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# Response to Local Energy Policy Statement consultation.

The Orkney Renewable Energy Forum was founded in December 1999 with the following aims:

- To encourage the preferential use of renewable energy in Orkney
- To debate the best technical and sustainable options for increasing renewable energy and energy efficiency in Orkney
- Facilitate Research and Development in renewable energy and energy efficiency
- Disseminate information on renewable energy and energy efficiency
- To lobby on the strategic issues affecting the development of a renewable energy sector in Orkney
- To act as a consultative body on issues related to connecting Orkney to renewable energy markets

As a community and business based organisation it seeks to:
Promote all forms of renewable energy, and energy efficiency, and encourage such activities to be of benefit to the Orkney community and sustainability lies at the heart of this. The combined goal of reducing energy consumption and increasing the proportion of Orkney's energy supply that comes from renewable sources makes a contribution to global efforts to mitigate global warming, but additionally offers local economic and social benefits:

- Energy saving reduces costs to households and to businesses, increasing sustainability of the local economy and community
- The potential for building local expertise on renewable energy, becoming a test-bed for new technologies, thus creating limited local employment, with the possibility of exporting expertise
- As a centre of production for renewable energy, exporting to other areas, thus generating local employment maintaining and servicing production equipment, as well as providing farmers in Orkney with another avenue for diversification.

Overall OREF welcomes the Local Energy Policy Statement. The need to resolve energy issues at a local level is critical and precisely chimes with OREF's approach that it has been following for nearly 20 years. OREF thefore commends the Scottish Government Team for a useful and thought provoking document.

Before getting into specific detail of the questions posed OREF; would like to focus on some specific points that are supported:

> 1.6 *Affordable energy:*
> *As stated above, the Scottish Government understands that, in our pursuit of affordable energy within a net zero economy, additional costs may arise.*

OREF believes this is a particularly important statement as it acknowledges that improving our energy system cannot be done without cost. Excessive focus on <u>just</u> reducing cost will not efficiently lead to a better outcome. It <u>will</u> be necessary to invest to save and to see enduring benefits that may not be achieved at the lowest immediate cost.

Clearly it is important to achieve the necessary outcome as inexpensively as possible, but this must be measured in the round and all parameters taken into account. OREF therefore urges that suitable assessment periods be developed that should be commensurate with other infrastructure investments (25 years+ for roads and harbours) and cost benefit analysis be undertaken over this period with appropriate discount rates. Removal of short-termism is essential if a sustainable solution is to be delivered, not just a cheap, quick and cheerful one.

The need to protect the vulnerable consumer is well made and supported, but OREF firmly believes that a sustainable system will, in the long run, be cheaper for all of society.

> 1.7 *Driving demand reduction:*
> *Reducing Scotland's energy demand is a key component of the energy transition. Smarter energy systems, combined with more energy efficient homes and more empowered and knowledgeable consumers who have greater control over their energy, will be large factors in achieving a net zero economy*

OREF would like to stress that the 'reducing energy demand' will inetitably result in more electricity being consumed than now. Moving from fossil fuels to electricity is essential. Indeed the energy needed in some electrified applications is less than the fossil energy needed (EVs use around 1/3 of the energy to move a mile compared to a fossil fuelled vehicle), but they will increase the electricity used. Metrics to measure progress need to accommodate this.

> 2.*1 Only by recognising the individual charachteristic of an area, can proper consideration be given to the decarbonisation of the energy requirements of said area.*

OREF strongly supports this statement. OREF urges Government to recognise through policy implementation that edicts that come as 'one size fits all' will not work. Although seductively simple to impose, working with averages will inevitably lead to poor outcomes. This should be avoided and OREF urges open dialogue during policy development.

> Page 16. *Scotland's Islands:*
> *Our islands can be at the forefront of the transition to low carbon energy. The introduction of climate change adaptation and mitigation measures, whether increased revenue for island communities through renewable energy projects or the protection, recovery, restoration or enhancement of natural carbon stores (on land or in the sea) or the introduction of solutions to combat coastal erosion, can have a direct, positive effect on the local economy and environment.*

OREF would strongly urge that this point is more fully reflected in policy implementation. Orkney has suffered from its inability to secure better grid connections for decades. In part this has been because the normal CBA processes used by OFGEM have failed to recognise the benefit of the innovation being delivered by marine renewables and other technologies. By failing to account for them, the cost of inaction remains unaddressed and the UK's lead in marine energy is being frittered away.

A fullsome recognition that islands have part of the solution and are not merely an irritant is long overdue in some quarters.

