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MySmartE â€“ An Eco-feedback and Gaming Platform for Smart and Energy-efficient Residential Communities

MySmartE platform combines IoT thermostat feedback with community gaming to drive residential energy savings.

Researchers at Purdue University have developed a platform to promote energy- conserving, thermostat adjustment behaviors. Residential heating and cooling is responsible for 20% of total energy consumption in the U.S., and its costs account for up to 16% of income for low-income families. The Purdue researchers' system consists of a wall-mounted, digital thermostat connected with the MySmartE energy management app. The app provides custom action recommendations based on each household's energy usage and also promotes energy conservation through a collaborative, community-level game among residents. This system is the first energy management platform that promotes direct user action through community-level engagement.

Technology Validation: Among all 12 households equipped with the researchers' platform, the researchers observed increased indoor air temperature in the summertime following initiation of personalized feedback and the community game.

Advantages:

- Decreases residential energy use

- Voice-control feature available

- Cloud-based, IoT system

Applications:

- Residential energy management

TRL: 5

Technology ID
2023-KARA-69985

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Intellectual Property:

Provisional-Gov. Funding, 2022-09-08, United States

Utility-Gov. Funding, 2023-09-08, United States

Keywords: Eco-feedback, Energy management, Green Technology, IoT, Occupant behavior, Residential buildings, User Interface