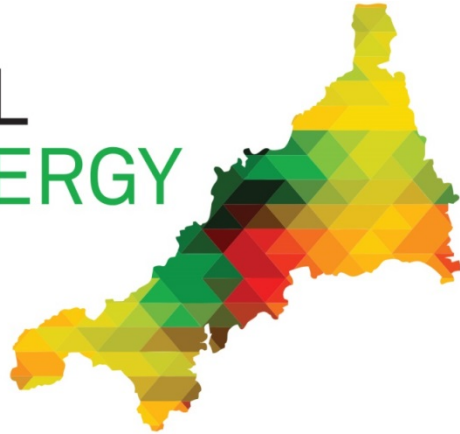


# PRP

## CORNWALL NEW ENERGY



Supporting small and medium-sized enterprises in Cornwall and Isles of Scilly to develop, promote and install renewable energy solutions and services.

Project Partners:



bre NATIONAL  
SOLAR CENTRE

UNIVERSITY OF  
EXETER



COMMUNITY  
ENERGY PLUS

Community Works CIC

09:00	Registration and arrival Supplier fair opens <i>Teas and coffees served</i>	
09:30	Welcome address and house-keeping About Cornwall New Energy Project	Alex Nicholas, PRP Andrew Mellor, PRP
09:40	Keynote speech: "Cornwall's Energy Future"	Mark Holmes, Cornwall Council
09:50	Client case study 1 Micro CHP, Skinner's Brewery	Amanda Forman, PRP
10:05	Client case study 2 Provia	Chris Connick, BRE National Solar Centre Scott James, Provia
10:20	Funding Options	Neil Farrington, Community Power Cornwall
	Funding Options	Alex Nicholas, PRP
10:35	<i>Tea and coffee break</i>	
10:50	Client case study 3 Coastline	Adam Longfield, BRE National Solar Centre Ralph Retallack, Coastline Housing
11:05	Panel Session Q&A	
	Presentation closing remarks	Alex Nicholas, PRP
11:35	Supplier fair - quick introduction	
12:20	Buffet lunch served Supplier fair still open <i>Teas and coffees served</i>	
13:00	Event close	



**European Union**  
European Regional  
Development Fund

Welcome  
*Alex Nicholas, PRP*

CORNWALL  
NEW ENERGY





**European Union**  
European Regional  
Development Fund

The Cornwall New Energy Project  
*Andrew Mellor*



- The Project provides supports to different sectors and groups, including:
  - Tourism and leisure
  - Developers / construction
  - Heavy energy users
  - Supply chain
  - Technology / product innovators
  - Start-up businesses
  - Community groups

consultancy start-ups  
product innovations  
research collaborations

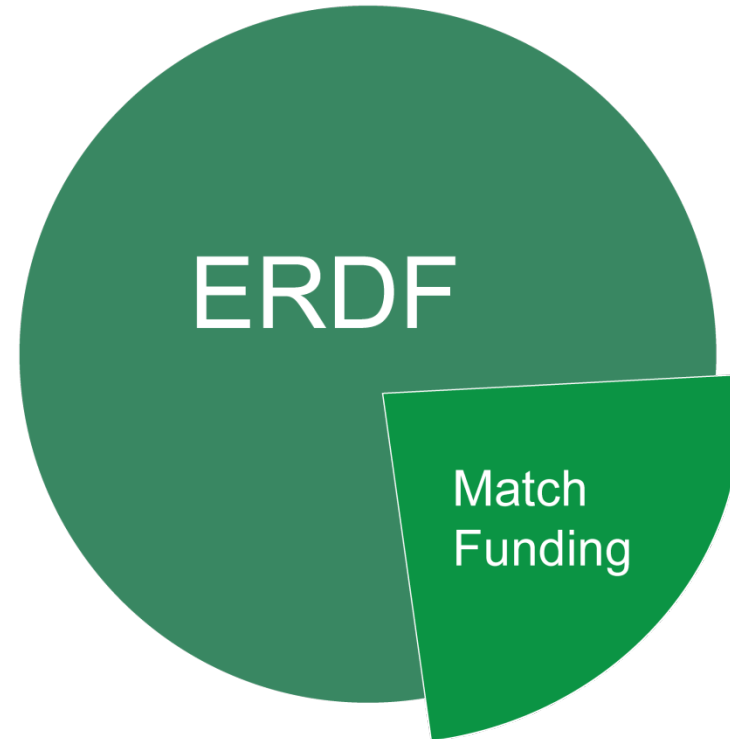


**5** organisations with **Experts** in the field

- Project Value - £3.3million
- Partly funded by the European Regional Development Fund - £2.6million
- Match funding provided by PRP and Delivery Partners - £0.7million



**European Union**  
European Regional  
Development Fund



Project Lead

PRP

Delivery Partners

breNATIONAL  
SOLAR CENTRE



COMMUNITY  
ENERGY PLUS

Community Works CIC



**5** organisations with **Experts** in the field

- The overarching objectives of the Project are to:
  - Provide greater energy security in Cornwall and the Isles of Scilly
  - Reduce operating costs and improve SME's overall financial performance
  - Enable new energy products and services to be launched to the market
- Type of **FREE** services provided:
  - Energy related consultancy
  - Research collaborations
  - Start-up businesses advice
  - Product innovations advice





Achievement so far...



CORNWALL  
NEW ENERGY

23   
businesses supported in 2017

 76 in 2018  
 76 in 2019





Cornwall's Energy Future  
*Mark Holmes, Cornwall Council*



# Cornwall's energy future

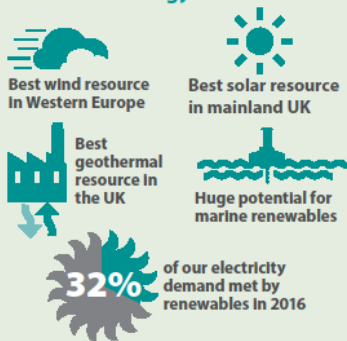
We will create an energy future that is cleaner and more affordable, retaining the social and economic benefits in Cornwall.



**CORNWALL & ISLES OF SCILLY**  
LOCAL ENTERPRISE PARTNERSHIP



## Cornwall has a wealth of renewable energy resources...



## We will exploit this unique opportunity to...

### Tackle energy inequalities



Making our homes, businesses and transport greener and more affordable.

### Take local control of our energy

Generating, owning and using our energy locally to reduce bills.

