AUCEL response to the Scottish Government's Just Transition Consultation

Daria Shapovalova, with Gloria Alvarez, Abbe Brown, Mary Gilmore-Maurer, John Paterson, Tavis Potts, and Eddy Wifa

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1. What do you see as the main economic opportunities and challenges associated with meeting Scotland's climate change targets?

The Aberdeen University Centre for Energy Law (AUCEL) welcomes the establishment of the Scottish Government's £62m Energy Transition Fund focusing on the Northeast of Scotland. We acknowledge the need to develop and support Scottish businesses and grow employment in manufacturing and expertise provision in the relevant sectors (eg offshore wind, hydrogen, carbon capture and storage, decommissioning, and renewable heat). We wish to highlight the following economic opportunities and challenges associated with achieving net-zero and a just transition in Scotland.

Hydrogen

The Northeast of Scotland, and particularly Aberdeen, will require investment in projects and a skilled workforce that facilitate a just transition in the region. Examples of major projects already facilitating a just transition relating to transport and energy in the region include a Hydrogen Hub and the Acorn project, which focuses on harnessing hydrogen from natural gas and sequestering the CO_2 produced. The recent Aberdeen City Council Net Zero Infrastructure Plan highlights opportunities around the Energy Transition Zone in the new Aberdeen port that is under construction. An area of economic opportunity and research therefore revolves around the governance of hydrogen in terms of investment, storage, heating and transport and its use in supporting renewable heating, electrical generation and mobility. In 2018, the Climate Change Committee confirmed that hydrogen is a credible option to help decarbonise the UK energy system but its role depends on timely Government commitment and greater support to grow the UK's industrial capability.

Offshore wind

Offshore wind will certainly make significant contributions as we transition to net-zero, particularly with the UK having the largest offshore wind capacity in the world. Scotland is already making the most of this opportunity as it boasts of the world's first floating wind farm and one of the largest offshore wind projects in the world (the 950MW Moray East Project). With the launch of Scotland's first offshore wind leasing round in a decade, Scotwind, the huge economic benefits are apparent. There are major opportunities for Scotland considering it has established expertise on the offshore energy industry, excellent port infrastructure, and a strong innovation hub. With such opportunities come certain challenges. More generally, some concerns regarding supply chain, balancing various interests in the marine environment, the impact of coastal communities, and a skills gap have been identified. If these challenges are not addressed, it could have a significant impact on both the growth of the industry and

Scotland's climate change targets more broadly. Also, having identified the concerns regarding a skills gap, which has wider occupational health and safety implications, a successful transition to net-zero will be one that seriously considers the safety of workers.

Decommissioning

The late life of the UK Continental Shelf as a hydrocarbon basin is characterised by a complex mix of ongoing investment in the context of the Maximising Economic Recovery Strategy and of decommissioning in the context of the UK's obligations under the OSPAR Convention. Already a delicate balancing act to ensure that the removal of infrastructure does not result in stranded reserves, this is further complexified when the need to ensure that infrastructure that could be used for (and indeed ensure the economic viability of) future carbon sequestration or geothermal projects is not removed precipitately. This raises a number of legal questions associated with liabilities that will require careful consideration to achieve an efficient, sustainable and just solution. The emerging interest and role of Carbon Capture and Storage (CCUS) also highlight potential opportunities for development and reuse of infrastructure and the skills built up in the industry.

Intellectual property (IP) and new technologies

Challenges might arise in the IP protections of new technologies, key to achieving net-zero. At present, the Scottish policy framework does not meaningfully engage with IP. This is problematic as IP can encourage the development of new technologies, but an IP owner might refuse to share it widely, even if this would have enabled a wider reduction of emissions. This also limits economic opportunities for others in the marketplace. IP is a reserved matter and, consequently, there are limits to what the Scottish Parliament can do directly. A more integrated approach is needed for the different legal fields relevant to technology-based responses to climate change.

Leading research and education provision on energy transition

Scottish universities have been developing expertise, and providing world-leading research and teaching on the energy sector and its regulation. In the past decade, the AUCEL has shifted from an almost exclusive focus on oil and gas to energy transition, climate change regulation, and socio-legal engagement with the energy sector. We see increasing student numbers in programmes and courses related to energy transition; increasing research funding opportunities in the field of energy transition. While we continue to provide excellent research and education on responsible management of fossil fuel resources, we see the Scottish Government's commitment to just transition as an opportunity to support and engage with the academic sector more widely. Across the University as a whole the recently established Centre for Energy Transition coordinates interdisciplinary approach to energy transition research, pulling together research clusters in the physical and biological sciences, geosciences, social sciences and humanities.

2. What do you think are the wider social (health, community, etc.) opportunities and challenges associated with meeting Scotland's climate change targets?

