









Thursday, 6 August 2020

14.00 to 15.30 (GMT+7)









Renewable Energy Outlook and the Challenge on Investment in ASEAN during COVID-19 Pandemic

Introductory Note



H.E. Morten Høglund Ambassador of Norway for ASEAN



Dr Nuki Agya UtamaExecutive Director, ASEAN
Centre for Energy (ACE)

Moderator



Nadhilah Shani Modelling and Policy Planning (MPP) Officer, ASEAN Centre for Energy (ACE)



Badariah Yosiyana Programme Officer, South East Asia, International Renewable Energy Agency (IRENA)

Speakers



Dr Roman Vakulchuk Senior Research Fellow, Norwegian Institute of International Affairs (NUPI)



Dr Zulfikar Yurnaidi Senior Officer of Sustainable Energy, Renewable Energy, and Energy Efficiency (REE), ASEAN Centre for Energy (ACE)









Renewable Energy Outlook and the Challenge on Investment in ASEAN during COVID-19 Pandemic

Agenda:

- 1. Introductory Note
- 2. Topic 1
- 3. Topic 2
- 4. Topic 3
- 5. Q&A









Introductory Note



Dr Nuki Agya Utama Executive Director, ASEAN Centre for Energy (ACE)









Introductory Note



H.E. Morten Høglund Ambassador of Norway for ASEAN





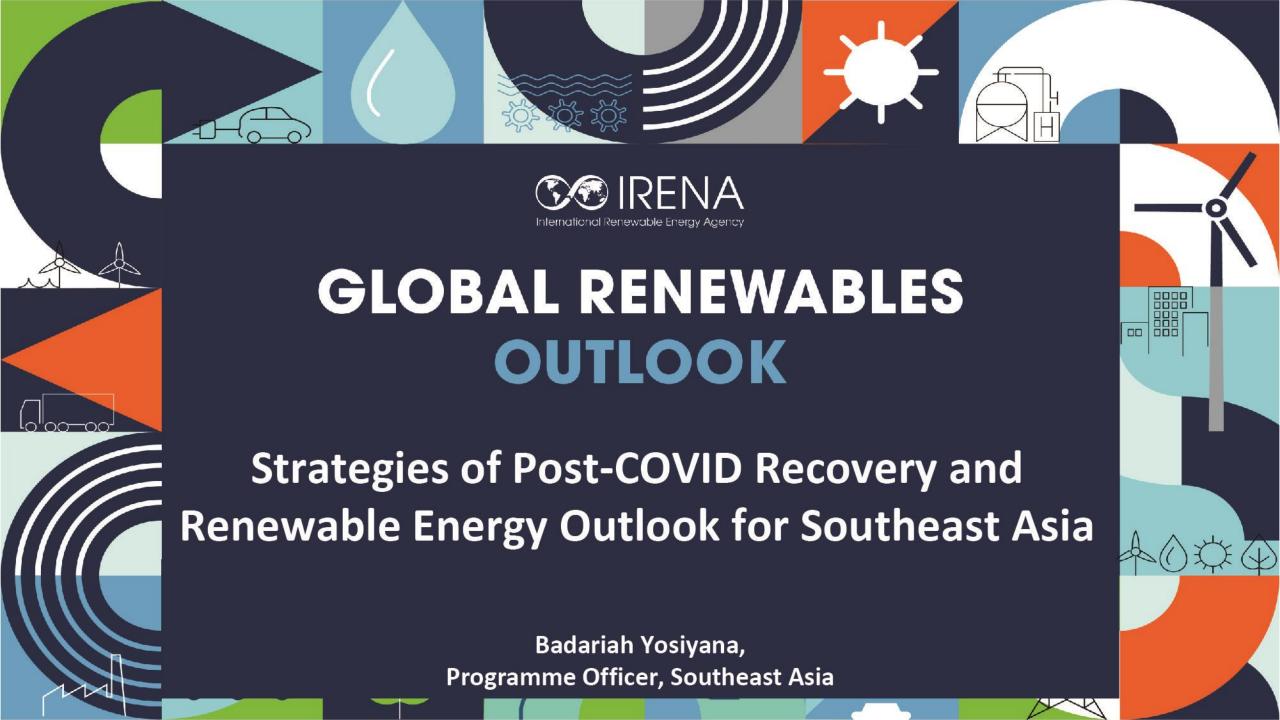




Topic 1

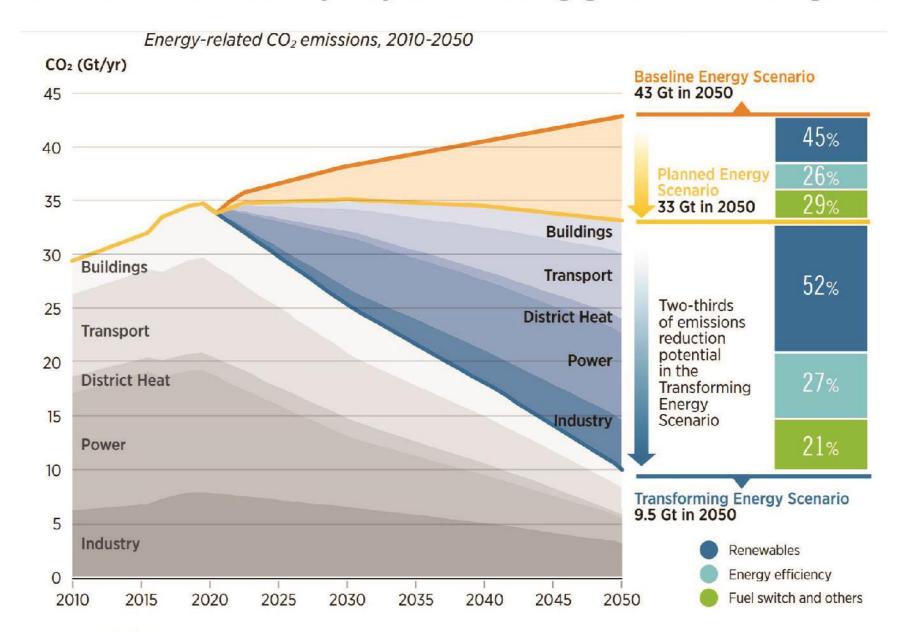


Badariah Yosiyana Programme Officer, South East Asia, International Renewable Energy Agency (IRENA)