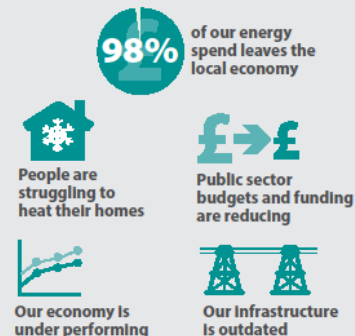


### Become a world-leading green economy

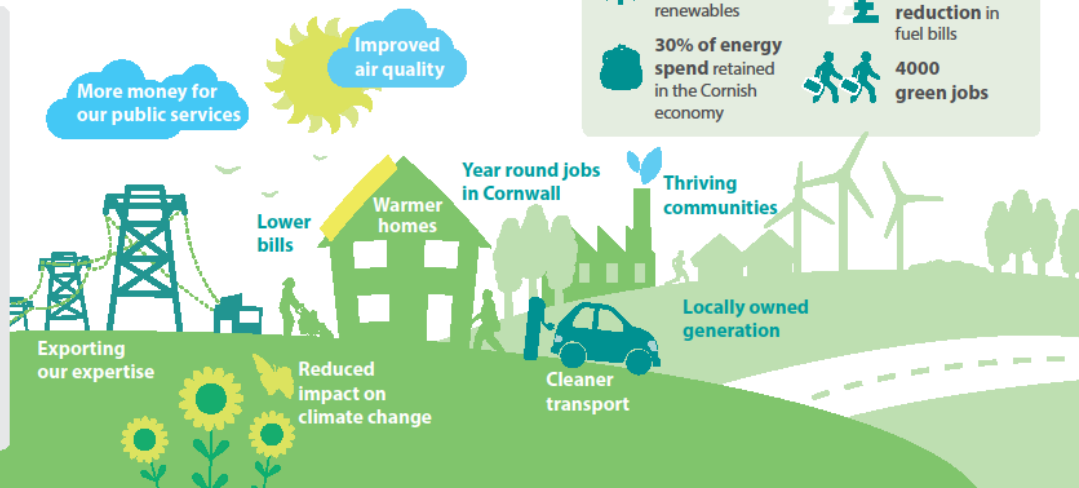
Retaining benefits in our communities and securing year round jobs.



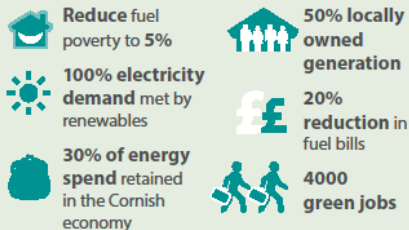
## but Cornwall is not benefiting and we currently spend £1bn a year on our energy



## We will create an energy future that is cleaner and more affordable, retaining benefits in Cornwall



## 2030 outcomes





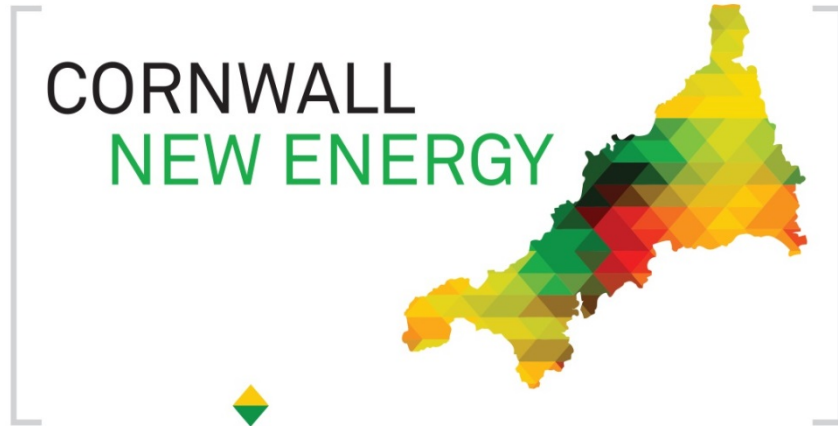
Case Study 1: Skinners Brewery  
*Amanda Forman, PRP*



