

Evidence for RSE Scotland's Energy Future.

Notes – for meeting with Craig Denham Friday 8 June 2018

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These are my individual opinions, not statements from either ECSC or TE.

1. ECSC www.edinburghsolar.coop
 - a. Challenges included understanding how the Edinburgh Council works, risk averse and slow. We pre-registered application for FITs with a deadline of September 28 2016. This meant that installation had to be completed in a short time window. Our installers found working with schools in session was a challenge, which they rose to earning praise in some sites.
 - b. It is being a success. Members 5% interest on capital investment has been given out. The generation and income are close to predictions – see sheet up to April 2018.
 - c. The model can be and is being replicated over the whole of the UK. ECSC is currently planning a phase 2. Energy4All now has 23 energy coops in its 'family'. There are also independent coops, who have not worked with E4A, for example Harlaw Hydro. This raised capital by people buying shares, as ECSC members did. Some Development Trust groups, like Huntly, raised finances through loans not shares.
 - d. We are still discussing how to manage the community benefit fund. So far it has contributed to installing screens to display the generation in the reception lobbies of each of our host buildings. See page from recent newsletter. This is part of our awareness raising and education role as people find it all too easy to come into a building with PV panels on the roof and never notice the panels.
2. Transition Edinburgh <https://transitionedinburgh.org.uk/>
 - a. TE does not at present have an energy saving or generation project. We have a food growing project at Gracemount, run by Transition Edinburgh South.
 - b. Pathways to Zero Carbon Edinburgh is our major project. It is an online source of details of how a range of technologies and actions can contribute to reduction in carbon emissions and suggests what businesses, communities and individual can do to make a difference. The overall message is that we have the technology, given determination and political will becoming carbon neutral by 2040 is possible. This is inspired by the Zero Carbon Britain project of the Centre for Alternative Technology.
 - c. We support the City of Edinburgh Council in the ambition to become carbon neutral. This has involved many meetings with both elected Councillors and officials. Our Participation Request, under the Community Empowerment act, led to the drafting of the attached document. This is still under discussion. The items relating to carbon will have implications for energy in the city.
3. Energy Mix. Question 5
 - a. Renewable energy should continue to be expanded. As electricity is used for transport and heating the demand will rise. Wind turbines seem able to provide year round energy. Hydro can also. Both may be less productive in summer than in winter, which complements the value of solar generation. Nearly 50 years after the first launch of the idea of Stephen Salter's 'ducks' it is a shame that more has yet to be gained from wave and tidal power. Biomass is more controversial. Crops to burn should not be produced on high quality arable land suitable for food production. Wood as a fuel sounds good but is now seen to cause air pollution. Energy from waste has potential but we should all be told of the possible implications for pollution.
 - b. We should be reducing our use of offshore oil and gas, and of imports of gas.
 - c. Unconventional oil and gas should remain banned.
 - d. Nuclear power should not be replaced by more nuclear plants when the existing ones become too old to be safe.
 - e. Energy storage is essential. Pumped storage schemes are excellent to quick response to a sudden surge in demand. Batteries are being taken up by some domestic and business, so far these are for

short term storage. Long term, seasonal storage needs research and investment. Fife and Aberdeen have experience of using hydrogen as an energy store.

- f. As communities develop relatively small renewable energy systems the grid needs investment to make it more flexible.
- g. Energy efficiency should be part of any energy policy – finding ways to lower demand. Using smart technology to balance the grid so that there is flexibility and storage in the system, reliance on a constant base load provision to meet peak demand should become less important.

4. Climate Change and Renewable Energy Question 6

- a. The public profile of climate change needs to be raised, and government has the power to do this. People do change what is normal behaviour, for example wearing seat belts, not smoking indoors. In these cases public readiness was pushed by legislation. Climate change is not visible. More need to be done by all of us to overcome public apathy.
- b. There is a risk that people will see changes as ‘going back to the ‘50s’ and lowering living standards. Few should object to a definition of sustainability as ensuring the next generations have the same opportunities as the current ones. The public needs reassurance that change can be for the better – cleaner air, warmer homes, greater well being. Again, government should be taking the lead on this.