> *2.8 Local energy planning and wider climate ambitions:*
> *The Scottish Government has supported a number of local energy systems demonstrator projects. However, these have tended to be done in isolation and did not take into account the wider energy systems in which the project was based. This needs to change.*
>
> *We need to see a step change in our approach to decarbonisation, one that takes a more strategic overview, covering larger geographical areas, and involving partnership arrangements at delivery level between local communities, energy network companies, local authorities, the public, and private sector*.

OREF completely agrees with this, however the public sector partners in many local partnerships are going to need to fundamentally change their attitude towards energy matters. To date they have either been absent from schemes, lamentably slow or in many cases hostile to renewables through supporting the sunset industries of the oil and gas sector.

**Hydrogen.** OREF does however challenge one underlying assumption: the role of hydrogen for heating. OREF is unusual in that it has three members actively involved in hydrogen activities (EMEC, Community Energy Scotland and Orkney Islands Council), so its views do come with specific knowledge and experience.

OREF is unconvinced that hydrogen should be used as a replacement for gas in heating. Whilst it is superficially attractive to swap one gas for another in the existing gas network, caution is urged as to how that gas will be finally used. OREF firmly believes that the sufficient heating of homes and businesses is a crucial outcome of an energy system and that the assumption that present systems need to be preserved is false.

Orkney is well aware of the challenges of producing green hydrogen and firmly believes that it is important to gain the maximum utility from the effort. Strenuously making green hydrogen to then see it burned inefficiently in poorly insultated buildings would be dispiriting. It would also be a terrible waste.

OREF therefore sees a crucial role for hydrogen as a <u>premium</u> fuel (mainly for heavy transportation), not one to produce basic heating comfort. It sees the delivery of heat through district heating partly provided by heat pumps and thermal storage as a more sensible means of delivering heat than piped hydrogen in most cases.

In the majority of rural and island areas district heating will not be possible and the current heating systems of oil and electric storage heating will need to be replaced with more efficienct heat pumps and high heat retention storage heaters. For heat pumps to be fully effiective many properties will require insulation measures to be installed as well as a new heating system. The costs of internal and external wall insulation in rural and island areas that have a very high percentage of detached

housing and dispersed housing is huge compared to urban areas. Funding levels for projects like the Home Energy Efficiency Programme for Scotland: Area Based Schemes (HEEPS: ABS) needs to reflect the fact costs are significantly higher in rural and island areas, otherwise both the insulation of the property and the required decarbonised heating system will be unattainable.

Orkney Islands Council is developing a Local Heat and Energy Efficiency Strategy (LHEES) which will form part of a medley of documents including the community led Orkney Sustainable Energy Strategy and the Fuel Poverty Strategy which all include elements around the decarbonisation of heat. OREF have been involved in the development of the LHEES and will continue to feed into future itterations.

## Answering the questions:

*1. Are you clear on the purpose of the statement? Please explain your view.*
Yes.

*2. What are your views on the 10 principles?*

The Principles seem well thought out and consistent.

The only omission would seem to be in Principle 1 which focusses purely on consumers. The drive to have more community generation will lead to community ownership models and socially motivated companies. There will therefore need to be a recognition of their needs and on occasions they may not perfectly align with those of their immediate consumer group on short timescales. The investments required may lead to short term cost to consumers which could be regarded as negative if the time horizons for measurement of impact are too short. This is precisely part of the issue with OFGEM's present limited mind-set.

As an example; it is hard for a community to justify the investment in a turbine unless they can be sure of the returns. However, many turbines are on electrical spurs which provide no fall back option in the event of local grid failure. This increases the risk to the project as export will be terminated during an outage to their single export path and so makes the finance more expensive since curtailment is more likely. OREF would point out that money is available through DNO plans to provide money to create resilience of supply to consumers in the form of redundant or switchable paths of supply. This is seen as important to properly serve the consumers. There is no such provision for generators. In the event that the generator is a community then they are both consumer and generator and their investment is at greater risk.

So recognising that the line between consumer and producer is blurring; placing consumers at the centre of local energy system development may need to be tempered. Note: this is not arguing that the principle is wrong. OREF fully supports the intent. We are just cautioning that some finesse in the definition may be required.

*3. How can the Scottish Government encourage stakeholders to adopt the principles set out within this document?*

- Make the principles clear and hold individual departments to account for showing they are being adhered to.
- Show progress.

- Ensure open discussion respects and values the contributions of all. It is OREF's opinion that this is patchy at best, but probably perceived by some sections of Government as good.

