

A photograph of two women in a professional setting. The woman on the left is smiling and looking towards the right. The woman on the right is seen in profile, also smiling. They appear to be in a meeting or discussion. The background is a bright, out-of-focus office space with windows.

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Smart homes: From DSM programs to resilient communities

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#CREF17

CLEAResult[®]
Energy Forum

Agenda

- Introduction to panel
- Residential energy efficiency programs and “The Case of the Disappearing Savings”
- What is resilience?
- The relationship of resilience to residential programs
- Panel discussion

Introduction to panel

- Franck Rougier, Kirio
- Steve Weise, Leading Force Energy & Design Center
- Mark Jerome, CLEAResult

Residential EE programs and “The Case of the Disappearing Savings”

All residential EE programs—both existing and new construction—are experiencing squeezed savings and budgets.

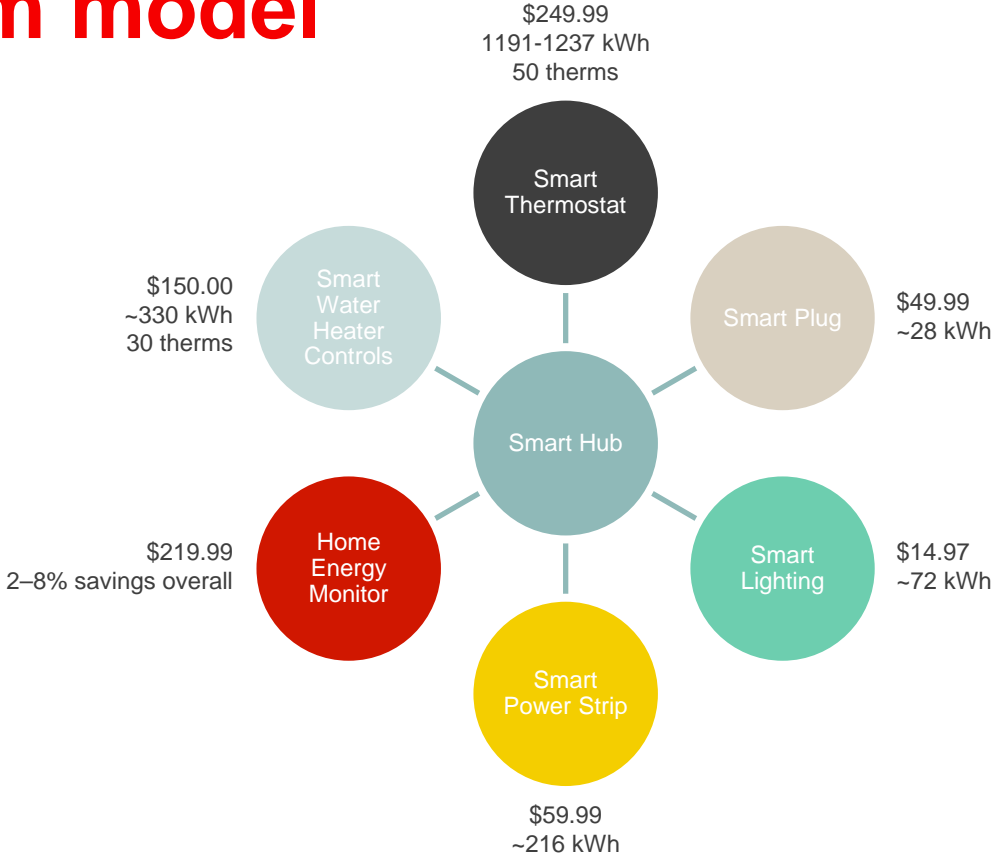
- The future of residential programs will hinge on the industry’s ability to backfill measures with dwindling savings, such as lighting.

Traditional program model



New program model

Bundle smart home products to provide energy savings + convenience, enhanced control, comfort



Benefits of new approach

- Convenience
- Security and safety
- Health and comfort
- Energy savings
- Planning for renewables
- Energy balance / path to net zero energy
- Resilience → *future program approach*

What is resilience?

