PREPARING THE EXTRACTIVES FOR ENERGY TRANSITION

A Roundtable Discussion

4 May 2022 | 2:30-5:00PM

EVENT DOCUMENTATION

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4 May 2022 | 2:30 pm – 5:00 pm | F1 Hotel Manila and via Zoom

Overview

The Earth's rising surface temperature is now a critical global concern, considering its impacts on biodiversity, climate, food security, and human health, among others. To mitigate impacts, governments around the world are identifying strategies to tackle the main contributors to temperature rise, foremost of which is the burning of fossil fuels like coal, oil, and gas.

To address global dependence on fossil fuels, advocates developed the concept of energy transition, an initiative to enable sustainable development and climate resilience. The International Renewable Energy Agency (IRENA) defines energy transition as "a pathway toward the transformation of the global energy sector from fossil-based to zero-carbon by the second half of this century." Countries moving towards this direction are expected to gradually, if not rapidly, modify their energy mix, and address any economic and social implications of the transition. The Philippines is one of the signatories to the Paris Agreement and the United Nations Framework Convention on Climate Change, an international treaty that requires governments to incorporate climate change mitigation and adaptation commitments across all sectors of the society.

Consistent with the global commitment towards a sustainable and clean energy future, the Philippines formulated the Philippine Energy Plan 2020-2040 to bring in more clean energy fuels and technologies that will dominate the country's portfolio of plans and programs for the energy sector in the next two decades. The plan encapsulates the government's vision for transition, which provides emphasis and focus on the sustainability of all available energy sources, as well as the diversification of the country's energy mix.

The mining, oil, gas, and coal industries are among industries directly affected by the global shift to net-zero emissions[1]. As the energy transition progresses, fossil fuel producing or dependent communities and countries will face challenges sustaining revenues and the national economy in general. Communities that rely on revenues and jobs generated by fossil fuel production are

[1] https://www.unescap.org/sites/default/d8files/event-documents/ANNEX%20IV-%20BACKGROUND%20PAPER_0.pdf

among the most vulnerable to the transition. Producing communities and countries will have to find alternative revenue sources to replace the lost income.

On the other hand, increased deployment of modern renewable energy and energy-efficient technologies also means an increased demand for rare earth elements and other mined inputs. This will require a substantial ramp-up of existing production capacity. This means transition to a sustainable low carbon economy will definitely reshape the extractive industries.

Objectives

In view of the emerging concerns on energy transition, the Philippine Extractives Industries Transparency Initiatives (PH-EITI) and the Department of Energy- Energy Policy and Planning Bureau (DOE-EPPB) organized a roundtable discussion to provide energy stakeholders with information on existing policies and forthcoming programs of the government towards the transition to a sustainable and low carbon economy. Using the PH-EITI platform, the RTD intended to elicit stakeholder perspectives on energy transition and thresh out issues on the implications and effects of the transition on various sectors.

Specifically, the RTD aimed to enable the participants to:

a. Be informed of the country's progress in implementing transition plans, policies, and commitments, including the rollout of government programs to support sectors that will be affected by the transition;
a. Express perspectives and ideas on energy transition, and identified opportunities and benefits for their respective sectors;
b. Raise concerns and issues on energy transition plans;
c. Identify next steps in preparation for energy transition in the Philippines; and
d. Determine how the EITI process, platform, and data could be optimized for public debate and policy discussions on energy transition.

Participants

A total of **508** participated in the roundtable discussion through different platforms. **91** people attended in person, **214** via Zoom, and **203** via Facebook Live.

Only those who attended via Zoom and in person can be identified and categorized. Of the **305** Zoom and in person participants, **194** from government, including representatives from LGUs and the legislative branch, **57** are from the industry sector, **27** are members of the civil society, **11** from academe, **2** from media and **14** are the event facilitators. **162** of the participants are men while **143** are women.

Sector	Zoom	In person
National Government Agencies (NGA)	86	65
Industry	9	48
Local Government Units (LGU)	0	43
Civil Society Organization (CSO) / Non-Government Organization (NGO)	3	24
PH-EITI Secretariat/DOE-EPPB and Event Facilitators	0	14
Academe	0	11
Media	0	2
Total Number of Participants (via Zoom & in person):	**305**	

Highlights of the event

The roundtable discussion on energy transition was moderated by Ms. Mary Jane Baldago, the managing specialist for stakeholder engagement of PH-EITI.

Welcome Remarks
Atty. Felix William B. Fuentebella
Senior Undersecretary, Department of Energy (DOE)

a. Stressed that energy transition albeit the disruption to economic prosperity is a priority of this administration
b. Mentioned that the Philippines is among the signatories to the Paris Agreement and United Nation Framework Convention on Climate Change, thus making the country a committed nation to climate change adaptation and mitigation practices
c. Cited that PH-EITI serves as a platform and its roles for the constructive engagement in addressing the impacts of energy transition among stakeholders
d. Stated the obvious questions surrounding energy transition such as the consequences of energy transition, issues and concerns that should be addressed, the boundaries to be pushed, and what are the negotiables

Opening Message
Atty. Valery Joy A. Brion
OIC-Undersecretary Department of Finance

a. Shared that DOF believes that energy transition is not only vital for addressing the climate crisis but is also a key factor for sustainable growth. And as country exposed and at high risk to climate-related disasters, it directly affects the country's economic growth and national development, particularly in rural areas
b. Presented data how the country has lost billions of pesos from natural calamities and how the figures will continue to surge in the coming years if the impacts of climate change be left unaddressed
c. Mentioned the DOF's integrated strategies for financing low carbon energy in the Philippine Sustainable Finance Roadmap. This roadmap includes plans to address the lack of commercially attractive energy efficiency financing, and credit enhancement or de-risking of projects to help banks overcome collateral barriers.
d. Stressed that the RTD event can spur future conversations on energy transition and that it is also useful in building the case for possible inclusion of the renewable energy sector in the EITI process

Rules of the RTD
Mr. Eastword Manlises
National Coordinator, Philippine Extractive Industries Transparency Initiative

a. Expressed gratitude to the DOE-EPPB for the opportunity it has presented to PH-EITI in giving way for discussing energy transition in the country and to create awareness to this initiative
b. Gave the overview of the RTD event where it is expected to set the pace of future endeavors connected to the country's energy transition journey
c. Explained that the event was divided into two parts – first, the presentation of existing initiatives related to energy transition, and second, the discussion proper
d. Called on the participants to share thoughts on next steps and priority actions after the RTD

Philippine Energy Plan: The road to transition
Dir. Michael O. Sinocruz
OIC-Director, Energy Policy and Planning Bureau, Department of Energy

a. Provided update on the country's state on sustainable and clean energy, and how the Department of Energy envisions the country's energy future and how the country can get there
b. Explained that the Philippine Energy Plan 2020-2040 is anchored on the goals of Ambisyon Natin 2040 which represents the collective long term vision and aspirations of

the Philippines in the coming years. In support of these aspirations, he shared that the DOE formulated the 9-point energy agenda, among these are providing access to electricity for all Filipinos, promoting energy efficiency, and establishing a pro-consumer framework.

c. Shared that the energy sector is clear with its 2040 objectives which is to have sustainable, stable, secure, sufficient, accessible, and reasonably-priced energy. To achieve this goals lie in the development of six (6) major sub-sectors:
    1. Upstream Sector
    2. Downstream Sector
    3. Renewable Energy
    4. Power Sector
    5. Energy Efficiency
    6. Alternative Fuels and emerging technologies
d. Explained that the Philippine Energy Plan 2020-2040 also supports United Nations sustainable development goals (SDG), specifically SDG 7 for affordable and clean energy. SDG is a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.
e. Disclosed the policies, guiding principles, and resiliency compliance plan among other tools in getting there.

Risks and opportunities
Engr. Romualdo Aguilos
Engineer IV, Mines and Geosciences Bureau

a. Identified the risks of energy transition for the mines group, as well as the opportunities on the environment, on the economy, and to the people.
b. Discussed some of the significant risks and opportunities of energy transition to the environment, economy, and community/people.

Identified Risks	
On the environment	1. Increased generation of mine waste and/or tailings 2. Potential risk to environment 3. Unregulated GHG emission from the initial demand surge 4. Land conversion and land use competition
On the economy	1. Demand volatility 2. Increased potential risks to timely supply 3. Cost of renewable energy sources

	4. Need to upgrade mine equipment and other sources of GHG emissions to essential reduce carbon emissions
On the community/people	1. Displacement of communities, indigenous communities
Identified Opportunities	
On the environment	1. Production of Clean Hydrogen 2. Reforestation efforts in relation to carbon sequestration 3. Adoption of Best Available Technologies (BATs) 4. Additional funds to be allotted for environmental protection and enhancement
On the economy	1. Increase in the demand for minerals needed to achieve the transition to clean energy 2. Metal prices for cobalt, nickel, lithium, and other energy-transition metals could reach historic peaks 3. Renewed interest in Rare Earth Elements (REE) exploration/ development in the Philippines 4. Encourage more in-country processing operations
On the community/people	1. Additional funds to be allotted for community development and empowerment 2. Job opportunities in the mining industry and renewable energy sector

Green and sustainable financing
Dir. Dona Minimo
Director, International Finance Group, Department of Finance

a. Shared that the Philippines greenhouse gas emissions are currently a minor contributor to global warming at approximately 0.33% of the world share of greenhouse gases (GHD) emissions. However, due to its economic development and rapidly growing population, the Philippines is projected to have sharp increases in CO2 emissions over the incoming decades. GDP growth is expected to strengthen seven to 8% in the medium term.
b. Shared that as a vulnerable country to climate change, our government will continue to seek climate justice by urging developed countries to fulfill their obligations on climate finance through grants, investments and subsidies

c. Shared the launching of the Sustainable Finance (SF) Roadmap and its Guiding Principles to synergise public and private investments towards green projects.
d. Shared some of the Green Finance Initiatives in the Philippines.
    - The Land Bank of the Philippines (LBP) has implemented the Climate S.M.A.R.T (Synergistic, Mitigation, Adaptation, Resiliency, and Transformation) Financing Program.
    - The Development Bank of the Philippines (DBP) has a Green Financing Program (GFP), an umbrella program to support the Bank's strategic thrust of environmental protection and the country's green growth strategy.
    - The BDO and BPI created Sustainable Energy Finance (SEF) Desks, which serve as the point-of-contact in evaluating and monitoring sustainable projects
    - BPI developed a Green Finance Framework and adopted voluntary reporting of sustainability performance.
    - RCBC launched the issuance of the Php 8 billion sustainability bonds on June 19, the first in the Philippines under the ASEAN Sustainability BOnd Standards 2018.

