

ENERGY  
EVALUATION  
ASIA PACIFIC

## EEAP WEBINAR 2: SUMMARY NOTE

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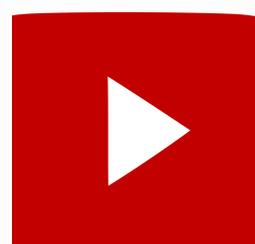
JULY 2021

### ENERGY EVALUATION IN ASIA PACIFIC: LATEST UPDATES

On Wednesday 16th June 2021, **Energy Evaluation Asia Pacific (EEAP)** held the second **webinar** of the 2021 series. It was titled '**Energy Evaluation in Asia Pacific: Latest Updates**' and featured a keynote speech from Ed Vine from Lawrence Berkley National Laboratory (LBNL), followed by a lightning session with 15 speakers from countries across Asia Pacific. After these presentations, **Energy Evaluation Indonesia** was launched by Jon Respati and Benedictus Dwiagus Stepantoro.

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The webinar began with an introduction by Energy Evaluation's coordinator, Hebe Hetherington, who outlined the proceedings and introduced the keynote speaker Ed Vine. Ed is an Affiliate at the Lawrence Berkeley National Laboratory (LBNL), where he was involved in the evaluation of energy efficiency programs and technology performance measurement for over 36 years. Ed began by explaining what we mean by 'Energy Evaluation', describing it as the objective process of understanding how a policy or program was implemented, the effects it had, for whom and why. The objective of evaluation is to reduce uncertainty, assess impacts and understand how to improve processes and programs. Ed explained that evaluators can be internal or external, with the key criteria of credibility, independence and objectivity. He then outlined the three different types of evaluation, which are impact (summative), process (formative) and market transformation (MT). Evaluators should aim to 'close the loop', striving for results that are 'useful and used' by stakeholders. Ed outlined key websites where more information on energy evaluation can be found.



### What is Evaluation?

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- Evaluation is an **objective** process of understanding **how** a policy or program was implemented, **what** effects it had, for **whom** and **why**
- Leads to **more effective** policies and programs



Ed then described the ways in which we can strengthen evaluation, outlining three types of improvement: institutional, methodological and capacity building. He highlights specific actions that can be taken for each of these types, and directs listeners towards his blog which includes further detail on each. Ed explains one model used in energy evaluation, in which we build up knowledge through different strategies, and then transfer this learning into evaluation for policies and programs. Ed stresses the importance of leadership from different countries in order to facilitate this transfer of knowledge, highlighting that collaboration is necessary for the model to be as effective as possible. Ed introduced EEAP and its leadership role in building a community of evaluators of energy efficiency and renewable energy programs and policies in the Asia Pacific region.

### Energy Evaluation Asia Pacific (EEAP)



- Non-profit established in 2018
- Mission:
  - Take a **leadership role** in expanding the practice of, and capacity for, **objective evaluation** in the energy efficiency and renewable energy program and policy arena
  - Using workshops, conferences, webinars, websites and other web-based tools to foster the development of **self-sustaining evaluation communities**
- Led by Planning Committee and 35 Evaluation Ambassadors from 22 Countries

<https://energy-evaluation.org/presentation-asia/>



# New Zealand

**Nina Campbell** from **New Zealand** began by outlining that energy emissions in New Zealand represent 40.5% of the total, and that decarbonisation of the energy sector is a key element of the plan to achieve net-zero emissions economy by 2050. She explains that since 2019, the New Zealand Living Standards Framework (which is used by the government for assessing cost-effectiveness of government investment) requires information about the impact of investment on a wide range of non-financial indicators that contribute to wellbeing. This is boosting demand for broader evaluation of the impact and effectiveness of energy sector policies and programs, on a wider range of indicators. Nina indicated that there is no specific government policy requiring evaluation, and each agency is free to decide their own approach to evaluation. The Energy Efficiency & Conservation Authority (EECA) has developed its own evaluation strategy to help maximise and report on the impact of our energy efficiency and decarbonisation programs. The strategy focuses on relevance, efficiency and impact of the program, and key elements of the strategy include: monitoring and evaluation plans to be developed for all programs, a process for prioritising and scaling evaluation projects, a process for feeding learning back into program design and for making room for celebrating successes, in order to get positive collaboration from project teams.

