



# Knowledge Partnership for Clean Energy

## Highlights of the Dialogue on the Indonesian Center of Excellence

8-9 October 2015  
Mandarin Oriental Hotel  
Jakarta, Indonesia

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**ADB**

## **1. Why a Knowledge Partnership Dialogue on Clean Energy?**

The Government of Indonesia is committed to implementing a series of reforms to (i) expand the country's energy production through greater private sector investment and more effective public sector investment; (ii) bolster the sustainability of the energy sector through increased reliance on domestic gas, renewable energy, and energy efficiency investments; and (iii) provide access to modern energy to all Indonesians. One of its key initiatives is the creation of the Center of Excellence on Clean Energy, an initiative of the Indonesia Minister of Environment and Mineral Resources expected to promote deployment of clean energy technology solutions from public and private sector entities in the country.

The Ministry of Energy and Mineral Resources (MEMR), Government of Indonesia held a Knowledge Partnership Dialogue for Clean Energy, in collaboration with the Asian Development Bank (ADB), to discuss its plans for establishing a Centre of Excellence (COE) for Clean Energy. The event was held on 8-9 October 2015 at the Mandarin Hotel in Jakarta, where the Government presented their plan for how the COE will bring together both public and private entities and integrate national and international expertise to promote clean energy development in Indonesia.

The objective of the Knowledge Partnership Dialogue was to explore common goals with development partners and public and private entities, and scope collaborative opportunities in the deployment of clean energy. The focus of these discussions concerns the COE and its proposed operations and facilities, and its role in supporting the needs of the energy sector for investment in, and implementation of, clean energy initiatives.

## **2. Who Contributed to the Workshop**

There were a total of 176 participants at the Dialogue. This comprised 119 individuals from the Indonesian government; 12 from development partners; 28 from the private sector; 3 from academe, and 14 from the ADB.

In particular, the event was attended by senior officials from the Ministry of Energy and Mineral Resources (MEMR) and the National Energy Council (NEC). Also in attendance were senior representatives from the University of Indonesia, Technological Institute of Bandung (ITB), the Energy Sector Group and the Knowledge Sharing and Services Center of the ADB, the ADB Indonesia Resident Mission, Agence Francaise de Developpement, USAID, JICA, the University of Tokyo, the Sustainable Energy Development Authority of Malaysia, and a conference call with the CEO of the National Renewable Energy Laboratory (NREL) of the Department of Energy (US). Private and non-governmental entities in attendance included the World Resources Institute (WRI), Oracle, Siemens, and the Kansai Electric Power Corporation (KEPCO) of Japan. The workshop agenda is provided in Annex 1.

### 3. How the Dialogue was Organized

The Government of Indonesia's MEMR delivered the keynote address on Day 1, outlining the country's hopes for the COE and conveying the support expressed for the COE by the President of the Republic of Indonesia and the Indonesian Parliament. A Roundtable event on Day 1 featured presentations from the government, its partners, and clean energy practitioners from around the world. The government highlighted its strategic action plan for clean energy and the COE's role in achieving the plan's objectives, including how the COE will enable policy, innovation, and investment in clean energy. A Memorandum of Understanding was signed between the Government of Indonesia and ADB during this event, and ADB outlined its support for the Centre.

Day 2 of the Dialogue featured representatives from both the public and private sectors discussing the Center's role in facilitating investment in clean energy. Topics included aligning the COE's operations and facilities with industry needs, recent trends in clean energy technology relevant to Indonesia, and how the Center can help accelerate the deployment of these technologies, including specific support for program scoping and facilitation.

### 4. Summary of Discussions

- Accelerating the development of clean and renewable energy in Indonesia is crucial for its economic health and security.

