



Empowered by: KU Leuven, VITO, imec & UHasselt

# Multi-Energy Systems

## Towards an Energy-as-a-Service model

### Description

Renewable energy sources (RES) like wind and solar PV generate electricity with an intermittent character, thus requiring flexibility in energy demand or via energy storage. Much flexibility can be found in thermal systems connected by heating and cooling grids.

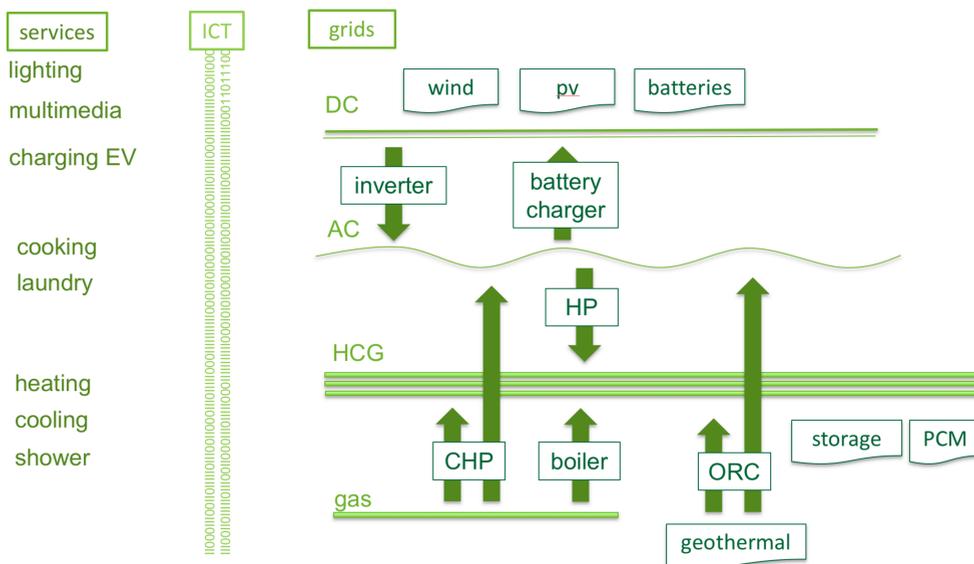
At the same time, ICT and IoT offer new opportunities for delivering services rather than commodities, having a disruptive impact on business models.

In SmarThor we bring these evolutions together in a **multi-energy system, offering Energy as a Service**. We set up a platform for analysing the role of multi-energy services in the future energy system.

### Purpose

To analyse the role of multi-energy innovations in the future energy system we have applied the **scenario-axis technique**. Using this technique, we developed **four possible visions on the future energy system**. Each vision is characterised along two main dimensions:

- **Centralised versus decentralised** energy sources and services
- **Individual versus collective** values



### Technical features