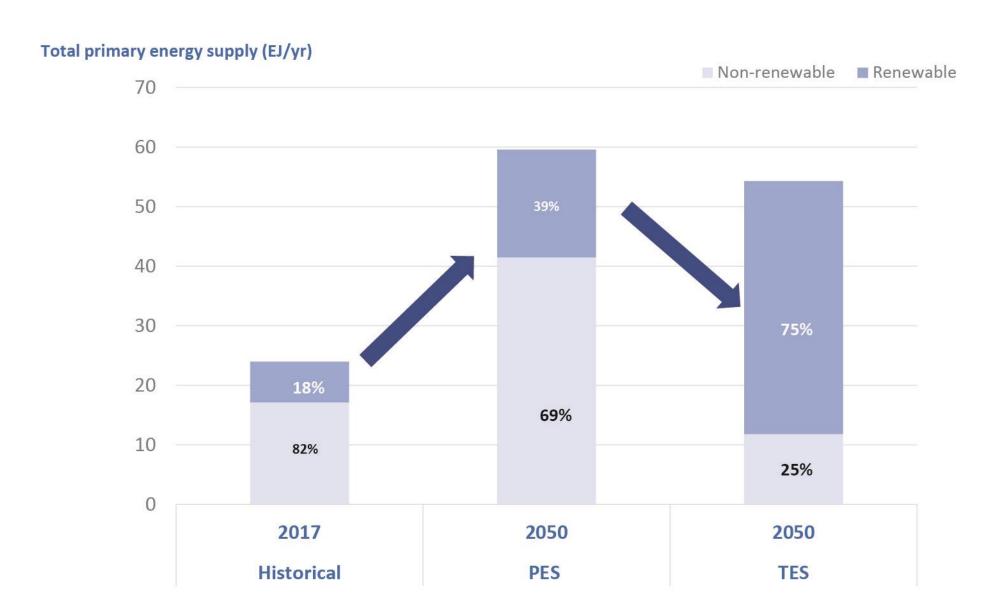


Renewables and efficiency key to meeting global climate goals



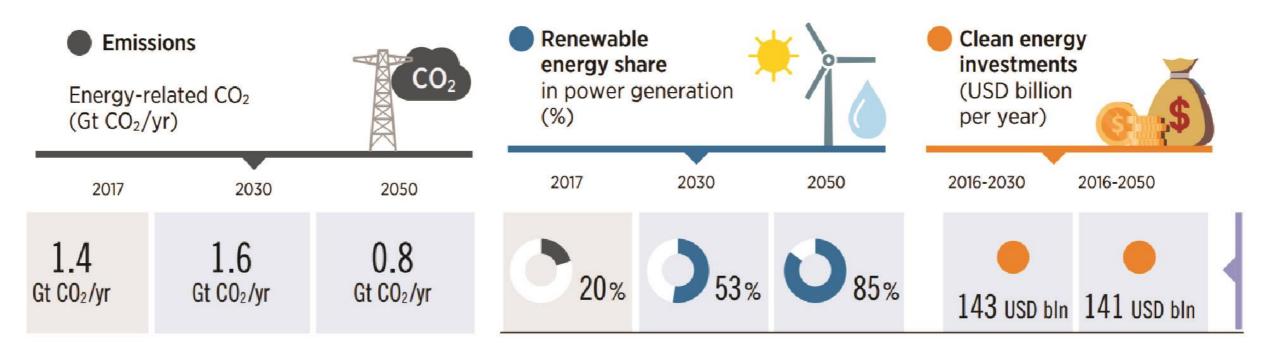


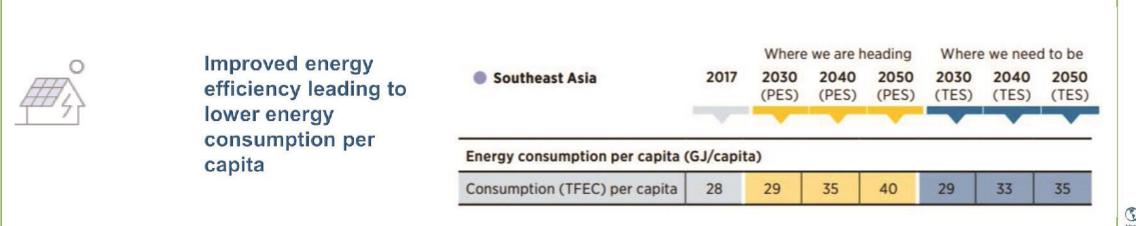
IRENA's Transforming Energy Scenario pathway for Southeast Asia





