

Conference and Exhibition
Indonesia - New and Renewable Energy and Energy Conservation
(The 3rd Indo EBTKE-ConEx 2014)

PREFACE



The 3rd Indo EBTKE-ConEx 2014 is an annual event organized by the Directorate General of New and Renewable Energy and Energy Conservation (DG-EBTKE), Ministry of Energy and Mineral Resources of the Republic of Indonesia, in cooperation with the Indonesian Renewable Energy Society (IRES) and Quad Event Management. The event was held on 4–6 June, 2014 at the Jakarta Convention Center (JCC), with the theme “Time to Deliver Clean Energy for the Nation”. The theme was created to revive the commitment to deliver clean energy, which is new and renewable energy and energy conservation, for the nation. It is also relevant to the Indonesian energy security and sustainability roadmap as stated in the national energy policy. Indo EBTKE-ConEx 2014 was officially opened by Prof. Dr. Boediono, Vice President of the Republic of Indonesia. This event was attended by a total of 5,009 visitors.

The 3rd Indo EBTKE-ConEx 2014 provided an excellent venue to identify opportunities in regional Indonesia that are challenging to reach. It also provided an important opportunity to share knowledge, understand challenges in renewable energy, build partnerships and strengthen cooperation among key stakeholders.

The aims of Indo EBTKE-ConEx 2014 were to:

- Increase public awareness of new and renewable energy and energy conservation (“EBTKE”) concept
- Promote latest products and technology of EBTKE
- Provide platform for EBTKE key stakeholders (governments, private sectors, and academics) to network and increase collaboration to achieve Indonesia’s EBTKE target
- Stimulate growth of new entrepreneurs in EBTKE as a sector, also increase the number and capacity of EBTKE projects significantly in the near future.

The conference presented papers from 40 international and Indonesian scientists, technologists, researchers, academicians, government officials, practitioners and the private sector. Presentation material from the conference can be downloaded at <http://www.indoebtke-conex.com/detail.php?id=3&cat=3>

The exhibition displayed and demonstrated various technologies on EBTKE at 27 booths in the Jakarta Convention Center (<http://www.indoebtke-conex.com/best-booth.php>). Education was carried out in three ways:

- **Training on new and renewable energy**, including biogas, biomass energy, solar energy / photovoltaic, mini and small hydropower, was conducted by GIZ-Indonesia and the USAID Indonesia-Clean Energy Development (ICED Project); and training on energy efficiency was conducted by the United Kingdom Climate Change Unit (UKCCU).
- An **essay contest** on new and renewable energy and energy conservation for students from junior high schools, senior high schools and undergraduate higher education produced 123 essays (<http://www.indoebtke-conex.com/writing-competition.php>).
- A **scientific poster competition** on new and renewable energy and energy conservation for graduate students, researchers, lecturers / academicians, technologists, and practitioners of new and renewable, and energy conservation produced 74 posters (<http://www.indoebtke-conex.com/paper-poster-competition.php>).

A call for technical papers elicited 131 extended abstracts and, following a thorough peer review process, 77 manuscripts were selected for presentation in Indo EBTKE-ConEx 2014 (<http://www.indoebtke-conex.com/detail.php?id=4&cat=3> and http://www.indoebtke-conex.com/data_proceeding.php). After selection and review by the scientific committee, 50 selected manuscripts were chosen for publication in Elsevier’s Journal, *Energy Procedia*.

We wish to convey our utmost appreciation to all authors and reviewers for their high quality contributions; to all participants/visitors for their participation; and to committees for their strong support throughout the Indo EBTKE-ConEx 2014.

Last, but not least, we hope Indo EBTKE-ConEx 2014 provided an interesting program and served as an excellent forum for innovative and technical discussions. We look forward to seeing you all at Indo EBTKE-ConEx 2015.

Sincerely yours,



Salis Aprilian
Indo EBTKE-ConEx 2014
Chairman of Organizing Committee

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Suitable Locations of Ocean Renewable Energy (ORE) in Indonesia Region – GIS Approached

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Abstract

The purpose of this research is to find areas that are potential to produce energy from ocean with different level. Approach used was by looking at the current technological capabilities and characteristics of the currents, winds, waves, and tides. This research developed four dynamic oceanographic, combining with technologies use Geographic Information System (GIS) approach. The results elucidated that for the larger currents in eastern Indonesia with velocity up to $3 \text{ m} \cdot \text{s}^{-1}$. For the wind was in the south of Java, Papua, and West Sumatra. Tidal range that can be utilized in the area of Nusa Tenggara Timur, northern Sumatra and Papua had a height up to four meters. Waves were in the area directly facing the ocean, especially in the south of Java with a range of 1.4 m to 2.4 m. These results elucidated that Ocean Renewable Energy (ORE) in Indonesia can develop for one up to four farming in one place.

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Keywords: Blueprint; Indonesian seas; mapping; ocean renewable energy; suitable locations

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