

nbi new buildings
institute

GETTING TO
zero
FORUM

USING ENERGY EFFICIENCY TO DECARBONIZE KITCHENS

FRONTIER
energy

**The Food Service
Technology Center**



October 11th, 2019

California **Energy Wise** CAEnergyWise.com

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Presentation by:

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Director

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**The Food Service
Technology Center**

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The Food Service Technology Center
Unbiased

Field Research

Appliance Test Lab

Direct Customer Support

Workforce Education & Training

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Question: Can we create all-electric kitchens?

YES

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The Good News



Much of the equipment is already electric and kitchen trends are moving more electric into the kitchen.

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~~Woks, Broilers, and Rotisseries~~ present some challenge...



Induction Wok: Just introduced at the National Restaurant Association Show



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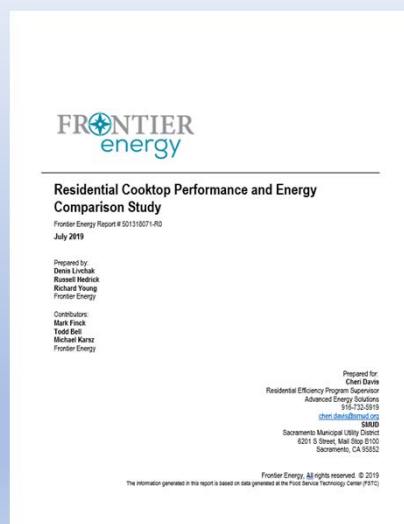
Induction plays a role but is not the total solution



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Overcoming Residential Consumer Concerns

...with Science!

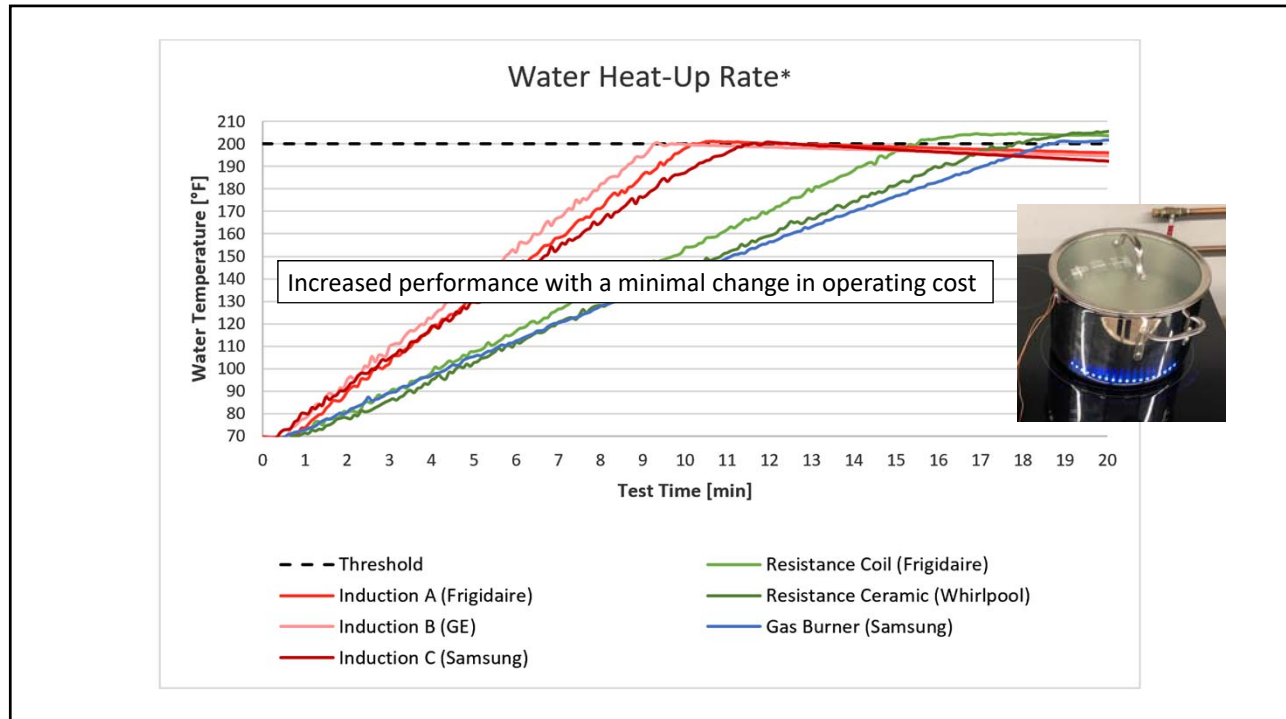


Research funded by:



