



ENERGY
TRANSITION
PARTNERSHIP

SOUTHEAST ASIA ENERGY TRANSITION PARTNERSHIP

ANNUAL REPORT

JANUARY - DECEMBER 2023



Federal Ministry
for Economic Affairs
and Climate Action



Department for
Energy Security
& Net Zero



Environment and
Climate Change Canada
Environnement et
Changement climatique Canada



Australian Government
Department of Climate Change, Energy,
the Environment and Water



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The views and results expressed in this report are based on information from projects funded by ETP and do not reflect the official opinions of the funding organizations nor that of the United Nations Office for Project Services (UNOPS).

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MESSAGE FROM THE DIRECTOR

By the end of 2023, it is clear that the climate crisis is not a theoretical future threat but a present reality, already impacting the world's population, with serious consequences for vulnerable groups. Energy transition remains the single most impactful step governments can take to mitigate climate change and improve the environment.

In Southeast Asia, fossil fuels (especially coal) continue to dominate the energy mix. Progress on the transition to renewable energy remains slow. Nevertheless, at COP28, Southeast Asian leaders reaffirmed ambitious energy transition targets including those related to Net Zero emissions. In two of the largest countries, Indonesia and Vietnam, Just Energy Transition Partnerships (JETPs) are now in place with support from external donors. But huge challenges remain in implementing these commitments in a timely way with a myriad of policy, legal, and technical obstacles to be dealt with.

Southeast Asia Energy Transition Partnership (ETP) has been established to help tackle exactly these challenges. We are working in Vietnam, Indonesia, and the Philippines and regionally to provide strategic technical assistance and build capacity.

2023 has marked a huge expansion in our programme, moving from 14 projects under implementation at the start of the year to 34 projects by the end, worth USD 11.58 million. Prime examples include:

- supporting Vietnam for a carbon market, starting with assessing the impacts of the Carbon Border Adjustment Mechanism (CBAM) and progressing with support for the legal and regulatory structures required for an active market
- the completion of engineering and architectural designs for Indonesia's JAMALI Control Centre (nation's largest), thus unlocking the potential to incorporate significant growth of variable renewable energy into the electricity grid
- tackling major bottlenecks to offshore wind development in the Philippines through marine spatial planning tools, tackling licensing and permitting
- addressing the overarching just considerations of the energy transition through the multi-stakeholder Just Coal Transition Platform.

Building on our established and trusted presence in-country and a number of strategic networking opportunities at COP28, we are actively forging new partnerships with governments and philanthropies to further expand our pipeline in 2024 and beyond. We are hugely grateful to our existing funders who last year agreed to extend the mandate of ETP to 2035.

Internally, we have been recruiting new staff to strengthen our capacity and the team now stands at 19 staff in Bangkok and our three partner countries, with plans for further expansion. We continue to benefit from being hosted by the United Nations Office for Project Services (UNOPS), with funders being able to rely on UNOPS' well established global system of project management.

I am delighted to present the Annual Report which summarises ETP progress to date with a particular focus on our results and outcomes in 2023.

Philip Timothy Rose

EXECUTIVE SUMMARY

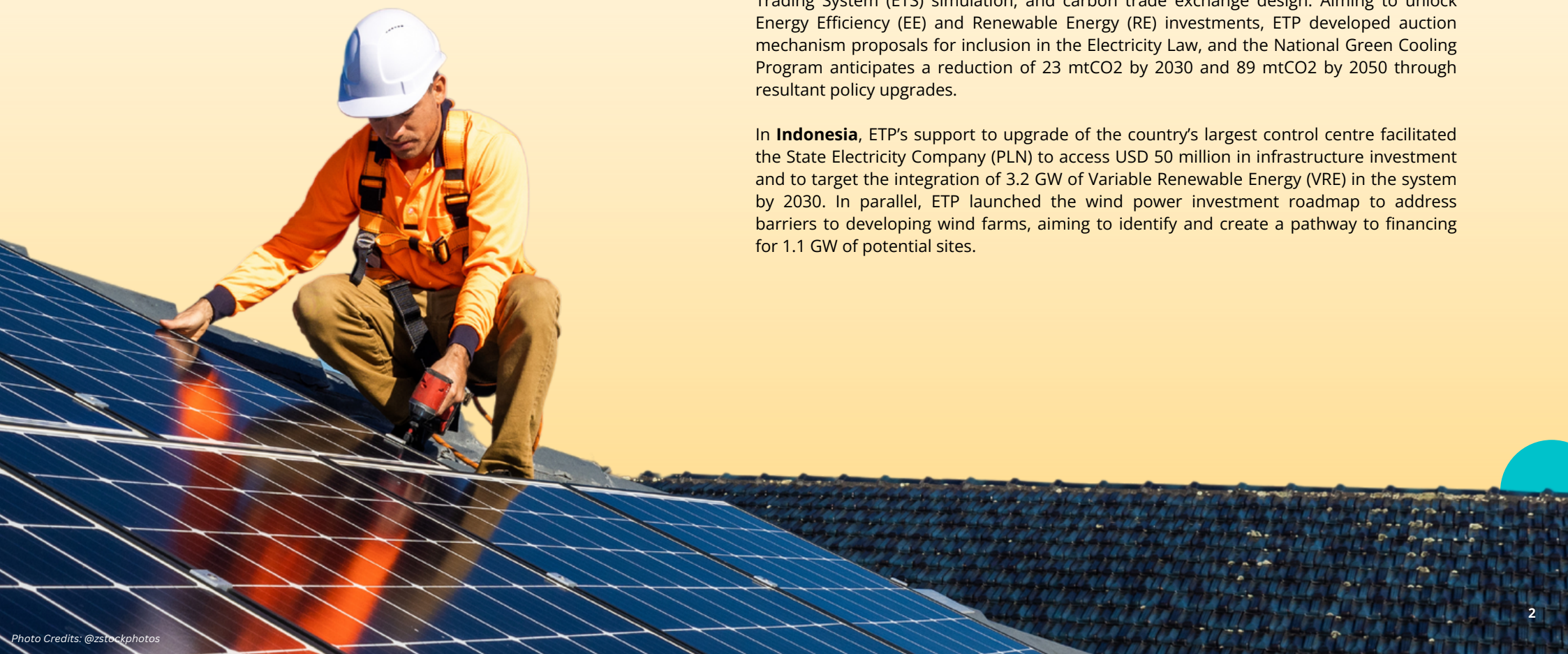
Energy transition in Vietnam, Indonesia, and the Philippines is gaining momentum, with growing recognition of the need to pivot towards sustainable and renewable sources. The shifts in the regulatory and legal frameworks and increased climate commitments are a testament to this. As these nations grapple with the challenges of decarbonising their energy infrastructure, the need for support has risen significantly.

While 2023 saw ETP play a significant role in aiding these countries to address their energy transition challenges, the demand for assistance continues to grow.

By providing crucial expertise, technical assistance, and policy guidance, ETP is facilitating a smoother and more effective transition toward renewable energy sources. ETP adopts a holistic strategy to navigate this transition, as evident in the key developments of 2023.

In **Vietnam**, ETP took a lead role in carbon market development, delivering the Carbon Border Adjustment Mechanism (CBAM) impacts assessment, carbon pricing, Energy Trading System (ETS) simulation, and carbon trade exchange design. Aiming to unlock Energy Efficiency (EE) and Renewable Energy (RE) investments, ETP developed auction mechanism proposals for inclusion in the Electricity Law, and the National Green Cooling Program anticipates a reduction of 23 mtCO₂ by 2030 and 89 mtCO₂ by 2050 through resultant policy upgrades.

In **Indonesia**, ETP's support to upgrade of the country's largest control centre facilitated the State Electricity Company (PLN) to access USD 50 million in infrastructure investment and to target the integration of 3.2 GW of Variable Renewable Energy (VRE) in the system by 2030. In parallel, ETP launched the wind power investment roadmap to address barriers to developing wind farms, aiming to identify and create a pathway to financing for 1.1 GW of potential sites.



EXECUTIVE SUMMARY

In the **Philippines**, ETP has addressed intricate transmission challenges by presenting alternative governance options and outlining a roadmap for the integration of smart grid innovations. On the distribution front, ETP initiated a Demand Side Management (DSM) program, marking the initiation of the countrywide implementation of smart technologies. This initiative enhances system flexibility and reliability while minimizing the necessity for constructing additional power plants. In offshore wind, ETP has undertaken the Marine Spatial Plan and Permitting Process, with the goal of unlocking the sector and installing the first 6.7 gigawatts by 2028.

ETP's **regional program** saw the launch of the ASEAN Power Grid Advancement Program, developing a stepwise roadmap and financing framework to advance the implementation of the ASEAN Power Grid (APG) and unlock the huge potential to Green House Gas (GHG) reductions that an interconnected ASEAN would bring. Emphasizing the principle of leaving no one behind, ETP officially launched its Just Coal Transition Platform (JCTP). JCTP will serve as the primary convening platform in the region, enabling communities, governments, and development partners to collaborate and exchange information. This will be achieved through activities such as twinning programmes, study tours, and contextualized learning resources. The platform aims to ensure an inclusive and equitable transition process.

2023 saw ETP leverage its position as a trusted partner to deliver impartial energy transition support to our partner countries, as well as to build an ever-strengthening portfolio of projects needed to deliver on the impending UN Sustainable Development Goals and Paris Climate Agreement targets. See 'SNAPSHOT OF ETP'S PROGRESS' for an overview of the programme's achievements to date.

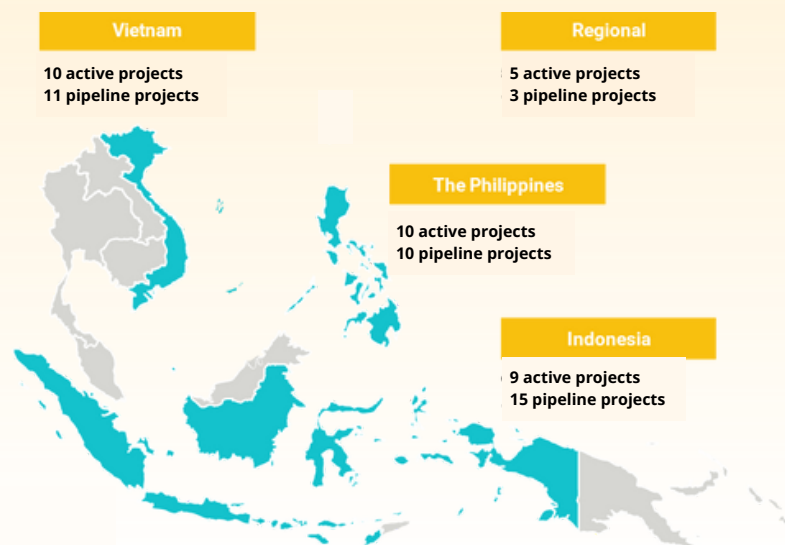


Illustration 1: Map of ETP Project Locations

SNAPSHOT OF ETP'S PROGRESS

SO1 - POLICY ALIGNMENT WITH CLIMATE COMMITMENTS (CUMULATIVE)

 **2**
Revised country energy plans

 **10**
Policy briefs presented

 **1**
Policy briefs adopted

 **7**
Financing Frameworks/ reforms recommended

 **1**
Financing Frameworks/ reforms adopted

 **1**
Strengthened National Entities


 **2**
Technical working group/roundtable/ platform established

SO2 - DE-RISK INVESTMENTS IN ENERGY EFFICIENCY AND RENEWABLE ENERGY (CUMULATIVE)

 **5**
De-risking instruments recommended

SO3 - EXTENDING SMART GRIDS (CUMULATIVE)

 **1**
Technical Recommendations

 **3**
Technical design/demo/ modelling projects

SO4 - KNOWLEDGE AND AWARENESS BUILDING (ANNUAL)

 **30**
Studies/research published

 **14**
Trainings/capacity-building conducted

 **53**
Consultations conducted

 **3475**
Participants at ETP trainings/ events/ consultations



ABOUT THE SOUTHEAST ASIA ENERGY TRANSITION PARTNERSHIP

Initiated in 2020, the Southeast Asia Energy Transition Partnership (ETP) is a multi-donor partnership, supported by philanthropies and government funders. ETP works to enable a just and efficient energy transition in Southeast Asia, with a specific focus on Vietnam, Indonesia, and the Philippines, supporting governments in achieving the UN's Sustainable Development Goals (SDGs) and Paris Climate targets.

