

GREEN FUEL CHALLENGE PILOTS: GUIDANCE FOR APPLICANTS

INTRODUCTION

1. This note sets out the application requirements, evaluation criteria and timetable for pilot projects under the Green Fuel Challenge. The process will be competitive, and it is hoped there will be proposals put forward for each of the fuels identified following the announcement of the Challenge in November 2000: hydrogen, bioethanol, biogas and methanol. The programme will consist of two rounds, the first with a closing date of 28 September 2001 and the second in 2002.
2. Pilot projects are intended to support research into, and the development and demonstration of, novel alternative fuels which have the potential to provide environmental benefits now or in the future. This may include issues relating to the production and use of these fuels.
3. Pilots are intended to provide the opportunity for the further assessment of new fuels. There is no guarantee that the duty exemption or reduction set for the fuel produced from a pilot will continue once the pilot project is completed. However, the pilot process will be used to inform decisions on the longer-term duty rates for the fuels in question.

APPLICATION REQUIREMENTS

4. Potential pilot projects must meet the requirements of Article 8(2)(d) of Council Directive 92/81/EEC, which provides that member states may apply exemptions or reductions for fuel used in pilot projects for the technological development of more environmentally friendly products and in particular in relation to fuels from renewable resources. The successful pilot projects will be governed by the terms of section 3(1) to (4) of the Finance Act 2001, a copy of which is at Annex A.
5. Applications should meet the following requirements:
 - *Pilot* - for the purpose of this programme, a pilot project is defined as a non-commercial scheme, designed to demonstrate the environmental performance of a fuel; provide cost information relevant to consideration of longer-term duty rates; and identify and assess any practical barriers that would have to be overcome before the fuel were viable.
 - *Timescale* – Projects should be time limited, with a maximum timescale of 5 years.
 - *Clear output* – Projects should have a specific output relevant to the area that is being piloted. This should include an environmental assessment with

independently verified data, where appropriate. It is expected that all data will be shared unless it is indicated that they are commercially confidential.

- *Exit strategy* – Projects should have a planned date for completion and for the end of the pilot duty concession. Progress will be formally reviewed against an agreed work programme at regular, six monthly or less intervals. Any duty concession may be withdrawn at any time if, for example:
 - it is clear that the pilot is not delivering against the agreed work programme
 - there are no environmental benefits or there are environmental disbenefits; or
 - the pilot is being used for improper purposes.

Any decision to withdraw a duty concession will be made by Customs and Excise, taking advice from other government departments.

5. Applications should include the following:

- *Section One*: a full description of the proposal, including the fuel that is being piloted and the details of the pilot; a full work programme; its proposed location; timing; the cost projections for the full-scale production of the fuel which the pilot will provide; and details of any partners.
- *Section Two*: the quantity of fuel involved in each financial year and how it is proposed to manage fuel distribution.
- *Section Three*: the duty concession sought, in pence per litre, and the financial case for that duty concession.
- *Section Four*: details of projects set against each of the evaluation criteria described below.

6. Application will be by formal submission, in two rounds. **The closing date for the first round is 5pm on 28 September 2001.** A further invitation for applications will be issued for the second round in 2002. Applications should be sent to Pam London at:

HM Customs and Excise
Environmental Taxation Development Division
1st Floor West, New King's Beam House
22 Upper Ground
London SE1 9PJ
Email: pamela.london@hmce.gsi.gov.uk
Telephone: 020 7865 4770
Facsimile: 020 7865 5055

7. Electronic applications or paper copies are acceptable. Five copies of each bid are required if they are in paper form. Applicants wishing to have receipt of their applications confirmed should include such a request at the top of electronic

applications with a return e-mail address, or a stamped and addressed post card for paper applications. There is no limit on the number of applications that may be submitted.

APPRAISAL PROCESS AND EVALUATION CRITERIA

8. Submissions will be evaluated by HM Treasury, HM Customs and Excise, the Department for Transport, Local Government and the Regions (DTLR), the Department for Trade and Industry and the Department for Environment, Food and Rural Affairs against the following criteria:

As regards the prospective fuel/technology and its continuing production and use:

- *Environmental impacts* – The actual or potential environmental benefits offered by the fuel in terms of air quality, climate change and waste management. ***Please see Annex B for DTLR guidance.***
- *Feasibility* – Pilots are intended to relate to fuels which are realistically likely to make a significant environmental impact in the medium to long term within the bounds of reasonable practicality and cost.
- *Best value* – The objective of the Green Fuel Challenge is to identify fuels which provide the most cost-effective environmental benefits, and the application should discuss and if possible quantify the prospective benefits of the fuel in continuing production and use.

