

A day in the Life of a domestic prosumer

The domestic customer experience could look very different from today and expectations will continue to increase.

At the heart of the transformation to the low carbon future is the interaction customers, companies and communities will have with their energy use and the energy market. Looking to the low carbon future, we explore how a day in the life will be different for a domestic 'prosumer' – an active domestic customer who both consumes and produces electricity.



6:00am



At 6am **Jim** wakes up and hops into the shower, still amazed that the hot water is being supplied by the local CHP plant down the road. He's now been in his house for a month, part of a new wider development with a specially designed community energy scheme, linking the plant, households and their solar panels, offices and battery storage together.

CHP - Combined Heat and Power

A CHP plant produces both electricity and heat from a single fuel source resulting in a highly efficient process.

7:00am



After breakfast, **Jim** loads the washing machine and sets the cycle to complete by 5pm. This information is relayed to his 'Home Smart Hub' which can communicate and control the smart electrical devices in the household. The Hub checks the forecast and, seeing that it's going to be a sunny afternoon, schedules the washing machine run for 2pm, when the solar panels on the roof will be generating at their maximum. Based on the forecast, he is expecting that the panels will generate excess electricity, which is good since he earns money from the local scheme for the electricity he can sell.



Home Smart Hub

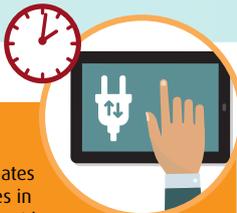
An automated controller which interfaces with multiple smart devices.

7:25am



Jim unplugs his electric vehicle which has reached 90% charge. As he sets it to a medium charge priority (guaranteeing 70% charge and using the spare capacity to offer flexibility to the community energy scheme) the spare capacity must have been utilised for flexibility services. **Jim** leaves for work, smiling at the thought of the extra money earned.

2:00pm



The Hub recognises the house is now empty and co-ordinates the smart appliances in the household to provide flexible demand services to the community energy scheme, with the fridge and freezer temperatures allowed to vary by +/-1°C.



Flexibility Services

A range of services provided using controllable electricity generation and/or consumption sources.

EV Charge Priority

A high priority ensures the EV charges to full capacity as quickly as possible. Lower settings allow for more flexible, variable charging.

5:12pm



Jim arrives home from work, plugs in his EV and sets the charge priority to high which guarantees him a full charge by the morning. He's off on holiday tomorrow and has a long drive in the morning so needs the car battery to be at full capacity. The Hub detects the car being plugged in and removes the offer of flexibility from the community energy scheme.

Many of the technology options described in the domestic prosumer's story are available today. As the demand for these technologies increases, we need to ensure that our networks are ready to accommodate them. Where those technologies allow consumers to be more flexible in their energy usage, we also need to make sure that we can access that flexibility to plan and manage our networks more efficiently and support whole system efficiencies.