*“100 Resilient Cities defines resilience as the **capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow, no matter what kinds of chronic stresses and acute shocks they experience.** Shocks are typically considered single event disasters, such as fires, earthquakes, and floods. Stresses are factors that pressure a city on a daily or reoccurring basis, such as chronic food and water shortages, an overtaxed transportation system, endemic violence or high unemployment. **City resilience is about making a city better, in both good times and bad, for the benefit of all its citizens, particularly the poor and vulnerable.**”*

— From the Rockefeller Foundation’s [100 Resilient Cities](#)

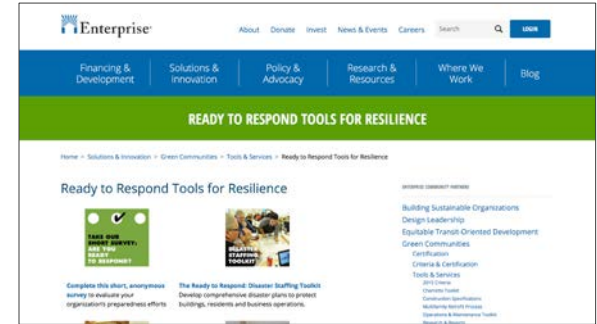
Resources for resilience



ey.com



aceee.org



enterprisecommunity.org

Why should we strive for resilience?

Hurricane Harvey



Texas Medical Center – CHP & District Energy provided critical thermal energy



H-E-B Grocery Stores – Virtual Power Plants by Erock kept doors open



Few options available currently for making homes more resilient

Hurricane Irma

Hurricane Irma left 6.5 million Floridians without power. Here's what that looks like from space.

Darkness, 500-plus miles above Earth.

Updated by Brian Stastik | @BStastik | Irma@vox.com | Sep 21, 2017, 6:00pm EDT

When Hurricane Irma roared into Florida on Sunday and Monday, its winds and rains knocked out power for **6.5 million people in the state**. That's more than a quarter of the state's population without electricity.

"We've never had that many outages, and I don't think any utility in the country ever has," Eric Silagy, the chief executive of Florida Power & Light, told reporters Monday. His company alone had 4.5 million customers without power. In some areas, restoration of power is **expected to take weeks**.

So much power was knocked out, you can clearly see it from space.

"We've never had that many outages, and I don't think any utility in the country ever has," Eric Silagy, the chief executive of Florida Power & Light.

Can homes be resilient?

Homes are adopting distributed energy resources at an increasing rate

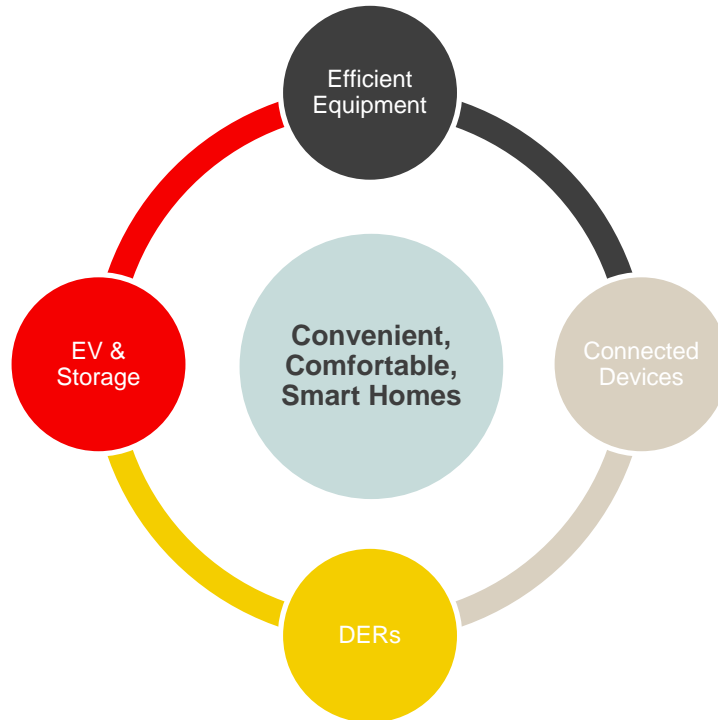
As houses build and install grid resources, they increase their community's ability to be resilient

Communities can contribute grid resilience to their regions



The future program model

Incorporating resilience into residential program design



Smart homes → resilient communities



Future goal? Network of homes producing & balancing energy creates resilient communities, can relieve grid infrastructure





Panel discussion

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Panel question #1

Do you think smart homes are more valuable to your customers than “non-smart” homes?

Panel question #2

What are your residential customers most interested in?

Panel question #3

How does the value of “smart” show up in a house?

Panel question #4

What role does resilience play in your business planning? What role does it play in your marketing/branding?

Panel question #5

What role can energy programs play in your business model? How can programs help your customers?

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Thank you

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