

CHP QA

Developments in Biomass and Energy from Waste CHP

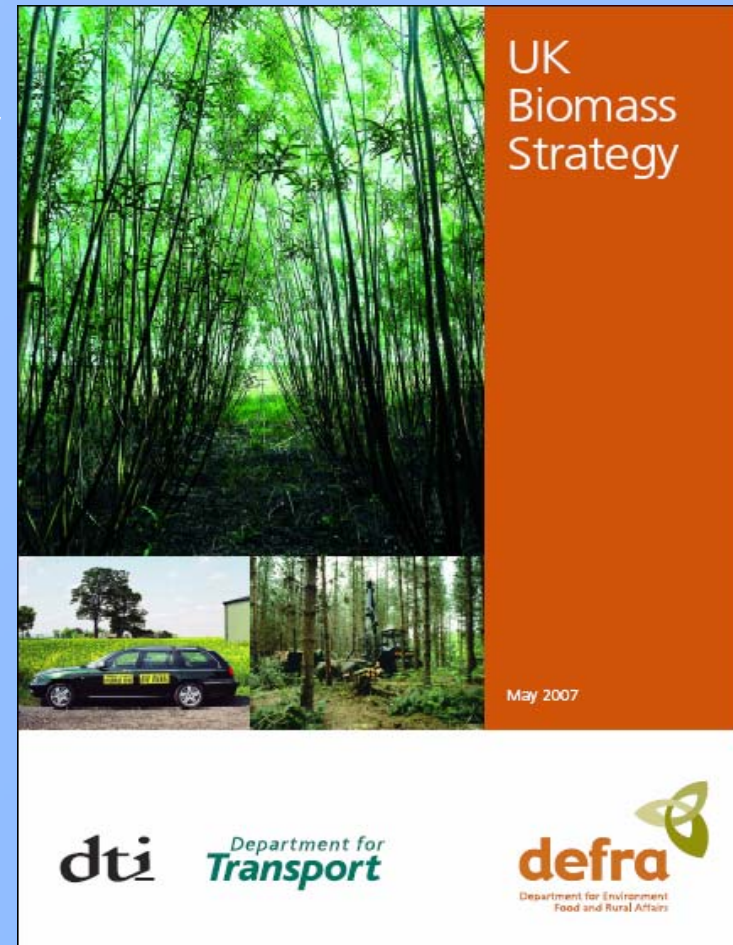
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Talk Coverage

- Biomass Strategy
- Biomass/EfW technologies
- Support Mechanisms

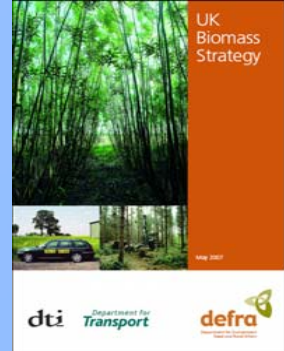
Biomass Strategy

- *The Biomass Strategy was one of the commitments within the Government's response to the Biomass Task Force report, published in April 2006*



- *The Biomass Strategy, published in May 2007 outlines the Government's strategic aims and goals for biomass use as an energy source.*

Biomass Strategy Objectives



- ***Achieve the optimal carbon-saving potential of biomass;***
- ***Support renewables and climate change targets and Energy Policy goals;***
- ***Facilitate the development of a competitive and sustainable market and supply chain for biomass, and energy crops and waste in particular;***
- ***Achieve an integrated policy and support framework across Government, accessible to customers; and***
- ***Comply with EU policies.***

Biomass and usage?

