

NIRIG response to Economy 2030: a consultation on an industrial strategy for Northern Ireland

24 April 2017

The Northern Ireland Renewables Industry Group (NIRIG) represents the views of the renewable electricity industry in Northern Ireland, providing a conduit for knowledge exchange, policy development, support and consensus on best practice between all stakeholders. Committed to making a positive difference, we promote responsible development, support good community engagement and deliver low-cost electricity generation from sources such as onshore wind, tidal, solar and storage using our greatest natural resources.

NIRIG welcomes the opportunity to respond to the Economy 2030 strategy. The renewables sector provides essential services, employment, investment, infrastructure, technological advances, knowledge and skills that are highly beneficial to the wider economy. We contribute to each of the 5 pillars outlined in the Economy 2030 Framework for Growth:

- **Innovation and research:**
 - cost-reduction in mature technologies leading to onshore wind becoming the cheapest form of electricity generation
 - new storage technologies such as the Gaelectric Compressed Air Energy Storage project
 - academic success in cutting edge sustainable technology research, such as the QUB Testing Tidal Turbines and UU £6.4 million grant to develop a range of renewable energy storage devices to meet current and future electricity market needs

- **Skills and employability:**
 - Skills development is an important element of the industry's contribution to employability, such as ESB's Graduate Development Programme¹

¹ <https://www.esb.ie/careers/graduatedevelopmentprogramme/our-graduate-programme>

- The SSE Airtricity Scholarship Fund enables post-graduate study for young people within a certain distance of wind farm developments and also a regional scholarship fund in counties Tyrone and Derry/Londonderry
- Brookfield Renewables actively facilitates postgraduate research programmes on site
- **Inclusive, sustainable growth:**
 - significant investment West of the Bann: wind turbine manufacturer Enercon has opened a new office and is doubling staff in its Coleraine office
 - Omagh-based business and renewables contractor Adman Civil Projects has scaled up from 10 employees in 2007 to 100 employees and 150 sub-contractors.
 - contributions to local Council rates: wind energy contributes £1.8m annually in rates to Derry City and Strabane District Council alone
- **Global markets:**
 - With ambitious clean energy targets NI attracted investment from German, Irish, US, Canadian and Belgian companies, proving that clear signals will deliver investment in renewables.
 - Traditional engineering companies such as Harland and Wolff are winning international contracts in offshore technologies, delivering local high-skilled jobs²
 - Local firms such as ARCH, McLaughlin Harvey and AGS are exporting their skills and services developed in the renewables sector across Europe
- **Economic infrastructure:**
 - Power plant build-out across natural resource-rich areas of NI is contributing to a diverse and stable electricity network
 - A secure, sustainable and cost-efficient energy supply will only be delivered through further investment in renewables

Developing a new energy strategy

Key business groups, such as the Confederation of British Industry, agree that the NI Executive must agree, implement and commit to abide by a new energy and decarbonisation strategy. Renewable energy represents the single greatest opportunity for Northern Ireland to transition to a low-carbon economy, promote energy sustainability and improve security of supply.

² <http://www.bbc.co.uk/news/uk-northern-ireland-39640674>

We strongly welcome the proposal to develop a new Energy Strategy and urge that the Department creates the right environment for investment by delivering long-term policy and regulatory certainty on decarbonisation of the energy sector. This must be a priority.

Timeframes: We note that the proposed energy strategy does not include timelines or specific targets. We believe that in order to deliver on the outcomes of the strategy, a timeline should be agreed as soon as possible. NIRIG recommends that an energy strategy be published by the end of 2017, and that it should focus on specific actions in the medium-term to 2035, with an energy vision outlined to 2050.

Technologies: Wind decreases electricity costs³ (even accounting for increased constraint payments and the cost of subsidies). To be globally competitive economy that works for everyone, Northern Ireland must therefore continue along its successful low-carbon trajectory and deliver decarbonisation of the electricity sector as the most effective way of ensuring **least-cost energy** over the short, medium and longer-term. This should include onshore wind, but also provide clear pathways for the development of storage, solar, tidal, demand side response and other technologies to create a diverse, flexible and complementary electricity system.

Northern Ireland has not had access to the CfD and there is neither financial support nor a route to market for either established or new renewable technologies. There is now a policy gap between a sustainable, secure and cost-effective electricity system and the means to deliver it: neither innovative early technologies such as tidal energy, nor competitive mature technologies such as onshore wind and solar have a **route to market** in Northern Ireland. The energy strategy must address this gap, and specifically address the ‘cliff edge’ that has faced established technologies since the closure of the NIRO.

The Energy Strategy should set out a long-term strategy for supporting world-leading **energy innovations to develop and prove their value in domestic markets** before and whilst they expand their markets overseas.

Planning and consenting: A fit for purpose planning and consenting environment will also be important. Planning decisions at Council and regional level operate under regional policy, and are thus significantly influenced by over-arching strategies such as the Regional Development Strategy and Strategic Energy Framework. The new Energy Strategy must clearly lay out objectives for renewables development. This will enable planning and consenting policy to both reflect and deliver the strategy.

