

# **Market developments in small scale biomass combustion in Ireland**

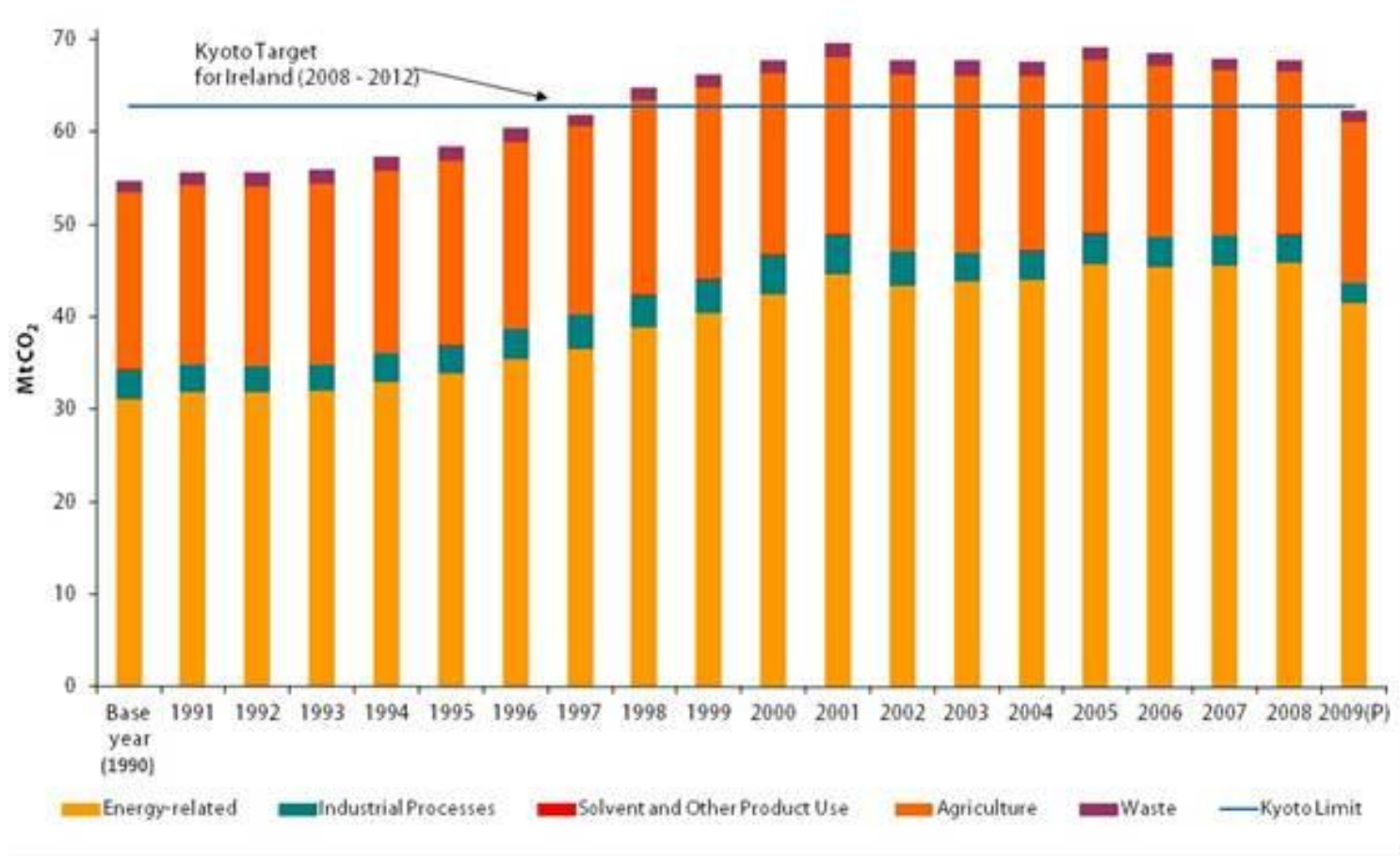
**IEA Bioenergy Task 32 workshop:  
18<sup>TH</sup> October 2011**

## Outline

- Drivers
- Progress at end 2009
- Biomass combustion in 2005
- Pilot Bioheat programme
- ReHeat programme
- Greener Homes scheme
- Biomass combustion in 2010
- Other developments
- Where to from here



