



# DECARBONIZATION OF COMMERCIAL KITCHENS





# Decarbonization of Commercial Kitchens

*Update for our Partners – September 2022*

- Scott Heim - President Middleby Ventless Cooking Solutions & Bluezone® Air Purification
  - ✓ Blodgett & Houno Combi ovens
  - ✓ CookTek
  - ✓ Evo America
  - ✓ Perfect Fry
  - ✓ Nieco Broilers + Evo VentCore
  - ✓ TurboChef
  - ✓ Wells

**MIDDLEBY**  
VENTLESS SOLUTIONS

## *Electrification Agenda Points:*

- Accelerating shift to electrification...why?
- Equipment innovations in foodservice
- What are some of the lingering barriers to go to electric power? Some Myths too...
- Electric regulations & recent SEC vote
- Summary

# Accelerating Shift to Electrification...Why?

## Corporations Pressing Forward:

- **Microsoft in 2020** broke ground on 18-story all electric building. Cafeterias supporting 9 dining concepts & 10,000 meals daily by 2023
- **Intel set “net-zero” emissions goal by 2040.**<sup>1</sup> Achieve by:
  - Building on prior success, **direct emissions down 75% over past decade**
  - **Addressing chemicals** used in factories
- **JP Morgan** building 1,388-foot skyscraper, tallest & largest NYC building.
  - Net-zero emissions, open in 2025<sup>2</sup>
  - Stated need to get ahead of NYC law(s) on combustible fossil fuels



<sup>1</sup> Intel Sets Net-Zero Goal, *Wall Street Journal*, April 14, 2022 (page B5)

<sup>2</sup> JP Morgan Goes All Electric for Its New Headquarters, *Wall Street Journal*, April 15, 2022 (page B3)

# Accelerating Shift to Electrification...Why?

## California to Halt Combustion Engine:

- Decision by CARB, all new cars, trucks & SUVs to run on electricity or hydrogen by 2035.<sup>1</sup> Shifting fast:
  - **Starting in 2026**, when 33% of all vehicles sold w/ 'zero' emission
  - Automakers **could be fined \$20,000 per vehicle** sold short of goal
- **Now, 17 States state to follow California's lead:**
  - Washington State & Massachusetts declared will follow California ASAP
  - New York & Pennsylvania have even stricter tailpipe emission standards



<sup>1</sup>California to Phase Out Gasoline, St. Louis Post-Dispatch, August 26, 2022 (page A12)

# Accelerating Shift to Electrification...Why?

## Automobile Corps. Shifting Fast:

- **GM** dramatic shift to EV production. Buick going all electric by 2030
- **Volvo aims to become pure electric** by 2030.<sup>1</sup> Shares reflect changes:
  - European Auto Mfg. Assoc. said **share of electric + hybrids = 19%**
  - Volvo share of electric + hybrid now at 31% of company sales
- **After 122 years, Dodge shifting focus to EV:**
  - By 2030, goal is to **50% of sales to battery powered models**<sup>2</sup>
  - Even full-size Ram pickup truck, electric launch in 2024



<sup>1</sup> Volvo Moves Closer to Its All-Electric Goal, *Wall Street Journal*, July 21, 2022 (page B3)

<sup>2</sup> Dodge Unveils Electric Muscle Cars, *Wall Street Journal*, August 18, 2022 (page B1)

# Manufacturing Innovations in Foodservice

*Opportunities NOT trade-offs!*

## Ventless Action Stations:

- Electric fuel
- Non-traditional sites
- Select location, based on demographics
- Clean sight line to meal preparation, reinforce freshness message
- Utility savings (reduce make up air)



# Manufacturing Innovations in Foodservice

*Opportunities NOT trade-offs!*

## Ventless Equipment:

- Accommodate all culinary needs
- Mobile and semi-portable, so you take your assets with you
- Add cooking throughput in existing kitchens
- Ghost / Dark / off-premise urban sites
- Oak View Group with Strategic Goal (only electric fuel)





