE and our Membership

- ▶ 28 member-owner cooperatives
  - 700,000 members
  - \$3.9 billion total assets
  - \$1 billion revenue
- ▶ Competitive rates, stable forecast
- ▶ 4,820 miles of transmission lines
- ▶ 3,000+ MW generation
  - 10 power plants
  - 700 MW renewables (wind, solar, hydro)



# Aerosol Simulation



# Healthy Buildings

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## ▶ Indoor Air Quality Assessment - Incentives

### ■ Private business facilities:

- Tier 1: under 50kW peak, \$500 up to 100% of cost
- Tier 2: 50-150kW peak, \$1,000 up to 100% of cost
- Tier 3: over 150kW peak, \$1,500 up to 75% of cost

### ■ State and local government:

- Excludes federal facilities 100% of cost up to \$1,500

# Healthy Buildings – **NEW** Program

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## ► Building Controls

- Demand control ventilation **NEW**
- Supply fan VSD
- **Advanced rooftop control NEW**



## ► UVGI Light **NEW**

- Ultraviolet germicidal irradiation

## ► Custom

- Biopolar Ionization



# Contact Information

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**Jill Eide, CEM** | Member Commercial Industrial & Agricultural Strategist

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**Q&A**

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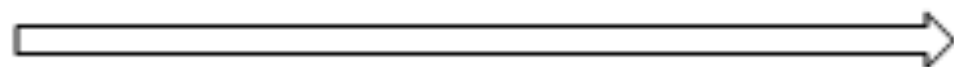
# Efficiency Vermont Controls and IAQ

