

Response to National Smart Specialisation Strategy Consultation

10 August 2021



EirGrid welcomes the opportunity to respond to this consultation. EirGrid operates, develops and maintains Ireland's electricity transmission system. As part of our strategy 2020 – 2025 we have a primary goal to decarbonise the power system for future generations. Our response to this consultation is in the context of the electricity system and the decarbonisation of same.

1. Regional Economic Context for Smart Specialisation

Q: Do you agree with the suggested areas of strength for the three regions as set out above? Are there other areas of strength in the three regions to be highlighted?

EirGrid is supportive of balanced regional growth and this was demonstrated in our recent consultation entitled "Shaping Our Electricity Future", where we held one of the most comprehensive engagements and endeavoured to seek the voices of all members from our communities, industry and statutory bodies, in every part of Ireland. In this consultation, we sought the views on four different approach to developing the grid and one of these was very much a regional solution where we sought to locate large industry users, including future jobs, close to the regional renewable generation locations away.

Ireland has an objective to be net carbon zero before 2050. To achieve this requires significant electrification of different sectors. Ireland however has a renewable resource potential far in excess of projected demand. A link therefore needs to be made between the resource and the end use. For example, the consultation paper notes offshore wind along the Northern and Western Region, however it should be noted that there is over 30 GW of potential off shore renewable resource which is far in excess of what we forecast the local demand in Ireland will be. Strong consideration needs to be given as to how we can utilise this resource e.g. hydrogen production and/or Ireland becoming a net exporter of energy.

Q: What, in your opinion, are the key sectors in your region? What are the skills, assets and capabilities within your region?

Ireland is a world-renowned leader in the integration of renewable resources into the electricity system. This includes the intellectual human capital in our higher education institutes and also within the wider power system landscape.

Q. Which sectors could achieve critical mass in Ireland over the next seven years? Where are the opportunities and what needs to be done to unlock these opportunities?

The Programme for Government 2020 set out ambitious climate action targets and these were formalised as part of the Climate Action Bill 2021 and will also be included in the forthcoming

Climate Action Plan 2021. These ambitious targets will continue to make Ireland a world leader in relation to the integration of renewables onto our electricity system and drive the decarbonisation of our economy. Ireland, due to our unique location and circumstances, experiences many of the challenges associated with the integration of large scales of renewables before others in the EU. We can therefore share our learnings which benefits the wider EU ecosystem. We need to ensure that Ireland focuses on our strengths in this area and that we receive the appropriate funding from the EU to enable us to deliver on our collective ambitions.

2. Digitalisation and Digital Transformation

Q: Is digitalisation impacting your sector or region? How?

The Irish electricity system has been undergoing significant change over the last several years and will undergo a further transformative change over the coming years. The scale of smaller distributed electricity generation has increased significantly, the amount of new technologies and the data underpinning all of the above has increased exponentially to date and will continue to do so over the coming years.

Q: How can we improve the alignment of the country's ICT and digitalisation expertise, initiatives and investments?

We need to ensure there is an appropriate pipeline of skills and expertise in this area and that investment is made in this area, as there are often shortages in this speciality.

3. Green Transformation for Enterprise

Q: What opportunities can you see as arising from Green Transformation for your sector or region?

EirGrid, as the Electricity Transmission System Operator (TSO) for Ireland, is tasked with ensuring that we meet the ambitious climate targets of sourcing 70% of our electricity from renewable resources by 2030. As noted previously we experience many challenges in Ireland before others do internationally. This gives us a unique opportunity to be the first to solve these challenges and to share these learnings to help others accelerate towards solving climate change challenges. Due to this we are uniquely positioned to secure EU Horizon and EU Green Deal funding. This will help create jobs and a sustainable economy in Ireland.

Q: What challenges exist for enterprises trying to reduce emissions or introduce sustainable practices?

No comment.

Q: How could government or enterprise agencies assist you in meeting those challenges?

As noted in the consultation paper there is significant funding available as part of EU Horizon and the EU Green Deal. It would be very beneficial if government could support applications for funding from these areas which align with government priorities. A major challenge is also around public understanding and acceptance for climate change initiatives as we transition away from fossil fuels to more sustainable sources. Increasing awareness of these challenges and what we need to do to overcome these would be greatly beneficial.

4. Innovation Diffusion

Q: What are the barriers for innovation diffusion in Ireland? How can these barriers be broken down? Are their regional differences in these barriers?

The new strategy should articulate what good looks like in relation to innovation practices and a toolkit made available in this regards. For example, ongoing monitoring and control, cost benefit analysis, lessons learned, etc should be embedded on a consistent basis. Openness and transparency should also be encouraged so as to encourage knowledge sharing. In particular the lesson learned and knowledge sharing for both successful and less successful projects should be a requirement. As part of funding there should be a minimum standard outlined with respect to a benchmark for what good looks like, with additional funding made available depending on whether the benchmark has been met or not.

Q: What channels for diffusion are used by your business or sector?