Energy transition is complex and challenging with **many barriers**. In Southeast Asia, some of these challenges are:

- **Legal and regulatory misalignment**
- **Lack of access to finance and technology**
- **Infrastructural inertia linked to conventional energy systems**
- **Limited local expertise and knowledge**

To overcome the above challenges, ETP mobilizes and coordinates technical and financial resources required to create an enabling environment for countries to transition from fossil fuels to renewable energy sources. ETP provides high-level technical advice through a multi-pronged approach to tackle roadblocks at both national and regional levels.

ETP aligns its activities under four **strategic outcomes**:



SO1: Aligning Policies with Climate Commitments



SO2: De-risking Energy Efficiency and Renewable Energy Investments



SO3: Extending Smart Grids



SO4: Knowledge, Awareness and Capacity-building

To deliver a significantly higher number of critical technical assistance projects, ETP has grown to 19 staff with a Secretariat based in Thailand and country teams located in Vietnam, Indonesia, and the Philippines.

COUNTRY CONTEXT

In recent years, the governments of Vietnam, Indonesia, and the Philippines have taken significant strides in bolstering their climate commitments, reflecting a growing need to address environmental challenges. The commitments recognise the multi-faceted nature of environmental sustainability, economic prosperity, social well-being, and the global shift away from a high-carbon economy. To demonstrate the region's commitment to transitioning to cleaner and sustainable energy systems, most countries in Southeast Asia have disclosed climate goals within the framework of the United Nations Framework Convention on Climate Change (UNFCCC) and incorporated energy goals into their national energy policies, some of which are outlined below. These commitments have been further bolstered by the Just Energy Transition Partnership (JETP) processes in Vietnam and Indonesia.

VIETNAM



- **Just Energy Transition Partnership (JETP):**
 - JETP committed USD 15.5 billion of public and private sector finance
- **Increased GHG reduction targets:**
 - Unconditional reduction of 15.8%
 - Conditional reduction of 43.5% (with international support)
- **The National Power Development Plan (PDP8) was adopted:**
 - Increasing the share of renewable generation capacity to reach nearly 50% by 2030
- **Limited Coal-fired power capacity:**
 - 30 GW (down from planned 37 GW)
- **Limited Power sector emissions capacity:**
 - 170 MT CO₂e by 2030 (down from 280 MT CO₂e pre-COP26)
- Moving towards increased international cooperation, as outlined in the 2035 JETP declaration

INDONESIA



- **Updated Nationally Determined Contribution (NDC) targets:**
 - Unconditional CO₂ reduction raised to 31.89%
 - Conditional CO₂ reduction raised to 43.20% with international assistance
- **Update to the National Energy Policy:** Government Regulation No. 79/2014 aims for at least 23% renewable energy by 2025, and 31% by 2050
- **Presidential Decree 112/2022:** Highlights measures for renewable energy deployment, including incentives and early coal retirement
- **Just Energy Transition Partnership (JETP):**
 - USD20 billion financing invested to increase renewable energy and cap emissions by 2030
- **Launch of the Comprehensive Investment and Policy Plan (CIPP):** Targets 250 MtCO₂ emissions in on-grid power by 2030, focusing on transmission lines and grid deployment, early CFPP retirement, dispatchable renewable energy, variable renewable energy and RE supply chains.
- **Increased Net Zero Emissions (NZE) commitment by 2060:** Roadmap outlines strategies like reducing coal plants, expanding smart grids and EVs, and adopting renewable energy

PHILIPPINES



- **Increase in Nationally Determined Contribution (NDC) targets:**
 - Reduce GHG emissions by 2.7% (unconditional)
 - Reduce emissions by 72.3% (conditional) by 2030
- **Extending the Philippine Energy Plan (PEP) extended to 2050:**
 - The Department of Energy (DOE) conducted public consultations based on a *Reference scenario* (35% renewable energy by 2030, 50% by 2040) and a *Clean Energy scenario* (>50% by 2050) leveraging innovative technologies like nuclear energy.
- **DOE announces an energy transition pathway for accelerated renewable energy development**
 - Smart and green grid systems
 - Port infrastructure for offshore wind
 - Voluntary coal plant retirement/repurposing
- **Introducing new policies and market mechanisms to stimulate the energy industry**
 - 100% foreign ownership allowed for renewable facilities (solar, wind, hydro, ocean energy)
 - "Green lanes" for priority investments such as renewables
 - Attract foreign partnerships and accelerate clean energy transition



STRATEGIC OUTCOMES

THE IMPACT OF SOUTHEAST ASIA ENERGY TRANSITION PARTNERSHIP'S STRATEGIC OUTCOMES TOWARDS THE REGION'S ENERGY TRANSITION PROCESS



● Strategic Outcome 1: Policy Alignment with Climate Commitment

Context: Well-designed and effectively implemented policies provide clear direction for energy transition and reduce uncertainty.

ETP provides technical assistance to Vietnam, Indonesia and the Philippines to review, analyse and develop recommendations for policies, laws and regulations, ensuring that they are aligned with each country's energy transition goals and climate commitments. Adoption of these recommendations would foster a conducive environment for renewable energy and energy efficiency investments.

● Strategic Outcome 2: De-risking Investments in Energy Efficiency and Renewable Energy

Context: Renewable energy and energy efficiency require significant public and private investments. Potential funders and developers are often reluctant to invest in renewable energy due to barriers that include high upfront capital investment, policy and regulatory barriers and limited access to finance.

ETP focuses on creating an environment that enables renewable energy and energy efficiency investments by guiding policies and regulations to encourage public and private investments, creating funds/platforms for feasibility studies, improving project bankability, and introducing de-risking instruments and project financing.

● Strategic Outcome 3: Extending Smart Grids

Context: Transitioning to renewable energy sources like solar, wind and hydro, requires upgrading grid infrastructure that is able to address the intermittency of variable renewable energy generation compared to conventional energy. New digital and dynamic technology solutions, technology standards and policies and regulation changes are critical to support a smooth transition to smart grid technology.

ETP focuses on grid expansion and upgrades, increasing system flexibility, introducing new investment models leveraging public and private investments and improving long-term planning and revision.

● Strategic Outcome 4: Knowledge and Awareness Building

Context: Knowledge and awareness building is crucial for a successful energy transition. As energy transition is implemented through individuals, businesses and governments, they need to fully understand the importance of energy efficiency and transitioning from fossil-fuels to renewable energy. Increased understanding leads to better informed decision-making, higher innovation and investment, and supports the development of strong human capital for green job opportunities.

ETP aims to build the knowledge and awareness of key stakeholders in the Southeast Asia region through their interventions.



PROGRESS AGAINST GOALS

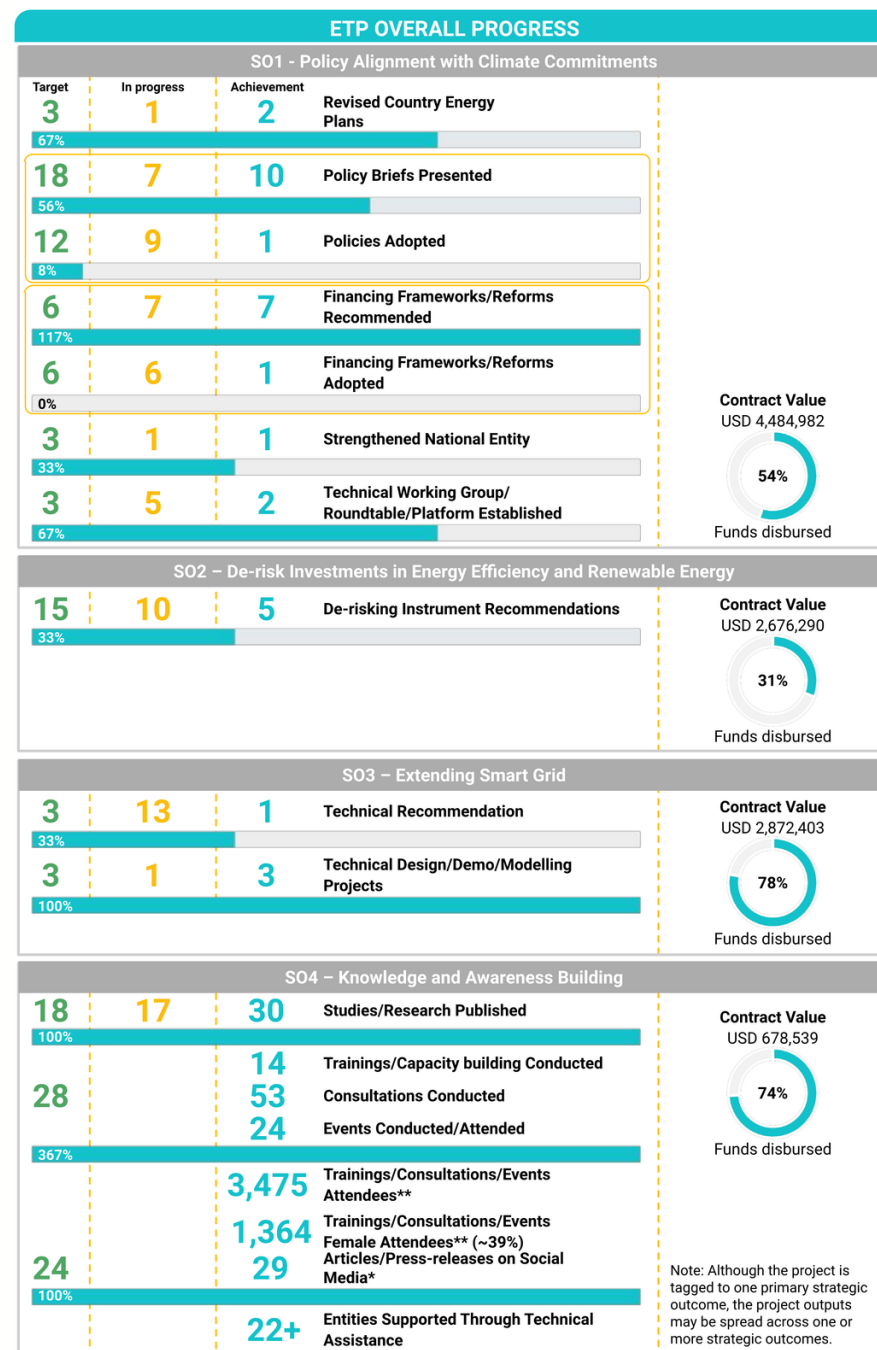
ETP PROGRESS TO DATE CATEGORIZED BY STRATEGIC OUTCOME

The following section highlights ETP's overall progress against its Strategic Outcomes.
For more information, refer to the [Annex 2 - Country Results](#).

