SUSTAINABLE ENERGY AUTHORITY OF IRELAND

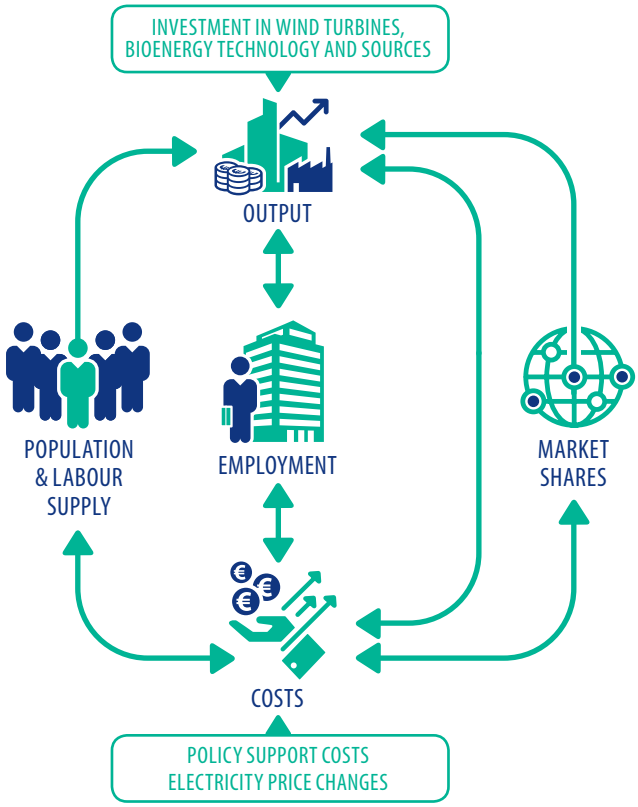
Macroeconomic and Net Employment Impacts of Ireland's Renewable Heat and Electricity Targets in 2020

Background

Investment in renewable energy technologies will contribute to Ireland's binding EU renewable energy targets for 2020, reduce our reliance on imported fossil fuels, and reduce our greenhouse gas emissions. SEAI has conducted detailed analysis which shows that in addition to these energy policy contributions, reaching our 2020 renewable energy targets for heat (12% RES-H) and electricity (40% RES-E) will also deliver positive macroeconomic and net employment benefits.

The results present the net new direct jobs (from new technology installations), indirect jobs (created in supply chains), induced jobs (from increased consumption), and jobs linked to increased investment in capital stock in the year 2020. These employment gains flow from anticipated investment over the period 2013 – 2020, while also taking into account changes in prices, incomes and output in the wider economy.

Sustainable Energy Economy Model



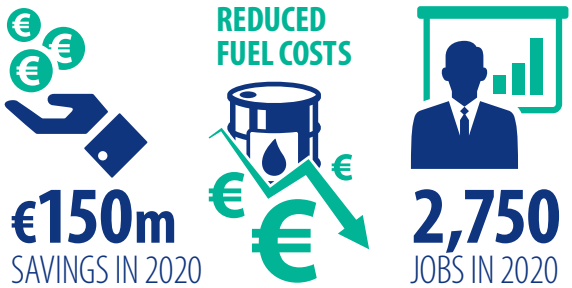
Approach

Detailed data on the structure of the Irish economy and population demographics have been used to create a model of the Irish economy. To assess the impact of technology investment on the economy, the anticipated investment to 2020 is compared with a hypothetical scenario where no further investment takes place post-2013.

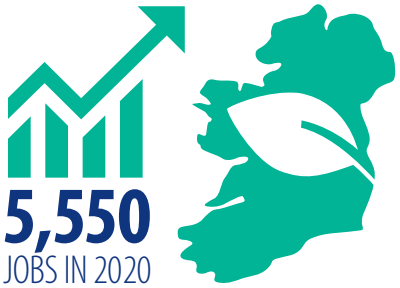
Renewable Heat (RES-H) Results

Achievement of the 2020 renewable heat target results in positive macroeconomic and net employment in Ireland.