*4. Are you clear about the roles of all the different stakeholders who may be involved in the development of local energy systems?*

OREF feels it is clear in its responsibilities but questions whether all other actors are:

- OFGEM do not seem to take decarbonisation seriously. In 2010 they were tasked with decarbonising (see answer 11 later), but most decisions they take are still based on labyrinthine financial calculations centring around cost to the consumer. They have yet to show they have the vision necessary to deliver a decarbonised system, local or otherwise.

- Regional Development Agencies seem under equipped to understand the scale of the challenge and opportunity they face. OREF has seen little proactive work to decarbonise locally and feels more obstructed than supported.

- DNOs seem to be getting the message slowly, but mainly because they have disruptive competitors battering at their doors. They feel caught between an unsupportive regulator and a UK government narrative of lower costs. They obsess about 'Business as Usual' and are frightened of the inevitable change and the risk of challenge. It therefore feels as though decarbonisation is more of a side issue than a core one; this must change.

- Local Authorities have responsibilities to enable not obstruct. There remain pockets of entrenched resistance such as planning officers who seem under-equipped to enable the changes needed to de-carbonise. See answer 5 for examples.

Overall OREF believes that the Local Energy System transition will take time and assiduous effort to explain and embed new behaviours. There will be a lot of sacred cows slaughtered in the process and unless there is organisational buy-in along with policy, then there will be resistance.

OREF is especially pleased to see the recognition in the Statement that (Pg 13) …. *The Scottish Government understands that, in our pursuit of affordable energy within a net zero economy, additional costs may arise.* This 'grown up' approach is critical to turning perceived present 'costs' into 'opportunities for investment in the future' and should underpin all decisions. These decisions must not just be limited to just the costs of wires etc, but the costs of the risk of inaction and the opportunities offered by soft benefits such as employment and quality of life.

*5.* Note: The question in the text is different from the summary of questions. The latter asks:

> *How can we ensure that all socio-economic groups in all regions across Scotland will benefit from the transition?*

The text asks:

> *What options should we consider to ensure that the local energy transition is fair and inclusive for all consumers?*

The choice to decarbonise should be a 'no-brainer' at each step. Low impact products should be VAT free or else some other sort of nudge should be applied at the point a decision is needed.

- Any process to choose a low carbon product should be simple and be the natural default.

- Any public support should be simple. Examples of this not being the case are the way that EV charge point support comes from 2 organisations in Scotland and each runs a different

administrative process and the money arrives by a different route. This is unnecessarily complicated, needs to be rationalised and needs to be avoided in any future schemes. OREF would be happy to provide details.

- Funding support should reflect costs and geographical location more effectively. Insulation and heating installations can cost significantly more in remote and rural areas, where the housing stock is poorer and mains gas isn't an option. These areas need adequate funding to be able to support vulnerable households and undertake the required installations. Currently there is often a significant gap between the available funding, even when ECO and other funding is utilised, and the cost of the measures. This means households need to pay the difference and the vulnerable households cannot afford to do so.

- Policy support to do the right thing should be consistent. In Orkney we face opposition to the upgrading of windows to double glazing by one planning officer who is routinely obstructive. If this attitude pervades elsewhere then the decarbonisation agenda will be hampered. The issue here is the weighing up of different priorities and it is essential that everybody 'gets with the programme'. If this is the case then applicants should be being pulled towards better and better decarbonisation options rather then pushed away from them.

  Another example of the conflict of priorities has surfaced in EV domestic charge points. They sensibly benefit from Permitted Development Rights in planning law so enabling easy installation without unnecessary bureaucracy, but that benefit is then withheld from 14% of Orkney properties because they sit in the National Scenic Area. Whilst it is understandable that there should be protection from intrusive development in such places, the requirement to require planning permission for a shoe-boxed sized charger on a 1960s harled ex-council house is completely unnecessary, wasteful and obstructive to the push we need to electrify. By all means control things on listed buildings in such an Area through the Listed Building Consent, but this sort of wasteful red-tape needs sweeping away as it is 'off message'.

*6. How can we ensure that people and communities across the whole of Scotland can participate in local energy projects*?

- The provision of case studies and especially templates for further action should be made a condition of grants. Scotland will have to work out some particular techniques and approaches and having template agreements for some of these will be much more efficient than each individual area having to start from scratch and hand craft them. Examples would include:
  - The transfer of rights to use shared renewables following change of ownership by one sharer.
  - Maintenance of access rights to infrastructure in the event of land sale.
  - The requirement to maintain the flow of performance information from a scheme.
  - Data sharing agreements under GDPR.
  - Data formatting options and good practice for holding and sharing it.
  - Reconciliation processes for heat supply.
  - Boilerplates for notices to be served for heat main installation.

