



IFA Farm Forestry Submission

to

**Framework for a Pact for Stabilisation, Social
Solidarity and Economic Renewal**

Biomass Public Procurement Initiative

30th January 2009

BIOMASS PUBLIC PROCUREMENT INITIATIVE

It is estimated that the Government spends about €600¹ million per annum on imported fossil fuels to heat public buildings.

IFA propose that the Government introduce a Biomass Public Procurement Initiative to convert 25% of all public buildings including hospitals, amenity centres, offices and local development housing to biomass heating systems in the next five years. If this target were achieved the public sector annual heating costs could be reduced by as much as €100 million per annum.

The main benefits of the Biomass Public Procurement Initiative are:

- No additional capital cost to Government;
- Reduction in annual public sector heating costs of up to €100 million;
- Increased fuel security through reduced dependence on imported fuels;
- Reduction in carbon emissions by approximately 90%;
- Potential to create 5,000 rural based jobs; and
- Proven track record of technology in Ireland with 125 biomass boilers installed under the ReHeat Programme.

European experience demonstrates the large potential to use biomass systems to generate heat and small-scale combined heat and power in public buildings. IFA propose that the Government enter into energy supply contracts with private sector Energy Supply companies (ESCOs). The typical ESCo contract would provide for:

- The installation and management of the biomass heating systems;
- Supply of biomass fuel at agreed tariff; and
- Full system maintenance and service.

The Government is charged a reduced kWh price for the energy used as per any traditional energy provider. Because the ESCo is responsible for maintenance of the equipment and fuel supply under the contract, this removes all risk for the Government.

Based on SEI kWh price figures, converting from oil to wood chip heating system could save the Government up to 60% on heating costs (see Table 1). The savings could be even greater if the efficiency of the wood biomass heating system is compared with the existing oil or gas boilers in many public buildings.

Wood biomass is considered to be the cheapest renewable energy generation technology per installed kilowatt of energy. Over the past 20 years, biomass costs have remained stable versus increasingly volatile markets for oil and natural gas. Prices are not as susceptible to shifts in global demand or limited supplies of fossil fuels. Current wood chip prices are equivalent to an oil price of about \$40 per barrel.

Ireland has a substantial existing and expanding wood biomass resource that can be accessed immediately. Since the 1980's 16,500 farmers have invested approximately 225,000 hectares into forestry. COFORD forecast that 2 million green tonnes² per annum are currently available rising to 3 million green tonnes by 2015.

¹ Imperative Energy, Maynooth 2008

² Green wood, 50% moisture content, based on lower heating value

IFA estimate that if this was converted into quality wood chip 5,000 rural based green collar jobs could be created in the forest energy supply chain increasing to 6,500 by 2015. These jobs will be generated in forest road construction, harvesting, logistics, wood chip productions and supply, boiler installation, maintenance and services as well as indirect job creation.

The major barrier to the development of viable on-farm energy enterprises is the lack of scale in the local market. It is difficult to build clusters of wood fuel supply and processing activity around the current level of demand in the biomass market, but it could be built on the back of demand in the public building sector.

If Ireland is to achieve its Renewable Energy heat target of 12% by 2020 a wood biomass resource of 2.5 million tonnes per annum is required. This will also achieve 1.7 mega tonnes of CO₂ saving.

Biomass heating can also make a significant contribution to cutting carbon emissions. Carbon absorbed by trees during the growth cycle balances that emitted when the fuel is burned, so that biomass is regarded as carbon neutral. Evidence indicates that using biomass could reduce emissions by approximately 90% on a like-with-like comparison with traditional fuels.

As well as the carbon saving by replacing imported fossil fuels with an indigenous carbon neutral fuel, Irish forests sequester 2 mega tonnes of CO₂ per annum. With an annual afforestation programme of 10,000 hectares the volume sequestered would increase to 4.5 mega tonnes per annum.

The ancillary social and environmental services provided by biomass energy generation in Ireland include burning of biomass residues, improving forests and watersheds and providing rural development and employment opportunities.

Table 1: Commercial Fuel Comparison of Energy Costs & Carbon Savings³

Fuel	From	Unit of Supply	Average Price per Unit (€)	Delivered Energy Cost (cent /kWh)	CO2 Production Emissions CO2 kg/ kWh
Oil	Light Fuel Oil	Litre	0.842	7.51	0.342
Natural Gas	Small Business <73,000	kWh	0.0621	6.21	0.228
	Medium Business >73,000	kWh	0.0415	4.15	
Wood	Wood Chips (35% moisture)	kg wet	0.11	3.03	0.010
	Pellets	kWh	0.17	3.64	0.068

³ SEI, October 2008