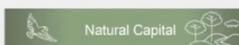
## The context for evaluation in NZ

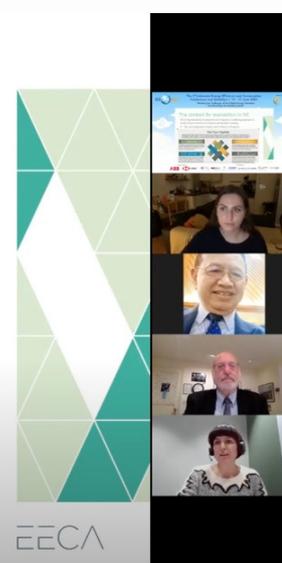
NZ Living Standards Framework now requires a wellbeing approach to justify all government investment and decision-making.

- This novel approach require new evidence of impacts

### The Four Capitals

Intergenerational wellbeing relies on the growth, distribution, and sustainability of the Four Capitals. The Capitals are interdependent and work together to support wellbeing. The Crown-Māori relationship is integral to all four capitals. The LSF is being continually developed and the next iteration of the framework will consider the role of culture, including Māori culture, as part of the capitals approach in more detail.

<div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">  <p style="text-align: center; font-weight: bold;">Natural Capital</p> <p style="font-size: x-small;">This refers to all aspects of the natural environment needed to support life and human activity. It includes land, soil, water, plants and animals, as well as minerals and energy resources.</p> </div> <div style="border: 1px solid #ccc; padding: 5px;">  <p style="text-align: center; font-weight: bold;">Social Capital</p> <p style="font-size: x-small;">This describes the norms and values that underpin society. It includes things like trust, the rule of law, the Crown-Māori relationship, cultural identity, and the connections between people and communities.</p> </div>	<div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;">  <p style="text-align: center; font-weight: bold;">Human Capital</p> <p style="font-size: x-small;">This encompasses people's skills, knowledge and physical and mental health. These are the things which enable people to participate fully in work, study, recreation and in society more broadly.</p> </div> <div style="border: 1px solid #ccc; padding: 5px;">  <p style="text-align: center; font-weight: bold;">Financial / Physical Capital</p> <p style="font-size: x-small;">This includes things like houses, roads, buildings, hospitals, factories, equipment and vehicles. These are the things which make up the country's physical and financial assets which have a direct role in supporting incomes and material living conditions.</p> </div>
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# Australia

**Verena Pichler** from **Australia** began by describing a shift in thinking on how demand management programs support a transition to net zero as grids become less emissions-intensive, from delivering direct emissions reductions through energy savings, to allowing a cheaper and faster integration of renewables. She then explained that for effective evaluation, having enough data to understand initial baselines is really important, so that we can understand whether emissions reductions, or other outcomes, are 'additional' to what would have occurred without the policy in place. Verena explained further that an understanding of the primary purpose is crucial for an effective evaluation, as program design and improvements will vary dependent on the key driver for that program. She described the importance of transparency and the release of detailed data for communication to be effective, ensuring the confidence of both the investors who finance industries, and the government to continue supporting and growing the program. However, Verena warned that communication to other audiences should be kept simple, so that the overall outcome of the evaluation is not lost in discussion of details. If communication is too complex or technical, the public may lose confidence in a program.

## Evaluation - learnings

- ▶ Good baselines are required to ensure 'additional emissions reductions' are achieved
- ▶ Data prior to establishing policy is fundamental to this
- ▶ Primary purpose of the policy needs to be understood in advance
  - ▶ Bill saving/energy system benefits/comfort/health/decrease emissions
  - ▶ Determines how to best design policy and which technologies to support most strongly
- ▶ Communication
  - ▶ Evaluation data needs to be made transparent so that investors and government can have confidence in policy
  - ▶ Simple messaging



# Thailand

**Boonrod Yaowapruerk** from **Thailand** began by explaining that energy plays a crucial role in enhancing Thailand to meet sustainable development goals and reduce greenhouse gas emissions to meet the NDC targets. It is very important for Thailand to properly and transparently evaluate the energy policy and development programs for public accountability. However, Boonrod described how government budget is limited; monitoring and evaluation budgets are often cut, resulting in most government-funded projects, programs and measures being developed without inclusion of a monitoring and evaluation plan. Data gathering and collection is also limited, and not standardised; expertise was also limited in the form of trained evaluators. At the facility level, energy audits are to be conducted by independent parties. Boonrod explained that the outcome of the evaluation is not yet fully communicated to the stakeholders.

