

# ***Biomass Resource Potential for Ireland***

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## ***Ireland's forest resource***

***ca 750,000 ha***

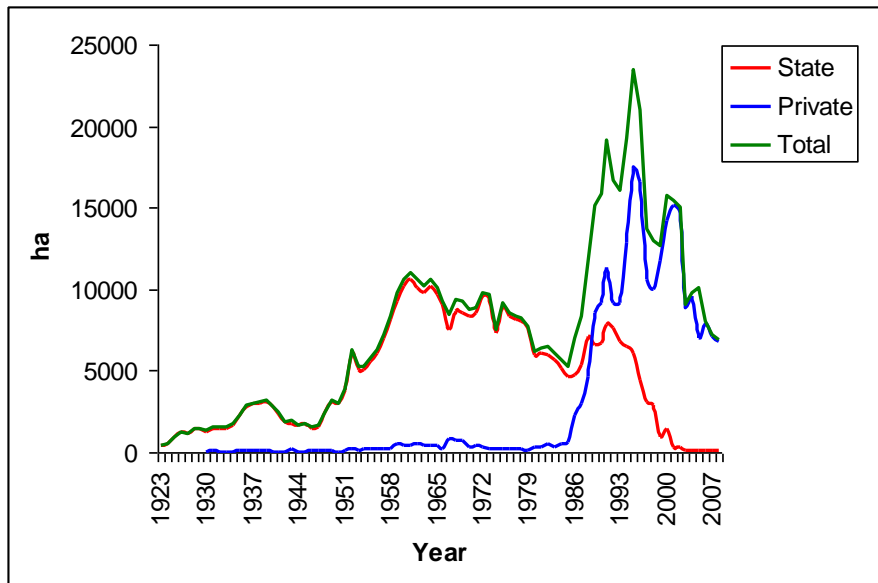
***plantation based***

***55:45 state:private ownership***

***rapid expansion 1985-2010 ...***

***fast growing – first harvest 12-15 years***

***wood energy harvest a good fit to management  
system***



## ***Renewable energy drivers***

### **Demand side**

***Energy White Paper***

***16% RE by 2020 target (Directive 2009/28/EC) NREAP***

### **Supply side**

***Forest age profile & need for thinning***

***Bioenergy crops***

## ***COFORD wood supply and demand modelling***

**November 2010**

***Wood supply (energy included) forecast to 2028***

***Wood demand (biomass included) (SEAI/COFORD)***

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### ***Modelled wood energy demand 2020 SEAI/COFORD***

<b>Combined heat &amp; power (CHP)</b>		
Required energy output	GJ/yr	7,344,000
Wood volume	000 m <sup>3</sup> /year	1,064
<b>Heat only</b>		
Required energy output	GJ/yr	3,610,000
Wood volume	000 m <sup>3</sup> /year	523
<b>Co-firing</b>		
Required energy output	GJ/yr	750,000
Wood volume	000 m <sup>3</sup> /year	109
<b>Total</b>	GJ/yr	<b>11,704,000</b>
	000 m <sup>3</sup> /year	<b>1,696</b>

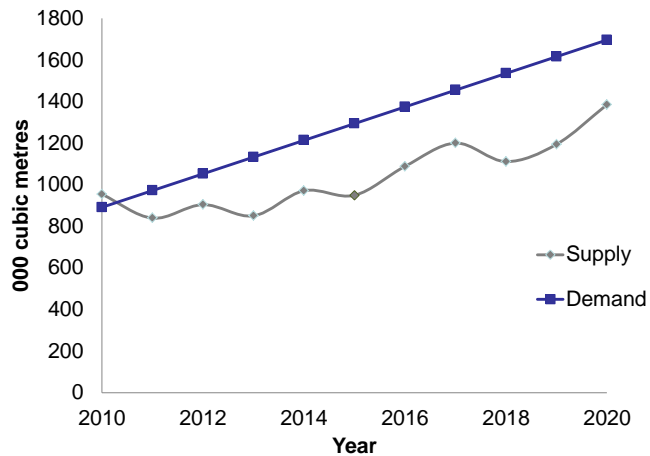
## Existing wood biomass use in Ireland

Use	Year		
	2007	2008	2009
	000 cubic metres (roundwood equivalent)		
Firewood	44	54	87
Wood chip	35	63	53
Short rotation coppice	1	1	4
Wood pellets and briquettes	67	82	110
Charcoal	2	2	2
Energy and forest products sectors	420	384	438
<b>Total</b>	<b>569</b>	<b>586</b>	<b>694</b>

