

Bioenergy Supply in Ireland 2015-2035

An update of potential resource quantities and costs

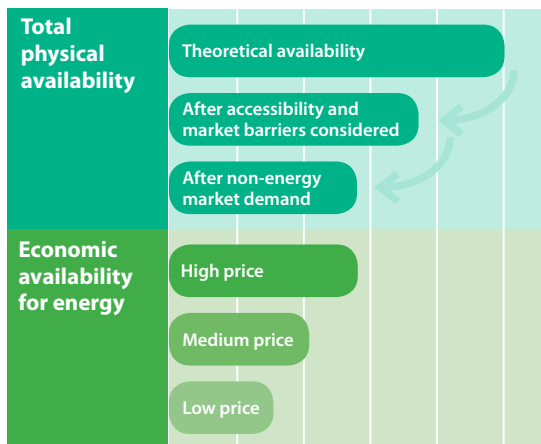
Background

The Sustainable Energy Authority of Ireland (SEAI) conducted a study to estimate the energy potential available from domestic biomass resources under various market conditions for each year to 2035.

The analysis uses up-to-date published information and input from industry experts. The findings offer insights into the long term actions required to develop the resources for future energy use.

The supply curves provide a foundation for analysis of the entire bioenergy supply chain that capture the market price/cost impacts of increasing the use of available bioenergy resources.

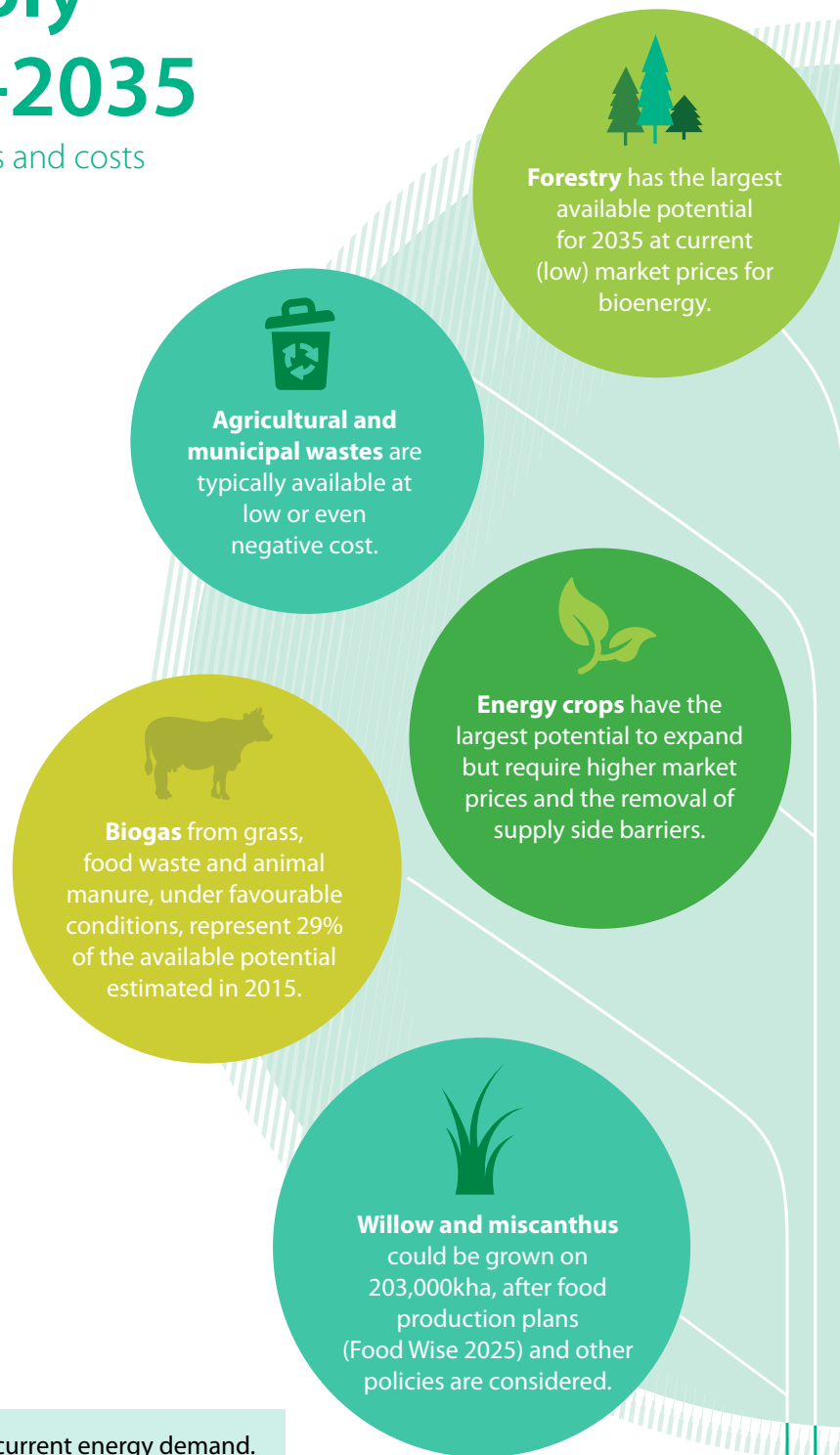
Illustration of resource estimate methodology



