

ILLUME



Now we're cooking!

What we know about consumer
adoption of induction cooktops

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Hello!

It's Nice to See You

Background

This presentation draws on 2 studies

- One for a mid-western utility where we conducted market actor interviews and peer utility interviews to understand orientations to induction cooking.
- Second study funded through DOE where we conducted 121 in-depth interviews with homeowners and renters in 4 states – IL, MA, GA, and AZ



Why cooking is different?

One of these things is not like the other . . .



There are some similarities between them

- Comfort of the home occupants
- How equipment is replaced
 - Replace on failure
 - Replace when completing remodel

But very significant differences in terms of the level, frequency, and significance of the interaction with the appliance.



Why cooking is different

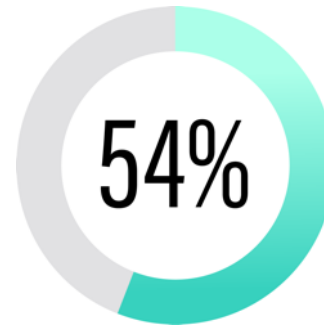
Replacing a stove is not like replacing an HVAC system

Interaction and visibility:

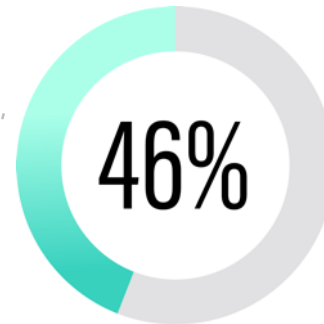
Central Location (kitchen)
and critical purpose

Frequent Use

High Interaction (multiple
touchpoints during food
preparation over some
duration)



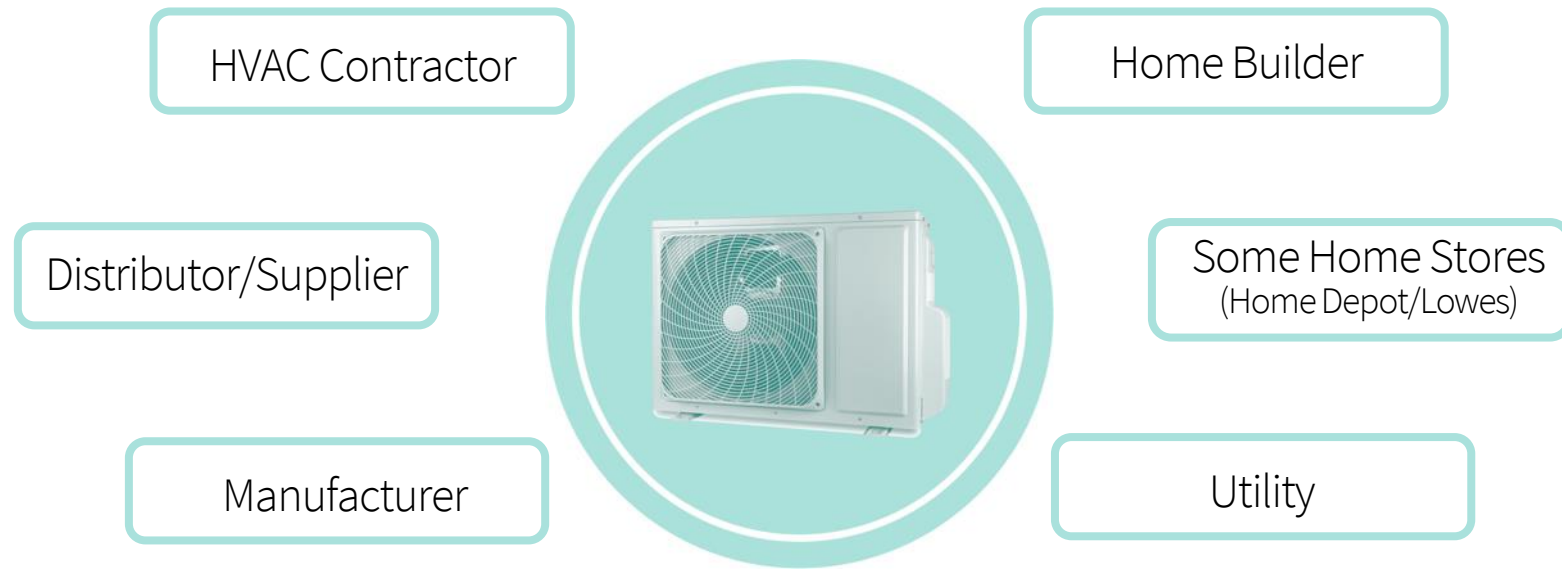
Over 50% of U.S. households cook food in their kitchen **two or more times a day.**



