

ZERO CARBON RUGELEY

WP17-D12-5 RETROFIT WORKSHOP STORY

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Notes for the animateur

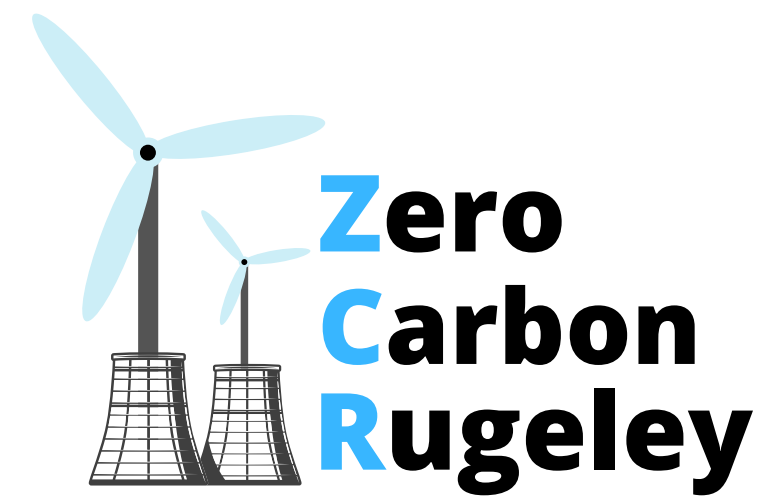
This workshop is designed to work both online and in person. The workshop focuses upon retrofit by telling the participants a story about three characters who are experiencing the retrofit process. Throughout the story, the characters have different reactions and questions to the retrofit process. Workshop participants have an opportunity to relate to or disagree with certain characters. The core aim is to help participants understand elements of the retrofit process and for the facilitator to engage in conversations about the process.

Key points for the animateur:

- Read through the story slowly, allowing participants to interrupt with any thoughts.
- Spend around 10 minutes on each 'key questions' slide, creating space for participants to explore their thoughts.

How Could Home Improvements and Energy Technology Reduce my Energy Bills?

Smart Home Energy Improvements Workshop



The aim of this workshop...



- We would like to hear your thoughts on the possible approaches to addressing energy production and use in the home - these 'home improvements' are a major part of a 'Smart Local Energy System'.
- We also want to answer any questions and generate discussion around 'smart home energy improvements'.

First of all ...

What words come to mind when you hear the word 'Retrofit'?

And next ...

What words come to mind when you hear 'Smart Home Energy System'?

Meet the characters

David



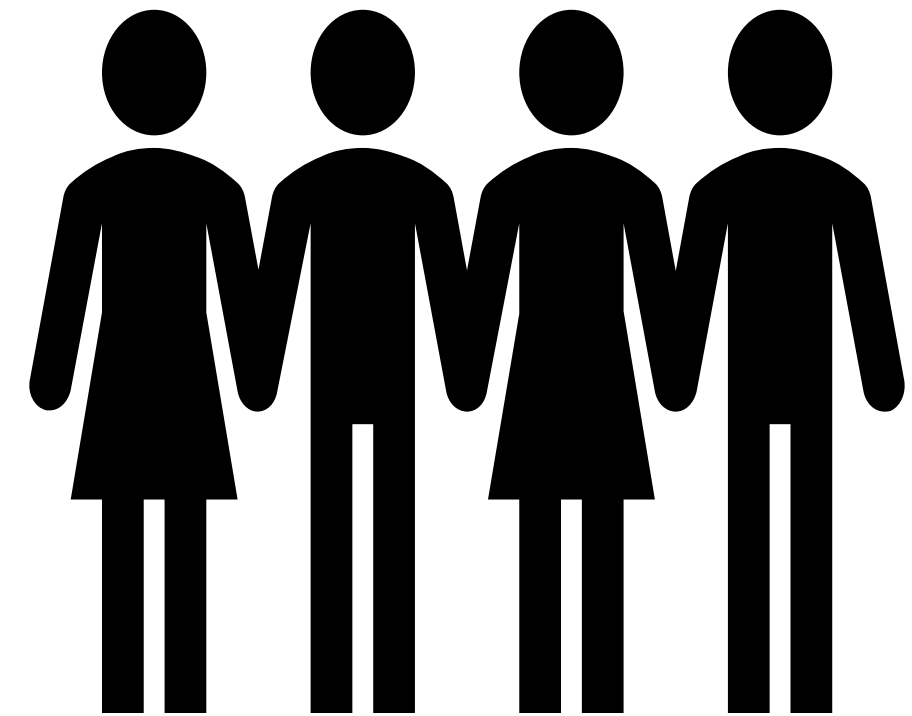
Jill



Anna



You



I am not
interested in
Smart Home
Energy

I wouldn't
be against it

I want Smart
technology
installed in my
home ASAP

The group, sign up to a 'Home Energy Improvement Programme' and their houses are inspected by trained professionals. Each member of the group (and you!) are given a document showing the improvements that could be made in their home. Improvements could include:

- 1) **'Fabric'** side, i.e. insulation, double glazing, and draft proofing.
- 2) **Energy technology** to produce and store energy e.g. solar panels/batteries.
- 3) **A home energy management system**, including energy monitoring and smart controls.

David **Jill**



David and **Jill** understand the 'fabric' and 'energy technology' but are both unsure about the energy management system.

Anna

Anna is very interested in the energy management system



Key Questions



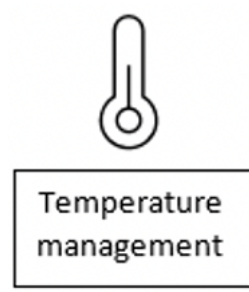
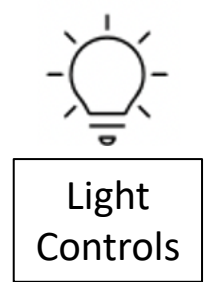
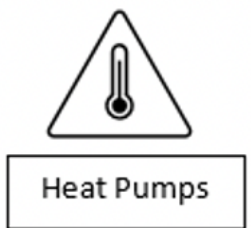
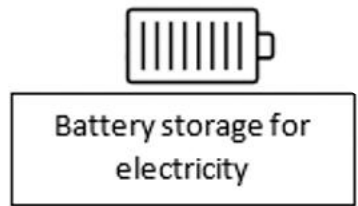
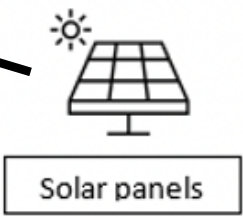
How long do you think the process would take to improve the 'fabric' of your home, install energy technology, and energy controls? Is this disruption acceptable?

What are your initial reactions to the home energy management system and smart controls? Which person do you relate more to and why?

Home Energy Management

Energy Technology

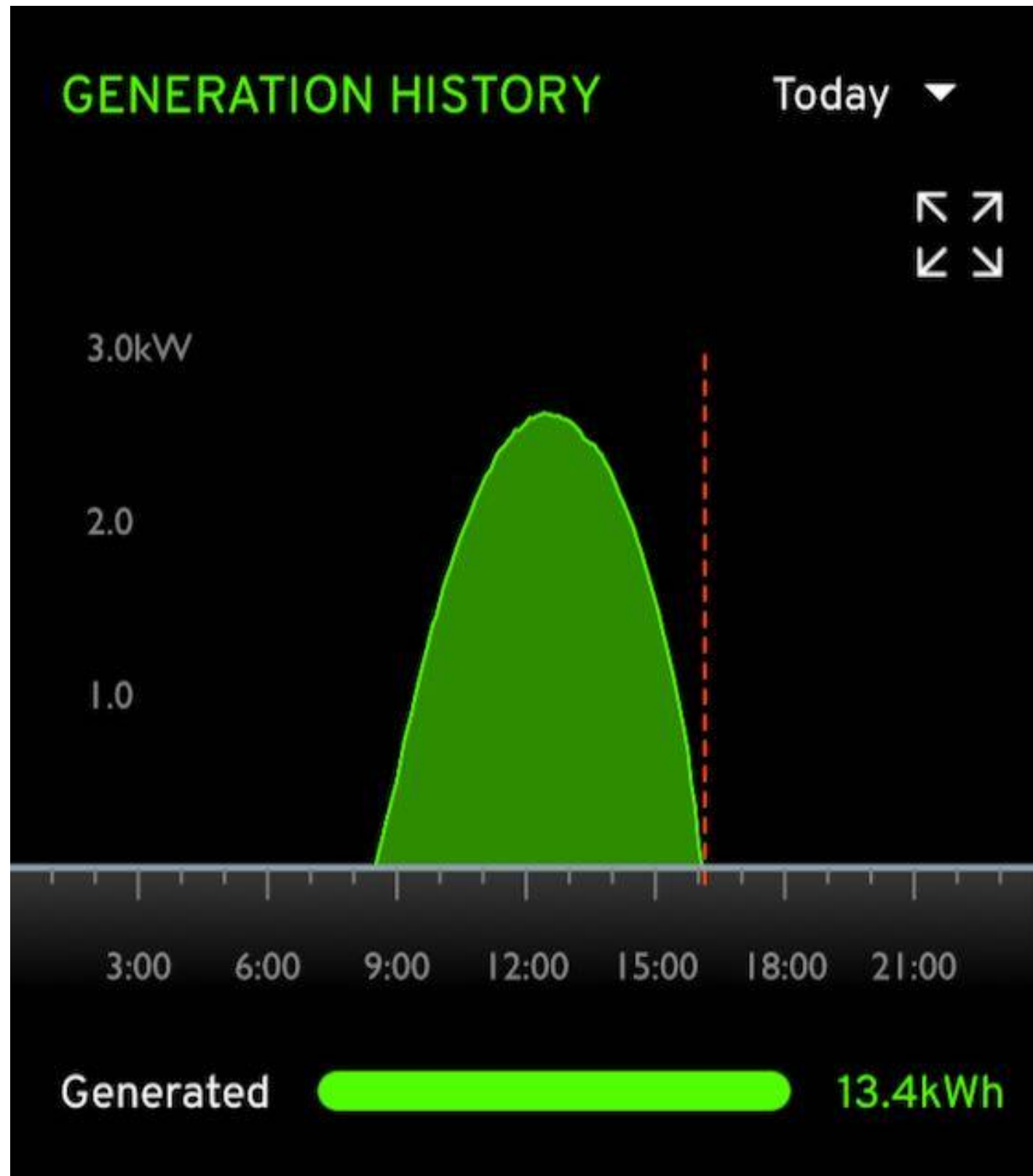
- Energy Generation
- Energy Storage
- Heating