ETP Overall Progress

INDICATOR*

- National energy plans reflect an ambition towards increasing the share of renewable energy/variable renewable energy, improving energy efficiency, and phasing-out fossil fuels
- Number of renewable energy and energy efficiency policies, laws, regulations, and/or technical standards developed and presented to the government entities
- Number of renewable energy and energy efficiency policies, laws, regulations, and/or technical standards revised and adopted by the government entities
- Number of renewable energy and energy efficiency related financing frameworks and fiscal reforms developed and presented to the government entities
- Number of fiscal policy adjustments, investment framework instruments, established and enacted by the government entities
- Presence of an effective National-level agency/institution
- Improved dialogue among government ministries and departments for a coordinated response to Energy Transition
- Number of new and existing, national and international, financing options/instruments de-risked and opened for private blended financing
- Number of technical recommendations and solutions implemented by the grid operators for planning and operation, leading to smart grid
- Number of technical design, demo, modelling projects supported for smart infrastructure
- Number of studies, research, new evidence gathered and published, for raising awareness, improving the knowledge base, driving decisions, and dissemination
- Number of trainings, knowledge sharing events, and/or awareness workshops organised at national and regional levels building institutional capacity and knowledge networks
- Total number of attendees (for tracking only)
- Total number of female attendees (for tracking only)
- Number of articles, press-releases on social media, and mass media, for outreach
- Total number of entities supported through Technical Assistance



*These indicators have an annual target

**Attendees who participated in multiple events are included in the count of each event they attended

Table 1: Overall Progress



PROGRESS AGAINST GOALS

ETP PROGRESS TO DATE CATEGORIZED BY GEOGRAPHIC PERSPECTIVE

The following section provides an overview of some of the key barriers to energy transition and ETP's Programming, with associated results for each relevant geographic area.

VIETNAM

ETP supports the Vietnam Government in its energy transition challenges through multiple interventions. In 2023, ETP's technical assistance and projects in Vietnam include policy formulation and drafting of national standards, development of roadmaps for Smart Grids and Net-Zero Emissions, and comprehensive studies and impact assessments of various policies, advancing Vietnam towards a sustainable energy future.

In 2024, ETP will introduce initiatives that help reaffirm the commitment to transformative change, including Regulatory Frameworks for Carbon Credit Management, Development of Legal Structures for Carbon Trade Exchanges, and Drafting and Proposing National Standards for Offshore Wind and Battery Energy Storage. Following the official launch of the Vietnam JETP Resource Mobilisation Plan (RMP) at COP28, ETP will discuss and design additional support for JETP technical working groups led by relevant ministries in Vietnam.

HIGHLIGHTS FROM 2023



6

entities supported



873

attendees at events/trainings/workshops



18

events/trainings/workshops concluded



451

female participants



10

active projects



11

projects in the pipeline

For more details on projects
visit www.energytransitionpartnership.org

OVERVIEW

Barriers to Energy Transition	ETP Intervention
Heavy reliance on coal for electricity production	<p>(SO1) Roadmap for the Commission for Management of State Capital (CMSC) toward Net-Zero Emission in Energy State-Owned Enterprises Impact: Facilitate the CMSC's management of state-owned energy enterprises toward coal phase-down, better governance, and profitable and sustainable business by 2050</p> <p>(SO1) Diagnostic Study on Net-Zero for The Energy Sector in Vietnam Impact: Facilitate improved understanding and realisation of NZE targets by 2050 in the context of JETP and National Energy Master Plan</p>
A lack of regulatory and legal frameworks and support instruments to facilitate just-energy transition	<p>(SO1) Development of Nine Key National Standards for Electric Vehicle Charging Infrastructure Impact: Encourage electric vehicle adoption by improving the charging infrastructure and reducing the GHG emissions to support the transport sector's energy transition roadmap until 2030</p> <p>(SO1) Legal Support to Develop the Power Generation Projects in Vietnam (EREA) Impact: Provide legal support to implement auction mechanisms for power generation and grid connectivity development that will increase the deployment of renewable energy by 2025</p>
Limited knowledge/skills of government officials to drive energy transition	<p>(SO1) Emission Trading System (ETS) Simulation Impact: Develop concrete policy recommendations for designing an ETS in Vietnam. The simulation will support the roll out of domestic ETS as a carbon pricing instrument by 2027</p>
Reducing and mitigating greenhouse gas emissions	<p>(SO1) Impact Assessment of European Union's (EU) Carbon Border Adjustment Mechanism (CBAM) Impact: Recommend a legal framework and institutional mechanism to develop a decarbonisation strategy and introduce a carbon tax by 2025</p> <p>(SO1) Assessment of Country's Readiness and International Experience for Carbon Trade Exchange Design Impact: Enable organisations to trade credits they have earned from emission reduction projects, incentivising them to invest in emissions reductions</p>
Underdeveloped energy efficiency market with limited financing types for energy efficiency projects	<p>(SO2) Promotion of Energy Efficiency in Supporting and Food Processing Industries in Vietnam Impact: Support the development of energy efficiency practices and provide recommendations for ESCO regulation development based on evidence from the private sector and business community's perspective</p> <p>(SO1) National Green Cooling Program Impact: Improve energy savings in the cooling sector by promoting high energy efficiency and low carbon technologies</p>
Inadequate grid infrastructure for renewable energy integration and a lack of private investment in grid infrastructure	<p>(SO3) Development of Vietnam Smart Grid Roadmap Impact: Contribute to Vietnam's Smart Grid Development Roadmap for the period up to year 2030, with a vision to 2050 that aims to increase the quality and reliability of power supply and to improve the effective use of electricity</p>

Table 2: Vietnam - Overview

- Below is an overview of all projects funded by ETP in Vietnam and their intended outcomes

Strategic Outcome 1:

Policy Alignment with Climate Commitments

ETP INITIATIVE

OUTCOME

Roadmap for the Commission for Management of State Capital (CMSC) toward Net-Zero Emission in Energy State-Owned Enterprises

Facilitate the CMSC's management of state-owned energy enterprises toward coal phase-down, better governance, and profitable and sustainable business, while promoting a transparent and sustainable development of the energy market and renewable energy toward net-zero by 2050 as committed by the Government of Vietnam

Diagnostic Study on Net-Zero for The Energy Sector in Vietnam

Facilitate improved understanding of NZE targets by 2050 in the context of JETP and National Energy Master Plan. Contributes to the development of just transition programs funded by ETP for the coal, oil and gas industries

National Green Cooling Program

Improve energy savings in the cooling sector by promoting high energy efficiency and low carbon technologies. The project, in close collaboration with the UNEP's passive cooling study, will provide inputs for a Prime Minister's decision on the National Cooling Action Plan (tentatively in 2024)

Development of Nine Key National Standards for Electric Vehicle Charging Infrastructure

Encourage electric vehicle adoption by improving the charging infrastructure and reducing the GHG emissions to support the transport sector's energy transition roadmap until 2030, accordingly, the charging infrastructure for electric vehicles is ready by 2030.

Legal Support to Develop the Power Generation Projects in Vietnam (EREA)

Provide legal support to implement auction mechanisms for power generation and grid connectivity development that will increase the deployment of renewable energy in Vietnam. The auction mechanism is expected to be legalised in the revised Law on Electricity and by a Decree in late 2025

Impact Assessment of European Union's (EU) Carbon Border Adjustment Mechanism (CBAM)

Provide Vietnam with a vision of the CBAM's impact on various energy-intensive industries, recommending a legal framework and institutional mechanism to develop a decarbonisation strategy and introduce a carbon tax in Vietnam as a response to the EU CBAM, which will become effective in 2025. The support will lead to further regulatory framework development, including (potential) revision of the Decree on Environment Law implementation and updating taxation on GHG emission.

Strategic Outcome 1:

Policy Alignment with Climate Commitments

ETP INITIATIVE

OUTCOME

Emission Trading System (ETS) Simulation

Develop policy recommendations to design an ETS based on the analysis of global best practices. The simulation will support the roll out of domestic ETS as a carbon pricing instrument by 2027

Assessment of Country's Readiness and International Experience for Carbon Trade Exchange Design

Enable organisations to trade credits they have earned from emission reduction projects, incentivising them to invest in emissions reductions. Attract foreign investment, foster the development of green technologies, and support sustainable projects

Strategic Outcome 2:

De-Risking Energy efficiency and Renewable Energy Investments

ETP INITIATIVE

OUTCOME

Promotion of Energy Efficiency in Food Processing and Supporting Manufacturing Industries in Vietnam

Increase efficiency in resource utilisation, responsible production supply chains and practices, improved social and environmental conditions, and reduced carbon emission in food processing and supporting manufacturing (two of the most energy-intensive industries of Vietnam). Support the development of energy efficiency practices and provide recommendations for ESCO regulation development

Strategic Outcome 3:

Extending Smart Grids

ETP INITIATIVE

OUTCOME

Development of Vietnam Smart Grid Roadmap

Contribute to Vietnam's Smart Grid Development Roadmap for the period up to year 2030, with a vision to 2050 that aims to increase the quality and reliability of power supply and to improve the effective use of electricity

Roadmap for the Commission for Management of State Capital toward Net-Zero Emission in energy state-owned enterprises

ETP contracted the Vietnam Initiative for Energy Transition Social Enterprise (VIETSE) to develop recommendations for a net-zero roadmap for the Commission for State Capital Management (CMSC). The recommendations would enable CMSC to support energy state-owned enterprises (SOE) in developing their strategies toward the country's NZE target.

Through a detailed scenario analysis using the principles of ensuring energy security, affordability and emission reduction, ETP has recommended emission reduction solutions for 3 power generation SOEs - Vietnam Electricity (EVN), PetroVietnam (PVN) and Vietnam Coal and Mining Corporation (TKV). Implementation of these recommendations will help achieve the SOE's emission reduction from 28 MtCO₂e to 57 MtCO₂e by 2030 and achieve the net-zero target in 2050.

National Green Cooling Program

The National Climate Change Strategies (NCCS), approved by the Prime Minister in July 2022, underscores the need to gradually reduce the use of hydrofluorocarbons (HFC) and hydrochlorofluorocarbon (HCFC) refrigerants. In response to this, Ministry of Natural Resources and Environment (MONRE) has tasked ETP with developing a National Green Cooling Program and implementation roadmap.

ETP along with Vietnam Energy and Environment Consultancy Joint Stock Company (VNEEC) is developing the National Green Cooling Program which aims to enhance energy efficiency in the cooling sector, aligning with Vietnam's 2050 net-zero target. ETP's assistance provides key stakeholders, including MONRE, Ministry of Industry and Trade (MOIT), and Ministry of Science and Technology (MOST), with recommendations for a legal framework and institutional mechanisms to promote energy savings in the cooling sector. The results of this technical assistance will facilitate the transition to energy efficient air conditioners, refrigeration equipment, and related technologies, and ignite energy efficiency investments in Vietnam's cooling sector.