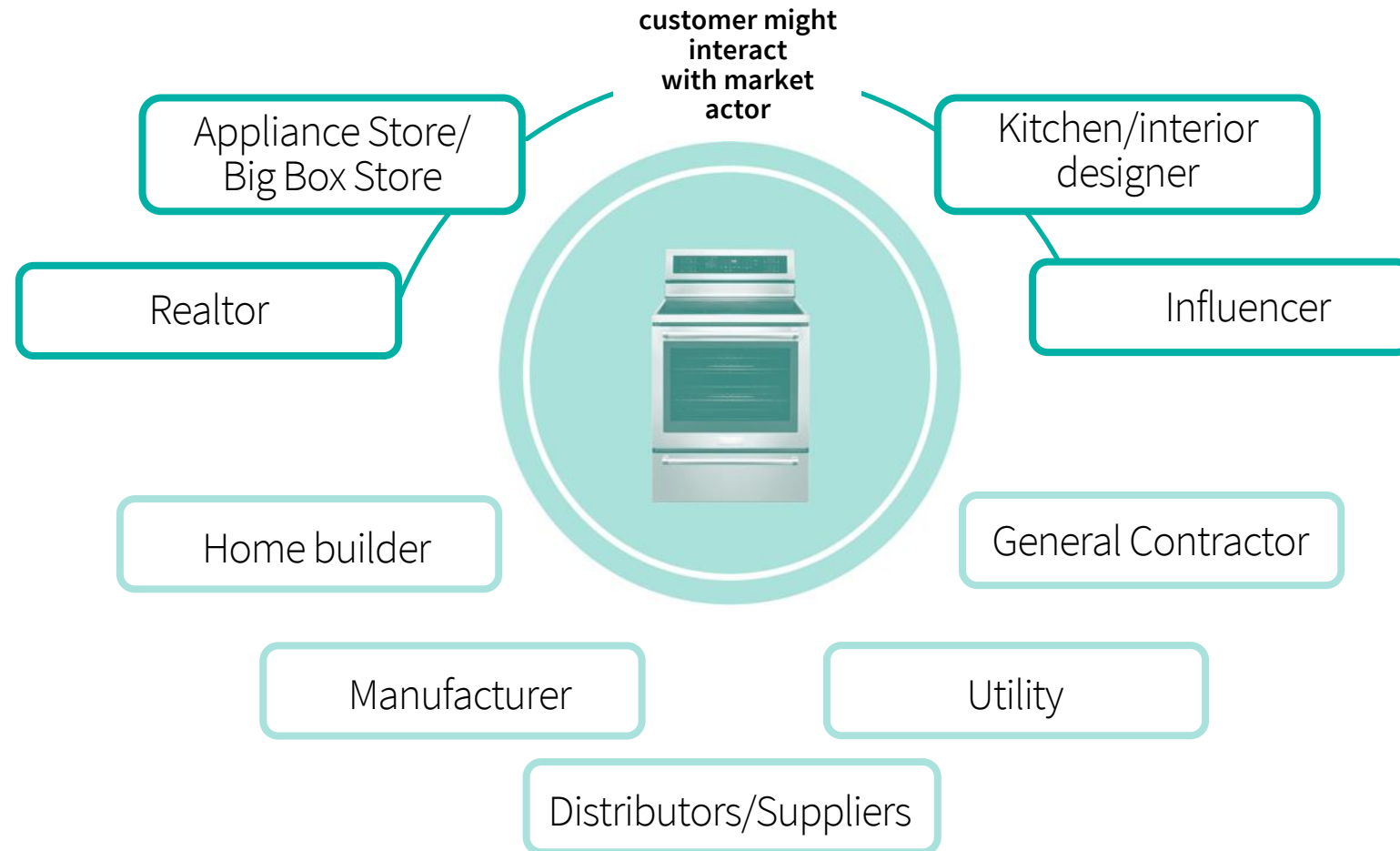
Less than 50% of U.S. households cook food in their kitchen **once a day or less.**

Data source: U.S. Energy Information Administration Residential Energy Consumption Survey

HVAC Market Actors



Market ecosystem for stoves is different



Why cooking is different

Culture and familiarity

Affect and Culture:

Family Celebration
Food Care
Nourishment

Stovetops are unlike other home appliances in that they are often imbued with homeowners' emotions about self and family

Induction cooking technology is unfamiliar or novel to many customers.