- Requirement
- Use
- Efficiency
- Generation



## [Skinners Brewery Video](#)



# How does a micro brewery operate?

## New Boiler

Boiler produces steam using natural gas

Malt and hot water are mixed in the mash tun 75-80 °C

Copper 100°C boil  
Add HOPS

Low Energy Lighting

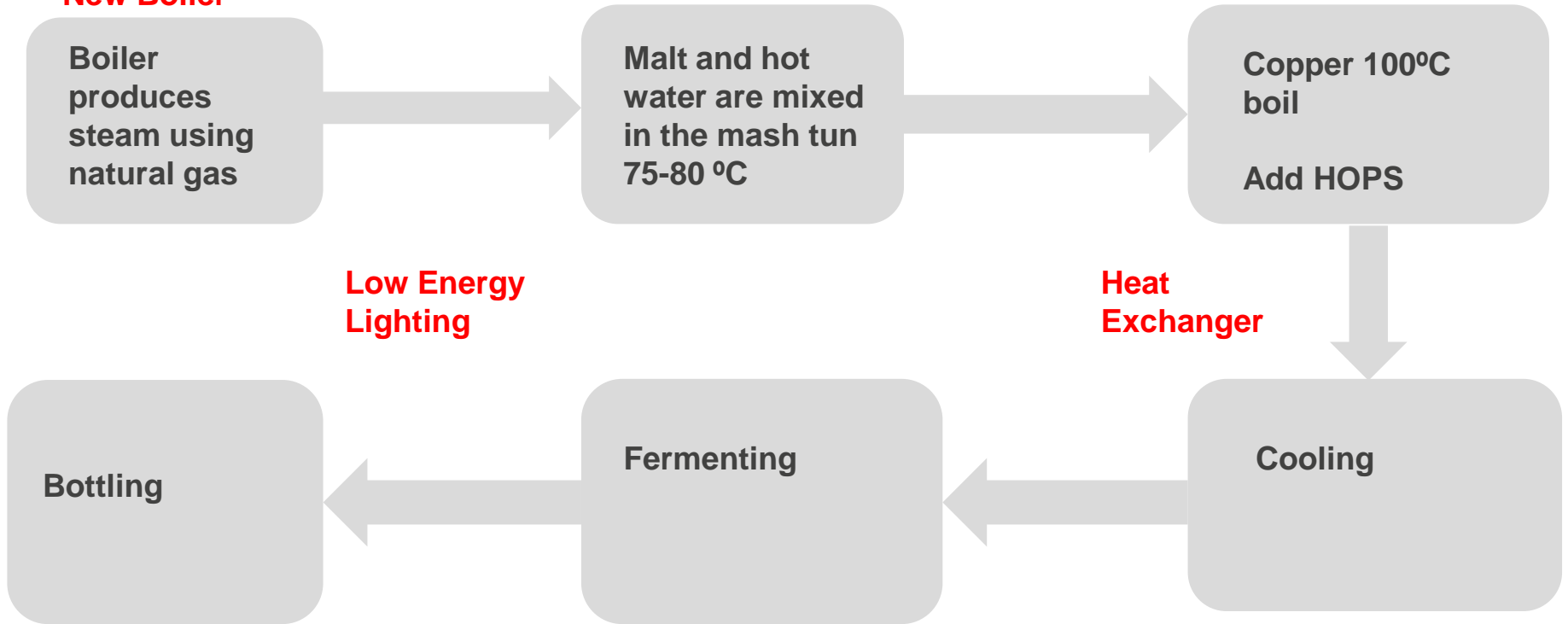
Heat Exchanger

Bottling

Fermenting

Cooling

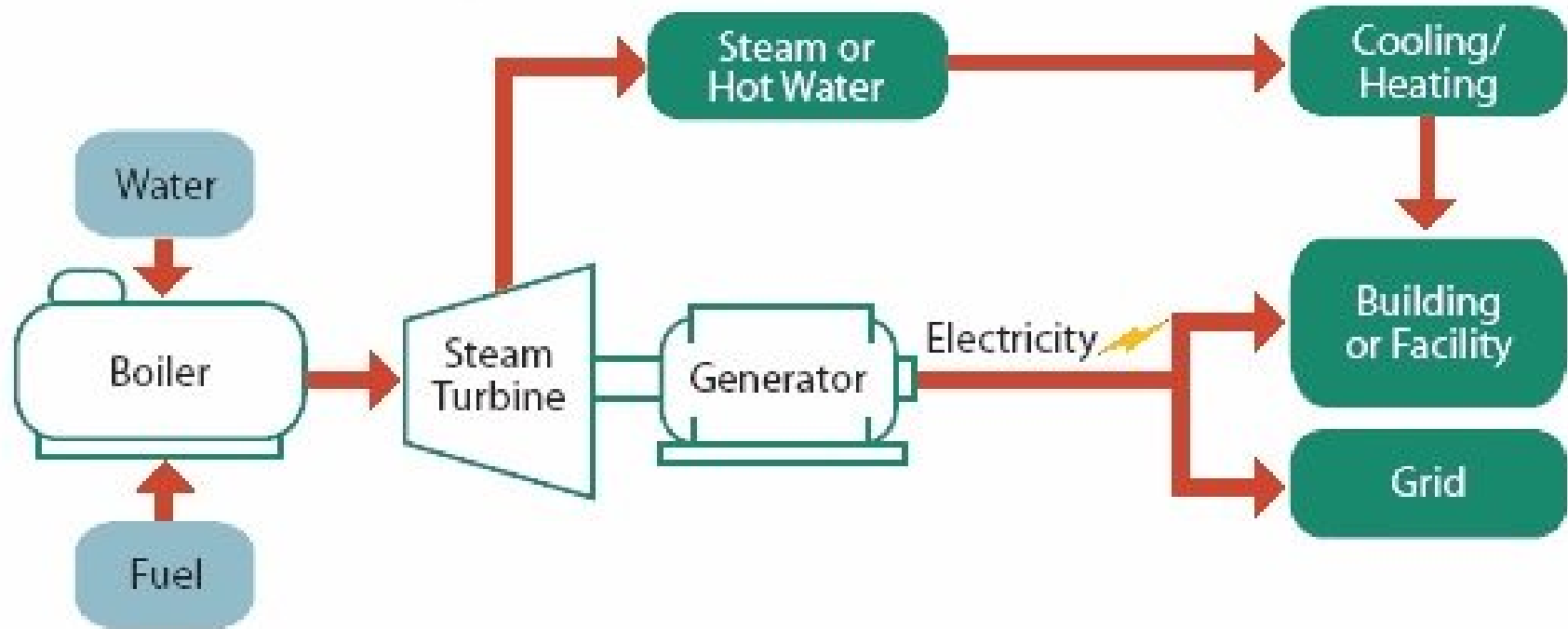
Chiller



- Reduce the electrical load
  - Lighting
  - Heating
  - Cooling
- Identify potential energy solutions
  - Combined Heat and Power
  - Solar Photovoltaic



# How Co-generation or CHP works



# Why CHP?



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NEW ENERGY

Compact energy generation units

De-centralised (local) supply of heat and power

Overall efficiency of around 90%

Energy savings of over 30% can be achieved.

Climate Change Levy exemption

Business Rates exemption

Enhanced Capital Allowances

# Why are we doing this again?



CORNWALL  
NEW ENERGY

- Cornwall New Energy is here to help SMEs in Cornwall and the Isles of Scilly engage with new technology and develop renewable energy systems.
- Reduces reliance on the grid
- Reduces stress on the grid
- Reduces electricity losses during generation and transportation
- Reduces running cost for the business in the long term
- And most importantly, adopting low carbon technology is part of the necessary global movement to mitigate the effects of climate change



*“We cannot solve our problems with the same thinking used when we created them”*



**Thank you**

Amanda Forman  
Technical Delivery Manager  
PRP

[A.Forman@prp-co.uk](mailto:A.Forman@prp-co.uk)

07471 953 998

[www.prp-co.uk](http://www.prp-co.uk)

**PRP**

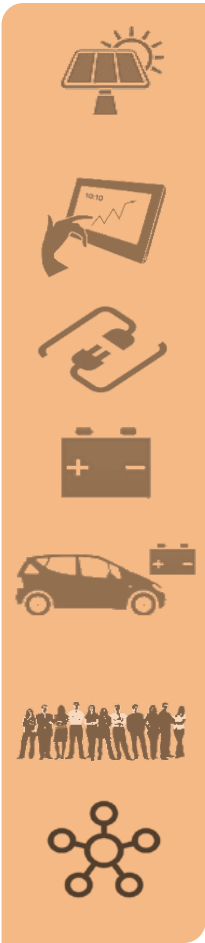


Client Case Study 2:  
*Chris Coonick, BRE National Solar Centre,  
Scott James, Provia*



# bre NATIONAL SOLAR CENTRE

To deliver **independent,**  
**research led knowledge**  
and **guidance** about solar  
and related technology