Development of Nine Key National Standards for e-Vehicle Charging Infrastructure

It is estimated that the annual CO₂ emission of the transportation sector in Vietnam will reach 90 million tons by 2030. The government has set ambitious targets to gradually reduce the use of conventional fossil-fuel based vehicles and achieve 100% electric and green energy-fuelled vehicles by 2050. However, the lack of national standards for e-vehicle charging infrastructure poses obstacles to the energy transition.

ETP has commissioned Bao Loc Technology Joint Stock Company (BLT Cert.) to assist in the development of nine key national standards for e-vehicle charging infrastructure. The establishment of national standards for e-vehicle charging infrastructure will remove barriers to the expansion of the charging stations, eliminate concerns over the quality and safety of the technology, leverage public and private investments in e-vehicle and charging infrastructure development, and accelerate the energy transition in the sector.

Impact Assessment of European Union's Carbon Border Adjustment Mechanism

ETP, with GREENCIC Co, conducted a study on the impact of the EU's Carbon Border Adjustment Mechanism (CBAM) on key Vietnamese industries at the request of MONRE. The study assessed the impacts on the various energy-intensive industries, recommending a legal framework and an institutional mechanism to develop a decarbonisation strategy, including introducing a carbon tax in Vietnam. A better understanding of the CBAM and its impacts will encourage industries to apply energy efficiency measures to gradually reduce their dependence on fossil fuels.

This impact assessment of CBAM on Vietnam's four industrial sectors - steel, aluminium, fertiliser and cement is complete. The study provided policy recommendations for the government to respond to CBAM to support energy transition as well as the decarbonisation process to reach net-zero target in 2050, including consideration of broader climate policies such as carbon pricing, improving current climate policy framework, and institutional and capacity building to respond to CBAM.

Representatives from government departments such as the Department of Climate Change (DCC), MONRE were present, alongside participants from the Vietnam Standards and Quality Institute and International Agencies like Agence Française de Développement (AFD), Asian Development Bank (ADB), and the Organisation for Economic Co-operation and Development (OECD)



Two consultation workshops engaged 160+ participants, approximately 56% of attendees were women. The attendees represented diverse organisations such as the Department of Climate Change – MONRE, Vietnam Environment Protection Fund (VEPF), Legal Department – Ministry of Finance (MOF), General Statistics Office of Vietnam (GSO), General Department of Taxation – MOF, Vietnam WTO Centre – Ministry of Industry and Trade (MOIT), and various other stakeholders passionate about contributing to the discourse.



Legal Support to the Development of Power Generation Projects

At the request of the Electricity and Renewable Energy Authority (EREA) within the Ministry of Industry and Trade (MOIT), ETP worked with NHQuang & Associates to assist EREA to develop a new and effective legal framework for the procurement modalities in selecting developers for power generation projects by formulating a comprehensive set of key considerations and recommendations derived from international best practices.

The new legal framework is aimed at unlocking investment in renewable energy, estimated up to USD 143 billion in the 2021-2030 period. The project will accelerate the energy transition process by enabling an effective review and approval process of new power generation projects.

The project put forth recommendations including requirements for tailored normative guidance from the Vietnamese government for implementing the amended Law on Bidding. This guidance outlines bidding instructions for the selection of investors in power generation and transmission projects, covering scope, methods, mechanisms, processes, evaluations, and relevant regulations. To address legal barriers, ETP proposed amendments to key laws, including the Law on Electricity and the Law on Natural Resources and Environment of Sea and Islands and possibly develop a Law on Renewable Energy to solve legal barriers.



(View full report [here](#))

Through a study of the international auction mechanisms of renewable energy, ETP's recommendations include:

- Advice to policymakers to explore a separate law or a distinct document outlining the auction mechanism for renewable energy projects, drawing inspiration from successful models in Germany and Japan. Alternatively, policymakers could consider developing a distinct document (like a decree guiding the Law on Electricity) specifically outlining the auction mechanism for renewable energy projects.
- When designing the auction mechanism, clear policy objectives are crucial, ensuring balance across four key elements: (i) Auction demand, (ii) Qualification requirements, (iii) Winner selection process, and (iv) Sellers' liabilities. The adaptation of the auction mechanism to fit Vietnam's national context, including considerations of energy needs and technological development, is essential for alignment with the country's unique energy landscape.



(View the full report [here](#))

Diagnostic Study on Net-Zero for The Energy Sector in Vietnam

ETP, with E4SMA S.r.l, conducted a comprehensive study to review more ambitious pathways aligning with Vietnam's new net-zero target by 2050.

The study provided the Vietnamese government with a clear understanding of net-zero scenarios and potential roadblocks highlighting challenges in sectors like industry and transportation, the crucial role of renewable energy, the temporary role of gas, and the need for innovative technologies.

This analysis significantly influenced the nation's net-zero declaration and the updated PDP8 energy plan.

The study and findings were disseminated through workshops with diverse stakeholders. The final report, titled "Assessing Energy Sector Net Zero Scenarios by 2050," supports Vietnam in achieving its National Energy Master Plan and designing just transition strategies for oil, gas, and coal industries.



Stakeholders consult on preliminary results of the project Net-Zero scenario diagnostic research for Vietnam's energy industry



Consultation workshop organized to share the findings from the study of the assessment of the NZE scenario



Strategic Outcome 1: Policy Alignment with Climate Commitments

Emission Trading System Simulation

Recognizing the importance of a well-designed market, ETP, together with VNEEC, is supporting government ministries to develop a pilot ETS simulation tool for key industries. This tool will assess potential impacts and inform effective policy decisions for the carbon market launch in 2027. The project also includes training programs for officials to strengthen their knowledge of ETS governance, paving the way for a successful carbon pricing tool in Vietnam's net-zero journey.



An inception workshop gathered 261 participants, with 20% being female. Representatives from government departments like the Department of Climate Change (DCC), Ministry of Industry and Trade (MOIT), Ministry of Finance (MOF), as well as the Vietnam Business Forum and State Securities Commission of Vietnam were present.



A study tour was organized in November 2023 for the Ministry of Finance to learn and exchange governance knowledge and experience of ETS. The study tour observed participation of 12 government officials of which 7 were female

Assessment of Country's Readiness and International Experience for Carbon Trade Exchange Design

ETP, together with Environment and Ecology Institute, is supporting the Government of Vietnam to develop a Carbon Trading Exchange (CTX). This exchange enables organizations to trade credits earned through emission reduction projects, incentivizing investments in cleaner practices.

The CTX has the potential to attract foreign investment, promote green technologies, and support sustainable projects, furthering Vietnam's transition to a low-carbon economy and achieving its emission reduction goals. This project aims to establish a legal and financial framework for the CTX by 2025, with preliminary operations targeted for 2027.

Stakeholder involvement ensures a well-rounded CTX fit for Vietnam's context. Two feedback workshops have been held with over 148 professionals, including 55% women. This collaborative approach ensures a well-rounded CTX that effectively tackles Vietnam's emissions challenge.

Strategic Outcome 2: De-risking Investments in Energy Efficiency and Renewable Energy



Promotion of Energy Efficiency in Food Processing and Supporting Manufacturing Industries in Vietnam

In Vietnam, more than 47% of the national energy is consumed by industries, particularly the food processing sector, which is a major exporter. In 2020, the country had over 7500 industrial-scale agricultural product processing enterprises, making up 19.2% of total industrial energy use. The supporting industry has growth potential, but many small-scale companies lack awareness of energy-efficient practices. The project's goal is to boost energy efficiency in food processing and supporting industries by raising awareness, helping businesses access financing, fostering networking among stakeholders, piloting energy efficiency benchmarking, and creating a roadmap for an ESCO association in Vietnam. ETP is working together with the Vietnam Chamber of Commerce and Industry (VCCI) to deliver this project, and collaborates with the Danish Energy Efficiency Program, and JICA's environment program in Vietnam.

Three training workshops were developed with input from experts (Yuko Vietnam, ESCOs, government authority). These workshops will be conducted for 50 food processing and supporting factories, with around 30 attendees per course.



Participants at the Inception Meeting for the project, 'Promotion of Energy Efficiency in Food Processing and Supporting Manufacturing Industries in Vietnam'

Development of a Vietnam Smart Grid Roadmap

ETP is working with Intelligent Energy Systems (IES) to create a smart grid development roadmap. This project supports phase 3 of Vietnam's Smart Grid Development Roadmap, and aims to improve the dependability of the system through demand-side management and energy efficiency measures.

This project will deliver a Smart Grid Development Roadmap for the period up to the year 2030, with a vision to 2050 that aims to increase the quality and reliability of power supply and to improve the effective use of electricity. In addition, the project will offer suggestions to tackle policy, legal, economic, and technical challenges, along with proposed solutions for execution.

A comprehensive report, based on the current state of smart grid development in Vietnam, was developed and reviews and assesses Vietnam's smart grid development, encompassing policies, legal frameworks, the national power system, market conditions, and the outcomes of Phase 1 and Phase 2 under Decision 1670/QĐ-TTg. Additionally, it highlights opportunities and drawbacks while addressing the specific needs of Vietnam.

Who we work with

Commission for State Capital Management at Enterprises (CMSC)
Ministry of Industry and Trade (MOIT)
Ministry of Natural Resources and Environment (MONRE)
Ministry of Science and Technology (MOST)
Ministry of Finance (MOF)
Vietnam Chamber of Commerce and Industry (VCCI)



INDONESIA

In 2023, ETP supported Indonesia to align multiple national plans to be consistent with its energy transition targets, conducted a study to support early retirement of Coal-fired Power Plants (CFPP), provided detailed designs to upgrade the main control center of the biggest power grid in Indonesia and conducted pre-feasibility studies for wind and solar energy.

Through ETP's assistance, Indonesia can start to reduce their dependence on fossil fuel as an energy source, ensure key stakeholders are better aligned on national energy plans and the JAMALI grid has better infrastructure to accommodate increased variable renewable energy of up to 3.2 GW (with 1.6 GW from wind and solar energy) into the grid. This collectively contributes towards reaching the country's Enhanced National Determined Contribution (ENDC) targets by 2030 and NZE by 2060.

In 2024, ETP will launch initiatives to build a more conducive environment to develop policies that support energy transition, support an increase in investments for renewable energy and energy efficiency projects, expand and develop smart grids, and build knowledge and awareness of key stakeholders in energy transition.