As regards the proposed pilot:

- *Information to be generated by the pilot* - The relevance and usefulness of the information in informing the Government's long term strategy towards a specific fuel or fuels.
- *Proven quality control* - It is essential that the quality of data obtained are of a high standard and robust nature.
- *Financial viability of the pilot* – Pilots will need to be able to demonstrate a sound financial footing and provide evidence of full funding for the pilot project, and a developed risk management strategy.
- *Best value of the pilot* – the relationship between outputs from the pilot and the cost in duty forgone will be considered. This may be particularly pertinent where multiple bids piloting similar fuels and proposing similar outputs are received.
- *Appropriate size and scope* – Pilot projects should be set at a size and scope that will deliver appropriate, relevant, significant and robust outputs, cost-effectively in relation to the prospective cost of the pilot in duty forgone.

9. The interdepartmental group will make recommendations to Treasury Ministers who will decide the appropriate rate of duty for each pilot they approve. The terms of operation of the individual pilots will be set by Customs and Excise.

10. The successful bids will be announced in the autumn. Unsuccessful applicants will be given feedback if requested.

Section 3 Finance Act 2001 (c.9) Part 1 - Excise duties

3. (1) In the Hydrocarbon Oil Duties Act 1979, after section 20AA insert-

“20AB Power to allow reliefs for fuel testing etc.

(1) The Commissioners may by regulations make provision allowing reliefs as regards excise duty charged in respect of experimental fuel where-

- (a) the fuel is, or is to be, used for the purposes of a fuel-testing project that is approved by the Commissioners,
- (b) the project is approved for the purposes of the development of the fuel (see subsection (8)(a) below, and
- (c) the use takes place, or is to take place, during the period that, for the purposes of the project, is the relief period for the fuel (see subsection (8)(b) below).

(2) In this section “experimental fuel” means a substance of a description specified in regulations made by the Commissioners.

(3) For each experimental fuel, the Commissioners shall by regulations make provision specifying-

- (a) the beginning and the end of the period that is the experimental period for that fuel; and
- (b) the form that (subject to any directions under subsection (9)(a) below) is to be taken by relief under this section as regards excise duty chargeable on that fuel.

(4) A form of relief specified under subsection (3)(b) above must be an authorised form; and for the purposes of this section “an authorised form” is

- (a) a repayment, or
- (b) a rebate (or extra rebate).

(5) Relief under this section shall be allowed-

- (a) to the extent specified in, or determined in accordance with, regulations under subsection (1) above, and
- (b) subject to

- (i) such conditions as the Commissioners may impose, and
- (ii) any directions under subsection (9)(b) below.

(6) The conditions that may be imposed under subsection (5)(b)(i) above include, in particular, conditions in connection with:

- (a) the collection, keeping, compilation or analysis, or
- (b) the supply to the Commissioners or other persons,

of data, or information, relating to the production, use or performance of an experimental fuel.

(7) Subsections (8) and (9) below apply where the Commissioners have approved a fuel-testing project.

(8) The Commissioners shall give directions specifying-

- (a) each experimental fuel for the purposes of whose development the project is approved;
- (b) for each fuel specified under paragraph (a) above, the beginning and end of the period that, for the purposes of the project, is (in accordance with subsection (10) below) the relief period for the fuel; and
- (c) any conditions imposed under subsection (5)(b)(i) above that apply to the allowance under this section of relief as regards excise duty chargeable in respect of an experimental fuel used, or to be used, for the purposes of the project.

(9) The Commissioners may give directions-

- (a) providing for relief as regards excise duty chargeable in respect of an experimental fuel used, or to be used, for the purposes of the project to take an authorised form different to the form specified under subsection (3)(b) above;
- (b) as to administration in connection with allowing reliefs under this section as regards excise duty chargeable in respect of an experimental fuel used, or to be used, for the purposes of the project.

(10) For the purposes of subsection (8)(b) above-

- (a) the beginning of the relief period for a fuel may not be earlier than the beginning of the experimental period for that fuel; and
- (b) the end of the relief period for a fuel may not be later than the end of the experimental period for that fuel.

(11) In this section-
“excise duty” means-

- (a) excise duty chargeable by virtue of this Act, or
- (b) any addition to such duty by virtue of section 1 of the Excise Duties (Surcharges or Rebates) Act 1979 (c. 8);

“fuel-testing project means a pilot project connected with the technological development of environmentally-friendly fuels.

(12) Regulations under this section may make different provision for different cases.”.

(2) In section 24(1) of the Hydrocarbon Oil Duties Act 1979 (c.5) (regulations for the purposes of provisions providing for rebates etc.) after “section 19A” insert “, section 20AB”.

(3) In section 27(1) of the Hydrocarbon Oil Duties Act 1979 (c.5) (interpretation), in the definition of “rebate”, for “or 14” substitute “, 14 or 20AB”.