# About us



CORNWALL  
NEW ENERGY



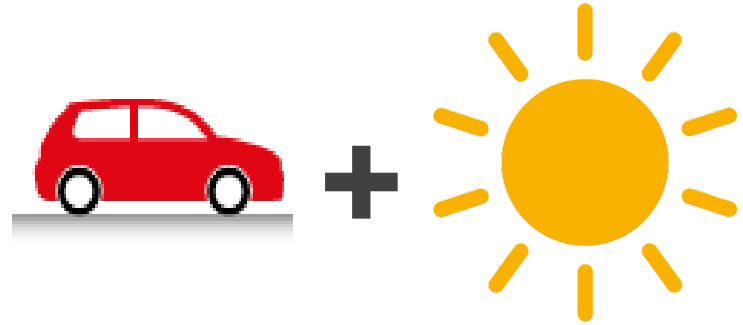
**bre** INNOVATION  
PARKS NETWORK



BRE National Solar Centre

## Solar car parks

A guide for owners and developers

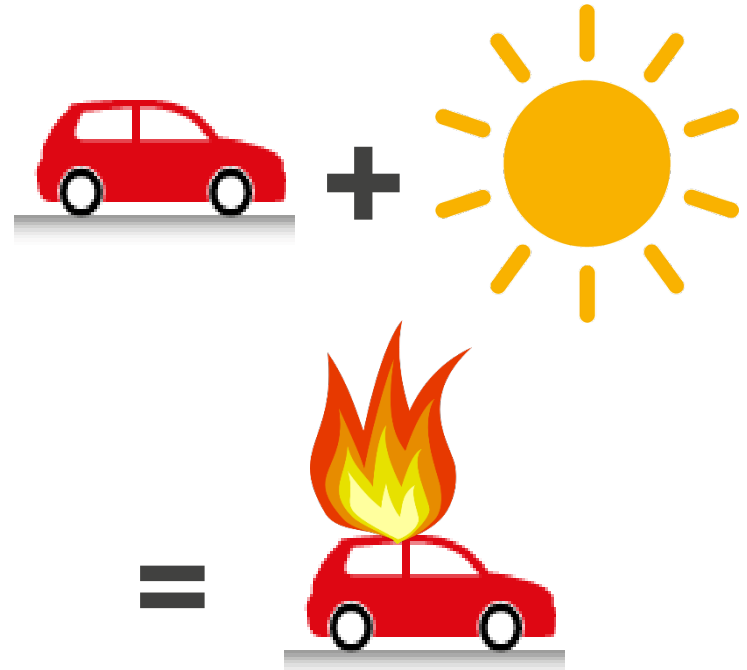


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BRE National Solar Centre

## Solar car parks

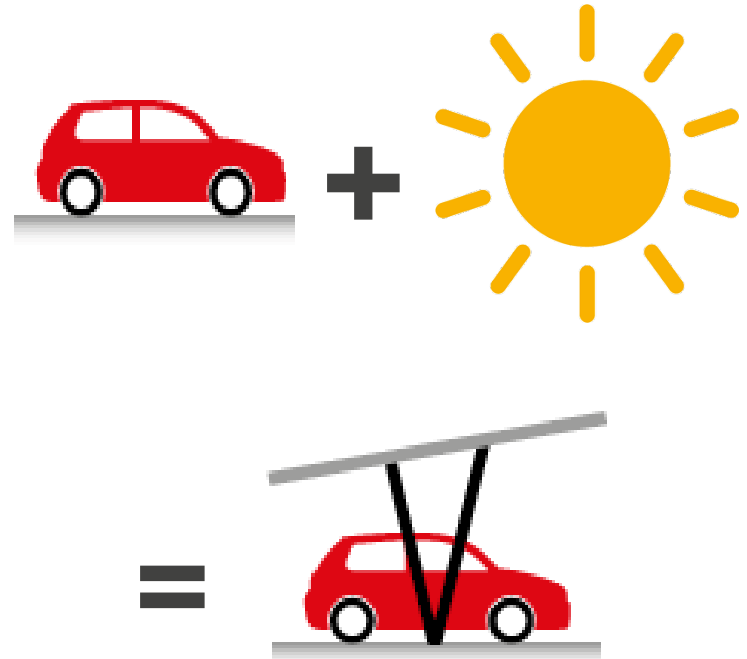
A guide for owners and developers



BRE National Solar Centre

## Solar car parks

A guide for owners and developers





## Provia

*Cornish for 'Supply' or 'Provide'*

The Provia solar canopy:

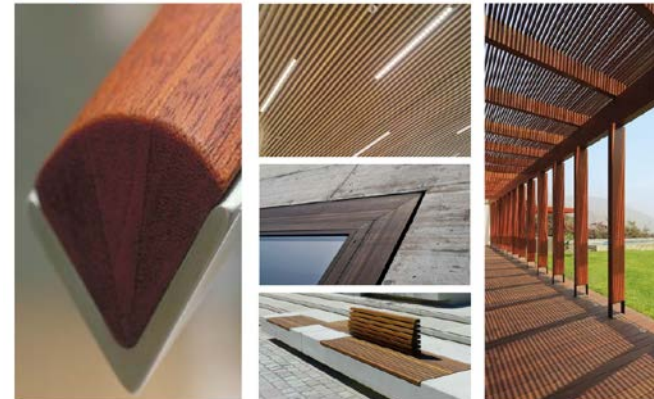
- Supporting the growing need for **financially viable energy generation** opportunities;
- Directly supports current and future **business needs**;
- Designed with **high-quality**, low-impact materials;
- Adds to the impression of a business on arrival, **showcasing your sustainability credentials**;
- Enables energy generation for your business whilst delivering **demand to integrated Electric Vehicle charge points** to support the growth of EV's from both customer and fleet uses.

*Provia have worked with the Cornwall New Energy project to produce a detailed Commercial Model to support review of all Client sites and opportunities*



# Key points

- **Highly sustainable design** utilising timber and recycled aggregate concrete pillars to support 20kW of generation.
- Would support 1MW of renewable energy generation for every fifty 10-bay units installed.
- Off-sets 460 tonnes of CO2 for every fifty 10-bay units installed.
- Ability to **retro-fit** into an existing portfolio of car parks whilst taking minimal footprint to impact on car parking spaces.
- Branding through design and colour treatment is able to be **tailored to your business or location**.
- Opportunity to generate **revenues from integrated EV Charging and Advertising**.
- Opportunity to integrate energy storage and associated energy and financial benefits this offers.





Supermarkets / Retail

Car park assets

Energy use adjacent to car park



Universities / Colleges / Schools

Fleet EV use



Hotels and Leisure Developments

Staff EV use

Customer EV use



Railway / Airport / Park + Ride  
Industrial / Commercial

Corporate sustainability targets

Safeguarding against future energy costs

# Our delivery approach



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NEW ENERGY

Working with you to develop the best solution:

- **Client review:**

To set out scope of opportunities for your sites

- **Design:**

Tailored to business needs

- **Commercial and Financial:**

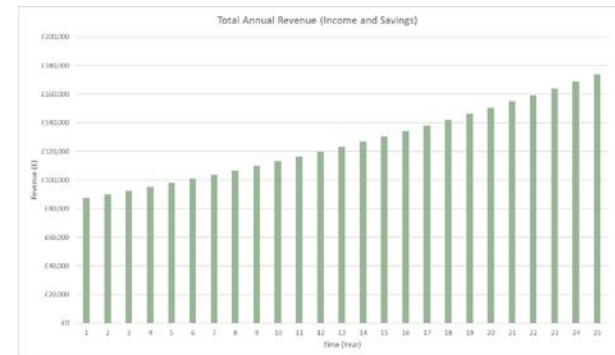
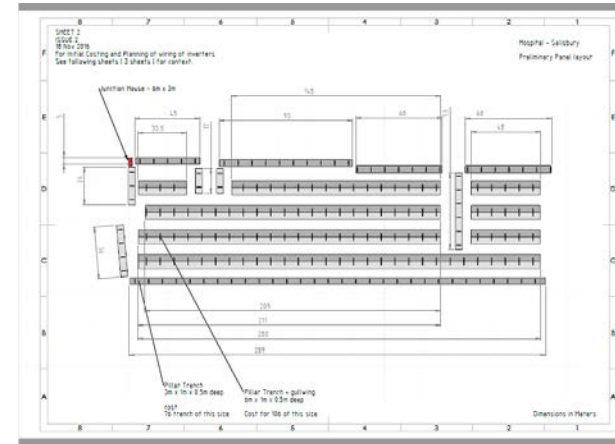
Overview of financial model and opportunities to finance