HIGHLIGHTS FROM 2023



6

entities supported



1234

attendees at events/trainings/workshops



22

events/trainings/workshops concluded



379

female participants



9

active projects



15

projects in the pipeline

OVERVIEW

Barriers to Energy Transition	ETP Intervention
Relatively heavy reliance on coal to generate power	<p>(SO1) Financial Implications of the Early Retirement of Coal-fired Power Plants in Indonesia Impact: Achieve Indonesia's GHG reduction target by enabling transition from fossil-fuel to renewable energy by 2030</p>
Multiple national plans to guide the energy sector development with different objectives and timelines that are not updated with the country's enhanced NDC and JETP declarations	<p>(SO1) Streamlining Government of Indonesia Plans as a Pathway to Achieve Net Zero Emissions Impact: Achieve Indonesia's NZE targets through streamlined and coordinated approach on government plans by 2024 in the new National Energy Policy</p> <p>(SO1) Assisting the Revision of the Indonesia Roadmap of Net Zero Emission 2060 Impact: Achieve Indonesia's NZE 2060 targets by ensuring the roadmap is aligned with current Indonesia energy market conditions</p> <p>(SO1) Supporting Medium-term National Development Planning 2025–2029 Background Study Indonesia Impact: Achieve Indonesia's NZE 2060 targets by integrating the prioritisation of renewable energy development into the Medium-term National Development Planning (RPJMN) 2025-2029</p>
Underdeveloped energy efficiency market with limited financing types for energy efficiency projects	<p>(SO1) Preparation of Indonesia's Enhanced Nationally Determined Contribution (ENDC) Investment Roadmap for Energy Efficiency Impact: Achieve Indonesia's ENDC target for Energy Efficiency sector by supporting investment and strategic financing framework for energy efficiency projects to help acceleration of emission reduction by 2030</p> <p>(SO2) Catalysing Energy Efficiency as a Service in Indonesia Impact: Establish a well-functioning energy efficiency market in Indonesia by 2030</p>
Relatively low share of renewable energy in the primary energy mix	<p>(SO2) Investment plan for Wind Energy Development in Indonesia Impact: Increase wind energy share by 600 MW in Indonesia's renewable energy mix by promoting investment conducive climate by 2030</p> <p>(SO2) 1 GW Solar PV Mapping and Development Plan Impact: Increase utility scale solar power plants share by 1 GW in Indonesia's renewable energy mix by promoting investment conducive climate by 2030</p> <p>(SO3) Detailed Design to Upgrade the Java-Bali Control Centre Impact: Increase deployment of renewable energy and variable renewable energy (VRE) by 3.2 GW in Indonesia through smart grid technology by 2030</p>

Table 3: Indonesia - Overview

- Below is an overview of all projects funded by ETP in Indonesia and their intended outcomes

Strategic Outcome 1:

Policy Alignment with Climate Commitments

ETP INITIATIVE

OUTCOME

Study on the Financial Implications of the Early Retirement of Coal-fired Power Plants (CFPPs) in Indonesia

Support Indonesia to achieve GHG reduction target by enabling transition from fossil-fuel to renewable energy by 2030

Streamlining Energy Sector Plans as a Pathway to Achieve Net Zero Emissions (NZE)

Achieve Indonesia's NZE targets through streamlined and coordinated approach on government plans by 2024 in the new National Energy Policy

Assisting the Revision of the Indonesia Roadmap of Net Zero Emission (NZE) 2060

Integrating the prioritisation of renewable energy development into the Medium-term National Development Planning (RPJMN) 2025-2029

Supporting Medium-term National Development Planning (RPJMN) 2025-2029 Background Study Indonesia

Achieve Indonesia's NZE 2060 targets by integrating the prioritisation of renewable energy development into the Medium-term National Development Planning (RPJMN) 2025-2029

Preparation of Indonesia's Enhanced Nationally Determined Contribution (ENDC) Investment Roadmap for Energy Efficiency

Achieve Indonesia's ENDC target for Energy Efficiency sector by supporting investment and strategic financing framework for energy efficiency projects to help acceleration of emission reduction by 2030

Strategic Outcome 2:

De-risking Investments in Energy Efficiency and Renewable Energy Investments

ETP INITIATIVE

OUTCOME

Catalysing Energy Efficiency as a Service in Indonesia

Establish a well-functioning energy efficiency market in Indonesia by 2030

1 GW Solar PV Mapping and Development Plan in Jamali Power Grid

Increase utility scale solar power plants share by 1 GW in Indonesia's renewable energy mix by promoting investment conducive climate by 2030

Wind Energy Development in Indonesia: Investment Plan

Increase wind energy share by 600 MW in Indonesia's renewable energy mix by promoting investment conducive climate by 2030

Strategic Outcome 3:

Extending Smart Grids

ETP INITIATIVE

OUTCOME

Detailed Engineering Design to Upgrade the Java-Bali Control Centre

Increase deployment of renewable energy and variable renewable energy by 3.2 GW in Indonesia through smart grid technology by 2030

Financial Implications of the Early Retirement of Coal-fired Power Plants in Indonesia

Indonesia's ambitious goal of increasing renewable energy to 23% by 2025 and 31% by 2050 hinges on reducing the country's reliance on coal, currently at 43%. To address this, a collaborative study led by ETP is underway, analyzing the implications of early retirement of 32 coal-fired power plants (CFPPs).

The study provides actionable steps for the government, including financial mechanisms for:

timely payments to plant owners	a roadmap with policy, technical, fiscal, and social recommendations
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The study also includes strategies for donor coordination and resource allocation, estimating an annual requirement of USD 11.7 billion from 2024 to 2038 to execute the proposed CFPP retirements.

Key suggestions include:

optimizing electricity subsidies	prioritizing energy efficiency
incentivizing renewables	creating green job opportunities.
offering zero-interest financing	strengthening grid integration

The first report can be accessed [here](#), providing high level implications of early CFPP retirement

View the second report of this project [here](#), providing strategy and recommendations to support early CFPP retirement

Streamlining Government of Indonesia Plans as a Pathway to Achieve Net Zero Emissions

ETP is streamlining interconnected plans within Indonesia's complex energy sector landscape. This includes bridging targets and initiatives set forth by the National Energy Policy (KEN), National Energy Plan (RUEN) - both overseen by DEN - National Electricity Plan (RUKN) - overseen by the Ministry of Energy and Mineral Resources (MEMR) - the Medium/Long-term National Development Plan (RPJMN/RPJPN) and the Nationally Determined Contribution (NDC) - overseen by MOEF. Capacity-building programmes are included to ensure sustainability.

In 2023, ETP in collaboration with Niras International Consulting Indonesia, published a [report](#) of a stocktake assessment to identify all existing government plans guiding the energy transition programs and donor coordination strategy to be implemented throughout the project. ETP and Niras have also developed a report on assessing the potential of emerging renewable energy and clean energy technologies in Indonesia. The report also provides an analysis on technologies to identify the most suitable option that can support the country's NZE 2060 targets.

Assisting the Revision of the Indonesia Roadmap of Net Zero Emission 2060

At COP26, Indonesia declared its aim to achieve NZE by 2060. Following this, the country released its *Roadmap for NZE 2060*, detailing plans for a clean and renewable energy transition.

ETP is working together with Neyen and Cagar Bentara Sakti to assist MEMR in reviewing this Roadmap and providing recommendations. These recommendations include detailed strategy recommendations to reach NZE by 2060, divided into six time periods between 2021 and 2060. Strategies with more accessible technologies and more feasible initiatives are prioritised in the earlier periods while strategies with developing or emerging technologies are saved for later periods. The proposed revisions to the Roadmap highlight the need for policy and fiscal reform, infrastructure development, funding support, and research and development of technology to facilitate these strategies.



A focus group discussion coordinated by Directorate of Energy Conservation of the MEMR to discuss the revisions for Indonesia's Roadmap to NZE 2060

Supporting Medium-term National Development Planning 2025–2029 Background Study Indonesia

ETP conducted a background study highlighting the implementation of energy transition programmes for the Ministry of National Development Planning (BAPPENAS).

ETP engaged Sureco to review current policy, project pipeline, and existing literature to determine the current pathway's alignment with Indonesia's energy transition targets. The study introduced the Technological Innovation System (TIS) framework tool, complemented by the levelised cost of electricity (LCOE) that will assist Bappenas in identifying major renewable energy projects for power sector development in RPJMN 2025-2029.

The tool identified mini and micro hydropower as the most cost-efficient and reliable solution for rural electrification while the on-grid solar PV has the highest potential to supply the country's electricity growing demand. The study also provides regulatory and non-regulatory recommendations to help Indonesia achieve its net zero targets. Two focus group discussions were conducted to discuss the findings of the study, attended by a total of 230 participants (including 78 female participants) between both sessions. The sessions brought together government bodies and various organisations to explore Indonesia's renewable energy landscape and its challenges.

Strategic Outcome 1: Policy Alignment with Climate Commitments

Preparation of Indonesia's Enhanced Nationally Determined Contribution Investment Roadmap for Energy Efficiency

ETP engaged Trama TecnoAmbiental, S.L (TTA) to assist the Directorate of Energy Conservation (DEC) at the MEMR in drafting a strategic investment roadmap for the energy efficiency sector. This roadmap aims to fulfill Indonesia's NDC targets. The project will assess Indonesia's energy efficiency financing and investment framework, focusing on current activities for Heating, Ventilation, and Air Conditioning (HVAC) in commercial buildings, the utilization of efficient air conditioners (AC) which has the largest potential emissions reduction, and one industrial sector (Food and Beverage) chosen by DEC.

The analysis will yield financial strategies and investment plans, detailing the costs of implementing energy efficiency projects to achieve the ENDC target for emission reduction.



A focus group discussion attended by different government bodies to present the current RPJMN and collect feedback from participants



Strategic Outcome 2: De-risking Investments in Energy Efficiency and Renewable Energy

Catalysing Energy Efficiency as a Service in Indonesia

To achieve its net zero goals, Indonesia needs a thriving energy efficiency industry. However, the current market lacks implemented projects, mainly due to limited financial support and low confidence from local businesses. Energy service companies (ESCOs) struggle to develop a project pipeline, resulting in insufficient data for policymakers and financiers to drive industry growth. ETP has extended a grant to Synergy Efficiency Solutions (SES) to establish a sustainable energy efficiency market in Indonesia to test various energy efficiency business models for viable projects. An innovative remote energy monitoring technology will monitor and collect data across these projects. This real data will be used to create knowledge products, aiding policymakers and stakeholders in developing the energy efficiency market in Indonesia, thereby supporting Indonesia's efforts to reach its net zero targets.

Wind Energy Development in Indonesia: Investment Plan

Wind energy is a significant renewable resource, and Indonesia is estimated to have 60.6 GW of wind energy according to the 2017 National Energy Plan. Despite this potential, the current utilisation is low, with only 147 MW installed capacity (0.24% of the estimated capacity).

ETP, in partnership with Pondera Consult, is accelerating wind sector development in Indonesia. By conducting wind power plant site assessments and providing investment opportunity guides, ETP aims to support the development of at least 600 MW (4X of the installed capacity) of wind energy in Java and Sumatra. The information collected through the study on wind data and each wind power plant site's energy potential will reduce uncertainty for potential developers to invest in wind energy development.

A Technical Working Group (TWG) has been formed as a platform for stakeholders to coordinate and provide inputs for issue resolution in wind energy development. Three TWG sessions were conducted in 2023 to gather feedback regarding wind energy development in Indonesia. ETP formally presented the draft wind energy development roadmap comprising proposed activities, stakeholders, and timelines to MEMR during the third session of the TWG.

The project also analysed the national and local regulations for wind energy development to improve the existing policy framework.

In 2024, the project will present a comprehensive analysis on wind energy potential mapping for 11 pre-selected sites in Java and Sumatra Island. Building on this, the project will also develop an investment opportunity guide for the wind sector as a de-risking instrument to attract potential investors.



A site visit to a wind farm in Sidrap during the second TWG event in October 2023

1 GW Solar PV Mapping and Development Plan in JAMALI Power Grid

ETP, in collaboration with Trama TecnoAmbiental, S.L (TTA), is assisting BAPPENAS to boost investments in Indonesia's solar energy sector. The goal is to cut emissions and help Indonesia reach its renewable energy targets—23% by 2025 and 31% by 2050.

This project will identify a potential 1 GW of solar power to be integrated into the Java-Madura-Bali (JAMALI) grid, the nation's most extensive grid. ETP will identify the regulatory gaps and challenges for solar PV development, create a development and investment plan for the 1 GW JAMALI grid, and solar irradiance data mapping and assessment for at least 100 potential production sites amounting to 1 GW through publicly accessible databases.