³ https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2926875

The Strategy should encourage grid and planning policy to accommodate more efficient projects, which will enable increased cost-savings. We further recommend that it addresses the issue of repowering existing large-scale developments, recognising their potential strategic role in future system design and planning as part of the transition to a low carbon energy system.

Electricity network planning: The proposed energy strategy must actively promote long-term transmission and distribution network planning in order to accommodate low-carbon electricity generation and storage. Scenario planning by SONI should be encouraged, and carefully integrated with scenario planning in ROI. There should be no delay in building the second North-South interconnector. Specific efforts to address grid constraints should be included as an objective.

Connection policy: Connection policy must also be given careful consideration and prioritised as a distinct arm of any energy policy. Historically connection policy has lagged behind renewables build-out, increasing costs and uncertainty for developers, and delaying construction of projects.

Network regulation: In order to facilitate policy development we recommend a review of the Utility Regulator's licence to assess its role in reviewing and approving connection policy. Providing NIAUR with powers in this area may be more appropriate and certainly timelier than having to make regular changes to licences through legislation. The Commission for Energy Regulation in ROI carries out these functions and it would be consistent with the Utility Regulator's current role in approving all-island policy changes in the SEM.

Energy Market: The Department should work to develop a strategy to ensure that the single all island price zone is maintained and that I-SEM is delivered. It would be preferable that the UK continues to remain with the regulatory framework of the IEM and NIRIG would encourage the Department to strongly make this case. Maintaining coherent energy, climate and environmental policies is necessary to facilitate a balanced approach across the market, minimising the risk of inefficient distortions, such as enhancing security of supply.

Strategy coordination: Development of the strategy should be led by the Department for the Economy, in collaboration with the Department for Infrastructure, Department for Agriculture, Environment and Rural Affairs and Department of Finance. The DfE should coordinate its policy closely with the Department for Communication, Climate Action and Environment (DCCA) in the Ireland, given the all-island nature of the Single Electricity Market (soon-to-be Integrated Single Electricity Market) and electricity network. It should involve the meaningful participation of the Utility Regulator (NIAUR), System Operator (SONI), Network Operator (NIE Networks) and industry, as well as academic institutions such as Queen's University Belfast and Ulster University.

Accelerating innovation and research: renewables deliver

Cost reductions

The pace of cost reduction in the renewable energy industry is unparalleled in any peer infrastructure. Costs have reduced substantially since the GB Contracts for Difference auction in 2014 and onshore wind is now estimated at a Levelised Cost of Energy of around £65/MWh. The cost of onshore wind is lower than the cheapest alternative fossil-fuelled generation. Onshore wind is now the cheapest form of new, large-scale generation and likely to be viable shortly on a subsidy-free basis – if a route to market is in place.

Flexible and dynamic energy systems

In the future, onshore wind is well-placed to compete successfully in an energy system of flexible and dynamic energy service markets. Wind turbines are able to provide frequency response, reactive power, demand turn-up and -down and virtual inertia among other services to the grid. With co-located PV solar and storage, the considerable existing fleet of wind farms should be considered among the most cost-efficient means by which to increase storage penetration in the short-term.

Innovative technologies

From Tidal Turbine Testing research through the Centre for Advanced Sustainable Technologies (CASE) and industry partners at QUB, to a recent £600,000 research grant to the Ulster University for a major study into safeguarding the security and stability of renewable energy supply, local innovation plays a major part in the development and facilitation of new technologies. The System Operator (SONI) delivers world-leading electricity system management, enabling 60% intermittent generation with a pathway to enabling 75%: a world first.

The European Union has awarded a €90million grant to Gaelectric for its energy storage project near Larne. This project employs compressed air energy storage technology to compress and store air within specially designed caverns created within naturally occurring salt deposits deep underground. The project will be capable of generating 330MW of power for periods of 6 to 8 hours and creating 250MW of demand on the system.

Skills and employability: renewables deliver

Provides our young people with the skills for life and work

The SSE Airtricity Scholarship Fund enables post-graduate study for young people within a certain distance of wind farm developments and also a regional scholarship fund in counties Tyrone and Derry/Londonderry. SSE Airtricity has partnered with Ulster University and South West College to launch the SSE Airtricity Scholarship Fund. The Scholarship Fund has a total annual value of around £80,000 and 20 students per year from Counties Derry-

Londonderry and Tyrone will receive 50% funding support from SSE Airtricity towards the cost of their student fees at Ulster University and South West College.

Delivering professional and technical skills

Skills development represents an important element of the industry's contribution to employability. Upskilling of graduates in such core STEM subjects as engineering (civil, mechanical and electrical) and IT form a core part of ESB's 3-year Graduate Development Programme.⁴

A strong and relevant supply of skills for economic growth

The Construction and Renewable Energy Scholarship is run by Gaelectric and the North West Regional College (NWRC) in Derry. The scholarship provides support to students on science, technology, engineering and mathematics courses on the college's Limavady and Derry campuses with £3000 in bursary aid also available. The partnership with the college includes a memorandum of understanding that aims to promote work on wind power and the integration of renewable generation on the grid. Students will be able to visit Dunbeg wind farm as part of the scheme, enabling a technical understanding of onshore wind farms under the guidance of Gaelectric's in-house operations and maintenance team.