<https://www.smud.org/-/media/Documents/Corporate/About-Us/Energy-Research-and-Development/Induction-Range-Final-Report---July-2019.ashx>

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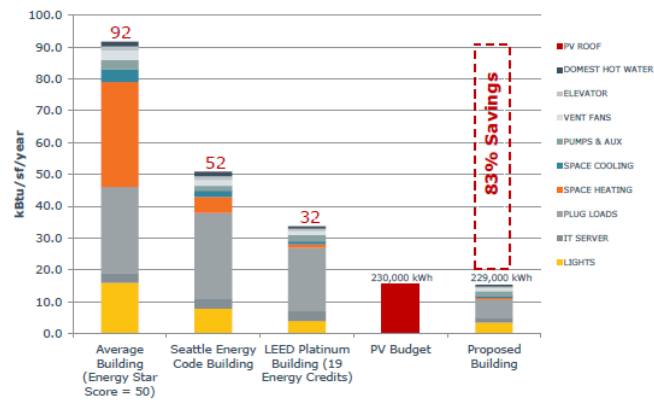
~~Question: Can we create all-electric kitchens?~~

Question: Can we afford all-electric kitchens?

???

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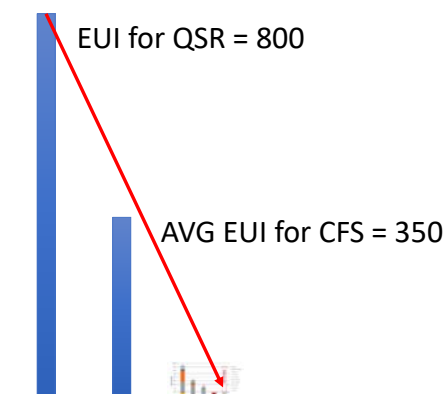
The EUI Challenge



Source: 2014 Getting to Zero Status Update, New Buildings Institute, January 2014

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The Challenge for Food Service



Source: 2014 Getting to Zero Status Update, New Buildings Institute, January 2014

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The Not-So-Good News

Electric appliances can cost significantly more to operate so, we need to “design smart” in order to achieve decarbonization.

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A quick annual energy-cost comparison of three, standard, baseline-efficiency appliances

Griddle



Gas = \$1,250
Elec = \$3,000

Fryer



Gas = \$1,650
Elec = \$3,750

Oven



Gas = \$1,050
Elec = \$2,075

\$1.00/therm and \$0.17/kWh

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Case Study: Salt Craft



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Induction vs. Gas Range Summary:

Similar Performance, Production, and Cost to Operate



Lower Capital Cost
Indestructible



Safer
Easy to Clean
Less Heat to the Kitchen

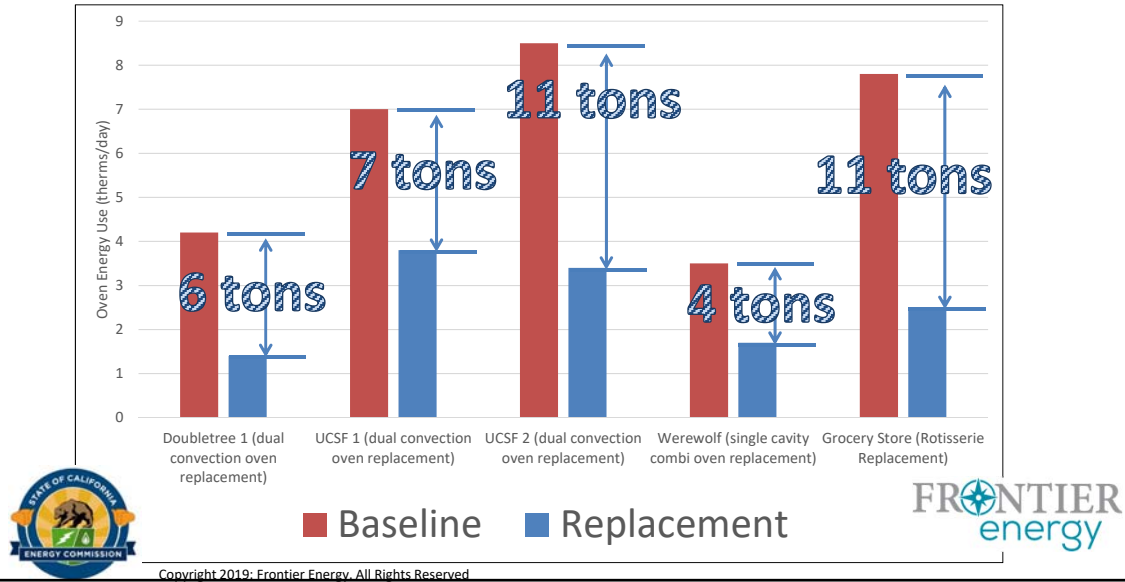
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Annual CO₂ Reduction from Upgrading to an Efficient Gas Oven