Coal sector's perspective on energy transition
Dir. Arnulfo A. Robles
Executive Director, Philippine Chamber of Coal Mines, Inc. (PHILCOAL)

a. Shared that Semirara has become the template for coal mining in the country.
b. Added that as part of environmental restoration and biodiversity, SMPC has conducted reforestation and biodiversity conservation goals as well as reforestation and wildlife species propagation
c. Shared that the Semirara Mining and Power Corporation is still studying and developing a concrete carbon transition roadmap.
    - Shared that part of SMPC's strategy is to continuously monitor new and emerging climate-change legislation measures and assess its impact on business sustainability and future growth. In support of its climate action response, climate-related operational funds for carbon mitigation may be allocated, such as offsets, the adoption of energy-efficient technology, and energy conservation.
    - Shared that as part of SMPC's environmental restoration and biodiversity conservation goals, they conduct reforestation and wildlife species propagation. They also actively seek partnerships to restore sustainably managed natural and modified ecosystems included in their climate action.
    - Shared that for integrating climate action, the SMPC commits mitigating the impacts of their operations through strategic environmental stewardship,.
    - Shared that SMPC bagged the Special Submission Category in the 2021 ASEAN Energy Awards

Oil and gas sector's perspective on energy transition
Atty. Jose Ma. Emmanuel A. Caral
Secretary, Petroleum Association of the Philippines

a. Disclosed that while companies remained focused on exploring, developing and producing the conventional oil and gas business, other companies have already started to diversify, and have made explicit commitments to achieve net zero emissions by 2050.
b. Shared that there is a relatively slight growth in energy mix for power generation particularly in the wind and solar energy
c. Mentioned that oil and gas companies should choose to support the UN-Paris Agreement, it can significantly reduce emissions and energy consumption; lower carbon energy, reduce investment in traditional oil and gas
d. Recommended that as a country, we still have work to do to help achieve the goals of the UN Paris Agreement. The Philippines continues to be heavily dependent on conventional fuels for transportation (by land, air or sea).
e. Concluded that energy security is the replacement affordable to consumers

Mining sector's perspective on energy transition
Atty. Christer James Ray A. Gaudiano
Director, CEMEX Holdings Philippines-Enterprise Risk Management, Corporate Communications and Public Affairs

a. Informed everyone that the cement companies have been transitioning to green cement that includes: (i) launch of green cement which uses a lower clinker factor in production, (ii) decarbonization of operations in using by-products of raw materials of other industries as part of the manufacturing process, and (iii) use of plastic waste or inorganic waste as alternative fuels for clinker production.
b. Shared investments in waste heat recovery (WHR) facilities to be able to produce electricity in the plant. SOLID Cement in Antipolo has a WHR which produces 12% of the energy needs of the plant and APO Cement in Cebu has a WHR which produces 8% of the energy needs of the plant.
c. Recommended to pass the Extended Producers Responsibility bill which requires plastic users and manufacturers to recycle or divert plastic waste
d. Encouraged and maximized the use of cement kilns in cement plants as waste eaters instead of landfills. Cement Plants will be able to use waste as an alternative fuel to coal.
e. Encouraged the use of green cement (cement with low clinker factor) in the use of public construction projects.

Civil society's perspective on energy transition
Mr. Vincent Lazatin, National Coordinator
Bantay Kita – Publish What You Pay Philippines

a. Explained that as the global community grapples with this transition, the clamor for reducing carbon emissions significantly continues to increase. However the need for clean energy technologies still relies on the extraction of minerals, metals and exotic rare earth elements.
b. Reiterates some of the potential key trends and risks identified by Bantay Kita – Publish What You Pay Philippines (BK-PWYP) in the transition to renewable and clean energy.
    - There will be an increase in investments and extractive activity in high-risk jurisdictions.
    - It is expected that there will be an expansion of mining activities into environmentally and socially sensitive areas.
    - Is expected to shift power dynamics between governments and industry.
    - There is an increased risk of geopolitical rivalries flaring up as market dominance in key minerals plays a greater role.
    - There is a possibility of the emergence of new industry actors.

c. Called for the nation to be extra vigilant and cautious to ensure that extractive activity benefits the most number of people in a sustainable manner especially since the Philippines has a poor governance track record in the extractive industry, and a poor governance track record in general.

The role of EITI in energy transition
Mr. Mark Burnett
Europe and Policy Manager - EITI International

a. Presented how EITI can support resource-rich countries in addressing the economic implications of the energy transition.
b. Shared how EITI implementing countries such as the Philippines could link their objectives to the energy transition. He also introduced the context of the energy transition, the reason why it is included in the EITI agenda. Among these are reduced demand for oil, massive fall in prices, buoyant demand for strategic minerals, extractive revenues and budgets under strain, diversification and decarbonisation of energy companies.
c. Mentioned that the transition is reshaping the extractives industries and it will have implications to a kind of data, disclosures, and public debate required to support good governance in resource-rich countries. The EITI will need to consider the transition to effectively informed policy and decision making in the future, EITI approach is to consider economic and energy implications of the transition.
d. Informed that the EITI board has set the direction for engagement on the energy transition:

1. EITI should advance economic implications of energy transition and use of the EITI data,
2. EITI should build capacity to stakeholder groups to engage and inform debate risks and opportunities associated with energy transition,
3. EITI should consider mainstreaming transparency on the energy transition through the EITI standards and guidance, and
4. EITI should engage industry and institutional investors in discussions about industry trends and how energy transition may affect extractives transparency.

Open Forum

The moderator posed structured questions and comments from the virtual participants.

Moderator: Having heard all the inputs, what are the next steps that you want to prioritize in terms of energy transition?

As the OIC- Director of the Energy Policy and Planning Bureau (EPPB) of the Department of Energy (DOE), Mr. Michael Sinocruz shared that they need to come up with a roadmap for the extractive industries, specifically for coal and cement. He was also amazed to hear the discussion of CEMEX Holdings Philippines, Inc. on how they use plastics as alternative fuel instead of coal. He emphasized the need for discussion with concerned stakeholders and probably to come up with a roadmap for the upstream of industry processes specifically for energy transition.

As the Executive Director of the Philippine Chamber of Coal Mines, Inc., Mr. Arnulfo Robles expressed that energy transition is a continuing activity. During his discussion, he mentioned that there will always be new emerging technologies that can be used, and it is important to see which of these emerging technologies could be appropriate for extractive industries and how it could work for humanity and the environment.

As the Chief of Climate Change Information and Technical Support Division, Mr. Albert A. Magalang agreed with OIC-Director Sinocruz on coming up with a roadmap to operationalize the transition to clean energy. He acknowledged what Mr. Robles mentioned that energy transition can bring a lot of technological transformation. He said that they advocated for emissions avoidance at the COP26, but the challenge lies on how to transition towards emissions avoidance, initiatives, and technologies. He pointed out that aside from energy transition, it is important to include just transition as a factor in the roadmap. He added that they should also check how they can acquire direct access to the means of implementation such as finance, technology transfer, and capacity building in order to find solutions to the climate crisis that do not only reduce emissions or protect the natural world, but do so in a way which creates a fairer, more just and more equal world in the process.

Moderator: Bantay Kita mentioned that transparency of licenses and contracts is important. What other information and data do you think are necessary to support policy discussion in energy transition?

As the National Coordinator of Bantay Kita, Mr. Vincent Lazatin shared that Bantay Kita is also looking at things like beneficial ownership disclosures that they believe would help them to understand different influences that are profiteering decision policy making. He also mentioned the lack of coal industry data to the EITI report and hoped that the coal sector can participate in the EITI.

Moderator: How can we ensure that the communities will not be affected negatively while we are transitioning?

Mr. Vincent Lazatin expressed that there are times that the grant of licenses or franchise renewals are not exposed, especially to the community level. To address this issue there are things related to increasing transparency that they are working beyond through EITI and other initiatives.

OIC- Director Michael Sinocruz brought up the discussion regarding the need to adapt to just transition, that they should not be adapting too many measures that will affect the cost of energy. He mentioned that the government will need to make sure that the rates will not increase and energy security will not be affected. He said that the priority right now is on energy security, reliability, and affordable energy for all. He also suggested having a technology roadmap and knowing the possible impacts to the consumers of adapting this kind of measure or technology.

