Innovation: designing for a sustainable future

Living in a power station.

Narrator
In this suburb of Amersfoort in Holland, every household is a small-scale supplier to the power company REMU.

The technology comes pre-installed from new.

It consists of photovoltaic panels, which are either mounted on or actually form the roofs of the buildings.

It's effectively a district power station, with residents being both generators and consumers of electricity.

Guys Van Den Boomen
People have bought their separate houses from real estate developers but the construction of the roof, where the solar panels are, has actually stayed the property of the energy company, so they actually lease the roof from the company.

Narrator
Individual householders get a great deal in return. Even on a misty morning like this, the PV panels generate significant amounts of electricity.

It's just before 9am and the panels are supplying almost 90% of electrical energy demands in the house.

Increase the demand and more energy must be purchased from the grid.

But once the sun comes out, the PV panels start to repay the energy debt.

On this sunny afternoon around 4kilowatts of energy is being supplied back to the energy company.

Financially, it's a fair arrangement – the supply company pay each householder the same amount per unit for their solar electricity as the charge for the power consumed.

Even the schools benefit from solar power – they might be net users during term-time, but they are net suppliers at the weekend and in the holidays.

Across the site as a whole, the PV panels can produce up to 1.3MW of electricity, making a significant contribution to the energy company's 10 percent target for renewable energy.

But small-scale supply is just part of the overall design concept for the community.

Guys Van Den Boomen
Our aim was as a design company to not give them the idea that they're living in a large energy station but to give them the idea that they are living in a genuine human environment with everything which comes with that.