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Minutes

All Party Group on Climate Action – Energy Theme
29 October 2021 | 10:00 am – 12:00 pm
at Virtual

Members in attendance: Kellie Armstrong MLA, Rachel Woods MLA, Cllr Martin Gregg, Cllr Siobhan Currie, Cllr Robert Irvine, Cllr Billy Webb, Cllr Terry Andrews, Cllr Donal McPeake, Cllr Lauren Kendall, Cllr Maeve O'Neill, Cllr Mark Fielding, Cllr Michael Henderson

In attendance: John Barry, Stephen Dunlop, Andrew Cassells, Andy Frew, A Blythe, Bob Hanna, Christine Watts, Christopher Jackson, Ciaran McGrath, Daniel Egerton, David Rooney, Debbie Caldwell, Donna Knowles, Eimear Montague, Fiona Gallen, Johnny Stewart, Joseph Ireland, Kate Fitzsimmons, Kate Livingstone, Margaret McMahon, Oliver McHugh, Rebekah Corbett, Rob Macintosh, Steven Agnew, John Burke, Liam McNally, Anne Ford, James Donaldson, Jim Mairs, Robert Macintosh, Ani Kanakaki, Clare McKeown, Nichola Hughes

Attendees: 43

Apologies: John Blair MLA, Claire Sugden MLA, Gerry Carrol MLA, Clare Bailey MLA

1	**Opening Remarks**
	Rachel Woods MLA (**RW**), Chair, welcomed everyone to the meeting.
1.1	**Apologies**
	Apologies were recorded.
1.2	**Chair's Business**
	RW noted that DfE was invited to today's meeting to provide an update on the Energy Strategy but requested to present in November after the launch of the Energy Strategy. RW welcomed two nominations Alderman Mark Fielding and Councillor Cathal McLaughlin from Causeway Coast and Glens Borough Council to the Group. She also noted the significance of the upcoming COP26 negotiations in Glasgow from 31 October – 12 November and that she will be attending the conference with her colleague Claire Bailey MLA and will report back to the group in November. RW noted the schedule for the next few APG meetings: • 26 November – COP26; Climate Risks for Northern Ireland; Common Purpose Legacy Programme; NI Energy Strategy • 10 December - All Island Biodiversity and Climate Research; Rights of Nature; Environment and Nature Restoration Bill Update • 28 January - Sustainability in buildings; Indoor Air Quality.

2	**Meeting Admin**
2.1	**Minutes of meeting on 24 September 2021**
	Minutes of the meeting on 24 September were approved: proposed by Cllr Terry Andrews and seconded by Cllr Michael Henderson.
3	**Presentation: Mapping a Just Energy Transition in Northern Ireland**
	RW welcomed the first speaker Professor John Barry (**JB)** from Centre for Sustainability, Equality and Climate Action at Queens University Belfast. As part of the development of the new Energy Strategy, the Department for Economy accepted a research proposal from Queen's University Belfast to produce an independent, grant funded, think piece on "Mapping a Just Energy Transition in Northern Ireland". The report was authored by Sean Fearon and John Barry. View report here. View presentation here. Contact: j.barry@qub.ac.uk Q&A followed. **RW** asked how import is education and climate literacy in supporting the energy transition? **JB** said better climate literacy is needed among policy makers in central and local government. He cited the lack of integration of energy and spatial planning as a key issue that needed to be solved. Also screening of infrastructure spending to prevent carbon lock in. Every student at QUB will graduate with a basic knowledge of carbon / climate literacy, which is a model that could be replicated elsewhere. **RW** enquired about gaps in data, how big of a problem is this in Northern Ireland? **JB** said there are many data sources available at UK level, but that haven't yet been disaggregated down to Northern Ireland level. For example, local councils do not have access to greenhouse gas inventories for their individual areas. Baseline statistics are required to measure progress. He also noted the need for war-time mobilisation of resources and the need for an integrated vision. Cllr Maeve O'Neill (**MO'N**) asked if there are any figures available to support the idea that retrofitting homes makes good financial sense? She also noted that new data centres being located in Northern Ireland are being heralded as being good for the region, but they require a massive amount of energy. She asked is there more potential for community-owned (or state-owned) renewable energy in Northern Ireland? **JB** noted that the APG has had a presentation from the two community energy co-operatives in Northern Ireland – Drumlin Energy and Northern Ireland Community Energy. He noted that onshore wind and solar lend themselves to a more distributed, decentralised energy model that works in favour of community owned energy. Policy here works in favour of large-scale market-based renewable solutions. He also noted the significant barriers communities looking to start up energy co-ops face (e.g., legal and finance issues can be difficult to navigate). He said this needs to be remedied through government support. A key issue is the cost of ignorance. The true cost of fuel poverty in terms of the health burden placed on the NHS, is not factored in when retrofit schemes are being considered. The UK Government Green Book only considers the direct economic benefits of climate action, not the indirect benefits (e.g.,