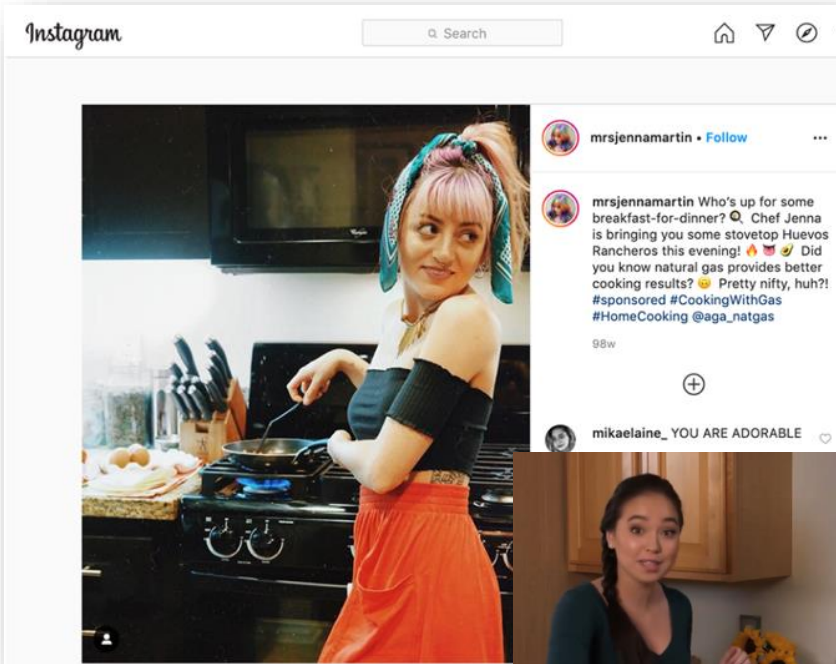
Added to this are uncertainties about cookware and whether or not it will be compatible.

Cuisine, cookware, culture and class status shape fuel preferences and individuals' relationships with home cooking.

A black and white photograph of a hand touching a touch-sensitive control panel on a modern kitchen stove. The panel features several buttons with plus and minus signs. A teal banner is overlaid across the middle of the image, containing the word "Barriers" in white text.