IRENA's Transforming Energy Scenario pathway for Southeast Asia

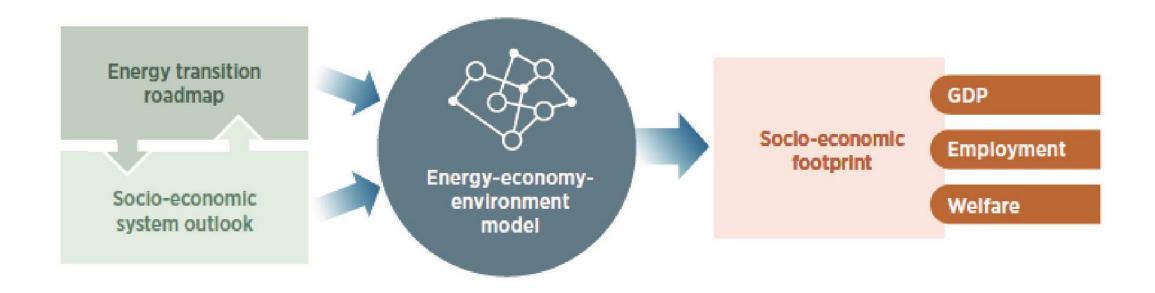








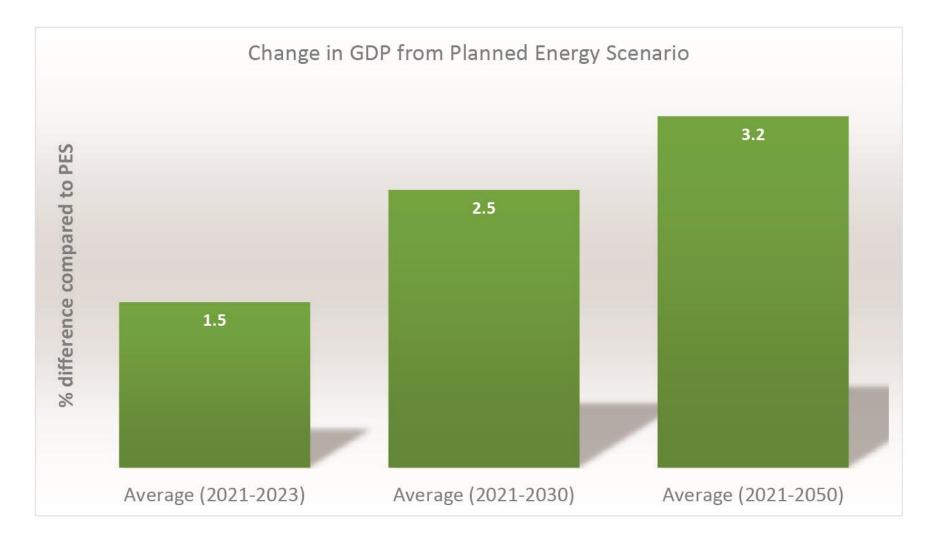
The need for a holistic approach to understand the socio-economic impacts of the energy transition



- A true and complete assessment of the transition includes both the energy sector and the socioeconomic system, and their interlinkages.
- IRENA has undertaken a holistic approach that links the energy system and the economies within a single and consistent quantitative framework, and analyses variables such as GDP, employment and welfare.



Boost in Southeast Asia economy, as measured by GDP

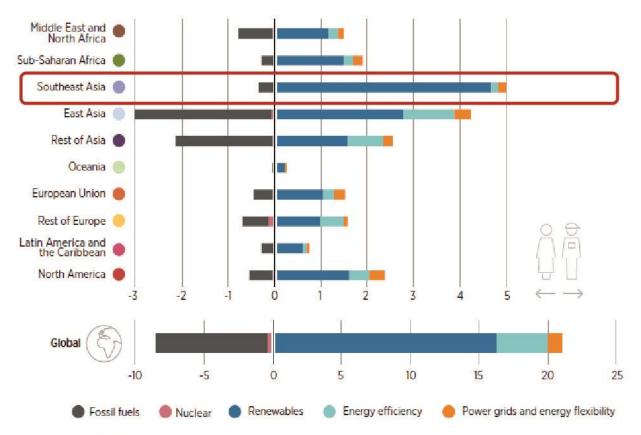


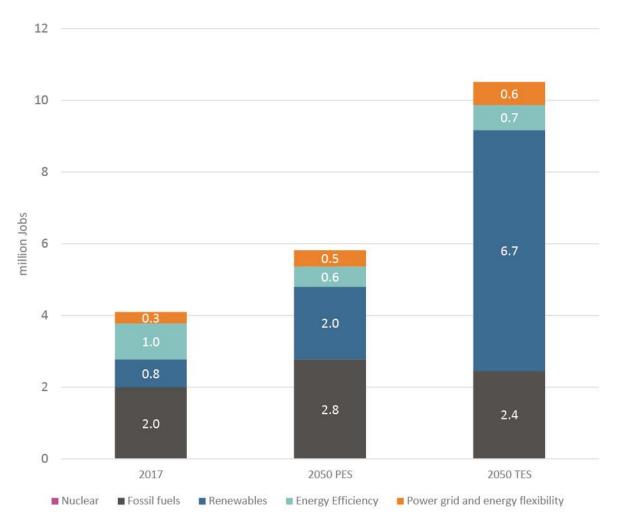
The GDP of Southeast Asia improves by 2.9% in 2050, compared to the Planned Energy Scenario. In absolute terms, it amounts to additional USD 5.64 trillion.



All regions see gains in energy sector jobs, including Southeast Asia

Difference in employment by 2050 between the Transforming Energy and Planned Energy scenarios, by region and sector (in millions)