## Summary of key challenges in energy evaluation



Government budget is limited. Monitoring and Evaluation budgets are often removed.



Most government funded-projects / programs / measures do not include M&E plan.



Data gathering and collection is limited and not standardized, depended on the data owners.



Expertise (trained evaluators) is often limited.



The outcome of the evaluation is yet fully communicated to the stakeholders.



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# Laos

**Somphanh Phomma** from **Laos** began by explaining that their aim is to secure a future where Laos is capable of adapting to changing its climate condition in a way that promotes sustainable economy development, reduces poverty, protects the public health and safety and enhance the quality of both the natural environment and the quality of life in Laos. He described the goals of the government, including achievement of low carbon emissions, increased resilience of the national economy and natural resources to climate change and its impacts, stakeholders and the improvement of public awareness and understanding of vulnerability to climate change, including the impact on the country's economy, to encourage action from stakeholders. Somphanh explained that a key area of focus is hydropower, which has high potential in Laos as demonstrated by their current export to neighbouring countries. He outlined the various government policy regulations introduced to support their climate goals, however the evaluation process is still unclear - it tends to be carried out by the same organisations responsible for the development of the programs and policies. Somphanh also highlighted the importance of standardising evaluation processes so that accountability can be established.

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# Vietnam

**Ananth Chikkatur** from **Vietnam** began by outlining the significant steps taken to support sustainable development and climate change mitigation in the context of Vietnam's green growth (GG) strategy. The GG strategy is currently being updated for 2021 and 2030, and the new GG strategy is expected to address both the Paris Climate commitments, sustainable development goals and expectations for long-term carbon neutrality. Ananth explained the importance of properly and transparently evaluating the government energy policy and development programs for public accountability. So far, the government relies on 'key-stakeholder consultation' for energy policy, but has recently been open to receive input from additional stakeholders. Evaluation is conducted by the government as well as donors for projects that they are supporting - donors will often mobilise experts to conduct independent assessment/evaluation. Evaluation is communicated to stakeholders via a portal maintained by the Ministry of Industry and Trade.

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# Malaysia

**Siti Sarah Sharuddin** from **Malaysia** began by outlining that Malaysia, as a member of the UNFCCC, aims to reduce by 45% the intensity of GHG emissions based on GDP by 2030, compared to the intensity of GHG emissions based on GDP in 2005. Siti explained that the Malaysia Climate Change Action Council was established as the national platform for discussing climate change policies and actions, driving green economic growth and catalysing green technology and low-carbon growth at all levels, particularly in the federal and state governments. She described the need for evaluation of energy efficiency policies, as in 2016 the energy sector in Malaysia remained the largest contributor of GHG emissions, accounting for 79.4% of the total emissions. Data gathering is crucial for good evaluation, which will be done by an independent agency. She concluded by stating that key evaluation documents are made available online for all stakeholders, and that this is instrumental in policy decision making and improvement of current policies.

**Key Evaluation Documents**

KEMENTERIAN TENAGA DAN SUMBER ASLI

- Mid-Term Review of 11<sup>th</sup> Malaysian Plan, 2018
- Preliminary Study on Demand Side Management, 2018
- APERC Peer Review on Energy Efficiency, 2019
- Mid-Term Review of National Energy Efficiency Action Plan – on going

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# Indonesia

**Rislima Sitompul** from **Indonesia** began by outlining the various goals and targets implemented by the Indonesian government between now and 2060. She described that the energy sector is the main contributor of GHG emission, therefore energy transition from the use of fossil fuel to renewable energy and energy efficiency is crucial in the effort of climate change mitigation. Rislima described that Indonesia have yet to implement independent evaluation by third parties, with no valid or robust methodology resulting in less reliable results regarding policies and programs. She stressed the importance of standardising the evaluation process, in order for government policy to be as effective as possible, and available in the public domain.

