

Biomass and Air Quality

Assessing the Impacts

Philip Mulligan
Chief Executive

Today's Presentation

- Background
- Environmental Protection UK/
LACORS Guidance
- Developing a local approach
- What next?

What is Biomass?

- Biomass is biological material derived from living, or recently living organisms. Can be straw, wood, chicken feathers, etc
- Wood is the most commonly used fuel



Wood chip

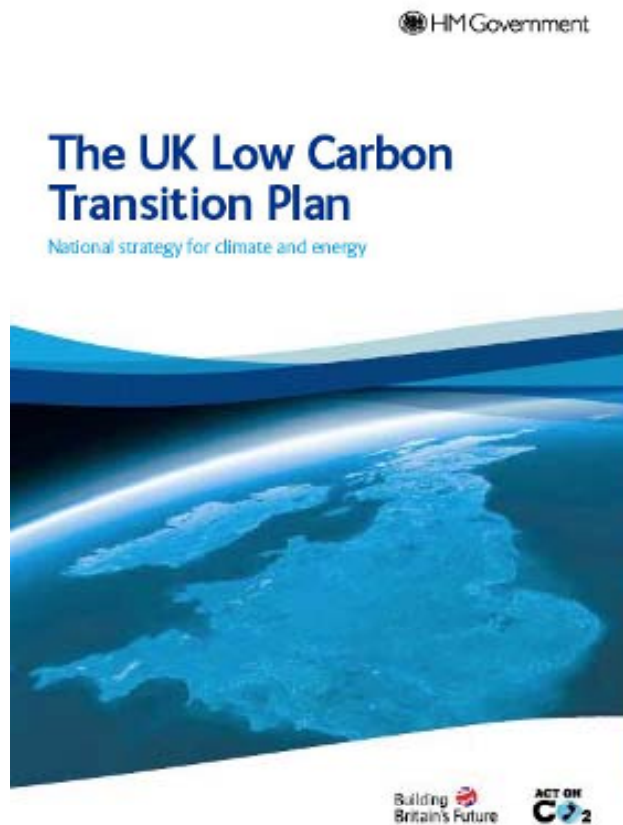


Wood pellet

How is Biomass Used (Size of Plant)



National Drivers for More Biomass



- Targets are demanding
- Biomass is one of the most cost effective forms of renewable energy

Local Drivers for More Biomass

Climate
change
strategies



NI 185
and 186

'Merton' planning
rules

Wood Burning Today

- Wood burning may already have a significant impact on urban background PM₁₀ levels:
 - Recent research suggests 10-30% of winter PM₁₀ in Paris arises from wood burning
 - Provisional results from Kings College suggests that around 12% of winter PM₁₀ at some London background sites may arise from wood burning
- Most of this is likely to arise from open fires and bonfires, rather than modern wood burning plant



Emissions Concerns

- London Councils report in late 2007 concluded that a large increase in biomass deployment could have a significant effect on PM₁₀ concentrations
- Result – a reported planning ‘freeze’
- Scottish Government study in 2008 reported on actual emissions monitoring – PM was far from ‘worst case’ but presentation of report was somewhat controversial

What do local authorities want to know?

How do I assess a planning application containing biomass plant?

Should we develop a local approach to biomass and air quality?

Planning Application – EPUK Guidance

- Last year background information on biomass and assessment techniques for local authorities were developing, but not easily accessible in one place
- Environmental Protection UK and Lacors felt we could assist with a clear guidance document, a view confirmed by our members
- Final guidance released June 2009

Final Guidance – Content

- Main local authority document
 - Background, including policy context
 - Boilers, fuels, standards and certification
 - Approvals and consents (i.e. regulation and planning approval)
 - Assessing and mitigating potential impacts
 - Anticipated progress
- Lots of links to supplementary info on the internet



Final Guidance – Content

- Leaflets and tools
 - Developer’s biomass and AQ information leaflet
 - Unit conversion and screening assessment tool
 - Boiler information request template
 - Installed boiler details log
- ‘Companion’ document to ‘Planning for Air Quality’