Marcus Jones

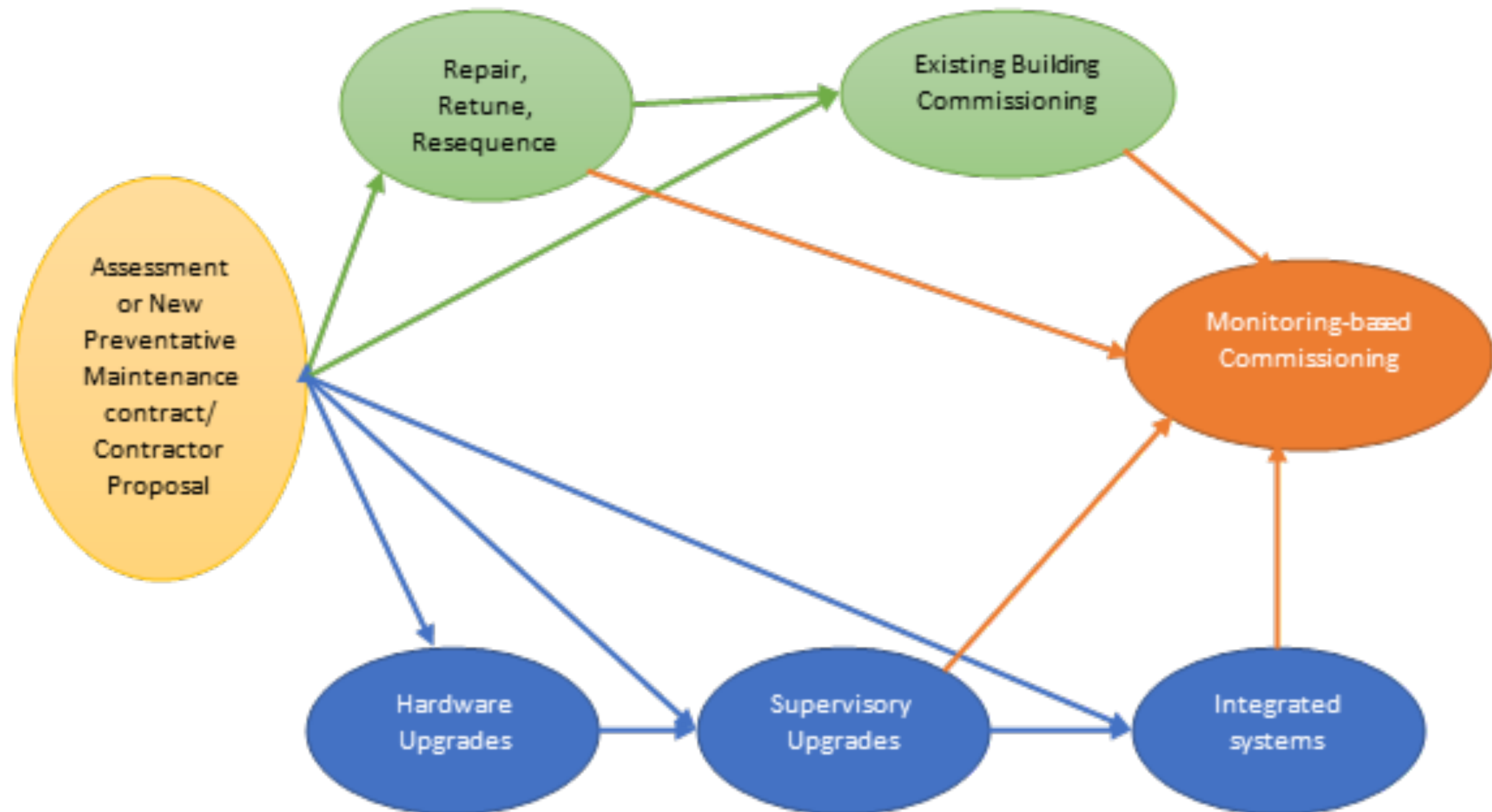
Senior Energy Consultant



MORE BASIC



MORE ADVANCED

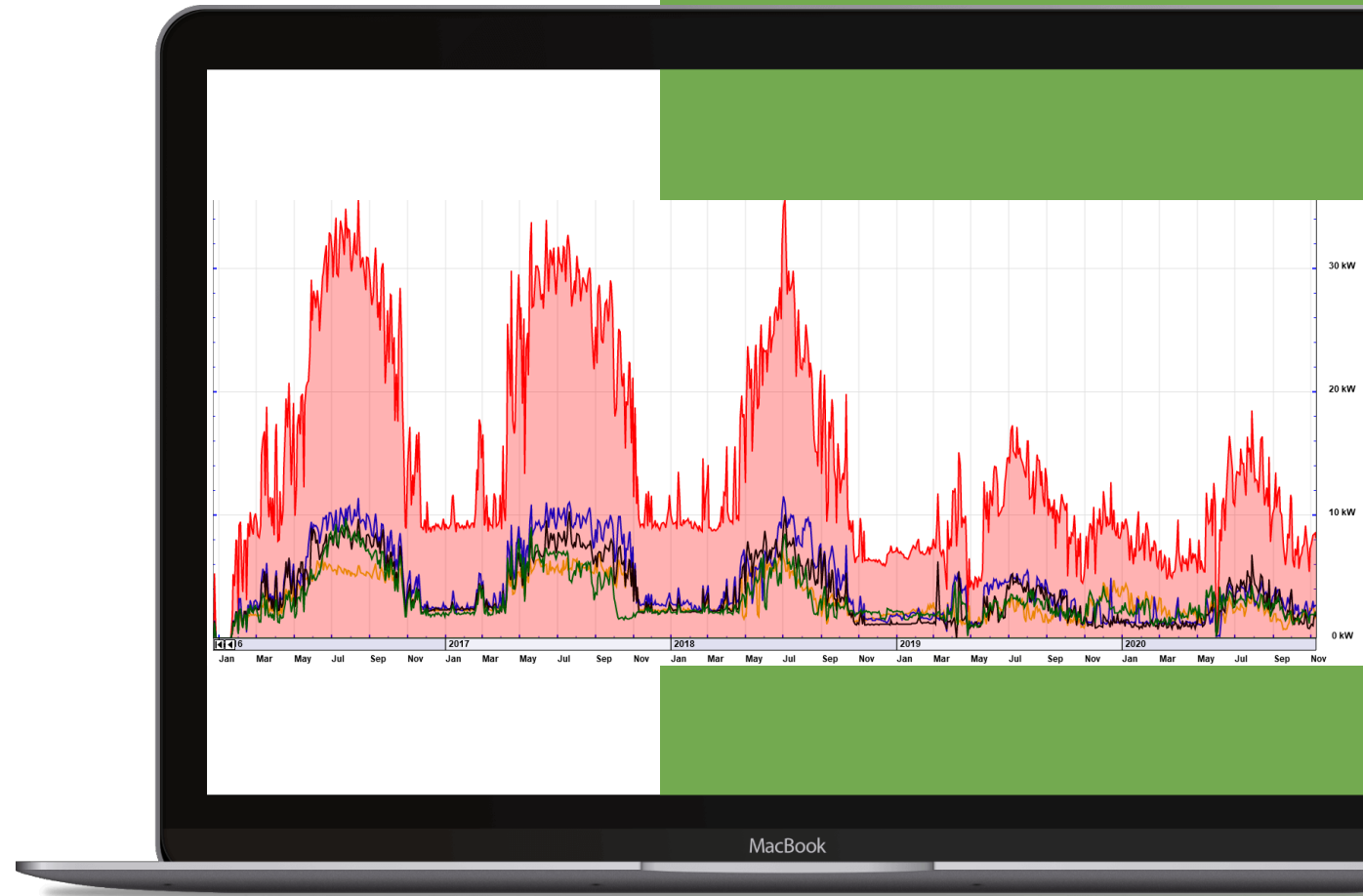


# Real world savings

- 4-year-old system
- No reset logic
- Improper scheduling

## Saved

- 50% reduction in electrical
- 58% reduction in propane



## K-12, Colleges and Universities COVID-19 response.

### Goals:

Reduce energy costs

Program Pandemic Mode