	improvements in health). Local government could play a role in issuing green bonds to support local retrofit schemes. Some Councils in England have partnered with the private sector to do this. There also is a shortfall in financial literacy in Government, which ought not to run itself as a household in conventional terms. Sovereign nations like the UK can take out state loans and pay themselves back over a long time horizon, and in doing invest in the future. The scale of the retrofit challenge requires a state-led approach, with state finance to partly subsidise the upfront costs. Otherwise, low-income households will be unfairly impacted by the transition, and it could lead to public resentment. See Kirklees street-by-street approach. Eimear Montague **(EM**) noted that progress on retrofit in GB has been slow due to the design of schemes that are overly complex. We need to remove complexity to see progress. Bob Hanna (**BH**) noted that the Scottish Government provides seed funding and other support to help community energy projects get off the ground. He referenced Edenderry Village where a group of residents are setting up a co-operative Community Benefit Society to develop and run a community energy scheme in the village. He said more support is needed to support the community energy sector in Northern Ireland. **JB** noted that NI should select segments of the market that it can specialise in, and that we already have a head start in terms of hydrogen technology and the economic benefits that will flow from it. He said hydrogen integrates well with renewable energy, which NI has a plentiful supply of. Jim Mairs (**JM**) cited the importance of demand side management of energy and greater citizen understanding. He said everyone should have a basic knowledge of energy and ecological literacy. **JB** suggested the APG looks at the role of the Italian state in leading a retrofit revolution. He said we need a state-led transition, at a speed and scale that matches the urgency of the climate crisis. **RW** closed the discussion and thanked **JB** for his presentation.
4	**Presentation: Pathway to a zero-carbon electricity system in Northern Ireland**
	RW welcomed the next speaker Steven Agnew (**SA**) from Renewable NI. **SA** delivered a presentation on a suitable pathway to a zero-carbon electricity system in NI based on the findings of the Baringa report. View report here. View presentation here. Contact: steven.agnew@RenewableNI.com Q&A followed. **RW** asked if there is a danger that focusing on onshore wind in the short term distracts from investment in offshore wind as a long term solution? **SA** said that offshore wind is tremendously efficient and produces much more energy per unit. One offshore wind turbine is equivalent to 25% of the installed renewable power currently on the network. Costs are plummeting and it is almost as cheap as

	onshore wind and solar, however it takes 10 years from conception to inception. For that reason there is a need for more onshore wind in the interim until offshore wind projects come online. There must be a consenting regime in Northern Ireland and policies that allow offshore wind to become a reality. Onshore wind will help NI meet its 2030 target, but offshore wind will take us beyond that. Offshore wind is likely to overtake onshore wind soon and will undoubtedly play a huge role in the NI electricity mix in future. **RW** asked if he had any concerns about the delays to the NI Energy Strategy? **SA** said that originally the strategy was due out in 2020 but that was delayed to enable a more holistic approach, rather than developing energy policies sector by sector, which he welcomed. If the strategy is delayed by a few weeks, it wouldn't be an issue, but if there was a significant delay it would be a problem. Northern Ireland is well behind in terms of decarbonising the grid, and if there is any sign of policy inconsistency, the renewable industry will get cold feet to invest here. Andy Frew (**AF**) asked if opening the heating market to renewable electricity production through smart demand management (e.g., heating hot water tanks at night when the wind blows) could offer opportunities to the industry? **SA** agreed, he said we need to look at dynamic pricing and smart technology to encourage consumer engagement and make best use of renewable resources, and to reduce dumping of surplus energy. He acknowledged that hydrogen offers opportunities through the long term storage of renewable energy, to provide power at peak times. This is the kind of thinking we hope to see in the forthcoming Energy Strategy and Action Plan. He noted it could help address the challenge of fuel poverty. Joseph Ireland (**JI**) asked if there are any issues with maintenance of offshore wind turbines and the need to switch turbines off during these periods? **SA** said this is the reason tidal energy hasn't taken off is because the turbines are exposed to a lot of force from the ocean and therefore require a lot of maintenance. Capacity of offshore wind is double that of on shore wind, which is to do with the size of the unit (1.5MW – 8 MW per turbine). There is the usual need for maintenance, but not any more than onshore wind. Bob Hanna (**BH**) noted that whilst the scale of investment in the grid is huge, the benefits of doing so to consumers far outweigh the costs – the investment is worth it. He highly recommended adopting something like the Renewable Energy Support Scheme (RESS) in the Republic of Ireland, which is slightly better than the UK Contracts for Difference. He also emphasised the urgent need to change policy to allow the Regulator to enable cost recovery over a much longer time horizon, it is currently only 4 years. **RW** closed the discussion and thanked **SA** for his presentation.
5	**Presentation: Organising visions in Geothermal Energy Roadmap Development**
	RW welcomed the next speaker Joseph Ireland (**JI**) from Queens University Belfast. **JI** delivered a presentation on research on geothermal energy, outlining his thoughts on organising visions to accelerate growth of the geothermal energy sector in Northern Ireland. View presentation here. Contact:

	jireland02@qub.ac.uk Q&A followed. **RW** asked what kind of potential is there for geothermal energy (GE) in NI? Is it everywhere, or are there only specific locations that are suitable? **JI** said that the technology has improved so rapidly, that there is now an expression used in the industry 'geothermal everywhere' because it can be deployed anywhere. It can be building or site specific or can be used to heat an entire community. The Geological Survey is finalising a report for the NI Executive which looks at geothermal potential in Northern Ireland. The report will be launched at the NI Energy Forum on 18 November. **RW** asked what a geothermal demonstrator project in Northern Ireland would look like in practice? **JI** said we need the equivalent of the United Downs project in Cornwall, focussing on renewable heat rather than renewable power. It would involve drilling deep wells in the ground, in a closed loop system. The wells penetrate aquifers which transmit superhot groundwater, they take the hot water to the surface like a sponge, extract the heat, and return the water to the ground. The heat could be used for a heat-intensive industry (such as milk pasteurisation in the dairy sector) or for a social purpose, e.g., to heat social housing in combination with district heating. **JI** noted that the Cornwall project started off with the objective of creating renewable zero carbon power, but the project has grown with several spin-off projects including mining lithium for car batteries and a geothermally powered rum distillery. It is also used as an educational resource for local schools. **AF** asked if there is the prospect of using geothermal to produce electricity, or should we be looking it mainly as a source of renewable heat? **JI** said there is higher risk associated with geothermal heat, relative to onshore or offshore wind. **JI** is primarily interested in geothermal as a zero-carbon heat solution, given that 50% of NI energy is used for heating it represents a significant market opportunity. Liam McNally (**LMcN**) asked if any big international renewable investors have expressed interest in geothermal production in NI? **SA** said government subsidies and incentives are required to lower the costs of geothermal energy so that it becomes less risky for private developers. He hopes this is something Government will address in the Energy Strategy. Jim Mairs (**JM**) asked if geothermal heat is a limited resource, and therefore if projects have a limited lifespan? **JI** said this was one of the myths that must be debunked. Geothermal offers an infinite supply of heat, it is the size and scale of the well that determines the lifespan of the supply. It's like designing a radiator for a room, the size of the room determines the size of the radiator required. Projects can be designed for 50 – 100 years of heat generation. How much is needed and for how long depends on the end use. **JM** asked if input is determined from radioactive degeneration of rock and if there are any downsides to drilling, for example are there any risks from seismic activity?

	JI said it is not like fracking, which drills into and disturbs rock formations under the ground. Drilling for oil is commonplace and it requires wells up to 8.5km underground. Geothermal wells tap into natural water bearing rock formations that have hot water, they act as a giant sponge and extract the hot water, harvest the heat, and return the water underground in a closed loop system. Geothermal wells carry no more risk from seismic activity than oil wells, and it doesn't carry the negative risks associated with fracking. A demonstrator project is needed to demystify preconceptions of drilling into the ground and showcase the benefits of geothermal energy to society. He also noted that engagement with local communities would be key to dispel preconceptions, highlight the benefits and reduce potential for local resistance. **BH** noted that Causeway GT is a new actor in this space, comprising of US-based oil and gas companies with a connection to Northern Ireland. They are on a mission to develop the geothermal market here. **AF** asked if it is possible to store geothermal heat energy in the ground? **JI** said yes it is and Holland is already doing it. They use aquifers to store excess heat generated in the summer from hot buildings, store it underground as rocks have high thermal conductance properties, and re-extract it for use in winter. He noted that Edenderry Village has secured funding from National Lottery to progress a feasibility study for geothermal district heating, and he reiterated that a demonstrator project would be key to unlocking the potential of geothermal energy in Northern Ireland. **RW** closed the discussion and thanked **JI** for his presentation.
6	**AOB**
	JI noted the NI Energy Forum will take place on Thursday 18th November 2021, register here. **SA** noted that the Renewable NI Conference (Smart Energy 2021 - a COP26 Regional Roadshow event) takes place on Tuesday 2 November at the ICC Belfast. Register here.
7	**Summary and close**
	RW thanked all the speakers for their informative presentations. She noted that next APG meeting takes place on Friday 26 November at 10:00am **RW** thanked members for attending. Meeting closed at 12:00.