- It should be noted that the creation of a 'local' market will result in new and inexperienced players coming into that market. Innovation about ideas should not be stifled by the templates, but they should provide a starting point for the new entrants and reduce the barrier to entry.

- Definitive information needs to be owned by Government. There is a great deal of information out there, but some of it is internet dross and unreliable. Some key data sets should be collated and owned by Government for use in comparisons. So as an example: in order to justify the change of fleet from fossil to electric there will be a series of facts needed. It is easy to get the financial ones, but some of the environmental ones are harder such as:
  - What energy goes into making a fossil fuelled car and an EV?
  - What is the expected energy usage (miles/kWh) of some models?
  - What are the carbon emissions for various forms of transport at a reasonably granular level. (So the emissions per passenger mile on a flight from Edinburgh to Kirkwall will be different from a flight from Edinburgh to London due to aircraft type and flight profile.)
  - What are the emissions of the assorted ferries in Scotland?
  - How are specific public buildings performing? (Schools, hospitals, libraries)

Unless these are 'owned' by someone then it will be hard for areas to make their cases for schemes and it will be impossible for funders to weigh up the best investments. At present this is all dispersed and collation is necessary by some sort of agency.

*7. What do you think the wider benefits of developing local area energy plans might be?*

a. It will be possible to focus electricity network investment onto transmission or onto alternative energy vectors rather than waste money on local electrical upgrades that can be rendered unnecessary by more smart usage.

As an example; OREF understands that SSEN are now requiring builders to provide larger sub-stations in new housing developments than was the case before citing the forthcoming electrification of transport. However all studies show that the housing is being built to higher insulation standards and generally being heated by heat pumps. Onsite generation and storage is allowing self consumption of electricity. Together they are lowering the demands on the electrical network at a substation level. In addition most commentators now recognise that most EV charging will be done at night and off peak through smart control so as to ensure no increase in electrical peak demand. Since the substations are sized to handle the peaks it is unclear how bigger substations are being justified.

The effect of an overcautious and poorly thought out strategy is that builders are putting in more expensive equipment than needed leading to higher building costs which are passed onto the residents. At the same time the builders are not incentivised to provide the necessary EV charging infrastructure for the late 21st century.

b. The more effective consideration to the delivery of heat rather than just the delivery of fuel is overdue. OREF looks forward to the forthcoming heat strategy.

c. The development of a local energy market will see local optimisation of energy resources and opportunities. In addition the sensitisation of local energy users to the issues will enable further renewable developments to be seen as in the national interest (or indeed local interest) and should help melt some opposition.

*8. How can we encourage greater collaboration between the key parties involved in the development of local energy plans?*

All parties need to feel both the gain and the pain of the decarbonisation process. On the face of it there appear to be vehicles to deliver cross organisational cooperation, but in OREF's experience there are few on these groups with any insight into how energy works or what is possible.

As an example: The Orkney Partnership comprises 5 main organisations and is supported by 14 others. There are only a handful of energy professionals within the organisations and energy is rarely discussed. When energy is discussed it is understood that it has often been about the need to support jobs in the sunset industries of oil and gas rather than the opportunities provided by renewables.

OREF believes it is important to upskill society in energy issues and then work with social groups and networks to drive change. Government will have a role in this, however it is probably more likely to be effective if the existing inter-relationships are used rather than seek to generate new ones. This is more about there being present ignorance than it is about an unwillingness to work together.

*9. How do we ensure that whoever is leading a local energy plan is fully integrated into the LHEES process?*

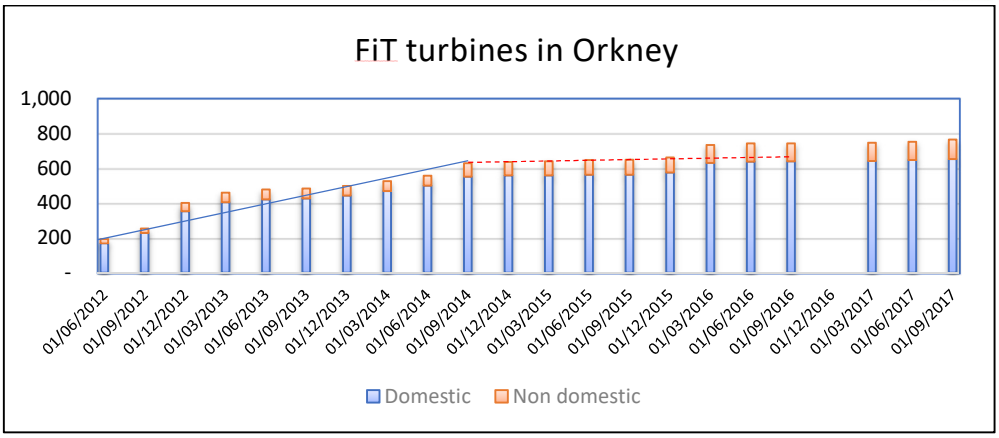
Orkney's Local Heat and Energy Efficiency Strategy is currently being developed by Orkney Islands Council's Housing Service as part of a polit project through the Scottish Government. The LHEES is discussed at the wider Energy Stakeholders Group to ensure that partners, including OREF, are sighted and included in its development. Orkney has already produced a Sustainable Energy Strategy and there is significant cross over in relevant areas between the two strategies. If the Local Energy Plan is the responsibility of local authorities it is up to the local authority to ensure that both strategies are lined up and integrated.