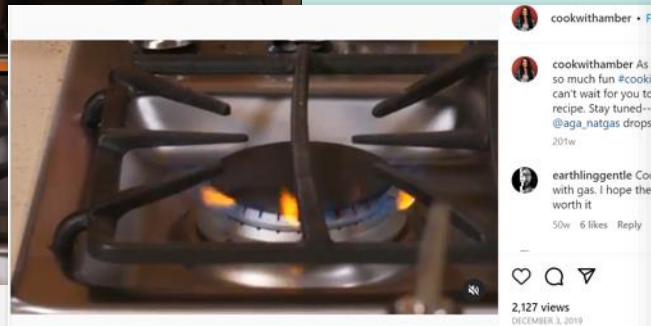
Barriers

Gas industry advertisements and influencers now and then



Themes are the same

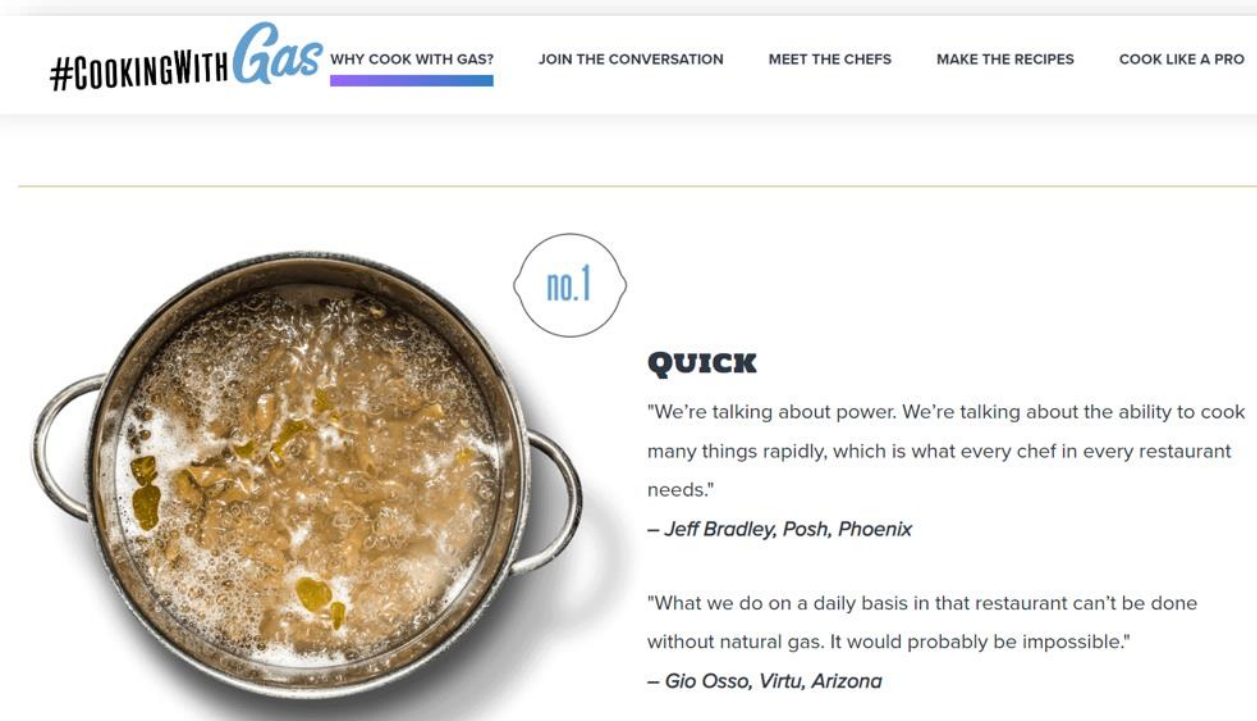
- ✓ Modernity
- ✓ Gender
- ✓ Clean, Fast,
- ✓ Quality cooking



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Sales-pitch for cooking with gas

Gas industry largely has defined the conversation



#COOKINGWITH *Gas* WHY COOK WITH GAS? JOIN THE CONVERSATION MEET THE CHEFS MAKE THE RECIPES COOK LIKE A PRO

no.1

QUICK

"We're talking about power. We're talking about the ability to cook many things rapidly, which is what every chef in every restaurant needs."

– Jeff Bradley, *Posh, Phoenix*

"What we do on a daily basis in that restaurant can't be done without natural gas. It would probably be impossible."

– Gio Ossa, *Virtu, Arizona*

On the “Cooking with Gas” website, several reasons are provided why gas offers a superior cooking experience – including:

- 1) Speed (it's Quick)
- 2) Control;
- 3) Trust (or familiarity)
- 4) Affordability – it's more affordable because natural gas prices are lower than electric prices.

The campaign has been successful

The same virtues – control, speed, and familiarity are expressed by customers

“ I feel like it cooks more evenly. You've got **more control** over it too, like **it gets hot quicker**... versus waiting on an electric burner to heat up, just standing there. **Gas is like instant.** ”

– Interview with a homeowner in Arizona

“ It's gas. I don't like electric. I like the gas range **where I have control**. I can **visually see how hot it is**, versus just seeing a red electric [ring]. ”

– Homeowner in [state?]

“ 1000% a gas stove. **I wouldn't know how to even boil eggs** [on an electric stove]. ”

– 2022 Interview with a homeowner in Illinois

Source: Advancing Energy Efficient Behavior; DOE-funded study

Barriers to installation: induction stovetops are expensive

The main concerns with induction stovetops, across market actors and consumer segments, are the unit price and the associated installation cost.

First Cost

Induction stoves are consistently higher priced than electric resistance models. For those who are budget-constrained, induction is rarely a viable option.

Installation cost

A bigger barrier than cost may be the installation challenges, including cost and labor of having a plumber cap a gas line, and an electrician install a 240-volt outlet, and possible upgrade the breakers or other circuits in the home.





