Influencing energy use behavior through training and gamification
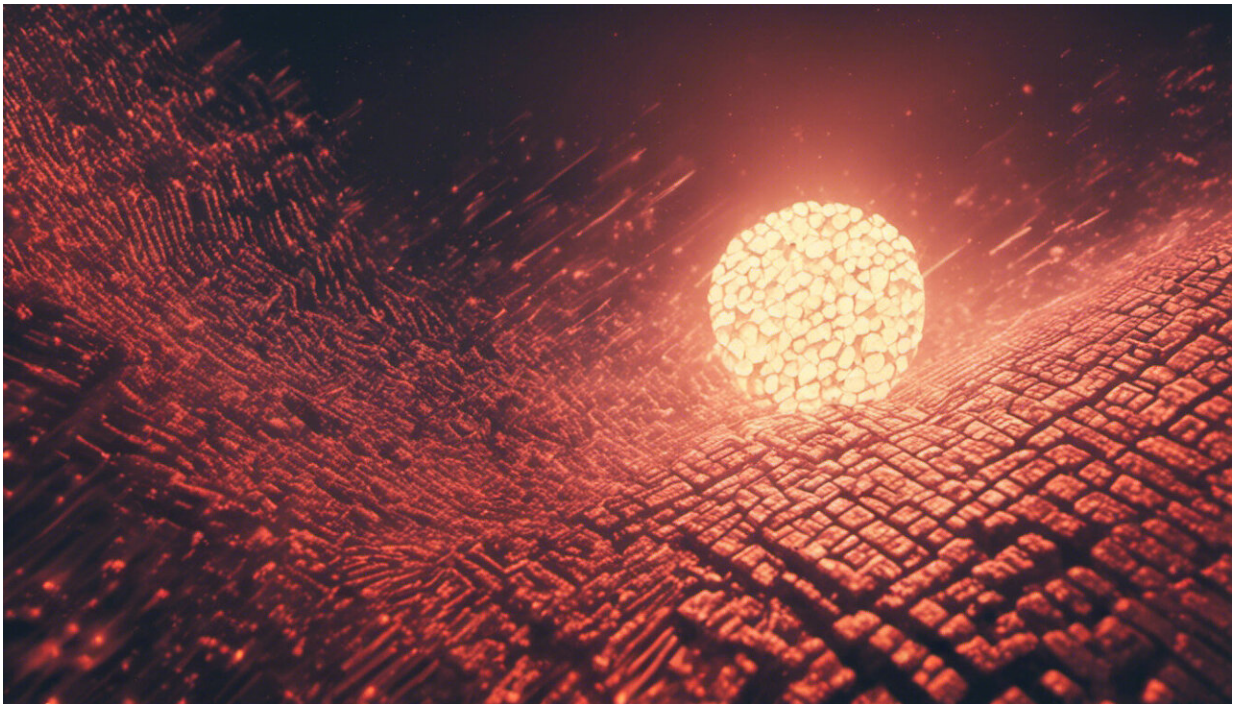
May 30 2019

Credit: AI-generated image (disclaimer)

Buildings are responsible for approximately 40 percent of energy consumption and 36 percent of CO_2 emissions in the EU, according to the European Commission. It's also widely accepted that to reduce the amount of energy used, consumers have to change their behavior. But old habits die hard, especially when it comes to making sacrifices for the

environment.

The EU-funded eTEACHER project (1) is addressing this challenge by developing an ICT tool aimed at motivating end users in buildings to change their energy consumption behavior. eTEACHER involves training and awareness activities, as well as feedback measures and incentives to bring about continuous alterations in users' power consumption habits.

Thanks to the project's tailored methodology that's based on energy conservation measures, users will be able to make better-informed decisions while also saving on their energy bills. The project website states: "eTEACHER tailored advice and behavioral change methods deployed through ICT solutions will reduce CO_2 emissions and save up to 10percent of energy consumption."

The project will also use gamification to engage people through methods such as notifications, bonus system, energy literacy and visibility so that they can commit to generating savings. With the development of social media, smartphones, interactive web technologies and the Internet of things, utility companies and mobile app developers are already harnessing the power of gamification. They believe the gamification approach helps consumers understand the environmental implications of their actions and adopt a more active and responsible behavior.

Pilot studies

Now in its second year, the eTEACHER (end-users Tools to Empower and raise Awareness of Behavioural CHange towards EneRgy efficiency) project focuses on pilot buildings in Spain, Romania and the United Kingdom. These include schools, healthcare centers, residential buildings and offices. Project partners conducted social studies to understand the energy consumption behaviors of different types of users

in these locations. They also organized various demo site visits, surveys and workshops to identify the key aspects of behavioral change. These led to the development of empowerment tools. What-if Analysis, one such tool, involves identifying energy conservation measures based on behavioral change, data processing to analyze energy system performance and assessing indoor environment quality. The solutions involve energy efficiency and comfort advisor apps for end-user devices such as mobile phones, smart TVs, smartwatches and dashboards.

The main issues covered by the project focus on the use of lighting and appliances, thermal comfort and engagement with the ICT tools. The partners believe user engagement is vital for the success of the final ICT solution, so eTEACHER will encourage end-user feedback throughout the app's development.

Quoted in a news item (2) on the project website, Sam Preston from Nottingham City Council says: "Those citizens will continually be a part of the process, we will keep refining the product so that it suits their needs and satisfies their wants and expectations." Nottingham Council House is one of the office buildings participating in the project.

More information: 1. eTEACHER project website: www.eteacher-project.eu/

2. Energy's got game: www.eteacher-project.eu/energys-got-game/

Provided by CORDIS