

# Purnomo Yusgiantoro Center Research Portfolio 2019



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## Our Profile

**The Purnomo Yusgiantoro Center (PYC)** is an independent, non-governmental think tank which was established as an initiative on June 2016. PYC's headquarter is based in Jakarta and its main goal is to promote independent, unbiased, systematic, professional analysis and research on the field of energy and natural resources.

The Center aims to participate in a wide range of research spectrum and to provide policy solutions and/or recommendations inside the energy and natural resources sectors. The center emphasizes on reviewing and identifying current issues revolving the energy sector at local, national, and global level. PYC also plays the bridging role in connecting various entities in the energy and natural resources sector.

PYC always upholds independency, integrity, objectivity, and diversity as the core values of its work.

## Our Vision

To be a leading knowledge center in energy and natural resources sectors for research, innovation, and technological development in Indonesia and abroad.

## Our Missions

- To provide, promote, and support high-quality research and training in the field of energy and natural resources.
- To facilitate a meeting point for experts, academics, and various think tanks and initiatives working in the energy and natural resources sector and encouraging collaboration among them.

## Our Focus

Built upon a research foundation, the center initiative strives to develop a solid research division with members coming from the diverse inter-disciplinary background. PYC research works involve independent and collaborative research with several institutions, focusing on issues in (1) renewable energy development, (2) energy security, and (3) energy poverty.

## Board Members



*Founder*

**Prof. Purnomo Yusgiantoro, Ir.,  
M.Sc., M.A., Ph.D.**



*Member of the Advisory Board*

**Luky A. Yusgiantoro, B.Sc., M.Sc.,  
M.S., Ph.D.**



*Head of the Supervisory Board*

**Inka B. Yusgiantoro, B.SE.,  
M.S., M.S.E., M.A., Ph.D.**



*Member of the Supervisory Board*

**Alexander E. Wibowo, S.H.,  
L.L.M., JSD.**



*Chairperson*

**Filda C. Yusgiantoro, S.T., M.B.M.,  
M.B.A., Ph.D.**

# Publications

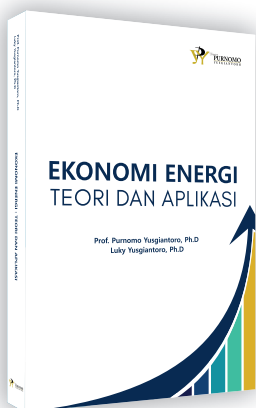
In the education front, PYC has currently released six publications covering two proceedings, a journal, a reference book, and a booklet. Through the publications, PYC aims to widely share the energy knowledge and insights to the society, both locally and globally. Our publications are available for access on [www.pyc-publication.org](http://www.pyc-publication.org).



## Indonesian Journal of Energy (IJE)

Indonesian Journal of Energy (IJE) is a peer-reviewed journal published twice a year by PYC. The journal is a multi-disciplinary journal in energy research that aims to be an authoritative source of information for analyses, reviews, and evaluations related to energy. The journal covers extensive research with a strong focus on energy economics, energy analysis, energy modeling, and prediction, integrated energy systems, energy planning, and energy management.

ISSN: 2549-1016



## Ekonomi Energi: Teori dan Aplikasi

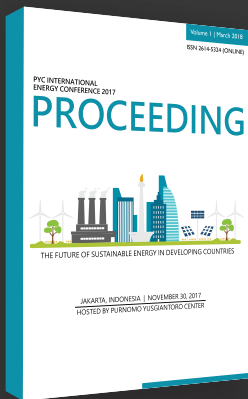
Purnomo Yusgiantoro Center (PYC) launched a book titled "Ekonomi Energi: Teori dan Aplikasi". The book was written by Prof. Purnomo Yusgiantoro with Dr. Luky Yusgiantoro. The book provides a comprehensive view of the energy economy theory and also covers various related topics ranging from energy in micro-economy, energy in macro-economy and energy imperfect market. Additionally, it contains both the theory and the most updated data and issues in the energy field.

ISBN: 978-602-52244-0-9



## Indonesia Renewable Energy Booklet 2018

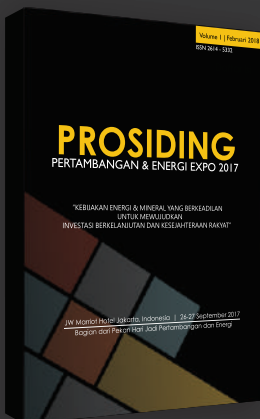
The Indonesia Renewable Energy Booklet 2018 provides information on Indonesia's renewable energy development. The booklet compiles data from various sources visualized in easily understandable graphics. It also contains the history of Indonesia's renewable energy policy, current development stage, as well as PYC analysis on the present condition and challenges.



