

For information
On 18 July 2003

**Legislative Council Panel on Economic Services and
Panel on Environmental Affairs**

DEVELOPMENT OF RENEWABLE ENERGY

Introduction

At the Joint Panel meeting on 28 April, Members requested the Administration to –

- review the target of Renewable Energy (RE) contribution to the electricity demand;
- consider the environmental and social benefits associated with the use of RE other than cost considerations;
- discuss with the two power companies to allow and facilitate RE producing organizations/companies access to the electricity grid in the context of the 2003 Interim Review of the Schemes of Control Agreements (SCAs); and
- draw up a concrete timetable for development and wide-scale application of RE.

This paper sets out the Administration's responses to the requests.

Development of RE

2. With the joint support of the then Environment and Food Bureau and the Economic Services Bureau, the Electrical and Mechanical Services Department (EMSD) commissioned the Study on the Potential Applications of

RE in Hong Kong in 2000 and completed it in late 2002. The Study has identified solar power, wind power, waste-to-energy and building integrated fuel cells as promising RE sources/technologies for wide scale application in Hong Kong. The Study has also recommended that the Government should adopt RE targets¹ of 1% in 2012, 2% in 2017 and 3% in 2022. The findings and recommendations of the Study were presented to Energy Advisory Committee, Legislative Council Panel on Environmental Affairs, Advisory Council on the Environment, and Energy Efficiency & Conservation Subcommittee in January and February 2003. The Executive Summary and the full Study Report were also uploaded onto the web site of EMSD for public access since February 2003.

3. The Environment, Transport and Works Bureau (ETWB), as the policy Bureau responsible for protecting the environment, is committed to spearheading the development of RE in Hong Kong with a view to further improving our air quality and reducing our greenhouse gas emission. The ETWB and the Economic Development and Labour Bureau (EDLB) will pursue the issue with the two power companies in the upcoming interim review of their Scheme of Control Agreements this year. We will also aim to encourage participants of the post-2008 electricity market to supply more electricity generated from RE sources, while meeting our objectives as regards reliability of supply and reasonable costs to consumers. The two Bureaux will work together to examine how the Government can formulate a comprehensive policy to promote the development of RE in the long run, bearing in mind that the development of RE has far reaching implications on not only the environment, but also sustainability of our power industry, the local economy and the community.

¹ The 1999 power demand level in Hong Kong is used as the basis for the targets.

Review the target of RE contribution to electricity demand

4. Public support is the most critical factor for the successful development of RE. According to the views collected² during the recent public consultation on the findings of Stage 1 of the “Study on the Potential Applications of RE in Hong Kong”, most respondents considered the targets (i.e. 1% in 2012, 2% in 2017 & 3% in 2022) recommended by our consultant conservative. This may indicate that the public are more receptive to RE than the consultant had envisaged. Therefore, ETWB is conducting a review of the RE targets proposed by the consultant with a view to meeting the latest aspiration of the community. Of course, it is important to consider the practicability and possible impacts on the electricity supply reliability and tariffs before determining how the revised RE targets should come into play in the post 2008 electricity market.

Environmental and social benefits associated with the use of RE

5. In formulating our RE policy, the Government will certainly take into account the environmental and social benefits, apart from the cost considerations. Wider adoption of RE has become an irreversible worldwide trend, not only because RE is more environmental friendly in the sense that it virtually emits no greenhouse gases and air pollutants, but also because RE reduces the reliance on exhaustible sources of fuel. The natural storage of fuel such as coal and natural gas will be used up in the long run and their prices will gradually go up.

6. Although the cost of tapping most sources of RE is still generally higher than the cost of using fossil fuel, particularly before taking into account

the hidden social and health costs relating to the combustion of fossil fuel, due to advancement in technology, wind power has becoming increasingly cost competitive over the years. In fact, the unit cost of electricity generated by modern wind turbines is now only slightly higher than the unit cost of electricity generated by coal-fired or gas-fired generators. **Prima facie**, there appears to be a case for reviewing the target of the power generation mix with wind power as the major contributor and the implication on power generation cost, since it is expected that the chosen target will help reduce the greenhouse gas emission of Hong Kong and make positive contribution to the environment.

Discussion with the two power companies on access to the electricity grids

7. We will make use of the upcoming interim reviews of the existing SCAs to rally support from the power companies to pave the way for future development of RE. As the first step, we will encourage the power companies to fund more RE projects or to take on such projects themselves. We will also ask the companies to make it easier for access of third party pilot RE projects to their electricity grids. These measures together would allow prospective RE investors in both the private and public sectors to gain first hand experience in various RE technologies and build up a knowledge base for local implementation. Although any changes to the Scheme of Control Agreements will require the agreement of the two contracting parties, we believe that the power companies should be able and willing to respond positively to our above proposals, as they have taken the initiatives to promote RE even before we approach them.

² A summary of the views received is provided at Annex.

Timetable for development and wide-scale application of RE

8. We need to work on the most appropriate RE targets for Hong Kong, high enough to make meaningful contribution to the environment but not to impose any unacceptable burden to the community or dampen the growth of our economy. This requires us to consider carefully how the RE element should feature in the post 2008 electricity market review, which both the EDLB and the ETWB will continue to work closely on. As the post 2008 electricity market review is still at a planning stage, the Administration is not able to commit to a concrete timetable on the development and wide-scale application of RE at this juncture. However, we will maintain close dialogue with Members and other interested parties while we are mapping out the way forward.

Environment, Transport and Works Bureau
Economic Development and Labour Bureau

July 2003

(Annex: Summary of views received during the public consultation)