Strategic Outcome 3: Extending Smart Grids

Detailed Design to Upgrade the JAMALI Control Centre

PLN's Java-Madura-Bali Control Centre plays a crucial role in supplying energy to over 160 million people in Java and Bali. ETP collaborated with ELC Electroconsult (ELC) and Debarr to provide technical assistance and detailed engineering design to upgrade and modernise the JAMALI Control Centre.

The upgraded centre will include a Main Control Centre (MCC) building in Gandul (near Jakarta) and a Disaster Recovery Centre building (DRC) in Ungaran (Central Java), equipped with advanced Supervisory Control and Data Acquisition/Energy Management System (SCADA/EMS).

These enhancements will facilitate the seamless integration of unlimited renewable energy into the grid, ensuring a reliable electricity supply for residents. The installation of the SCADA/EMS platforms and construction of the building is anticipated to commence in 2024.

Who we work with

Ministry of National Development Planning (BAPPENAS)

Perusahaan Listrik Negara (PLN)

National Energy Council (DEN)

Coordinating Ministry of Maritime and Investment Affairs (CMMIA)

Ministry of Energy and Mineral Resources (MEMR)

JETP Indonesia Secretariat

PHILIPPINES

In 2023, ETP's technical assistance in the Philippines included:

- revising multiple regulations and technical standards to support the integration of Variable Renewable Energy (VRE) into the grid
- working towards generating a pipeline of bankable energy efficiency projects through de-risked funding mechanisms
- developing tools to tap into its marine and offshore wind resources.

Through ETP's interventions, the Philippines will have a flexible and reliable grid with a sustainable power supply, increased energy savings, and increased renewable energy usage in its primary energy mix to reach the country's decarbonisation targets by 2030.

In 2024, ETP will introduce initiatives that help embed long-term renewable energy planning into policymaking, develop de-risking mechanisms for renewable energy and energy efficiency projects, improve the Philippines' grid to accommodate smart technologies, and increase knowledge and awareness of relevant stakeholders in energy transition.

HIGHLIGHTS FROM 2023



10+

entities supported



689

attendees at events/trainings/workshops



37

events/trainings/workshops concluded



232

female participants



10

active projects



10

projects in the pipeline

OVERVIEW

Barriers to Energy Transition	ETP Intervention
Regulatory and policy gaps on variable renewable energy, energy efficiency, and energy storage	<p>(SO1) The Philippines Battery Energy Market Mechanism Support Program Impact: Increase in energy storage systems in the electricity markets to facilitate more variable renewable energy by 2030</p> <p>(SO1) Power Development Roadmap for the Bangsamoro Autonomous Region for Muslim Mindanao (BARMM) Impact: Renewable energy and energy efficiency integrally established in BARMM's power sector, enabling the region's sustainable growth and development, and contributing to the national targets of 50% renewable energy by 2040 and reduced energy intensity</p> <p>(SO1) Support to the Green Energy Auction Program Impact: Increase in renewable energy generation and enhanced competition in the generation sector leading to lower electricity rates by addressing gaps in the implementation of the Green Energy Auction Program, contributing to a 50% renewable energy target by 2040</p> <p>(SO3) Upgrading Energy Regulations for the Energy Regulatory Commission of the Philippines (ERC) Impact: A flexible, dynamic, and innovative regulatory framework that enhances the integration of VRE, promotes system efficiency and creates a competitive investment environment by 2030</p>
	<p>Unclear permitting process for offshore wind projects</p> <p>(SO1) Offshore Wind Permitting and Consenting Impact: Enhanced investors' confidence on offshore wind sector, contributing to the 6.72GW offshore wind farms by 2028, and to the country's 50% renewable energy target by 2040</p>
	<p>Shortage of affordable funding options to finance energy efficiency projects</p> <p>(SO2) Investment-grade Audit (IGA) Financing Program Impact: Increase in deployment of bankable energy efficiency measures and increased energy savings through the identification and implementation of investable energy efficiency projects resulting to 1.951 GtCO₂e GHG emission reduction through 2040</p> <p>(SO2) ESCO-in-a-box for Southeast Asia Impact: Increase in deployment of energy efficiency measures and increase in energy savings using the Super-ESCO concept, enhance capability of local ESCOs to implement bankable energy efficiency projects that has the potential to reduce 185,000 tCO₂ eq GHG emissions (218,833,000 kWh saved and USD 41.72 million saved per annum)</p>
	<p>Untapped marine and offshore wind resources</p> <p>(SO2) Marine Spatial Planning Impact: Increase offshore wind energy projects development by creating a marine spatial planning tool to de-risk offshore wind projects leading to the first 6.72GW offshore wind farms by 2028</p>
Power supply shortages	<p>(SO1) Demand Side Management Policy Impact: Wide-scale reduction of energy consumption and support in increasing penetration of variable renewable energy</p> <p>(SO3) The Philippines Grid Diagnostic and Roadmap for Smart Grid Development Impact: Flexible and reliable transmission grid that is ready to interconnect large-scale variable renewable energy projects and ensures sustainable power supply. Support the Government to reach its renewable energy target of 35% by 2030</p>

For details on projects
visit www.energytransitionpartnership.org

Table 4: Philippines - Overview

- Below is an overview of projects funded by ETP in the Philippines and their intended outcomes

Strategic Outcome 1:

Policy Alignment with Climate Commitments

ETP INITIATIVE

OUTCOME

The Philippines Battery Energy Market Mechanism Support Program

Increase in energy storage systems in the electricity markets to enhance grid flexibility and reliability with increasing VRE generation by 2030

Power Development Roadmap for the Bangsamoro Autonomous Region for Muslim Mindanao (BARMM)

RE and EE integrally established in BARMM's power sector, enabling the region's sustainable growth and development, contributing to the national targets of 50% RE by 2040 and reduced energy intensity

Support to the Green Energy Auction Program

Increase in RE generation and enhanced competition in sector leading to lower electricity rates by addressing gaps in the implementation of the Green Energy Auction Program, contributing to a 50% RE target by 2040

Offshore Wind Permitting and Consenting

Enhance investors' confidence on offshore wind sector, contributing to 50% RE target by 2040

Demand Side Management Policy

Reduce energy consumption and increase in penetration of renewable technologies for grid supply contributing to the 75% emissions reduction NDC target of the Philippines (reduction of GHG emissions) and supporting the increase in share of RE to 35% by 2030 in the power generation mix (displacement of fossil fuel-based power generation)

Strategic Outcome 2:

De-risking Investments in Energy Efficiency and Renewable Energy Investments

ETP INITIATIVE

OUTCOME

Investment-grade Audit (IGA) Financing Program

Increased investments in bankable energy efficiency projects on the upgrade of cooling systems, upgrade of the HVAC system, and adoption of an Energy Management System, resulting to efficient energy use.

ESCO-in-a-box for Southeast Asia

Increase in deployment of energy efficiency measures and increase in energy savings using the Super-ESCO concept, enhance capability of local ESCOs to implement bankable energy efficiency projects that has the potential to reduce 185,000 tCO₂ eq GHG emissions (218,833,000 kWh saved and USD 41.72 million saved per annum)

Marine Spatial Planning

Increase offshore wind energy projects development to reach the Philippines' energy decarbonisation targets by creating a marine spatial planning tool to de-risk offshore wind projects by 2030

Strategic Outcome 3:

Extending Smart Grids

ETP INITIATIVE

OUTCOME

The Philippines Grid Diagnostic and Roadmap for Smart Grid Development

Flexible and reliable transmission grid that is ready to interconnect large-scale variable renewable energy (VRE) projects, and ensures sustainable power supply. Support the Government to reach its renewable energy target of 35% by 2030

Upgrading Energy Regulations for the Energy Regulatory Commission of the Philippines (ERC)

A dynamic, and innovative regulatory framework that enhances the integration of VRE, promotes system efficiency and creates a competitive investment environment by 2030

The Philippines Battery Energy Market Mechanism Support Program

ETP, in collaboration with NEL Consulting, provided technical assistance to the Philippines Electricity Market Corporation (PEMC) to integrate Battery Energy Storage Systems (BESS) and other Energy Storage Systems (ESS) into the Wholesale Energy Spot Market (WESM). The introduction of these storage systems aims to enhance market competitiveness and supports national energy targets.

In response, the Philippines' Department of Energy (DOE) released a new ESS policy in early 2023, defining energy storage classifications. ETP recommended amendments to align WESM rules with this new policy. Once approved, these recommendations will foster fair market competition, greater deployment of renewable energy generation, and increase investor confidence. ETP further held a workshop in September with the country's relevant energy agencies, including PEMC and the Independent Electricity Market Operator of the Philippines (IEMOP), to discuss updated recommendations for various energy storage options.



Click [here](#) to read the project report

Power Development Roadmap for the Bangsamoro Autonomous Region for Muslim Mindanao

ETP, in collaboration with Aquatera, supported the Ministry of Environment, Natural Resources and Energy (MENRE) of the Bangsamoro Autonomous Region for Muslim Mindanao (BARMM) in analysing and reconciling the most urgent needs to achieve targets outlined in the Bangsamoro Organic Law, Bangsamoro Development Plan, and Philippines' clean energy targets.

This resulted in the formulation of the Power Sector Development Roadmap, which provides key analysis of BARMM's energy sector, identifies energy transition opportunities, and presents a roadmap on power sector development that would support the Bangsamoro Government's sustainable economic and development.

- **BARMM is a newly established political entity. ETP's support to BARMM is helping them establish their energy planning process inherent in renewable energy and energy efficiency.**

In 2023, ETP completed the BARMM Power Sector Roadmap through stakeholder interviews and focus group discussions to understand how to enhance energy security and reliability in BARMM through low-carbon and sustainable development, contributing to the Philippines' national target. The roadmap outlined five strategic objectives:

- Strong and reliable electricity: Fewer power cuts, smarter energy use, and efficient management by power companies.
- More people with electricity: Better power grids, funding programs, and microgrid solutions.
- Better energy management: Improved government and private sector collaboration for smooth operations.
- Finding and using new energy sources: Plans and investments to explore and use potential energy resources.
- Working together: Partnerships with government, businesses, communities, and international partners to achieve these goals.

The roadmap comprises of strategic activities and targets for each corresponding objectives over the short term (2023-2025), medium term (2026-2030) and long term (2031-2040). In July, ETP conducted a virtual workshop to present the final findings of the BARMM Power Development Roadmap and received positive feedback from MENRE for a collaborative approach to the process. ETP organised a Renewable Energy Project Development Workshop with the Center for Empowerment, Innovation and Training on Renewable Energy (CentRE) for Bangsamoro in August 2023.

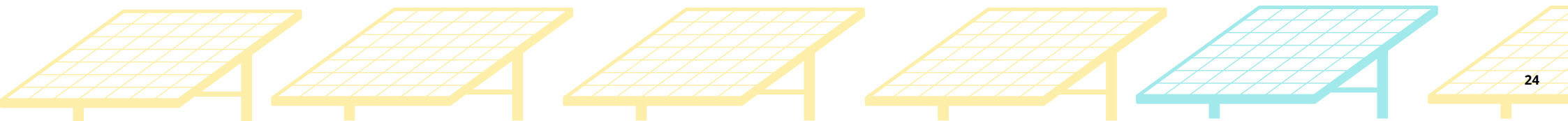
This undertaking has allowed ETP opportunities to continue its support of BARMM energy sector development with larger technical assistance for energy planning.

