

# Report of G20 Investment Forum on Energy Transitions

Bali, Indonesia, 31 August – 1 September 2022



## 1. INTRODUCTION: BACKGROUND AND OBJECTIVES

The G20 Investment Forum on Energy Transitions, co-organised by the Indonesian Ministry of Energy and Mineral Resources (MEMR) and the International Renewable Energy Agency (IRENA), was successfully held on 31 August – 1 September 2022 in Bali, Indonesia. The event was attended by over 250 in-person participants and more than 1,200 online participants, from government representatives, regulators, and other related agencies as well as development partners, financial institutions, investors and project developers.



The IRENA Investment Forum is a key element in the Agency's strategy to support the mobilization of investments in energy transitions. The G20 Investment Forum 2022 was co-hosted by IRENA and the G20 Presidency of Indonesia, in collaboration with international and regional partners. It convenes decision makers from the public and private sectors including the financial community, development partners and other relevant stakeholders to drive energy transition investments, with particular emphasis on the Southeast Asia region. The Investment Forum aims to strengthen the ability of decision-makers to foster a strong enabling environment for energy transition-related investments as well as helping developers prepare bankable projects and gain easier access to financing.

The Forum also ties in with the broader G20 Climate Action agenda. During the 2021 G20 Summit in Rome, leaders agreed that countries must take more meaningful and effective action to achieve the 1.5°C goal by 2050 and pledged to stop financing coal power. The G20 has an important mandate to formulate comprehensive recovery strategies and ensure that economic activity is sustainable and effectively contributes to broad prosperity. At the same time, the G20 could play a leadership role in laying a solid foundation for accelerating green economic activities, in line

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with the global leaders' commitment pledged at COP26, and mobilizing the financing required for the energy transition.

The report summarises the main content and findings of the workshop. All presentations can be downloaded at [here](#).

## 2. THE FORUM SETUP

The forum was designed as a two-day event with deep-dive sessions addressing project risks, parallel matchmaking sessions and high level energy transitions dialogue. Keynote presentations and panel discussions from governments, development partners, financial institutions and projects developers gave insights into different experiences on energy transitions investments.

On the first day, the following topics were discussed: (i) Developers' Perspective: Developing and Implementing Energy Transition Projects; (ii) Financiers Perspective: Originating and Appraising RE Projects; (iii) Access to Energy Transition Finance: Challenges and Opportunities; and Matchmaking between Project Developers, Investors and Financiers. Participants were also provided with opportunities to share experiences on the current investment mechanisms, identify key barriers and explore how to increase energy transitions investments.

The second day comprised of high-level dialogues and announcements, including (i) The Status of the Global Energy Transition: Priorities and Investment Needs, (ii) Launch of the Alliance for Industry Decarbonization (Bali Declaration), (iii) Letter of Intent (LoI) signing between IRENA and MENTARI, and (iv) Creating Enabling Frameworks Conducive to Energy Transition Investments in South-East Asia.

The detailed agenda is presented in [Annex I](#).

## 3. FORUM ACTIVITIES

### Day 1: Deep Dive Sessions on Finance Facilitation Day

The first day consisted of deep dive sessions on project financing and facilitation issues offering perspectives from developers and financiers, as well as discussions on the challenges and opportunities related to access to financing. The session was commenced with remarks from IRENA Director General, Francesco La Camera and Special Advisor for Minister on Energy Transition, Ego Syahril.



### **Session 1: Developers' Perspective: Developing and Implementing Energy Transition Projects**

Session 1 was organized as a panel discussion moderated by Ahmed Badr (Director, Project Facilitation and Support, IRENA) with the following panellists:

- Cita Dewi (Executive Vice President of Renewable Energy Division, PLN - Indonesian State Utility)
- Jean Ballandras (CEO of Asia Pacific, AKUO Energy)
- Tri Mumpuni (Executive Director, IBEKA)
- Retno Setianingsih (Senior Energy Program Specialist, USAID)
- Mark Hutchinson (Head of Asia, Global Wind Energy Council-GWEC)
- David Lecoque (CEO, Alliance for Rural Electrification-ARE).

The panellists discussed the developers' experiences across the deployment of energy transition-related projects. The session examined some of the key challenges and opportunities developers face and was an opportunity to share best practices and examples of the successful implementation of renewable energy projects.



Starting the panel discussion, Cita Dewi informed that PLN's strategy on energy transition and net zero roadmap has been established for 2030 and 2060. She further shared that currently the planned supply is up to 20 GW, which must also be supported with increased demand. Up to July 2022, 12.7% has been achieved and there remains significant gaps to bridge. She emphasized on the importance of support from the government and other stakeholders to overcome existing challenges and ensure target achievement.

Tri Mumpuni then exhorted those investments has to be made “just” and there should be a “sharing culture” in which investments consider local benefits. She explained that when investors are willing to share their profit with the community, the local community will take care of the investment. Democratization of energy is necessary, and the local community need to have the sense and same passion. Tri said that if this become possible, the future challenge of global warming can be collectively addressed.