5. Ethics, social issues and Impact on Communities

- a. International and Climate Justice Question 9 Scotland should aim to be self sufficient in energy. Climate justice is important internationally. It is also important within Scotland, especially for ensuring that workers in the oil and gas industries are supported into new employment.
- b. Affordable energy Question 10 Some aspects of our present energy system should be changed. That the poorest, using prepaid meters, are charged the most per unit is unacceptable. Where a local group can set up an ESCO and create a fairer tariff system this should be encouraged. Some research could be undertaken to question whether expectations of cheap energy are unrealistic. The other side of that is that energy supply companies should not be making undue profits.

c. Communities Question 11

- i. Local generation Now many examples – see Energy4All papers and web site, Local Energy Scotland and the CARES programme (Community and Renewable Energy Strategy) and Community Energy Scotland. There may not be enough sharing of this in media to reach all communities. Owning a generating asset, whether outright or shared with a power supplier, provides a community with an income. As the people involved usually care about energy use, this is often used to improve the energy efficiency of local buildings, especially housing. Providing electric vehicles and charging point is also often part of the projects.
Examples, Eigg, Fintry, Huntly, Harlaw Hydro, Edinburgh
Grid constraints are an issue- Scottish Power is trying to move forward on this see SP Energy Networks Innovations Strategy 2018 which mentions a project Dumfries and Galloway Integrated Network Management.
The CARES schemes give financial support but reducing FITs by Westminster Gov has made developing a business case for a local project more challenging.

li. Community Empowerment Having an income by generating electricity is empowering for communities. Many are Development Trusts, supported by [Development Trusts Association Scotland www.dtascot.org.uk](http://DevelopmentTrustsAssociationScotland.org.uk)

lii Research into what communities can do and how they can be involved in planning local energy systems -

1. COBEN Community Benefit of Civic Energy
<https://www.alienergy.org.uk/community-renewables-local-energy-economy/coben/> This has worked in four areas to show what can be done. All are rural (if Oban counts as rural) Similar work is badly needed to inform cities of their energy options.
2. Changeworks project engaging residents of Peebles in retrofitting projects and behaviour change to become more energy efficient. Being extended to Penicuik. Transition Edinburgh hopes that it will be possible to collaborate in a similar project in an area of south Edinburgh.
3. Transition Edinburgh Portobello (PEDAL) drew up a local 'energy decent plan' some years ago. Transition Edinburgh has the aspiration to try to do something similar for the whole of the city, but we are not ready to start yet.

iv. Engagement of all

- a. 2050 Edinburgh City Vision One Year On. This is a document prepared for all stakeholders in the city, not merely the council. There are upbeat videos of contributors on the web site.
http://edinburgh.org/media/1140697/2050_Booklet_for_2017_event_dps_FINAL.pdf
http://videolike.org/view/yt=KK:aj4_E;E
 TE steering group is pleased to report that **becoming carbon neutral** is the top priority. See page 4 of the 2050 Vision One Year On document. This is the result of collating the hopes of about 5000 city residents. Abolishing poverty as we know it, improving our public spaces and becoming more caring are other shared ambitions. The energy implications becoming carbon neutral are not spelled out. Actions to achieve this ambition include the expansion of district heating, heat capture and more microgeneration. The 20150 team intend to engage with all the citizens and stakeholders in the city between September and November 2018 and to draw up a road map in early 2019.
- b. Edinburgh's Sustainable Energy Action Plan. (SEAP) the 2017/18 report published on May 15 2018 notes examples of collaboration across the city including Edinburgh Napier University, Changeworks and council tenants, WEA and NHS staff. Each of these contributes to increasing public awareness of energy issues.
- c. The Fullbright lecture at Edinburgh University on May 6, had Nicholas Stern as guest lecturer. He stressed the four years of behind the scenes work with international bodies to move from the disappointment of the Copenhagen COP event to the accord in Paris at COP 21 in 2016. Scotland needs the same effort to draw in all levels of government, public and private sector organisations, the voluntary sector, environmental pressure groups and communities. There has been and continues to be consultation on legislation about the CLIMATE AND energy issues. However the overall impression is of top down action not efforts to engage and promote taking part. In many discussions of this the need for trust as well as information is given as essential. Case studies of what different stakeholders have done helps to build that essential trust. Too often the culture of government, local or national, comes over as doing things to or for the people. Despite the Community Empowerment Act changing that culture to doing things with the people is a slow process.

6. Informed debate Question 13 Need for leadership from government has been mentioned above. More information could be made available to Transition groups and Development Trusts. As far as I know average building Energy Performance Certificate ratings for areas are available to councils but not to voluntary groups. Such information would help plan local action.