Opportunities

Communicating about induction

Based on a review of marketing materials **on utility and partner websites with programs supporting induction, primary themes include** health, safety, and efficiency:

- **Health:** a focus on IAQ, with an emphasis on childhood asthma
- **Safety:** Heat transfer, emphasizing safety for children and pets who might accidentally touch a range. Few programs focus on safety concerns with natural gas.
- **Efficiency:**
 - Reduces time and labor spent on cooking because they heat faster than other stoves,
 - Easy to clean,
 - Precision cooking

Our unequal earth Gas stoves

'I use it because it's better': why chefs are embracing the electric stove

As evidence mounts that gas stoves are bad for human health, a growing number of professional chefs say electric even makes for a better cooking experience



<https://youtu.be/ooNzRrHA9VY>

What do home cooks say about induction?

Speed, ease of cleaning, and high-tech features

“ **But now, I want one of those induction ranges.** That'll be **way down the line**, because our stove is fine, but the induction one's always... Those are supposed to be very energy efficient, because they **heat everything up in two seconds.** ”

– 2022 interview with homeowner in IL

“ You want to have the **ease of cleaning.** The gas grates, the iron grates, are heavy and then it gets dirt easier. So **to get an induction cooktop, you just wipe it up and it's gone.** ”

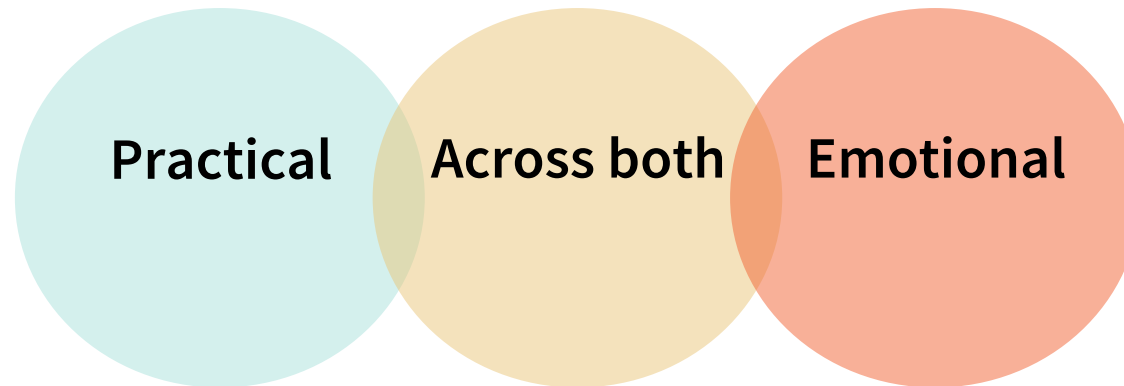
– 2022 interview with homeowner in AZ

“ Oh yeah, I think [the induction stove] **it's magic.** Besides the fact that it's **cool and it's sleek-looking,** the fact **that I can air fry anything..** I love the **connectivity features.** ”

– 2022 interview with homeowner in MA

What do we do about this?

- Barriers to adoption are both **practical** (cost, cookware concerns, installation challenges) and **emotional** (familiarity and prestige of gas, care for loved ones through food).
- Solutions will likely need to address both factors.



What do we do about this?

Practical Considerations

Practical:

- Incentives to bring down cost
- Education and practical support for logistics of installation/capping gas lines
- Programs involving other market actors beyond typical EE (e.g. realtors, kitchen designers)

“It’s not even just the sales price when someone is converting their fuel type. I have gas at my home. If I were to switch to an induction stove ... I’d have to go through the whole conversion. **Who do I call for that?** It seems like a lot. So there are other costs, like the cost to cap a gas line or upgrade the panel. **I don’t know where I would start.**”

– Purchasing manager at major home appliance chain

What do we do about this?

Emotional Considerations

“ **For people who do cook, it's deeply personal and a point of pride** -- showing you can eat well and provide for your family. **People fear that they are going to fail their families and not be able to feed their families.**

*If someone is **spooked with the induction**, then I need to address their concerns first because it doesn't matter if the house is otherwise perfect. I think maybe 60% of consumers are going to struggle with this, and **around 20% of people will walk at the sight of induction**. For those who are still open, you need to bond with them in the practice of cooking. ”*

- Interview with a real estate broker and developer in IL

Emotional:

- Culturally relevant equipment
- Emphasis on health and safety
- Acknowledge and address emotions in program materials

What do we do about this?

Across both practical and emotional

Marketing and communications should emphasize **ease of cleaning, safety, and control/quality of cooking.**

Across both:

- Opportunities to try out
- Culturally-relevant cookware/models
- Marketing and communications



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