## 4. How the outcome of the evaluation is communicated to the stakeholders

### Current Situation

- Evaluation in Indonesia mostly conducted on ad-hoc bases, and the recommendation is delivered restricted to those who give assignment (project owner), both in government and private program. There are no disclosures on both the methodology and the results.
- Non-existent of independent evaluation by third parties work independently with proper methodology and using valid data and information

### What to propose

- A proper and valid methodology and delivery mechanisms of the evaluation result are strongly needed to ensure the accountability of the evaluation as well as the compliance of the result.
- Evaluator should be able to disclose their methodology use, and especially for the evaluation of the government policy and program, and the result should also be available at public domain. The result can be reported and disseminated through social media, workshop etc.

To propose the Energy Evaluation Indonesia (EEI) that will be launched shortly aiming to promote the important role of Evaluation in Energy development, especially Renewable Energy and Energy Efficiency in Indonesia



# Bhutan

**Chhimi Dorji** from **Bhutan** began by stating that Bhutan is carbon-negative, due in part to the huge hydropower-driven economy. Maintenance of carbon neutrality will be achieved through these clean energy sources. He explained that energy evaluation is crucial for the improvement of designs of systems, which was evident by the impact of their cookstove initiative. Chhimi highlighted the importance of remaining cognizant when developing projects, as they don't always get implemented as planned: there can be unintended social benefits or impacts. Electric vehicles are gaining momentum in Bhutan, and Chhimi noted the move towards alternative renewable energy sources, such as large-scale wind and solar.



**ENERGY IN BHUTAN**

- HYDROPOWER IS THE MAIN SOURCE OF ELECTRICITY
- 80% IS EXPORTED
- Electricity to GDP ~ 20%
- 70+ Forest Coverage
- Carbon negative

In a 2016 Ted Talk titled, "This country isn't just carbon neutral – it's carbon negative", Tshering Tobgay – former Prime Minister of Bhutan – highlighted the country's innovative strategies.

[https://www.youtube.com/watch?v=7Lc\\_d1v](https://www.youtube.com/watch?v=7Lc_d1v)

# Nepal

**Gana Pati Ojha** from **Nepal** began by asserting that both clean energy and evaluation are priority areas in his country. He stated that in order to generate and trade hydropower, respectful foreign investment is key, and there is a need to develop a fair distribution policy of the global climate fund. This should be based on the contribution of each country to the global climate crisis, as well as its impact on the country. Gana Pati explained the need for robust evaluation methodology to analyse the contribution of different actors to the results of energy, and its effect/impact on various stakeholders and cross-issues related to the environment, social equity, gender equality and human rights. He ended by outlining the needs for strengthening communication of evaluation results to the wider public, as well as its use in decision making.

## ***Nepal government's viewpoints on the role of energy in sustainable development and in meeting the climate change mitigation***

- Clean energy viewed as an engine for economic growth, economic transformation and SDG achievement
- High potential for hydropower generation
- Only a small portion generated, even not enough for domestic consumption during winter season
- Alternate energy: micro hydro, improved stoves, improved water mills and biogas
- In the process of trading 9 tons carbon credit
- Strong voice for mitigating climate change effect in international forums
- Preparing to raise strong voice in the COP 26 (Nov 1-12) on loss and damage and claiming its share of Climate Fund



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# India

**Ripu Bhanjan Singh** from **India** began by highlighting the vulnerability of the country to climate change impacts; therefore, the adaptation and resilience of the energy system to these conditions should receive higher political priority. Ripu described that the provision of secure, affordable and sustainable energy to all is an important policy priority, as well as the implementation of clean air strategies. He stressed the importance of transparent evaluation of government energy policy by referring to the recently published audit report on 'energy efficient' appliances in India, concluding that frequent independent evaluation is needed right from the beginning of policy implementation. Ripu suggested an initial, mid-term and final performance evaluation could address a wide range of evaluation questions, and a mixed methods approach for collecting responses. He ended by stating that while traditionally evaluation results have been limited to only the key stakeholders and a few other individuals responsible for carrying out the evaluation, recently the Development Monitoring and Evaluation Office established by the Government of India has been active in trying to mainstream the monitoring and evaluation of government policies.