Retno Setianingsih underlined the need for consistent policies from the government, which must go beyond tariff by creating incentives and other policies to provide investors with adequate and consistent returns. She said that progress have been made for the last 10 years, where technology in renewables has evolved and grew significantly. USAID continues to help its partner countries in the ASEAN region, including through capacity building for PLN system operators such as how to integrate intermittent technologies in the electrical system.

Jean Ballandras iterated that while planning is important, continuity in implementation is key to target achievement. If a country continued to move forward in implementation, it creates trust in terms of capacity to develop. Thus, it



is imperative to kick start and develop energy policies to allow continued implementation. In this case, he added, capacity for implementation will then become an important feature.

Mark Hutchinson assured that there are ambitious targets which may provide guidance to investors and developers. Financial resources are plenty to enable projects that need to be structured in a way that ensures profits. It is necessary to have well-structured implementation steps to mobilize all available capital.

### **Session 2: Financiers Perspective: Originating and Appraising Renewable Energy Projects**

The second session was moderated by Lubomir Varbanov (Managing Director and Head of Public Sector Solutions, Asia Pacific, Swiss Re) and brought together financiers from Southeast Asia and beyond that have taken part in financing energy transitions projects.

Panellists consisted of:

- Nicole Iseppi (Director of Global Energy Innovation, Bezos Earth Fund)
- Douglas Midland (Regional Managing Director, U.S. International Development Finance Corporation-DFC)
- Bayu Wirawan (Managing Director, Investment Directorate Indonesia Infrastructure Finance-IIF)
- Yuichiro Yoi (Unit Head for Indonesia, Private Sector Operations Department, Asian Development Bank-ADB)
- Ulrike Haarsager (Head of Development Effectiveness Strategic Planning and Economic Services, OPEC Fund).

The panellists discussed their perspectives on the complexity of renewable energy projects' valuation, as well as the multiple approaches and due diligence applied by the financiers. The session provided financiers with the opportunity to share their experiences in originating and appraising renewable energy projects, including to discuss what developers can do to avoid costly mistakes that can adversely affect project valuation and impact bankability.



Yuichiro Yui shared that, compared to other regions, one of the challenges sometimes faced by financiers in Southeast Asia is the size of projects. In justifying the structuring of project financing and clustering projects, there are minimum capacity thresholds to ensure an effective strategy to reach critical mass. The scale of projects is also key to achieve substantial cost reductions.



Douglas Midland pointed out the importance of balancing all dimensions that may ensure long-term sustainability when assessing renewable energy projects. Financial sustainability takes priority but the impact on the environment and returns to society are also key.

Ulrike Haarsager stated that the OPEC Fund for international development are very committed to financing renewable energy and supporting countries in their energy transition. Ulrike mentioned that OPEC Fund in the last four years approved about 350 million dollars in funding for renewable energy projects and are committed to increasing that substantially over the next few years.

Nicole Issepi elaborated that philanthropic organizations can play a fundamental role in accelerating the energy transition because they can take higher risks compared to financial institutions. Through collaboration, this can support the development of new technologies and open new markets.

Bayu Wirawan shared that, in regards to the power sector in Indonesia, the huge gap in the development of electricity grids has made it difficult to link supply and demand, as well as to handle the intermittency of solar and wind electricity. He emphasized that financing energy transition also means finding new ways to finance the development of grid infrastructure, such as through public-private partnership.

### **Session 3: Access to Energy Transition Finance: Challenges and Opportunities**

The third session commenced with a panel discussion moderated by Gurbuz Gonul (Director of Country Engagement and Partnerships, IRENA) that brought together key stakeholders including governments and financiers of energy transition projects.

Panellists consisted of:

- Cecilia Tam (Team Leader, Clean Energy Finance and Investment Mobilisation Programme, Organisation for Economic Co-operation and Development-OECD)
- German Velasquez (Director of Mitigation and Adaptation, Green Climate Fund-GCF)
- John Colombo (Country Manager of Indonesia, Clime Capital)
- Iwan Adhisaputra (Senior Advisor, Castle Rock Consulting UK Mentari)
- H.E Tomas Anker (Climate Ambassador, Government of Denmark)
- Dadan Kusdiana (Director General of New, Renewable Energy and Energy Conservation, Indonesian Ministry of Energy and Mineral Resources)
- Basilio Dias Araujo (Deputy for Indonesian Coordinating Minister of Maritime Sovereignty and Energy Affairs).

The panellists discussed about the challenges, opportunities and solutions in mobilizing energy transition finance in the investments of energy transition technologies.

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Dadan Kusdiana shared that Indonesia is trying to substitute coal with renewables through the use of co-firing. Currently, there is 144 MW project in West Java where hydro is used at night and solar is used during the day. He also elaborated that geothermal is a priority for the Indonesian government, in which 100% financing will come from the government to reduce project risks. He further revealed that blended finance institution is being established to accelerate the phase-out of coal power plants.

Tomas Anker stated that Danish partnership with Indonesia is very strong. The important thing is the actual cost of renewable energy, and it is important to address the fossil fuel subsidies. In 2/3<sup>rd</sup> countries, renewables are cheaper than fossil fuels. He shared that when working with Indonesia, long-term prospective to integrated renewables into the grid is considered. Also, Denmark is focusing on Indonesia but also works in Vietnam, it sees that ASEAN has a lot of potential. There is a huge work going on in Indonesia, especially with the announced target of 20% offshore wind by 2030 for Baltic countries. Over the next 20-30 years, things will move faster especially in line with the Paris Agreement. Investors are currently aiming at Indonesia and other countries in the region.