- **Operational needs:**

Installation team to deliver with minimal operational impact

- **Confidence:**

Delivered with established partners with nationwide coverage





Supporting our business future...  
through Provia we are able to support yours



CORNWALL  
NEW ENERGY



Contact details:

Scott James

[scottjames@wwa.uk.com](mailto:scottjames@wwa.uk.com)

01872 272 906

07718 571 047



## Thank you

Chris Coonick  
Senior Consultant  
BRE National Solar Centre  
[Chris.Coonick@bre.co.uk](mailto:Chris.Coonick@bre.co.uk)  
01726 871831  
[www.bre.co.uk/nsc](http://www.bre.co.uk/nsc)



'Financing the future whilst retaining local benefit'  
*Neil Farrington, Community Power Cornwall*





Source: Communities for Renewables CIC



## Cornwall's energy future

We will create an energy future that is cleaner and more affordable, retaining the social and economic benefits in Cornwall.



### Cornwall has a wealth of renewable energy resources...



### We will exploit this unique opportunity to...

#### Tackle energy inequalities

Making our homes, businesses and transport greener and more affordable.



#### Take local control of our energy

Generating, owning and using our energy locally to reduce bills.



#### Become a world-leading green economy

Retaining benefits in our communities and securing year round jobs.



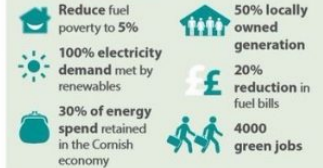
### We will create an energy future that is cleaner and more affordable, retaining benefits in Cornwall



### but Cornwall is not benefiting and we currently spend £1bn a year on our energy



### 2030 outcomes





Community Power Cornwall exists to enable community ownership of renewable assets, to generate capital to be reinvested locally in renewable energy, and to nurture the spread of community owned renewable energy generation.



TRANSITION ST GORAN

Gorran 2011



£2.7million revolving loan facility created by  
Community Power Cornwall & Cornwall Council to  
support community energy schemes in the County.

**Loan book:**

CPC, Gorran:	£179,000 & £275,000
CPC, BF Adventure:	£50,000
Energy Society, Shears Barton	£370,000
Wadebridge Energy Company:	£101,000
FREE Fowey, Penhale Farm:	£45,000
Pesco, Humphry Davy School:	£268,000
Tamar energy community:	£285,000
CPC, St.Cleer School:	38,250
CPC, Liskeard School and Community college	£60,000
CPC	£1,400,000

**Expected loans to March 2018:**

**£3,071,250**

# Power Purchase Agreements (PPA) & Heat supply contracts







### Our vision for the site



## Thank you

Neil Farrington  
Development Director  
01872 245566 / 07976 490953

Paul Martin  
Executive Director  
07752 818 759

[info@communitypowercornwall.coop](mailto:info@communitypowercornwall.coop)  
[www.communitypowercornwall.coop](http://www.communitypowercornwall.coop)



Cornwall & Isles of Scilly  
Rural Investment Opportunities  
*Jon Teague, Cornwall Development Company*



Quick overview of available funding



Grant support in another area of your business  
could release funds for your own investment  
in renewable energy technology

Part funded by the European Agricultural Fund for Rural Development (EAFRD) and part of the Rural Development Programme for England (RDPE).

A community-led scheme providing grant funding towards capital projects in England which create jobs, help small businesses and rural communities to grow and develop the rural economy.

Local Action Groups (LAGs) are made up of local public, private and civil society representatives who have the role of assessing applications and awarding grants locally to businesses and organisations that apply.

Support in Cornwall is divided into 4 Local Action Group areas: South and East Cornwall; Atlantic and Moor; Coast to Coast and West Cornwall.

## What is available:

1. Increasing farm productivity
2. Supporting micro and small businesses and farm diversification
3. Boosting rural tourism
4. Providing rural services
5. Providing cultural and heritage activity
6. Increasing forestry productivity

Grants from £2,500 – £150,000 typically limited to a maximum of 40% of the project's total eligible costs but can be more in certain circumstances.

Renewable energy sources tech is ineligible (apart from battery storage)

Further information: <http://www.localactioncornwall.co.uk>

A European Agricultural Fund for Rural Development (EAFRD) scheme providing funding for projects which create jobs and growth in the rural economy.

More than £6.5m of funding is available across three different themes in Cornwall and the Isles of Scilly covering:

- Food Processing;
- Business Development;
- and Rural Tourism Infrastructure.

Open to food and drink processors, farmers, rural businesses (including social and community enterprises) and rural tourism providers located in Cornwall and the Isles of Scilly.



Department  
for Environment  
Food & Rural Affairs

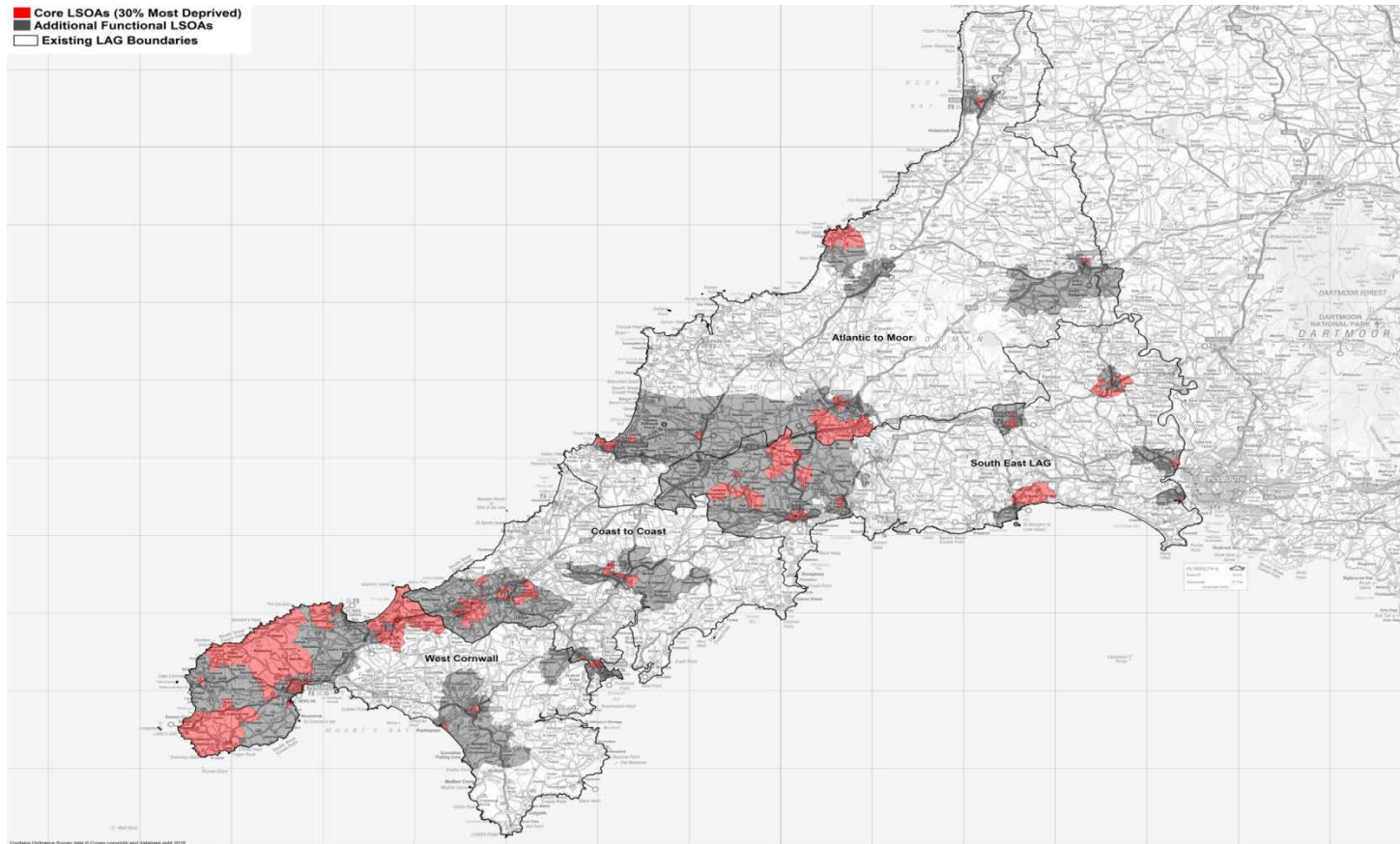
Focused on area's of greatest need (Bottom 30% IMD) and their “functional economic hinterlands” **(i.e. does not cover all of Cornwall)**

