Headline: Renewable energy resource assessment and mapping

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Countries in the Asia-Pacific region may have a huge untapped renewable energy potential, but they have limited technical expertise available for identifying their resources and for addressing climate change and energy security. It has become essential for these nations to respond to the scale of these challenges.

To be able to discuss these concerns, the Department of Science and Technology, International Renewable Energy Agency (Irena) and the United Nations Economic and Social Commission for Asia and the Pacific-Asian and Pacific Centre for Transfer and Technology (APCTT) gathered renewable energy researchers, private sector representatives, policymakers and government officials in the renewable energy sector from the Philippines and other Southeast Asian countries for the Southeast Asia regional training program on renewable energy resource assessment and mapping on Sept. 28-30 at Marco Polo Hotel, Davao City.

Extensive training

Irena, together with other international organizations such as the World Bank and Technical University of Denmark, provided an extensive training on various methodologies, tools and techniques for solar and wind energy resource assessments which could estimate potential renewable energy in national and global scales. An Abu Dhabi-based intergovernmental organization that promotes the widespread adoption and use of all forms of renewable energy, Irena supports countries in their transition to sustainable energy future.

Irena associate program officer Abdulmalik Oricha Ali introduced the Global Atlas for Renewable Energy (Global Atlas), a geographic information system backed with over 1,000 data sets that would help energy planners and policymakers find the best areas for solar, wind, bioenergy and geothermal energy development. Global Atlas is funded by World Bank's energy sector management assistance program in selected developing countries.

"The whole goal for this product is for policymakers, business leaders and planners to have a better sense of what are the potentials of these different resources and all areas where they would consider expanding their businesses," Ali said.

He added that Global Atlas is freely accessible to anyone who has Internet connection and mobile service around the world. Its web application (irena.org/globalatlas) provides visualization maps and analysis tools that would help combine maps to zero in the areas with high potential for renewable resource, while its mobile version, a lighter scale, is an app that allows viewing of these sources. The app runs in Windows, iOS, Android and Blackberry devices.

Representatives from Brunei, Cambodia, Indonesia, Laos, Thailand and the Philippines meanwhile presented their best practices in undertaking solar and wind resource assessments. Delegates also shared their knowledge on policy areas such as energy subsidies, skills development, infrastructure planning and national climate change. Some other key issues tackled were the grid expansion, limiting factors, strategies and policy mechanisms, feed-in tariffs and net-metering.

“In addition to what we have now, the advance technology from the National Renewable Energy Laboratory of United States, plus these [techniques], the development cost of renewable energy will be lessened. If the development cost goes down, then so as its per-kilowatt-hour,” said solar and wind energy management chief Fortunato Sibayan of the Department of Energy.

Auction

He added: “We’re going into auction with FIT next year; probably the earliest is in April, if all the guidelines will be ready by that time.”

Sibayan said that after the program, the DOE will review the best practices shared by other countries and consider if they would tweak the existing policies and mechanisms in renewable energy.

The program also aimed to create a pool of trainers that will help disseminate the information to their respective countries.

In 2001, the world energy consumption was estimated at 13.5 terawatts and is expected to rise by 27.6 TW in 2050 and 43 TW by 2100. According to a study from chemistryviews.com, as cited during the seminar, there is more solar energy striking the Earth’s surface in 1.5 hours than its worldwide consumption in a year. Likewise, the theoretical potential of wind energy is estimated to 1000 TW in a year.

In the Philippines, it is speculated that the total realizable wind energy potential could grow up to 76,000 megawatts.