We welcome the Commission's approach integrating societal opportunities and challenges alongside the economic concerns. However, we invite the Commission to review the answers to Questions 1 and 2 in a holistic way, which includes the policy and legal implications needed not only to avoid (implicitly or explicitly) a hierarchy between the two categories. We further praise the Commission's commitment to stakeholder involvement approach but would like to

take the opportunity to highlight that it is important to avoid consultations becoming a box-ticking exercise. We highlight that genuine community engagement and partnership in the energy transition will be central to a just process. This important area or work will require constant and close attention of the Commission to avoid negative results. In particular, there needs to be an approach to a just transition that understands *governance* as core to the project, that is, the means by which targets are identified, options are selected and implemented, and impacts evaluated must be open and inclusive. The process should be accessible and focus on a plurality of voices and communities.

Community engagement and renewable energy

While it is evident that early and meaningful community engagement often leads to 'social license' for renewable energy developers, it is also important to acknowledge cases of community opposition to such projects. The Scottish Government and local councils should consider further means of community engagement, including through ownership share provision, if possible. For example, Danish legislation on renewable energy promotion established detailed requirements on community ownership and public participation, while in Scotland community benefits are largely voluntary. Community ownership of low-carbon energy system, especially in remote areas, would promote energy citizenship and facilitate just transition. Scotland is already showcasing examples of successful implementation of such an approach (eg the Isle of Eigg). The Fourth Energy Package in the EU contains important provisions on energy citizenship, and it would be useful to examine the integration of the relevant legal principles into the Scottish legal framework in a meaningful way. An important point is how interventions reach marginal or difficult to access communities who are not usually represented in the process, with the aim of increasing participatory democratic outcomes and ownership of the transition.

There are already planning frameworks which consider effective implementation of participatory and community engagement rights, however at a local level, it is our position, that legal frameworks need to be further refined in order to impose clearer obligations to renewable energy investors and the government on how and when third party right to be duly observed, in order to achieve not only an economic but also a socio-legal legitimacy of the intended project.

Hydrogen

Projects that seek to use hydrogen injection into the existing gas distribution grid are a good illustration of both the challenges and opportunities of Scotland's climate change targets. With the decline in demand for fossil fuels, the hydrogen sector can provide transferrable and new jobs for the region (social and economic opportunity). The Acorn CCUS Project has now received funding from the UK Government. Social approval and economic certainty require legal incentives for eventually moving from blue hydrogen towards clean hydrogen from renewable sources (economic and social opportunity). There is a scope for using the existing gas distribution infrastructure to transport hydrogen (economic benefit/opportunity and potentially addressing the environmental impact and social opposition). Costs involved in hydrogen operation and infrastructure (economic challenge) require close evaluation in terms of economic and social benefits and challenges relating to funding mechanisms throughout the supply chain to avoid historical challenges associated with for example Contracts for Difference and onshore wind, especially if the intention is to move from blue hydrogen to clean hydrogen for example.

Just transition in the fossil fuel sector

The 2014 oil price fall and the recent further price decrease caused by Saudi moves to achieve market share and by the Covid-19 lockdown demonstrate how external shocks on oil demand affect life in the North East. Research presented to the government following the 2014 crash demonstrated not only a sharp increase in jobseekers' allowance claims, but also significant effects on the housing market. Ancillary industries, such as tourism and hospitality took a hit as well. It is imperative for a just transition in the oil and gas sector, that any decline is more carefully managed with consideration of not only the training and re-employment of oil and gas industry workers but also wider regional implications. In short, there must be available and comparable jobs across in energy transition industries to allow for a shift in the workforce and minimisation of community impact.

3. What would a successful transition to net-zero emissions look like for your sector/community?

Earlier this year, the University of Aberdeen adopted its vision for 2040. One of the key priorities for the University is Sustainability, including to achieve net-zero carbon emissions before 2040, and to excel in research that addresses the climate emergency, enables energy transition and the preservation of biodiversity. To implement these priorities, the university established the Centre for Energy Transition (CET). CET brings together over 200 academics working in various disciplines related to energy, from physical sciences and engineering to law, business and social sciences. The CET will pioneer and promote cutting-edge interdisciplinary research & education that advances the low carbon and just energy transition. It builds upon decades of energy-related research, education and partnership with industry and government and builds the critical mass necessary to achieve all aspects of the energy transition from generation, storage, use and social transformation. It explicitly places energy governance, social science and the just transition at the centre of its strategy recognising this area has not been the traditional focus of research despite its critical role in achieving transition.