- Current budget allocation for the whole of Cornwall is £14.6m
- Capital and revenue costs for businesses and other organisations
- Will support projects that strengthen local availability of employment, skills and training
- 70% of the funds need to be targeted at the bottom 30% IMD areas (red on the map)
- 30% of the funds can be spent in the “functional economic hinterlands”
- Launches April 2018 until Dec 2021

[www.communityledcornwall.co.uk](http://www.communityledcornwall.co.uk)



# Community Led Local Development (CLLD)



**Thank you**

Jon Teague

Project Coordinator

Cornwall Development Company

[jon.teague@cornwalldevelopmentcompany.co.uk](mailto:jon.teague@cornwalldevelopmentcompany.co.uk)

[www.localactioncornwall.co.uk](http://www.localactioncornwall.co.uk)



**European Union**  
European Regional  
Development Fund

Refreshments

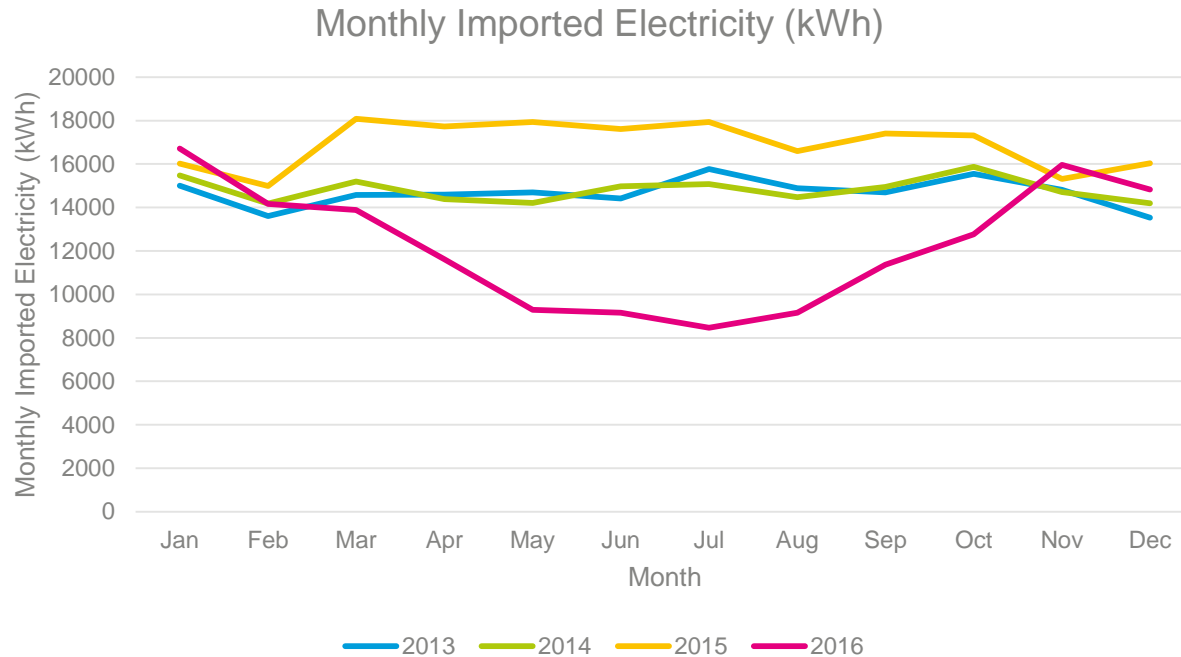




Client Case Study 3:  
*Adam Longfield*, BRE National Solar Centre  
*Ralph Retallack*, Coastline Housing



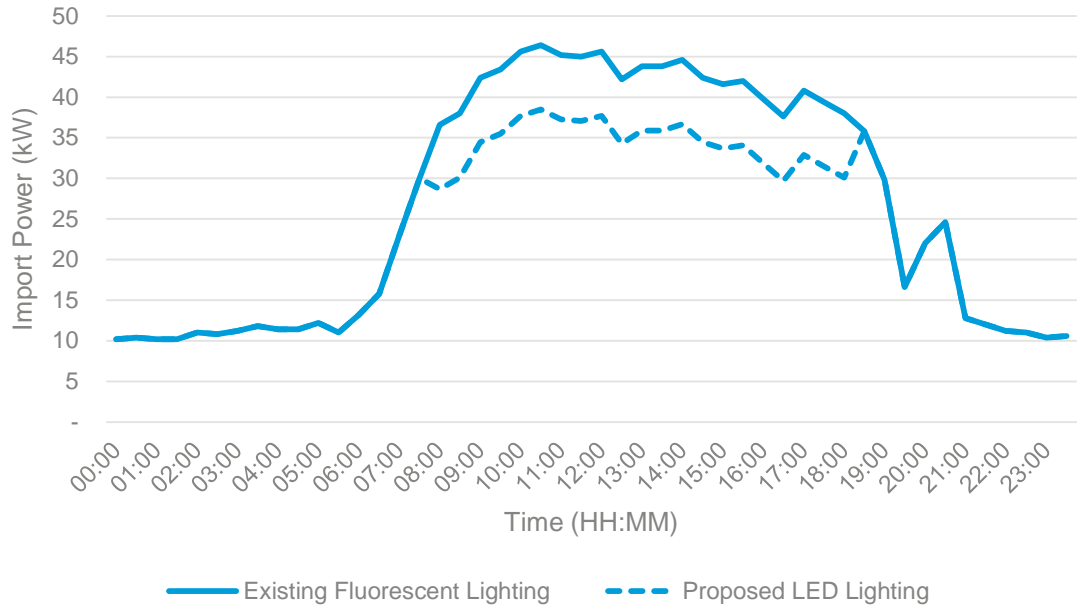
- impact assessment of the existing solar PV system