Smart Energy Controls

- Water Control
- Light Control
- Heating Control
- Appliance Control

Energy Generation



Smart Controls



Anna



Anna explains that monitoring energy use in the home makes you more aware of your usage and helps to reduce the amount of energy wasted!

Through monitoring, smart controls could adapt the way that energy is used in the home to match behaviors. It knows this from the data it collects about energy use (similar to how your smartphone can track your steps or sleep!). For example, the system would see that **David** showers between 6 am and 7 am every day. It could ensure that the boiler is ready for this time and that the energy to power it had been bought at the cheapest time.

Monitoring

David



David is more convinced by the benefits of smart controls.

Jill



Jill is still unsure about the controls and would like to know more.

Key Questions

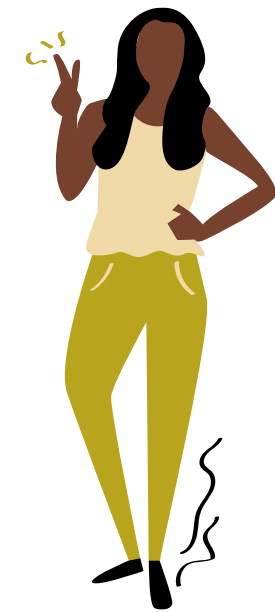
What do you think about the smart controls now?

Who do you relate with more?

How do you feel about data on your energy usage being collected and monitored?

Jill

"I am unsure about the smart controls"



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Jill



After doing some research, Jill explains that the smart monitoring has different levels of control, ranging from 1 to 4.

Level 1 control only monitors the energy use in the home and can be manually turned on and off. **Level 4** control uses the data to remotely switch appliances on and off/up or down. For example, it could turn your heating and lights off when you are not home. Or turn your dishwasher on at times when energy is cheapest.

Levels of Control

David



David learns that the levels can be **adjusted** at any time to suit his preferences. This makes David even more comfortable with smart controls.

Key Questions

How comfortable would you be with the different levels of smart control?