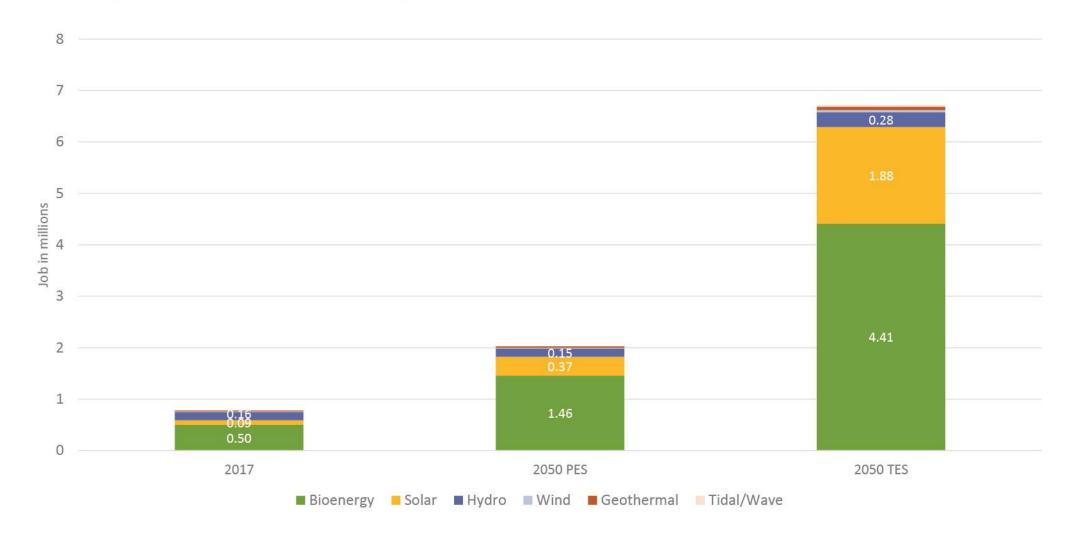




Source: IRENA analysis



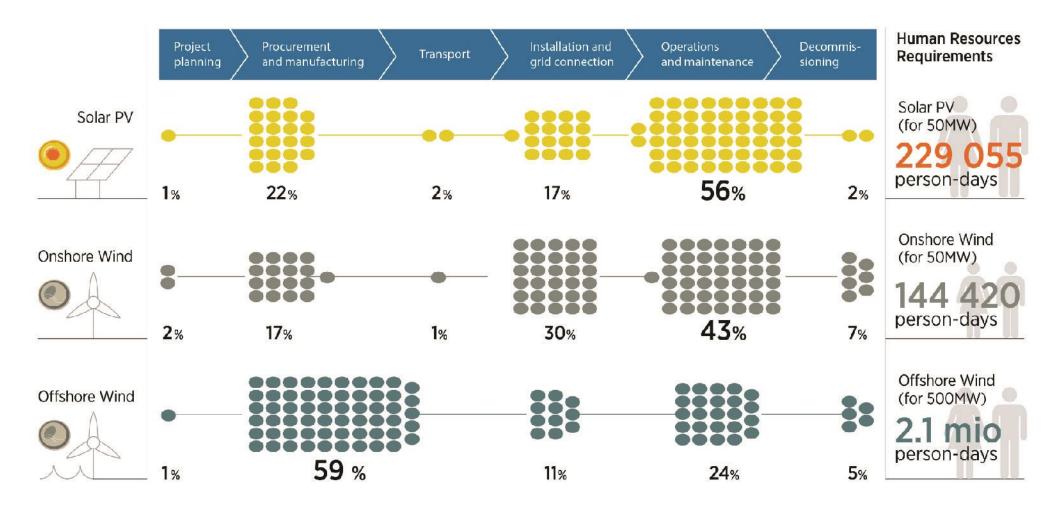
Bioenergy creates the most jobs in renewables in Southeast Asia



Jobs in renewables almost double compared to the Planned Energy Scenario, reaching 6.7 million in 2050.



Employment along several important renewable value chains



Policy makers need to recognise how many renewable energy jobs can be created along each segment of the value chain, so they can design green recovery programmes that maximise regional and national value creation.



Improvement in welfare



Welfare improvement (%): TES vs. PES	2030	2050			
Indicator					
Economic	0.1	0.0			
Social	1.5	7.7			
Environmental	1.6	3.5			
Total	3.2	11.2			

Welfare improves by 3.2% in 2030 and 11.2% in 2050, primarily due to improvement in health and GHG emission reduction



Objectives for the recovery and the energy transition

AMBITION

Support implementation of NDCs and energy transition-related plans

PUBLIC INTERVENTION

Active public policy; mobilise investment, encourage institutional investors

INVESTMENT

Scale up transitionrelated investment in power, heating and cooling and transport

EMPLOYMENT

Support the expansion of the workforce in energy transition-related fields

INDUSTRY

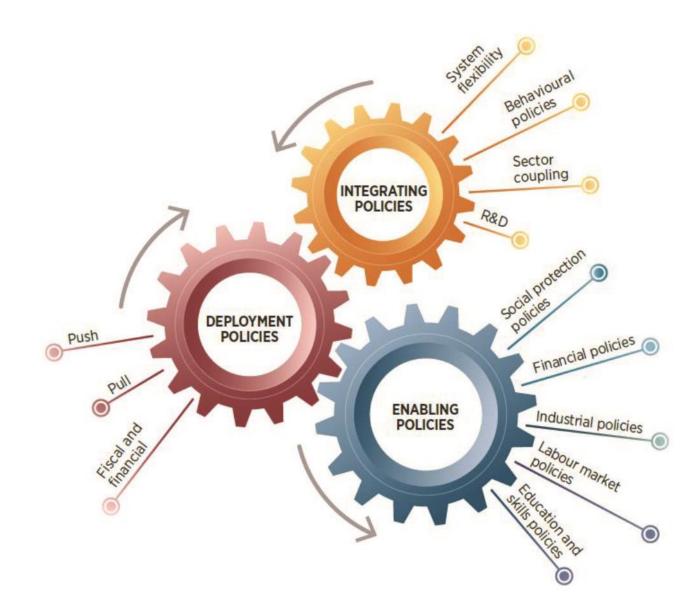
Develop local industries for energy transitionrelated technologies

ACCESS

Continue efforts to ensure universal energy access



Policy interventions for a decarbonised society



- Investing in clean energy infrastructure is critical, and as essential is investing in people and institutions to support the transition.
- Successful stimulus and recovery packages call for policy cohesion and increased international cooperation.



IRENA's Socioeconomic impact analyses

Jobs Annual Review series

2011

2012

2013

2014

2015

2016

2017

2018





























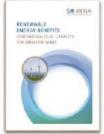






GLOBAL RENEWABLES OUTLOOK

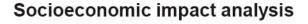












Leveraging Local Capacities series

Empowering Women, local communities and livelihood benefits





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Launching Policy Briefs RE Investment Series











Topic 2



Dr Roman Vakulchuk Senior Research Fellow, Norwegian Institute of International Affairs (NUPI)



Action plan to attract more investment in renewable energy in the ASEAN countries