COMMENTS/SUGGESTIONS FROM THE ZOOM CHAT BOX
Edward Malahay 1. Create some sort of department and pick the brightest people from the various agencies and other stakeholders to deal with this concern in an exigency effort. 2. Harness typhoons' energy from flooding, wind, storm surge/sea wave, etc. 3. Create a law requiring every Filipino to plant trees to mitigate climate change. 4. Revive the nuclear energy program. 5. Require every household to use solar energy.
Lowell Chicote, MGB RO XI: 1. Duplicate Singapore's technology from Trash to Energy (https://www.youtube.com/watch?v=r-q5V6LDxEY)
PNOC EC Leoncio Dalloran: 1. Develop a typhoon tracker that can harness power from typhoons. DOST can consider.

Alberto Morillo: The country's commitment is made, the financial institutions are committed to providing funds for Green Energy and Efficiency and the extractive industries have identified opportunities.

What the Philippines should do now are:

1. Have all Energy Service Contractors (old/new) submit their Net Zero programs that could be part of contract commitments. Incentives could be extended to the Net Zero projects along with the new benefits being provided by law and EO. This could be extended to the MGB.
2. Encourage coal power plant operators to develop their own Carbon Capture technology and would be given the opportunity to cost recover the technology as long as carbon emission is dramatically reduced by 50%.

Closing Remarks
Atty. Felix William B. Fuentebella
Senior Undersecretary, Department of Energy (DOE)

The roundtable discussion on energy transition was officially closed with remarks from Usec. Felix William Fuentebella. He recapped the presentations discussed throughout the program and also expressed his gratitude to all the speakers and participants who joined the roundtable discussion on energy transition.

Way Forward

The PH-EITI and DOE-EPPB will be collaborating once more to facilitate another roundtable discussion on energy transition on a national level. This second RTD, which is targeted to be held in the second half of 2022, will delve deeper on the information and perspectives that were raised during the first RTD. It will aim to explore the specific plans of each stakeholder in relation to decarbonization, and examine the possible effects of energy transition to the extractive sector and its contribution to the national economy.

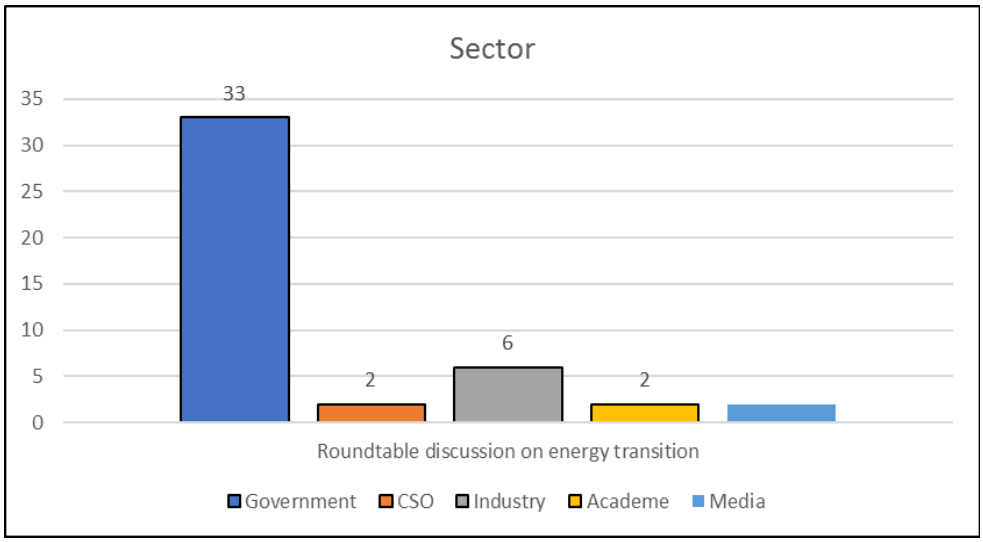
The PH-EITI and DOE-EPPB also plan to engage with local government units (LGUs) that are rich with mineral resources, and exchange views on energy transition based on the findings that were raised during the previous RTD.

Feedback

At the end of the event, the PH-EITI Secretariat requested participants to fill out an evaluation form to gather insights or comments that can be useful in the coming events. A total of 43 responses have been recorded.

Sector

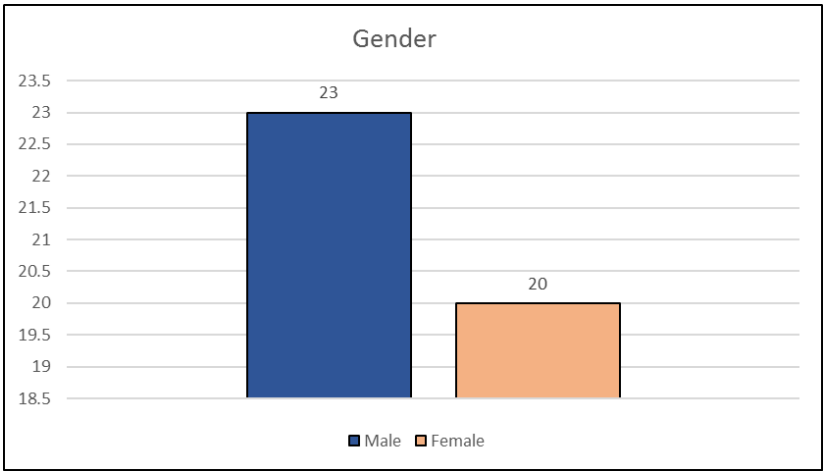
This graph shows that the **majority** of the **43 respondents** were from the government sector. The figures indicate that there was minimal participation from the industry sector, the academe, and civil society organizations. These numbers can serve as a basis for exerting additional effort in inviting participants from these sectors to attend future forums.



Distribution of RTD participants by sector

Gender

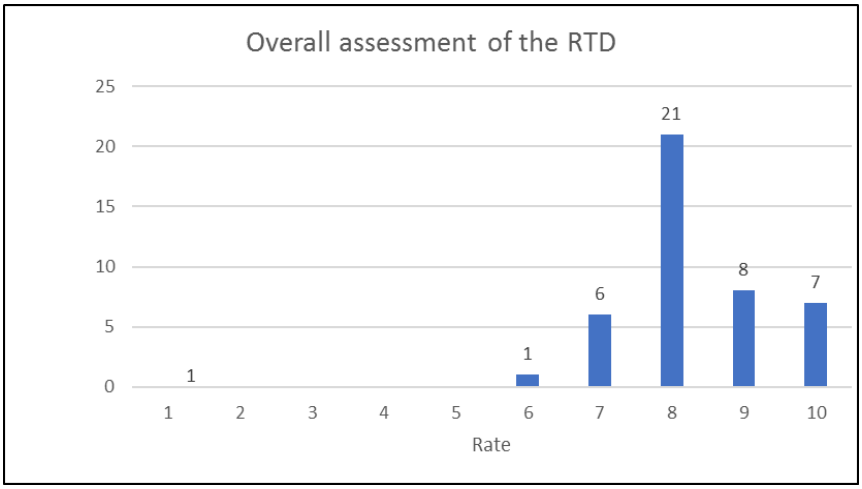
This graph shows the gender of participants who responded to the evaluation form. There was a higher number of male respondents as compared to female respondents.



Distribution of RTD participants by gender

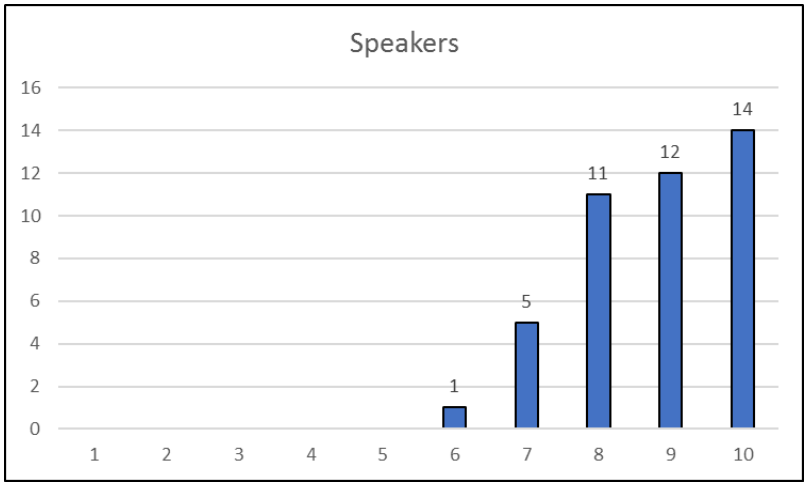
Overall assessment of the event

A total of 43 responses have been recorded for the overall assessment of the event. With a scoring approach of "1" as the lowest rating and "10" as the highest, the majority of the respondents gave the event an overall assessment of **"8"**.