Key Findings

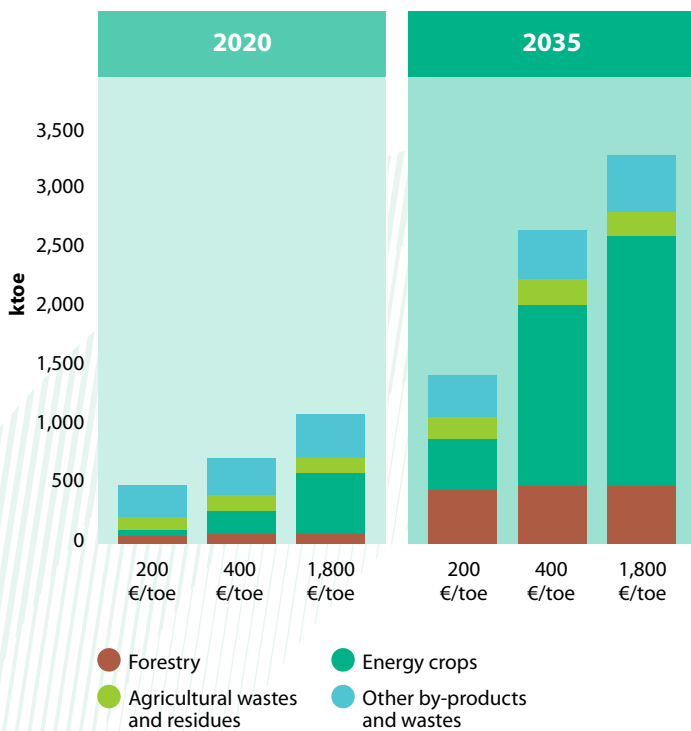
- 2035 potential is equivalent to 30%* of Ireland's current energy demand.
- The majority of resource potential is available at a roadside/farm gate price above current market prices for most resources.
- Increased bioenergy demand, leading to sustained increases in the market price for bioenergy, is required to deliver an expansion in domestic bioenergy supply.
- Further supply side interventions aimed at removing the barriers identified can lower production costs and help the financial viability of resources at lower prices.

* if used to produce heat at 80% efficiency.

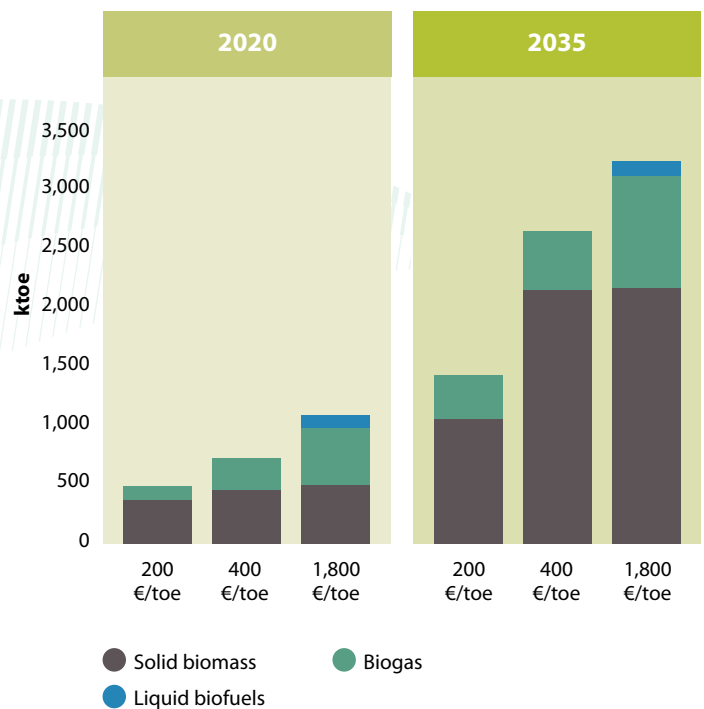


Bioenergy resources in an enhanced supply scenario

Potential by type of resource at low, medium and high prices in 2020 and 2035



Potential by type of fuel at low, medium and high market prices in 2020 and 2035



Maximum resource potential in 2020 and 2035 under favourable conditions (natural units)

Enhanced supply at high prices	2020	2035
Solid biomass		
Forest thinnings (000m3)	541	2,988
Sawmill residues (000m3)	862	1,237
Waste wood (tonnes)	75,127	94,693
Willow (odt)	18,491	1,280,772
Miscanthus (odt)	14,005	1,290,562
Straw (tonnes)	268,996	413,929
Municipal waste (tonnes)	355,883	492,298
Tallow (tonnes)	84,807	80,653
Biogas from anaerobic digestion		
Food waste (tonnes)	321,987	511,157
Cattle slurry (tonnes)	783,765	2,198,212
Pig slurry (tonnes)	3,234,785	3,481,479
Grass silage (odt)	1,010,579	2,135,000
Industrial food waste (tonnes)	238,666	302,321
Liquid biofuels		
Wheat for bioethanol (tonnes)	118,969	131,587
Oil seed rape for biodiesel (tonnes)	233,526	262,930
Used cooking oil for biodiesel (tonnes)	11,023	18,574

To view the full report Bioenergy Supply in Ireland 2015 – 2035, visit www.seai.ie