

**For Discussion on
20 December 2010**

**LEGISLATIVE COUNCIL
PANEL ON ENVIRONMENTAL AFFAIRS**

Pilot Green Transport Fund

PURPOSE

This paper seeks Members' views on a proposed implementation framework of the Pilot Green Transport Fund.

BACKGROUND

2. To encourage the transport sector to test out green and low-carbon transport technology, the Financial Secretary proposed in his Budget Speech this year to set up a \$300 million Pilot Green Transport Fund (the Fund). On 26 April 2010, we sought Members' views on the operation of the Fund for drawing up the implementation details (LC Paper No. CB(1)1663/09-10(03)). Taking account of the views of Members and other stakeholders, we have developed a proposed implementation framework, the details of which are set out in the ensuing paragraphs.

PROPOSED IMPLEMENTATION FRAMEWORK

Target Transport Trades

3. The Fund will be deployed to support the testing of green innovative technologies applicable to the public transport sector including ferries, taxis, public light buses, vehicles of charitable / non-profit making organizations providing services to their clients, franchised buses and non-franchised public buses, as well as goods vehicles (including special purpose vehicles).

Green and Innovative Technology

4. In general, the green and innovative technology to be supported under the Fund should outperform its conventional counterpart in respect of air pollutant or greenhouse gas emissions or fuel economy. Moreover, it should not have been commonly adopted for day-to-day application in the relevant transport trade locally. It can be a new vehicle type, equipment or machinery related to transport activities, or a new retrofit system resulting in substantially better emission performance compared with the existing model. Broadly speaking, it may involve one or more of the following products -

- (a) alternative-fueled vehicles such as hybrid vehicles, plug-in hybrid vehicles, electric vehicles, etc.;
- (b) after-treatment emission reduction devices such as diesel particulate filters, selective catalytic reduction devices, exhaust gas recirculation systems, wet scrubbers, etc.;
- (c) fuel saving devices; or
- (d) conversion of in-use conventional vehicles to alternative-fueled vehicles.

5. Given the diversity and continuous evolvement of technologies, it is impracticable to draw up across-the-board specific emission reduction or fuel saving targets for determining whether a technology is sufficiently environment-friendly and innovative for receiving grant under the Fund. In this connection we propose to set up a Steering Committee (the Committee) to assess and advise on applications.

The Steering Committee

6. The Committee will be chaired by a non-official member and include, inter alia, members appointed in their personal capacity but drawn from academic institutions and the transport trades, as well as Director of Environmental Protection, Commissioner of Innovation and Technology, Commissioner for Transport and Director of Electrical and Mechanical Services or their representatives.

7. The main duties of the Committee will be as follows –
- (a) decide on the funding rules in relation to the eligibility and funding caps in processing and vetting the applications for funding support under the Fund;
 - (b) based on the relevant guiding principles/eligibility criteria, consider and make recommendation on –
 - (i) whether an application should be approved;
 - (ii) if an application is recommended for approval, the subsidy amount;
 - (iii) the terms and conditions, if any, for approving an application;
 - (c) consider the relative priorities for funding support;
 - (d) review the trial findings of approved applications; and
 - (e) receive reports from the applicants if there are changes to the continuing use of the funded products.
8. The Committee members will be required to declare their interest, if any, when making recommendation on any application. Those who may have any conflict of interest will be asked to abstain from voting in the meeting.

Guiding Principles on the Operation of the Fund

9. To meet the objective of encouraging the introduction of green and innovative transport technologies that can help improve our air quality and/or reduce greenhouse gas emissions, the Fund should only accept a technology that stands a good chance to cope with the local operation demands and to be adopted by the relevant transport trade should the trial be successful. As such, we propose the following guiding principles for determining the eligibility of an application for the Fund-

- (a) the Fund should subsidize the capital cost of the hardware (including installation cost if applicable) of the innovative green product proposed for trial on a cost-sharing basis, but should not subsidize the associated recurrent expenditure, such as the operation, repair and maintenance costs;
- (b) the innovative green product should work on sound scientific principles. It should outperform significantly the emission or fuel economy performance of its conventional counterparts or bring along significant emission or fuel economy benefits in the case of retrofit or add-on devices. The extent of performance improvement should at least be comparable with that achieved by advanced technologies for similar applications;
- (c) the technology of the innovative green product should not already be widely in use locally in the targeted transport trades. It should also likely be within the realm of affordability of the transport trades in respect of capital and operation costs.
- (d) the innovative green product should likely be able to cope with the operating conditions in Hong Kong such as the hilly terrain, hot and humid climate, intensity of operation, etc;
- (e) new fossil fuel engine technology that involves a substantial degree of innovativeness in engine design or construction to achieve significant improvement in emission control performance or fuel economy should be eligible for application to the Fund. However, regular upgrading of emission performance of conventional fossil fuel vehicles in accordance with the prevailing international standards (for example, European standards) should not generally be qualified for application;
- (f) the use of the innovative green product will not violate any statutory requirements such as roadworthiness, fire safety, etc. and can satisfy the approval requirements of the relevant regulatory authorities;

- (g) the innovative green product under application should not be receiving or have received funding from other Government sources, public bodies or charitable organisations for the same purpose. For avoidance of doubt, applicants should continue to be eligible for the prevailing incentive scheme on replacement of Euro II commercial vehicles and the tax incentive schemes to encourage the use of environment-friendly commercial vehicles so long as the relevant criteria for the subsidy under the respective schemes are fulfilled; and
- (h) the Fund is not intended for supporting research of new green technologies.