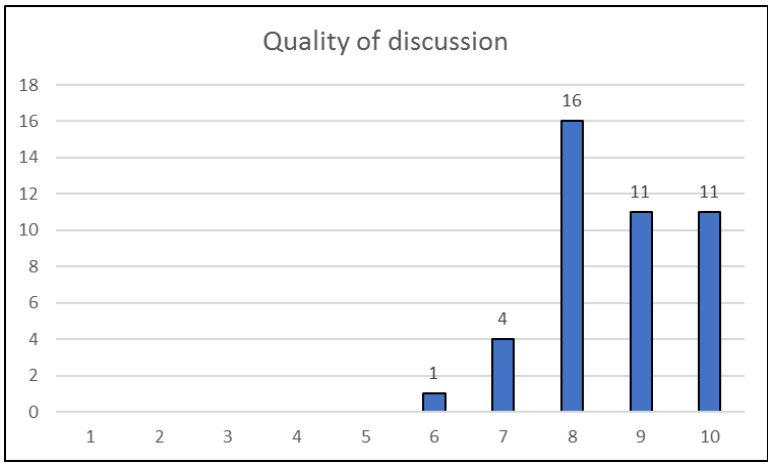


Overall assessment of the event

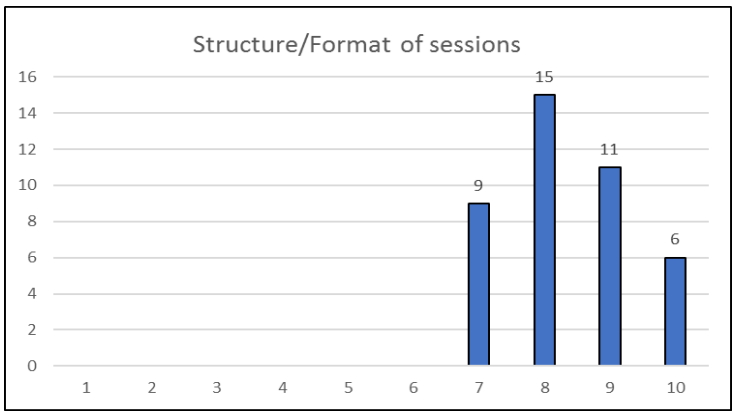
Overall rating of speakers,discussion, venue, online platform, and structure of sessions



Participants' rating of the speakers (10 being the highest)



Participants' rating of the quality of discussions (10 being the highest)



Participants' rating of the structure/format of sessions (10 being the highest)

Participants on what they liked the most about the event:

1. The involvement of both industry and the policy makers
2. The presentations/discussions
3. The various inputs from the resource persons
4. Speakers from different sectors
5. All resource speakers are knowledgeable on their assigned topic.
6. The sharing of different ways to energy conservation through incorporating energy transition and use of renewable energy.
7. Latest EITI initiatives
8. Very informative
9. The presentations of the different groups in relation to their plan on energy transition
10. Very informative and timely
11. Bantay Kita presentation
12. The future framework presented
13. Presentation of the stakeholders of the extractive industries
14. Exchange of ideas
15. The hybrid set-up. Participants outside the capital have given the opportunity to partake or listen to the discussions
16. Every insights of different sectors regarding energy transition
17. The topic on climate change and the presentation on the role Of EITI on energy transition
18. The discussion is well prepared and very informative.
19. Collaboration
20. Environmental discussion

Participants on what they think can be improved:

1. The time allotted was not sufficient to have a more in depth discussion on extractives industry
2. Next steps not clear
3. Technical glitches on the audio during the event.
4. The discussion on transition plans and goals
5. Preferably face to face
6. Coal energy presentation
7. No presentation with definite involvement of LGUs
8. Some speakers had no slides deck presentation
9. Time allotted on the open forum.
10. Length of the Activity
11. Video quality of the venue

Annexes

Annex 1: Opening Message

Atty. Valery Joy A. Brion
OIC-Undersecretary, Domestic Finance Group, Department of Finance

Department of Energy Undersecretary Felix William Fuentebella; Department of Finance Assistant Secretary Neil Adrian Cabiles; Members of the PH-EITI Multi-Stakeholder Group; fellow government workers; representatives from the oil, gas, coal, and mining industries; civil society stakeholders; members of the EITI International Secretariat; Friends, guests: Good afternoon.

On behalf of the Department of Finance, it is my pleasure to welcome everyone to this roundtable discussion on energy transition. We specifically thank the Department of Energy – Energy Policy and Planning Bureau for collaborating with us to make this event happen.

Energy transition is a relatively new concept. Building public awareness on this matter is necessary to ensure informed and inclusive debate and policy discussions.

Simply put, energy transition is the shift from fossil-based to low-carbon systems of energy production and consumption. It is an essential strategy for limiting global temperature rise and mitigating impacts, especially on vulnerable countries like the Philippines. With less than a decade left to achieve the 2030 emission reduction goals of the Paris Agreement on Climate Change, it is incumbent upon governments around the world to lead and start the conversations on energy transition now.

The Department of Finance believes that energy transition is not only important for addressing the climate crisis, but it is also a key factor for sustainable growth.

Despite a measly 0.3 percent share in the total global greenhouse gas emissions, the Philippines is among countries at highest risk of climate-related disasters. This affects economic growth in rural areas and impedes overall national development.

From 2010 to 2019, for instance, climate-induced hazards caused a loss of 463 billion pesos in infrastructure alone. In 2020, the total damages reached 113.4 billion pesos. In the next 50 years, the country has a 40 percent chance of losing over 989 billion pesos, and a 20 percent chance of experiencing a loss exceeding 1.53 trillion pesos.

Considering the impacts of climate change, the Philippines has drawn up extensive plans to cut local carbon emissions by 75 percent by 2030, through energy efficiency improvement, and increased deployment of low carbon and renewable energy technologies. This ambitious target is the country's first Nationally Determined Contribution in accordance with its commitment to the Paris Agreement.

To realize these plans, the energy sector will require support in terms of financing and building investor confidence. As such, the Department of Finance has integrated strategies for financing low carbon energy in the Philippine Sustainable Finance Roadmap. The roadmap includes plans to address the lack of commercially attractive energy efficiency financing, and credit enhancement or de-risking of projects to help banks overcome collateral barriers.

Pursuant to existing laws, government financial institutions are also mandated to set aside funds for lending to energy efficiency and conservation projects at concessional rates.

In terms of transparency and accountability, the Department of Finance-led Philippine Extractive Industries Transparency Initiative made energy transition a priority under its 2022 work plan. This is to help inform policy discussions and uncover associated risks and opportunities, including impacts on natural resource governance and revenue management, using extractives data disclosures.

This roundtable discussion, and future conversations on energy transition, is also useful in building the case for possible inclusion of the renewable energy sector in the EITI process, an advocacy being pushed for quite some time now by various stakeholders both locally and internationally.

It is our hope in the DOF and the PH-EITI that this activity would surface opportunities and benefits for the affected sectors, help raise critical questions on energy transition plans, and identify next steps in preparation for a just transition to net-zero emissions.

We are excited to hear our resource persons share their thoughts on this matter. May all our participants find this session productive and useful.

Thank you and we look forward to working with everyone on our energy transition initiatives. Good afternoon.

Annex 2: Oil and gas sector's perspective on energy transition

Atty. Jose Ma. Emmanuel A. Caral
Secretary, Petroleum Association of the Philippines

Magandang hapon po sa inyong lahat.

Thank you for inviting me to this interesting discussion on the Energy Transition.

Allow me to share some of my personal thoughts on the energy transition. Please note that there is a great diversity of companies involved in oil & gas, some are local companies while others have international operations. Some are privately owned, while others are Government-owned national oil companies.

The response of oil & gas companies to climate change and the energy transition also varies greatly. Some companies continue to be focused on the conventional oil & gas business, by this I mean exploring, developing and producing crude oil, natural gas or similar products. Other companies have started to diversify, and made explicit commitments to achieve net zero emissions by 2050.

As a country, we still have work to do to help achieve the goals of the UN Paris Agreement. The Philippines continues to be heavily dependent on conventional fuels for transportation (by land, air or sea).

There is somewhat more diversity in the energy mix for power generation – which includes coal, natural gas, geothermal, hydro, wind and solar. However, the proportion of wind and solar is relatively small, although it is growing.

Assuming that an oil & gas company wants to support the UN Paris Agreement on climate change, to limit the increase in the average global temperature to 1.5°C above pre-industrial levels, what can it do?

As they say, there are many ways to skin the cat:

1. Reduce emissions and energy consumption in operations - this is about efficiency and conservation, and using less energy.

2. Invest in lower carbon energy – this is about diversifying the company's portfolio to include investment in solar, wind, hydro and other renewables for power generation. This could also mean investment in producing cleaner fuels like hydrogen or biofuels.

3. Over time, to reduce investment in traditional oil & gas – this can be potentially challenging and disruptive. For example, some countries are highly dependent on petroleum revenues – what new sources of revenue will replace it? Another consideration is energy security – will the change mean greater reliance on imported sources of energy, or intermittent sources of energy? Another consideration is price – is the replacement energy affordable to consumers?

4. Finally, there are technologies like large batteries, carbon capture and storage, and also commercial instruments and mechanisms for carbon trading to offset emissions from operations.

There are no easy answers and much work to do.

In conclusion, Government, industry, civil society, and consumers will need to work together to ensure that in the coming years planet Earth will still be habitable, and at the same time making sure that secure, reliable and affordable energy is available.

Maraming salamat.

Annex 3: Civil society's perspective on energy transition

Mr. Vincent Lazatin, National Coordinator
Bantay Kita – Publish What You Pay Philippines

The transition from traditional energy sources, such as gas, oil and coal, to clean and renewable sources such as solar and wind brings with it much hope for a low-carbon emissions future. Research and development are advancing at breakneck speeds as scientists and engineers try to develop new and more economical, low-carbon energy technologies – from more efficient solar panels to longer lasting and higher capacity batteries. As the global community grapples with this transition, the urgency of reducing our carbon emissions significantly – not incrementally – looms larger and larger with each and every passing day. We are in the midst of an energy revolution as we wean ourselves away from fossil and high carbon emission fuels to "clean" energy and renewable sources.

