

European Gas Regulatory Forum

Interoperability: Report on the gas quality issue
(Presentation from the UK)

Dr Christopher Mansfield
Department of Trade & Industry

15 – 16 September 2005

Purpose

- Share key findings from the UK ‘Gas Quality Exercise’
- Identify implications for the UK’s gas quality arrangements
- Draw out messages for interoperability in Europe

UK Gas Quality Specifications

- UK became a net gas importer during 2004
- Certain future supply sources potentially incompatible with UK's present gas quality specifications
- Most UK gas quality specifications embedded in health and safety legislation
- Potential for problems recognised in Energy White Paper (Feb 2003). Gas Quality Exercise launched in June 2003

UK Gas Quality Exercise

2003

- Phase 1: Problem identification

2004

- Phase 2: Exploration of policy options

Engagement with industry stakeholders

Technical research

Public Consultation

Leads to policy decisions

2005

2006

- Phase 3: Policy implementation

Why Is This An Issue?

- Consumer Safety
- Security of Supply
- Cost
- Emissions Impact
- Fuel Efficiency

So, do we change the rules, or do we change the gas?

Options

No Change Specifications

- Gas Blending
- Gas Processing

Study to establish the scale and costs of the processing measures necessary to ensure future gas supplies to the UK continue to conform to existing gas quality regulations

Change Specifications

- Downstream Impact

Gas appliance testing and survey of gas appliance population to establish the scale and costs of the measures necessary to ensure that the UK gas appliance population will continue to operate safely under new gas quality regulations

Pointers from Research - I

- Blending & Ballasting

- Capital and operating costs likely to be relatively modest
- Processing techniques are within reach of current technology
- Some scope for (short-term?) blending
- N₂ ballasting is preferred method for derichment
- Processing is energy intensive and incurs additional emissions
- Implications for security of supply ...?

Pointers from Research - II

- Appliance Testing: Health & Safety Implications
 - Emissions are closely related to Wobbe Index of gas supply
 - Appliance age & use history can impact emissions performance
 - Appliances respond differently to servicing
 - No apparent impact on appliance operability
 - No obvious differences between pre-GAD and post-GAD appliances

Pointers from Research - III

- Appliance Testing: Environmental Implications
 - Emissions are closely related to Wobbe Index of gas supply; and ...
 - Fuel 'slip' also appears to be Wobbe Index dependent; but ...
 - Link to indoor and outdoor air quality standards needs further work
 - Sooting can may occur in some appliances operating on rich gases
 - Nitrogen ballasting of rich gases largely benign
 - Thermal efficiency largely unaffected by tested gas qualities

Pointers from Research - IV

- Stakeholder Engagement: Other Areas of Concern
 - Gas turbines
 - Chemical industry
 - Glass & Ceramics industry
 - Gas storage
 - Natural Gas Fuelled Vehicles

Next Steps

- Research will conclude September 2005
- Will need to consult
- Will require full impact assessment

Implications for UK specifications

- There will be no early change in the UK's specifications
- Gas leaving import terminals must meet UK's specifications
- Possible other considerations: gas storage?

Gas Quality at Import Terminals

- Investment could be required
- Investment should be efficient - must avoid gold-plating
- Prefer market-led solution

Option for Longer-Term?