- *The term biomass is used to cover a broad range of biologically derived resources including:*
 - *Biodegradable fractions of municipal, commercial & industrial wastes*
 - *Sewage sludge, animal slurries, poultry litter;*
 - *Food waste;*
 - *Forest wood fuel;*
 - *Agricultural residues;*
 - *Wood waste;*
 - *Specifically grown energy crops*

EfW and Biomass CHP Technology

- *There is a range of technical options for converting biomass into useable energy (heat, power or CHP):*
 - *Straight combustion*
 - *Gasification*
 - *Pyrolysis and*
 - *Anaerobic digestion (AD)*
- *All operate at a range of capacities, although 'Advanced Conversion Technologies' (gasification, pyrolysis & AD) tend to be smaller end of market*

EfW and Biomass CHP Technology

- *CHP is a mature technical solution*
- *In the large scale, technologies employed are steam turbines and gas turbines*
- *Small scale technologies are mainly reciprocating engines*
- *For EfW or Biomass, technology is mainly:*
 - *Steam turbines*
 - *Reciprocating Engines (using Biogas/Syngas)*
 - *Gas Turbines (hot gas or Biogas).*

Support Mechanisms

- *Incentives are already in place to support the use of biomass as a renewable fuel source for heat and electricity, these are:*
 - *The Renewables Obligation (electricity only)*
 - *Bio-energy capital grants*
 - *Bio-energy infrastructure scheme*
 - *ECA for EfW and Renewable CHP schemes*
 - *Low Carbon Building Programme (LCBP)*
 - *Support for energy crops under Rural Development Programme for England (RDPE 2007-13).*

Renewables Obligation Consultation

- *The consultation on banding the Renewables Obligation has closed.*
- *BERR are considering the large number of responses made. There were lots of suggestions made which they are currently analysing.*
- *The necessary legislation would be part of the Energy Bill which is in the legislative programme for the third session of Parliament with the aim of getting Royal Assent by summer 2008.*
- *The new regime for the Renewables Obligation would start in 2009.*
- *On current proposals the Government envisage 15% of electricity from renewable resources in UK by 2015.*

Proposed ROCs Banding – 2007 White Paper

New guidelines proposed by Government for the banding of the Renewable Obligation have been published in the Energy White Paper in May 2007. Under these Guidelines the following bandings would apply;

Scenario	ROCs
Co-firing of a non Energy Crop	0.25 ROCs per MWh
Energy from Waste Plants with Combined Heat and Power	1 ROC per MWh
Dedicated regular biomass (>90% Biomass)	1.5 ROCs per MWh
Emerging technology/Advanced Thermal conversion. Including dedicated Regular biomass with CHP	2 ROCs per MWh

ROC calculation for EfW CHP

- *ROCs on biomass fraction of waste and electrical output only*
- *ROC award based on relationship between QPO and TPO – similar to CCL*
- *QPO/TPO based on most recent certificate*

Bio-energy Capital Grants scheme

- *Defra launched a five-year grant scheme for biomass heat and CHP, building on previous support from DTI and the Big Lottery Fund*
- *This supports the installation of biomass boilers and CHP in the industrial, commercial and community sectors in England*
- *The current round is now closed. 44 projects have been allocated funding. Of these, 12 are CHP schemes*
- *Defra expects to announce further rounds later this year*
- *Grants of up to 40% of the additional cost compared to a fossil fuel installation. Min grant of £25,000, Max of £1m.*

Enhanced Capital Allowances

- ECAs give relief for full cost of qualifying expenditure incurred in the accounting period
- Changes proposed in budget in March 2007
- To expand definition of Plant and Machinery for SRF firing

Enhanced Capital Allowances

- Eligible for ECA if installed as part of scheme certified by CHPQA as 'Good Quality'
- Scheme must obtain 'Certificate of Energy Efficiency' from SoS
- Threshold Criteria
 - Meet Power Efficiency Criteria
 - No-entitlement if do not meet threshold
 - Meet Quality Index Criterion
 - Entitlement restricted by QPC/TPC if do not meet threshold

Enhanced Capital Allowances

- CHP Energy Technology Criteria List
 - Equipment on list qualifies as Plant and Machinery
 - List modified to include some additional items for SRF firing, including
 - fuel handling
 - SynGas generation/treatment
 - Grate cooling/Ash collection
 - plant for WID compliance

To summarise...

For Renewable & EfW CHP schemes to claim any of the Benefits available for GQCHP, it must be certified by CHPQA - as you have heard earlier.

CHPQA Contact details

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