But even as we embrace the hope and optimism of a new and exciting future in clean energy, there is a dark side to energy transition, one whose roots stretch back generations. New, clean energy technologies will still rely on the extraction of minerals, metals and exotic rare earth elements. As technologies advance to increase the efficiencies of solar panels, energy storage cells, and other renewable sources, demand for minerals such as aluminum, silicon, cadmium, tellurium, nickel, and lithium, among many others, will increase exponentially. Many of these minerals are found in the developing world, in countries in Latin America, Africa and Asia. We are in a new Gold Rush era, one that goes beyond a single mineral and one that expands into many exotic and rare ones.

As an affiliate of the global network, Publish What You Pay, Bantay Kita reiterates some of the potential key trends and risks identified by PWYP in the transition to renewable and clean energy.

First, there will be an increase in investments and extractive activity in high-risk jurisdictions. Many of the foundational minerals needed for energy transition are found in countries with poor governance records. As energy and technology companies try to find cheaper and cheaper sources of these minerals, the incentive to enter jurisdictions with lower friction costs increases. This means that countries with weak regulatory, enforcement and legal regimes become prime targets for extractive companies.

Second, it is expected that there will be an expansion of mining activities into environmentally and socially sensitive areas. Lithium, for example, a mineral critical to battery technology, is many times found in areas with high levels of water stress. Greater demand for even common minerals such as copper and nickel can push extractive

companies into new and ecologically sensitive areas that have, up to this point, remained untouched.

Third, is the expected shifting power dynamics between governments and industry. In supply countries with strong or dominant market position, for example, governments may tend towards “resource nationalism” and see the need to nationalize mineral production. On the other hand, countries that are dependent on mineral imports, the balance of power may shift in favor of industry as it increases demand on governments for incentives and market-distorting policies.

Fourth, there is an increased risk of geopolitical rivalries flaring up as market dominance in key minerals plays a greater role. As it becomes clearer who the “haves” and “have nots” are in the world of energy transition minerals, levers of power, trade and diplomacy could be exploited to give countries undue advantage over geopolitical rivals.

And fifth, there is a possibility of the emergence of new industry actors. While it is unclear what impact this may have, as industries and companies recognize the economic advantage of vertical integration by sourcing their own raw materials, the risk of opaque pricing practices and the potential tax avoidance that comes with it may increase. The incentive for corrupt practices in the private sector also increases commensurately.

There are many governance, transparency and accountability challenges that an increased reliance on mineral extraction bring with it. The growing demand for these minerals at the cheapest price, increase the incentive to cut corners, make backroom deals, and unduly influence regulators, policy makers and even whole governments. In a country like the Philippines that has a poor governance track record in the extractive industry, and a poor governance track record in general, we must be extra vigilant and cautious to ensure that extractive activity benefits the most number of people in a sustainable manner. This requires that license-, permit- and franchise-issuing agencies and bodies live up their mandates of protecting the public interest, environmental protection, sustainability and ensuring fairness and a level-playing field. It requires that bodies meant to look after and protect the interests and welfare of indigenous peoples, women, children and other marginalized groups most directly affected by extractive activities ensure that they are heard, seen, and listened to. It requires that our policy-makers, most especially our legislators, be transparent about the interests they are protecting and advancing. This includes the need to legislate a fair and just fiscal regime to ensure that extractive companies pay their fair share to the country so that all benefit, most especially those directly impacted by their activities. It requires that our public institutions of law enforcement and justice are functioning properly and are above narrow political and business interests, and do not cave in to undue pressure and influence. All of these

institutions must at all times serve the public interest. Lastly, there must be a renewed and deeper commitment by all stakeholders, including the local coal industry, to the goals and ideals of the Philippine Extractive Industries Transparency Initiative, to push the boundaries of not only what is required of us, but of what we require of ourselves. And this commitment must be made at the highest levels.

These are our challenges.

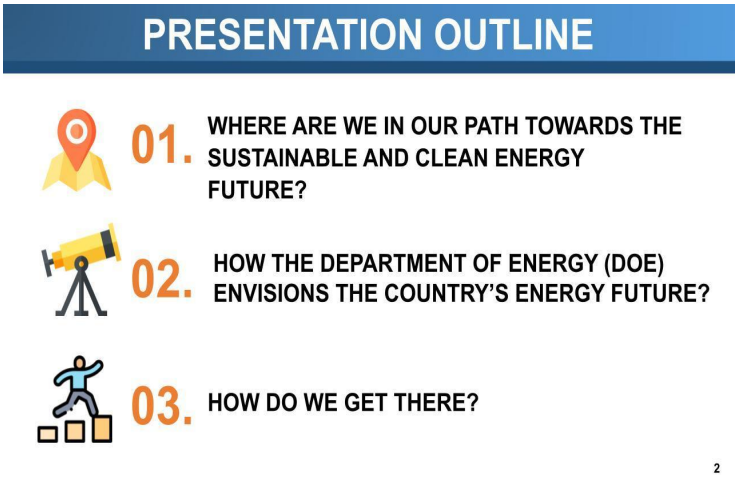
Thank you and good day.

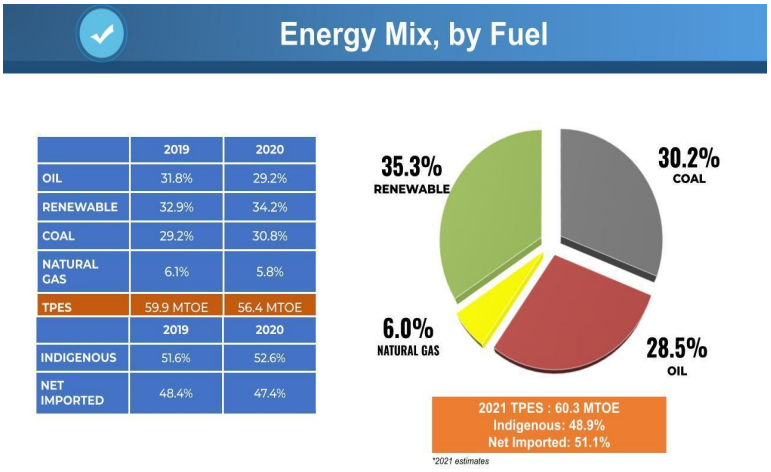
Annex 4: Philippine Energy Plan: The Road to Transition

Dir. Michael O. Sinocruz

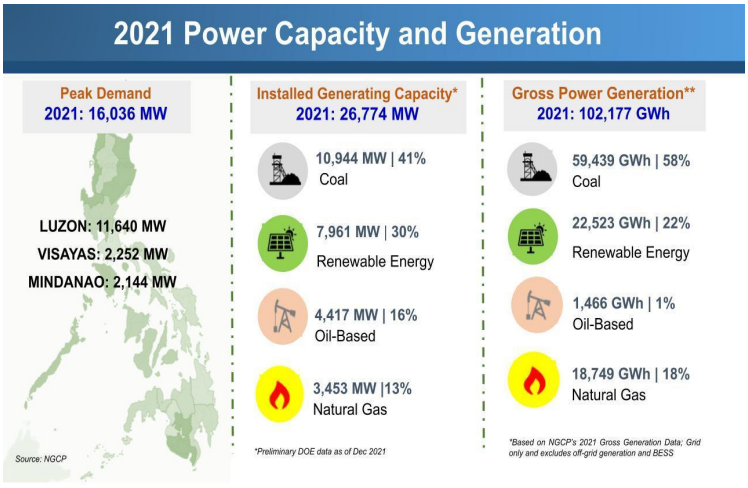
OIC-Director, Energy Policy and Planning Bureau, Department of Energy

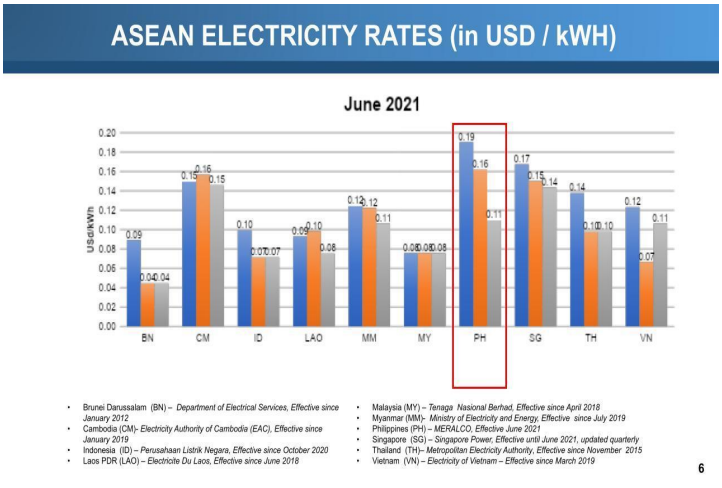
Google Drive link to the presentation: https://bit.ly/DOEPhilippineEnergyPlan



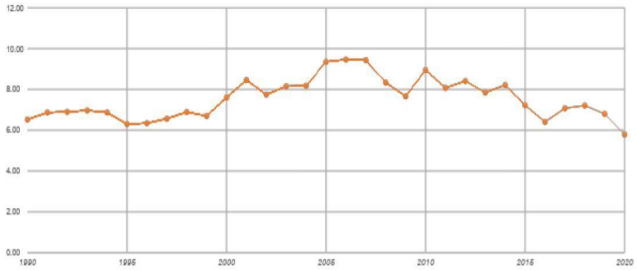


	2019	2020
OIL	31.8%	29.2%
RENEWABLE	32.9%	34.2%
COAL	29.2%	30.8%
NATURAL GAS	6.1%	5.8%
TPES	59.9 MTOE	56.4 MTOE
	2019	2020
INDIGENOUS	51.6%	52.6%
NET IMPORTED	48.4%	47.4%





