

Forestry

Wood energy begins its renewable journey



Last week's IrBEA conference heard how to develop the bioenergy sector to help achieve Ireland's renewable energy targets, mainly using wood biomass
Donal Magner reports

While wind and solar power are playing an increasingly important role in decarbonising the energy economy, bioenergy – wood and other organic biomass – is still the main source of renewable energy in the EU. Forestry remains the main element of biomass for energy, either as wood residue (wood chips, sawdust and waste wood) or fuelwood. Wood pellets, mainly for heating and electricity production, have also become an important energy source.

Wood energy featured prominently in last week's conference "Bioenergy – inspiring the industry with opportunity and vision", though the event also addressed other bioenergy crops and opportunities, including biogas and biofuels to achieve renewable energy targets in heat, transport and electricity.

Organised by the Irish Bioenergy Association (IrBEA) and sponsored by Bord na Móna, the annual conference was the first of its kind since Minister Bruton launched the Support Scheme for Renewable Heat (SSRH) last summer "to increase the use of renewable energy in the heat sector by approximately three percentage points".

Many countries with ambitious renewable energy programmes use multiple sources of energy. Tom Egan, head of bioenergy operations and power generation at Bord na Móna, alluded to this when he spoke of his company's transition from fossil fuel to renewable energy at Edenderry Power Station.

"Biomass contribution at Edenderry makes it the biggest supplier of on-demand renewable energy on the island of Ireland," he said.

"This means that when the wind doesn't blow or the sun doesn't shine, Edenderry can guarantee a supply of renewable energy to the grid. This adds flexibility to the grid, to install more wind and solar generation."

While countries such as Denmark, Sweden, Finland and Austria place strong emphasis on wood as a major renewable energy source, it has its critics.

For example, the 2018 EPA report *Air*



Nick Cotter, Cotter Bros Firewood, explaining the benefits of renewable wood energy at the IrBEA conference with (from left) Thomas Duffy, Macra Feirme; Laura Burke, EPA; and Billy Costello, Green Generation. \ John Ohle Photography

quality in Ireland identified domestic use of solid fuel such as coal, peat and wood "as having a negative impact on our air quality". In England, wet wood and house coal will be banned by 2023. These will be replaced by cleaner alternatives, including dry wood and manufactured solid fuels.

A number of speakers at the conference, including Nick Cotter from Cotter Bros Firewood and Kenny McCauley of McCauley Wood Fuels, stressed the need to urgently move away from wet fuelwood.

"This will require regulation to ensure that products such as wood chips are dried to moisture content at least below 25%, which is the standard demanded by the Wood Fuel Quality Assurance (WFQA) scheme," McCauley said.

This view was shared by Nick Cotter, whose company, like McCauleys, is a member of WFQA scheme.

"Lack of regulation is a significant challenge, as there is a lot of inferior, sub-standard wet firewood out on the market," he told the conference.

"This is not good for our industry, nor is it good for the consumer, as wet firewood contains less heat and is bad for stoves and the environment."

He outlined a plan to implement mandatory minimum standards for wood biomass, including firewood, which his company processes in Abbeyfeale.

“Lack of regulation is a significant challenge, as there is a lot of inferior, sub-standard wet firewood out on the market

He proposed "an initial maximum moisture content of 25% and then move to 20% as this is the optimum moisture content of kiln dried firewood".

Both speakers also emphasised the importance of locally-sourced wood. "A Western Development Commission study shows that 1,000t of firewood leaves €250,000 in the local economy, while the same usage of oil leaves a mere €15,000," said Nick Cotter.

Kenny McCauley said his customer base includes the agriculture sector as well as industry, tourism and leisure users, mainly in the northwest. His company's long-term aim is to increase production to 40,000m³ of small logs, which would displace 2.5m litres of heating oil every month during the peak heating period.

Tom Egan also stressed the benefits of localised wood energy. "Edenderry Power continues to transition towards ever-increasing levels of biomass, which is sustainable and 80% of which is indigenous from local Irish suppliers," he said.

Cork and Cavan venues for free SSRH information seminars

The second phase of the Support Scheme for Renewable Heat (SSRH) was opened last May by Minister Bruton. This provides operational support for biomass boilers and anaerobic digestion heating systems. Although the scheme is now live, the take-up has been modest, despite its potential for many enterprises, including hotels, nursing homes, leisure centres and the agriculture and horticulture sectors, where significant savings can be made by converting to wood biomass.

The current flow of queries on the SSRH shows that there is a knowledge gap around the practical engineering applications that are allowed within the regulations. Some of these were discussed by Ray Langton, SSRH programme manager at the Sustainable Energy Authority, during last week's bioenergy conference. He will be one of the speakers at the hands-on seminars on the practical application of the SSRH on:

- Tuesday, 10 March, 1.30pm, Teagasc, Ballyhaise, Co Cavan.
 - Wednesday, 11 March, 1.30pm, Teagasc, Moorepark, Co Cork
- Organised by Teagasc and SEA, both seminars, which are free, will cover the principles of biomass heating systems, including:
- Interpretation of eligibility rules for biomass boilers.
 - Biomass resources and sustainability criteria.
 - System quality and performance.
 - How the reduction in the farm's carbon footprint could be of advantage in the market place.
 - Consideration of payback on the investment.

In addition to Ray Langton, Tom Houlihan of Teagasc, Mark Hanly of Greengrove Wood Energy, Barry Caslin of Teagasc, Conor Casey of Towards Zero Carbon, Pat Smith of Local Power and Robert Goss of Solar Electric Ireland will also be speaking at the seminars.

For more information, contact Vanessa Keane, Teagasc via email (vanessa.keane@teagasc.ie) or by phone (057-868 2175).



Ray Langton.



Our past, sustaining your future

Freephone:
1800 928 900
to arrange a **FREE** consultation



Premiums up to €680/ha/year

Exempt from income tax*

No cost to you*

Retain full ownership of land & timber

*Subject to individual status and site conditions

www.swsforestry.ie