## International Energy Conference Proceeding

The proceeding contains the selected papers and materials presented during the International Energy Conference 2017. The materials include infographics and essays from the conference.

ISSN: 2615-3912



## Indominergy Proceeding

The proceeding contains the selected papers and materials presented during the Indominergy Event 2017. The event held as a part of the 72<sup>nd</sup> Indonesia's Energy and Mining anniversary celebration.

ISSN: 2614-5332

# International Events

## PYC INTERNATIONAL ENERGY CONFERENCE 2017

Purnomo Yusgiantoro Center (PYC) International Energy Conference 2017 covered wide ranging discussions on various topics within the energy sector. The event successfully attracted hundreds of delegates which embodied a diverse array of academic and professional backgrounds, from students, lecturers, and business professionals. The conference was held at Sari Pan Pacific Hotel in Jakarta on November 30, 2017. It was opened by the speech from His Excellency (H.E.) Mr. Ignasius Jonan as the current Minister of Energy and Mineral Resources of Indonesia and the eleventh Vice President of Indonesia, Prof. Boediono.

The conference continued with a plenary session that hosted speakers from various backgrounds. The line-up of the panelists included Prof. Armida Alisjahbana (Director of the Center for Sustainable Development Goals Studies, Universitas Padjajaran and Indonesia Minister of National Development Planning from year 2009-2014), Prof Akiko Yamanaka (Senior Diplomatic Fellow at Central Asia Forum Cambridge University, Former Vice Minister for Foreign Affairs of Japanese Government and Former Special Ambassador for Peacebuilding of Japan) and Mr Andrew Shaw (Economic Counsellor of the US Embassy for Indonesia). The session was chaired by Dr. Havas Oegroseno (Deputy Minister of the Coordinating Ministry of Maritime Affairs, Indonesia). The conference also hosted several parallel sessions discussing various topics under the sustainable energy theme.



# PYC INTERNATIONAL ENERGY CONFERENCE 2017

THE FUTURE OF SUSTAINABLE ENERGY  
IN DEVELOPING COUNTRIES

JAKARTA, INDONESIA  
NOVEMBER 2017



## RENEWABLE ENERGY INNOVATION FORUM 2017

The “Renewable Innovation Forum: Sustainable Off-Grid Electrification and Renewable Energy Opportunities in Indonesia” was held by a collaboration among PYC, International Power Supply (IPS) A.D., and Indonesia Embassy for Bulgaria in Sofia. The event was held at Hotel Indonesia Kempinski, Jakarta on February 22, 2018. The forum aimed to gather people from different sectors to have extensive discussions, not only on the ongoing problems, but also solutions for Indonesia's off-grid electrification sector. During the event, more than 150 representatives from different government institutions, business sectors as well as academic sector came together and had productive discussions by sharing their respective knowledge.



# Research Projects (2017 - 2018)



## **PYC - IPS Project on PV Installation for Military Base**

PYC is currently working with International Power Supply (IPS AD) and Indonesia Defense University (Universitas Pertahanan Indonesia, Unhan) on a research project for military posts electrification. As an archipelagic country, Indonesia has numerous remote military posts where electricity power for these posts are often provided using diesel generator. This approach is considered as a costly and unsustainable alternative considering the supply chain of the diesel fuel. Aiming to assess the cheaper and sustainable alternative, the joint research project focuses on conducting a feasibility study on military posts electrification through smart off-grid renewable energy system.



## **Geothermal Investment Feasibility Study**

PYC is currently taking part in an integrated study on the technical, financial, and legal aspects of a geothermal investment project. This work aligns with Indonesia's ambitious renewable energy (RE) target with the commitment of having a 23% share of RE in the 2025's energy mix. In fact, geothermal energy is the second largest contributor to Indonesia's renewable energy mix after hydro power. Despite its large potential, the development of geothermal energy often faced with complicated bureaucracy and regulations. Hence, PYC aims to facilitate RE development in Indonesia through various efforts, including participation in its feasibility studies and legal aspects mediation.



