

Bright future for on-farm renewables

Wind, solar, biomass and aerobic digestion are all showing promise as sources of energy, and income, for farmers

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The world of renewable energy in the agricultural sector is an exciting place to be. Many farmers will be drawn to on-farm renewable energy projects by the prospect of attractive returns on investment, boosted by the long-awaited Support Scheme for Renewable Heat (SSRH) and the Renewable Electricity Support Scheme (RESS).

Greater scope for anaerobic digestion

The removal of carbon dioxide from energy sources is commonly referred to as decarbonisation. There have been dramatic falls in the cost of technologies such as photo voltaic solar, onshore and offshore wind. Together with battery storage they will help decarbonise Ireland's electricity supply and will generate interest in renewable energy production on-farm.

Large amounts of low-carbon gas will be required to displace fossil fuel natural gas. This will offer opportunities for farmers to produce biomethane through anaerobic digestion (biogas) from slurry and grass, together with other carbon sources such as food wastes.

Biomethane will require SSRH support in order for it to become viable as there is a high capital outlay.

Support Scheme for Renewable Heat

The Minister for Communications Climate Action and Environment (DCCA) Richard Bruton, TD, has committed to introducing a scheme called the Sustainable Scheme for Renewable Heat, which will encourage the installation of equipment such as biomass boilers in commercial prop-



erties which could have a real benefit for rural businesses. The tariff will be paid for 15 years from joining the scheme, providing claimants demonstrate a use for the heat produced.

Many farms have a ready supply of wood coppice, chip or straw that can be used in biomass boilers, and others may be able to use ground-source heat. There could also be scope for individuals or groups to supply heat to local communities through district heating networks.

Renewable Electricity Support Scheme

A new Renewable Electricity Support Scheme will incentivise the introduction of sufficient renewable electricity generation to help meet national and EU-wide renewable energy and electricity decarbonisation targets.

RESS will consist of a number of key elements under headings including: community participation; increasing technology diversity; delivering on renewable targets for 2020 and 2030; and renewable electricity auctions.

Battery storage

The wind does not always blow or the sun does not always shine when you need the electricity. Battery technology could help overcome these peaks and troughs. It also opens up a range of future diversification opportunities, such as the prospect of hosting charging stations for electric vehicles (EVs) on farm.

Low-emission vehicles

Ireland is gearing up to ban the sale of new petrol and diesel cars by 2040. Electric tractors may be on sale as early as 2020, competing with biomethane-powered machinery for farm self-sufficiency, although challenging for the rural energy infrastructure in terms of charging needs.

But large vehicles may function like mobile storage batteries, earning income through so called vehicle-to grid services, potentially allowing access to ultra low cost charging.

Future of renewables

A lot of super markets and buyers are looking to supply chain efficiencies and certainly some of the milk buyers are looking to farmers to install renewables.

Milk producers and niche vegetable growers in particular are increasingly being told they need to have good green energy credentials.

The farm of the future has the potential to become an important source of renewable fuel and energy, as well as food. One vision could be the farm as the centre of the local community, supplying energy to their neighbours sourced from solar photovoltaic, wind or bioenergy produced on the farm.

The energy farm might also serve as a local rural vehicle refuelling station delivering renewable fuels. Renewable energy has a key role to play in Ireland's rural economy.