Dr Roman Vakulchuk, Senior Researcher NUPI





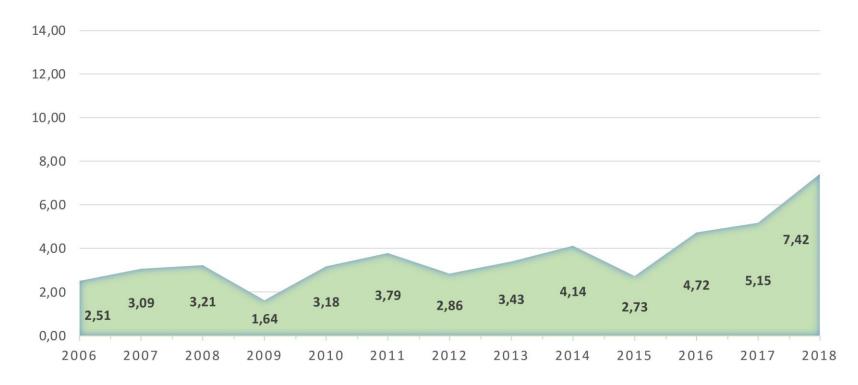
The global race for investment in renewable energy

- The competition for renewable energy investment has been heating up globally
- In 2018, global investment increased by 206% compared to 2006 (from USD 89 billion to USD 272.9 billion)
- 513% increase in developing countries vs. 93% in developed ones
- ASEAN has not been part of the global trend



- ASEAN target: 23% renewable energy in the energy mix by 2025
- ASEAN needs to attract USD **27 billion** in renewables every year from 2019 onwards
- In 2018, it attracted USD 7.42 billion

Total investment in renewable energy in ASEAN 2006–2018 (billion USD)



Sources: BNEF (2017); IRENA (2018); UN Environment, Frankfurt School-UNEP Centre, Bloomberg, NEF (2019).

Renewable energy legislation progress in AMS

	Philippines	Vietnam	Indonesia	Malaysia	Thailand	Singapore	Myanmar	Laos	Brunei	Cambodia	
	1. Renewable energy targets	•	•	•	•	•	•	•	•	•	•
S	2. Renewable energy in INDC or NDC		•	•	•	•	•	•	•	•	
olici	3. Feed-in tariff/auctions/premium payment	•	•	•	•	•					
Į,	4. Electric utility quota obligation/RPS	٠	•	•	•						
Regulatory policies	5. Net metering/billing/direct consumption-supply	•	•	•	•		•				
	6. Biofuel blend obligation/mandate/target	٠	•	•	•	•					
	7. Tradable REC		•								
s and	8. Tendering	•		•	•		•				
	9. Tax incentives		•	•	•	•		•	•		•
ntive	10. Investment or production tax credits		•	•							
Fiscal incentives and public financing	11. Reductions in sales, CO2, VAT or taxes		•	•	•	٠		•			
	12. Energy production payments					•					
_	13. Public investment/loans/grants/capital/rebates	•	•	•	•	•	•		•		
	Total	12	11	11	10	8	5	4	3	2	2

Sources: REN (2019); ACE (2020).

Regulatory Indicators for Sustainable Energy (WB, 2018)

	Total	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	score	Legal	Planning	Incentives	Attributes	Network	Counter-	Carbon
		framework	for RE	and	of financial	connection	party risk	pricing and
		for RE	expansion	regulatory	and	and use		monitoring
				support	regulatory			
				20 000	incentives			
Vietnam 32	467	100	98	79	58	66	66	0
Philippines	437	100	59	77	83	53	65	0
Malaysia	404	100	71	70	58	32	73	0
Singapore	377	100	64	19	67	60	67	0
Indonesia	376	100	66	31	33	13	83	50
Thailand	329	50	56	56	67	20	80	0
Cambodia	289	100	15 /	18	0	30	76	50
Laos	214	100	55	27	8	7	17	0
Myanmar 111	195	50	48	34	17	6	40	0

In 2018:

- 146 countries had renewable energy targets
- **138** established support policies
- 113 passed national renewable energy laws



Southern Vietnam's Binh Thuan province: wind turbine and solar panels (source: The ASEAN Post 2020).

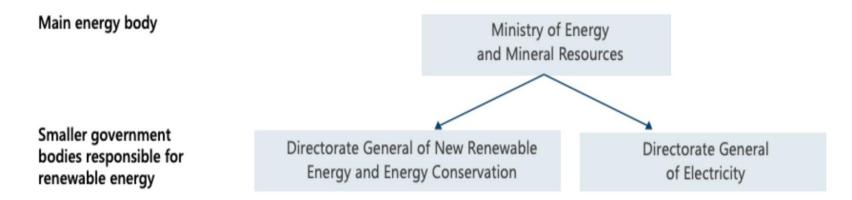
Key barriers that limit investment

- Limited governance capacity to promote renewable energy
- Investors expect that relevant institutions are established to support and implement advanced legislation
- Limited human resources
- Weakly developed financial markets

Action plan (I)

- Initiate major governance reform in favour of renewable energy
- Set up a ministry of renewable energy

Example: Current energy governance in Indonesia



Setting up a separate renewable energy ministry/body has clear advantages

Renewable energy prioritised

- Gaining more power, resources and autonomy
- More independent decision-making
- More effective governance of renewables
- Faster capacity-building and expertise
- Higher concentration of skilled human resources
- Better awareness-raising and communication
- Mobilsing private sector investment
- More attractive for green energy investors
- Puts a country higher in global business rankings
- High correlation with investment increase

Action plan (II)

- Build capacity for renewable energy governance (requesting more targeted support from IRENA)
- Prioritise renewables in the regulatory framework
- Facilitate market entry for investors and mobilise domestic investors
- Improve bankability of renewable energy projects











Topic 3



Dr Zulfikar Yurnaidi Senior Officer of Sustainable Energy, Renewable Energy, and Energy Efficiency (REE), ASEAN Centre for Energy (ACE) Launching Talk – Renewable Energy Outlook and the Challenge on Investment in ASEAN during Covid-19 Pandemic

Covid-19 Impacts on RE Sector in ASEAN

August 6th, 2020

Presented by:

Zulfikar Yurnaidi, Senior REE Officer

ASEAN Centre for Energy



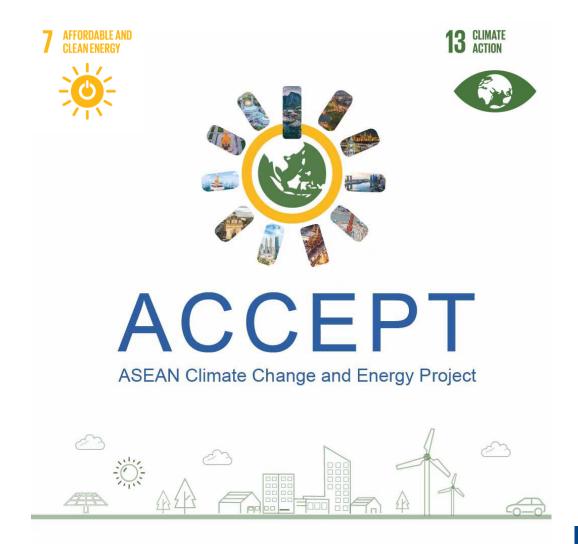
About ACCEPT

 Three years' project (2018-2021), supported under Norwegian-ASEAN Regional Integration Programme (NARIP).