The Aberdeen Centre for Energy Law (AUCEL) is comprised of legal academics working on legal and governance issues related to the energy sector. Having built our reputation as a leading research and teaching centre for oil and gas law and responsible resource management, we have for a number of years been expanding our expertise to low-carbon energy transition (renewables, nuclear, CCUS), decommissioning, climate change governance, law and technology, and energy investment regulation. In the last few years, we observe a rising interest in climate change governance in our students and the scope of support available from funding bodies. While the justice aspect often gets overlooked, we are committed to providing leading research and teaching fully integrating it into our curriculum and research agenda.

The Covid-19 epidemic is already having significant effects on the financial position of higher education and research institutions. It is clear that the Commission's consultation paper was written before the crisis, but we hope that it will not diminish the importance of pursuing a just transition. To that end, the academic sector will require continuing Government support through the relevant research funding and opportunities to contribute to policy-making.

4. What actions do you think the Scottish Government should take to manage the opportunities and challenges referenced above?

The AUCEL welcomes the Commission's approach with wide consultation and its composition of diverse and competent members. We further welcome the inclusion of just transition principles into the Climate Change Act and the Scottish Investment Bank Bill. Going forward, it is important to ensure that principles are legally enforceable and are implemented meaningfully.

There is much discussion globally about a Green New Deal. The details vary, but the impulse is universal. There is much to commend careful consideration of focused government spending on projects that seek to make progress towards net-zero targets, stimulate economic growth/regeneration and redress energy inequalities which can undermine other desirable initiatives. The challenge will lie in the balance between state and market (and indeed in reimagining those arrangements). There will be a key role of legal research in understanding the rights and duties implicit in such a project.

IP and energy transition

Further integration of net-zero goals in dispute resolution and decision-making should be considered. For example, new rules could be adopted for Scottish courts to ensure that disputes which involve meeting climate change targets and IP law are heard together. Further, CCSA could be amended so that Scottish Ministers and climate change committee need to have regard to IP rights. We invite the Commission to consider introducing a new integrated approach to consultation, committee involvement, and impact assessments in respect of Scottish Parliament legislation involving (directly or indirectly) innovation, technology and/or climate change including relationships with sustainable development and human rights. This should include the development of a working list of issues, a new Ad Hoc Committee on Technology and Climate Change, IP owners being mandatory consultees, and consultation with UK Parliament on respect of IP and energy transition.

Electricity sector

The Commission is commended for engaging directly with different sectors. In line with this, it should engage further with specific industry sectors and their regulatory and representational bodies, such as Ofgem, energy utility companies, and the Energy Networks Association. Doing so could provide helpful insight into applying aspects of governance and regulatory innovation for sustainability. A key example is the RIIO price control framework, which has sought to incorporate economic and social goals into the price review mechanisms by making sustainability and stakeholder engagement part of the contractual outputs that companies are required to achieve. The Commission might also review aspects of the RIIO framework, which have proved more challenging in terms of balancing economic and social goals, resulting in trade-offs between economic efficiency and social and environmental considerations. (https://www.ofgem.gov.uk/ofgem-publications/51871/riiohandbookpdf). Reforms to the method of regulating utilities in the UK provide helpful insights into governance challenges in areas where social, economic and environmental matters are intertwined with technical developments.

Likewise, regulatory frameworks such as RIIO focus on energy transition but require to be brought in line with the Just Transition Principles more widely so that different industry sectors are working harmoniously to achieve the transition. This also requires the inclusion of the Just

Transition Principles into relevant legislation such as the Electricity Act 1989 (as amended) and the Gas Act 1986 (as amended).

Hydrogen

Despite the Scottish Government's Energy Transition Fund, the prospects of hydrogen can be uncertain due to insufficient and historically inconsistent policy and governance to support investment and larger scale deployment. As hydrogen transport via pipeline is considered the most cost-effective option for large-scale hydrogen deployment, it lends itself to a degree of network regulation. Therefore, hydrogen injection into existing gas grids requires reform of gas distribution network governance but also more widely governance of hydrogen storage (eg a review of the legal restrictions on owning storage and operating networks) and investment in projects.

Offshore wind

Training and skills development in the offshore wind energy sector as well as extensive stakeholder engagement and responsible evidence-based site selection. Also, it will be worthwhile considering what additional licensing or permissioning requirements could prioritise workers safety. Given that some of these challenges are not entirely new to the offshore energy industry, it might be useful to consider other offshore energy industries like offshore oil and gas that could provide both expertise and perhaps regulatory lessons. While both industries have distinct differences, research has shown that they equally share significant similarities and synergies.

5. Are there specific groups or communities that may be, or feel that they may be, adversely affected by a transition to a net-zero carbon economy? What steps can be taken to address their concerns?