## Forecast Potential Supply Wood Energy

Year	Tip - 7cm	Roundwood 7 - 13cm	Downgrade + Wood Residues	PCRW	Total	Energy Content Millions(GJ)
2010	46	188	635	85	954	6.59
2011	42	193	518	86	839	5.79
2012	47	202	568	87	904	6.24
2013	43	173	546	88	850	5.87
2014	48	206	628	88	971	6.70
2015	49	226	585	89	949	6.55
2016	53	252	692	91	1,088	7.51
2017	56	304	747	93	1,200	8.28
2018	54	264	698	95	1,111	7.66
2019	56	296	745	97	1,194	8.24
2020	60	378	848	99	1,385	9.56
2021	58	365	897	101	1,421	9.80
2022	57	364	888	103	1,412	9.74
2023	60	376	972	105	1,513	10.44
2024	58	368	929	107	1,462	10.08
2025	54	327	900	109	1,390	9.59
2026	55	331	1,052	111	1,549	10.68
2027	62	398	1,236	113	1,809	12.48
2028	61	382	1,191	116	1,749	12.07
<b>Totals</b>	<b>1,021</b>	<b>5,594</b>	<b>15,274</b>	<b>1,861</b>	<b>23,749</b>	<b>163.87</b>

**Wood biomass supply and demand in Ireland to 2020**



## ***Achieving forecasted levels of forest-based biomass supply***

- 1.accessibility – county roads system***
- 2.availability of roading grant***
- 3.economic volume threshold for harvesting***
- 4.sales system - need for a standardised approach***
- 5.voluntary certification - access to market***

## ***Going beyond the forecast - addressing the wood biomass supply gap***

***Higher levels of thinning (market pull)***

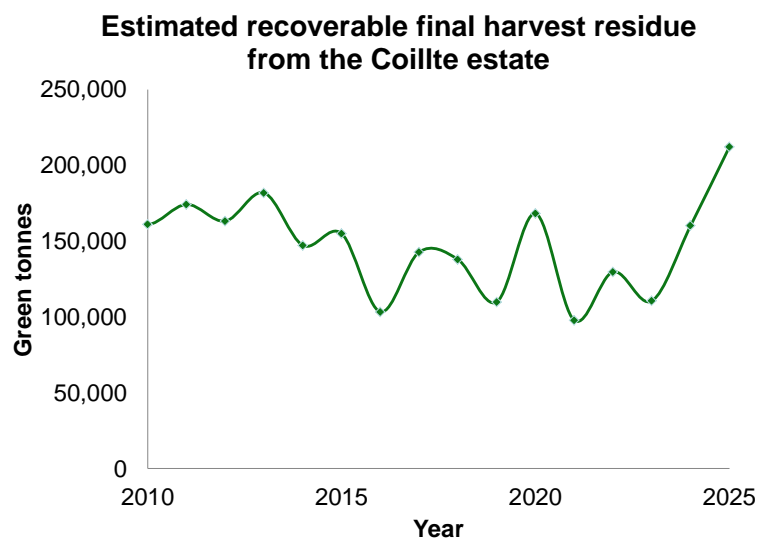
***Full tree and whole tree harvesting***

***20,000 ha willow: 300-400,000 t biomass per year***

***Short rotation forestry (eucalyptus, ash, sycamore...)***

***Clearfell harvest residues ~ 150,000 t per year***

***R&D along supply chain + GIS tools and information systems***



## ***Demand side measures***

***REFIT – State Aids approval***

***Capital grants and tax allowances***

***Public sector procurement policy – district heating***

***Wood Fuel Quality Assurance Scheme***

***Independent advice and promotion – SEAI, DAFF, DCENR***

***Climate change strategy and measures***