## **ERIA - PYC Joint Research on Manufacturing Review: Energy**

PYC supported ERIA in research on reviewing energy issues, challenges, and opportunities in the manufacturing industry. The research was a part of the arrangement of the National Medium-term Development Plan (RPJMN) 2020-2024 and the Government Work Plan (RKP) 2020. The research aimed to provide alternative solutions which are advantageous to achieve the government target in the manufacturing sector. It mainly covered the government accomplishments, relevant policies and issues, policy comparisons, policy and institutional role evaluations in developing manufacturing industries, especially linked to supply, demand, and efficiency of energy.



## **Natuna Seabed Maritime Infrastructure Feasibility Study**

The collaborative research between Purnomo Yusgiantoro Center (PYC), Indonesia Defense University (UNHAN) and Bandung Institute of Technology (ITB) went through consecutive events including several Focus Group Discussions (FGDs) and field research since August 2017 up to October 2017. The research focuses on a micro analysis of the maritime infrastructures in the Natuna Sea, Indonesia. The research report was presented at the seminar on October 10, 2017, in Nusantara Hall, Urip Sumoharjo Building, Ministry of Defense of the Republic of Indonesia and was attended by the Minister of Defense of the Republic of Indonesia.

# Knowledge Sharing Series



## **An Introduction to Geothermal: Theory and Applications**

In manifesting the goals of knowledge provision, Purnomo Yusgiantoro Center (PYC) conducted the first edition of Knowledge Sharing Series with the geothermal energy at the heart of the conversation. The sharing itself aimed at galvanizing the knowledge exchange among attendants in a casual, informal vibe. A brief presentation was delivered to outline initial approach to what the geothermal energy is and how it is classified.



## **Energy Condition in Indonesia: An Energy Economics Perspective**

PYC organized its second Knowledge Sharing Series (KSS) event on reviewing energy condition from energy economic perspective. The event aimed to discuss the upcoming energy economy book written by both Prof. Purnomo Yusgiantoro and Dr. Luky Yusgiantoro. In the event, many participants expected and wished that the book would be published as soon as possible to be a reliable academic reference on energy economics in Indonesia.

## PYC Discussions and Forums

PYC believes that conversation and information exchange would help to enrich people's understanding of complex issues surrounding energy and natural resource sector. Acknowledging the complexity of the energy system is essential for managing and structuring the sector. Furthermore, a discussion can be the starting point of inter-institutional and multi-disciplinary collaboration. Hence, PYC is willing to conduct various discussion and forums that are open to public participation. To date, PYC has held multiple discussions and forums in the form of Focus Group Discussion (FGD) and Knowledge Sharing Series (KSS) covering broad aspects of energy issues, from legal to technical views.



### MEMR Policy Outlook for Indonesia Energy Sovereignty

PYC conducted its third edition of Knowledge Sharing Series (KSS) to discuss the Indonesia current energy policy and prospected sovereignty issues. The sessions addressed a topic on the management of upstream oil and gas business activities in respect of Indonesian law, Indonesia Energy Sovereignty from policy perspectives, and observations of the dynamics of energy security of the coal mining sector.



### Quo Vadis Indonesia's Energy 2019-2024?

In response to the end of The Cabinet of the Republic of Indonesia 2014-2019, PYC research team assessed the overall energy sector conditions. The study covers various aspects from the energy mix data; the shares in national income; energy infrastructure development; national energy achievements and problems; as well as PYC recommendation for the next Cabinet of the Republic of Indonesia 2019-2024.

# Focus Group Discussions



## Energy & Environment: Millennial's Perspective

The FGD aimed to address millennial's roles in the energy and environment sectors.

The discussion covered some issues related to (1) the fact the energy and environment are inextricably related, (2) the necessity of eradicating basic poverty to enable more awareness of people regarding the environment, and (3) the importance of youth role in advocating awareness for sustainable development.



## Women in Energy

The FGD addressed the topic about the evolution of women's role in energy and how it develops into the future.

Three main conclusions were derived (1) technology could be the solution since it facilitates women to cope with physical ability especially in the fieldwork; (2) women in rural area should be the main actors in the family; (3) social media is a perfect tool to spread many ideas about the importance of energy.





### Manufacturing Industry Review: Energy Perspective

PYC, in cooperation with ERIA, hosted an FGD discussing the manufacturing industry condition from an energy perspective.

The discussion covered an overview of the energy demand in the manufacturing industry sector, the role of National Energy Council (DEN) in creating regulatory guidelines and forecasting the national energy, the importance of ensuring reliable energy supply to the downstream industry and the importance of new technology application.



### Alternative Energy Policy for Manufacturing Industry

PYC and ERIA held the second discussion to review the alternative policy for the manufacturing industry, especially in the natural gas and electricity sectors.