Cecilia Tam elaborated on the OECD programme that started in 2019. The partners include Indonesia and OECD provides objective and data -based analysis. There is a need to understand what the risks for private investors are and what the barriers are. OECD uses its platform to share best practices and solutions, e.g. forums to engage private sector. The role of the government needs to be understood in order to drive down costs. OECD have just launched the new report 'Blended finance guidance' for clean finance and is considering how to support off grid solutions.

John Colombo highlighted the increasing need for de-risking capital. It is necessary to bring expertise and help to fill in the gaps. There is a lot of capital in the developing world, and there should be more focus on de-risking facilities, and more support on early-stage projects in Indonesia.

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Jerry Velasquez stated that GCF would like to work more with the countries of ASEAN, and Indonesia has a lot of potential for private investments. The organization considers energy access more as adaptation rather than mitigation—hence would be more than happy to consider projects for energy access. There are ongoing biofuel projects, but it has been challenging with the current war. He shared that they would explore more opportunities, the goal is to leverage public investments to de-risk private investments.

Basilio Dias Araujo admitted that Indonesia still has a lot of to improve in this area. Indonesia has raw materials, now China and Korea cooperate with Indonesia companies to produce nickel batteries. Also, Tesla is partnering with Indonesia on that. Indonesia intends to produce cars for exports, and later shift from exporting materials to exporting finished products.

### Day 2: High Level Energy Transitions Dialogue Day

The second day of the Forum consisted of high-level discussions involving ministers and heads of institutions on priorities and investment needs for the global energy transition and creation of enabling framework for investments in Southeast Asia. The forum commenced with opening remarks from HE Arifin Tasrif, Minister of Energy and Mineral Resources of Indonesia and Francesco La Camera, Director General of IRENA.



A scene setting presentation was later given by Dolf Gielen, IRENA's Director of Innovation and Technology on the Energy Transition Outlook for ASEAN. He laid out the pathway to carbon neutrality for the Southeast Asian region and the key opportunities and challenges. He also presented the results of the energy transition outlooks for Indonesia and Malaysia.

### **Session 1: The Status of the Global Energy Transition: Priorities and Investment Needs**

The first session was moderated by Dan Dorner (Head of Clean Energy Ministerial Secretariat) and brought together high-level panellists from governments and development agencies to consider the priorities and investment needs.

Panellists consisted of:

- H.E. Greg Hands, Minister for Energy, Clean Growth and Climate Change, UK
- H.E. Armida Salsiah Alisjahbana, Executive Secretary of the United Nations Economic and Social Commission for Asia and Pacific (UNESCAP)
- H.E. Tan See Leng, Second Minister for Industry and Trade, Singapore
- H.E. Stefan Wenzel, Parliamentary State Secretary, Germany
- Mari Elka Pangestu, Managing Director of Development Policy and Partnerships, World Bank
- H.E. Thomas Anker Christensen, Ambassador of Climate Change, Denmark



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- Roberta Casali, Vice President, ADB
- Jerry Velasquez, Director, Division of Mitigation and Adaptation, Green Climate Fund (GCF)
- H.E. Rania Al-Mashat, Minister of International Cooperation, Egypt



H.E. Greg Hands stated that the Investment Forum is strengthening UK's partnership for renewables deployment. There is a common goal of 1.5 degrees and clean energy is urgently required to achieve it. Use of coal must end by 2030 and the private sector can also play a role like ADB in energy transition mechanism. Investment opportunities must also be a focus. Here, fossil fuel subsidy reform and private investment are essential. Governments must understand the real cost of fossil fuels from health to environment. Investors need confidence and certainty under the right policy framework. There must be appropriate regulatory environment. Investors are extremely interested in renewables. About 70% of electricity in the UK was from fossil fuels in the past, then it became 40% and now keep decreasing. Policies, regulations and targeted incentives should be put at the centre to create long term investment climate. Prices for renewable energy have dropped drastically: e.g. solar price reduced by 80%. Countries have different challenges, but through G20 and IRENA everyone must come together to find a solution.

H.E. Armida Salsiah Alisjahbana underscored that Asia-Pacific region is key to reach net zero. Current finance level requires a significant boost to reach the targets. Public finance alone is not sufficient, private sector funds are necessary to accelerate energy transition. Investors need to have confidence in the sector. Fossil fuel subsidies and carbon price are very important. Energy access can be one of the areas for investment increases. Innovation from private sector should be considered. Regional power grid connectivity is another area of interest for investments. In regards to this, UNESCAP has prepared an analysis with recommendations on investments in regional connectivity.



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H.E. Tan See Leng stated that ASEAN has a very ambitious energy transition target of 23% share by 2025. Private sector and international financial institution must play a key role in energy transition. The region is rich in renewable energy potential and is well-positioned to attract more investments. Singapore is keen to work with international and regional partners, and has been working closely with IEA to establish Singapore – IEA regional training hub to promote investment developments. Singapore government is taking a lead in issuing green bonds. In June 2022, the green bonds framework was established. He emphasized that large scale infrastructure projects are important to make bankable and to de-risk. He said that the forum becomes an opportunity for policymakers to discuss how to reduce finance gap.