# Manufacturing Innovations in Foodservice

*Opportunities NOT trade-offs!*

## Ventless Equipment:

- Little Caesars Arena, 80% of concessions ventless action stations
- Not stuck under Type I Hood, so operators able to move the station
- Post COVID world, reduce the lines
- Spark impulse sales with food prep. next to the beverages



EVent® Ventless Griddle



evo

# Manufacturing Innovations in Foodservice

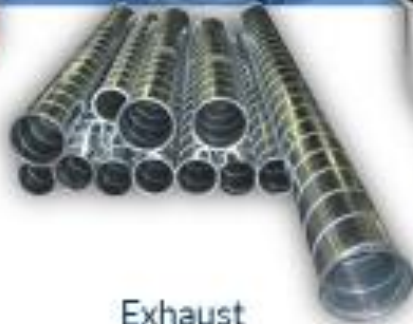
*Apples to Apples comparisons (...TYPE I Hood...)*



Ventilation  
Hood



Fire Suppression  
System



Exhaust  
Ducting



Exhaust  
Fan



Make-up  
Air Fan



Installation  
Labor

# Redefining the Limits of Ventless

## Ventless *electric* Broiler Innovation:

- Busted industry norms for temperature
- Over 1,500 Whoppers® in 8 hours
- Think of the utility heat savings
- Energy Star benefits (REBATES)



**evo** **niECO**

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VENTLESS SOLUTIONS

# Redefining the Limits of Ventless

## *High Speed Cooking* Innovation:

- Three (3) cooking technologies: rapid cook, impingement, convection, or any combination
- Autoload / unload
- Think of the utility heat savings

SPECIFICATIONS: 3 PHASE, 208/240V, 39A-49A  
MAX CIRCUIT 50A



# Improving electric griddle performance

## *Smart Heat Electric Plancha* Innovation:

- All about instant recovery and searing ability: high volume, 200° to 700° variable temps, surrounding drip tray for easy capture
- Install on refrigeration base (space use)
- Chipotle tested for 1 ½ years

SPECIFICATIONS: 3 PHASE, 208/240V, 40A-45A  
MAX CIRCUIT 50A



# Some the Lingering Foodservice Barriers?

## Electric Fuel vs. Gas Myths:

- Recovery is **slow**
- **Cost issues**
- **Past behavior** and BTU perception (gas flame!)
- Temperature limits (advances and speed with induction cooking!!!)



# Never Get Approved...my city is tough

## Compliance! Success in 98 metro areas

In The Most Diligent Jurisdictions



- Focus on Fire Dept.
- Grease capture set by EPA 202 testing



### INTERNATIONAL

- Bahamas
- Canada
- Chile
- China
- Costa Rica
- England
- Indonesia
- Iraq
- Macau
- Mexico
- St Lucia
- Sweden

# Electric Regulations & Sustainability News

## SEC Vote<sup>1</sup>:

- Voted 3 to 1 to advance proposed rule requirement
- Disclose climate risks, and emissions generated directly by operations
- Energy consumption will need to be reported
- Sustainability strategic initiatives highlighted



<sup>1</sup> *Gensler Stages a Climate Coup, [Wall Street Journal](#), March 22, 2022 (page A18)*



# Electric Regulations & Restaurant Development News

## Metro Area Regulations:

- Berkeley in 2019, then S. California
- Denver, Chicago, Detroit and NYC legislation, recently Washington D.C.
- No Energy Star? "No go in D.C."
- Energy consumption will need to be reported
- Corporations (OVG...) declaring and making shift



# Action Plans to Pursue

## How to drive the momentum:

- Southern California Edison test kitchen center (Ohio just completed a **new test kitchen**)...Seeking more
- Invited EPRI to **attend NAFEM in Feb. of 2022**
- Energy Star & **Rebates on Electric powered equipment**
- FCSI (Foodservice Consultant Society International), the designers and restaurant experts...**perhaps a NAFEM panel?**
- Middleby Corp. and the Independent Representative Network



# Summary

- Conveyed electrification of everything
- Reinforced the foodservice & ventless innovations
- Electric power vs. gas myths (...more news at NAFEM in '23)
- Electric regulations and SEC mandate



Contact



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