



# Frimley Parish Energy Project 24 with Listed Building Consent A Strategy for Net Zero



# Strategy

- Way of life
  - Big Parish boundary – rural / urban split. Socio-economic mix.
  - Church Halls are first stage. Progressive upgrades to replace fossil fuels.
  - Two churches. Use experience of Church Halls to implement NetZero.
- Community
  - Church Halls are a hub; art and drama, physical exercise and well being, community events, private hire. Other denomination worship.
  - First year data collection and optimising the energy system for cost and self-sufficiency.
- Future proof
  - Building has a lifespan that permits upgrade and development.
  - Potential for expansion in utilisation of accommodation and car park.

# Summary of FPEP 24

**Tiger Neo N-type**  
**54HL4R-B**  
**420-440 Watt**  
ALL-BLACK MODULE

N-Type  
Positive power tolerance of 0+3%  
IEC61215(2016), IEC61730(2016)  
ISO9001:2015: Quality Management System  
ISO14001:2015: Environment Management System  
ISO45001:2018  
Occupational health and safety management systems

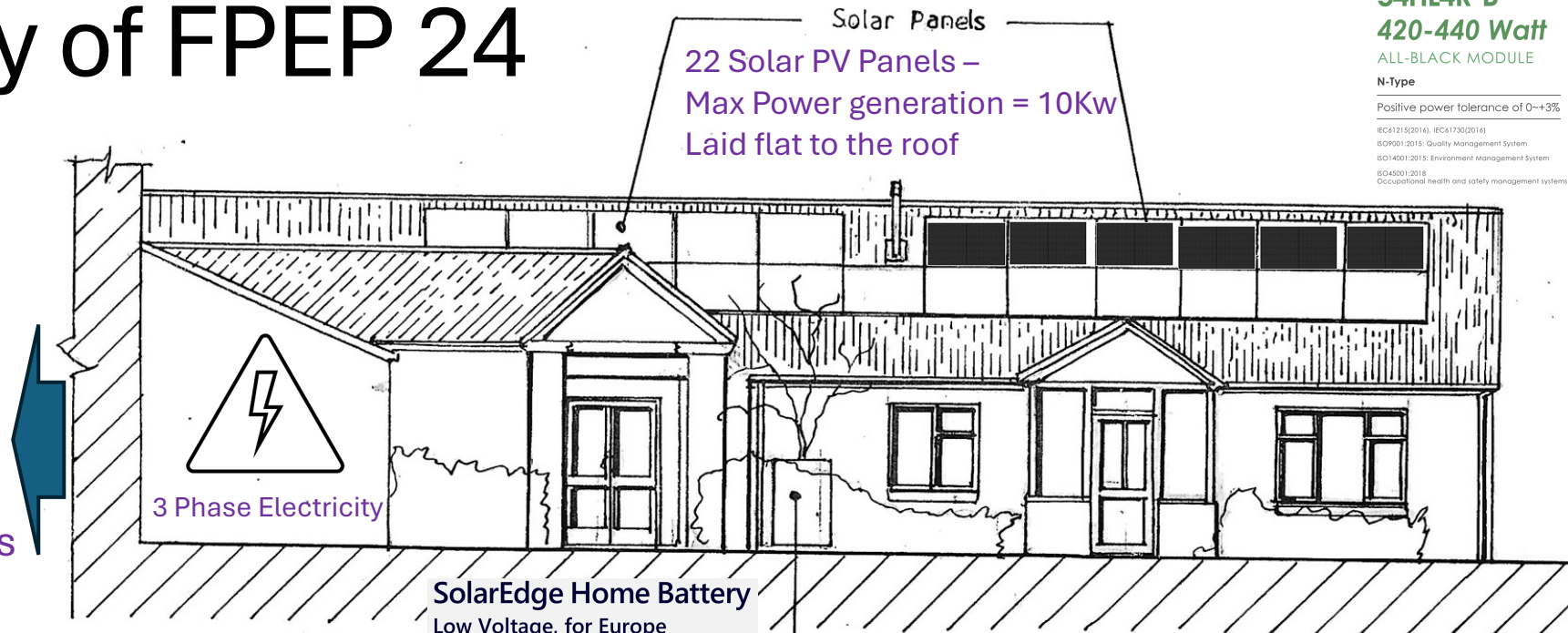


Service Provider

Export tariff

Import tariff

Day / Night Split rates

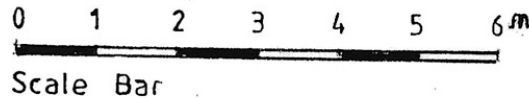


**SolarEdge Home Battery**  
Low Voltage, for Europe  
BAT-05K48



Storage Battery

Ground mounted Battery  
500mm high x 540mm wide x 240 mm deep.  
a storage capacity of 13.8kW.




Installation of Solar Panels on Roof with Associated Storage Battery  
St Peters, Frimley, Parish Hall and Bungalow  
Frimley Green Road, Frimley.

South-East Front Elevation

Scale : 1/100

# Plan

- Based on data 
- Pilot project to establish evidence
- Staged (10 years)
  - Stage 1. FPEP 24 (Pilot Project).
  - Stage 2. Additional SPs in Church Halls and Air Source Heat Pump. ALL ELECTRIC in Halls.
  - Stage 3. St Peter's Church roof SPs and Air Source Heat Pump.
  - Stage 4. St Francis SPs and Air Source Heat Pump.
- Incorporate change
  - Technology improvements? (Fuel Cells, Ground SHP)
- Communicate the plan
  - Congregation and community support

|                          |     | Dec-16 to<br>Nov-17 | Dec-17 to<br>Nov-18 | Dec-18 to<br>Nov-19 | Avg / yr | Annual usage<br>from<br>Sustainability<br>Report |
|--------------------------|-----|---------------------|---------------------|---------------------|----------|--------------------------------------------------|
| <b>St Peter's Church</b> |     |                     |                     |                     |          |                                                  |
| Gas Usage                | kWh | 53865               | 54422               | 45875               | 54144    | 49647                                            |
| Electricity              |     |                     |                     |                     |          |                                                  |
| Day                      | kWh | 4184                | 4862                | 4819                | 4622     |                                                  |
| Night                    | kWh | 1311                | 1186                | 1412                | 1303     |                                                  |
| Eve/Weekend              | kWh | 7283                | 7263                | 8258                | 7601     |                                                  |
| Elec Total               |     | 12778               | 13311               | 14489               | 13526    | 14232                                            |
| <b>St Peter's Hall</b>   |     |                     |                     |                     |          |                                                  |
| Gas Usage                | kWh | 69829               | 60984               | 66827               | 65880    | 61210                                            |
| Electricity              |     |                     |                     |                     |          |                                                  |
| Day                      | kWh | 7231                | 5242                | 6485                | 6319     |                                                  |
| Night                    | kWh | 6517                | 5291                | 5946                | 5918     |                                                  |
| Elec Total               |     | 13748               | 10533               | 12431               | 12237    | 11594                                            |
| <b>St Francis</b>        |     |                     |                     |                     |          |                                                  |
| Gas Usage                | kWh | 35140               | 45569               | 42060               | 43815    | 43254                                            |
| Electricity              | kWh | 7192                | 5915                | 4242                | 5783     | 5620                                             |





# Cultural Change

- **Demonstrate intent by understanding and controlling energy usage**
  - **Engage with experts, contractors, planning department**
  - **Understand service provider opportunities**
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