MERALCO RATES (Real Price 2010)



	1990-2000	2000-2010	2010-2020	1990-2020	2000-2020
AAGR	1.54%	1.64%	-4.27%	-0.40%	-1.36%

7

HOUSEHOLD ELECTRIFICATION RATE as of December 2021

Source: DOE-EPIMB-REAMD

the household electrification rate is

95%

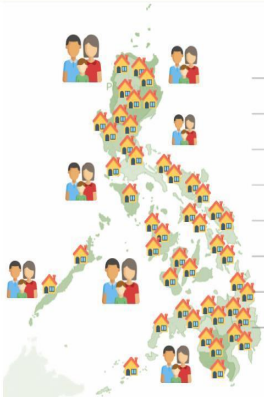
which is equivalent to

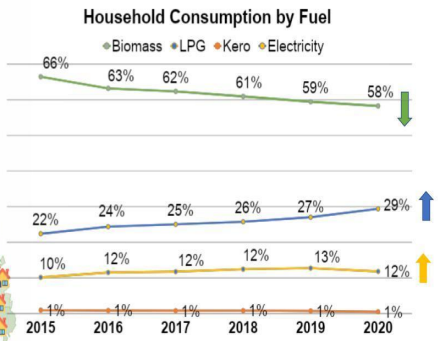
25 million households

with access to power

8

ACCESS TO MODERN ENERGY (as of 2020)





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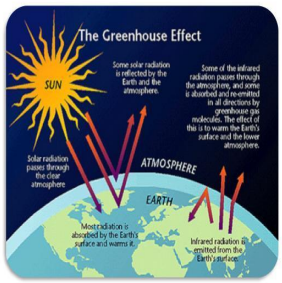
CLIMATE CHANGE

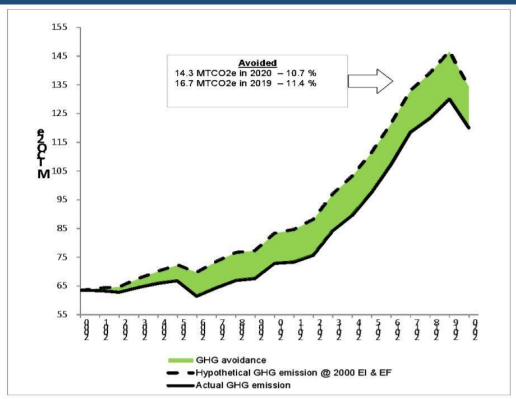


Greenhouse Gases:
- **Carbon dioxide (CO_2)**
- **Methane (CH_4)**
- **Nitrous oxide (N_2O)**
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF_6)

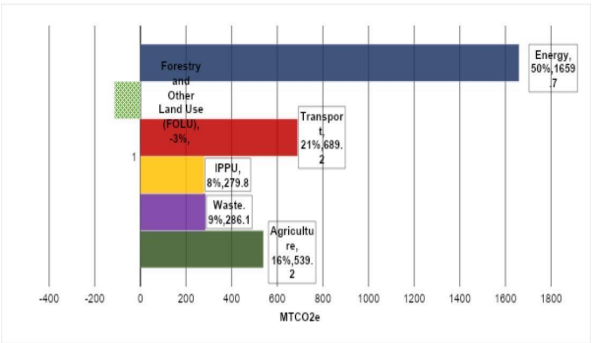
Crude Oil
Oil Products
Natural Gas
Coal

GLOBAL WARMING is due to the abnormal increase in greenhouse gases in the atmosphere that trap heat and its long-term warming results to **CLIMATE CHANGE.**

GHG EMISSION

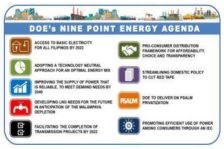


NDC BASELINE EMISSION, 2020-2030, BY SECTOR



Policy Framework

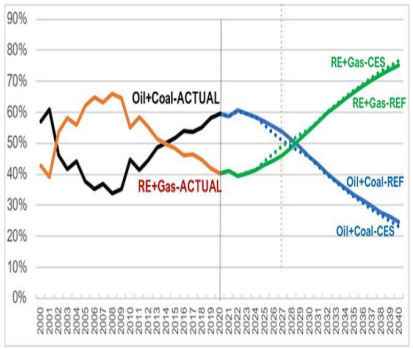
AMBISYON NATIN 2040



DOE's NINE-POINT ENERGY AGENDA

SUSTAINABLE DEVELOPMENT GOALS

ENERGY TRANSITION:
CLEAN FUELS AND TECHNOLOGIES DOMINATING THE POWER MIX



WHERE DO WE WANT TO BE IN THE FUTURE?

Simple Rule

Reference Scenario (Business as Usual) + Clean Energy Scenario (CES)

Energy Efficiency
- RA 11285
- Energy Labeling
- Minimum Energy Performance
- Energy Conserving Building Designs

Renewable Energy
- RE Act of 2008
- NREP
- RE Policy Mechanisms
- CREZ, PURE,

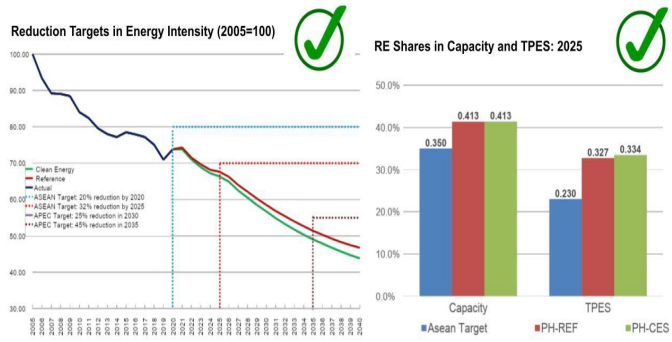
Other Emerging Technology
- Nuclear, Hydrogen
- Highly efficient technologies
- Alternative Fuels for Transport

ICT
- Smart Grid
- Smart Homes

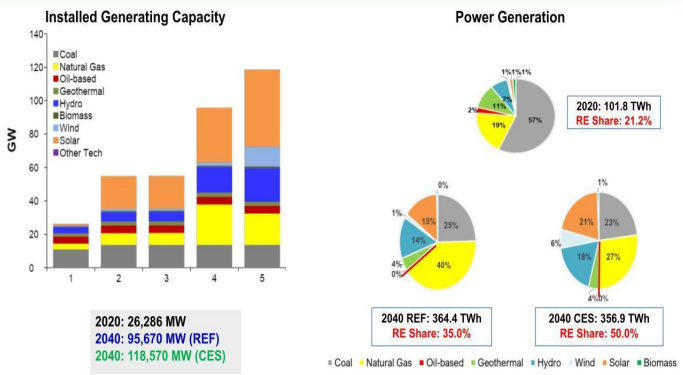
Energy Resiliency
- National Energy Contingency Plan
- Build Back Better

DEPARTMENT OF ENERGY

Regional Energy Targets



2040 Energy Outlook: Power Capacity and Generation



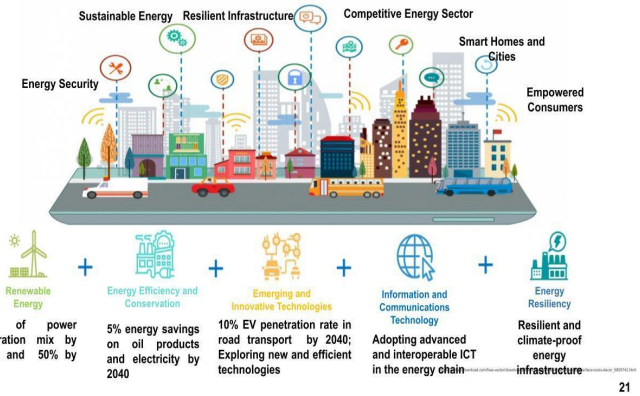
2040 OBJECTIVES

"Sustainable, stable, secure, sufficient, accessible and reasonably-priced energy"

Upstream Sector	Increased indigenous petroleum and coal reserve and production
Downstream Sector	Improved policies governing the downstream oil industry and establishment of a world-class, investment driven, and efficient natural gas industry
Renewable Energy	Attain the target of at least 35% RE share in the power generation mix by 2030 and 50% by 2040
Power Sector	Energy Security, Resiliency, Affordability, and Sustainability Transparent and Fair Playing Field in the Power Industry Electricity Access for All
Energy Efficiency	Measurable reduction in energy intensity and consumption per year versus Business-As-Usual
Alternative Fuels and Emerging Technologies	Secured and Stable supply of energy through Technology Responsive Energy Sector

20

Future Energy Scenario in Capsule



35% of power generation mix by 2030; and 50% by 2040

5% energy savings on oil products and electricity by 2040

10% EV penetration rate in road transport by 2040; Exploring new and efficient technologies

Adopting advanced and interoperable ICT in the energy chain

Resilient and climate-proof energy infrastructure

21

Plans and Programs: Renewable Energy

Accelerate RE Position

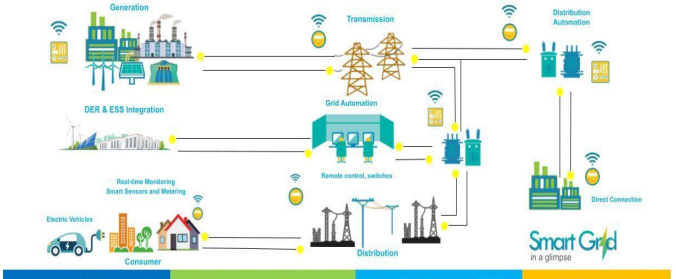
Roll-Out Policies Under RE Law

Strengthen Partnerships with RE Development Partners

Establish Reliable and Efficient Infrastructure

22

POWER SECTOR



Smart Grid	Increase Flexibility in Power Generation	Interconnection of Major Island Grids	Total Electrification
The National Smart Grid Policy Framework and Roadmap for Distribution Utilities established in 2020 shall be fully implemented.	Increasing flexibility in power generation enables the system to synchronously adapt and adjust to dynamic conditions at any given time, resulting to an optimized electricity demand and supply flow.	Having an interconnected grid system, which allows optimization of the country's indigenous energy resources and infrastructure, is one of the visions for the Philippines' electric power industry.	The government shall continually improve its existing electrification strategies, utilize advanced technologies, and adopt innovative solutions to achieve 100% electrification rate in the country.