## Drivers – GHG emissions



## Drivers – Energy security

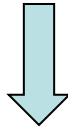


**89% Import dependent  
in 2009**



## Drivers – EU RED Directive

- **RED Directive 2009/28/EC for 2020**
  - **16% renewable energy in gross final energy consumption**
  - **10% renewables in transport**



- **National sectoral targets for 2020**
  - **12% renewable heat**
  - **40% renewable electricity**
  - **10% renewables in transport**



## Progress to end 2009

- 4.2% renewable heat
- 14.1% renewable electricity
- 1.8% renewables in transport



## Biomass combustion in 2005

- Biomass heating established in the wood industry sector
  - Drying kilns in sawmills
  - Process heat in boardmills
- Some biomass heating in the domestic sector – generally wood combustion at low efficiency

## Pilot Bioheat programme

- 3<sup>rd</sup> quarter 2005 to 2<sup>nd</sup> quarter 2006
- For commercial / industrial sector
- Capital grant of up to 25% for wood fuelled boilers
- Wood chips/pellets only
- Boiler min size 60 kW





## Pilot Bioheat programme

- 17 projects supported
- Total installed cap. 10.85 MW
  - 1 x 1.8 MW
  - 1 x 5.2 MW
  - Balance  $\leq 500$  kW
- ~€625,000 in grants



**Mid Cork Pallets – 1.8 MWth**

## ReHeat programme

- 2<sup>nd</sup> Quarter 2006 to 4<sup>th</sup> quarter 2010
- Capital grant of up to 30%
- Budget of €26 million
- Wood chips/pellets only
- Boiler min size – none
- Solar thermal and heat pumps added



## ReHeat programme

- 190 biomass projects supported
- Total installed cap. 78 MW
  - Two in the 8 MW range
  - Several in the 1 MW range
  - Most were  $\leq 500$  kW
- ~€8 million in grants

## Monart Hotel & Spa, Wexford



- **540 kW wood chip boiler**
- **ESCo-installation**
- **CO<sub>2</sub>-savings: 700 t/a**



## Greener Homes Scheme

- 1<sup>st</sup> quarter 2006 to 4<sup>th</sup> quarter 2010
- Domestic sector
- Capital grant varied by type of product
- Initial budget of €26 million
- Budget augmented due to level of demand

## Greener Homes scheme

- ~6,100 boilers/stoves installed
- ~171 wood gasification boilers
- ~€78 million in grants





## Developments to end 2010

- **Wood fuelled boilers added**
  - ~6,100 domestic wood pellet boilers/stoves
  - ~171 wood gasification boilers
  - ~210 commercial industrial wood boilers or ~90 MW
- **Wood chip/wood fuel supply chains initiated**

## Other developments

### Wood pellet production facilities

- D-Pellet, Knocktopher, Co. Kilkenny
- Laois Sawmills, Portlaoise

### Wood pellet press manufacturer

- Kerry Die Products Ltd., Killarney, Co. Kerry



## Other developments



- **The main objectives of the scheme are to:**
  - Ensure product that meets/exceeds customer requirements
  - Instil confidence in the marketplace
  - Ensure the production of sustainable wood fuel
- **Scheme will certify organisations involved in the manufacture/supply of solid biomass**
- **Web: [www.wfqa.org](http://www.wfqa.org)**

## Other developments

### Non-wood fuels - Strogs

- Compressed Straw
- Calorific Value: 15 to 17.5 MJ/Kg
- Ash: 3-6%



## Other developments

### Non-wood fuels – Miscanthus

- Alternative energy crop to SRC willow
- Limited demand in co-firing with peat - chemistry issues



## Other developments

- **SEAI Miscanthus Pilot Demonstration Programme**
- **Capital grant of up to 50% of eligible costs**
- **Boiler minimum size - none**
- **6 projects supported**
  - **Total capacity 515 kW**
  - **€125,000 in grants**



## Other developments



**Miscanthus boiler - 120 kW**  
**Eugene Sheehan**



## Where to from here

- **REFIT for RES-E and obligation (BOS) for RES-T**
- **What support for RES-H/C??**
  - **Policy yet to be determined**
- **Role of non–wood fuels in RES-H/C?**
- **Emissions from wood fuel / non-woodfuel combustion systems, particularly at small scale?**
- **Health & Safety, including fuel storage / handling?**

Thank you  
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