It is also important to note that both a Local Energy Plan and the LHEES need to be developed by staff with a real understanding of energy, heat, fuel poverty and energy efficiency projects programmes and work with households and communities. There have been statements made that Planning should be given more responsibility in the development of these plans and OREF feel that this would be a huge mistake as Planning officers have next to no experience or knowledge around the intricacies of energy efficiency and energy.

*10. What infrastructure challenges are you aware of that present an obstacle to delivering local energy projects? What actions would help solve the issue?*

- The lack of models for good district heating schemes is leading to a blind spot as to the opportunities presented. **Action**: Install some demonstrator schemes and set them up to show the art of the possible. Ensure that the legalities around the systems are worked through and template information made available to potential 'follow on' schemes. i.e. easements, access rights, metering and billing, dispute resolution, service levels etc. See answer 11 about Shetland's experience.

- The inability of the DNO to recognise the need to <u>enable</u> local flexibility and to help champion it. OREF would point out that a moratorium on new generation connections was introduced by SSEN unilaterally in 2014. That saw the immediate stifling of a nascent micro-renewables sector in the county.




In response to howls of local protest SSEN did little more than shrug. Since then they have made little or no attempt to find ways to enable more generation claiming that '*Orkney has had its turn and now they are focussing elsewhere*'. This myopic view of the scale of the progress we need to make will not serve Scotland well and needs to be more effectively challenged. In their defence they are regulated by OFGEM in a manner that is not conducive to decarbonisation and change, however SSEN's response was lamentably poor and Governments challenge of it completely absent.

- Delivery of new grid infrastructure investments. OREF was amazed at the recent refusal by OFGEM to sanction the replacement of the faulty cable across the Pentland Firth. This decision criticised SSEN's submission, but the outcome of that particular spat is that Orkney will see power cuts, renewables will be curtailed and research programmes at EMEC will be adversely affected. Those costs are not accounted for in OFGEM's calculations.

  The provision of a bigger interconnector has taken over 15 years to get to a point where it has been approved. However the conditions imposed by OFGEM show a complete lack of vision as to the generating potential of the islands. As a result the decision is more of a 'maybe' than a definite yes and so developers are still left wondering if Orkney is the place to invest. Plans therefore stall and investment looks elsewhere. In other words a feeble and somewhat cowardly decision by OFGEM (seeking to be above reproach rather than show any leadership or spine) has led to a continuing uncertainty which drains investment away from the isles.

  Due to OFGEM's limited view of its responsibilities (see answer 11) it fails to see the social impact of such decisions and walks away from the mess it has caused. OREF cites this as a specific example of how the regulator's principal duties are now out of step with the nation's needs.

*11. What other actions could the Scottish Government take to ensure Scotland will have the necessary infrastructure in place to enable resilient, local energy systems?*

Experiment. Systematically find out what works elsewhere. Be willing to learn from elsewhere.

- The tasking of the Scottish Investment Bank to support green initiatives is welcome. It will have to be better at this then the Green Investment Bank which was a disaster. It played safe and became irrelevant. The Scottish Investment Bank needs to be kept out at the leading edge of green innovation.

- Scotland needs to have the humility to learn from other countries and find to how to install heat main infrastructure. It is widely done in mainland Europe, particularly the Nordic states and Scotland needs to seek out the best practice and deploy heat mains for the 21st century.

  As an example; Shetland has a district heating scheme. It is successful, cost effective and popular. However it is being prevented from expanding through inappropriate legislation that is stopping it adding the output from a wind turbine into the heat network. This is wrong. However it is a matter of restrictive policies rather than the physics not working. This could be changed.

