

Roundtable Discussion

PROSPECT ON ENERGY TRANSITION IN INDONESIA POWER SECTOR

“Lessons learn from some of G20 Countries”

Background

The IPCC Special Report 1.5°C, published in October 2018, analyzed various climate change impacts that can be avoided by limiting the increase to 1.5°C above pre-industrial levels¹. It is found that the global greenhouse gas (GHG) emission must reach the peak level in 2030 and then dramatically decrease to net-zero emission in 2050. The prerequisites to meet the target as follows: 1) global emission must be decreased by 2030, and it is equivalent to 45% of the 2010 emission level (20 GtCO₂eq); 2) coal consumption must be cut as much as 59 – 78% from the 2010 level and no more coal after 2050; 3) oil consumption must be lessened as much as 32 – 87% from the 2010 level; 4) 85% of the world’s electricity supply by 2050 comes from renewable energy; 5) net-zero global emission by 2050.

On the other hand, Indonesia’s energy consumption increases strongly. Data from the Ministry of Energy and Mineral² shows there was a 30% increase in Indonesia’s energy consumption in 2017 compared to the 2007 level. Besides, World Bank Data shows Indonesia’s energy consumption in 2014 was 812 kWh per capita or 26% of the world average; which rose to 1,021 kWh per capita in 2017 (MEMR, 2018). To meet electricity growth, Indonesia depends heavily on fossil fuel power plants, dominantly coal. According to the PLN’s Electricity Supply Business Plan (RUPTL 2018-2027), the amount of capacity planned to build until 2027 reaches 56 GW: of which 48% is a coal power plant, and 26% is a gas power plant.

Indonesia must take dramatically climate change mitigation action in the electricity sector. According to the projections of the Climate Action Tracker³, total Indonesia’s emission (excluding LULUCF) is equivalent to 3.75 – 4% of total global emissions in 2030. Of which 23 – 26% is from electricity generation. In order to be in line with the 1.5°C, half of Indonesia’s emission from electricity generation must be cut down by 2030; or equivalent to the 2019 emissions level from electricity. Half of the coal power plant must be retired gradually starting from 2025 – 2030, and another half must be closed by 2050. Besides, no more coal power plant development allowed after 2025⁴.

Concerning these two issues, Indonesia needs a rapid energy transition to renewable energy power plants, while also considering the implications to the coal sector. For the last four years, coal revenue collected to the State was around IDR 27 trillion (1.93 billion USD) or on average 80% of total non-oil & gas revenue. Nevertheless, the contribution of coal to the state budget is relatively low around 1.5 to 2 % of total revenue. Also, coal has a substantial contribution to the local economy of the coal producer provinces.

¹ <http://www.ipcc.ch/report/sr15/>

² <https://www.esdm.go.id/assets/media/content/content-handbook-of-energy-and-economic-statistics-of-indonesia.pdf>

³ <https://climateactiontracker.org/countries/indonesia/>

⁴ <http://iesr.or.id/2018/10/siaran-pers-laporan-ipcc-sr15-dan-implikasinya-bagi-sektor-energi-indonesia/>

Having realized that Indonesia must cut down the emission from the energy sector to stay on the track of 1.5°C as well as the increasing energy demand, Institute for Essential Services Reform, together with other partners under the Climate Transparency partnership, conducted a study to scrutinize the energy transition and the future of coal in some of G20 countries. This study aims to analyze how energy demand can be fulfilled without putting more risks on climate change.

Participants

Participants of this discussion consists of 40 people from the governmental institution, business, academic, non-governmental institution and relevant association.

Objectives

The objectives of this discussion are:

1. Discuss drivers and different pathways on energy transition in power sector
2. Sharing insight on energy transition in power sector in G20 countries (India, China, South Africa)
3. Facilitate active learning opportunities and knowledge exchange in making energy transition in power sector happen

Date and Venue

Details of the conference as follows:

Day/Date : Tuesday, April 2, 2019

Time : 08.30 – 13.30 WIB

Location : Morrissey Hotel, Jl. KH. Wahid Hasyim No.80, Menteng, Jakarta Pusat

Agenda

Time	Activity	PIC
08.30 – 09.00	Registration	IESR
09.00 – 09.15	Opening remarks and introduction to the discussion	IESR
09.15 – 12.15	<p><u>Presentation and Discussion</u> International Experiences on Energy Transition in Power Sector</p> <p>Panelist:</p> <ul style="list-style-type: none"> • Global Experiences: Dr. Ursula F. Hutfilter (Head of Policy / Senior Climate Policy Advisor, Climate Analytics) • India Experience: Thomas Spencer (Fellow, The Energy and Resources Institute) • China Experience: Alvin Lin (Climate and Energy Policy Director, Natural Resources Defense Council) • South Africa Experience: Bryce McCall (Researcher, Energy Research Centre) • Germany Experience: Hannah Schindler (Project Coordinator of Climate Transparency, Humboldt-Viadrina Governance Platform) 	Moderator: Dr.Suzanty Sitorus

	<p>Key questions:</p> <ul style="list-style-type: none"> a) Drivers of energy transition in power sector b) Pathways on energy transition in power sector <p>Discussant:</p> <ul style="list-style-type: none"> • Dr. Alin Halimatussadiah (Senior Researcher, Institute for Economic and Social Research, Faculty of Business and Economic, University of Indonesia) • Tata Mustasya, S.E., M.A. (Regional Climate and Energy Campaign Coordinator, Greenpeace South East Asia) • Ir. Josaphat Rizal Primana, M.Sc. (Energy, Mineral, and Mining Resources Director, National Development Planning Agency) • Ir. Jisman Hutajulu, M.M. (Electricity Program Development, Directorate General of Electricity, Ministry of Energy and Mineral) • Dr. Ir. Widhyawan Prawiraatmadja (Indonesia Clean Energy Forum) <p>Key questions:</p> <ul style="list-style-type: none"> a) What is the lesson for Indonesia? b) What are the key structural challenges for energy transition? c) What are the risk and policy alternatives? 	
12.15 – 12.30	Conclusion and Closing	IESR
12.30 – 13.30	Lunch	IESR

About Institute for Essential Services Reform:

Institute for Essential Services Reform ([IESR](#)) is a well-known think-tank in the energy and environment sectors in Indonesia. It has been involved in the development of Indonesian energy and climate change framework; and therefore, gained recognition nationally and internationally. Its main objective is advocacy and campaign to ensure the fulfilment of energy needs, to ensure the fairness of the natural resources' utilization, and ecological sustainability. IESR produces fact- and science-based analyses and studies, provide technical assistance and capacity building for policy makers, businesses, civil societies, and other stakeholders in need, and works in partnership with other state and non-state actors on specific projects and campaigns.



About Climate Transparency:

[Climate Transparency](#) is a global partnership with a shared mission to stimulate a ‘race to the top’ in climate action in G20 countries through enhanced transparency. It convenes partners from Argentina (Fundación Ambiente y Recursos Naturales), Brazil (CentroClima/COPPE UFRJ), China (Energy Research Institute), France (The Institute for Sustainable Development and International Relations), Germany (Germanwatch, HUMBOLDTVIADRINA Governance Platform, NewClimate Institute), India (The Energy and Resources Institute), Indonesia (Institute for Essential Service Reform), Mexico (Iniciativa Climática de México), South Africa (Energy Research Center/University of Cape Town) and the UK (Overseas Development Institute). Climate Transparency is funded by the ClimateWorks Foundation, Stiftung Mercator and the World Bank and supported by the European Climate Foundation.

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