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# Sri Lanka

**Thusitha Sugathapala** from **Sri Lanka** began by explaining that the Government of Sri Lanka has given high priority to the energy sector within the national development agenda, as reflected in localised sustainable development goals and nationally determined contributions. Thusitha described the importance of energy evaluation in substantiating progression towards SDGs and NDCs, and although this evaluation is supported by the relevant policy landscape and institutional mandates in general, its effective implementation in a comprehensive manner (incorporating sustainability criteria and stakeholder engagement) is less evident. He outlined that the guiding principles of 2030 Agenda and SDGs and Enhanced Transparency Framework of the Paris Agreement and NDCs provide entry points for mainstreaming energy evaluation. He then added that intervention may be needed in terms of the deployment of sound methodological framework together with analytical tools and effectuation of knowledge management for energy evaluation.

## ENERGY EVALUATION

- National Level Energy Evaluations and Disseminations:
  - Information management (SLSEA):
    - ✓ Sri Lanka Energy Balance: Analysis of Energy Sector Performance
  - Electricity sector planning (Ceylon Electricity Board)
    - ✓ Long-term generation expansion plan: Technical, Financial & Environmental
  - Sector regulation (PUCSL)
    - ✓ Economic, technical & safety of the industry, with stakeholder engagement.



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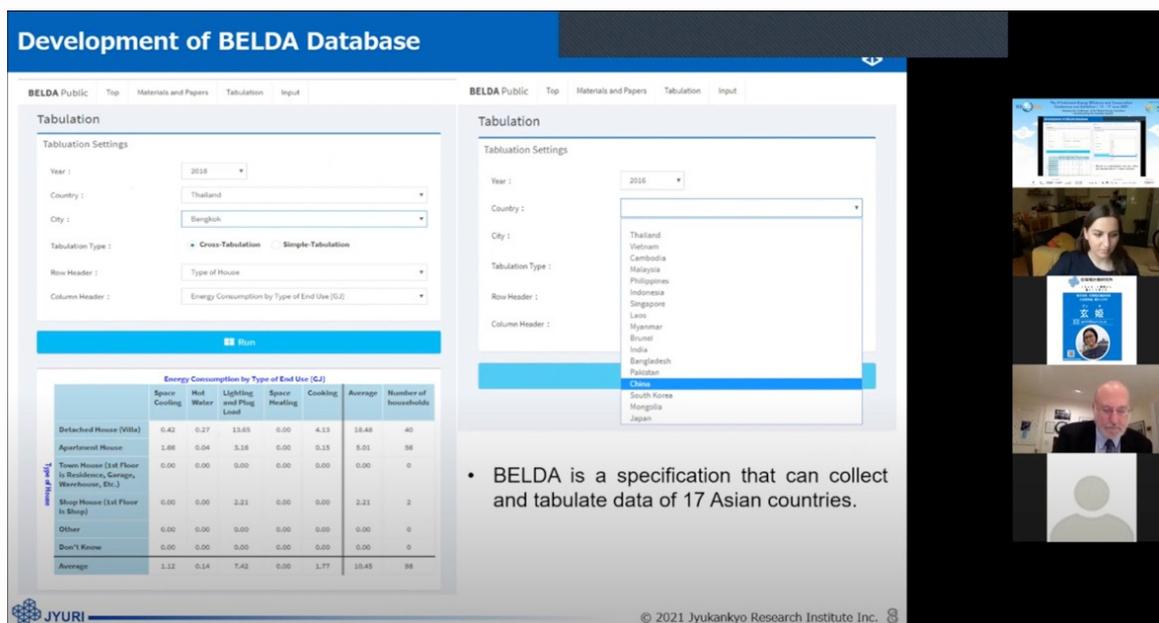
# China

