



making energy work for everyone

Welcome

to



exeter community energy

Public Meeting

come and help make community energy a reality
Tues Feb 4th 18.45 to 20.45

exeter community energy

www.ecoe.org.uk



What's happening this evening

- 18.45 Arrivals, informal networking chat,
- 19.10 Introducing Exeter Community Energy and our team, Q&A, tell us why you are here.
- 19.50 Small Groups sessions
 - Involving the local community and optimising the benefits?
 - Choosing suitable roofs,
 - Our future projects,
 - How can we make ECOE's decision-making be truly democratic?
- 20.20 Feedback from small groups
- 20.40 What's next.





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“a community-owned social enterprise...”

Our vision is for renewable energy projects to create practical low-carbon solutions that address our reliance on fossil fuels and the associated climate impact...

... and which benefit our city, its people and the environment.



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Why Community Energy?

“Community-led action can often tackle challenges more effectively than government alone, developing solutions to meet local needs, and involving local people.”

(Community Energy Strategy: People powering change. DECC 2014)

- Reconnecting people to the energy they use,
- Strengthening the local community,
- Increasing energy security,
- Reducing energy bills,
- Promoting low-carbon practical solutions that alleviates climate chaos.



Climate chaos



Christiana Figueres -
Executive Secretary of the
United Nations Framework
Convention on Climate
Change (UNFCCC)

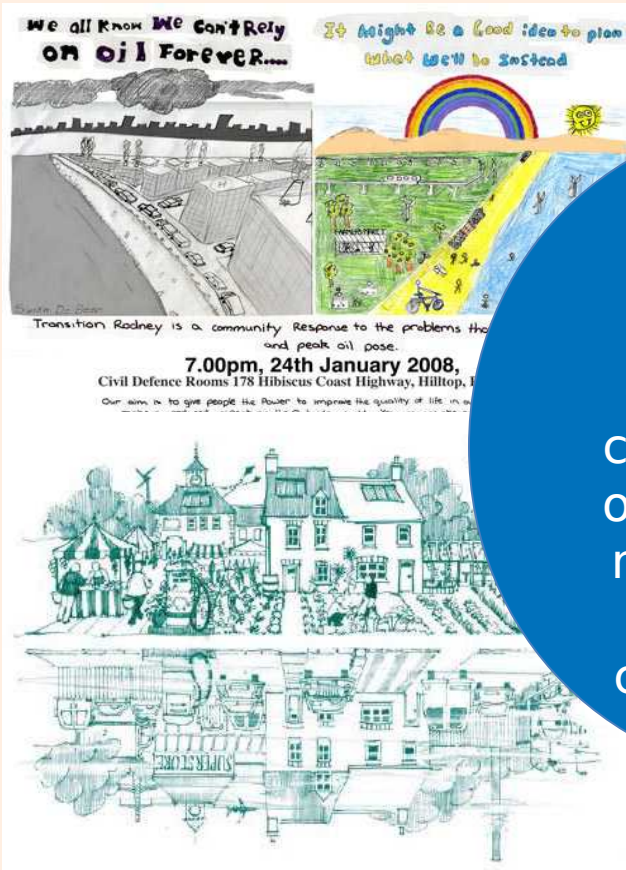
On mitigating climate change said -

“Yes, it’s complex. But frankly, do we have any other option? We don’t. So we are going to change the global attitude on climate change. We are going to change it to a can-do attitude. Yes, we can address climate change. And yes, we can address it in a timely manner. **Everything that you do is a contribution to that.**”

Kofi Annan (Former United Nations General Secretariat)

“If governments are unwilling to lead when leadership is required, people must. We need a global grass-roots movement that tackles climate change and its fallout”

Our Origins: The Transition Movement



'By unleashing the collective genius of the community we can design ways of living that are more enriching, satisfying and connected than the present.'



TRANSITION EXETER



Initiated 2006

- Large public meetings & debates
- Open space gatherings
- Newsletter to 500
- Skills training
- 5 working groups

DECC funded LEAF project:
home energy survey, energy
efficiency workshops and
Green Homes tours

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Our first Project: Solar PV1

- A total of 100kW solar PV on one or more sites,
- ~£150,000 CAPEX,
- 20 year project life time,
- Host site benefits: reduced energy costs, publicity,
- Funded by community share offer (**launch on April 2014**),
- Revenue generated from electricity production: PPA, feed-in-tariff,
- Returns used to fund future renewables and efficiency projects,
- A community fund will also be establish to return benefit directly to the community,

What is a co-operative?

"A co-operative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise."

The 7 co-operative principles:

- Voluntary and open membership,
- Democratic member control,
- Member economic participation,
- Autonomy and independence,
- Education, training and information,
- Co-operation among co-operatives,
- Concern for community.



Who are our members?

anyone who holds shares in the co-op!