Assessing Potential Impacts

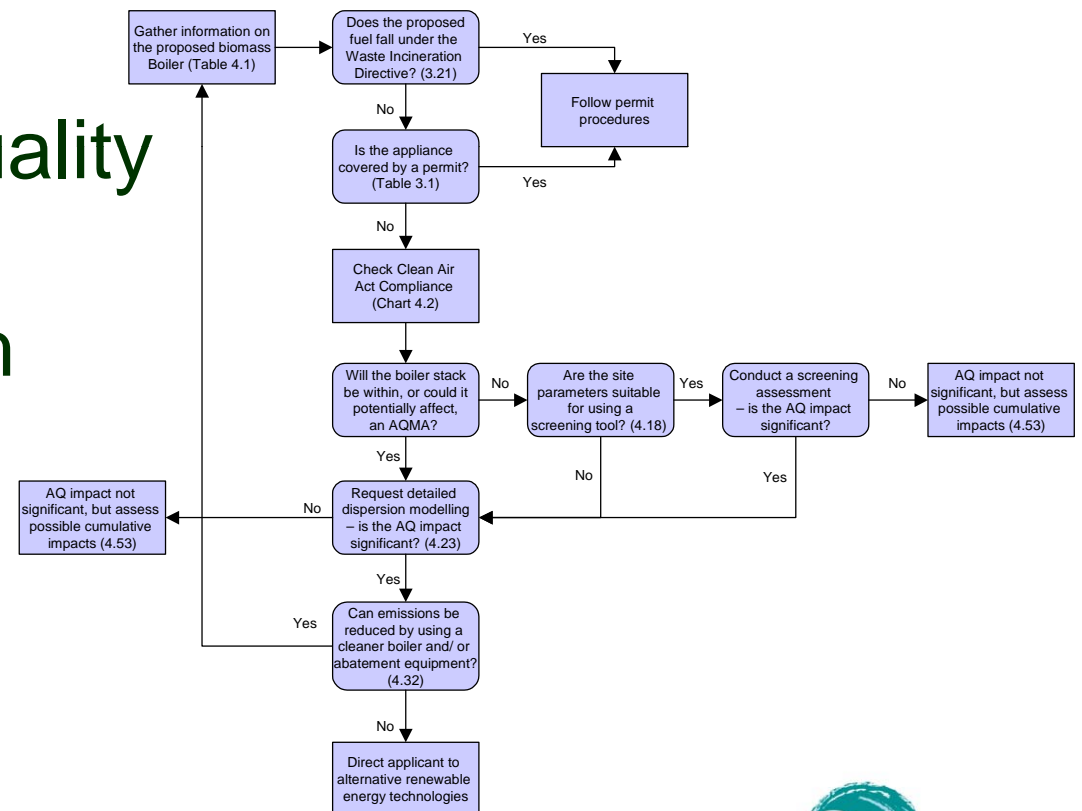
- The guidance advocates a risk based approach to assessment based on the boiler and its location:
 - Geography (e.g. is it in or near an AQMA)
 - What are the fuel alternatives (i.e. would these have better or worse emissions)
 - Likely emissions performance of the boiler
 - Fuel used (clean wood, waste, etc)

Assessing Potential Impacts

- The key to making a good assessment is obtaining information about the proposed boiler as early as possible, this may be difficult
- The amount of information requested should be proportional to the risk to air quality presented
- Guidance is provided on what information might be needed - developers leaflet and information request template also available

Assessing Potential Impacts

- Flow charts are provided for air quality and Clean Air Act assessments, with links to the text
- Mitigation options also discussed



Planning Policy for Biomass

Should we develop a local approach to biomass and air quality?

Yes!

What should it be?



Local Approaches

- Early days for local approaches to biomass, not many templates to work from
- One option is a blanket ban – but lots of environmental and political drawbacks!
- Policy should be evidence based
- Should link in with local climate change strategy/ policy, and any ‘Merton’ rule in operation

Evidence Base

- DEFRA commissioned a UK wide study of the potential air quality effects of a major expansion in biomass heat
- Results and key messages communicated in a letter from DEFRA/ DECC Minister Lord Hunt to all English and Welsh LA Chief Execs in June 2009

'Key Messages' from the Study

- Potential conflicts between air quality and climate goals can be small and manageable if:
 - High quality, low emission plant is used (standards not yet established though)
 - Replacement of old coal and oil fired plant with high quality wood fired plant is prioritised (may actually benefit air quality)
 - Off gas grid areas away from densely populated urban areas are prioritised



'Key Messages' from the Study

- In urban areas, or where an Air Quality Management Area has been declared, DEFRA/ DECC 'expect' (i.e. would like) biomass heat deployment to be less common
- Larger plant normally result in a system where air quality emissions are easier to control than from a larger number of small plant, making these more suitable for urban areas

One Possible Local Approach

- A three pronged approach, based upon the size of the plant
- Small plant (stoves, etc) – focus on education
 - Making people aware of the law in Smoke Control Areas, and helping them understand what they must do
 - Raising awareness of burning correct fuels (not wastes), and the need for maintenance
 - Working with installers, retailers and advisory bodies



One Possible Approach

- Medium sized plant – focus on assessment
 - Working closely with planners and developers
 - Ensuring that the issues are well appreciated
 - Using available assessment tools
 - Encouraging biomass deployment in ‘beneficial’ situations for AQ
- Large plant – focus on partnership
 - Working with the Environment Agency to ensure local AQ concerns are taken into account

What Next?

- New emission standards for biomass plant are under development which, in some ways, may supersede Clean Air Act requirements
- Forthcoming Renewable Heat Incentive (2011) is very likely to take over from 'Merton Rules' as the primary driver of biomass deployment
- The RHI will probably require high emission performance, and maintenance conditions, in order to gain payments

Keeping Up to Date

- Dust still settling so keep up to date!
- Guidance and updates available at www.environmental-protection.org.uk/biomass

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