- Ensure that all parts of the Scottish state play together. OREF has experience of the Scottish Futures Trust exhibiting undue, if not bullying, influence over the local NHS which led to the delivery of an 'average' hospital after there were assurances in the Chamber that a 'green hospital' would be constructed. The combined inertia of a weak local NHS Board desperate for a new hospital, SFT needing to see a project at the minimum acceptable standard and cost along with a contracting strategy that failed to incentivise innovation all led to a sub-optimal outcome.

  Orkney now has a new 'average' hospital that will tie the local NHS into excessive fuel bills for the 25 years of the contract. This was predicted but ignored as a result of the attitude of SFT and the lack of a contractual model to incentivise efficiency.

- OFGEM: The role of OFGEM needs to be expanded to cover the regulation of heat distribution. It already covers the distribution of two of the fuels that heat most homes. With the anticipated increase in focus on district heating and heat delivery as a product and service, it is logical that the delivery of heat should itself be similarly regulated. At present this is not really needed since the fuel-to-heat conversion takes place in the home or business. In a de-carbonised local energy system the purchase of heat as a utility service is inevitable and so the regulation of its supply is essential.

This will require an expansion of OFGEM's remit from just gas and electricity, but it will also provide the opportunity to better calibrate OFGEM with the decarbonisation agenda being established by all governments. OREF believes that some of the present issues being encountered with OFGEM's decisions (often seen as perverse) can be resolved through a more effective tasking of OFGEM by Government. OREF also believes that such a re-tasking may not require primary legislation in Westminster as the power to intervene and issue guidance on matters of sustainability are already in place. Section 3A of the Electricity Act 1989 says that

*3AThe principal objective and general duties of the Secretary of State and the Authority.*

(1)The principal objective of the Secretary of State and the Gas and Electricity Markets Authority (in this Act referred to as "the Authority") in carrying out their respective functions under this Part is to protect the interests of existing and future consumers in relation to electricity conveyed by distribution systems or transmission systems... .

(1A)Those interests of existing and future consumers are their interests taken as a whole, including—

(a)their interests in the reduction of electricity-supply emissions of targeted greenhouse gases; ...

(b)their interests in the security of the supply of electricity to them; and

(c)their interests in the fulfilment by the Authority, when carrying out its functions as designated regulatory authority for Great Britain, of the objectives set out in Article 36(a) to (h) of the Electricity Directive.

(1B)The Secretary of State and the Authority shall carry out their respective functions under this Part in the manner which the Secretary of State or the Authority (as the case may be) considers is best calculated to further the principal objective, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the generation, transmission, distribution or supply of electricity or the provision or use of electricity interconnectors.

(1C)Before deciding to carry out functions under this Part in a particular manner with a view to promoting competition as mentioned in subsection (1B), the Secretary of State or the Authority shall consider—

(a)to what extent the interests referred to in subsection (1) of consumers would be protected by that manner of carrying out those functions; and

(b)whether there is any other manner (whether or not it would promote competition as mentioned in subsection (1B)) in which the Secretary of State or the Authority (as the case may be) could carry out those functions which would better protect those interests.

(2) In performing the duties under subsections (1B) and (1C), the Secretary of State or the Authority shall have regard to —

(a)the need to secure that all reasonable demands for electricity are met; and

(b)the need to secure that licence holders are able to finance the activities which are the subject of obligations imposed by or under this Part, the Utilities Act 2000, Part 2 or 3 of the Energy Act 2004, Part 2 or 5 of the Energy Act 2008 or section 4, Part 2, , sections 26 to 29 of the Energy Act 2010 or Part 2 of the Energy Act 2013; and

(c)the need to contribute to the achievement of sustainable development.

OREF would point out the guidance was issued by the then Secretary of State in 2010[1] but has not been refreshed in the light of the recently declared Climate Emergency.

In a Scottish context; OREF notes the requirement under Part 6 of Section 64 of the Scotland Act 2016 for Ministers to lay OFGEM's annual report and its plans before the Scottish Parliament. OREF feels that to date these reports have been somewhat self-congratulatory and barely seem to touch on carbon matters. OREF would urge Scottish Ministers to use this opportunity to effectively scrutinise the effectiveness of OFGEM in delivering reduced greenhouse gas emissions and decide whether pressure should be brought to bear on the Westminster Secretary of State to refresh the nearly ten year old direction.

[1] Social and Environmental Guidance to the Gas and Electricity Markets Authority (DECC 2010)

- Smart charging of EVs will need to become the norm. This is being enabled by OLEV in Westminster, however as shown in answer 5 above there remain issues with effective policy alignment, especially in terms of Permitted Development which is devolved.