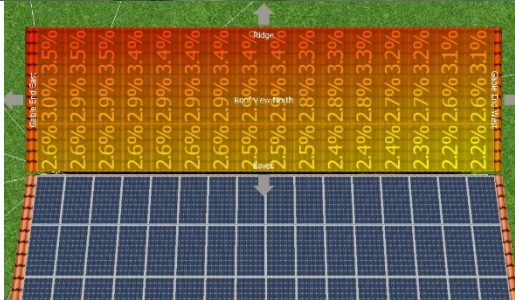
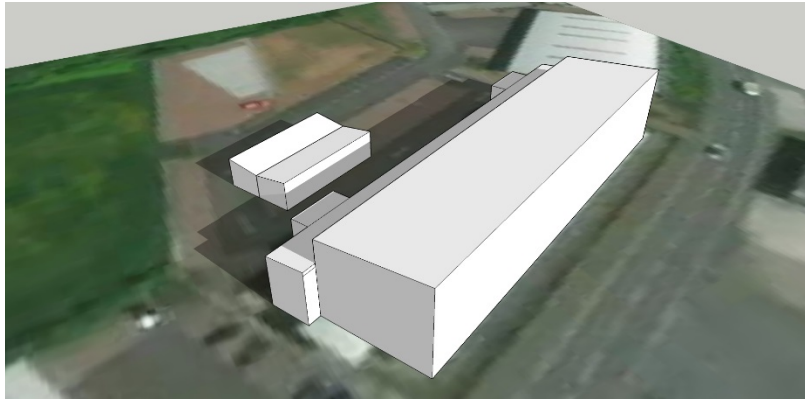
- Lighting



## Daily Import Power Profile with LED Lighting (kW)

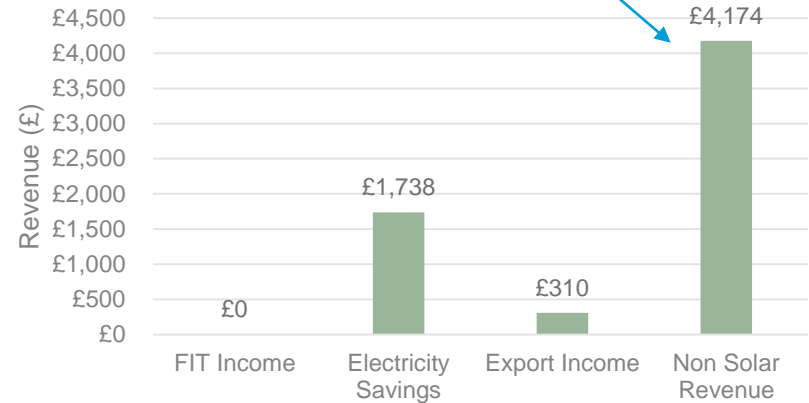


- Solar PV canopy

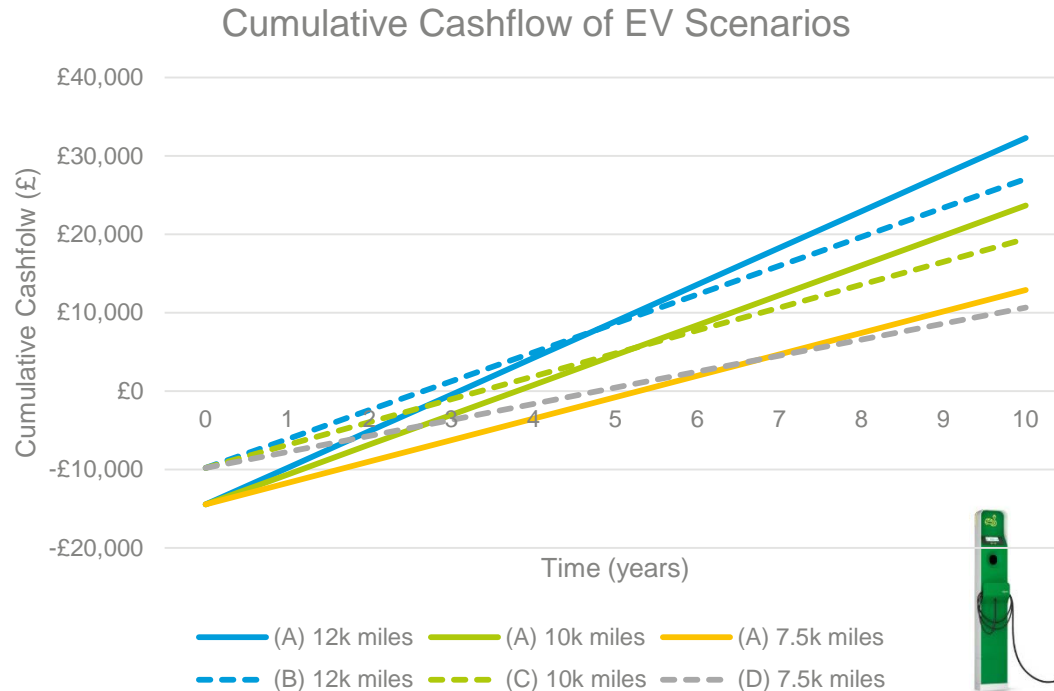


Based on 4 full car charges per day @ £1 connection charge and 30p/kWh unit charge.

