Response to Scottish Parliament Economy, Energy and Fair Work Committee "Energy Inquiry – Call for Views"

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ECONOMY, ENERGY AND FAIR WORK COMMITTEE

ENERGY INQUIRY

SUBMISSION FROM **Mags Tingey, Fabian Fuentes Gonzalez, Jan Webb and Faye Wade, *Heat and the City*, Sociology, School of Social and Political Science, University of Edinburgh.**
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Local Energy

1. The appropriateness and achievability of the 2020 and 2030 community and locally owned energy targets. What are the key issues impacting the viability of relevant schemes?[1]

- Opportunities for local energy trading and sale to local end-users remain unclear: these are important in a 'subsidy free' regime because sale of energy to customers garners a higher price than export to grid. Investment in local network infrastructure, smart/flexibility services and technologies, and appropriate regulatory mechanisms – including those which facilitate and reward local access to the market – need to catch up to enable community- and locally-owned energy participation. Scottish Government and MSPs need to work with UK Government and MPs to advocate regulatory change in reserved areas of policy. Current mechanisms for local access to electricity trading include 'sleeving' arrangements (power purchase agreements, PPAs) or private wire, but these are costly: PPAs usually require long term contracts; private wire unnecessarily duplicates network infrastructure.
- Energy storage – including thermal storage – should be advanced under local energy policy to reduce network infrastructure costs. 'Energy storage' should include cost-efficient thermal storage[2].
- Reducing energy demand, especially in buildings, is essential to meeting net zero emission goals and must be further prioritised and promoted within the development of locally-owned energy systems. This includes through Local Heat and Energy Efficiency Strategies (LHEES).

2. Whether it is appropriate to incorporate community and locally owned schemes in the same target and policy area? What more could be done to encourage and support community owned schemes?

- Scottish Government needs a single strategy that creates clear opportunities for a variety of ownerships models to be pursued. Further work is needed to explain the opportunities for community and local ownership in a 'local energy system', and how such systems can be developed[3] under a direct framework. This includes a strategic approach, which avoids dual investment in competing network infrastructure in the same area, with potential for stranded assets.
- More could be done to encourage and support community owned schemes through a single statutory requirement for Local Area Energy Plans. At present multiple forms of local energy plans are under discussion: Local Heat and Energy Efficiency Strategies (LHEES), Energy Plans and Community-led Local Energy Plans; this causes confusion and unnecessary, potentially counter-productive, work. It would be more effective to consolidate all local energy plan

proposals into one *required* strategy that includes input from community groups and organisations, building for example on Community Planning Partnerships. A Local Energy Plan should include heat and energy efficiency, coupled with transport, storage and industrial decarbonisation, and should be designed to share knowledge about community investment opportunities across social networks.

3. Do CARES Grants and Loans adequately support relevant projects?

- CARES grants and loans have contributed to the development of a community and locally-owned energy generation sector, including recent capacity growth from 204 MW in 2012 to 697 MW in 2018[4]. Given current (and new) incumbents, the sector could be strengthened. Early stage entrepreneurialism however, still needs revenue support to stimulate new projects: resources, expertise and the financial resilience of local energy organisations have all been significant to the emergence of projects[5]. However, subsidy schemes can also create unequal distribution of benefits; for example, studies conclude that better-off households have benefitted most under Feed-in-Tariffs schemes in England, Wales, and Germany[6,7].
- Beyond facilitating access to grants and/or loans, it is important to ensure that projects are capable of generating the necessary income to cover costs and make enough profit to fund social initiatives. This should be achieved by promoting (real) open access to the market; providing capital in an accessible, convenient way – especially for more deprived communities; and, involving financial actors in projects, whilst retaining community and/or local ownership. If the CARES scheme is improved in line with these principles, a more significant and sustainable community market sector should emerge. Furthermore, more resilient local economies might emerge which may help to re-allocate public funds to other priorities.

4. The role of Distribution Network Operators in connecting community and locally owned projects. What more could be done by DNOs to encourage and support projects?

- DNOs need the incentive and ability to invest ahead of need in local network infrastructure, when this is aligned with net zero GHG emission targets.
- Comprehensive, unified Local Area Energy Plans are needed to target areas for network investment, and to identify opportunities for storage and smart responsive networks. In the context of generation and transmission planning, this can be done by establishing ‘geographical development poles’, where the government specifies locations for installation of community-led capacity; this would reduce uncertainty for DNO investment planning and decision-making.
- As critical local energy businesses, DNOs need to work with local authorities and Community Planning Partnerships to plan networks in line with local energy plans, and Infrastructure First principles advocated in Scottish planning[8].

5. What role can smart, decentralised local energy systems play in ensuring security of supply and supporting a just transition to net-zero by 2045?

Factors critical to securing the contribution of smart, decentralised, local energy systems to equity, security and net zero goals include:

- Adopting a whole systems model for investment planning, including cost savings from demand management. This would reduce need for investment in large scale high carbon back up plant; support use of large-scale waste heat sources via heat networks; improve investment in energy efficiency in buildings; contribute to system services through balancing supply and demand on a network with high levels of intermittency from renewable power generation[9].
- Prioritising local social and economic value in line with just transition principles (see the Just Transmission Commission).

6. The role of local authorities in delivering community and locally owned projects. How can these be integrated into local energy systems?