In terms of labour planning, it is important to take into consideration the existing evidence on the consequences of phasing out (or re-use) of fossil-fuel infrastructure in a way that harms the socio-economic landscape of labour and employment with flow on impacts on community cohesion and conflict. In is important to consider the adverse effects of phasing-out fossil fuel industries without having planned for the potential imbalances possibly brought by unemployment at a local and regional level. Hence the critical importance of ensuring opportunities are available that are of economic and social parity with existing sector jobs.

The just energy transition needs to ensure that there is also a labour transition in terms of transferable skills, training and most importantly, ensuring that the workforce demand ratio is balanced against the ratio of job loss due to the closure of fossil-fuel projects. Funding is needed for training programmes (including technical and professional skills), entrepreneurship programmes, as well as to ensure new economic opportunities. In addition, it is important that labour planning is sustainable by not simply shifting labour from one single industry (ie fossil fuels) to another (ie renewables) bur rather to provide the labour transitioning force with a diverse range of employment opportunities (eg consultancy business, technology and education). Steps that need to be taken to ensure that labour opportunities should be progressive and reflect the same speed of the energy transition. Moreover, where labour and employment options are available, there is a need for training and re-training programmes, dignified retirement as well as high-quality jobs.

The rural and remote communities in Scotland, often relying on fossil fuels for heating and electricity generation should not be disproportionately affected by the transition. Support schemes should be put in place to assist in transition, such as decarbonising heating, providing charging points for electric vehicles, considering the affected businesses (eg petrol stations). Furthermore, the Fuel Poverty (Scotland) Act 2019 and the Fuel Poverty Strategy should integrate just transition principles and commitment to net-zero.

6. Please provide here any other information, evidence, or research you consider relevant to the work of the Commission.

Just Transition

- Dr Gloria Alvarez is co-leading the Just Transition Project, fully funded by EPSRC and UKRI to further the role of law in delivering the low-carbon economy: https://ukerc.ac.uk/project/just-transition/
- · The CET has established an Energy Governance and Just Transition theme co-led by Law and Social Science. See: https://www.abdn.ac.uk/energy/
- For comparative approaches and examples of Just Transition initiatives see also the OECD's 'Investing in Climate, Investing in Growth' report (https://www.oecd.org/environment/cc/g20-climate/synthesis-investing-in-climate-investing-in-growth.pdf). Helpful comparisons may also be drawn from specific countries, such as Germany to whom the European Commission has recently allocated approximately EUR 877m of its Just Transition Fund to support structural change in German coal mining regions. (https://ec.europa.eu/info/sites/info/files/2020-european_semester_country-report-germany_en.pdf).
- As energy markets will continue to be linked beyond Brexit, cooperation with the European Commission and some degree of consistency with the Commission's Just Transition Mechanism is strongly encouraged (https://ec.europa.eu/info/news/launching-just-transition-mechanism-green-transition-based-solidarity-and-fairness-2020-jan-15_en)
- John Paterson, 'Reconceptualising Energy Security from a Legal Perspective in the Context of Climate Change', in Tina Soliman Hunter (ed) Routledge Handbook of Energy Law (2020)
- On just transition in the fossil fuel sector see Greg Muttit and Sivan Kartha, Equity, climate justice and fossil fuel extraction: principles for a managed phase out, Climate Policy 2020.

Climate Change, Technology, and IP

- Abbe Brown, Intellectual Property, Climate Change and Technology ((Edward Elgar 2019), especially chapter 7, pp. 232-233, 235-236, 254-262.

Hydrogen & CCUS

- Parallels in relation to hydrogen might be drawn from past research conducted at the University of Aberdeen in relation to proposed biomethane injection into gas grids (see Woolley, O. 'Reforming Gas Sector Governance to Promote Biomethane Injection' (2013) *RELP* 3, 175)
- In relation to CCS, see Faure, M G and Partain (University of Aberdeen), R A *Carbon Capture and Storage: Efficient Legal Policies for Risk Governance and Compensation*

(The MIT Press, 2017) for analysis of legal policies that support CCS as an energy transition technology.

- John Paterson, Carbon Capture and Storage: Developments in the UK, European Energy Law Review (forthcoming)
- John Paterson, "A systems theory perspective on the principle of precaution employing critical discourse analysis", in Andreas Philippopoulos-Mihalopoulos and Victoria Brooks (ed.) Research Methods in Environmental Law: A Handbook, Edward Elgar, 2017, pp364-395, ISBN: 978 1 78471 256 3.
- Greg Gordon, Aileen McHarg and John Paterson, "Energy Law in the United Kingdom", in Roggenkamp et al (eds) Energy Law in Europe (3rd ed.), Oxford: OUP, 2016, pp1053-1136, ISBN 978-0-19-871289-3