We currently use a number of forums such as:

- We publish an annual innovation report outlining what we did in the previous year;
- We are part of a number of research partnerships where we work collectively with academia and industry to solve challenges;
- We facilitate webinars and events to disseminate our learnings;
- We are part of international consortiums such as the Global Power System Transformation (GPST);
- We participate in EU Horizon 2020 projects and are currently leading a strategic H2020 project called the EU-SysFlex Project. This project addresses system operation challenges associated with the integration of 50% renewables by 2030 in Europe. It is an exemplar of

European cross jurisdiction and cross sectoral collaboration with 32 partners across 15 European jurisdictions participating; and

- We produce journal papers on our findings.

We are also currently developing a new Innovation & Research strategy, which we will be publishing and seeking feedback on in late 2021.

Q: How can we enhance collaboration between industry and the higher education sector?

The strategy should articulate the benefit of research and innovation and make it accessible to all and not just the typical research institutes. For example, open data is very powerful in this regards. Without having the data and information we cannot make informed decisions. Consideration needs to be given to providing additional funding to allow open data structures to be put in place.

Another consideration should be made to the establishment of a specific supportive ecosystem that could offer opportunities for collaboration. For example in the climate/energy space this could be between academic researchers, private companies, State companies (ESB, EirGrid, Gas Networks Ireland, Bord na Mona, Coillte, etc), State agencies (Science Foundation Ireland, Enterprise Ireland and Industrial Development Agency Ireland) and the Commission for the Regulation of Utilities and industry bodies (e.g Wind Energy Ireland).

In respect of encouraging companies, the research and development tax credits could be expanded to cover a wider variety of activities, or increased.

Finally any grant funding should include a requirement for dissemination and proof of knowledge transfer.

5. International collaboration on RD&I

Q: What areas of research or industry sectors does Ireland have an international competitive advantage in? How can we build on that advantage?

As noted previously we have an international competitive advantage in respect of integrating large volumes of variable renewable generation onto a power system. This advantage will continue into the future.

The strategy needs to call out the importance of higher education in developing the current and future skills and capabilities that will be required to delivering a green, digital and sustainable knowledge-based economy. Currently there is a challenge in the energy/engineer sector where there is a limited number of key skilled resources in the economy to continue to deliver on the government ambitions. The strategy should address the investment in higher education

development linking people, process and technology developments, so as to position the future work force to be better positioned to address some of the future challenges.

We need to ensure that we maximise the utilisation of European funding where such funding is aligned with our priorities.

Q: In what areas or sectors should we be concentrating our international research collaboration activity? What supports do these areas or sectors need to be competitive on a world stage?

We need to concentrate on the areas where we are leaders and which deliver solutions to meet future challenges. Furthermore areas where we are not experts will require us to leverage international collaborations to help us understand these areas further so that ultimately we can then exploit these in the future.

In respect of climate change we need to ensure that there are supports which links the challenges coming from government and/or industry and how the wider ecosystem can help solve these challenges. Furthermore, there are a large variety of different funding schemes in place, however it can be difficult to identify the best one which meets the needs. This should be centralised to ensure the process is streamlined.

Q. How can Ireland's regions use Ireland's international links and memberships to support their strengths and emerging areas of future opportunity?

Working with partners for positive change is an objective of the EirGrid Group Strategy 2020 – 2025.

In respect of our remit we have partnered with a number of international organisations and peer TSOs to ensure we can learn from how they solved similar challenges and for us to share our learnings. We have an extensive network across the globe and we are leveraging this in respect of the climate change objectives. We have found that many of the countries are very eager to engage with us, due to our achievements to date and our very ambitious climate change goals. Ireland should look to exploit this area further.

6. Actions to improve the national or regional enterprise research and innovation system

Q: Which RD&I initiatives have been successful for your sector/region? Which programmes should continue? Which RD&I programmes for enterprise are not working?

Tax credits for Research & Development have been positive and should be expanded. We also have received EU Horizon funding and we need to get greater access to these types of funding

mechanisms. As noted earlier we will experience many of the issues first in Ireland and these learnings can be shared within the EU ecosystem.

We need to improve how the Irish ecosystem maximises access to grant funding from the EU, which we believe is not currently happening today. Improved education around how to apply for grants, how to develop consortiums, etc would be very beneficial.

Q: How do we generate a stronger, unified ecosystem approach to RD&I across the country to strengthen the visibility of our RD&I supports?

Our climate targets can be delivered more effectively with an innovation, research and collaborative approach between all sectors of our economy and society. For example, there needs to be a cross collaborative approach, where the policy makers, research institutions, academia, communities and industry can collectively drive the green, digital and sustainable knowledge-based economy. This collaboration should be cross sectoral where energy, transport, housing, heating and enterprise are coming together to find innovative solutions with communities and energy citizen at the centre of this just transition.

Q: How do we target RD&I spend in a way which maximises impact for the economy and which addresses the market failure evident in low RD&I in the indigenous SME sector?

RD&I spending needs to be focused on areas for prioritisation for the government and which delivers the greatest benefit for society.