Ashton Hayes Smart Village

Diyar Kadar, Technology Manager
ScottishPower Energy Networks
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- Going Carbon Neutral
- Community achievements
- DNO engagement
- Aims and Outcomes

Ashton Hayes Going Carbon Neutral

AIMING TO BECOME ENGLAND'S FIRST CARBON NEUTRAL VILLAGE

going carbon neutral Ashton Hayes

Located in rural Cheshire, Ashton Hayes is a well knit community of about 1000 people that is aiming to become England's first carbon neutral community. We started our journey in January 2006 and since then we have already cut our carbon dioxide emissions by 23% - by working together, sharing ideas and through behavioural change. We are about to start work on our community owned renewable energy power station.

This website encapsulates our journey towards carbon neutrality and offers free advice and guidance. Please feel free to use anything from our website (we'd like a credit if you can).

Project Outline:

- Community led scheme
- Village has achieved 20% CO_2 reduction since 2006, through:
  - *Behavioural changes*
  - *Energy efficiency upgrades*
  - *Community education*
- Awarded £400k DECC Low Carbon Community Challenge Award
- Plans to invest in renewable generation & electric vehicles

Rod's Story

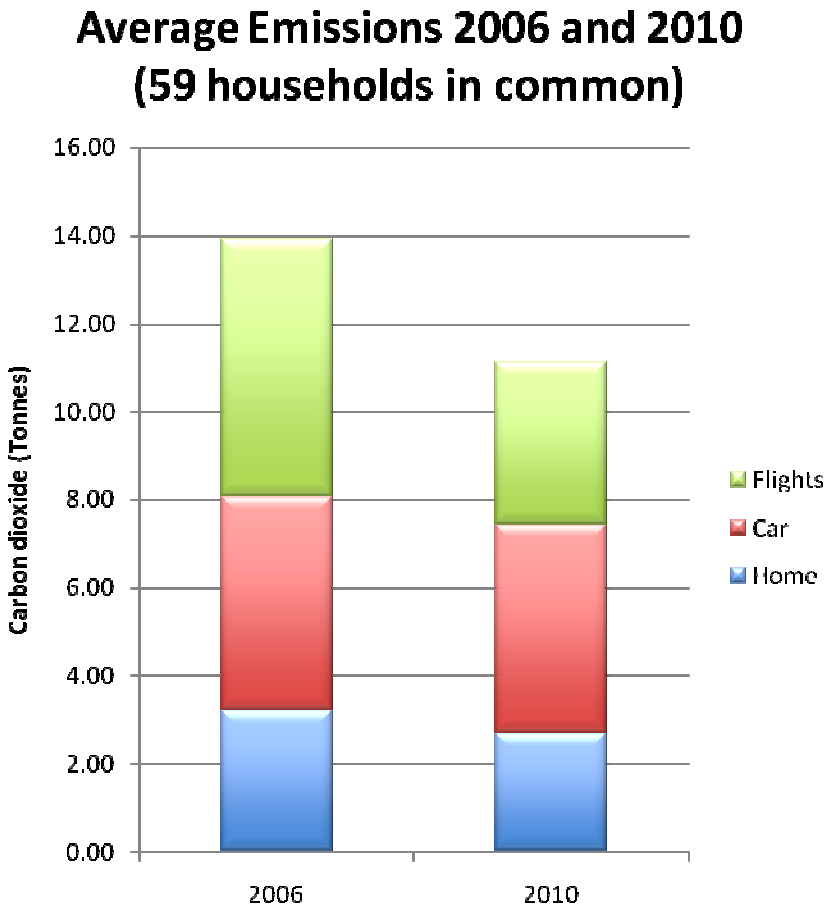
Ian & Rosemary's Gaia house

Community Achievements

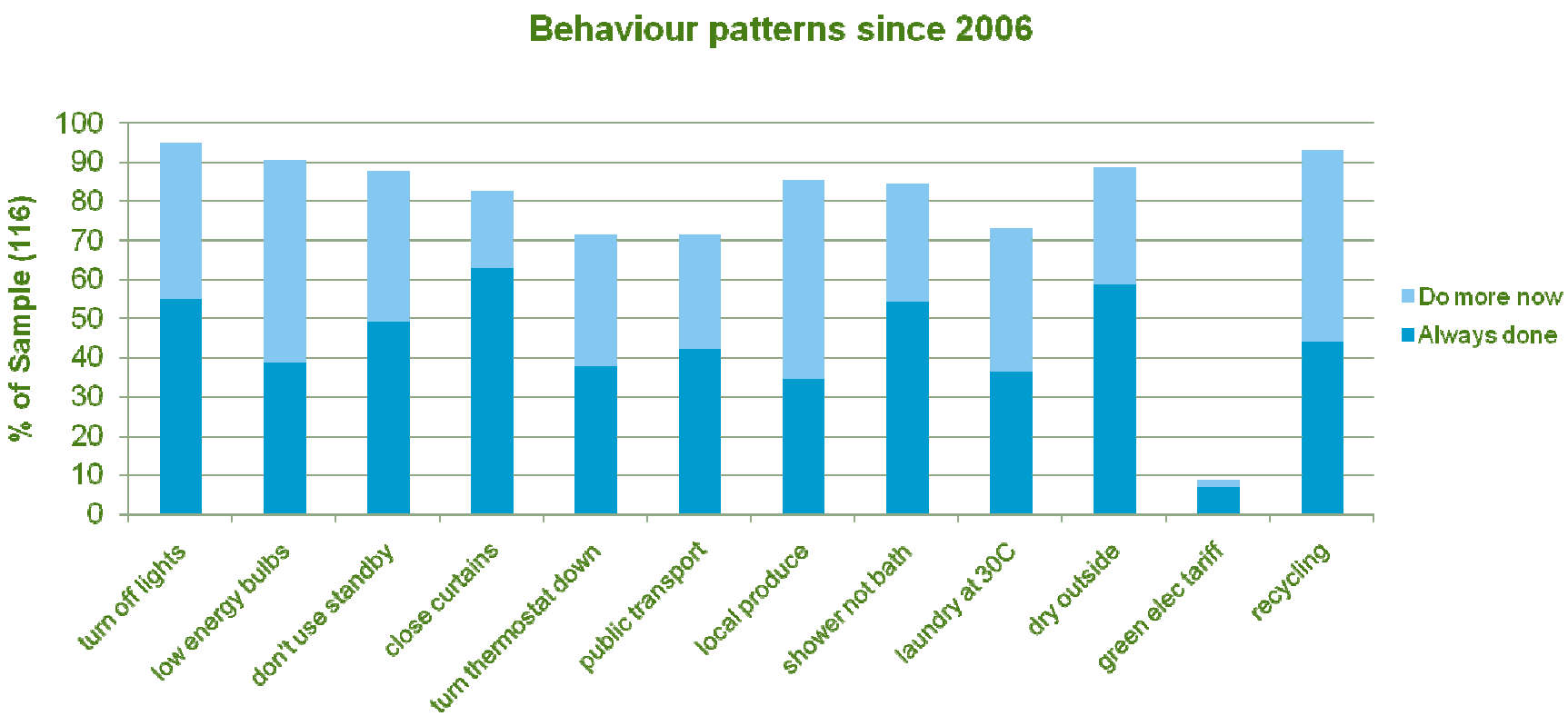
- Aston Hayes Village has a population of 1000 and 370 homes.
- Raised awareness through village meetings and community events.
- Encouraged people to get involved.