  In addition the untenable position of local authorities being the prime provider of public charging infrastructure will need to be addressed. A private provider will need to come in at some point in the same way that the private sector provides patrol stations. However in the absence of charges for charging an EV it is inconceivable that a business model will develop and so the public purse will continue to be left funding electricity costs.

  This will need to be addressed and in Orkney OREF pushed hard to get sensible charging policies introduced. It has to be said it was an up-hill struggle. In the end some sensible charges were established (against the advice of Transport Scotland), the public assets were then freed up and costs to the public reduced.

  Orkney now sees a way forward for charging EVs, but there remains no capacity in the local authority to engage and plan a coherent charging and divestment strategy.

*12. What significant barriers are there to the replication of existing local energy projects and systems in Scotland that this policy statement should take account of?*

The need for there to be competition between areas is counter productive. There seems to be a lack of joined up approach where each area is often locally supported to develop plans and strategies in isolation (often paid for by the public purse). Such plans are often seen as a means to attract funding and therefore are seen as bidding against other areas. This leads to a fragmented development.

The formation of clusters of different areas that can support development has been suggested for hydrogen across the north and North East of Scotland. This approach should have a more strategic emphasis and link projects across geographies to deliver industry development. This could be utilised within other areas/sectors and be financed appropriately. OREF has existed for 20years and the Orkney clustering that it has promoted and engendered has been recognised as an example across the globe despite the minimal, if not parsimonious, funding it has received.

As mentioned earlier the lack of vision of the funding agencies has not helped, but their rather belated recognition of this as an issue is welcome. OREF understands the limitations that pubic organisation have but any economic development agency should be the funder that helps take the risk out of innovative projects rather then the gate keeper of funds. It is anticipated that a re-calibration of all the agencies of government will be required and OREF would be very willing to provide further specific examples of helpful and unhelpful interventions it has encountered over the last two decades.

*13. What actions can we take to accelerate the focus on economically and commercially viable low carbon local energy solutions in an inclusive way?*

- For there to be economically and commercially viable projects there needs to be a healthy stream of R&D.

  A spectrum of demonstration activities needs to take place with sufficient public funding to enable them to succeed. All too often such demonstration activities are parsimoniously funded only to the point where they struggle into life. As a result projects are often badly constrained

and fail to thrive early enough in their lives. Their trajectories of success therefore become flatter than they might.

As an example; the support rates for projects involving a large company are 20%-25%, whereas some organisations can receive 100% funding. It is difficult to get a multinational's board to be willing to invest 80% of their own money in a R&D project and so a lot of creative effort is wasted on seeking to get them to play along. Whilst it is often blamed on 'State Aid' rules it is clear that the UK's approach to these rules is extremely timid and OREF would urge the Scottish Government to seek to aggressively challenge the status quo. To be blunt: we will not win the battle over the climate by having one hand tied behind our backs.

- Public Servants should be more aggressively tasked with supporting initiatives. There has been a developing trend of expecting 100% success from projects and this is both unrealistic and hampering to innovation. It is necessary to try some ideas and processes that are more experimental and marginal; we must anticipate occasional failure because that is the nature of research and development. If we do develop a more risk taking environment the rate of progress will be faster as some 'marginal bets' will unexpectedly come off and move the agenda forward.

- Scotland needs to have the combined efforts of SE & HIE pushing forwards in concert (as opposed to against) business.

Adopt the funding approval version and accountability used by SE rather than that often applied by HIE; the latter seems overly procedural and generates a significant management overhead.

*14. How can we ensure that Scotland capitalises on the economic opportunities from the development of local energy systems?*

There is much in Section 5.2 about cementing Scotland's place that OREF specifically agrees with:

- *'We are recognised as a world leader in marine energy*
- *'There has never been a greater opportunity to capitalise on decarbonisation efforts.*
- *'We need to act now to consolidate our efforts and lead*

However we also need to recognise that our focus on oil and gas exploration for fuel is fundamentally unhelpful to a sustainable energy system and Scotland's lead in this sector needs to be relinquished and left behind.

The UK's industrial Strategy has a shorthand approach of:

Invent it, design it, build it, use it and then sell it over and over again.

This is precisely what Orkney is trying to do. However it needs far more support than it is getting for its initiatives. It routinely feels as though it is having to fight various elements of government because 'they know best' when we can see they do not. OREF is not saying we know all the answers, but we have some of the answers and we demand to have our views listened to and our experience respected.

Specific examples include a somewhat dismissive attitude from Transport Scotland on matters relating to EVs. OREF has sought to engage time and time again, but rarely finds an interested or engaged ear. OREF finds this both surprising and disappointing but has almost become inured to the battle to be had over even the simplest matter.