H.E Stefan Wenzel shared that Europe is discussing what is happening with energy after the war. Green hydrogen is cheaper than blue hydrogen. Development banks need to participate in the discussion. There are a lot of good possibilities to put together, like private investments, and everyone need to look at good business cases. There is a possibility to boost German's climate initiative and just energy transition partnership with more countries.

Mari Elka Pangestu underlined that the objective is universal energy access under SDG 7. 2. Investment opportunities. It is necessary to understand where the pipeline of projects is and to have an enabling environment. She also said that the difference between bankable and nonbankable projects must be understood, and further, who will be financing nonbankable projects. Policies, commitments are needed from the governments. In Indonesia, transition issue is strong in Java, but in the rest of the country it is access that becomes an issue. A framework for short term priorities is necessary. She also added that natural gas would be needed as well as a transition bridging fuel if there no viable alternative.

H.E. Thomas Anker Christensen informed that Denmark has a lot of government subsidies to build the sector. There is also a long-term planning to focus on offshore and onshore wind. In fact, it was just announced that German will increase wind capacity. Integration of Germany, Denmark and other countries is extremely important. There are many discussions on just energy transition partnership with Indonesia. He said that countries indeed need to increase ambitions, but the international community must also be ready to help in supporting these ambitions.

Roberta Casali affirmed that ADB is committed to be a climate bank for Asia and the Pacific. The bank has an ambitious target of 100 bln \$ by 2030, 75% of ADB's operations will be supporting climate transition. ABD is fully aligned with Paris Agreement scope and need a programmatic approach that aligned with each country needs and priorities. She explained that ADB provide knowledge solutions, and has launched the programme to accelerate coal plant retirement and increase renewables investment at COP 26. She said that stakeholders are very diverse, and thus it is important to consider bankability of projects and find the right mix of finance in order to win this battle against the climate change. How much MDBs can do to create sustainable capital markets—a framework is necessary to define what is green, blue bond etc. There must be a pipeline of credible projects. This way, good financing for green transition can be mobilized. Local financial institutions are also very important and must be supported.

Jerry Velasquez stated that there are short-term challenges, and to address them at GCF the focus is on policies and energy access not as mitigation but as adaptation. In terms of energy efficiency, industry and transport are at the centre of attention. He added that de-risking is also important to address. GCF is working with WB within geothermal energy risk mitigation facility and will launch big green bond guarantee facility in October 2022.

H.E. Rania Al-Mashat shared that in Egypt energy sector, 13% of GDP. 3.7GW is generated from renewables. By the energy, transportation, water, agriculture, water and gas are priorities for Egypt. She emphasized that, for more sustainable investments, private sector engagement is crucial to reach climate goals.

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### Launch of The Alliance for Industry Decarbonization



After the first session was concluded, IRENA with co-founding partner Siemens Energy and 13 companies across all industry sectors officially launched the Global Alliance for Industry Decarbonization. The new Alliance aims to accelerate net-zero ambitions and the decarbonization of industrial value chains in pursuit of the Paris Agreement climate goals. The new coalition was officially launched by adopting the Bali Declaration in the presence of IRENA's DG and the Executive Board Member of Siemens Energy, Karim Amin. Siemens Energy will co-chair the Alliance leadership. The first Alliance meeting is planned to take place at COP27 in Sharm El Sheikh, Egypt

### Letter of Intent Signing between IRENA and MENTARI

The next activity was the signing of a Letter of Intent (LoI) between IRENA and MENTARI by Ahmed Badr (Director of PFS) and Julio Retana (IRENA Team Leader). IRENA and MENTARI have planned to collaborate on facilitating project development and in the preparation of creating a pipeline of bankable proposals. The partners will be supporting matchmaking with potential investors and promoting initiatives on public-private dialogue on scaling up access to sustainable finance in Indonesia. With this LoI, the established cooperation aims to expand in knowledge creation, capacity building, and strategic dialogue in the support the of effective deployment of renewable energy market development in Indonesia, whilst taking into account the recommendations proposed by IRENA in the forthcoming Indonesia Energy Transition Outlook.

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### **Session 2: Creating Enabling Frameworks Conducive to Energy Transition Investments in South-East Asia**

The next session was moderated by Rabia Ferroukhi and brought together high-level panellists from governments and development agencies and research institutions to consider the creation of enabling frameworks for energy transition investments.