 Aims to produce analysis and actionable recommendations to make ASEAN energy policies more coherent along two axes: the axis between energy policy and energy-related climate policy within each ASEAN country, and the axis between policies at the national and regional levels.

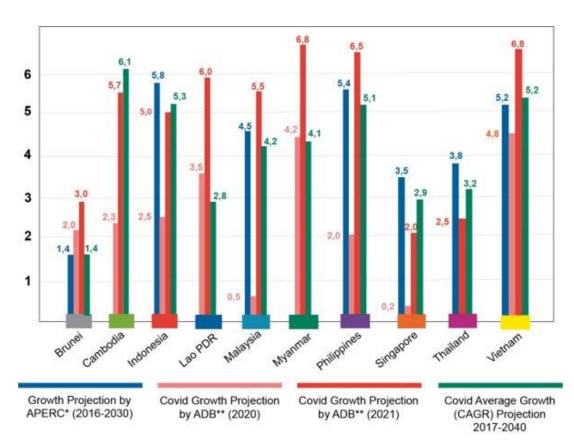
We welcomed the ACCEPT to support ASEAN in improving the coherence between the ASEAN energy and climate policies and contribute to more climate-friendly development of the energy sector.

Joint Ministerial Statement (JMS) of the 37th The ASEAN Ministers on Energy Meeting (AMEM), Bangkok, 4 September 2019.



COVID-19 in ASEAN

	ndex case(s)	Confirmed	Recovered	Deaths	Active	Tests
Brunei 09-Ma	Tutong, Tutong r District	141	138	3	0	40,202
Cambodia 27-Jar	Sihanoukville	239	164	0	75	64,597
Indonesia 02-Ma	r Kemang, Jakarta	108,376	65,907	5,131	37,338	1,506,191
Laos 24-Ma	Vientiane, Vientiane Prefecture	20	19	0	1	27,106
Malaysia 25-Jar	Sungai Buloh, Selangor	8,976	8,644	125	207	970,644
Myanmar 23-Ma	r Yangon	353	296	6	51	112,381
Philippines 30-Jar	Manila, Metro Manila	93,354	65,178	2,023	26,153	1,497,313
Singapore 23-Jar	Sentosa, Southern Islands	52,205	46,491	27	5,687	1,321,094
Thailand 13-Jar	Bangkok, Central Thailand	3,310	3,125	58	127	717,814
Vietnam 23-Jar	Ho Chi Minh City, Southeast	546	373	2	171	430,000
Tota	I	267,544	190,359	7,375	69,810	6,688,910



Source:

Source:

^{*} https://www.worldometers.info/coronavirus/#countries (31 July 2020)

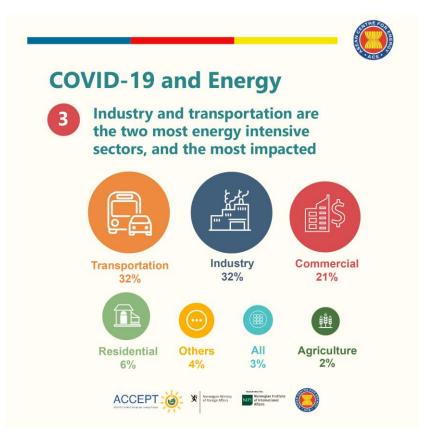
^{*}APERC GDP projection on the APEC Energy Demand & Supply Outlook 7th Edition (2019)

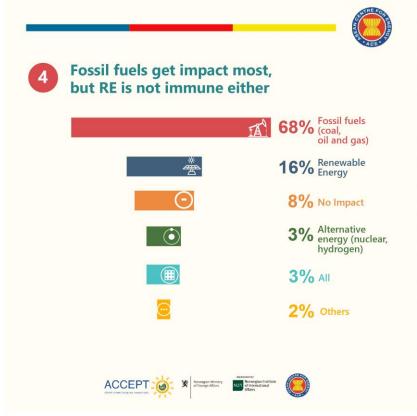
^{*}Cambodia and Lao PDR's non-covid projection are from IIASA, while Myanmar is from OECD due to them not being in APEC

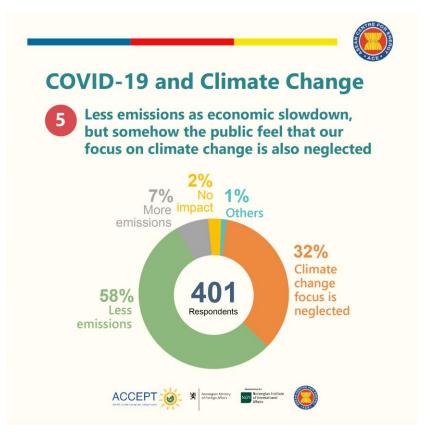
^{**} COVID-19 projection refers to ADB Asian Development Outlook (ADO) 2020

Q1 Survey – Covid-19 on Energy

Public perspective pointed fossil fuels, but RE is to be hit, as well









The Impact of COVID-19 on Energy and Climate Change in ASEAN: ACE Survey

RE in ASEAN Pre-Covid-19

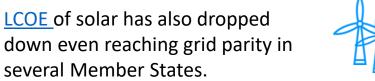
Pre-pandemic, the region had been gearing up towards RE acceleration



down even reaching grid parity in several Member States.