### Year 1 Itemised Revenue Streams

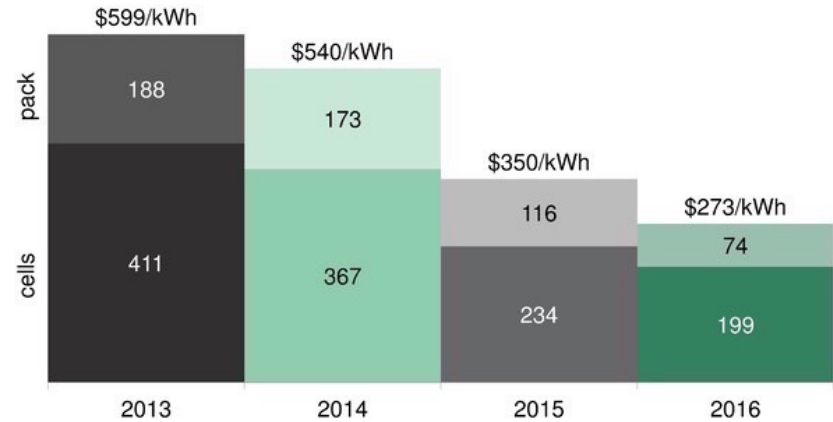
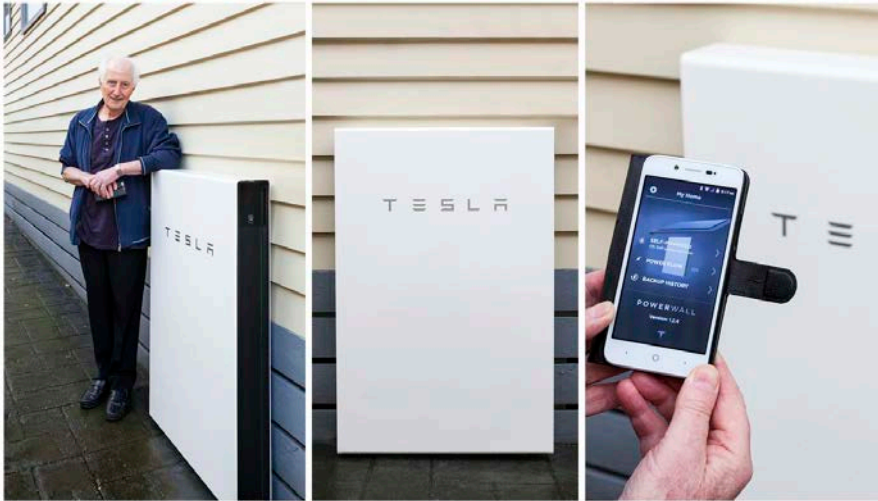


- electric vehicle (EV) fleet





- battery storage



## Ralph Retallack, Energy Efficiency Project Manager, Coastline Housing

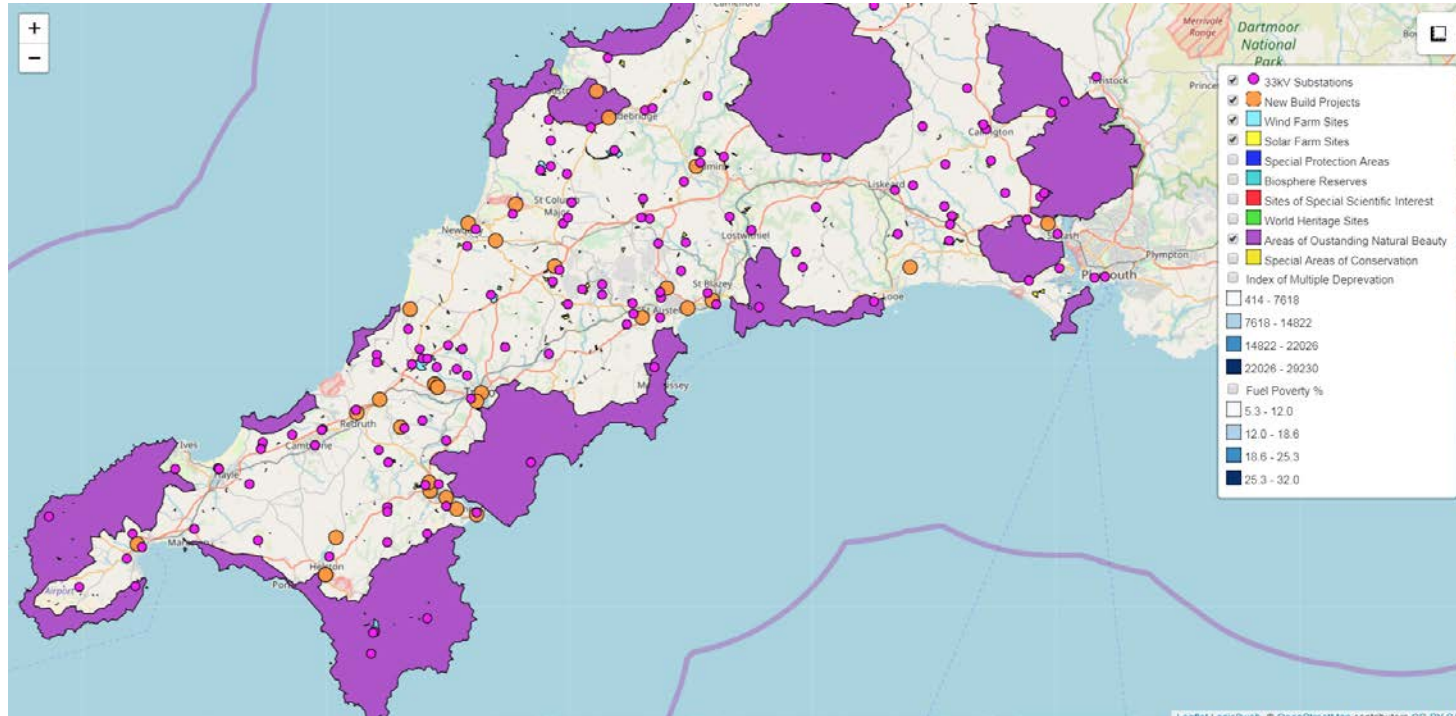


- Operate from Coastline House; competed 2011 and occupied Feb 2012;
- Grant funded but limited in its green credentials;
- One large building with approx. 120 staff who are office based;
- Approx. 4200 homes with a further 1000 new development homes planned over next 5 years;
- Roof based 80kW PV system installed 2015;
- Realised that we could be operating in a more sustainable way but where to start?
- Time to investigate, technical knowledge, budget to carry out identified work .....
- CNE offered the solution – “Potential Energy Saving Initiatives at Coastline House”
- This has led to Growth Bids being prepared for Solar PV Canopy with EV charging, EV Pool Vehicles, LED lighting;

## Coastline Housing working with Kensa Contracting



- Pilot project 2016 for 12 one bed bungalows, sheltered scheme utilizing CHF grant;
- Further two sites CHF extension for 16 homes;
- 2017, St.Keverne site – 8 homes;
- 2018, plan to complete circa 90 homes, mix of General Needs and Sheltered utilising WHF Round 1;
- Coastline & Kensa's heating upgrades will result in an annual average saving of £188 on each property's energy bill, and reduced CO<sub>2</sub> emissions of the properties by over four tonnes per year;
- Recognised at 2017 Cornwall Sustainability Awards; Best Contribution to a Sustainable Energy Economy (sponsored by CNE) and Winner of Winners.



## Thank you

Adam Longfield

Consultant

BRE National Solar Centre

[Adam.Longfield@bre.co.uk](mailto:Adam.Longfield@bre.co.uk)

01726 871835

[www.bre.co.uk/nsc](http://www.bre.co.uk/nsc)



Panel Q&A Session





**European Union**  
European Regional  
Development Fund

## Supplier Fair Introductions





**European Union**  
European Regional  
Development Fund

Thank you

CORNWALL  
NEW ENERGY