Support to the Green Energy Auction Program

The Green Energy Auction Program (GEAP) in the Philippines is a competitive procurement mechanism for renewable energy generation. ETP supported further development of the Program by:

- Addressing payment settlement gaps: Assisting with the development of a framework for winning bidders
- Contributing to the draft of an opt-in policy and agreement template for utilities the opt-in purchase agreement template that will allow distribution utilities to bid for specific quantities under the auction.

ETP recommended using the existing framework for Feed-in-Tariff (FIT) payments to address gaps in the auction's payment settlement process. The government of the Philippines adopted ETP's recommendation as an amendment to the Green Energy Auction Program Guidelines through Amendment to Department Circular No. DC2021-11-0036.



Permitting and Consenting for Offshore Wind Projects

The Philippines has significant offshore wind potential of around 178 GW, but the current process for obtaining permits for offshore wind projects is unclear, causing delays and increased costs.

ETP, in collaboration with Niras, is working to support the government in creating effective offshore wind permitting procedures, minimising delays and regulatory complications. Through this technical assistance, ETP is providing the following:

- Mapping: Establishing a clear overview of all required permits from national, regional, and local authorities.
- Recommendations: Proposing updates and streamlining of regulations based on international standards.
- Upskilling: Training of relevant government bodies to efficiently handle offshore wind permitting tasks.

The first consultation workshop was attended by government and private entities. The workshop was held as part of initial data gathering for baseline permitting processes.



The first consultation workshop for offshore wind permitting and processes attended by government and private entities. The workshop was held as part of initial data gathering for baseline permitting processes



In 2023, ETP and Niras held a workshop with over 150 government and private stakeholders to understand current permitting processes for offshore wind projects. This includes the study of successful models in Scotland, Denmark, and Taiwan. By analyzing these insights, ETP will recommend improvements to streamline and align Philippine permitting practices with international best practices, aiming to present these recommendations later in 2024. This collaborative effort aims to smooth the way for offshore wind development in the Philippines.

Demand Side Management Policy

Demand-Side Management (DSM) promotes efficient electricity use, reducing consumption and peak demand. In collaboration with International Institute for Energy Conservation (IIEC) ETP assists the Philippines Department of Energy (DOE) in designing a tailored DSM program for distribution utilities and economic zones. DSM will increase the efficiency of the distribution grid, enhance system flexibility and reliability, and delay the need for constructing additional power plants.



A TWG session to present the draft DSM Program document. The session was attended by DOE, ERC, NEA, NGCP, IEMOP, PEZA, and private entity stakeholders

ETP is supporting the Philippines DOE to design a DSM Program and identify effective DSM strategies tailored for Philippine-distribution utilities (DU) and economic zones.

Through the technical assistance, ETP will:

- Develop DSM Program Documents: Framework, implementation plan, and monitoring & evaluation plan.
- Provide Tools and Resources: DSM toolkit, technology & strategy catalogues, and capacity-building sessions.
- Engage Stakeholders: Technical Working Group (TWG) sessions with DOE, ERC, NEA, NGCP, IEMOP, PEZA, and private entities.
- A TWG session to present the draft DSM Program document. The session was attended by DOE, ERC, NEA, NGCP, IEMOP, PEZA, and private entity stakeholders.

Progress so far includes the first TWG session held in September with 29 participants (including 6 women), a draft DSM Program document presented to DOE and TWG in November, and finalization expected in early 2024, followed by public consultation.

Strategic Outcome 2: De-risking Investments in Energy Efficiency and Renewable Energy

Marine Spatial Planning

ETP is collaborating with BVG Associates to assist the Philippines government in leveraging their ocean resources. Through this project, ETP and BVG Associates are developing a Marine Spatial Planning (MSP) tool to identify optimal areas for marine renewable energy development. This tool serves as a basis for further planning activities in the region, expediting the growth of offshore wind projects. The project also includes capacity-building workshops for key stakeholders, teaching them to operate, understand the methodology, and maintain the MSP tool for accuracy.

Investment-grade Audit Financing Program

Investment Grade Audits (IGAs) analyse a facility's energy use, pinpoint areas for improvement, and propose ways to reduce consumption without sacrificing output. These audits are crucial for implementing and financing energy efficiency projects. However, many companies hesitate due to upfront costs and a lack of understanding of the benefits. In response to this, ETP has provided a grant to Climargy Inc. in the Philippines under the Energy Efficient Innovation Window (EEIW) to deliver investment-grade energy audits (IGAs).

Climargy completed IGAs for a warehouse owned by an aviation company in 2022 and a commercial retail establishment (a three-storey, 22-year-old building that occupies a total area of 229,000 square meters) in 2023. The audit findings demonstrate an opportunity for the aviation company to reduce 15.9% of their electricity use per year and the retail mall to reduce a minimum of 38% energy use.

ESCO-in-a-box for Southeast Asia

EP Group, supported by ETP's EEIW, successfully adapted the ESCO-in-a-Box (EIAB) platform to the Philippines, paving the way for regional expansion across Southeast Asia. The platform empowers local ESCOs by simplifying project development, implementation, and financing. As part of this project, EP Group has developed a Licence and Services Agreement which provides for materials including five core ESCO contract templates: Implementation Study Agreement, Energy Services Agreement, Works Contract, Collateral Warranty and Contractor Framework Agreement.

In the Philippines, three ESCOs have been trained and licensed to utilize the adapted EIAB platform, equipping them with resources and support to pursue their first energy efficiency projects. Additionally, a comprehensive business plan for a regional entity, ESCO-in-a-Box Southeast Asia (EBSEA), has been established. EBSEA aims to build a network of ESCOs across the region, facilitate project development, and provide funding through an Energy Efficiency Fund. A successful launch campaign has generated awareness and interest in EBSEA across Southeast Asia, positioning it as a key driver for wider adoption of energy efficiency solutions.

Who we work with

Ministry of Environment, Natural Resources and Energy (MENRE)
Department of Energy (DoE)
Energy Regulatory Commission (ERC)
Philippine Electricity Market Corporation (PEMC)
Philippine Offshore Wind Joint Industry Programme (POWJIP)
Ministry of Environment, Natural Resources, and Energy of the Bangsamoro Autonomous Region in Muslim Mindanao
Local ESCOs – TrySkyLink, SmartPower, Stratcon

The Philippines Grid Diagnostic and Roadmap for Smart Grid Development

ETP, collaborating with Ricardo, successfully developed a roadmap for smart grid upgrades in the Philippines. Key findings, including policy recommendations, technology solutions, and renewable energy integration analysis, were presented at an interagency workshop with 54 participants including high-level government officials. The workshop validated the study's conclusions and gathered valuable stakeholder feedback on grid challenges.

Furthermore, ETP and Ricardo reviewed the national grid's governance structure, identifying potential roadblocks for smart grid investments. The study's recommendations, including establishing a dedicated technical entity for grid oversight, were well-received. In a significant development, the Philippines' ERC adopted Resolution No. 04, Series of 2023, creating an Interim Grid Management Committee (GMC) – a direct response to ETP's recommendations and a step towards more effective regulatory management in a dynamic energy market.

Upgrading Energy Regulations for the Energy Regulatory Commission of the Philippines

ETP, together with Ricardo, supported the Philippines' Energy Regulatory Commission (ERC) to review and provide recommendations for their regulatory framework. Strengthening the regulatory framework will ensure policies are consistent and aligned with the government's energy transition targets.

Following ETP's submission of proposed recommendations in 2022 for the Philippines Grid Code (PGC), the Philippines Distribution Code (PDC) and the Philippines Small Grid Guidelines (PSGG), ERC and Ricardo conducted three focus group discussions with industry stakeholders to gather feedback on PGC, PDC and PSGG earlier this year. The focus group discussions allowed the key stakeholders - generation companies and utility distribution companies, to better understand the rationale for the proposed technical changes and consequent compliance implications.

ETP has provided further recommendations to supplement new ancillary service regulations. These regulations will help establish a regulatory framework for ancillary services to ensure the reliable operation of the electric grid. In October, the recommendations for PGC, PDC, and PSGG were presented to the newly appointed Interim Grid Management Committee (GMC). The interim GMC was reconstituted as part of the recommendations of the Grid Diagnostics: Smart Grid Roadmap Project to enhance technical capability in governing the grid.

ETP is finalising the review and update of the Distribution System Loss (DSL) caps that aim to enhance the efficiency of the distribution grids.



View the recommendations to the PSGG in more detail [here](#).



REGIONAL

In addition to programming specifically in Vietnam, Indonesia, and the Philippines, ETP has also delivered initiatives in 2023 that span the region. These initiatives included projects that support greater deployment of renewable energy (through a diagnostic of competitive arrangements for energy transition), and increased knowledge dissemination and awareness of energy transition (through regional roundtables, masterclasses, and issue papers).

Collectively, these initiatives contribute to fostering collaboration and shared understanding among stakeholders, showcasing ETP's commitment to a comprehensive approach to regional energy transition.

Regional initiatives also include current major programs like the Just Coal Transition Platform (JCTP) and the ASEAN Power Grid Advancement Program and future projects to specifically support knowledge sharing and dialogues for decarbonisation and energy transition in Southeast Asia.

HIGHLIGHTS FROM 2023



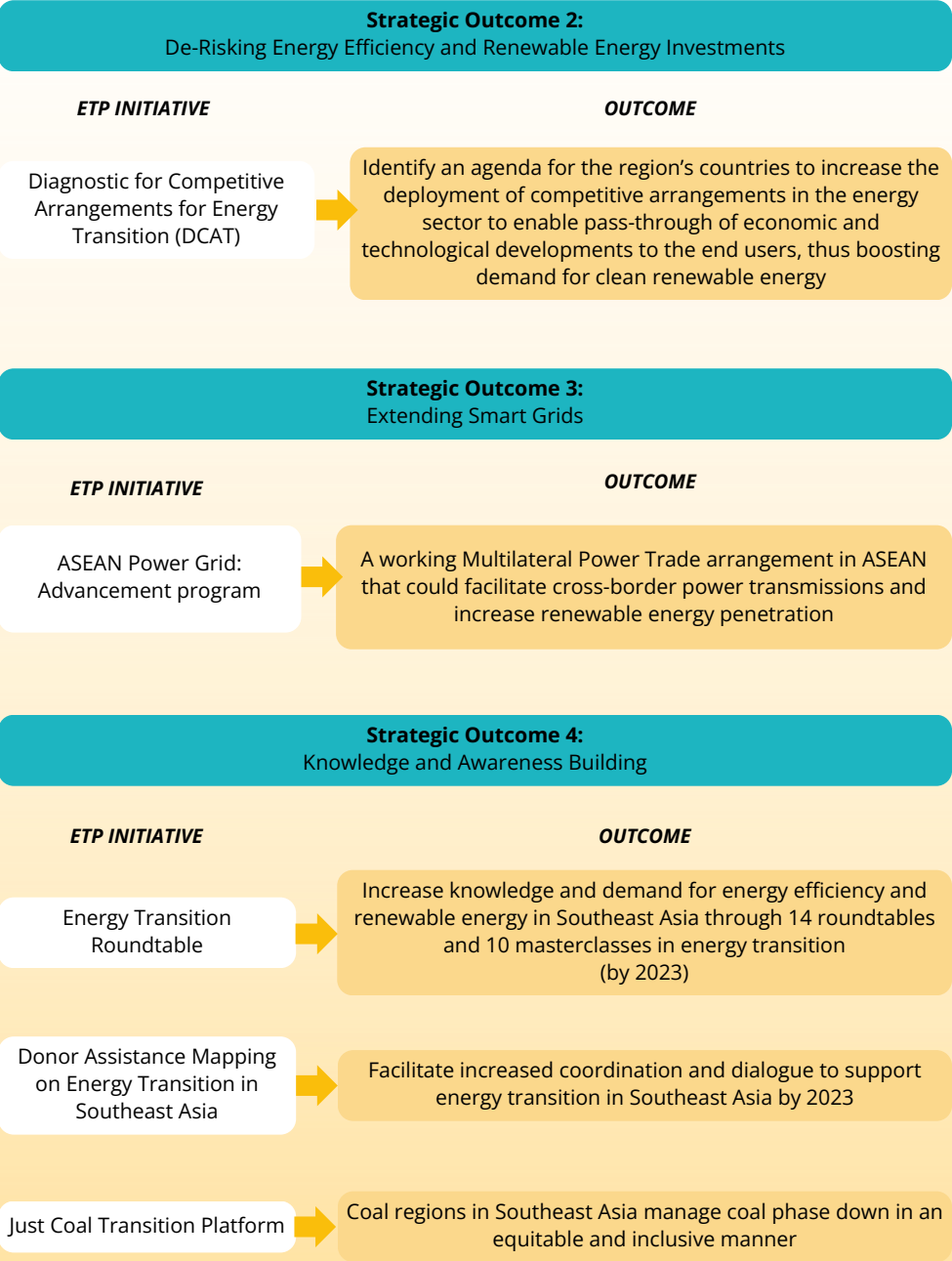
For project updates
visit www.energytransitionpartnership.org

