



Our Energy Vision

70 per cent Renewable Electricity by 2030



Irish Wind Energy Association

INTRODUCTION

Ireland will shortly face a choice.

Will we take up the challenge from An Taoiseach Leo Varadkar TD and the work done by the Citizens' Assembly to become a leader in the fight against climate change?

Or will we duck the hard decisions, condemning Ireland to another lost decade of failed energy policies and empty rhetoric?

When we set Ireland's renewable energy targets for 2030 we will be shaping our energy and climate action policies for a generation.

A comprehensive report commissioned by IWEA by leading energy and utilities experts Baringa has shown how Ireland can use renewable energy to supply 70 per cent of our electricity needs by 2030.¹

This briefing paper summarises that report and sets out what needs to change over the next decade, beginning in the coming months.

We have the technology to do this. We have the resources.

With sensible policies and determined political support we can be a global leader in the decarbonisation of our electricity network.

Achieving this starts by setting an ambitious, but achievable, target to get to **70% by 2030**.

WHY DOES IRELAND HAVE TO SET A TARGET?

In June 2018 the European Union agreed to set a target that 32 per cent of the EU's energy would come from renewables by 2030.

To achieve this target each EU member state will have its own national target. These will vary as countries are at different stages in developing renewable energy and together will contribute to achieving the overall target.

Ireland's target will be negotiated with the EU in the coming months. We will agree a specific overall energy target broken down across three energy categories – electricity, transport and heat.

As renewable transport and heat have traditionally been much slower to develop, a target for electricity of 70 per cent is essential if we are not to fall further and further behind our European neighbours.

A target of 70 per cent renewables in the electricity sector, coupled with the electrification of our heat and transport systems, will ensure we play our part in making Europe's energy vision a reality.

¹ Reference for Baringa report.



WHERE IS IRELAND AT NOW?

Ireland will fall short of our 2020 renewable energy target. Our goal was for 16 per cent of our energy to come from renewables, which was our contribution to achieving an overall EU target of 20 per cent.

Although the EU is likely to exceed its target Ireland has lagged far behind.

To hit our target 40 per cent of our electricity should come from renewable sources along with 10 per cent of our transport and 12 per cent of our heat.

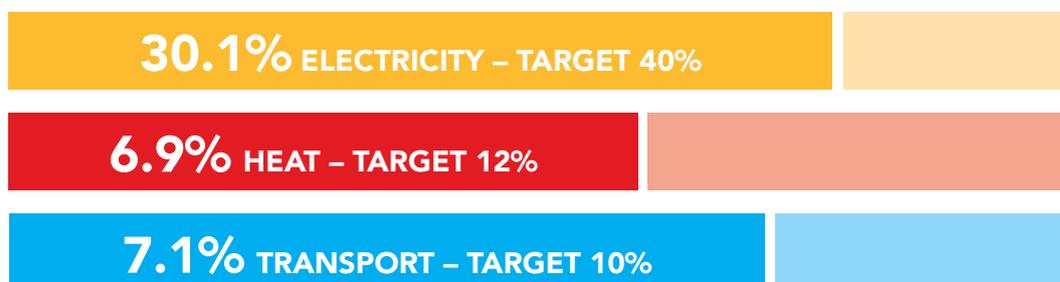
Record-breaking growth in wind energy in recent years means that our electricity target could still be reached but we will fall well short in the other categories (see Figure One). The size of our failure is increasingly clear. In June the Climate Action Network identified Ireland as the second worst country in Europe when it came to tackling climate change.²

A month later the Climate Change Advisory Council confirmed that our greenhouse gas emissions are increasing, not falling, and warned we are 'completely off course' in addressing climate change.³

Beyond the policy debates and the formal reports, more and more people are seeing the impact of climate change on their lives. From the flooding caused by Storm Eleanor at the start of the year to the impact on farming of drought-like conditions over the summer.

Climate change is no longer something that is happening somewhere else, it is happening in our fields and farms, our towns and villages, our homes.

Figure One: Progress to 2020 targets⁴.



² <http://www.caneurope.org>

³ <http://www.climatecouncil.ie/>

⁴ Based on provisional SEAL figures provided by Minister Denis Naughten TD on 31 May 2018.

HOW DO WE GET TO 70 PER CENT BY 2030?

There are seven steps to achieve a 70 per cent target by 2030.

- I. Increase wind power, including on and offshore, from an expected 5,400 MW⁵ in 2020 to 10,000 MW.
- II. Develop at least 2,900 MW of solar power, including both small-scale installations on buildings and larger solar farms.
- III. Strengthen our electricity transmission system so that it can accommodate up to 90 per cent renewable electricity at any one time.⁶
- IV. Reduce the minimum amount of fossil fuel generation required on our system from 1,000 MW to 700 MW.
- V. Build an additional 1,450 MW of interconnection from Ireland to neighbouring countries.
- VI. Construct 1,700 MW of new batteries.
- VII. Electrify our heating and transport systems using heat pumps and electric vehicles.

