

**Project 15/2005 – Solar/Wind Power Feasibility Study**

**Purpose**

This paper seeks Members' advice on funding the captioned application for ECF submitted by The Sustainable Solutions Foundation Limited.

**Background**

2. The funding requested by this project is \$253,150.00 for the staff cost of employing one Research Assistant for 12 months (\$144,000.00), the cost for the solar water heater (\$12,000.00), the photo-voltaic cell panel (\$50,000.00), the wind turbine (\$40,000.00), the energy efficient light bulbs (\$150.00) and the auditors fee (\$7,000.00). The project is expected to last for 12 months.

3. The purposes of this proposal are to study the feasibility of placing solar panels and wind turbines on rooftops as a pollution reduction method and to prove that the use of solar and wind power in apartments in Hong Kong is economically feasible.

4. The Sustainable Solutions Foundation Limited is a registered local company and a charitable institution exempted from tax under Section 88 of the Inland Revenue Ordinance. The objects of the Sustainable Solutions Foundation Limited are stated in the Memorandum of Association and Articles of Association which is attached to the project proposal. The Sustainable Solutions Foundation Limited had implemented a waste recovery project funded by the ECF in 2003 and also submitted applications to the Waste Recovery Projects Vetting Subcommittee in 2005 for consideration. The performance of the previously completed waste recovery project was considered not satisfactory and the decision of the Waste Recovery Projects Vetting Subcommittee for those applications in 2005 are given in Annex A for reference.

5. The Electrical & Mechanical Services Department (EMSD) and two external expert assessors have reviewed the proposal. EMSD points out that the concept of the project is based on reducing the energy consumption of a 700 square foot apartment and allowing the renewable energy installation to meet the reduced energy demand of the apartment. It may be possible to find

space for installing solar water heater, wind turbine and photovoltaic panels in a low-rise house or village house. However, this approach may not be easily applied to each apartment of a high rising housing block. The application of the proposed project is considered to be limited and the project is therefore not supported. The proposed project also duplicates some of the works already undertaken by EMSD. Solar photovoltaic panels and a small wind turbine have been installed in EMSD Headquarters and their performance is being monitored. These installations have been used as "working exhibits" to allow visitors from schools and other interested organisations to familiarize themselves the latest technologies in renewable energy.

6. Both external assessors agree that solar and wind energy application definitely contribute to environmental protection and conservation but both of them do not support the proposal. Assessor 1 considers that the output from photovoltaic modules and wind turbines are over-estimated in the proposal. The payback is too long for the target users to use solar and wind energy resources if there is no favourable renewable energy policy from the Government. Assessor 2 comments that local researchers have investigated the solar/wind hybrid systems, including publications and commercial/demonstration projects. This project cannot deliver innovative ideas and there is no demonstration need for this project. The proposal is thus not supported as a research project.

### **Advice sought**

7. Members are invited to advise whether the application for ECF should be supported as detailed in paragraphs 2 to 3 above and if supported, the exact amount of fund to be recommended to the ECF Committee for approval.

**Secretariat, ECF Research Projects Vetting Subcommittee  
May 2006**