Panellists consisted of:

- Kerri-Ann Jones, Deputy Secretary-General, OECD
- Dr. Kazutomo Irie, President, Asia Pacific Energy Research Centre (APERC)
- Dr. Nuki Agya Utama, Executive Director, ASEAN Centre for Energy
- Mark Hutchinson, Head of Asia, GWEC
- Christophe Bahuet, Deputy Regional Director for Asia and the Pacific, UNDP
- Agung Wicaksono, Deputy Chair, Business 20 (B20) Energy, Sustainability and Climate Taskforce
- Basilio Diaz Araujo, Deputy for Indonesian Coordinating Minister of Maritime Sovereignty and Energy Affairs



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Kerri-Ann Jones mentioned that the OECD's Southeast Asia Regional Programme aims to encourage a systematic exchange of experiences to develop common solutions to regional policy challenges. It is very comprehensive in nature and covers crucial policy areas including Education and Skills Development, Small and Medium-Sized Enterprises (SMEs), Investment Policy and Promotion, along with other aspects. It is a critical time right now, there are growth and demand, but also a lot of challenges. All countries in the region are different, hence national policies and coordination are important. Energy prices do not incentivize renewables. There are high subsidies – this is a policy that is challenging and needs to be addressed. Global cooperation and collaborations important. Energy transition should be a driver of inclusion. It is about skills, training and access. SEA regional programme has many dimensions. One of them is small and medium enterprises, as they employ 60% people and represent over 90% of the businesses. OECD has a toolkit for small enterprises with examples how companies have access to green finance.

Kazutomo Irie informed that APERC produce energy demand and supply outlook every three years and just completed the outlook. In twenty years, the APREC energy demand has doubled. It is estimated to have the highest growth among all APERC sub-regions. The energy demand is expected to demand in the planned policies scenario. APERC has two non-binding aspirational goals. One is the reduction in the energy efficiency consumption and doubling share of renewables by 2030. APERC is now estimating how to make these targets ambitious, as the targets aren't too ambitious at the moment.

Nuki Agya Utama underlined that 33.5% renewable energy comes from the installed capacity. They primarily come from hydropower. If VRE is to be increased, it will be a different story. We have to look at the whole sector. Industrial sector isn't being looked at properly. In power sector, we optimize the cost – if we take an optimization model, USD 500 billion will be used only for the power sector. VRE can't be implemented optimally. At the moment, we are looking at all sources, and thermal and fossil fuels will still play a role. Supply chain issues are going to be a problem is going to be an issue if we don't solve it easily. Localizing supply chains in the economy is important. We need to



build capacity – and one is the human resource. Our curriculum in Southeast Asia hasn't touched on energy transition.

Mark Hutchinson highlighted that right now there is 20GW of solar, with 16GW is in Vietnam—installed in the last 2 or 3 years. Vietnam might not expect such success, but it shows what can be achieved with good policies. Philippines did an auction and they had a good success. There are good wind resources in Vietnam and Philippines. There is a little of resource issue in the Southeast Asia, but there are also policy issues. The risks were favourable for project developers. A 1MW of solar creates more jobs, but they are also local jobs. If there is a policy predictability, there will be more jobs and local value creation in the region.

Christophe Bahuët underlined that UNDP focusses on the NDCs. Policies are anchored within NDCs. We have climate promise. UNDP works with MRV (measurement, reporting and verification) for carbon emission reductions. We also have fossil fuel subsidy report – they block energy transition. But they need to be dismantled in a socially smart way. We are working on a framework with a number of countries. We are also working with industries on the ground that contributes 2.3 million tonnes emission reduction. The understanding of RE has grown significantly. RE is economically attractive provided we don't have subsidies and market distortion. De-risking projects is important and UNDP is doing this for project developers. In Cambodia, we are modelling private sector data to analyse the solar PV potential and look at the measures of de-risking off-grid and on-grid projects. There are about 70 measures on how government can de-risk and support project developers. Connecting project developers with climate investors is very important. CIP is a good example.

Agung Wicaksono said that the taskforce shouldn't lose sight of development in the climate space. A set of policy recommendations has been set. First policy recommendation is to accelerate the transition to sustainable energy by reducing the energy intensity. This relates with how phasing down of coal can be done in a way that doesn't jeopardize energy security. Second policy recommendation is for just, orderly and affordable transition. We need to ensure that micro- enterprises are not left behind. He added that it is also important to ensure consumer level access to clean modern energy.

Basilio Diaz Araujo mentioned that Indonesia realizes its abundant resources. The government has changed its approach by not only exporting raw materials but also seek to export finished products. Indonesian companies are investing in EVs, and few more global companies are coming. Maybe, all countries won't have all resources. For Solar PV, the potential for production is very low – 35MW to 100MW. Just energy transition, we all have to smile and not to let someone behind. Small investors are involved on biomass. In a village of 40 thousand households, if we can have them invest 2 hectares per household, then we have 80 thousand hectares. It is bad to have regulations that discourages private sector investment. Indonesia has 500 municipalities, and they are independent. Indonesia is ready for renewable energy. Indonesia should have stopped using coal yesterday, but it requires huge investment. Indonesia is open for partnerships including public-private partnership models.

#### **4. PARALLEL EVENT: MATCHMAKING BETWEEN PROJECT DEVELOPERS, INVESTORS, AND FINANCIERS**

Apart from panel discussions, parallel matchmaking sessions were also organized on 31 August and 1 September 2022 to connect public and private project proponents with potential financial and commercial partners. The sessions were carried out in two formats, namely closed-door meetings and exhibition room.

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The discussions started at the forum are continuing and tangible outcomes such as agreeing to provide finance will come at a later stage after due diligence and information exchange.

### Closed Door Meeting



The format allowed projects to be displayed in two rooms, one for projects actively supported by IRENA and the second for projects from the region that were presented by the project proponents. During the 2-day meetings, there were 21 projects that participated with a total of 32 meetings carried out between financiers and project proponents.