- The delivery of local energy strategy needs to be through cross-sector collaboration, but made the responsibility of a single stakeholder[10]. If the development of a strategy is optional and responsibility for development is voluntary, there is a high risk that no organisation will accept lead responsibility, and transaction costs increase.[11] Key public bodies, notably local authorities, need to be empowered, and provided with resources, to develop and implement local energy plans. One approach piloted by Scottish Government is Local Heat and Energy Efficiency Strategies (LHEES). Evaluation of the first LHEES pilots[12] found that local authority officers believed that their authorities were well-placed to undertake energy planning, and supported LHEES becoming a statutory duty, on condition that resourcing and technical support are established. Strategic local energy planning would be prioritised in the council only through a statutory duty.

7. What systemic and behavioural changes are needed to increase the use of smart local energy systems? Has public engagement to date been successful and what more could be done?

- Public engagement has been limited to date[13]. Energy literacy, engagement, willingness and 'prosumerism' should not be relied on as the basis for meeting energy and climate policy goals. The Scottish Local Energy Policy Statement's recognition that 'Not everyone will want to engage with local energy projects in the same way' signals a role for public agencies, intermediaries and 'honest brokers' (i.e. public bodies such as local authorities) working on behalf of, or in some capacity for, citizens/consumers (i.e. beyond vulnerable customers). This needs to be clarified and strengthened, going beyond consideration of consumer protection only, to ensure Scottish ambitions for a just transition are achieved.
- Actions to decarbonise different aspects of the energy system need clearly communicating to all participants, across sectors. For example, knowledge about current legislation for decarbonising buildings is uneven; social housing providers and local authorities are likely to be most aware of the range of powers and duties. Little has been achieved on local clean heat or transport systems, or on efficiencies from local integration of heat, power, transport and energy storage; a leading exception and important source of learning is ReFLEX Orkney[14]. A public information campaign about Scottish Government plans for energy transition (including Energy Efficient Scotland) is essential. All sectors of society need to engage in energy transition, including all property owners, supply chain businesses, assessors, advisers, and installers[15] to ensure that action follows policy.

[1] For elaboration see our consultation response: Wade F, Tingey M, Fuentes Gonzalez F, and Webb J (2019) *Heat and the City Response to Scottish Government's Local Energy Policy Statement: A Consultation*. Edinburgh: University of Edinburgh. https://heatandthecity.org.uk/resource/heat-and-the-city-response-to-scottish-governments-local-energy-policy-statement-a-consultation/

[2] Committee on Climate Change (2016) Next steps for UK heat. London, Committee on Climate Change. https://www.theccc.org.uk/wp-content/uploads/2016/10/Next-steps-for-UK-heat-policy-Committee-on-Climate-Change-October-2016.pdf

[3] Summary of responses to Question 3 in: Wade et al (2019) *Heat and the City Response to Scottish Government's Local Energy Policy Statement: A Consultation*. https://heatandthecity.org.uk/resource/heat-and-the-city-response-to-scottish-governments-local-energy-policy-statement-a-consultation/

[4] Fuentes González F, Sauma E, and van der Weijde AH (2019) The Scottish experience in community energy development: A starting point for Chile. *Renewable and Sustainable Energy Reviews*, 113, 109239.

[5] Brummer, V. 2018. Community energy–benefits and barriers: A comparative literature review of Community Energy in the UK, Germany and the USA, the benefits it provides for society and the barriers it faces. *Renewable and Sustainable Energy Reviews*, 94:187-96.

[6] Grover, D., Daniels, B. 2017. Social equity issues in the distribution of feed-in tariff policy benefits: A cross sectional analysis from England and Wales using spatial census and policy data. *Energy Policy*, 106:255-65.

[7] Winter, S., Schlesewsky, L. 2019. The German feed-in tariff revisited-an empirical investigation on its distributional effects. *Energy Policy*, 132:344-56.

[8] https://www.gov.scot/policies/planning-architecture/reforming-planning-system/

[9] For elaboration see: Webb J. Net-zero for local and regional energy systems. In UKERC (2019) *Review of Energy Policy 2019*. Available at: http://www.ukerc.ac.uk/publications/rep19.html

[10] Summary of responses to Question 3 in: Wade et al (2019) *Heat and the City Response to Scottish Government's Local Energy Policy Statement: A Consultation*. https://heatandthecity.org.uk/resource/heat-and-the-city-response-to-scottish-governments-local-energy-policy-statement-a-consultation/

[11] Webb J, and Hawkey D (2017) On (not) assembling a market for sustainable energy: heat network infrastructure and British cities, *Journal of Cultural Economy*, 10:1, 8-20 http://dx.doi.org/10.1080/17530350.2016.1226193

[12] Wade F, Webb J and Creamer E. (2019) Local Heat and Energy Efficiency Strategies: Phase 1 Pilots Social Evaluation Report. https://www.gov.scot/publications/local-heat-energy-efficiency-strategies-phase-1-pilots-social-evaluation/

[13] Summary of responses to Questions 2 & 6 in: Wade F et al. (2019) *Heat and the City Response to Scottish Government's Local Energy Policy Statement: A Consultation*. https://heatandthecity.org.uk/resource/heat-and-the-city-response-to-scottish-governments-local-energy-policy-statement-a-consultation/

[14] http://www.emec.org.uk/press-release-energy-system-of-the-future-to-be-demonstrated-in-orkney/

[15] Wade F, Hitchings R, and Shipworth M (2016) Understanding the missing middlemen of domestic heating: installers as a community of professional practice in the United Kingdom. *Energy Research & Social Science*, 19, pp.39-47.