10. To assist the Committee to form a view, the applicant should indicate in his application how the proposed innovative green product is better than the prevailing ones on the market. Moreover, the applicant will have to provide the information/undertaking as detailed in paragraph 17 in the application for the Committee's consideration.

Encouraging the Transport Industry to Test out Green and Innovative Technology

11. Given the diverse modes of operation in the transport sector, the Fund should encourage the industry to test out and adopt green and innovative technologies by facilitating a reasonable number of operators in a specific transport trade to experience first hand the use of such innovative green products. That had been the case for the testing of liquefied petroleum gas (LPG) taxis and public light buses (PLBs), where 30 LPG taxis and 13 LPG PLBs were put on trial under the respective management of five and six fleet operators respectively to pave way for their wider application. On the other hand, to avoid mistaking the Fund as one that provides subsidy to operators in acquiring innovative green product, we propose that limits be set on the number of applications from a transport trade (e.g. public light bus operators) on a type of innovative transport technology (e.g. hybrid vehicles); and on the number of units of such green product per application.

12. Such limits should be decided by the Committee with the objectives of enabling a thorough trial of a technology by a transport trade for which an application has been made, and effective sharing of the trial experience within the relevant transport trade. Consideration should also be given to the characteristics of the specific innovative green product, the operation modes of the transport trade, products of similar technologies that have already been put on trial, and the availability of products from other suppliers of similar technologies.

13. In case several applications are received from the same transport trade for the same type of technology and the relevant limits are exceeded, the Committee will decide on the priorities of the applications based on the following underlying considerations-

- (a) whether the application will cover the operation modes of a specific trade, which can be quite diverse even within the trade; and
- (b) whether the completion of the trial under application, if successful, can help encourage the transport trade to use the innovative green product.

14. While an applicant can submit more than one application to try different technologies (e.g. a public light bus operator to try both hybrid vehicles and electric vehicles) subject to the limits as proposed in paragraph 11, in order to increase the number of potential beneficiaries of the Fund, we propose to set an upper limit of \$12 million on the total amount of fund granted to any individual transport operator.

15. If the innovative green product proposed for trial in an application comes from more than one supplier, to ensure value for money, the applicant has to observe the procurement procedures stipulated by the Environmental Protection Department (EPD) in accordance with the prevailing requirements for procurement using public funds. If, however, the product(s) to be tested involves proprietary technology and is only available from a single supplier, the applicant should spell this out and provide full justifications for the choice and cost of the concerned products in the application.

Potential Applicants

16. The applicant should be an existing operator in the transport sector with operation based in Hong Kong (including cross-boundary transport) who –

- (a) has been in the relevant transport service for more than one year;
- (b) will likely remain in the service for a reasonable length of time for the trial to bear fruit;
- (c) has the potential to put the new technology under test into wider use in his/her own operation upon successful trial; and
- (d) is willing to share the findings of the test with other operators.

17. An application should be considered with reference to how likely the applicant can conduct the proposed trial in a proper manner but not the size of his/her company or organization. As such, the applicant will have to provide the following information/undertaking in the application for the Committee's consideration-

- (a) an account of his/her experience in the relevant transport service;
- (b) an outline of the technology to be tried together with the necessary supporting technical information and, if available, trial data done;
- (c) the expected environmental benefits in respect of carbon and air pollutant emission reduction with supporting technical data and the evaluation method for the environmental benefits during the trial;
- (d) an implementation plan for the trial including a trial schedule, in which the applicant should commit to starting the trial

within a certain period from the approval of the application. The period will normally not be more than 12 months;

- (e) an undertaking to accept the checking by an independent third party to be appointed by EPD to verify the conduct and findings of the test for report to EPD and other requirements such as procurement procedures, etc.;
- (f) a commitment to making public the trial findings and sharing them with interested parties as directed by EPD;
- (g) an undertaking to ensure that the innovative green product so procured will be put to good use throughout its usable life as far as it is economically feasible to do so. Any decision to discontinue the usage of the green product will have to be reported to the Committee and the result will be made open to the public;
- (h) an explanation on the reasonableness of the price of the product should it be a proprietary product from a single supplier; and
- (i) information and declaration on other funds/incentives received and applied.

18. The operator is encouraged to pair up with potential suppliers of green transport technologies, research institutes or other relevant stakeholders.

