Summary of the Session on Renewable Energy[1]

1. The first session, chaired by Mr. Ronald Steenblik of the Organization for Economic Co-operation and Development (OECD), provided an overview of prospects for trade in one of the key Environmental Goods and Services categories — namely renewable energy, and more particularly wind and solar energy — and the extent of the current barriers to increasing that trade.

2. Mr. Ralph Sims of the International Energy Agency (IEA) kicked off the session by providing a broad overview of renewable energy technologies. As he pointed out, in order to meet the target of reducing atmospheric concentrations of greenhouse-gases in the atmosphere to 450 parts per million, or even to a less ambitious target of 550 parts per million, the world would need to substantially cut its use of fossil fuels for transport and electricity generation. Nuclear energy may provide some of the needed low-carbon energy, but a substantial amount of renewable energy will be needed. Fortunately, the technologies used to exploit wind energy and solar energy are evolving quickly. Solar photovoltaic energy is already competitive in remote areas for charging telephones, supplying lighting and water pumping. And, there has been a revival of interest in power generated through concentrating solar energy. The market for wind power is also growing apace, with new technologies for micro-grids that can form an integral component of electricity supply for isolated communities.

3. Dr. Veena Jha, a consultant to the International Centre on Trade and Sustainable Development (ICTSD), spoke of the need for levelling the playing field for trade in renewable-energy technologies. Based on a detailed analysis of trade in equipment and components for renewable energy, she noted that developed countries are currently the major exporters, with a few firms dominating the market, but that there are a number of emerging exporters — generally industrializing countries that already export other industrial products. Reducing tariffs on these technologies would help facilitate trade, but would unlikely spur a major expansion in their trade. Other policies generally drive the market in countries that use solar and wind energy, particularly guaranteed prices for sales to the electric grid, which are usually called "feed-in tariffs". Among other recommendations, Dr. Jha called for international mechanisms to help establish renewable-energy industries in developing countries, especially those with a weak industrial base.

4. Dr. Mohamed Salah El-Sobki, from the Ministry of Trade and Industry of Egypt explained Egypt's plans to expand its use of wind energy. The national strategy adopted in 2008 established a target to satisfy 20 per cent of the generated electricity by renewable energies by 2020, including 12 per cent from wind energy. Egypt has substantial wind-energy potential, especially along the Gulf of Suez. The country's first forays into wind power began in the late 1980s, but received a big boost with the establishment of several large-scale wind farms established in co-operation with Denmark, Germany, Spain and Japan. The government's new electricity law calls for pursuing electric-power generation through three mechanisms: (i) plants built by the national electric utility; (ii) plants built through competitive bidding; and (iii) plants encouraged by a generous feed-in tariff. The amount of wind power capacity, planned to be built in the country by the year 2020, will be apportioned amongst these three mechanisms.

5. Mr. Chintan Shah, Head of Strategic Business Development for Suzlon Energy Ltd – a wind-turbine producer that has emerged from India to become the fifth largest manufacturer of wind turbines in the world – noted that the world market growth for wind power has averaged 25 per cent a year since 2003, and that similar rates of growth are expected in the future. However, non-tariff trade barriers in wind turbines abound. These include local-content requirements in several countries; lack of acceptance of Indian standards and testing; restrictions on movement of persons (i.e., Mode 4 services) and various additional duties, even in countries with zero import tariffs. Also dampening

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trade prospects in this area were the non-recognition of Indian testing standards and lack of "Made in Developing Economies" brand equity. Product-specific examples of non-tariff barriers faced in certain countries were mentioned in the presentation.

6. Turning to solar energy, Dr. Moses Ikiara, Executive Director of the Kenya Institute for Public Policy Research and Analysis (KIPPRA), noted that Kenya, being close to the equator, is endowed with resource potential for renewable energy. However, the country's exploitation of those resources is still very low. Nonetheless, among developing countries, it is a leader in developing small, private-sector businesses engaged in installing and servicing small-scale solar photovoltaic (PV) systems, and is also starting to export solar equipment to neighboring countries. Currently, many components of solar PV systems (with lead-acid batteries being the main exception) are imported by Kenya duty free, but are subject to a 16 per cent value added tax. According to Dr. Ikiara, lengthy procedures related to the valuation of goods at customs are among the non-tariff barriers that Kenya needs to address.

7. Finally, Mr. Dylan Tudor-Jones, the Managing Member of Solar Heat Exchangers, a Johannesburg-based company specializing in solar thermal applications, explained the important role that solar water heaters are playing in reducing electric power needs in South Africa, where electric water heaters have so far been the dominant technology for providing household water-heating needs. The Government has established a target of installing at least three million solar water heaters over the next five years, which will be achieved by a combination of national standards for new buildings, and incentives for existing home-owners to install such heaters on their roofs. In order to help meet that demand, Mr. Tudor-Jones advocates reducing applied tariffs on solar-water heaters and associated components, at least for a few years, so as to encourage local investment in the industry.

8. The session concluded with a panel discussion, which picked up on several of the themes that emerged during the question and answer sessions. Panelists pointed out that the economics of renewable energy for electricity generation were also affected by whether or not there was an existing electric grid. By avoiding the necessity of building large transmission lines, renewable-energy-based electricity could be a cheaper option for many areas currently without electricity. Moreover, even though the up-front cost of renewable-energy technologies may be higher than for some fossil-fuel-based technologies, these should be viewed against the long-run savings of displaced fuel imports. However, as long as fossil fuels, or fossil-fuel-based electricity, continued to be subsidized – as they are in a number of developing countries and countries in transition – renewable-energy would find it harder to compete. Panelists did not provide new insight into the perennial question of how to encourage technology transfer, but agreed that exchange of knowledge on how to build, maintain and operate renewable-energy technologies was an important adjunct to increasing trade in these technologies.