List of participants for closed door meetings:

PROJECT FINANCIER	PROJECT DEVELOPERS		
	COMPANY	PROJECT	COUNTRY
<ul style="list-style-type: none"> <li>Indonesia Infrastructure Finance</li> <li>Swiss RE</li> <li>Hexa Renewables</li> <li>Islamic Development Bank</li> <li>Pegasus Capital Advisors</li> <li>Tokyo Gas</li> <li>Regions 20</li> <li>Clime Capital</li> <li>LX International</li> </ul>	PT Akasu Energi Utama	RoR Hydropower – 2.8 MW	Indonesia
	Helio Synar	Solar PV and Biomass – 25 MW	Indonesia
	Gree Energy	Biogas-to-Energy 4.5 –MW	Indonesia
	PT Pelita Luwuk Energi	Utility Scale Solar PV 16 – MWp	Indonesia
	Elemental Energies	Utility Scale Solar 44 –MWp	India
	Sand Town Solar Bhd	Utility Scale Solar 33 –MWp	Malaysia
	Adwik Bio Ener-g	Biogas – 21,000 m3	India
	PT PLN Persero & NZMATES	Solar Hybrid – 4 MW	Indonesia
	Fiji Department of Energy	Micro Hydro – 33 KW and Solar Home System – 450 KW	Fiji



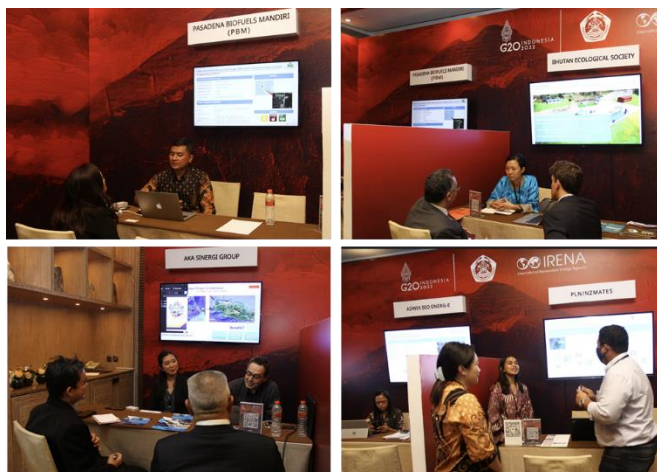
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### Exhibition Room

The exhibition room enabled 10 project proponents to present over 27 projects in the format of both standard Power Point presentation for projects on the big screen and the QR codes to access the Project Information Sheet (PIS) prepared by IRENA. The exhibition room has attracted over 13 potential financiers, (e.g ADB, GCF, Bezos Earth Fund, Gading Kencana, Sembcorp, and LX International, to name a few) to have good discussion with the potential project proponents in the room from 10am until 5pm on 31 August 2022.



List of participating project proponents in the exhibition room:

COMPANY	NUMBER OF PROJECTS	COUNTRY
PLN/NZMATES	2 projects	Indonesia
Adwik Bio Energ-E	1 project	India
Bhutan Foundation	1 project	Bhutan
Bhutan Ecological Society	1 project	Bhutan
IBEKA	3 projects	Indonesia
Fiji Department of Energy	5 projects	Fiji
AKA Sinergi Group	3 projects	Indonesia
Pasadena Biofuels Mandiri (PBM)	1 project	Indonesia
Elemental Energies	3 projects	India
Kamiko Group	6 projects	Indonesia



## ANNEX 1 – AGENDA

### Day-1 – Plenary Event

<b>09.00 – 09.30</b>	<b>Registration</b>
<b>09.30 – 10.00</b>	<b>Opening Remarks</b> <ul style="list-style-type: none"> <li>– Francesco La Camera, Director-General, IRENA</li> <li>– Ego Syahril, Special Advisor for Minister on Energy Transition, Ministry of Energy and Mineral Resources Indonesia</li> </ul>
<b>10:00-11:30</b>	<b>Session 1. Developers’ Perspective: Developing and Implementing Energy Transition Projects</b> <p>This session will focus on developers’ experiences across the deployment of energy transition-related projects. It will also examine some of the key challenges and opportunities developers face and provide the opportunity to share best practices and examples of the successful implementation of renewable energy projects.</p> <p><u>Topics of discussion:</u></p> <ul style="list-style-type: none"> <li>– Funding pre-feasibility and feasibility studies</li> <li>– Negotiating and preparing PPAs</li> <li>– Structuring the equity and debt (accessing finance in specific countries/regions)</li> <li>– Financial close</li> <li>– Issues with local currency finance</li> <li>– Policy and regulatory issues (financial incentives etc.)</li> <li>– Permitting, manpower (bundle together)</li> <li>– Community engagement, social and environmental safeguards</li> </ul> <p><b>Moderator: Ahmed Badr, Director, Project Facilitation and Support, IRENA</b></p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• Cita Dewi, Executive Vice President of Renewable Energy Division, PLN (Indonesian State Utility)</li> <li>• Jean Ballandras, CEO Asia Pacific AKUO Energy</li> <li>• Tri Mumpuni, Executive Director IBEKA</li> <li>• Retno Setianingsih, Senior Energy Program Specialist, USAID</li> <li>• Mark Hutchinson, Head of Asia, Global Wind Energy Council (GWEC)</li> <li>• David Lecoque, Alliance for Rural Electrification (ARE)</li> </ul>
<b>11:30-12:00</b>	<b>Coffee Break</b>