Driving inclusive, sustainable growth: renewables deliver

Prosperity across the region

Our industry invests in infrastructure and supply chains in regions of relatively low GVA. Continued deployment of renewable energy is therefore crucial to maximising economic benefit. Onshore wind projects deliver circa 50% local content⁵ (defined as the amount of expenditure retained over the whole lifecycle of a project) and the wave and tidal stream sectors often achieve more than 80%.⁶

Extensive supply chains have developed as a consequence of this renewables demand for products and services; these companies span manufacturing, electronics, engineering, ports and maritime vessels, financial services among many others. For example, in response to the operation and maintenance needs of the onshore wind sector, German company Enercon is doubling its staff in its Coleraine centre in 2017 and opening a new office in Omagh with technicians already in training. Every 2nd turbine installed creates one local long-term job.

⁴ <https://www.esb.ie/careers/graduatedevelopmentprogramme/our-graduate-programme>

⁵ <http://www.ni-rig.org/wp-content/uploads/2012/07/FINAL-WEB-NIRIG-REPORT.pdf>

⁶ RenewableUK (2017) Member survey

Growth in sectors where we have strengths and capabilities

Harland and Wolff Heavy Industries have won a multi-million pound contract for the East Anglia One ScottishPower Renewables project in the North Sea. ScottishPower Renewables has ensured that the Harland and Wolff facility will deliver 24 of the jackets, supporting up to 200 jobs in Belfast. The project will be the most cost efficient offshore windfarm ever to confirm construction, and is more than 15% lower than other projects in construction elsewhere in the UK. The successful tender comes after H&W successfully delivered offshore wind construction for the West of Duddon Sands project.

Businesses realise their growth potential and scale up

Incorporated in 2007 with 10 employees and 20 sub-contractors, Omagh-based firm Adman Civil Projects won contracts for both wind farms and sub-stations across the West of Northern Ireland, growing in 10 years to 100 employees and 150 sub-contractors. They have developed new client relationships and delivered record turnover. They also have an extensive Ireland-wide supply chain for materials such as stone, concrete and rebar, and skilled operatives traveling around the region. County Fermanagh has £1.6million contracted value, Derry has £10million and Tyrone has £9.8million.

Succeeding in global markets: renewables deliver

Attracting foreign direct investment

With ambitious clean energy targets NI attracted investment from German, Chinese, Irish, US, Canadian and Belgian companies, proving that clear policy signals will deliver significant investment in renewables. According to a 2015 report Northern Ireland benefitted to the tune of £32 million in 2014 through the onshore wind industry.⁷ This means that a single turbine from an average wind farm represents £2.7 million investment in the local economy throughout its development, construction, and operations and maintenance (O&M) phases. Traditional engineering companies such as Harland and Wolff are winning international contracts in offshore technologies, delivering local high-skilled jobs.

Commercial success in overseas markets

Local firms such as ARCH, McLaughlin Harvey and AGS are exporting their skills and services developed in the renewables sector across other European countries. Access Rescue Consulting at Height is a work at height and safety consultancy business supplying specialist height and safety training, rope access, rescue, safety consultancy, inspection and maintenance services to the telecommunications, wind energy, industrial and public sectors. Founded and based in Lisnaskea, Fermanagh, the company has now opened a new office in Shannon.

Existing strengths within sectors

⁷ <http://www.ni-rig.org/wp-content/uploads/2012/07/FINAL-WEB-NIRIG-REPORT.pdf>

As the UK leaves the European Union, it is imperative that we build on our leading sectors and skills to create an expanded and stronger role in international markets. Companies in the supply chain for renewables range from SMEs to large corporates. These firms cover a variety of goods and services, such as: supplying and maintaining turbines and components for offshore, onshore wind and wave and tidal energy projects; installing offshore wind turbines and underwater power cables; inspecting and maintaining offshore wind farms; providing helicopters, crew and vessels; conducting geological surveys; weather forecasting; monitoring wildlife; and providing financial, advisory and legal services.

Building the best economic infrastructure: renewables deliver

Enabling and driving economic growth

Our vision is of predictable, long-term and cost-reflective energy market where all participants compete to provide services to a smart, flexible grid and lower costs for consumers. This will lead to a more connected and competitive economy.

It is crucial that the policy and regulatory framework keeps pace with the energy transition so that it is delivered at lowest cost to bill payers and at most value for the economy. Energy participants operate in a context of considerable uncertainty – ranging from economic factors such as inflation, changes to electricity demand, evolution of technology and the performance of the energy system. These risks are appropriately taken on by those participants.

Energy strategy

However, policy risk is in the control of the Government and should as far as possible be minimised. We consider that this can best be achieved by a predictable process which meets security of supply and decarbonisation at least cost, and a clear commitment to decarbonisation of the electricity sector, followed by decarbonisation of the heat and transport sectors.

We look forward to close engagement with the DfE in its formulation and delivery of the new Energy Strategy.

Meabh Cormacain

NIRIG