Following revision of the FiT for wind power and release of updated guideline for wind power projects in the Vietnam, there are a total of 7,000 MW of wind power project proposals submitted.





Solar has reached grid parity in the Philippines and Singapore, and soon in Thailand too if the equipment costs can be brought down.



Singapore

Singapore will have one of the world's largest offshore floating solar system along the Straits of Johor, with capacity of 5 MW which is estimated to operate this year.



Vietnam

Vietnam revises its feed-in-tariff (FiT) incentive scheme for solar early this year. The FiT will be differentiated by regions, higher for cloudy region in the north and lower for sunny region in the south and would also differ depending on the category.

Cambodia

The RE sector is also increasingly attractive for investors in Cambodia as an outcome of the Kingdom's largest solar energy project (60 MW in Kampong Speu) which will operate this year.

Thailand

- Thailand has also gotten its hand on the floating solar technology in their dams and reservoir.
- Thailand also begins to plan for recycling plant of solar cell.

RE in ASEAN during Covid-19 Q1 2020

Supply chain disruption and the postponed RE projects

The importance of independency is highlighted



Laos

Laos government suspended all hydropower construction throughout the country



Cambodia

Cambodia postponed two potential hydro projects in March.



Philippines

Philippines' utility suffers the delay of commissioning 135 MW solar project as the country sources most of the solar PV modules from China



Malaysia

As the country imposed a nationwide lockdown since mid-March, the palm oil plants shutdown undermines biomass supply



Thailand

Ministry of Energy is urged to sign a moratorium on Power Purchase Agreements of new power projects in neighbouring countries



Indonesia

The Indonesian Geothermal Association (INAGA / API) examined the effect of the present COVID-19 crisis and the depreciation of the Indonesian rupiah on geothermal ventures in Indonesia.

RE in ASEAN during Covid-19 Q1 2020

Keeping the hopes of renewables alive amid dark times

Global recession and extremely low oil prices could discourage the clean energy transition agenda due to less competitiveness of RE

Despite the black cloud hanging over the RE, several positive actions are observed in ASEAN during the COVID-19 crisis, including social initiatives



Viet Nam

Vietnam planned to launch its second Feed-in-Tariff (FiT) scheme for solar projects



Malaysia

Rural community in Malaysia constructed a solar-fueled buggy and water pump

Shaping the post-pandemic RE industry

RE sector is believed to be able to create the biggest job opportunities.

Governments can provide green stimulus packages for RE markets, such as renewing their investment, easing credit terms in financing RE projects, and reducing cost competitiveness with fossil fuels.



ASEAN

As ASEAN countries with the emerging economies are among the most vulnerable nations, regional cooperation would be necessary



Malaysia

Malaysia planned to spend US\$2.9 billion including towards the rooftop solar panels installation, and to invite investments for a 1400 MW solar power project.

RE in ASEAN during Covid-19 Q2 2020

RE development was pushed back a little as projects delayed



ASEAN

150GW of Asia-Pacific renewables 'at risk'



Malaysia

Malaysia postponed the national enforcement of the B20 biodiesel programme rollout

Indonesia

- Demand for photovoltaic panels dropped from the previous year in the March-April period
- ✓ Government to delay auction of geothermal working areas this year
- ✓ The completion of Batang Toru hydro power would be delayed to 2025
- ✓ Delay of B40 (40% biodiesel blend) and B100 or "green diesel" policy

The resilient effort of RE amid the new normal roll-out



Indonesia

Under a US\$300 million loan granted by the ADB to the state-owned PT Geo Dipa Energi (GDE), Indonesia is installing two new geothermal plants



Viet Nam

- ✓ Vietnam launched its second Feedin-Tariff (FiT) scheme for solar projects
- ✓ Vietnam's FiT scheme for wind projects is being considered be extended for another two years until 2021



Philippines

DOE reported that there will be no suspension on the bioethanol blending program have E10 blend in all gasoline products sold in the country

RE in ASEAN duri

RE in ASEAN during Covid-19 Q2 2020

Countries are urged to not lose sight of the long-term Green Recovery

While combatting the pandemics, AMS are starting to strategize the recovery plan and ensuring that sustainable pathways are taken, including to keep pursuing RE.



Thailand

Thailand plan to spur 30 billion baht for Energy for All scheme.



Philippines

The Philippines urges to switch to 'resilient' renewables after the pandemic, as Central Bank offers support for energy transition and renewables



Myanmar

IFC to boost funding for off-grid solar power in Myanmar



Indonesia

Studies to design rooftop solar-centred recovery scheme called Solar Archipelago is conducted.



Cambodia

EU will provide \$5.97 million to fund two new projects in Cambodia, "Switch to Solar" and "Promotion of sustainable energy practices in the garment sector in Cambodia".



ASEAN

South East Asia Clean Energy Facility (SEACEF) gathered \$10 million of fund, with additional \$40 million more in the pipeline.

"Progressive" Development?



The Impact of COVID-19 on Energy and Climate Change in ASEAN: ACE Survey

Affecting fossil fuels the most, but RE is also to be hit.





Assessing the Impact of COVID-19 Pandemic on Energy and Climate Change in ASEAN









COVID-19 vs ASEAN Energy Sector:
Renewables

Q1/2020: "Renewable energy sector is also inevitably hit by this pandemic, remarkably under the disrupted supply chain and logistic which cause inevitable postponed projects. This pandemic creates both, opportunities and threat to RE as target and priorities of government are still on the fence. However, there is an optimism that this pandemic could shine a silver lining on how to progress with the energy transition and shape the RE industries once the economy bounces back."



COVID-19 vs ASEAN Energy Sector: Renewables (Q2)

Q2/2020: "Renewable Energy projects continuously experience inevitable struggles during the COVID-19 pandemic. However, currently, ASEAN governments see that RE could be an integral part of re-building energy resiliency of the region as the new normal begin. RE shall and will be the driver for ASEAN to look towards green recovery plan, ensuring the economy rise and sustainability are inline. After half-year pandemic hit, there might be a silver lining that this COVID-19 outbreak is giving ASEAN a chance to re-orient its economy to be greener with renewables being the key solution."

