Statement of H.E Eng. Fahmi bin Ali Al Jowder Minister of Works, Minister in charge of Electricity & Water Authority Kingdom of Bahrain

At the Founding Conference on the International Renewable Energy Agency (IRENA) in Bonn on 26 January 2009, Federal Republic of Germany

Your Excellency, Mr. Chairman Excellencies Ladies & Gentlemen,

The government of Bahrain feel honored to be invited for this esteemed Founding Conference of the International Renewable Energy Agency (IRENA) and derive extreme pleasure in sharing experiences and vision on the development of renewable energy sources with the other international communities.

God has blessed the Arab region and the Gulf Arab states, in particular, a huge wealth of renewable energy. The Kingdom of Bahrain and the States of the Gulf Cooperation Council enjoy the highest solar radiation levels and despite moderate wind speeds this source can still be employed to generate energy and therefore these countries are qualified to use these sources of renewable energy. However, in spite of the promising opportunities, the research and development programs, transfer of technology and practical applications are still far less than what is available or required.

The Kingdom of Bahrain pays a special attention to energy issues in general and the topics of renewable and clean energy in particular. The concerned authorities in the Kingdom are continuously searching for new energy alternatives that suit the local environment. Solar and wind energies always come as potential alternatives for two main goals, the production of electricity and reducing the pollution emitted from power plants operating with natural gas and diesel fuel. These alternatives are still under assessment and research in the Kingdom and we are continuously coordinating with our neighboring Gulf States on the various issues related to the employment of modern technology in these areas.

Kingdom of Bahrain produces 2800 megawatts of electricity and 140 million gallons per day of desalinated water from the power stations and water desalination that employ fossil fuel as the main energy source from the government and private owned installations that consume nearly approximately 583 million cubic feet per day. With an estimated annual energy growth rate of 10% which is a very high rate, the required amount of natural gas will be doubled in less than a decade. This requires serious consideration in finding potential alternative sources of energy including renewable energy.

The Electricity and Water Authority took the first initiative to form the first committee to conduct a study for the assessment of Solar and Wind energies in the Kingdom and possibility for utilization of such alternative resource for the production of electricity and water. The committee completed a survey of these energies in the Kingdom as well as selected locations in the GCC states. The working teem proposed to set up a pilot scheme that employs a hybrid solar and wind for practical research and development of these energies. Upon completion of the first task for the committee, I intend to form a larger group committee to carry on with the work and recommendations made in the first study.

The solar energy application technologies are still facing difficulties as a result of the high capital cost, which makes use of traditional energy for the time being the least expensive. However, in view of technological development in the past few years, a promising future for the production of electricity from concentrated solar thermal power systems and photovoltaic systems, the future for employing solar energy in the region appears very promising. The economic potential within an annual average daily solar radiation measures of 5200 watts/hour per square meter (reaching maximum values of 6000 to 7200 watt hour per square meter) during summer season) is considered very appropriate to make the cost of solar energy in the medium term competitive with conventional sources of energy and other renewable power resources. Thus, the Kingdom of Bahrain and the rest of the Gulf Cooperation Council states which falling within the solar belt are very qualified to take advantage of these technologies.

Wind energy is currently the lowest cost of renewable energies and the economic viability of wind has improved significantly in the past few years and in many developed countries wind energy is considered the least expensive option among all renewable energy technologies. Though the survey study for Bahrain showed low to moderate wind speeds throughout the year, averaging at 5 meters per second, it is possible to harness this energy for the production of electricity around the coastal areas with higher wind speeds due to its advantages. The Bahrain World Trade centre will be the first of its kind to utilize wind power to support upto15% of building needs for electric power and will be fully operational by early 2009.

It is well known that the costs of the renewable energy is very large compared to the alternatives fossil fuels, However, it is clean and renewable and the cost of the equipment is steadily declining due to the evolution of the various technologies. It is unfortunate, however, that the applications of these energies are still limited in our region and we hope that sufficient budgets will be allocated for research and development and to implement some projects on grounds.

The Kingdom of Bahrain is seeking to make use of the renewable energies, particularly solar and wind and thus follow up on everything that is being developed in this area and is trying to use it as much as possible besides, that the research centers and local universities in the Kingdom encourages and urges

researchers and students to conduct research in this area is to encourage the use of this important source of energy in the electricity and water as an alternative source to organic fuels. Recently, at the request of the government of Bahrain, World Bank has launched a study to devise a strategy for developing and using alternative energy in Bahrain as an integrated component of energy supply, and to examine potential economic and business opportunities for Bahrain to supply alternative energy technologies and services for its own use or to other countries in the Region.

The Electricity & Water Authority made various dialogs with companies working in the field of new and renewable energies to explore the recent developments in the field of renewable energies and look into feasibility of utilization of renewable energies in a small public facilities and tourist sites in the country as a first principle to be used in a wider scale for electricity production. The space and the cost, however, remains the major challenge to us compared with the traditional energy generators.

The kingdom's vision is to foster green, reliable and resilient energy system that is environmentally friendly. The Government of Bahrain is looking forward to receiving technical support from the international community for the realistic assessment for renewable energy systems implementation based on the newer and energy efficient systems to respond to the long-term challenges of energy security and climate change with the dwindling gas reserves.

It's a high time for the development of renewable energy industry and we got to kick off as early as possible. Now since the whole word is aggressively looking forward to the greener energy sources, Bahrain is no exception and very keen to focus more on clean energy technologies.

There are a lot of high expectations in the field of RES due to the potential of solar and wind in our region. We need to do a lot in this regard such as educating consumers and investors about what each technology can realistically offer in the prevailing circumstances in moving renewables forward.

To mitigate the impact of climate change resulting from burning the fossil fuels, the renewable energy strategy should be developed in a comprehensive manner including the required legislation, creation/identification of a lead agency, and establishment of network with private companies and with regional and international entities. (researching, manufacturing, financing, etc.)

At the end I would like to extend my heartfelt gratitude for this great invitation and initiative taken by the Government of the Federal Republic of Germany which would provide a platform for the international communities to share their vision and experience on this vital issue.

Thank you.