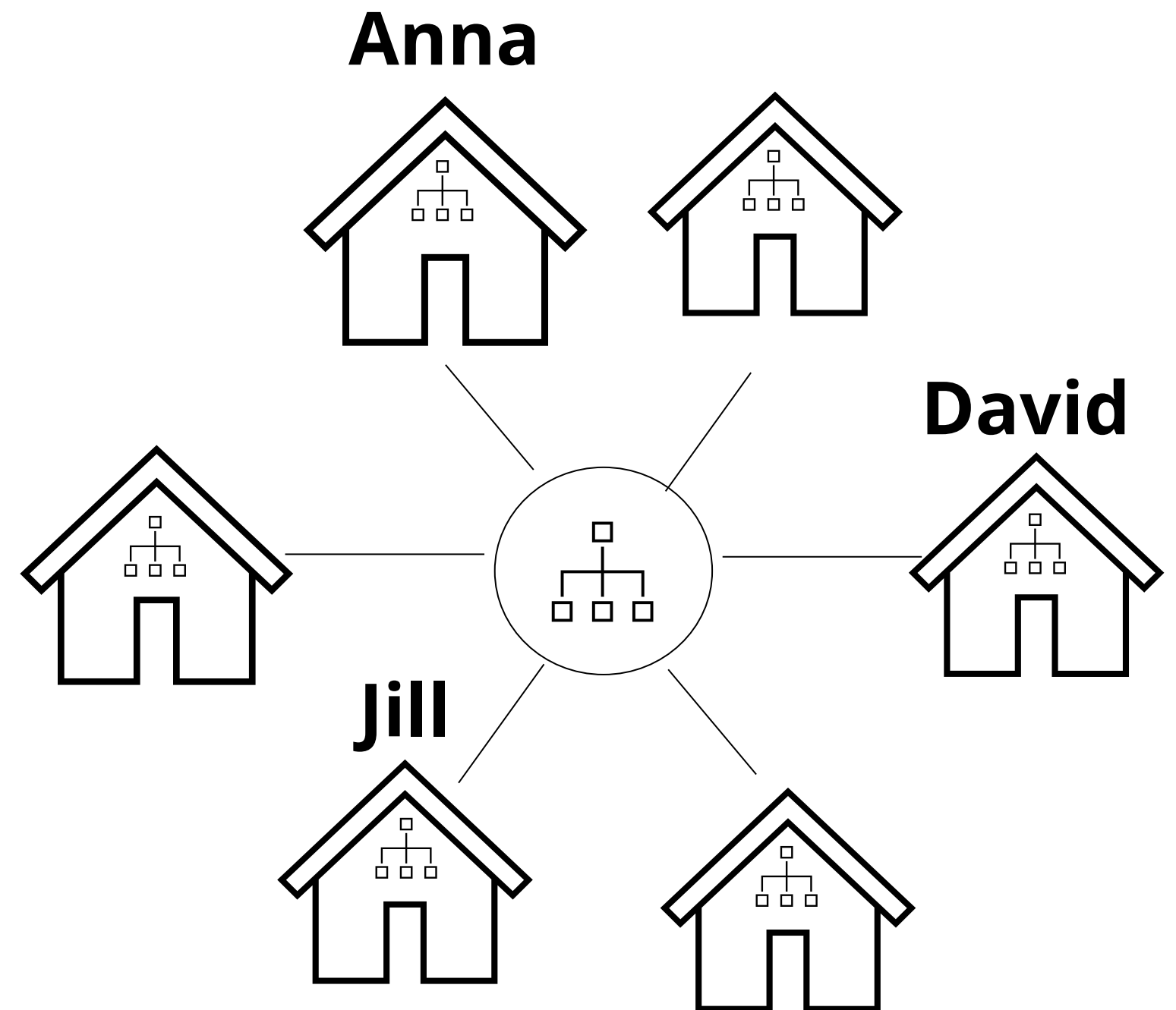
What do you think levels 2 and 3 of the smart controls would do?

Is there anything else in your home that you would, or wouldn't, want to be controlled?

The group learn that their house can be linked to a larger control centre in Rugeley. This connects multiple houses at once, meaning that energy could be bought from the grid, or from a locally produced source such as solar panels on a neighbour's roof.

David, who owns an electric vehicle, but does not have solar panels, learns that the control centre would look at either A) the cost of buying energy from the grid, or B) the amount of locally produced energy available. It would charge David's vehicle using the cheapest energy available and have it fully charged for when he leaves for work in the morning.

David



Key Questions

How do you feel about the presence of the control centre in Rugeley? Would you feel comfortable allowing the centre to control the type of energy used (local vs grid)?

How would you feel about the system making sure his electric vehicle is charged up when he needs it using the cheapest electricity possible?

The costs for the whole process can be paid upfront, or the costs can be paid from the energy savings that would occur as part of a contract. The group learn that if more of their neighbours sign up to have improvements done at the same time, it would be cheaper for everyone.

David decides to talk to neighbours about signing up together.

David



Anna can afford to pay upfront and signs up.

Anna



Jill decides that the 'Smart' aspect is not for her, but is interested in a fabric retrofit.

Jill



Key Questions

Do you think you would be able to talk to your neighbours about signing up to a home energy improvement programme?

Who do you relate to the most (if anyone)?
How convinced or interested are you in this process?

Do any of the improvements discussed seem more important than others?

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