ENGINEERS IRELAND

URGENT ACTION NEEDED TO MEET ENERGY TARGETS

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Ireland is committed to a series of EU renewable energy source (RES), energy efficiency and greenhouse gas (GHG) emissions targets for 2020. Achieving these targets is a necessary first step in a much more ambitious transition to a low-carbon society by 2050.

While we have made substantial progress on renewable electricity generation (RES-E), projections for heat (RES-H) and transport (RES-T) put us well behind targets and we are unlikely to meet our overall 16% renewable energy target. We face particular challenges in the heat and transport sectors.

Similarly, our energy efficiency and GHG emissions reduction goals are likely to be missed, the latter by a very significant margin (Fig.1). Missing these targets will mean that we could incur fines of up to €610 million each year. Ireland will be allocated new targets for 2030 and we need to understand clearly why we did not reach our 2020 targets and take urgent action.

Electricity (RES-E)

Ireland's electricity has been decarbonising and a quarter of electricity is now generated from renewable sources, primarily wind. In the short to medium-term, while we continue to rely on fossil fuels, we should promote fuel switching from coal and peat to gas.

The deployment of wind capacity (and repowering of old wind farms) should continue along with the development of other clean energy technologies such as solar, bioenergy, ocean energy, energy storage, and carbon capture and storage.

Heating (RES-H)

Energy-efficient renewable technologies such as wood-burning boilers, heat pumps and solar water heaters, should be encouraged along with district heating systems, where appropriate. A robust Renewable Heat Incentive should be implemented and should deliver value for consumers and the State.

Homes should move to renewable solid/liquid fuels or appropriate electric heating. Buildings located within a short distance of the gas network should be connected to that network, and over time natural gas should be progressively replaced by biogas.

Transport (RES-T)

The adoption of electric vehicles, alternative fuels and active travel must be promoted as part of sustainable planning. Switching HGVs and buses to renewable fuels and natural gas (where appropriate) would also have a significant impact. More detailed recommendations on transport can be found in our policy brief on transport.