**Pengcheng Li** from **China** began by explaining that China has committed to peak its carbon emission before 2030 and achieve carbon neutrality by 2060, and that clean energy transition is the first priority to achieve these targets. He described a top-down evaluation system for performance of energy intensity reduction as well as carbon emission reduction of provincial governments and local governments. This system has a comprehensive method, but the communication of information with the public is limited. Pengcheng explained that there are many academic papers of the evaluation of energy policy available, created by experts from universities or research institutes. In China, the evaluation of energy performance of industries is frequent; therefore, there are several standards to provide guidance on industrial evaluations. However, he explained that there is no regulation or comprehensive methodology for energy policy and program evaluation.

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# Japan

**Xi Juan** from **Japan** began by setting out the Japanese goals and targets to achieve carbon neutrality by 2050. The Ministry of the Environment along with the Ministry of Economy, Trade and Industry are becoming increasingly interested in how to effectively change the behaviour of energy consumers. They are conducting research on how to promote autonomous efforts in the residential sector towards low carbon behaviour. She moved on to explain the development of an education program implemented in schools to teach cooking with less water, less waste and less energy, asserting that excellent results can be achieved with low investment costs. Xi Juan concluded by highlighting the importance of a nationwide database in order to effectively evaluate the energy-conservation effect.



**Development of BELDA Database**

**Tabulation Settings**

Year: 2018  
 Country: Thailand  
 City: Bangkok  
 Tabulation Type: Cross Tabulation / Simple Tabulation  
 Row Header: Type of House  
 Column Header: Energy Consumption by Type of End Use (CJ)

	Energy Consumption by Type of End Use (CJ)						Average	Number of Households
	Space Cooling	Hot Water	Lighting and Plug Load	Space Heating	Cooking	Average		
Detached House (Villa)	0.42	0.27	13.65	0.00	4.33	18.48	40	
Apartment House	1.66	0.04	3.18	0.00	0.25	5.01	56	
Town House (1st Floor to Residence, Garage, Warehouse, Etc.)	0.00	0.00	0.00	0.00	0.00	0.00	0	
Shop House (1st Floor to Shop)	0.00	0.00	2.21	0.00	0.00	2.21	2	
Other	0.00	0.00	0.00	0.00	0.00	0.00	0	
Don't Know	0.00	0.00	0.00	0.00	0.00	0.00	0	
Average	1.12	0.14	7.42	0.00	1.77	10.43	88	

Country list: Thailand, Vietnam, Cambodia, Malaysia, Philippines, Indonesia, Singapore, Laos, Myanmar, Brunei, India, Bangladesh, Pakistan, **China**, South Korea, Mongolia, Japan

- BELDA is a specification that can collect and tabulate data of 17 Asian countries.



# Philippines

**Romeo Santos** from **the Philippines** began by explaining the importance of pushing evaluation to the level of policy and decision making: without a legal foundation, it will be hard for the government to act in advancing the cause of evaluation. Romeo described how mainstream evaluation is currently made up of fractious parts, and should be integrated to embody the holistic facets of true evaluation including the program implementation, partnerships or alliances that brought about the intervention, and results on not only the environment but the socioeconomic wellbeing of the people. He stated that there is currently a low level of awareness and knowledge about evaluation in the field, and a lack of sound plans for achieving SDGs. Romeo highlighted the potential to change this through raising awareness within the academic field, and concluded with plans to work collaboratively to support the energy evaluation within the Philippines in the future.

RB SANTOS PPT EEP Webinar\_16 June 2021 - Microsoft PowerPoint (Product Activation Failed)

Since the 2<sup>nd</sup> APEA Conference in 2019, 2 Senate Bills -filed \_establishment of a national evaluation policy in the Philippines.

1<sup>ST</sup>: Senate Bill No. 788: "An Act Establishing a National Evaluation Policy" (Senate of Philippines, 2019b).  
Bill filed in JULY 2020 months after the APEA conference- Author: Senator Rissa Hontiveros, Member -minority bloc, the Upper House --- Keynote Speaker of the APEA event in the Senate.