The discussion encompassed the research team's findings on the policy implementation, both by Indonesia and other countries, related to the energy issue in the manufacturing industry. The output of the discussion is a policy recommendation to address the energy issues in the manufacturing industry.



# Courses and Competition



## Short Course Energy Efficiency Towards SNI ISO 50001

PYC held the first edition of PYC Energy Short Course which focused on “Energy Efficiency towards SNI ISO 50001”. This event was held in collaboration with the Center for Research and Development of Electricity Technology, New Energy, Renewable Energy and Conservation of Ministry of Energy and Mineral Resources. The short course aimed to provide insight to participants regarding the government policies related to energy efficiency, the potential saving and SNI ISO 50001.



## PYC Business Case Competition in IPFEST 2019

PYC in cooperation with Integrated Petroleum Festival (IPFEST) 2019 organized PYC Business Case Competition. In this competition, the participating team were given details about three oil and gas fields and were required to give analysis and recommendations on which block should be developed. Teams had three hours to finish the task and ten minutes presentation to three judges.



# Partnership

PYC, as a non-government think tank, is open to cooperate with various institutions in developing Indonesia's energy sector. In the last few years, the center has collaborated with both international and national institutions, mostly on conducting joint-research activities. Along with for what we have achieved, we continue to look for more future collaborations and partnerships.

For more information, please contact us through [research@purnomoyusgiantorocenter.org](mailto:research@purnomoyusgiantorocenter.org).

## Our Partners:



**Ministry of Energy and  
Mineral Resource  
of Indonesia**



**Embassy of  
The Republic of Indonesia  
in Sofia, Bulgaria**



**Kementerian PPN/  
Bappenas**

**National Development  
Planning Agency**



**Institut Teknologi  
Bandung**



**Indonesia  
Defense University**



**Universitas  
Pertamina**

**Universitas Pertamina**



**International Power Supply  
Bulgaria**



**Economic  
Research Institute  
for ASEAN and East Asia**

# Regular Articles by PYC Researchers

Sustainable Energy in Developing Countries

Policy Review on the Sanctity of Contract

The Unpredictability of Oil Prices

The World's Oil Market and OPEC

The Determination of Energy Price

Indonesia Renewable Energy Development: How Far Have We Gone?

The Implementation of Renewable Energy in the Top Oil Producer Countries

What Drives Household Energy Choice for Cooking

The Development of Electricity in Natuna Island

Green Bonds Standard Formulation in the Energy Sector

A Brief Outlook on EURO 4 in Indonesia

Reflections on Energy Cooperation Between Indonesia and Japan



Brief Notes for Indonesia's Feed-in Tariff (FiT) Implementation

Electrification Development in Sorong, West Papua Province, Indonesia

Learning from Venezuela: How to Manage National Oil Company (NOC)

The Progress of Green Finance for Indonesia's Energy Sector

Electrification Development in Sorong, West Papua Province, Indonesia

Welcoming Indonesia's Vision in 2045: How About Energy Security in Indonesia?

Coal in Indonesia: Current and Future Role

The Importance of Energy Security Concept

Power Wheeling and Clean Energy Development

A Brief Review on Indonesia's National Energy Policy

The Potential Cooperation in Renewable Energy between Indonesia and Australia

Indonesia Energy Efficiency Current Situation

For full articles, please visit:

<https://publication-pyc.org/opinion>

or scan this QR code.





### **Proposed Collaboration**

At PYC, we value partnership and collaboration. We welcome any opportunities to explore the possibilities to work with you because we believe that the best value will be achieved by working together.

### **What can be proposed for collaboration?**

1. Joint Event:
  - Focus Group Discussion
  - Short Course
  - Seminar
  - Workshop
  - Conference
2. Research Collaboration
3. Research Fellow Exchange
4. PYC Scholarship

### **Why collaborate with us?**

As a non-profit organization, PYC is focused on the quality of the program in a professional capacity. We are always open to new ideas, allows for great flexibility and creativity in crafting collaborations that suit the needs. Our teams are structured to prioritize the strong and long relationship with our partners and collaborators. By collaborating with PYC, partners and collaborators will gain access to Indonesia's energy stakeholders, most updated energy sector issues as well as the comprehensive review by PYC research team.



## Areas of Interest



Renewable Energy Transition  
Off-Grid Electrification  
Disruption on Coal Exporter Countries



Fiscal Transition on the Energy Sector  
Clean Coal Technology Implementation  
Carbon Market Implementation



Energy Efficiency and Conservation Policy  
E-Mobility Development



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