**Communiqué from**

 **Grand Renewable Energy 2014**

 ***“Advanced Technology Paths to Global Sustainability”***

 TOKYO BIG SIGHT, TOKYO, JAPAN, 27 July – 1 August 2014

Tokyo, Japan, August 1, 2014

Over 1350 specialists, 30% being young scientists and researchers, from 48 countries gathered for the Grand Renewable Energy 2014 International Conference in order to contribute to the progress of a wide range of renewable energy technologies and to promote sustainable energy systems. Based on the various presentations and discussions at the Conference, held at the Tokyo Big Sight in Japan, the following fundamental understandings and proposals have been reached to show our direction to the world.

• Since the beginning of this conferences series (Makuhari in 2006 and Pacifico Yokohama in 2010, both in Japan), we have observed a continuous growth in renewable energy deployment worldwide. Expectations for renewable energy have further increased and recognition of its importance is widely shared among the public.

• The work of the Intergovernmental Panel on Climate Change (IPCC) has reconfirmed the relationship between global climate change and greenhouse gas (GHG) emissions by human activities and has identified serious consequences associated with climate change. The IPCC has recognized that renewable energy is part of the solution to deeply reduce GHG emissions and thus minimize the consequences of climate change.

• Renewable energy markets are expanding and the installation of renewable energy technologies is accelerating throughout the world. In its recent report, REN21 has stated that the total, worldwide renewable power capacity is in the order of 560 GW (not including hydropower) at the end of 2013, but the contribution to the total electricity production in the world was approximately 5.8% (2012 data). Thus, renewable energy in the global energy supply is still relatively small, and its deployment needs to be significantly accelerated to achieve a considerable fraction of the total energy supply by the middle of this century.

• Further research and development focused on advanced and innovative technologies are required to accelerate the penetration of renewable energy, to further reduce costs and to improve the efficiency of renewable energy systems. Not only individual renewable energy technologies, but also energy efficiency, the integration with energy storage and the management of integrated energy systems have become crucially important to realize the low carbon society.

• To achieve its full potential, the renewable energy sector needs a competent and diverse workforce. The sector thus offers opportunities for new jobs. This will require new education and training programs, both at the technical and university levels. There are also significant opportunities for the continuous education and training of the existing workforce who will migrate to the renewable energy sector.

• While various policies have been implemented by governments to promote renewable energy, more efforts need to be done. Strong, innovative and reliable policy frameworks will be required to significantly enhance the deployment of renewable energy. Not only will these policies assure a security of energy supply, but will provide a stable investment environment that will reduce financial risks, minimize costs, and achieve economic growth.

We, the specialists involved in the field of renewable energy technologies and their policies, accept the technical and policy challenges. We will continue to contribute to growing the renewable energy market to realize a sustainable world. The Grand Renewable Energy 2018 International Conference, to be held in Japan, will provide an opportunity to assess the work and to share the accomplishments that will be done in the next four years.