<p><b>12:00-13:30</b></p>	<p><b>Session 2. Financiers Perspective: Originating and Appraising RE Projects</b></p> <p>The valuation of renewable energy project is complex, and multiple approaches and due diligence are applied by the financiers. This session provides financiers with the opportunity to share their experiences in originating and appraising renewable energy projects. What are the approaches to, and how do financiers assess the value of projects? This session will also discuss what developers can do to avoid costly mistakes that can adversely affect project valuation and impact bankability.</p> <p><u>Topics of discussion:</u></p> <ul style="list-style-type: none"> <li>– Impact of recent events on financing (extreme weather, geopolitics &amp; pandemic)</li> <li>– New focus areas for financiers in RE project financing (green hydrogen etc)</li> <li>– Frequent shortcomings in project development</li> <li>– Different facets of projects to be considered for financing</li> </ul> <p>Moderator: <b>Lubomir Varbanov Managing Director and Head of Public Sector Solutions, Asia Pacific, Swiss Re</b></p> <p>Panelists:</p> <ul style="list-style-type: none"> <li>• Nicole Iseppi, Director of Global Energy Innovation, Bezos Earth Fund</li> <li>• Douglas Midland, Regional Managing Director, U.S. International Development Finance Corporation (DFC)</li> <li>• Bayu Wirawan, Managing Director, Investment Directorate Indonesia Infrastructure Finance (IIF)</li> <li>• Yuichiro Yoi, Unit Head for Indonesia, Private Sector Operations Department, Asian Development Bank (ADB)</li> <li>• Ulrike Haarsager, Head of Development Effectiveness Strategic Planning and Economic Services, OPEC Fund</li> </ul>
<p><b>13:30-14:30</b></p>	<p><b>Lunch</b></p>





<p><b>14:30-16:30</b></p>	<p><b>Session 3. Access to Energy Transition Finance: Challenges and Opportunities</b></p> <p>Investments in energy transition technologies, while having reached record levels, are still not large enough and are concentrated in just a few countries and regions. For the energy transition to become truly global, access to financing must widen considerably. The needed scale-up of renewables would require significant and decisive coordinated actions across public and private sectors. This session will discuss the challenges, opportunities and solutions regarding mobilising energy transition finance.</p> <p><u>Topics of discussion:</u></p> <ul style="list-style-type: none"> <li>– Risk associated with accessing RE finance (region-specific risks, political risks, policy or regulatory risks, currency risks, counterparty risks, grid and transmission risks, and liquidity risks).</li> <li>– Risk mitigation mechanisms</li> <li>– Lack of bankable renewable energy projects pipeline</li> <li>– High upfront investment</li> <li>– Lack of local capability to bring the projects to bankable level</li> <li>– Lack of access to financing</li> </ul> <p><b>Moderator: Gurbuz Gonul, Director, Country Engagement and Partnerships IRENA</b></p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• Cecilia Tam, Team Leader Organisation for Economic Co-operation and Development (OECD)</li> <li>• German Velasquez, Director of Mitigation and Adaptation, Green Climate Fund (GCF)</li> <li>• John Colombo, Country Manager of Indonesia, Clime Capital</li> <li>• Iwan Adhisaputra, Senior Advisor, Castlerock Consulting, UK Mentar</li> <li>• H.E Tomas Anker Christensen, Danish Climate Ambassador</li> <li>• Dr. Dadan Kusdiana, Director General, Renewable Energy and Energy Conservation, Ministry of Energy and Mineral Resources Indonesia</li> <li>• Basilio Dias Araujo, Deputy for Coordinating Minister of Maritime Sovereignty and Energy Affairs Indonesia</li> </ul>
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## Day-1 Parallel Event

<p><b>10:00-16:00</b></p>	<p><b>Closed Door Meetings</b></p> <p><b>Matchmaking between Project Developers, Investors and Financiers (facilitated by IRENA)</b></p> <p>The session aims to connect public and private project proponents with potential financial and commercial partners. Projects applying to be a part of the matchmaking event will be screened by IRENA to ensure they are sufficiently advanced and suitable for the event.</p> <p><u>Objective:</u></p> <ul style="list-style-type: none"> <li>– Enable the discussion of pending matters on existing communications between developers, investors and financiers</li> <li>– Promote new engagements among developers, investors and financiers (LOIs, term sheet, etc.)</li> </ul> <p><u>Scope of key activities:</u></p> <ul style="list-style-type: none"> <li>– Introduction of bankable energy transition projects by pre-listed project developers to interest investors / financiers</li> <li>– Advice on tools and standardizing due diligence processes to help strengthen project proposals</li> <li>– Advice on how to improve efficiency and mitigate costs to achieve financial closure</li> </ul> <p><u>Format:</u></p> <p>The format of the matchmaking event will allow for projects to be displayed in two rooms, one for projects actively supported by IRENA and the second for projects from the region that will be presented by the project proponents. Financial institutions can pre-book meetings with projects that have been supported by IRENA prior to the event while no booking is required for the second room since projects will be on exhibition.</p> <p><u>Objective:</u></p> <ul style="list-style-type: none"> <li>– Signing ceremonies for financial closure/PPA agreements</li> <li>– Facilitate the discussion of pending matters on existing communications between developers, investors and financiers</li> <li>– Promote new engagements among developers, investors and financiers (LOIs, term sheet, etc.)</li> </ul>
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## Report of G20 Investment Forum on Energy Transitions