Our first project will be funded through community shares

Features of our community shares:

- Withdrawable, Non transferable
- Primary return is a social dividend
- Expected interest rate 3-4%
- Minimum shareholding £50-£500
- Maximum shareholding £20,000
- One person one vote

Profits will be split between future renewable energy projects, community fund and return for shareholders

Solar Photovoltaics (PV)

- Most electricity generated from direct sunlight.
- SW has highest level of solar irradiation in the UK.
- Panels, tiles, or can be built into the fabric of a building.
- Best performance from angle and position - facing South at an angle of 30 degrees.
- Facing between East & West can be viable.
- Shading dramatically reduces performance & should be avoided.
- Structure of building's roof strong enough for weight of the panels.



Step 2 – system design

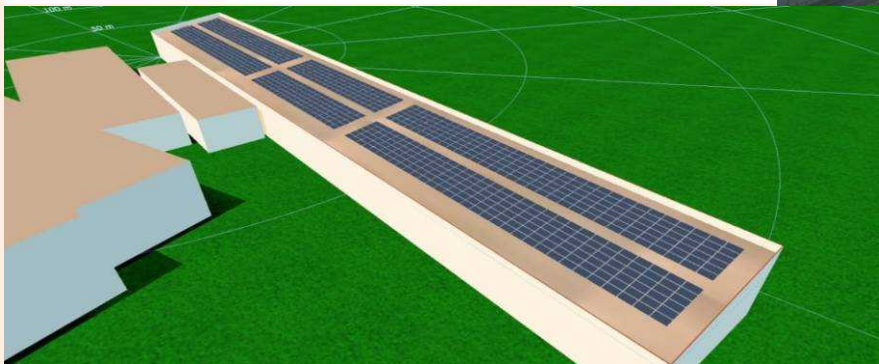
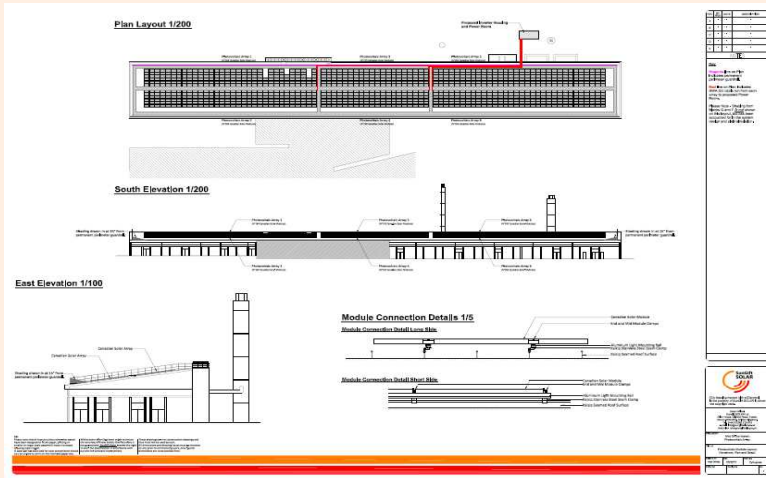
- Western Power (WPD) enquiry if necessary
- Use specialist PV industry software
- Build a 3D model of your property/roof
- Run shading analysis
- More accurate estimate of the amount of electricity generated by the system
- Inverter sizing



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**Case Study - Met Office,
Exeter:**

250kWp PV array
Estimated payback 7.3
years
Estimated return 13.5%



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The Team

- Sonya Bedford
- Mike Rowe
- Karan Toor
- Justin Butt
- Kay Rumford
- Amanda Penaligon
- Nathalie Cook

SUSTAINING OUR FUTURE THROUGH RENEWABLE ENERGY

Worldwide energy usage. Our needs are changing and increasing.

Worldwide energy consumption has risen by 46% in the past 20 years.

Energy Consumption in Million Tonnes of Oil Equivalent (MTOE)

WHERE DOES RENEWABLE ENERGY FIT IN?

% of energy consumed from renewables

In Europe, renewables account for 11% of primary energy consumption.

WHAT ARE WE USING OUR ENERGY ON IN THE UK?

On average 2.4 people live in a UK household using 4,600kwh of energy per year.

HOW IS STEPHENS SCOWN DRIVING CHANGE?

Our Renewable Energy team have been at the cutting edge of UK developments. The projects we've been involved in are producing:

- 35 MWG Projects already in the ground
- 40 MWG Projects in the pipeline

What does this mean to you? 30 mw is enough to power...

- 15,216 Quads
- 19,444 Dishwashers
- 22,757 Hairdryers
- 23,333 Microwaves
- 31,818 Toats
- 186,169 Fridges
- 164,319 LCD TVs
- 583,333 Stereos
- 700,000 Laptops
- 8,750,000 Phone chargers
- 1,166,666 Kettle boils

Where and how we've been involved...