Results of producers switching to biomass, regardless of source location...

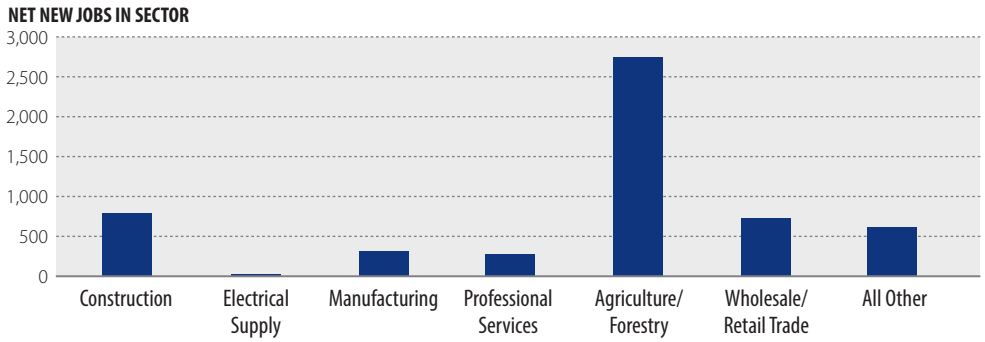


... but, net employment increases when biomass is grown and sourced **locally**



GDP increases in 2020

The macroeconomic and employment benefits are maximised where more biomass is sourced locally, creating additional jobs in forestry and agricultural supply chains.



Renewable Electricity (RES-E)

ONSHORE WIND

Onshore wind deployment has a consistently positive impact on the Irish economy and net employment in 2020.

4,400
NET JOBS CREATED IN 2020

2,000
DIRECT JOBS IN CONSTRUCTION

500
ONGOING DIRECT JOBS IN OPERATIONS AND MAINTENANCE

THE REST IN THE SUPPLY CHAIN (MANUFACTURING, PROFESSIONAL SERVICES) AND AS A RESULT OF HIGHER EXPENDITURE IN THE WIDER ECONOMY.

GDP
INCREASE IN 2020

IN 2020, GDP COULD INCREASE BY
€305m-€585m
AS A RESULT OF BUILDING NEW WIND FARMS AND EXPANSION OF THE ELECTRICITY GRID.

The additional direct employment is driven by investment in new wind turbines. These new jobs drive increases in average income per capita and real disposable income in 2020 (where electricity cost savings are made). Future changes in the price of electricity as a result of supporting investment in onshore wind, via the renewable energy feed-in tariff, impact on the net jobs created, however the macroeconomic and employment impact is always positive. Where international gas prices remain lower than currently anticipated to 2020 net new jobs are estimated at around 2,880 in 2020. With current gas price projections, net new jobs are anticipated to increase by 4,400 – increasing to 6,000 in the event that gas prices increase faster than expected in future – thus highlighting a further benefit of sourcing electricity from indigenous sources versus relying on international sources of energy.

BIOMASS FOR ELECTRICITY GENERATION

In terms of biomass used to generate renewable electricity, net employment benefits are observed only if energy crops are sourced in Ireland. Potential exists for 1,500 net jobs to be created in 2020, mainly in the agriculture and forestry sectors, through the domestic supply of solid biomass. Conversely, when solid biomass is imported, combined with an assumed increase in electricity prices to support the renewable energy feed-in tariff (Government supports) for biomass generated electricity, there is estimated to be a loss of jobs in the wider economy as spending and output declines.

Using biomass for electricity generation reduces availability of the resource for use in the heat sector. This could increase the cost of achieving the targets in both sectors.

To download a copy of the full reports
A Macroeconomic Analysis of Bioenergy Use to 2020 and
A Macroeconomic Analysis of Onshore Wind Deployment to 2020
visit www.seai.ie

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