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HOW DO WE ENVISION THE COUNTRY'S ENERGY FUTURE?

Legal Basis: R.A. No. 7638 (DOE Act of 1992)

Section 5.b:

"Develop and update the existing Philippine energy program which shall provide for an integrated and comprehensive exploration, development, utilization, distribution and conservation of energy resources, with preferential bias for environment-friendly, indigenous, and low-cost sources of energy…."

- The PEP is a comprehensive roadmap of programs and projects of the energy sector to ensure ***sustainable***, ***stable***, ***secure***, ***sufficient***, ***accessible*** and ***reasonably-priced energy***.
- Embodies the country's major plans and programs in consideration of energy trends and development, as well as the action agenda to respond to emerging energy challenges and issues.

HOW DO WE GET THERE: Investment Requirements of the PEP

USD 153 Billion
Total Required Energy Investments

UPSTREAM

- USD 10.05 Billion — Oil and Gas Exploration and Development
- USD 13.12 Billion — Coal Exploration and Production
- USD 510 Million — Renewable Energy (Pre-Development Activities)

DOWNSTREAM

- USD 2.94 Billion — Oil Distribution Depots and Import Terminals
- USD 1.78 Billion — Liquefied Natural Gas (LNG) Terminals
- USD 2.38 Billion — Biofuels Production

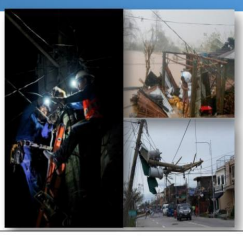
POWER

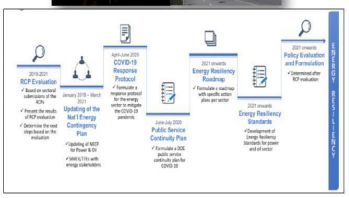
- USD 115.3 Billion — Construction of New Power Plants
  Conventional: USD 21.0 Billion
  Renewable Energy: USD 94.3 Billion
- USD 6.97 Billion — Transmission Projects

25

HOW DO WE GET THERE: Build Back Better

- Energy Resiliency Policy (DC 2018-01-0001)
  - *Build Back Better* Principle
  - Created the Task Force on Energy Resiliency (TFER)
- Energy infrastructures vulnerable to natural and man-made calamities
  - Earthquakes
  - Tropical Cyclones
  - Volcanic eruptions
- Energy resiliency puts priority actions to improve the whole value chain of the sector in terms of strengthening the ability of the system to withstand the impact of hazards and recover from any disruption of energy supply.





HOW DO WE GET THERE: TASK FORCE ON ENERGY RESILIENCY

✔ Automatically activated during times of disasters

Chairperson: DOE Undersecretary
Head Secretariat: DOE

DOE ↔ NDRRMOC (Command Center)

ENERGY FAMILY
- NEA
- NPC
- TRANSCO
- PNOC
- NGCP
- PSALM
- MERALCO
- Oil industry players
- GenCos/PDUs

SECURITY GROUP
- NSC
- PNP
- AFP
- BFP
- PCG

NGO
- pdrf
- SHAPES

Response, Recovery & Rehabilitation Efforts

HOW DO WE GET THERE: RESILIENCY POLICY

POLICY ISSUANCE

DC 2018-01-0001
Energy Resiliency in the Planning and Programming of the Energy Sector
Signed:17 Jan 2018

RESILIENCY COMPLIANCE PLAN

Total Submissions as of 12 Nov 2021:
130 RCPs

GUIDING PRINCIPLES

- **Strengthen** the existing energy infrastructure
- Implement the **"build back better"** principle in terms of **reconstruction and rehabilitations** of damaged infrastructure;
- **Improve existing operational, maintenance and practices** to ensure continuous operations and energy supply; and
- **Develop resiliency standards** that will be used as basis in future construction of energy facilities.

DEPARTMENT OF ENERGY

THANK YOU and MABUHAY!

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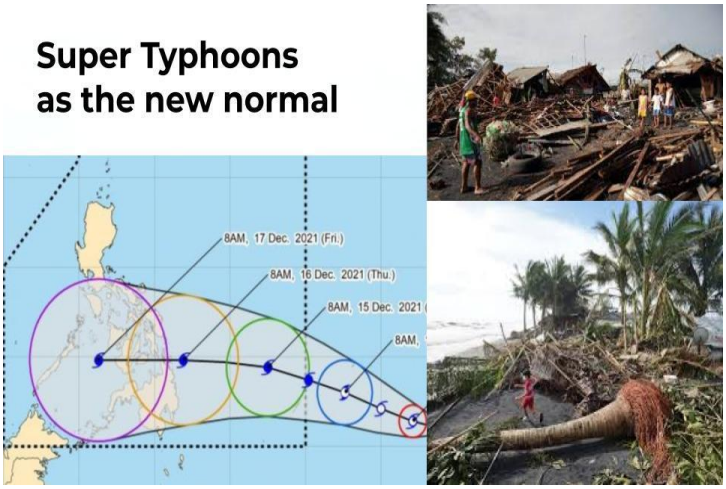
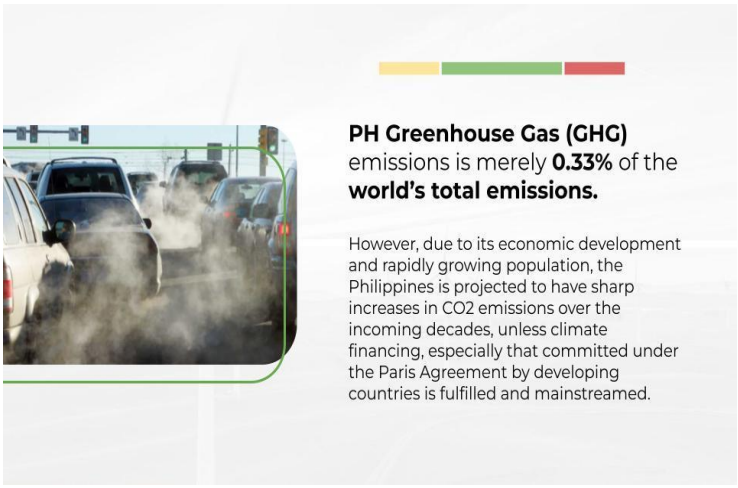
Annex 5: Green and sustainable financing

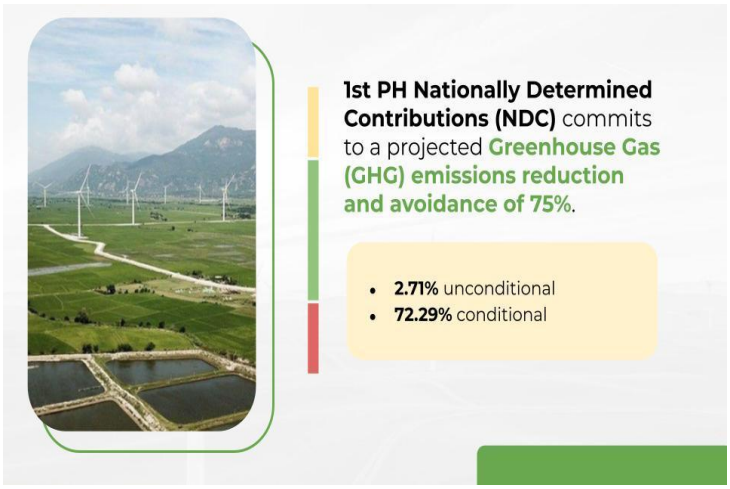
Dir. Dona Minimo

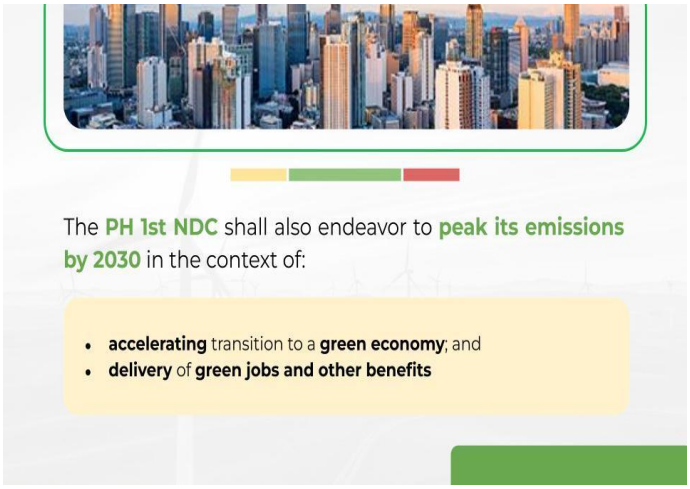
Director, International Finance Group, Department of Finance