OUR PROJECTS – KEY FACTS

Projects Stephen Scown are involved with and the power output (expressed as the number of cups of tea they will make)

1.437 MWG 47,900 cups of tea Wheal Jane The South West's first large scale solar park and the first site in the UK to gain planning consent	1.4 MWG 46,666 cups of tea Hendra Holiday Park The second largest solar park in the UK at time of opening in July 2011 with 1,000 solar cells on site	265 KW 8,833 cups of tea Goring & Streatley Hydro Aims to extract energy from the flow of the river. Therefore the equivalent to power the average electricity consumption of 500 houses
5 MWG 166,664 cups of tea Hayle Solar Park One of the first 5 MWG sites to go live in Cornwall and the UK	1 MWG 33,333 cups of tea Roof Top Solar 25 school buildings in Sussex	20 MWG 666,666 cups of tea Wave Hub The team consulted on property issues during development of the project, located 10 miles off the Cornish coast

Ilogan Green Ripple Project

The aim is to help households in the parish of Ilogan, West Cornwall to live with more understanding and reducing their energy usage and costs.

As always we could rely on the team at Stephens Scown to turn both the lease terms and construction contract around in very good time, with very satisfactory results as we consistently expect from them. A very professional service delivered without fault.

Edie Hyatt, owner of Hendra Holiday Park.

POWERING THE SOUTHWEST

Together, these projects have generated enough energy to power Exeter, Truro and St Austell

49,833 people Exeter	12,833 people St Austell	18,750 people Truro
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So what does this all mean?

Well, the world's energy requirements continue to develop and grow – renewable energy has a key role to play in a sustainable future.

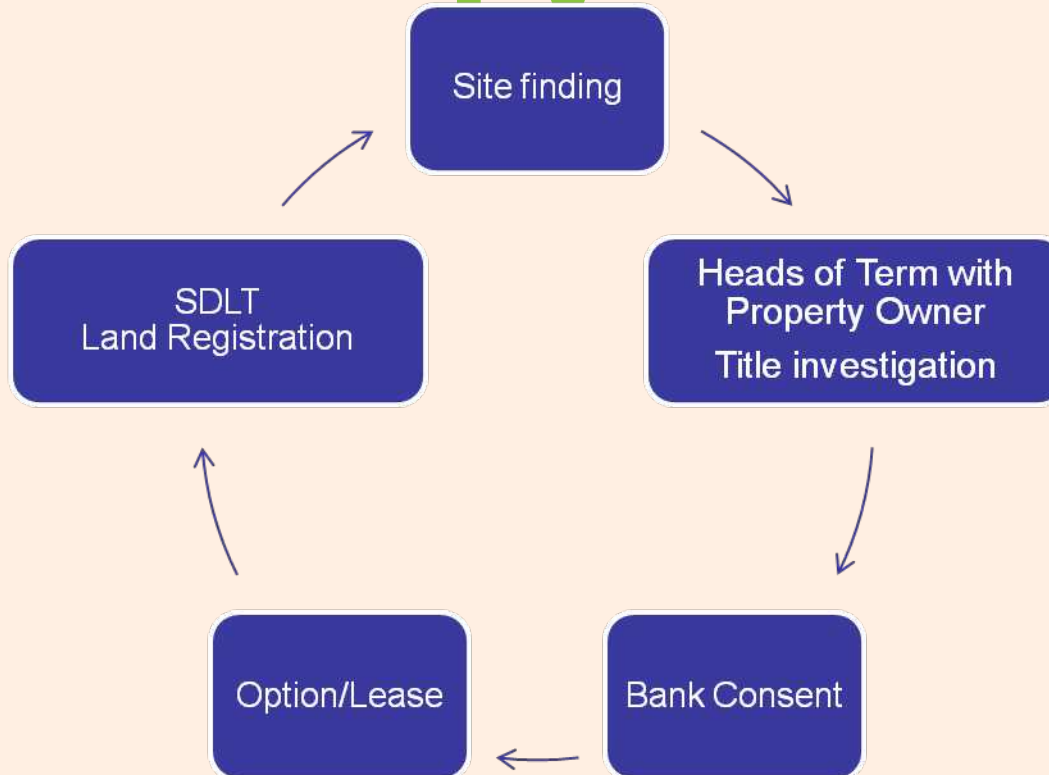
For more information on Stephens Scown's specialist legal advice on renewable energy please visit our website or email renewables@stephens-scown.co.uk

www.stephens-scown.co.uk

Source: Data from <http://yearbook.enerdata.net/> <http://renewableenergy.org.uk/> <http://renewableenergy.org.uk/>

The legal aspects of roof top

PV





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The future

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ECOE's potential impact

- Climate change
- Community fund
- Empowering people
- Fuel poverty and energy efficiency
- Creating a new local energy market
 - More renewables
 - Rival the big 6
- Being part of a new local economy

We are not alone!



**DECC
Community
Energy
Strategy**

Small Groups

1. Involving the local community and optimising the benefits,
2. Choosing suitable roofs
3. Our future projects
4. How can we make ECOE's decision-making truly democratic?



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Feedback and conclusions

So, what's next?

- Sign up for news,
- Volunteer,
- Tells us about your roof,
- Tell us if your are keen to invest

Green
Open
Homes
Weekend
of 5th
April,

**Communi
ty Share
Launch
5th April,**



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