Level of Subsidy

19. As mentioned in paragraph 9, as a matter of principle, the Fund should only subsidize the capital cost of the hardware (including installation cost if applicable) of the innovative green product proposed for trial but not the associated recurrent expenditure. In addition, the technology under application should not be receiving or have received funding from other Government sources, public bodies or charitable organisations for the same purpose. To cater for the variety of

technologies covered by the Fund, the following principles for deciding on the subsidy level are proposed, taking into account views expressed by stakeholders during the consultation-

(a) Alternative-fueled vehicles

(i) The subsidy level will be set as the price premium between the alternative-fueled vehicle and the conventional vehicle or 50% of the cost of the alternative-fueled vehicle, whichever is higher. Though it is difficult to quote reliable estimates on the innovative green products of all types of transport uses, to better ensure effective allocation of resources and avoid abuses, a cap of \$3 million is proposed for each alternative-fueled vehicle with an upper limit of \$9 million for each application. The proposed funding cap of \$3 million per alternative-fueled vehicle will be translated into a cost of \$6 million per product, which would allow sufficient scope to cater for innovative products which have yet to be widely used. Where the applicant proposes to conduct test on more than one vehicle of the same technology, he may try out different suppliers under the same application to compare performance. Should there be more than one vehicle under application, be they from one or more suppliers, the overall cap for the vehicles under application will be increased proportionally (i.e. \$6 million for two vehicles and \$9 million for three vehicles), subject to the upper limit of \$9 million per application and any other upper limits elaborated in paragraphs 11 and 14.

(ii) Test of electric vehicles or other alternative-fueled vehicles may require the setting up of dedicated charging facilities or refilling facilities or other related support systems. The Fund will cover 50% of the setting up cost that is necessary for and directly related to the trial subject to the proposed upper limit for each application in (i) above.

(b) After-treatment emission reduction devices, fuel saving devices, or conversion of in-use conventional vehicles to alternative-fueled vehicles

The subsidy will be set at meeting 75% of the cost of the device(s) including installation or the vehicle conversion cost. To guard against abuse, a cap of \$1.5 million will be imposed for each device or vehicle conversion under test with an upper limit of \$9 million for each application. Where the applicant proposes to test more than one device of the same technology, he may try out different device suppliers under the same application to compare performance. Should there be more than one device under application, be they from one or more suppliers, the overall cap for the devices under application will be increased proportionally and as in the case of (a) (i), subject to the above proposed upper limit of \$9 million for each application and any other limits as elaborated in paragraphs 11 and 14.

20. To ensure value for money, the procurement of the innovative green product(s) to be tested, the supporting facilities and associated installation services has to observe strict procurement requirements stipulated by EPD. The Committee may impose suitable conditions in addition to the fulfillment of commitments and undertakings as stipulated in paragraph 17 when recommending the approval of an application. Failure to fulfill these conditions may lead to withdrawal of the subsidy and recovery of the fund to the Government.

21. In the case of ferries, the Fund will consider applications for testing the retrofitting of their engines with devices to reduce air pollutant and/or carbon emissions. Subject to funding availability and priority as recommended by the Committee, applications for testing alternative-fueled ferry engines may also be considered. The subsidy will be set at a ceiling of 75% of the cost of the device(s) or engine(s) including installation. As retrofitting devices and engines for ferries are much more expensive than that for vehicles, a cap of \$3 million will be imposed for each device or engine under test with upper limits of \$9

million for each application and \$12 million for each applicant.

22. As technology continues to develop, innovative green products other than the categories in paragraphs 19 and 21 may also be available for trial by the transport trades. The Committee will consider such applications on a case-by-case basis, using the same principles that the Fund would cover as much as 50% of the capital cost of the vehicles and the set up cost of the dedicated charging facilities or refilling facilities or other related support systems; or 75% of the cost of emission reduction/fuel saving devices (including installation cost if applicable), subject to the upper limits of \$9 million for each application and \$12 million for each applicant.

Independent Third-Party Assessor

23. To ensure that the trial is conducted in accordance with the application and approval conditions, and to verify the environmental performance of the new technology under test, we will engage an independent third-party assessor to evaluate the environmental performance of the innovative green product(s) under trial, including conducting visits to approved applicants, collating data and reporting to us. The cost of this independent assessment will be met from the Fund.

PUBLIC CONSULTATION

24. In developing the proposed implementation framework, we have consulted key stakeholders comprising transport trades, vehicle suppliers, green technology providers, academics, professional bodies, chambers of commerce, as well as the Advisory Council on the Environment. Overall, they are supportive of the proposed Fund as a positive step to encourage the wider use of green transport technologies in Hong Kong. Some have suggested a higher subsidy level and greater flexibility for processing the applications. In drawing up the implementation framework, we have taken into account the views so collected from the consultation.

FINANCIAL AND CIVIL SERVICE IMPLICATIONS

25. Subject to Member's support, we will seek the Finance Committee's agreement to allocate \$300 million for establishing the Fund before end March 2011. Additional staff resources will be allocated to serve the Committee, liaise with the transport industry to encourage their participation, process the applications, and handle the corresponding type approval or alteration approval applications, etc.

ADVICE SOUGHT

26. Members' views are sought on the proposed implementation framework of the Fund as set out in paragraphs 3 to 23.

**Environmental Protection Department
December 2010**