Bali, Indonesia, 31 August – 1 September 2022



### Day 2 – High Level Dialogue

09:00 – 09:30	<b>Welcome Remarks</b> <ul style="list-style-type: none"> <li>H.E. Arifin Tasrif, Minister of Energy and Mineral Resources, Indonesia</li> <li>Francesco La Camera, Director General, IRENA</li> </ul>
09:30 – 09:50	<b>Scene-setting Presentation by IRENA: 2<sup>nd</sup> Renewables Outlook for ASEAN and Energy Transition Outlooks for Indonesia and Malaysia</b>  Dolf Gielen, Director, IRENA Innovation and Technology Centre
09:50 – 11:00	<b>The Status of the Global Energy Transition: Priorities and Investment Needs</b> According to IRENA's flagship publication World Energy Transitions Outlook 2022, to achieve net zero carbon by 2050, a massive scale-up of investments will be needed the rest of this decade, in all sectors and regions, to reach the required USD 5.7 trillion a year between 2021 and 2030. The public and private sectors both have key roles to play. In this context, this session will provide a platform for exchange of views among Ministers from G20 and ASEAN and high-level delegates from industry, financial institutions, international organisations.  Moderator: Dan Dorner, Head of Secretariat for the Clean Energy Ministerial  Speakers/Panelists: <ul style="list-style-type: none"> <li>H.E. Dr. Rania Al-Mashat, Minister of International Cooperation, Egypt</li> <li>H.E. Dr. Tan See Leng, Second Minister for Industry and Trade, Singapore</li> <li>H.E. Greg Hands, Minister for Energy, Clean Growth and Climate Change, UK</li> <li>H.E. Armida Salsiah Alisjahbana, Executive Secretary of the United Nations Economic and Social Commission for Asia and Pacific (UNESCAP)</li> <li>H.E. Stefan Wenzel, Parliamentary State Secretary, Germany</li> <li>Mari Elka Pangestu, Managing Director of Development Policy and Partnerships, World Bank</li> <li>H.E. Thomas Anker Christensen, Ambassador of Climate Change, Denmark</li> <li>Roberta Casali, Vice President, ADB</li> <li>German Velasquez, Director, Division of Mitigation and Adaptation, Green Climate Fund (GCF)</li> </ul>
11.00 - 11.20	<b>Launch of the Alliance for Industry Decarbonization (Bali Declaration)</b> <ul style="list-style-type: none"> <li>Karim Amin, Member of the Executive Board, Siemens Energy</li> <li>Jasim Husain Thabet, TAQA Group Chief Executive Officer</li> <li>Francesco La Camera, Director General, IRENA</li> </ul>
11.20 - 11.30	<b>Letter of Intent (LoI) signing between IRENA and MENTARI</b>
11:30 – 11:45	Coffee Break
11:45 – 13:00	<b>Creating Enabling Frameworks Conducive to Energy Transition Investments in South-East Asia</b> This session will discuss enabling frameworks that drive the investment needed for sustainable energy transitions.



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	<p><u>Possible topics of discussion:</u></p> <ul style="list-style-type: none"> <li>– Enabling policies such as regional and national commitments to raise ambitions, measures that eliminate market distortions and disincentivize new investments in fossil fuel technologies and instruments that mitigate risks and facilitate access to finance.</li> <li>– Policies and measures to support the deployment of renewables (power, end uses) and support their integration into the power and wider energy systems</li> <li>– Policies and measures that enable structural change and a just and inclusive transition including measures that govern demand and supply of critical minerals and help mitigate risk of supply constraints including circular economy strategies.</li> </ul> <p>Moderator: Rabia Ferroukhi, Director, Knowledge, Policy and Finance, IRENA</p> <p>Panelists:</p> <ul style="list-style-type: none"> <li>– Kerri-Ann Jones, Deputy Secretary-General, OECD</li> <li>– Dr. Kazutomo Irie, President, Asia Pacific Energy Research Centre (APERC)</li> <li>– Dr. Nuki Agya Utama, Executive Director, ASEAN Centre for Energy</li> <li>– Mark Hutchinson, Head of Asia, GWEC</li> <li>– Christophe Bahuét, Deputy Regional Director for Asia and the Pacific, UNDP</li> <li>– Agung Wicaksono, Deputy Chair, Business 20 (B20) Energy, Sustainability and Climate Taskforce</li> <li>– Basilio Dias Araujo, Deputy for Coordinating Minister of Maritime Sovereignty and Energy Affairs Indonesia</li> </ul>
<b>13.00 – 13.15</b>	<p><b>Closing</b></p> <p>Francesco La Camera, Director General, IRENA</p>