



bEhaVioral Insights and Effective eNergy policy acTions

An EVIDENT policy brief

Home Energy Reports A key to greener living and savings

HIGHLIGHTS

- Saving energy is increasingly important for consumers, with over 80% of CheckWatt's (Swedish energy company) clients valuing energy conservation.
- Home Energy Reports (HERs) are an effective and affordable way to reduce electricity consumption, providing personalized feedback, consumption tips, and comparisons with others.
- The EVIDENT research project is conducting a natural field experiment in Sweden, offering customized HERs to a select group of CheckWatt's clients. Early findings show that our HERs resulted in a nearly 5% decrease in energy consumption in Sweden.
- In Greece, PPC S.A. (Greek energy company) provides its clients with an energy monitoring platform. Initial results indicate that the platform has resulted in an average energy consumption decrease of 6.9%.

HOME ENERGY REPORTS

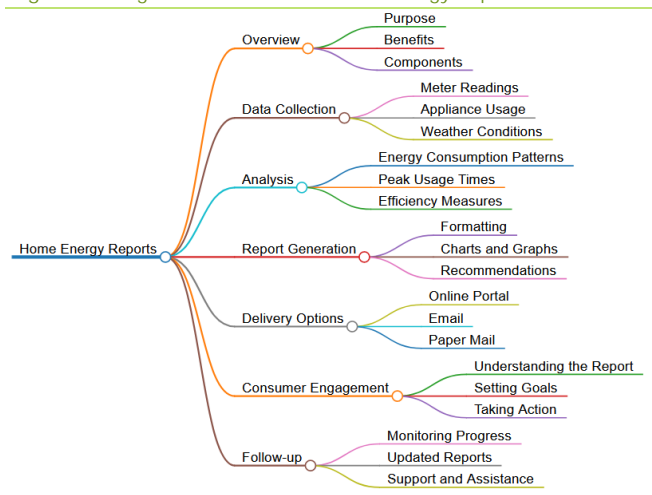
Introduction

Behavioural interventions, such as informational nudges, have become an increasingly popular strategy in demand-side energy management. Home Energy Reports (HERs) specifically have shown promise in reducing electricity consumption and prompting behavioural changes among residential consumers.

HERs are personalized feedback tools that provide households with information about their energy consumption. These reports typically include data on a household's energy usage, comparisons with similar households, tips for reducing energy consumption and incentives for energy efficiency actions and programs. Figure 1 presents a general overview of HERs.

The literature indicates that the impact of HER on energy conservation varies, with reported reductions ranging from -2% to -20%. On average, households have experienced up to an 8% reduction in energy consumption due to HERs.

Figure 1 – A general overview of Home Energy Reports



EVIDENT and Home Energy Projects

The EVIDENT research project ('bEhaVioral Insights and Effective eNergy policy acTions') offers valuable insights into leveraging behavioural biases to promote energy efficiency. The EVIDENT consortium comprises nine project partners and receives funding from the European Union's Horizon 2020 research and innovation programme.

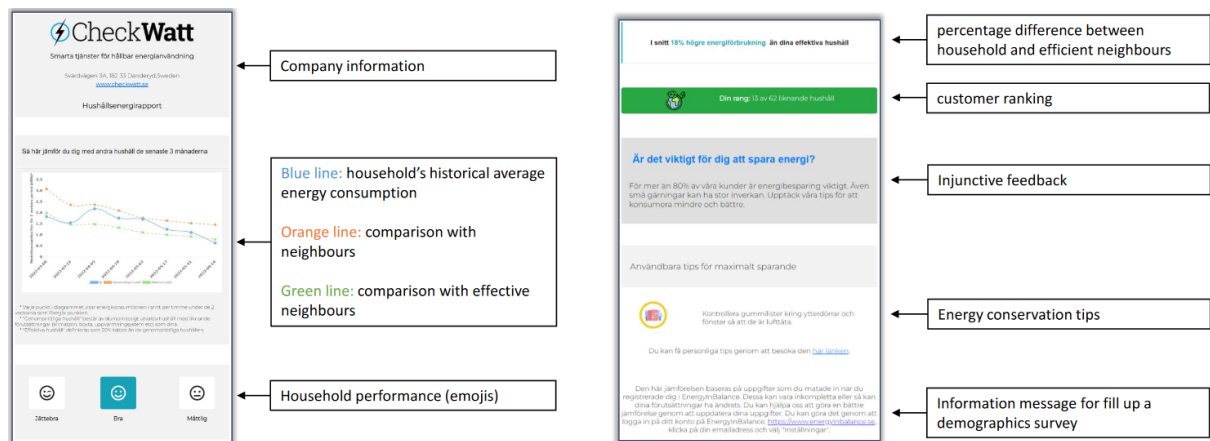
Project Funding



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 957117.



Figure 2 – Sample EVIDENT Home Energy Report



In addition to other initiatives, EVIDENT is conducting a natural field experiment to assess the impact of HERs on energy consumption in Sweden. This is particularly relevant as Sweden has one of the highest electricity consumption rates per capita in the European Union.

The campaign was initiated in December 2021 and targets around 1,000 customers in Sweden. CheckWatt distributes HERs in biweekly rounds. These reports are personalized, utilizing data gathered from smart meters and other sources, and are designed to be user-friendly and actionable. A sample HER is illustrated in Figure 2. All data are anonymized, and the campaign complies with all ethical and legal requirements.

The data is being analyzed by the Democritus University of Thrace (DUTH), a partner in the EVIDENT consortium.

Preliminary results suggest that HERs have resulted in a 5% decrease in energy consumption. As the campaign and analysis progress, additional results, including the methodologies used, will be published soon.

Insights for policy makers

EVIDENT’s HER activities offer crucial insights for authorities to develop interventions and evaluate their impact. They can assist EU Member States with their legal obligations, such as ensuring compliance with the Energy Efficiency Directive by providing consumers with easy access to comprehensive information on their historical energy consumption.

Create your own home energy reports

You can now create your own home energy reports with the Python code shared by EVIDENT. This allows anyone to easily generate their own reports. For a detailed tutorial, please visit: <https://evident-h2020.eu/creating-an-electronic-home-energy-report-using-python/>

myEnergyCoach

In Greece, PPC S.A., a partner of EVIDENT, has launched an energy monitoring platform that provides customers with personalized energy usage insights, tips for reduction, and device replacement suggestions.

The platform combines user data from demographic questionnaires and consumption habits, offering consumers detailed information on their energy consumption, disaggregation of energy usage across devices, personalized feedback, and comparisons to their neighbors. Additionally, the platform provides information on the energy and financial benefits of replacing devices.

According to anonymized data from 12,000 households, the platform resulted in an average energy consumption decrease of 6.9% between July 2022 and March 2024.

For more: <https://www.dei.gr/en/home/myenergy>

Find out more

The EVIDENT project is actively pursuing research on HERs and other tools for understanding and influencing energy behaviours. To stay informed and up-to-date with EVIDENT:

Visit our website <https://evident-h2020.eu/>

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