Indonesia has embarked on an important journey to increase the share of renewable energy in its energy mix from 6% now to 25% in 2025. The MEMR and NEC have concurred in prior meetings that energy should not be seen as a commodity but rather a driver of economic growth. This requires a departure from 'business as usual' and the integration of new technologies, innovative business solutions, improved policies, and robust private sector investment. The Minister was also able to relate that the highest authorities within the government agree on this, including the President of the Republic of Indonesia, so there is widespread consensus internally to bring reform and assistance to develop clean energy. The ADB observed that the sustainability of the COE can only come through government ownership and guidance, and expressed appreciation for this strong interest from the highest levels of government.

- The COE will exist as a virtual center before gaining a physical presence.

Participants agree that the COE represents more than a building, but rather a living framework, network, and platform of actors working in collaboration with each other. The COE will begin as a web platform which consolidates research and resource information into a single online source. It will have a particular emphasis on consolidating geospatial information for resource and investment mapping. This and

other information can later be stored and accessed at the COE's physical location, which will also serve as a center of research activities and investment facilitation for clean energy projects.

- The COE must build on existing knowledge and institutions.

Indonesia's clean energy sector already comprises many stakeholders, including the government, universities, research institutions, and the private sector. It is fitting to establish a central coordinating body through the COE that can make these stakeholders and their activities more efficient and complementary. Its function and authority, however, should be clear to avoid overlapping with other existing institutions. The focal point for the COE will be Agency of Research and Development for Energy and Mineral Resources within MEMR, but other government agencies will be involved in order to enable the COE to provide comprehensive support and facilitation to the implementation of clean energy projects. The Government is now in the process of designing the structure, organization, and overall concept of the Center.

- Technology transfer needs to be enabled to reduce costs behind renewable energy.

A major challenge to Indonesia in developing its clean energy potential will be the high cost of renewable technologies, particularly where the technology needs to be imported. These technologies need to be affordable in order to achieve high market penetration, and their costs can be reduced through research innovations together with efficient technology transfer. Technology transfer will therefore be a key component behind Indonesia reaching its sector goals. This is one area where ADB can provide support, since the ADB has facilities to provide assisted technology transfer which can help reduce the costs and difficulty involved. An approach specific to Indonesia's needs could start with an initial selection of key technologies that will be targeted for transfer and integration into the domestic energy sector.

- International partnerships will enhance the technical capability and reach of the COE.

Many international parties are interested in supporting the COE and have a wealth of resources and ideas that the COE could draw from. The intention of the COE is not to conduct pure research, since clean energy research is already quite advanced in other areas of the world. Donor organizations like ADB, USAID and other multilateral and bilateral institutions can leverage funding and international partnerships to support COE activities. The COE can also learn from the experiences of various other energy centers such as those in Malaysia, Japan, Korea, and the United States. There are also international training and certification programs available through institutions like KEPCO in Japan that could help build technical capacity in countries like Indonesia. Rather, the COE will coordinate how to bring the benefits of that research to Indonesia

in a cost-effective way. Coordination of these institutions through the Center will need to be very strong in order to maximize their contributions for Indonesia.

- The private sector can leverage technological innovation but needs guidance from the government.

Indonesia is attractive to the private sector for its market size and potential, but the private sector will need guidance and support from the Government of Indonesia before bringing large amounts of investment in the country. Sector regulations viewed as fluid and lacking transparency openly discourage large amounts of private investment. The private sector also lacks guidance and central planning from the government, as well as access to quality resource data. Quality of data and project execution are crucial considerations for both high-level resource planning and development of bankable renewable energy projects. The COE is intended to serve largely as a business incubator and project facilitator, and could therefore have important roles in helping to develop a stronger and more stable regulatory environment in Indonesia, as well as in coordinating the resource data and quality feasibility studies needed as prerequisites to private investment.

- Geospatial mapping is a critical tool for energy planning and could be consolidated through the COE.

A wealth of statistical and mapping data does exist for Indonesia but it is spread among government institutions, international institutions, and nongovernmental organizations. If this data were combined with advanced geospatial mapping technology, the government would possess a powerful tool for planning the deployment of the energy access infrastructure that will be required to achieve 100% electrification. This information is particularly needed to access hard-to-reach areas of Indonesia which have yet to be electrified, and which may never be able to be serviced by the national grid. One initial service that the COE could provide is the integration of information on economic development, load, infrastructure availability and renewable energy resources to help develop least cost electrification plans. Presentations regarding geospatial capabilities and applied space technology being developed by the University of Tokyo and WRI gave powerful indications of what can be achieved if such information can be consolidated. WRI in particular would be a strong collaborator in this initial step, especially as WRI has just recently signed a corporate knowledge partnership with the ADB.

