



Practice Abstract 1

Food systems are globally responsible for around a third of total greenhouse gas (GHG) emissions. These numbers are poorly quantified and lack detail for specific sectors and food groups. The food industry has made significant efforts to reduce emissions already with simple optimisation procedures and changes, so further reduction will require advanced technology.

The ENOUGH project (enough-emissions.eu) brings research, universities and industry together to tackle these challenges. We will generate new information on emissions from the food chain, develop strategic road maps (technical, political and financial), develop digital tools and smart data analysis methods to quantify and benchmark energy use and emissions in the food chain.

Promising decarbonisation technologies in real food industry environment will be demonstrated to provide European food companies tools and quantified information on the benefits and financial paybacks of low emission technologies. The technologies will be tested with regards to identified key products (meat, fish, dairy and fruit and vegetables) and opportunities for cross sector applicability. The focus will be thermal processes as the key products are perishable and require thermal processes throughout their life. Some key technologies are high temperature heat pumps (HTHPs) working with natural refrigerants and processes related to energy efficiency of cooling, freezing, heating and storage of food. Several demonstrations are also planned to generate hot water and steam in real life situations. Another important sector identified is transport, including for example home delivery. The outputs will be widely communicated to relevant food companies, policy makers and interested groups.