Source: CEC Cookline Study - <https://fishnick.com/ceccook/>

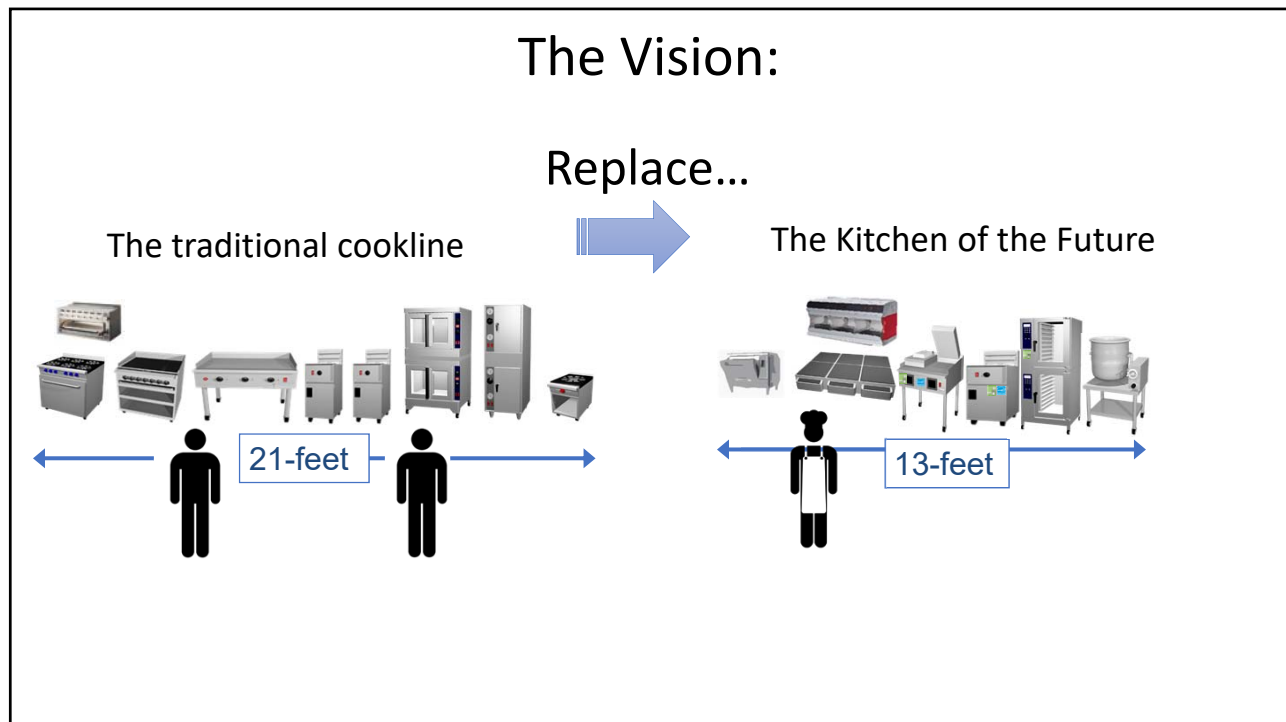


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Solutions?

The Kitchen of the Future

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The Tools to Get it Done

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LOVE IT BEFORE YOU LIVE WITH IT

Try out new high-performance kitchen equipment at the FSTC. Our Chef Consultant Mark Duesler has a wide array of equipment available for you to test drive.

STEP 1. Visit fishnick.com/demos

STEP 2. Schedule your hands on Demo

(For more information contact Mark Duesler at — mduesler@fishnick.com or 925.866.5960)

STEP 3. See the equipment in action and bring your menu items to life!

Looking for a new fryer or need to replace that old broken oven?

SCHEDULE YOUR DEMO TODAY!



Mark Duesler

Chef Consultant

With 20 years in the food service industry and 15 years in the kitchen, Mark will share his expertise and help you find a solution for your operation.

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Hands-On Changes Hearts and Minds

‘After the presentation and testing some of the equipment, I am confident that they are just as good or better than conventional cooking equipment.

I am and would be a “Happy Chef” with using more energy efficient appliances.

Green Light for me.’

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What We Have:

Lots of equipment choices and
The Food Service Technology Center

What We Need:

1. More equipment testing – “data for design”
2. Hands-on education and industry outreach
3. Policy Solutions that consider the operators

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