5 emerging technologies utilities should have on their radar

Highlights from the Summer 2024 Tech Roundup webinar
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Our tech roundup webinars keep you updated on the latest developments in efficiency, load management, and decarbonization technologies. At the Summer 2024 Tech Roundup, we highlighted 10 technologies that'll have the most potential for utility pilots and programs.

In this blog post, we'll highlight five of the most promising technologies from the event and what we like about them. Members of the E Source Technology Assessment Service can watch the recording or read the highlights report, 5 standout technologies from the Summer 2024 Tech Roundup, for a deeper dive into each technology. Not a member and want to learn more? Contact us to get access.

Wish you had a crystal ball on all things tech?

Our experts can (sort of) see the future. Fill out this short form to start a conversation about your needs and how we can help.

Portable heat pumps

Also called micro or in-room heat pumps, portable heat pumps are small units that connect to windows with air hoses and they're easy to move from room to room. Portable heat pumps offer supplemental heating and cooling in rooms with windows.

What we like about portable heat pumps

Comfort. In colder weather, portable heat pumps put out enough heat to warm a small space but not an entire building. Likewise, for extreme heat events, they provide cooling relief. That makes them great for poorly zoned spaces in a home, like a home office that gets especially cold in the winter or too warm in the summer.

Low price. They range in price from $500 to $700, which is much cheaper than a whole-home heat pump installation. For that reason, renters or customers with lower income might like portable heat pumps.

Battery performance incentives

Right now, the most common type of customers who buy batteries are people with high income who care about resiliency, advanced technology, and the environment. But utilities that want to meet their enrollment targets for their battery programs need to get more customers to participate besides just early adopters.

To broaden the type and number of customers who want batteries, utilities can blend up-front incentives and battery performance incentives in their programs to overcome these potential customers' challenges in enrollment and participation. Performance incentives are usually a set dollar amount per kilowatt-hour that a utility will pay to customers for peak demand reductions during an event window.

Blend up-front incentives and battery performance incentives to overcome potential customers' challenges in enrollment.

What we like about battery performance incentives

Utilities use savings to justify incentives. We analyzed nearly 60 battery storage incentive programs to learn how utilities make battery programs accessible to more customers. We found that utilities focus on services that save them the most money, so they can afford to give out incentives while keeping the program cost-effective. For most utilities, those services are demand response and peak load management battery programs.

Utilities can value stack. Batteries offer many benefits, but utilities often focus on one aspect, like demand response, to use for performance incentives. Instead, we recommend utilities value stack, which means they consider all the benefits the battery provides as they create incentives.

Next-generation natural gas meters

Traditional gas meters, called diaphragm meters, work mechanically, and utilities have used them for about 200 years. To adapt them to advanced metering infrastructure (AMI), utilities attach a communications device.

The next-generation natural gas meter is the ultrasonic gas meter. Although US utilities have used ultrasonic gas meters for about 5 years, Europe has used the technology since the 1990s. Ultrasonic gas meters are smaller and lighter than diaphragm meters. They're also cheaper to deploy and operate, and they're more reliable than diaphragm meters

E Source is constantly reviewing efficiency technologies

The Tech Roundup is one of many ways we share insights on established and emerging technologies that utilities consider including in their programs. Visit our Technology Assessment Service to learn more about what we do.

What we like about next-generation natural gas metering

Accuracy. Ultrasonic gas meters have no moving parts; instead, they use sound waves to electronically measure gas flow, which is more accurate. Ultrasonic gas meters work with AMI and allow customers to better understand their energy use.

Safety. Using a shut-off valve, the meter can shut itself off in emergencies like fires or leaks. Or if a customer calls the utility because they smell gas, the technician can shut it off remotely if it hasn’t already shut itself off. In fact, ultrasonic meters detect methane before people.

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