This consultation response is not the time to air the specific issues, but OREF would like to take the opportunity to ask that Transport Scotland's EV team be specifically tasked with more openly and honestly engaging with those communities who have relevant and useful experience.

*15. Do you have any opinions on the initial focal typologies chosen?*
OREF eventually traced this to Scottish Enterprise funded project by Riccardo dated June 2019.
http://www.evaluationsonline.org.uk/evaluations/Documents.do?action=download&id=946&ui=basic

The done work is useful in that it collects experience from elsewhere, but it is not clear to what end the typologies will be put. The selection of the 4 main typologies to help direct Scotland's efforts is understood to include:

- Islanded rural communities
- Off gas grid towns
- Industrial towns
- Industrial parks and campuses

OREF agrees that Scotland has experience in some of these areas, but would strongly urge that the experience is sought form the communities and active participants. Do not reply upon the supposed experience of the development agencies as their experience is somewhat second hand in many respects.

OREF is also surprised that only 15 energy related businesses are shown for the entire HIE region as opposed to 177 for the rest of Scotland. OREF itself has over 30 business members in Orkney. It is unclear how this figure was arrived at, but OREF wonders if it is symptomatic of the lack of engagement by HIE staff in energy matters that this figure is so low and is such an underestimate of locally applied effort.

OREF also wonders about the motivation of this report. An initial poll of OREF members has shown that it appears to have been completed in a 'blaze of silence'. No-one could recall having been spoken to about it (even though Orkney features) and none to the ReFLEX consortium who have some profile in this space and are mentioned on page 69.

OREF would have expected that it should have been the first point of contact for this type of engagement and would normally invite members to participate in shaping the information from an Orkney perspective. This was not done which seems unfortunate as it is an opportunity missed.

*16. How can local energy considerations become business as usual for industry?*

It is essential that local energy becomes **visible**. A means to demonstrate energy flows in networks is desperately needed. This requires systematic monitoring and also the development of displays and icons to enable easy engagement. By bringing simple and consistent tools to businesses decision making processes it will be possible to generate attention and drive investment. The corollorary being that if it remains unseen; it will remain untackled.

The **narrative** needs to be developed of one of national progress in both reducing and decarbonising our energy system. It needs to be a matter of personal pride of the progress we make, and one of social censure of those who choose to obstruct the programme. We have done this with other visible social 'evils' such as smoking, littering, sexism, drink driving etc and they have been the result

of a mix of increasing public awareness through active governmental campaigning, but also of providing social licence for groups and others to highlight when behaviour is seen.

Part of this raising of business' awareness will come from the views of the employees. If the staff are bought in then the businesses will need to follow. To that end it is essential that any campaign to drive energy systems has a 'personal' dimension. The pester-power of a MD's children may be as effective as shareholder opinion on occasions!

In Orkney there is a pride in the generation figures achieved to date, but that is entirely the result of local private initiatives. There has been no assistance provided by the state.

**Visitor Centre:** There is a desperate need for a visitor centre relating to energy matters in Orkney and OREF is keen to find a way to bring this about. OREF believes Orkney has a compelling story to tell, but lacks the wherewithall to show this to a wide audience systematically.

Orkney has been very effective at using its assorted small businesses' PR activities to highlight progress and has been supported by investments made in digital media by HIE and the Council. OREF has been briefing professional tour-guides on renewables matters for a number of years and there are reported to be increasing numbers of tourists coming to see the energy activities in the county.

Unfortunately most renewable initiatives are of a small scale and lack the bandwidth to establish a visitor experience. Each would inevitably be willing to contribute, but cannot shoulder the burden of initiating a visitor centre. Since the introduction of local energy systems will inevitably require a change in hearts and minds of both locals and visitors alike, the need to centre a systmatic campaign around a visitor experience is critical.

Finally the outcome must be to **normalise** the 21st century's energy system.

The fact that people will have and EV, home energy storage, renewable heating, be driving past wind turbines as they commute, know people living in houses that are being retrofitted (or have moved from an old draughty house into a new insulated one) all need to be part of the 'normal' Scottish narrative. This is already happening in some TV dramas and one occasionally sees images of renewables in the 'weather photos' after the news, but it needs to be even more normal.

Scottish Government publications should drive this message further. As examples there are 4 photos in this document. Only one shows renewables. The Scottish Government's Programme for Government has 41 photos, none of them feature renewables and only one shows any energy infrastructure. More needs to be done and the graphic designers of Government publications need to be tasked to bring this narrative into view.

END.