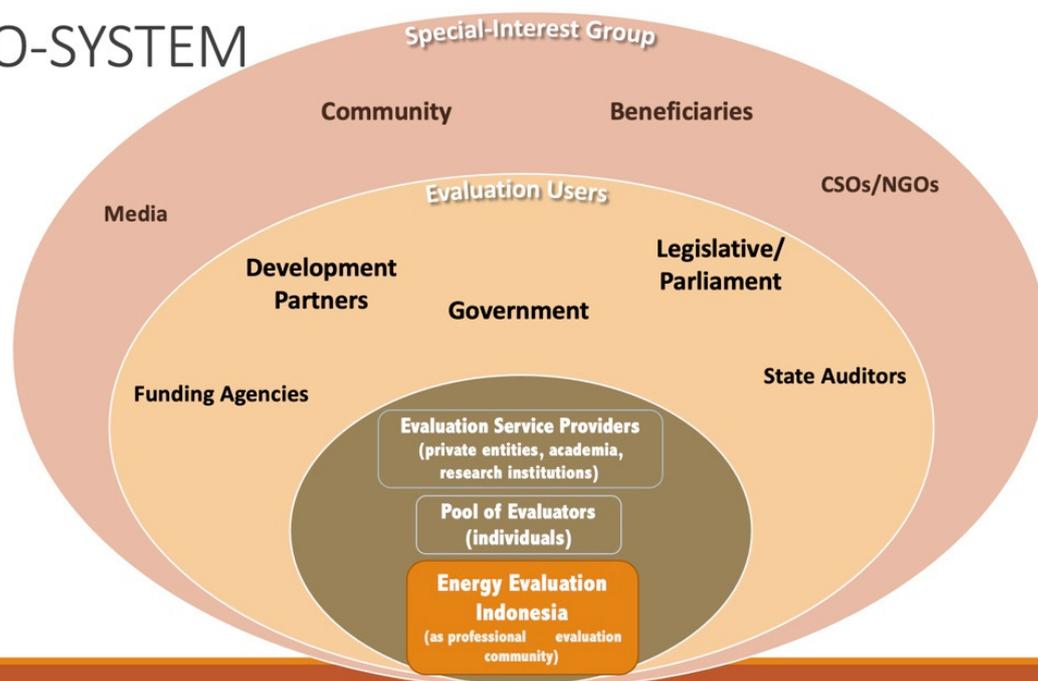
2<sup>ND</sup>: MOST recent \_Senate Bill No. 1885: "An Act Establishing A Result-Based National Evaluation Policy (RBNEP)" (Senate of Philippines, 2020b). Author: Senator Imee Marcos, Member-majority bloc in the Upper House.  
First reading and approval of the Upper House in October 2020.  
NOW \_BILL referred to \_Senate Committee Secretary: NEDA -for the refinement and further review.

Energy Evaluation Asia Pacific

# Energy Evaluation Indonesia

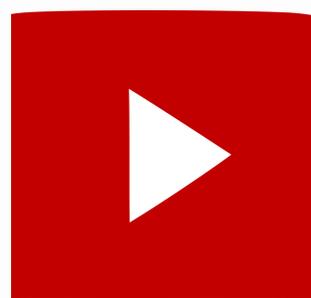
Finally, **Jon Respati** and **Benedictus Dwiagus Stepantoro** from **Energy Evaluation Indonesia** started by explaining the importance of evaluation for improving energy sector development in Indonesia. He explained that evaluation in Indonesia for the energy sector is challenging, but all key stakeholders in the energy sector are needed for participation in evaluation and using the evidence gathered from the evaluation. An association of evaluators that have a specific focus on energy evaluation can become a platform for raising the awareness of key stakeholders in the energy sector about the importance of the proper conduct of evaluation, which would in turn build capacity for managing and using evaluation. Benedictus explained how Energy Evaluation Indonesia is proposed as a community of professional practitioners of evaluation, expected to evolve from an informal network to a more organised association with more visibility and credibility among all stakeholders involved in the energy sector.

## ECO-SYSTEM



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