⁵ All figures are all-island.

⁶ The national grid is operated using an Alternate Current (AC) at a frequency of 50 Hertz (Hz). One of EirGrid's challenges is to maintain the system at a stable frequency. Conventional, fossil fuel, generation produces AC electricity at a stable frequency which is compatible with the grid. However, the intermittent nature of renewable energy, like wind and solar, means that the frequency of the electricity generated can fluctuate. To ensure the safe operation of our transmission system EirGrid currently limits the amount of renewable energy on the system to 65 per cent and is actively working to increase that limit. The company has confirmed to us that 90 per cent by 2030 is attainable.

IS THIS ACHIEVABLE?

This plan is ambitious, it is challenging, but it is absolutely achievable.

There are already plans for thousands of MW of new wind and solar generation with more than sufficient resources available to achieve a 70 per cent target and we have not even begun to exploit the potential of offshore wind.

Work on developing the interconnectors to France and to the UK is already underway.

But it will require a complete rethink in our energy system and a determined effort to electrify our transport and heating sectors with electric cars and heat pumps.

To succeed we will, for example, need 426,000 electric vehicles on the road in the Irish Republic by 2030, and while that is a high number it is smaller than the Government's own target of 500,000.⁷

We can do this and the crucial first step is for the Government to set a 70 per cent renewable electricity target to drive energy policy and investment over the next decade.



7 <https://www.per.gov.ie/en/national-development-plan-2018-2027/>

HOW MUCH WILL THIS COST?

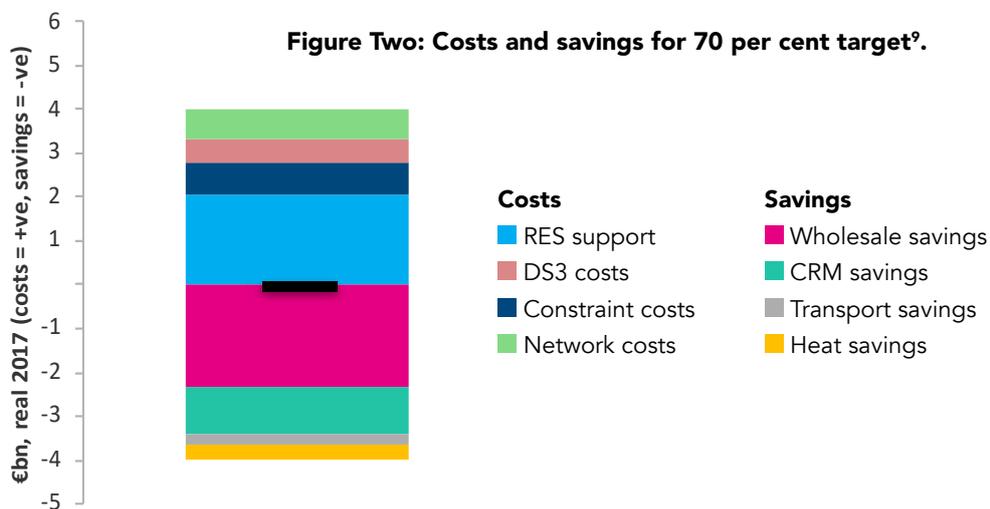
As well as showing that 70 per cent by 2030 is a practical target, Baringa also looked at how much it would cost and how we would pay for it (see Figure Two).

Their detailed analysis shows that the cost of doing this will be at least balanced out by the savings it will generate.⁸

More wind and solar farms, and a stronger transmission system, will certainly require investment.

But renewable energy drives down wholesale electricity prices, while electrifying heat and transport will also deliver savings and dramatically reduce our foreign fossil fuel imports.

The evidence is clear. An electricity system using 70 per cent renewable energy by 2030 is not only practical, it is – at a minimum – cost neutral for the consumer.



CONCLUSION

The more clean, renewable, energy we use to power Ireland's homes, farms, schools and businesses the less we rely on fossil fuels, the more we cut energy imports and the fewer carbon emissions.

Providing 70 per cent of our electricity through renewables by 2030 is technically and economically possible.

With the proper leadership we can be ambitious for Ireland's energy future.

We can get to **70%** by **2030** and take our place among the global leaders in the fight against climate change.

⁸ Energy Vision 2030. Baringa 2018.

⁹ Energy Vision 2030. Baringa 2018. Based on a figure of €60/MWh levelised cost of wind.