Sneak Peek of H2 2020



Malaysia

- ✓ Petronas Malaysia signed an agreement to invest in solar energy start-up
- ✓ Hydropower project remains on track amid the challenges during the movement control order



Viet Nam

- ✓ Planned to shift ~17 GW of planned coal power plants in favor of natural gas and renewables.
- ✓ 5 MWp solar power farm was inaugurated on schedule despite multiple challenges.



Philippines

The rise of prosumers lead to solar installation in Filipino household

Global financing is become tighten during the Covid-19 pandemic, while local banks are reluctant to finance renewable energy capacity and generation projects

Government could provide incentives for financial institutions and investors to finance renewable energy projects, which could become part of the stimulus package for economic recovery.

Special Page on COVID-19

Related Analysis



Development: Pre COVID-19 Status and Progress 2020 is incredibly tough for ASEAN energy development as Covid-19 brings unprecedented challenges to

Discoursing the Impact

of COVID-19 in ASEAN

As COVID-19 already spread

all around the world, global

economic activities have been

slowed down. Various people's

Electricity Sector



ACCEPT initiated an In-House Sharing Session, discussing five different topics under a common theme regarding the COVID-19 pandemic and climate crisis via online



COVID-19 and the Energy Sector: Policy Perspectives The Asia Clean Energy Forum (ACEF) of the Asia Development Bank (ADB) is one of Asia's leading clean energy events and is held each June, ACEF connects...



Pandemic With Residential Energy Efficiency and It has been half a year since COVID-19 was first reported in December 2019, followed by the World Health...



COVID-19 vs ASEAN Energy Sector: Oil &

Plunge in demand, supply glut, and plummeting price-even touching minus point-have made oil and gas market



Energy Sector: Renewables Renewable energy sector is also inevitably hit by this pandemic, remarkably under the disrupted supply chain and logistic which cause inevitable



Energy Sector: Electricity Falling electricity demand is a dire impact of COVID-19 as the guarantine practice, which urges power utilities to cope. Left hanging between...

Energy and Climate Policy Tracker on COVID-19

ASEAN | Brunei Darussalam | Cambodia | Indonesia | Lao PDR | Malaysia | Myanmar | Philippines | Singapore | Thailand | Vietnam

ASEAN

mobility...

Related News

- 23 June In post-Covid Asia, countries should develop their own renewable energy capabilities
- 22 June Embracing renewables in ASEAN countries for post COVID-19
- . 15 June Standing tall: How green buildings are adapting to the post-Covid era
- 5 June UK seeks to boost ties with Southeast Asia through ASEAN
- . 15 May PH reports significant improvement in air quality
- . 13 May Post-pandemic stimulus may slow end of coal in Southeast Asia and Japan
- . 11 May COVID-19 will not slow Southeast Asia's shift from coal to renewables
- . 10 May Air pollution clearing up in Southeast Asia
- 7 May Air pollution clears in some cities in SE Asia during lockdown, but not all, study finds
- 6 May KrisEnergy reviewing commerciality of oilfield operations offshore Thailand
- 5 May Covid-19 offers preview of impact of environmental threats
- . 2 May Global oil price crash leaves ASEAN economies staring down the barrel
- . 27 April Don't Waste The Pandemic Response
- . 24 April Coronavirus means cheap oil isn't good news for energy-hungry Southeast Asia
- 24 April Lower oil prices hurting China and Southeast Asia
- . 22 April COVID-19: 150GW of Asia-Pacific renewables 'at risk'
- . 22 April Reduce risk of future epidemics by improving climate change commitments now, MPs warn



Indonesia

Key Policy Responses

As a result of the coronavirus pandemic, Indonesia took another step back toward a clean energy economy due to fossil fuel subsidies and hampered clean power plant projects such as geothermal. Indonesia introduces a domestic coal price of \$20 below market price in January and set a subsidised fuel quota at 26.87 million kiloliters (mL) as a government position to protect the people's purchasing power and ensure the business community.

Related News

- 16 June Indonesia pushes back target for palm oil fuel refinery to 2026
- 11 June SKK Migas lowers upstream oil and gas investment target this year
- 8 June Energy ministry rejects miners' request for relaxation on coal royalties
- 1 June Govt Should Review Energy Prices: Apindo
- 29 May Sustainable development crucial in Indonesia's COVID-19 recovery, experts say
- 26 May 11 companies sign deals to buy gas at lower prices











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Thank You













Badariah Yosiyana Programme Officer, South East Asia, International Renewable Energy Agency (IRENA)



Dr Roman Vakulchuk Senior Research Fellow, Norwegian Institute of International Affairs (NUPI)



Dr Zulfikar Yurnaidi Senior Officer of Sustainable Energy, Renewable Energy, and Energy Efficiency (REE), ASEAN Centre for Energy (ACE)











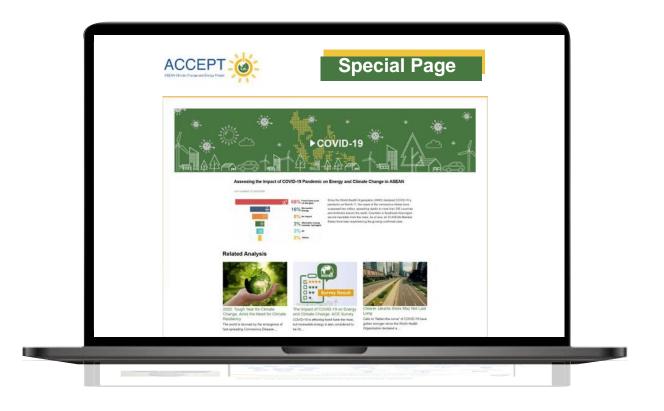








Special Page on COVID-19





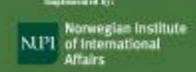




ASEAN Researchers Network on Energy and Climate Change (ARNECC)

A group of scholars, analysts and other stakeholders gathered in an interdisciplinary forum for the discussion of social, economic, governance and technical issues related to energy and/or climate change.







Link: go.aseanenergy.org/3okRr



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