



## **BDC Presents: Innovation Acceleration**

How the building sector has transformed in just four years

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### **Summary:**

In just four years, a movement to eliminate pollution from buildings has spread rapidly across the United States. The BDC's report, "Innovation Acceleration", captures how quickly perceptions have shifted, how the market is reacting to the swift policy development and consumer preference for electric appliances, and gauges the impact this shift has had on the spaces where we live, work, learn, and play. It charts a path to achieve a just transition away from fossil fuels and fully unlock building decarbonization's potential to create pollution-free communities in the U.S.

### **Resources:**

[Innovation Acceleration report](#)

<https://incentives.switchison.org/>

### **Overview:**

Building decarbonization must focus on three key areas - stopping expansion of the gas network, developing the electrification marketplace, and setting a phase out for fossil fuel appliance sales. We must ensure that equity is at the forefront of all these objectives.

### **Intro**

Since 2019, some huge accomplishments have happened, including:

- 1 in 5 Americans live in a region that has a building decarbonization policy
- 98 municipalities and four states have adopted these policies
- Last year, it was the first time in history that more homes in U.S. were using electricity to heat rather than gas
- Heat pumps outpaced gas furnace shipments in every month in 2022
- Nine states and the District of Columbia have started future of gas proceedings, while six states are reining in gas utility spending on expanding the systems.

## Q & A

What was the situation like in 2018 in regards to building electrification?

- There was really no awareness at all among policymakers, consumers, NGOs. Only one or two states had programs in the entire country. Technology was minimal.
- Collaboration was key - groups identified barriers and then developed a roadmap to really overcome them. People started to work together rather than in their own silos.

Pace of building electrification

- To meet climate goals in 2045, you can't be putting in new gas appliances that have 15 year life spans after 2030. That's an intense timeline, because the whole supply chain - manufacturers, distributors, installers - has to adjust, but it also gives time to work out challenges like high electricity rates.

Market response to building electrification:

- The market response has been shocking - green building still has a relatively small market share after 20 years, and it's taken 40 years for solar. Electric appliances are surging - even before the IRA incentives have rolled out. Whole communities have embraced the technology.

What does the next phase of building electrification look like?

- We're at a change point now. If this first phase of building electrification was no awareness, no products, and no policies, we're definitely in a different place now.
- We have to meet climate targets, but we have to do this right, as well. Disadvantaged communities can't be further harmed. Tens of thousands of workers in the gas industry need a just transition to new jobs. Ratepayers must be protected. We're now at a point where we can have this conversation.

Speed of how public awareness has shifted

- Building electrification is one of the most consumer facing issues in climate. The policy solution of ending gas hookups in new construction was so eye-catching, but we can also speak directly to the public. We shouldn't have to sacrifice our health to heat our homes or cook our meals, or live with the hidden health impacts of using gas. All-electric technologies are just superior. It's just a better way to do things. People want to see climate action and they want to have clean air in their homes.

Gas stove pollution & media reaction

History -

- The closest the U.S. has come to regulating gas stoves was back in the 1980s during the Reagan administration, but federal agencies didn't act. There's been a lot of new attention on this issue, because there's new science. We can attribute about 13% of childhood asthma in the U.S. to gas stove use in homes.

Media coverage -

- 25,000 media stories on gas stove pollution in the past month. It's not been limited to the political press. Consumer interest in induction has shot up. The health evidence on gas stoves is real, and it's

damning. We're opening the door for new manufacturing of electric technologies. There is a problem here and we have a solution to it.

How the electrification marketplace is developing innovative new products

- At major trade home appliance trade shows four years ago, very few people were talking about building decarbonization. Not a dominant conversation. It's a complete 180 in 2023. The market is very clearly seeing where policy is going, and seeing that the future of gas is a wind down.
- New products are coming into the market. Plug in induction stoves with batteries. Retrofit ready heat pump water heaters that only need 120 volt plug-ins.
- Innovations are solving the challenges of making buildings 100% electric, but also making buildings more resilient to climate change.
- People are coming out of tech and into the electrification market and creating product offerings that solve some of the challenges of electrifying your home, like connecting with a contractor, and being able to make those connections on your phone or laptop.

The IRA incentives will begin rolling out in 2023

- That creates massive opportunities, but also more responsibility to do this right.