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## **ACE Paper 17/2008**

*For information*

# **Draft Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings of Commercial, Residential or Institutional Purpose in Hong Kong**

## **PURPOSE**

This paper informs Members of the progress in drafting the proposed “Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings of Commercial, Residential or Institutional Purpose in Hong Kong” (the draft Guidelines) to facilitate conducting carbon audit on buildings in Hong Kong.

## **BACKGROUND**

2. Buildings consume about 89% of electricity used in Hong Kong and are a major source of our greenhouse gas (GHG) emissions. Enhancing energy efficiency in buildings is therefore an area where significant energy savings and reduction in GHG emissions can be made. To this end and to continue to lead the community’s efforts in combating climate change, the Chief Executive announced in the 2007 Policy Address to conduct a carbon audit for the new Government office at Tamar. Private developers are also encouraged to join hands together to conduct carbon audits for their buildings and reduce GHG emissions from these buildings.

3. A Task Force comprising Environmental Protection Department, Electrical and Mechanical Services Department and Architectural Services Department was set up in November 2007 to draw up a set of guidelines to provide a systematic and scientific approach to account for and report on the GHG emissions arising from the operation of buildings. The draft Guidelines can facilitate the users and managers of

buildings to improve their awareness of GHG emissions, conduct carbon audit on their buildings to measure their GHG emissions performance, identify possible areas for improvement and conduct voluntary programmes to reduce or offset their emissions.

## THE GUIDELINES

4. A copy of the draft Guidelines is at **Annex**. Designed for voluntary and self reporting by the reporting entities, the draft Guidelines have been mapped out by making reference to two well accepted international protocols, “the Greenhouse Gas Protocol – A Corporate Accounting and Reporting Standard” of the World Resources Institute/World Business Council on Sustainable Development and International Organization for Standardization (ISO) 14064-1, to ensure its consistency with international practice.

5. The draft Guidelines are intended primarily to be used to account for and to report on emissions and removals from buildings which are entirely used for commercial or residential purposes. They are also applicable to most of the buildings used for institutional purposes, which include schools/universities, community centres, sports complexes, etc. However, the Guidelines may not be applicable to buildings for industrial or other special purposes because of the complexities of GHG emitting processes in these buildings.

6. As the first essential step in the reporting process, the draft Guidelines provide guidance for the reporting entities to determine the physical boundary and to identify operations for reporting purpose. In line with other international protocols mentioned in paragraph 4 above, all operations in relation to direct emissions and removals (the Scope 1)<sup>1</sup> and energy-related indirect emissions (the Scope 2)<sup>2</sup> are required to be accounted for and reported. The report of other indirect emissions (the Scope 3)<sup>3</sup> is optional.

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<sup>1</sup> Some examples of Scope 1 operations are on-site electricity generators, boilers, gas stoves, dedicated motor vehicle fleets, leakage from refrigeration systems, and additional trees planted on site.

<sup>2</sup> Scope 2 operations include production and transportation of electricity and Towngas purchased by the buildings.

<sup>3</sup> Some examples of Scope 3 operations are commuting and business travel by employees; transportation of products, materials, people or waste by third parties; outsourced activities; GHG emissions arising from the production and distribution of energy products, other than those covered under Scope 2; GHG emissions from production of purchased materials and products.

7. The draft Guidelines also set out local conversion factors for estimating GHG emissions of some common operations to facilitate reporting entities to quantify their GHG emissions and removals. The approaches and conversion factors in the Guidelines cover Scope 1 and Scope 2 operations which are commonly found in Hong Kong buildings. Additional approaches and conversion factors for some of the Scope 3 operations such as electricity consumption for processing fresh water and sewerage, as well as methane production at landfills due to paper waste are also included in the draft Guidelines to facilitate those users who wish to cover indirect emissions from these sources in their reports.

8. A sample reporting format, together with summary tables on emissions and removals, as well as guidance on reporting, is provided in the draft Guidelines to facilitate reporting entities to prepare the necessary document to report on their GHG emissions.

## **CONSULTATION**

9. In the course of drafting, the Task Force has collected views from a number of stakeholders from property development/management sectors, professional bodies, business groups, tertiary institutions and environmental groups. Two introductory seminars were held respectively on 18 and 25 March 2008 to brief stakeholders on the draft Guidelines and to collect their feedback. Each seminar was attended by over 100 participants.

## **WAY FORWARD**

10. The Task Force is finalizing the Guidelines taking into account of the feedback from the stakeholders. Tentatively, we plan to formally launch the Guidelines in June/July 2008. We are engaging property developers, professional bodies, business groups, tertiary institutions and environmental groups to adopt the Guidelines for conducting carbon audits on their buildings. A carbon audit is expected to take around two to three months to complete. Upon completion of the exercise, the findings will provide a good reference for emission reduction measures. We would encourage private developers, business groups, tertiary institutions and all interested groups to embark upon suitable programmes to reduce emissions associated

with building operations. We have thus far received positive response from a number of major property developers in Hong Kong who have agreed to participate in the carbon audit and emission reduction campaign.

## **CONCLUSION**

11. Members are invited to note and comment on the draft Guidelines and the way forward.

**Environmental Protection Department**

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