Support contractors

Building assessment

Develop pipeline of projects



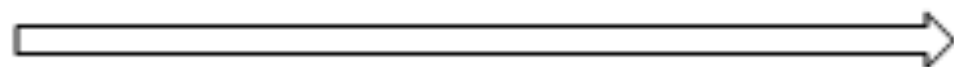
## Phase 1: building shutdown

- Remote system analysis
- Customer training

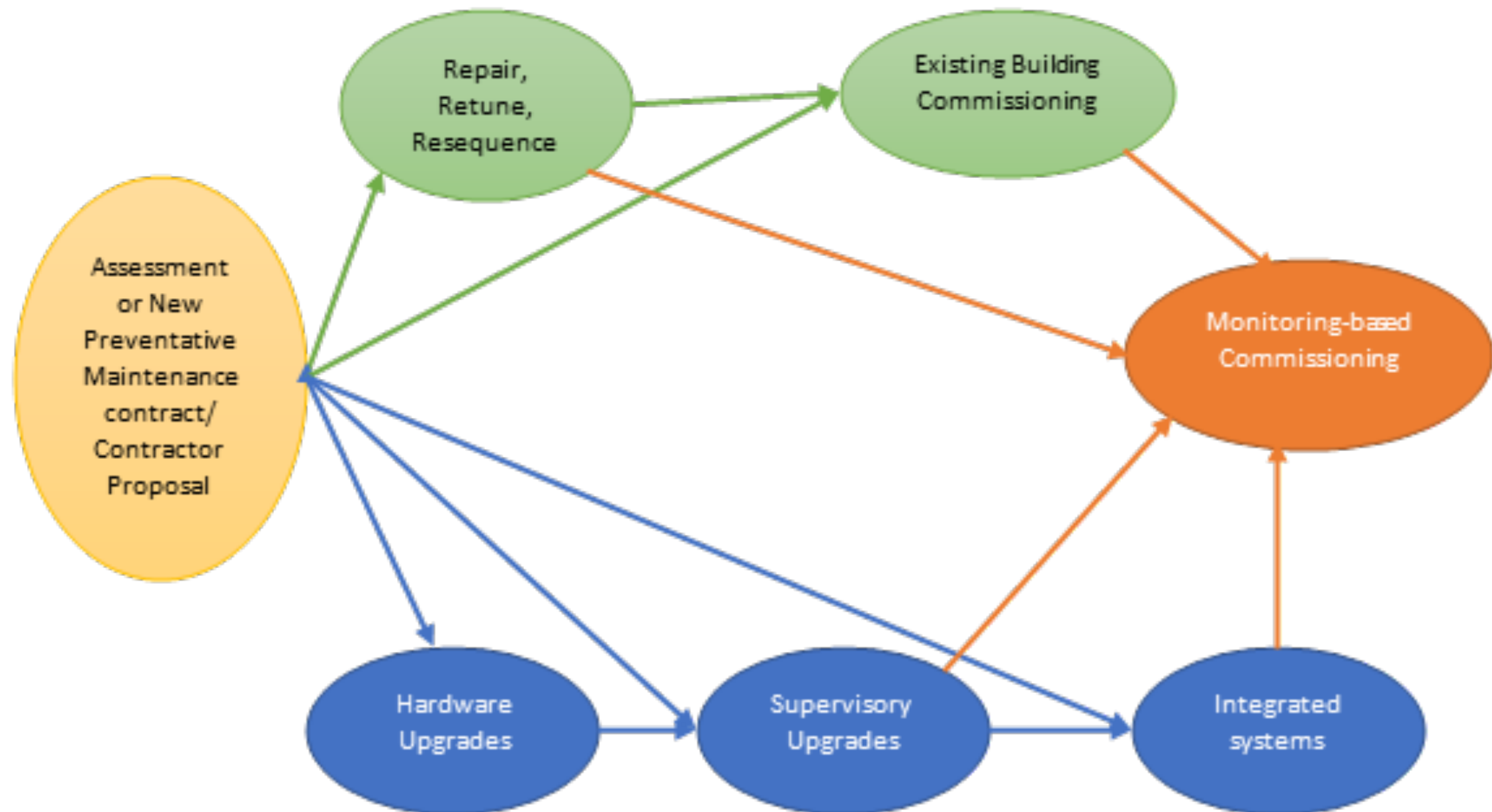
## Phase 2: optimized reopening

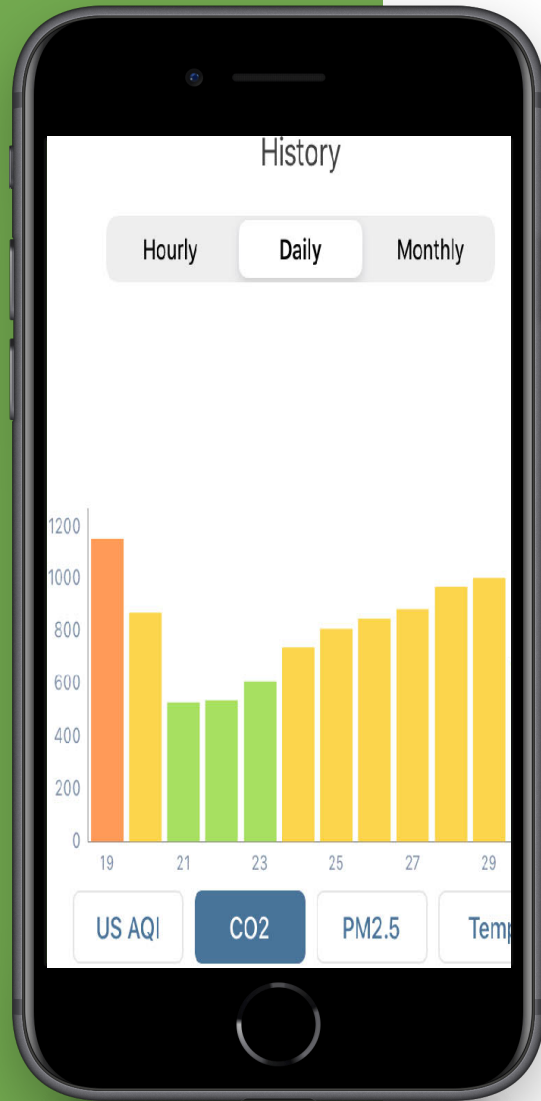
- Preventive maintenance
- Efficient IAQ sequencing
- Final report

MORE BASIC



MORE ADVANCED





## Integrated IAQ sensors just make sense

- IAQ is top of mind for many
  - At home
  - At work
- You can't control what you don't measure

# Small Primary School

- Replacing Nest thermostats
- Installing 75F Smart Stats
- Integrating 3 systems
  - Oil boiler
  - Oil furnace
  - New energy recovery unit

## Pilot

Thermostats with integrated IAQ sensors



# Questions?



**Marcus Jones**

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**Q&A**