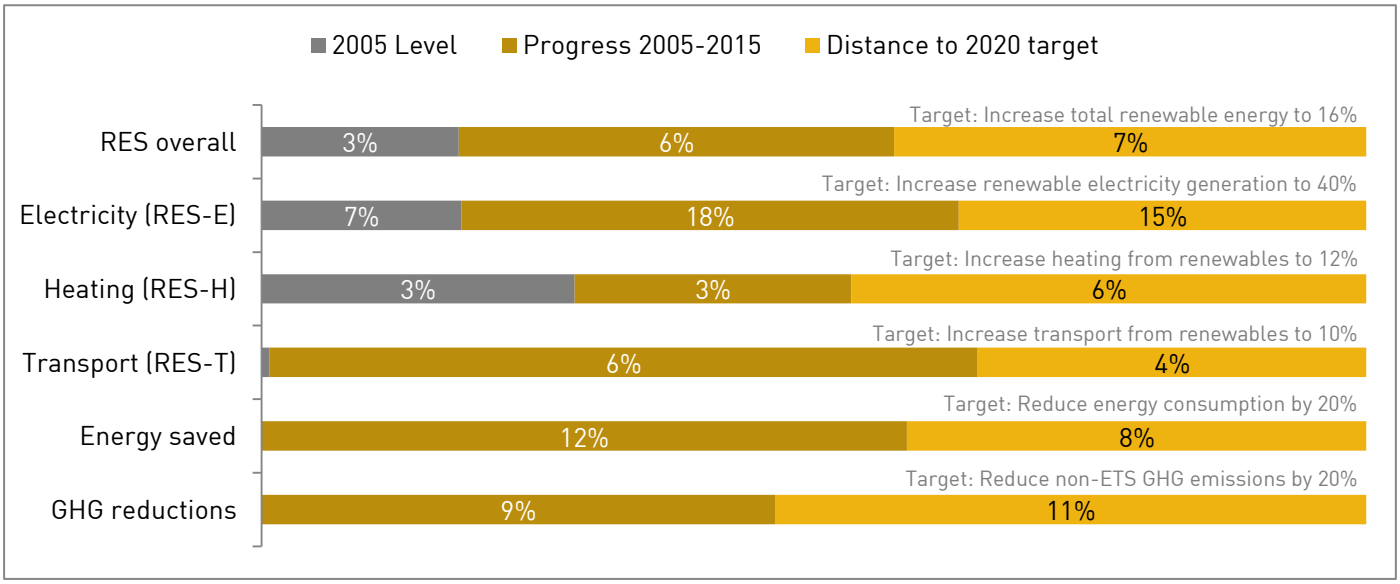

Figure 1. Ireland's 2020 energy targets, showing progress between 2005 and 2015 and the distance remaining to each target [EPA]

Engineers Ireland Policy
Click here for more policy briefs on Energy, Environment & Food.

Further reading

Engineers Ireland (2017) State of Ireland 2017
DCCAE (2017) National Mitigation Plan
SEAI (2017) Assessment of cost and benefits of biogas and biomethane in Ireland
EPA (2017) Ireland's Greenhouse Gas Emission Projections
Engineers Ireland (2016) State of Ireland 2016
SEAI (2016) Ireland's Energy Targets: Progress, Ambition & Impacts
DCCAE (2015) Ireland's Transition to a Low Carbon Energy Future

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Energy efficiency & behaviour change
Energy saving opportunities exist across all economic sectors, while beneficiaries of energy efficiency can be found at all levels of society. Energy efficiency should be rethought as an energy source in its own right. Energy efficiency also strengthens competitiveness and energy security by reducing energy costs and exposure to fluctuating prices.

Highly effective energy efficiency policies must be implemented across a range of sectors, including transport, residential, public, manufacturing and services. In particular, the deep retrofit of Ireland's domestic and public buildings towards nearly zero-energy building (nZEB) standards should be an immediate priority. All new buildings must also achieve nZEB standard.

Changes in energy practices and attitudes are pivotal. Community education programmes, awareness campaigns and grant schemes and supports should be expanded. ICT and the smart grid can also be used for demand side management and real-time pricing.

Translate policy and legislation into action
The National Mitigation Plan outlines a set of policy measures to achieve the transition to a low carbon future by 2050, complementing the Energy White Paper and the Climate Action and Low Carbon Development Act. This policy and legislation must translate into real action in the short term – seen as a 'burning platform'.

Efforts to decarbonise our energy system must be supported by planning and investment in infrastructure. Decarbonising heat and transport via electrifications is directly dependent on decarbonising of the electricity generation system. This has proven difficult from a planning perspective and has required significant subsidy to get to the current levels of on-shore wind.

Decarbonisation will also undoubtedly require research in and development of multiple disruptive renewable technologies, including energy storage and microgrids. Other infrastructure needs include anaerobic digestion plants to generate renewable bio-methane which is a drop-in replacement for natural gas and may be distributed via the existing gas grid infrastructure.

Challenges posed by Brexit
The Republic of Ireland's energy future is inextricably linked with Northern Ireland as part of the all-island Single Electricity Market (SEM), which may or may not be affected by Brexit. Nevertheless, it is essential that work on the North–South Interconnector continues to further bolster security of supply and reduce cost to the consumer.

It is important that Brexit negotiations seek to guarantee the functionality of the SEM and the unimpeded trading of energy across gas and electricity interconnectors with Britain. Future capital investment should consider additional interconnection options and energy trading facilities.

While Brexit is a significant challenge for Ireland on the energy supply side, we have a number of mitigating factors already in place. For example, 58% of Irish gas demand is now supplied from the Corrib gas field and a further 28% of Irish gas demand could be supplied from indigenous renewable gas. Further development of indigenous renewable energy sources would greatly improve our energy security and sustainability.

A policy brief on Engineers Ireland's Brexit priorities is available here.