## 5. Next Steps

The Government is now in the process of designing the structure, organization, and overall concept of the center. The following activities are proposed as follow-on steps to this forum:

- Development of a business plan for the Center for the medium term, including the Center's scope of work, financing, potential strategic partnerships, and an initial three-year work plan.
- Development of a geospatial decision support system to allow investment planning for renewables and electrification, potentially through collaboration between the Government, ADB, and WRI.
- Policy and regulatory support for developing price incentives and other enabling regulations for renewables (e.g. solar and wind), electrification, energy efficiency and clean fossil energy, through continued coordination between the Government and ADB.
- Linkages with other ADB knowledge partners such as the Korean Energy Agency, Japanese Institutes, Tsinghua University and NREL, among others.

A Knowledge Partnership Forum will be held by the Government in February 2016, where the first-phase virtual COE will be launched.

## Annex 1. Workshop Agenda

### KNOWLEDGE PARTNERSHIP DIALOGUE ON CLEAN ENERGY. AGENDA

Revised 8 Oct, 2015

**Day 1: Thursday, 8 October 2015**

Registration		
08:30-08:45	Registration of Participants - Secretariat	
<b>Session 1 : Understanding the Centre of Excellence</b>		
Time	Agenda	PIC
09:00	Singing of Indonesia's National Anthem	
09:05 – 09:20	The Government's Centre of Excellence	William Sabandar, <i>Advisor for Clean Energy /Renewable Energy, MEMR</i>
09:20- 09:30	Message from the <i>National Renewable Energy Laboratory</i> (via Teleconference)	William Harris, <i>CEO, National Renewable Energy Laboratory</i>
09:30 - 09:35	ADB's Support to the Centre of Excellence	Steven R. Tabor, <i>Country Director, Asian Development Bank (ADB)</i>
09:35 – 09:40	Pursuing Access to Clean Energy for All in Asia and the Pacific	Yongping Zhai, <i>Technical Adviser (Energy), ADB</i>
09:45-10:15	Coffee Break	
<b>Session 2: Establishing the Centre of Excellence</b>		
10:15	Report from Head of Agency R & D	F.X. Sutijastoto, <i>Head of Agency of Research And Development For Energy &amp; Mineral Resources</i>
10:15 – 10:25	Keynote Address: Promoting Clean Energy Development in Indonesia	H.E. Mr. Sudirman Said, <i>Minister, Ministry of Energy and Mineral Resources (MEMR)</i>
10:25 – 10:30	MOU Signing Ceremony between MEMR and ADB	H.E. Mr. Sudirman Said and Steven R. Tabor
<b>Session 3 National Integration of the Centre of Excellence</b>		
10:30 - 12:00	<p><b>Panel Discussion: National Integration of the Centre of Excellence</b></p> <p>The panellists will respond to the concept of the Centre and expound on its integration within current national initiatives to achieve accelerated development of new and renewable energy</p>	<p>Moderator: Andhika Prastawa, <i>Agency for the Assessment and Application of Technology</i></p> <p>Panellists: F.X.Sutijastoto, <i>Head of Agency for Research and Devt, MEMR (ARDEMR)</i> Ir. Rida Mulyana, <i>Director General of NRE and Energy Conservation, MEMR</i> Prof. Rinaldy Dalimi, <i>University of Indonesia</i> Tatang Hernas, <i>Bandung Institute</i></p>