- Provided information on what to do and where to get help.
- Measured our progress with annual carbon footprint surveys plus feedback of results to residents.
- Applied and won the DECC LCCC award for £400k.

Community Achievements

- Average household emissions down by 20% since 2006, based on a sample selection of 59 households.
- Mostly
  - Flights -37%
  - Home energy -20%
- Cars – little change



Community Achievements



DNO Engagement

- Facilitating connection of renewable generation
  - PV (School and Pavilion)
  - CHP (School)
  - Possibility of micro wind
- Monitoring energy flows
  - Village feeders
  - Micro generation
  - EV charging
- Data and information provision
  - Total village consumption
  - Total renewable generation
  - Potential for DSM coordination

Peel Crescent

- 500kVA Tx
- 154 customers
- x5 LV circuits
- R = 320A
- Y = 320A
- B = 220A

St Johns Church

- 100kVA Tx
- 24 customers
- x1 LV circuit
- R = <144A
- Y = <144A
- B = <144A

Shay Lane

- 200kVA Tx
- 96 customers
- x2 LV circuits
- R = <288A
- Y = <288A
- B = <288A

Peel Hall Lane

- 100kVA Tx
- 97 customers
- x1 LV circuit
- R = <144A
- Y = <144A
- B = <144A

School LV Connections:

- *18kVA CHP*
- *10kVA PV*

Future LV Connections:

- *Church PV*
- *Wind Turbine*

Potential Learning

- Technical
  - LV monitoring and data provision
  - LV modelling and connection
  - Social
  - Working with the community
  - Characteristics of a rural Smart Grid
  - Environmental
  - Maximise the utilisation of low carbon technologies
  - Assisting in the reduction of Carbon footprint

Thank You ...

Questions?