Google Drive link to the presentation: https://bit.ly/DOFGreenAndSustainableFinancing







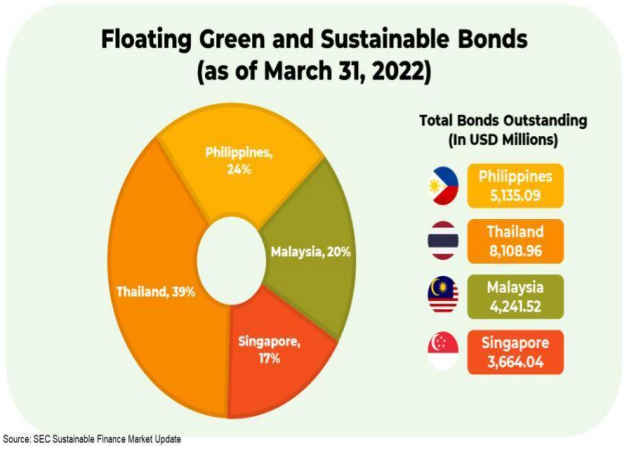



Climate Finance in the Philippines
Focus is more on **climate change adaptation** but mitigation is also considered
Balance between the implementation of **sustainable climate change actions** and the **pursuit of the country's economic growth and development potential**.
Developed countries must fulfill their obligations on climate finance to deliver **climate justice for developing countries and future generations**.


Climate finance should cover three (3) elements:
Grants to improve the capacity of local communities in climate-vulnerable areas
Investments to focus on programs and projects that will unlock business opportunities, create new jobs, and lead to energy self-reliance in the long run
Subsidies to help address the financial costs and risks of communities transitioning to a climate-resilient economy


Green Finance Initiatives
The **Land Bank of the Philippines (LBP)** has implemented the **Climate S.M.A.R.T. (Synergistic, Mitigation, Adaptation, Resiliency, and Transformation) Financing Program.**
The **Development Bank of the Philippines (DBP)** has a **Green Financing Program (GFP)**, an umbrella program to support the Bank's strategic thrust of environmental protection and the country's green growth strategy.


Green Finance Initiatives
PSF People's Survival Fund
A special fund established to support adaptation programs and projects of local government units (LGUs).
Under the PSF is the **Project Development Grant (PDG),** a sub-financing window with an initial allocation Php 1 billion that aims to help LGUs prepare viable project proposals for PSF funding.


Floating Green and Sustainable Bonds (as of March 31, 2022)
Philippines, 24%
Malaysia, 20%
Thailand, 39%
Singapore, 17%
Total Bonds Outstanding (In USD Millions)
Philippines 5,135.09
Thailand 8,108.96
Malaysia 4,241.52
Singapore 3,664.04
Source: SEC Sustainable Finance Market Update


We are ramping up our efforts to counter climate change.
• Build capacity of local government units (LGUs) to formulate and implement green projects
• Deepen our financial markets to enable green financing to flourish
• Eliminate plastic pollution for a more sustainable environment
• Partner with the UK government and Northern Ireland to facilitate green finance and energy efficiency
13

With high recognition of its vulnerability to climate risks, the **Philippines commenced national reforms to increase its resilience** while facilitating action on low GHG emissions towards sustainable development such as:

- National Climate Change Action Plan
- creating Executive Order 174
- ratifying the Paris Agreement

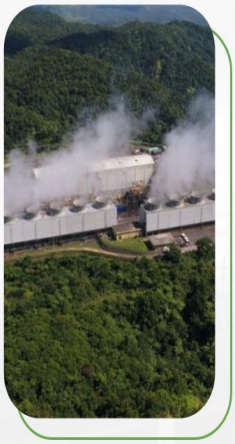
A CPI is a **mechanism** that sets a 'price' on GHG emissions **to create incentives to reduce consumption of fossil fuels.**

The two main options for carbon pricing. First is the **carbon taxes** and then **quantity-based caps.**

*A **carbon tax** fixes the **price** and lets participants determine the quantity of emissions they are willing to pay for given this price*

*A **quantity-based cap** fixes the maximum **quantity** of emissions and lets participants determine the price of emissions*

Economic theory shows that **well-designed CPI**, such as carbon taxes and ETS, **can achieve cost-effective emission reductions**.



Proposed **Carbon Bills** and Other **Related Legislation**

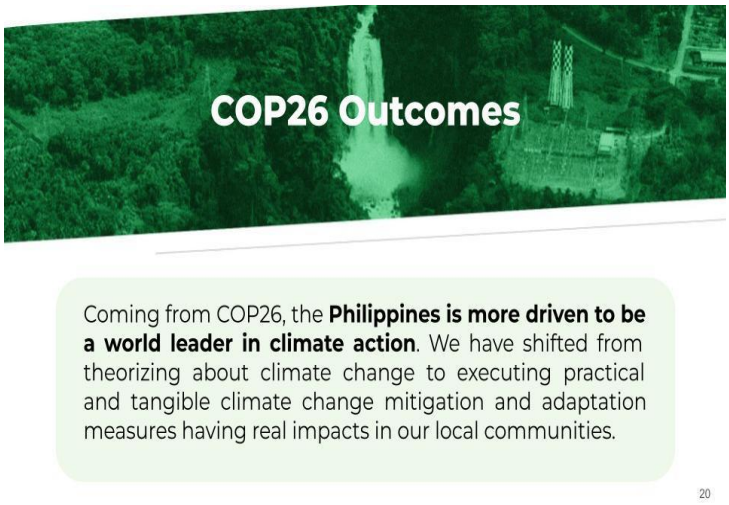
The House of Representatives have drafted bills that may contribute to the establishment of CPIs, as follows:

- **House Bill No. 2184** - "An Act to Promote a Low Carbon Economy Establishing for this Purpose the Emission Cap-and-Trade System in the Industry Sector to Reduce Greenhouse Gas Emissions and Protect the Climate"
- **House Bill No. 6945** - "An Act Establishing Environmental Taxation for the Protection of Philippine Natural Resources" or "The Environmental Taxes Law of the Philippines"

Philippine Sustainable Finance Roadmap and Guiding Principles

On 20 October 2021, the government launched the **Sustainable Finance (SF) Roadmap** and its **Guiding Principles** to synergise public and private investments towards green projects and serve as a taxonomy of sorts for the sustainable finance ecosystem in the Philippines, respectively.

UK Government


COP26 Outcomes
Coming from COP26, the **Philippines is more driven to be a world leader in climate action**. We have shifted from theorizing about climate change to executing practical and tangible climate change mitigation and adaptation measures having real impacts in our local communities.
20


Let's be partners for change!
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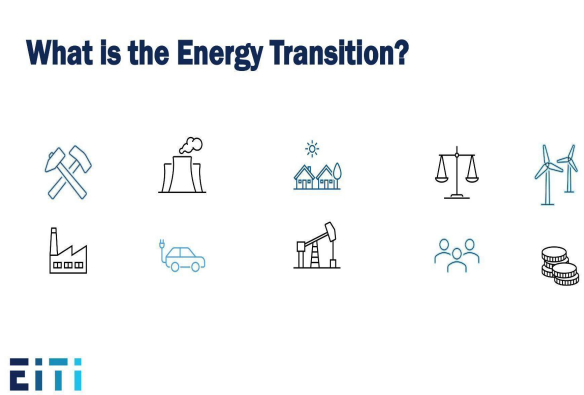
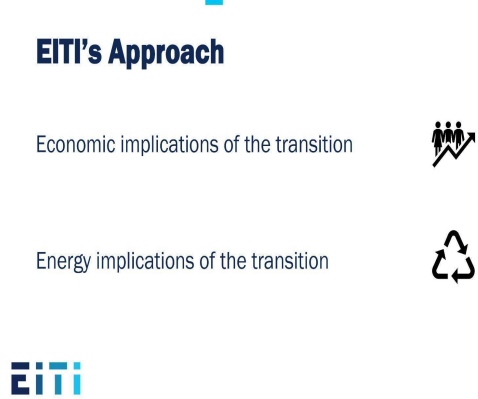
Annex 6: The role of EITI in energy transition

Mr. Mark Burnett

Europe and Policy Manager - EITI International

Google Drive link to the presentation: https://bit.ly/EITIEnergyTransition





Key Global Policy Signals

- World Bank COP26 Climate Briefs
- The EU Global Methane Pledge
- Global Coal to Clean Power Transition Statement

Role of the EITI in Energy Transition

Data for Energy Transition Planning

- Revenues and public finance
- Future projects, opportunities and risks
- Planning and legislation
- Climate impacts

Revenue & Public Finance

- Revenue Resilience & Optimisation
- Public Finance at Risk
- Subsidies

Future Projects

- Project Viability
- Carbon Pricing
- Transition from Fossil Fuels

Planning and Legislation

- Energy Transition Policies
- Distribution of Risk

Climate Impacts

Emissions

Opportunities for EITI Engagement

Integrating Energy Transition

- Systematic disclosure
- Knowing the terms of extractive agreements
- Understanding who profits: beneficial ownership
- State participation

Extending Scope of EITI Reporting

Renewable Energy
Nuclear Energy
Transportation and CO2 Revenues

Critical Minerals

Resources in Asia: Copper, Nickel, Iron Ore, Zinc, Tin and Tungsten
Governance risks and implications for a just transition
Systematic disclosure and open data systems

Extractive Industries Transparency Initiative

Thank you!

Mark Burnett
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Philippines EITI Roundtable Discussion
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