

## Replacing peat with energy crops for electricity generation will eliminate emissions equivalent to 225,000 family cars but we need more research to develop wider range of varieties to suit different land types

A significant plank in the national strategy to reduce the level of harmful green house gas emissions (GHG's) is to substantially increase the use of renewable energy (RE), particularly in electricity generation, for heat purposes and in transport. Specific targets which have been adopted for these sub sectors include:

**Electricity Generation:**

Co-fire 30% renewable fuel by 2015 in peat burning power stations [equivalent to the elimination of emissions of 225,000 family cars]

**Heat:**

5% of heat from renewables by 2010 & 12% by 2020

**Transport:**

Usage of 5.75% biofuels by 2010 and 10% by 2015.

Variable forms of RE such as wind and wave cannot achieve these targets alone. Biomass is the only solution which can be used in the heat and electricity co-generation sectors and indeed for the majority of the base raw material for biofuels. Biomass consists principally of wood and energy crops (e.g. miscanthus, willow, and oil seed rape) and ground meat and bone meal (MBM), which is a waste product of the meat processing industry.

The Bioenergy Action Plan, p27 suggests that up to 90,000 hectares of biomass would be required to meet the target as set out below.

The largest single potential use for biomass including energy crops is the peat firing stations. Replacement of this peat (which is one of the most pollutant fuels) with renewable fuel, i.e. energy crops is unlikely at this time because peat, despite its high carbon content, is still significantly cheaper than energy crops. If a sustainable energy crop industry or sector is to be established, it will be necessary to jump start it by introducing incentives by way of market support mechanisms for peat replacement in electricity generation and for the market generally. This will enable investors and farmers to calculate returns and remove uncertainty about financing and capital. However, even if appropriate incentives or market adjustment factors are introduced to encourage the development of energy crops, it will still be necessary for new varieties of miscanthus and willow (the principal energy crops) to be developed for lesser quality land. Primary research is required in this area immediately. Unless high yielding miscanthus and willow varieties suitable for lesser quality land are developed, we are unlikely to achieve a level of coverage to meet the needs of the

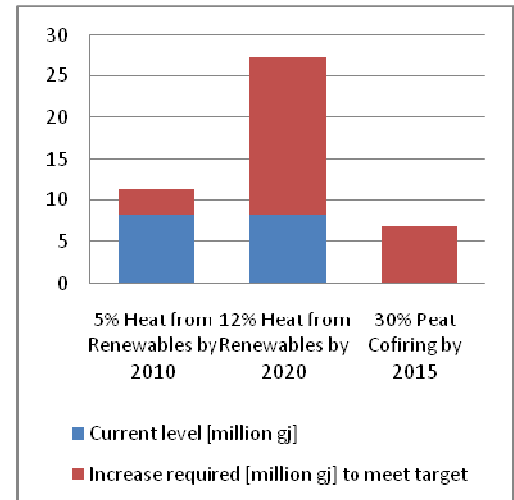


Figure 1 - Biomass Energy Gap

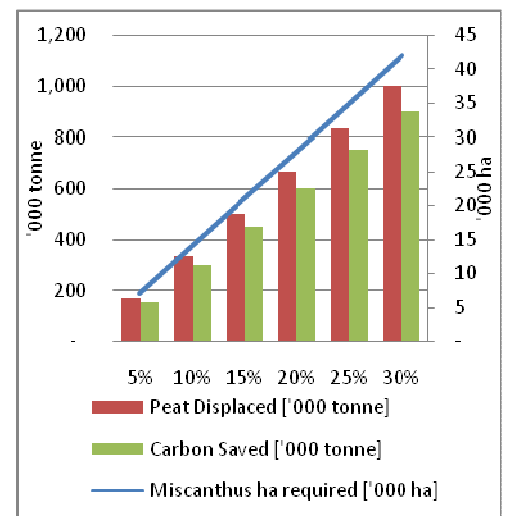


Figure 2 - Co firing Energy Crop Requirements (ha); Peat Displaced & Carbon Savings

electricity generation industry alone, not to mention the heat market generally.

The creation of a sustainable energy crop industry and the ability to co-fire at the target level, has significant benefits, including:

- Makes a substantial contribution to our Kyoto and EU commitments on climate change strategies
- Achieves a substantial reduction in GHG emissions
- Goes a long way to achieving the national renewable energy target
- Substantially reduces our cost of carbon credits
- Fully supports the three pillars of energy policy,inc
  - Increasing the level of energy security by adding to the indigenous energy source
  - Improves economic competitiveness by protecting us against future increases in fossil fuel prices
  - Supports the aim of environmental sustainability due to the low nutrient input required [no fertilisers required after yr 1 and with a crop life of 20 years in the case of miscanthus, no planting required]
- Creates a further income opportunity for the farming sector
- Provides a suitable crop for the increasing numbers wishing to continue farming on part-time basis
- Extends the life of our peat resources and of the bogs which act as a carbon sink
- Avoids the need for expensive imports which we believe would be a substantive policy failure.

Unless the current disincentive to co-firing by the three peat burning stations is changed, these power generators cannot be expected to change from their current practices which are economically more attractive for them now. They will continue to contribute more than 4% of our total emissions of harmful gases. The opportunity is there now: it is easily implemented, has little relative cost and has the same impact as reducing the car population by 225,000 cars.

In summary, energy crops provide a very significant opportunity to make an immediate and substantive reduction in our level of carbon emissions. However we need improved varieties of energy crops, principally miscanthus, suitable for lesser quality land. Primary research in this area is required urgently and this together with appropriate market adjustment measures will lead to the development of a substantive energy crop with benefits for all.

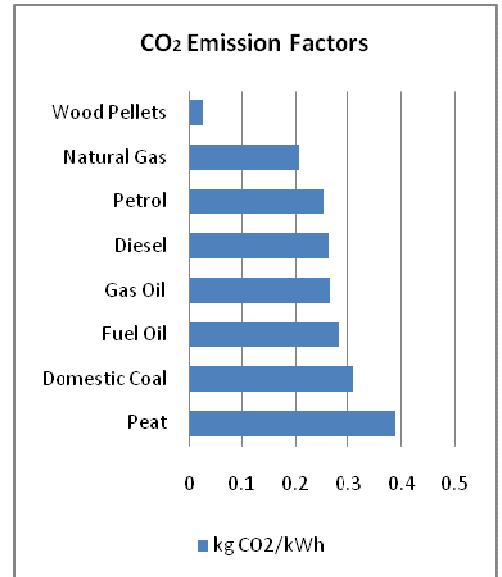


Figure 3 – Peat the most polluting fuel of them all

### National Climate Change Strategy



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*“The government will amend the REFIT scheme to allow biomass from co-firing to avail of the tariff.”*

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