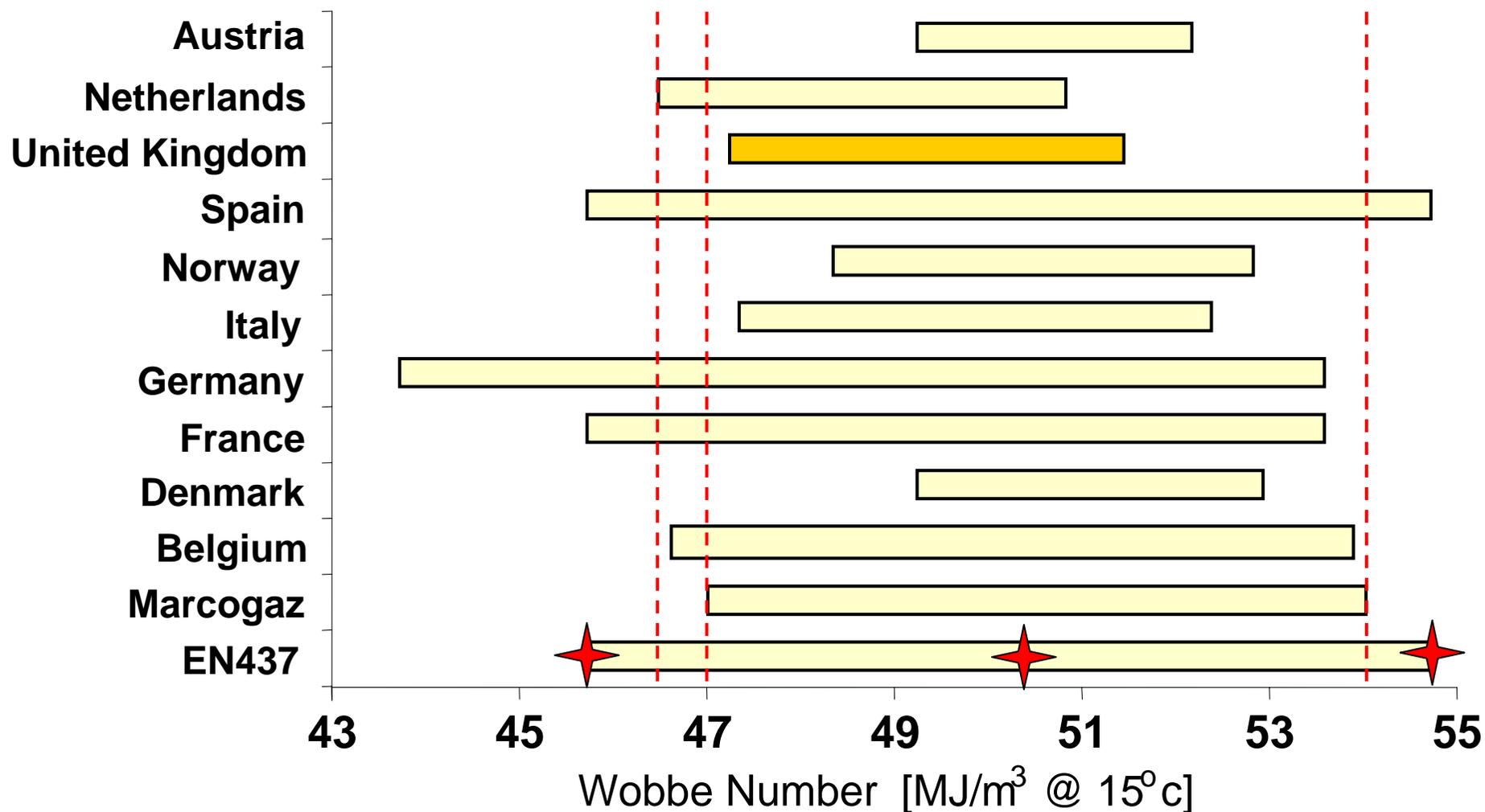
- Transition to broader specifications?
- Will need to ensure
 - Safety of consumers
 - Minimised impact on environment
 - Optimised fuel efficiency
 - Appliance standards fit for purpose
 - Minimised cost impact on consumers

Interoperability in Europe

- UK supports moves to facilitate cross-border trade and to improve supply competitiveness in single EU gas market
- Approach must be fit for purpose – Proposal needs a Cost – Benefit Analysis
- Required investments must be efficient. Prefer market-led approach. Important role for Regulators
- Consequences of changing gas quality may be far-reaching – Member States should consult
- Must avoid discrimination in implementation – principles of compliance must be clear and transparent

Back-up Slides

Wobbe Index



Timing

Current Ministerial Line

“There is no question of the Government recommending to the HSC, who are responsible for the GS(M)R, an **early change** in the UK’s gas quality regulations. The effective choice, for consideration in due course when the results of a number of research exercises are apparent, is expected to be between recommending no change at all versus the option of making no immediate change but **implementing transitional measures** that would provide the **flexibility to introduce a change** in the gas quality specifications at a **later date**, perhaps towards the end of the next decade.”