

## **Report of Edinburgh Public Engagement Event**

### **IET Glasgow: Teacher Building**

**3 May 2018**

*Note: The following is a distillation of a public engagement event held by the RSE Energy Inquiry Committee. The views expressed at the event are those of the attendees and do not necessarily represent the position of the Royal Society of Edinburgh.*

#### Committee Members Present

Prof Gavin Little

Prof Jan Webb

Prof Karen Turner

Prof Little welcomed the audience to the engagement event and provided background on why the inquiry was taking place, what it looked to achieve, and what the Committee hoped to gain from holding public engagement events. Prof Little noted that at this stage in the process the Committee was seeking input and not making recommendations.

Prof Turner then took the audience through a presentation on the context of the Inquiry, examining how energy is currently used in Scotland, and where this energy is generated. The room was then guided by Prof Webb through the 15 questions the Inquiry posed in the consultation document.

The first comments from the audience addressed the long history of discussion on the topic of energy in Scotland. The same questions on generation that were being posed a decade ago are still being asked today. For years it has been known that Scotland's nuclear power stations would go offline and simply attempting to extend the lifespan of Hunterston is not a long-term solution. When Hunterston shuts it is not clear how baseload for the country will be produced.

A new generation of nuclear power stations is required. It is strange that nuclear energy is not considered to be 'green' when it produces energy with no carbon emissions. 'Green' energy is being pursued at the expense of security of supply.

A member of the audience suggested that the biggest problem society faces around energy is linked to continued population growth and the desire from the public to enjoy an ever-increasing standard of living. Scotland does not produce a high proportion of the goods it consumes. Renewable sources are not sufficiently developed to negate the need for nuclear power and so another generation of nuclear plants may be needed. Fossil fuels remain cheap and so there is no incentive not to use them.

The next contribution looked at safety aspects and regulation. There is a general awareness that safety standards are too onerous and so discourage development. The attendee spoke of an incident which occurred in Taiwan in the 1980s whereby radioactive material from scrapped hospital machinery entered the supply chain and was used in the building of homes. This was only discovered years later after the residents of the new properties has

been exposed to greatly increased radiation levels for prolonged periods of time. Despite this it was suggested that no serious problems with ill health resulted.

A standout issue is that the public do not have a strong appreciation of where the energy they use comes from. There is a lack of perspective. A high amount of energy that is used to generate heat and electricity is wasted. This needs to change. The UK is increasingly reliant on imported gas; the cost and security of which is volatile. This could lead to important government policy being made without proper consideration.

There needs to be discussion over whether traditionally accepted concepts, such as baseload, are still useful in contemporary discourse. Smart technology may make certain aspects redundant. Fuel price is fairly inelastic. People will need to heat and light their homes, regardless of cost; it is other areas in which they will scale back to afford this. The Isle of Eigg is an interesting example of a different experience. Designated times are given for the islanders to use electricity. It is possible to drive behaviour in ways other than price points. Energy has an enormous impact on the economy. This is something that needs to be kept in mind if there is a move towards community renewables.

The next comment addressed the broad challenges faced by society and the changes the public will need to make to their lives to meet these. There are significant trade-offs around energy that the public should be aware of. Informed and respectful debate are necessary. Fuel poverty is an incredibly important issue. Those who cannot afford to adequately heat their homes are adversely impacted. The public need to question how their use of energy and how it is produced relates to their lives and the lives of their fellow citizens.

Improved energy efficiency is vital. Reducing our consumption would also reduce the need for generation. The problem we face is that the majority of the public do not see adequate incentive to act. This is where a strong regulatory body should step in for the common good. Currently, properties under a certain energy efficiency standard cannot be rented to tenants. This could be expanded to include the sale of homes.

There is a problem with the public showing a lack of interest in taking up even free schemes to improve the efficiency of their homes. A pilot scheme which offered free loft insulation had incredibly low uptake until a decluttering service was also included. Innovative further incentives may be required. If the installation of solid wall insulation will take the average homeowner 30 years to recoup the cost of, then nobody will do this.

It was noted that there is a related issue in Scotland of empty homes. This is addressed in the Scottish Government strategy and could be one avenue to deal with homelessness. Affordable housing should also be looked at as the cost of housing has increased in recent years. There are related public health problems.

An audience member noted that international challenges were being examined by other contemporary inquiries. The RSE inquiry should look to network with these other projects.

There are notable failings at the UK Government level. The UK does not invest in renewables at the same level as is the case in Scotland; which also has a stated policy of moving away from nuclear generation. Scotland has the opportunity to invest heavily in marine, wind and solar energy. These technologies provide a better outcome for everyone. District heating schemes should also be championed as they build local relationships. They do, however, require the correct regulation and oversight to have a lasting impact and benefit the local economy.

The next audience member to speak articulated the view that the single biggest challenge an energy strategy for Scotland faces is that most people have no real understanding of the energy system or how the existing network operates. Too often the view taken is overly simplistic. Very few people outside of those working on the grid have a genuine in-depth understanding.

We operate using a legacy system which was privatised as we went down a market route. The market model is very good at reducing the cost of energy, but poor at allowing a transition to something new.

New concepts continue to be discussed using outdated metrics. Renewable and wind generation should not be thought of in terms of Gigawatt hours as there is no control over when this can be produced and used. Similarly, the idea of capacity margin is no longer relevant. Problems are likely to occur on dark, autumn days when the wind is not blowing.

The analogy was given that the electricity network operates in much the same way as the human body. If its moves to far away from its optimal operating parameters is will cease to function. The grid will simply not work with certain forms of generation. These technical issues must be recognised and addressed.

Grid stability is of paramount importance. The general public needs more awareness of energy issues and cannot continue to expect to consume energy at a cost which is unsustainable. There is a danger that the focus of the debate will be too heavily on unit cost rather than wider costs.

It will be impossible to get the necessary political incentives without awareness of the issues and support from the public. The housing stock in Scotland is appalling in comparison to countries in Scandinavia.

Transport needs to be highlighted in the report. The Government documents looks at both electrification and hydrogen as possible solutions to decarbonising transport. It may be that electricity can be used for small scale transport with hydrogen used for larger haulage vehicles. Part of this equation is also looking at active travel. Car sharing, managing car usage and integration of public transport should all play a role.

The Grangemouth refinery currently imports a great deal of natural gas from the United States. This used to be produced in the North Sea. In doing so Scotland is potentially exporting a significant quantity of emissions abroad and allowing money to leave the UK economy.

We face a collective problem that requires individuals to take action. Attempting to encourage best behaviour from the public has not worked. Real will from Government is required to address this. Without the public perceiving there to be a significant problem there is no legitimacy for parliament or government to legislate.

There is significant tension within the Scottish Government strategy between the aspiration to move entirely to renewables, while also exploiting Scotland's fossil fuel reserves to their maximum.

**Craig Denham**

**Inquiry Secretariat**

