

**ENERGY.GOV**

Office of  
**ENERGY EFFICIENCY &  
RENEWABLE ENERGY**

## Building Technologies Office

June 2024

# ***RESIDENTIAL ENERGY DISPATCH***

## **Decarbonizing the U.S. Economy by 2050: A Buildings Blueprint**

The U.S. Department of Energy (DOE) led the development of a blueprint for a national strategy for aggressively reducing building greenhouse gas emissions while delivering equity, affordability, and resilience benefits to communities.

The national strategy reflects the central role that buildings will play in achieving economy-wide climate goals while delivering cost savings, healthier environments, and high-quality jobs for the American people. Federal agency coordination and support for state and local actions is essential to accelerate the transition to low-carbon buildings. Download and read [Decarbonizing the U.S. Economy by 2050: A National Blueprint for the Buildings Sector](#) to learn more.

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## DOE Announces Solar Decathlon 2024 Design Challenge Winners

In April 2024, the DOE [Solar Decathlon](#)<sup>®</sup>, DOE's longest-running student competition, announced the winners of the 2024 [Design Challenge](#). The University of Arizona won top honors for their partnership with the Hopi Tribe on 24 rowhouses that integrate passive design techniques and a microgrid to promote energy sovereignty for the community. [Learn more about the other winners and the pool of 40 finalist competitors.](#)



The team from The University of Arizona earned the Grand Winner award in the 2024 Design Challenge.

## Participant Outcomes in Residential Pay As You Save<sup>®</sup> Programs Report

Lawrence Berkeley National Laboratory (LBNL) recently published a report, funded by DOE's Residential Buildings Integration (RBI) program, on Pay-As-You-Save<sup>®</sup> (PAYS) programs. The report delineates key design elements on

[Quiz](#)

**JOIN THE BETTER  
BUILDINGS RESIDENTIAL  
NETWORK**

## Upcoming [Better Buildings Residential Network](#) Peer Exchange Calls

Thursday, June 27, 2024  
[The Changing World of Residential Refrigerants on World Refrigeration Day \(June 26\)](#)

Thursday, July 11, 2024  
[DOE's New National Blueprint for the Buildings Sector - What it Means for the Residential Sector, a Nonprofit Panel](#)

Thursday, July 25, 2024  
[To be announced](#)

## Peer Exchange Call Summaries

All summaries, which contain speaker PowerPoint presentations, can be found on the [Better Buildings Residential Network Peer Exchange Call Summary webpage](#).

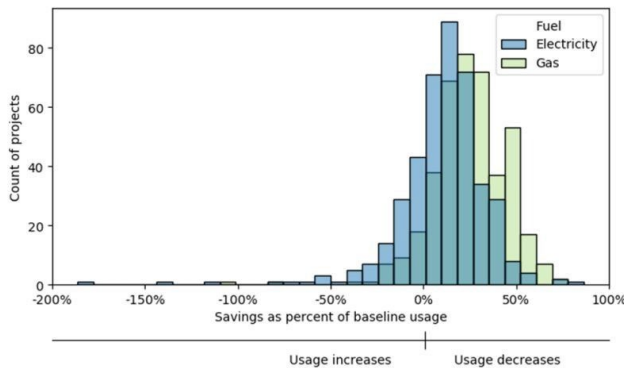
Thursday, May 23, 2024  
[Decarbonizing Low Income Homes - The DOE Affordable Home Energy Shot](#)

Thursday, May 9, 2024  
[The Latest in Zero Energy](#)

PAYS® programs, describes participant demographic and socioeconomic characteristics, and reviews participant energy and financial outcomes. Some key findings include:

- PAYS® programs are active in disadvantaged communities.
- PAYS® realization rates are generally high compared to other programs.
- In one of the programs examined in the report, a large majority of projects reduced electricity (77%) and gas (89%) use.

[Read the report for more information.](#)



Distribution of *ex post* project percent usage changes by fuel.

## 2024 Applications Open for Zero Energy Design Designation

Buildings play a significant role in reaching the White House’s goal of a net-zero emissions economy by 2050, so it is critical that buildings professionals are prepared to design and construct high-efficiency, low-carbon buildings powered by clean energy. DOE’s [Zero Energy Design Designation](#) recognizes post-secondary academic programs that prepare students for 21st-century building careers. [Applications](#) are open through June 28 for the 2024-2027 Zero Energy Design Designation.

[Windows, Thin Triples, and Advanced Window Technologies](#)

Thursday, April 25, 2024

[Demand Response Programs and Their Impact on Peak Load Energy Usage and Comfort](#)

Thursday, March 28, 2024

[How Does Energy Efficiency Relate to Housing Affordability for Americans](#)

Thursday, March 14, 2024

[The Solar - Energy Efficiency Nexus Update](#)

### Quick Quiz

What is the most common type of heat pump?

- A) Air-source
- B) Geothermal
- C) Absorption

(Answer at bottom.)



## Professors Wanted for JUMP into STEM

JUMP into STEM is now seeking professors across a variety of fields who are affiliated with U.S. colleges and universities to join the 2024-2025 [Professor Team](#). Interested professors should contact Yeonjin Bae at Oak Ridge National Laboratory, [baey@ornl.gov](mailto:baey@ornl.gov).



## Recordings Available for the Challenges and Opportunities for Home Decarbonization Seminar Series

LBNL and the Building Decarbonization Coalition are collaborating on a seminar series titled *Challenges and Opportunities for Home Decarbonization*. [Watch the recordings of the webinars](#).



- [Better Buildings Residential Program Guide](#), U.S. DOE; a repository of lessons learned, resources, and knowledge from across the country.
- [Building Science Solution Center](#), U.S. DOE; information on hundreds of high-performance construction topics.
- [Mechanical Ventilation and Indoor Air Quality in Recently Constructed U.S. Homes in Marine and Cold-Dry Climates](#), Pacific Northwest National Laboratory (PNNL) and LBNL; examined if new homeowners used mechanical systems properly and effects of systems on indoor air quality.
- [Smart Tools for Efficiency HVAC Performance \(STEP\) Campaign](#), U.S. DOE and PNNL; smart diagnostic tools encourage more efficient HVAC installation and commissioning.
- [Storm Window and Insulating Panel \(SWIP\) Campaign](#), U.S. DOE and PNNL; accelerates adoption of high-performance and other energy-efficient window attachments.
- [Ventilation and Indoor Air Quality in Recently Constructed U.S. Homes: Measured Data from Select Southeastern States](#), Florida Solar Energy Center (FSEC) and LBNL; examines new homeowner mechanical system use and impacts on indoor air quality.



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Quiz answer: A) [Air-source](#)

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