		<i>of Technology</i> Dato'lr Dr Ali Askar Sher Mohamad, <i>Chief Operating Officer,</i> <i>Sustainable Energy Development</i> <i>Authority</i>
12:00 - 13:30	Lunch Break	
<b>Session 4 : Development Strategy and Plan for the Centre of Excellence</b>		
13:30- 15:00	<p><b>Panel Discussion: Planning and Operating the Centre of Excellence</b></p> <p>The panellists will discuss the strategies and plans for the establishment and operationalization of the Centre of Excellence and expound on the roles they can play to help establish, operationalize and sustain the Centre of Excellence</p>	<p>Moderator: Ryu Fukui, <i>Head, Knowledge Sharing and Services Centre, ADB</i></p> <p>Panellists Yongpoing Zhai, <i>Technical Adviser (Energy), ADB</i> Juraku Masahiro, <i>Japan International Cooperation Agency</i> Retno Setianingsih, <i>Energy Program Specialist, USAID</i> Bruno BOSLE, <i>Deputy Country Director</i> <i>AFD - Agence Française de Développement Indonesia Resident Mission</i> Hiroyuki Miyazaki, <i>Assistant Professor University of Tokyo</i></p>
15:00- 15:20	Coffee Break	
15:20 – 15:40	Way Forward	Yongping Zhai, <i>ADB</i>
15:40- 16:00	Closing Remarks	William Sabandar, <i>MEMR</i>

**Day 2: Friday, 9 October 2015**

<b>Session 1: Dialogue with the Public and Private Sector</b>		
Time	Agenda	PIC
09:00-09:15	<p><b>The Centre of Excellence as Driver for Clean Energy Investment</b></p> <p>This session will focus on the Indonesian Government's plans for the Centre of Excellence on Clean Energy, highlighting inputs and changes agreed upon during the previous day's dialogues</p>	William Sabandar, <i>Advisor on Renewable Energy, MEMR</i>



09:15-09:30	ADB's Support to the Centre of Excellence	Yongping Zhai, <i>Technical Adviser (Energy), ADB</i>
<b>Session 2: Priority Areas for Clean Energy in Indonesia</b>		
09:30 -11:30	<p><b>Panel Discussion: Priority Areas for Clean Energy in Indonesia</b></p> <p>The panellists will discuss recent trends relevant for Indonesia, where and how to scale up investments, how the Centre can facilitate this scaling up.</p>	<p>Moderator: Yongping Zhai, <i>ADB</i></p> <p>Panelists:</p> <p>Renewable Energy: Lazeena Rahman, <i>Investment Specialist ADB</i></p> <p>Energy Efficiency: Ery Djunaedy, <i>Econoler</i></p> <p>Smart Grid: Anand Menon, <i>Chief Technology Officer, Smart Grid, Siemens</i></p> <p>Clean fossil: Kiyoshi Takebayashi, <i>Director General, Kansai Electric Power Corporation</i></p>
11:30 - 13:00	Break for Friday Prayers	
13:00 - 14:30	Networking Luncheon	
<b>Session 3: Integration of ICT and Energy</b>		
14:30-15:30	<p><b>Panel Discussion: Enabling Knowledge Management through ICT</b></p> <p>The panellist will discuss how information and communications technology can be used to generate and manage knowledge on clean energy, paying particular attention to the Indonesian context</p>	<p>Moderator :Arif Hardoko, <i>Assistant Manager on Technology Development, Pertamina</i></p> <p>Panellists:</p> <p>Andhyta Firselly Utami, <i>World Resources Institute</i></p> <p>Stuart Shaw, <i>Sales Director-Asia, Oracle</i></p> <p>Bhuwneshwar Prasad Sah, <i>Infrastructure Specialist (GIS), ADB</i></p>
<b>Session 4: Recap and Roadmap</b>		
15:30-16:00	Moderators from the various sessions will sit in a panel and give the highlights/ agreements made during their session.	Moderator: Ryu Fukui, <i>Knowledge Sharing and Services Center, ADB</i>
16:00 - 16:30	Closing Remarks	Pradeep Thakaran (on behalf of) Steven Tabor, <i>Country Director, ADB</i> F.X. Sutijastoto, <i>Head of ARDEMR</i>