(4) In section 12B(1)(h) of the Finance Act 1994 (c.9) (excise duty reliefs that may be recovered under section 12A when wrongly given, after “allowed to a person by virtue of section 20AA” insert “or 20AB”.

DTLR GUIDANCE ON ENVIRONMENTAL CRITERIA

Proposals for pilots should consider the total lifecycle environmental impact of the piloted fuel. The areas where we would like to receive information are set out below. Individual fuels may not provide benefits under each – indeed, some fuels might have a penalty in some areas. However, respondents should bear in mind that the most important criteria in terms of reducing the environmental impact of transport are air quality and climate change.

Information may not be available in all areas – indeed, one of the intentions of the pilots is to generate further information. Where detailed information is available, it should be set out. Where it is not, this should be highlighted.

Air quality: emissions of local pollutants

Improving local air quality is a key Government aim. The *Air Quality Strategy for England, Scotland, Wales and Northern Ireland*, published in January 2000, sets out health-based objectives for eight pollutants.

These are:

- benzene (C₆H₆)
- 1,3 butadiene (CH₂CHCHCH₂)
- carbon monoxide (CO)
- lead (Pb)
- nitrogen dioxide (NO₂)
- ozone (O₃)
- particulates (PM₁₀)
- sulphur dioxide (SO₂)

Our national modelling indicates that the objectives for most pollutants should be met by the target dates in the Strategy. This is not the case, however, in respect of PM₁₀, NO₂ and ozone.

Current forecasts suggest that the objectives for PM₁₀ and NO₂ may not be met, particularly in urban areas. Road transport is responsible for a significant proportion of emissions of NO₂ and PM₁₀, and we are therefore particularly interested in the potential of various fuels to reduce these emissions. Respondents should also offer information, where possible, on emissions of ultra-fine particles associated with the fuel in question.

Ozone is a trans-boundary pollutant, affecting mainly southern England, and action is primarily being taken to reduce emissions of ozone precursors such as volatile organic compounds (VOCs) at a European level.

In addition to the Strategy pollutants, the Government is currently considering whether to set an objective for polycyclic aromatic hydrocarbons (PAHs). We would be interested in any information on emissions of PAHs, including benzo-a-pyrene. The European Commission is also likely to bring forward proposals for limit values for a number of heavy metals (nickel, cadmium, arsenic and mercury). We would be interested to receive any information on any additives the fuel may contain which may give rise to emissions of these or other heavy metals.

Such data, if available, should ideally be in the form of the results of independently verified emissions tests, at an identified test site. This need not be in the UK. However, if the fuel is compared with a standard fuel (e.g. diesel), the specification of that fuel should also be provided. The ideal comparators would be UK specification ultra-low sulphur diesel or ultra-low sulphur petrol. Advice on emissions testing protocols is available from DTLR – see the contact at the end of this paper.

Climate change: emissions of greenhouse gases

Under the Kyoto protocol, UK emissions of 6 greenhouse gases need to be 12.5 per cent lower in 2008-2012 than they were in 1990. These include:

- carbon dioxide (CO₂)
- methane (CH₄)
- nitrous oxide (N₂O)
- hydroflouorocarbons (HFCs)
- perflouorocarbons (PFCs)
- sulphur hexaflouride (SF₆)

The Government also has a domestic goal of reducing CO₂ emissions by 20 per cent below 1990 levels by 2010. *Climate Change – The UK Programme*, published in November 2000, set out the policies the Government was putting in place to meet the Kyoto agreement and move towards our domestic goal.

The combustion of most fuels is associated with emissions of CO₂. Different types of engine have a major effect on the efficiency of the combustion of the fuel and therefore CO₂ emissions. Different fuels contain different levels of carbon. The use of some fuels may also produce or release other greenhouse gases such as methane.

It is therefore important that we receive information about the likely greenhouse gas emissions associated with the pilot. This information should be provided on a lifecycle basis. It should include, where appropriate, information about emissions associated with the production, distribution and combustion of the fuel.

Other environmental impacts

As explained above, climate change and air quality are not the Government's only environmental concerns. How the pilot addresses the following environmental concerns is also important.

- *Waste and recycling* - The Government is particularly keen to promote the use of recycled materials, and would welcome proposals for the use of waste-derived fuels - provided that, of course, they meet other environmental criteria.
- *Noise* – The bid should indicate whether the fuel offers the potential for any improvement in noise levels.
- *Water quality* - Would the pilot have the potential to increase water pollution (including groundwater pollution). Additionally, if appropriate, how biodegradable is the fuel?
- *Biodiversity* - Would there be any impact on biodiversity as a result of use of the fuel?

For further information, please contact Patrick Erwin at the DTLR:

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