

Name: Fair (FER) solutions for better community
Award category: Youth
Organisation: Society for Sustainable Development Design
Location: Zagreb, Croatia
Duration: 2018-2020
Website: <http://door.hr/english/>

Factsheet:

Fair (FER) - New knowledge and skills to tackle energy poverty

Changing perceptions

Energy poverty is a social and environmental issue that places terrible physical and mental burdens on households. A lack of adequate heating and insulation and poorly fitted windows can cause mould, dampness and drafts, leading to respiratory illnesses and other ailments. The 'Fair (FER) solutions for better community' project has sought to tackle these challenges by teaching electrical engineering students in Zagreb how to carry out simple household audits to identify energy-saving solutions.

The project has also challenged perceptions about what energy poverty means – that this is not just a technical challenge, but a serious social and environmental problem that must be overcome. “Engineering students are taught technical solutions,” explains Ivana Rogulj, FER project manager at the NGO Society for Sustainable Development Design (DOOR) in Croatia. “But unless they visit real houses, they won’t really know what living in energy poverty is really like.”

Delivering energy-saving solutions

The initiative, implemented by DOOR in partnership with the city of Zagreb and University of Zagreb’s Faculty of Electrical Engineering and Computing, invited a range of experts to teach engineering students how to effectively carry out energy audits. These included a United Nations Development Programme (UNDP) expert to discuss the challenges faced by energy-poor households and a communications expert with experience in working with people with disabilities. A professor of public health from the University of Zagreb explained how energy poverty can impact your health.

Students have since carried out energy audits in more than 100 energy-poor households in Zagreb, helping occupants to identify and then implement simple efficiency measures. These include installing insulated windows and doors, LED lamps and radiator reflection panels. Based on existing calculations, these simple improvements can save households around 200 kg CO₂/year, and more than 1200 kWh/year in electricity and heat. This means less pollution and lower energy bills. The University of Zagreb recently commended project participants for their positive impact on the local community.

An impressive result of all this fieldwork has been the development of a new computer model. This model takes energy audit findings and data, and based on past experiences suggests the most cost-efficient and effective energy-saving solutions to take. “This will help the city of Zagreb to see in the future which sustainable energy policies are the most cost-effective, as part of the energy transition,” says Rogulj.

Training the experts of the future

The project, funded through the European Social Fund (ESF), has also had a lasting impact on all participating students. They have gained new skills in communication and surveying, as well as new knowledge about energy poverty, which is currently not part of the engineering curriculum. “We really wanted them to develop new communication skills,” says Rogulj. “Many of the people they are dealing with are elderly or have disabilities.”

In this way, the FER project has made a critical contribution towards mainstreaming issues related to energy efficiency and energy poverty in the education of future engineers. Through practical experience, the project has shown how energy audits perform a critical social and environmental function, especially for society’s most vulnerable people, and how even modest energy efficiency measures can have a positive impact on both citizens and the environment.