OVERVIEW

Barriers to Energy Transition	ETP Intervention
Slow paced renewable energy deployment and its integration	(S02) Diagnostic for Competitive Arrangements for Energy Transition (DCAT) Impact: Deployment of more renewable energy sources due to competitive arrangements and transparency
Disconnect between supply and demand of renewable energy due to unestablished regional power interconnection	(S03) ASEAN Power Grid Advancement Program Impact: Increase energy security and renewable energy uptake in the ASEAN Power Grid
Lack of access to global knowledge, innovation and emerging technologies, networks, and concepts under pilots for financing models and private sector participation mechanisms, the leadership and stakeholders in energy transition	(S04) Energy Transition Roundtable Impact: Strengthened level of knowledge and awareness in the government, private sector, and civil society stakeholders related to energy transition (S04) Donor Assistance Mapping on Energy Transition in Southeast Asia Impact: Accelerated Energy Transition through shared knowledge and increased funding opportunities through gaps identified (S04) Just Coal Transition Platform Impact: Coal regions in Southeast Asia manage coal phase down in an equitable and inclusive manner

Table 5: Regional - Overview

Below is an overview of projects funded under ETP's regional window and their intended outcomes



Strategic Outcome 2: De-risking Investments in Energy Efficiency and Renewable Energy

Diagnostic for Competitive Arrangements for Energy Transition

Boosting renewable energy in Southeast Asia requires major investments and policy changes. The goal is to make renewable energy more competitive and affordable, but the region hasn't fully embraced efficient market practices for faster adoption. ETP is working with Kuungana Advisory to conduct a Diagnostic for Competitive Arrangements for the Energy Transition (DCAT). This diagnostic assesses current power purchasing systems in Vietnam, Indonesia, and the Philippines. It identifies barriers and (through consultations) develops an action plan for adopting market mechanisms.

DCAT focuses on two key areas:

- mechanisms (eg: competitive procurement) to increase renewable energy procurement
- commercial terms (eg: Power Purchase Agreements) for successful project contracting

The team has completed the diagnostic work which assessed key barriers to renewable energy procurement. The team completed and presented the Power Purchase Agreement (PPA) guideline which was accepted by Indonesia's Ministry of Energy and Mineral Resources. This guideline steers the design and implementation of the PPA regulation for renewable energy being drafted by the government, intended to increase investment and deployment in renewable energy projects.

Throughout the year, ETP and Kuungana Advisory conducted four consultations and capacity assessment workshops in Indonesia and the Philippines. These sessions, attended by nearly 100 representatives from government institutions such as Indonesia's Ministry of Energy and Mineral Resources, Indonesia's State Utility Company (PLN), and the Philippines' Department of Energy among others, included a 39% female representation.

Strategic Outcome 3: Extending Smart Grids

ASEAN Power Grid Advancement Program

The ASEAN Power Grid (APG) aims to connect the power systems of Southeast Asian nations, enabling clean energy sharing and reducing reliance on fossil fuels. This initiative is implemented in stages:

- Bilateral & Sub-regional: Initial connections between neighboring countries.
- Regional Integration: Full-fledged regional grid with multilateral power trading.

ETP is implementing the ASEAN Power Grid Advancement Program (APG-AP) together with the ASEAN Centre for Energy (ACE) and provides support through four key areas:

- Coordination: Facilitating communication and collaboration among stakeholders.
- Roadmap: Developing a stepwise APG roadmap and its financing framework.
- Analytical Work: Developing an evidence base to establish multilateral power trade.
- Pilot Trading: Facilitating the implementation of a pilot multilateral power trade.

In addition to ETP's support for the above, the Clean Affordable and Secure Energy for Southeast Asia program (CASE) funded by GIZ provides funding support to ACE to establish a dedicated Project Management Unit (PMU) for APG-AP. (Contd.)

Strategic Outcome 4: Knowledge and Awareness Building

(Contd. from Strategic Outcome 3: Extending Smart Grids) ETP is working with Delphos International Ltd to prepare a comprehensive and staged roadmap as part of the APG-AP. This roadmap will serve as a charted path from the current study stage to the launch of multilateral trading operations in ASEAN power markets. The roadmap will include a detailed analysis of past, current, and planned assistance provided to the APG initiative and will inform the next steps to build on, collaborate, and capitalise on such external assistance.

Energy Transition Roundtables

ETP provided a multi-year grant (December 2021 to December 2023) to the Australian National University (ANU) to develop and deliver a learning platform for current and aspiring energy transition practitioners, which included a series of educational content, dialogues, deep dives, and white papers. One of the core outcomes of the project was that stakeholders increase their understanding of energy transition topics relevant to them in their discipline.

In collaboration with various partners and industry experts, ANU identified capacity gaps and shared insights with policymakers. In 2022, the project delivered 9 roundtables, 10 masterclasses, and an Energy Transition Dialogue, engaging 420 participants (40% women). As part of a survey evaluating the effectiveness of the sessions, 96% of respondents from relevant Government entities, public sector companies, financial institutions and academia reported that they have an improved understanding of renewable energy and energy efficiency value chain topics.

In 2023, the focus was on concluding these sessions and producing policy briefs:

- Grid & Financing Challenges for Energy Transition in Indonesia (View [here](#))
- Enabling and increased Share of Renewable Energy in the Philippines Electricity Mix (View [here](#))
- Managing Vietnam's Grid Issue for Effective Energy Transition (View [here](#))
- Mind the Gap - Exploring Options to Finance Decarbonization of the Energy Sector in Indonesia and Vietnam (View [here](#))

The Energy Transition Dialogue executed in 2023 featured 10 speakers, drawing 272 participants (42% women), with 87% satisfaction rate during the post survey.

Approximately 247 participants attended the 2023 online Pre-COP Policy Dialogue leading up to COP28. Panelists were from the Southeast Asian Energy Transition Partnership, national government representatives from Vietnam, Indonesia, and the Philippines, the Indonesia Research Institute for Decarbonisation, Association of Southeast Asian Nations (ASEAN), CASE, ClimateWorks Centre, and the Australian National University (ANU).

The COP Side Event held at COP28 in Dubai brought together stakeholder representatives from the implementation countries to shed light on the approach and outcomes of ETP and highlight its progress.

Central to the project was providing ongoing access to an up-to-date online library with continued access to new concepts and technologies under testing and piloting, as well as best practices. This enables the Southeast Asian countries' energy transition leadership to continue

their learning and stay abreast with developments. This online library of the resources, information and materials related to the roundtables is available on ETP's website (View [here](#))

Just Coal Transition Platform Southeast Asia

The World Bank joins ETP funders to establish the Just Coal Transition Platform (JCTP) Southeast Asia for communities impacted by the coal phase down in the region, particularly Vietnam, Indonesia, and the Philippines. As a convening platform, JCTP aims to bring together partners and stakeholders working on coal phase down in Southeast Asia to collaborate in ensuring equitable and inclusive transition. The Platform is in its five-year incubation period (2023-2028) where the Platform Secretariat (incubated under ETP) is being set up and initial activities are defined.



- **Generate, collate, and disseminate knowledge and good practices on core just transition issues.**



- **Enable dialogues and peer-to-peer exchange between coal communities to discuss the critical transition issues and identify potential solutions.**



- **Create a coordination mechanism to facilitate access to financing and technical assistance for the coal communities affected by coal phase down.**



- **Provide a forum for the just coal transition initiatives in the region that could catalyse collaboration and alignment to support equitable and inclusive transition processes.**

Progress

In 2023, the Platform accomplished various critical initiation tasks. The Platform has developed its first Project Implementation Manual that pencils down the overall design of the Platform for its incubation period. In July 2023, the Platform hosted its first online partner meeting where 38 people from aligned initiatives attended the meeting to understand what the Platform is about and how they can take part in the Platform activities. Following the success of the first partner meeting, ETP and the World Bank co-hosted the first in person meeting in Singapore with partners and country stakeholders to design the shape of the Platform. Of the 38 participants who attended, half were women and over one third represented the non-governmental organisations from Vietnam, Indonesia, and the Philippines, showcasing the Platform's commitment to achieve gender equality and social inclusion.

Strategic Outcome 4: Knowledge and Awareness building



The platform meeting conducted in Singapore was attended by 38 participants including stakeholders from Indonesia, the Philippines and Vietnam

Donor Assistance Mapping on Energy Transition in Southeast Asia

ETP commissioned Asia Clean Energy Partners (ACE Partners) to conduct a comprehensive review and collect data on donor assistance in Southeast Asia, with a specific emphasis on Vietnam, Indonesia, and the Philippines. In addition to donor mapping reports, ACE Partners also developed an issue-based paper on blended finance for energy transition in Vietnam, Indonesia, and the Philippines.

The overall objective of the project was to improve the methodological approaches for ETP's donor mapping in Southeast Asia, particularly Vietnam, Indonesia, and the Philippines. The project helped identify the gaps and overlaps of donor activities related to energy transition in Southeast Asia to ensure alignment and avoid repetitions of works, allowing for more directed and streamlined strategies for energy transition projects. The outputs of the donor mapping are shared with the Southeast Asia Information Platform for Energy Transition (SIPET) which hosts a database of donor activities in Southeast Asia and disseminates it to the public.



Second Donor Mapping report was submitted identifying gaps and possible overlaps of issue based donor activities and prepare regularly strategic and pioneering reports on donor activity, identification of gaps and risk of overlaps. ([View here](#))



An issue based paper on blended finance for energy transition in Vietnam, Indonesia, and the Philippines was submitted to examine the landscape of clean energy finance in these countries. ([View here](#))



JUST ENERGY TRANSITION PARTNERSHIPS

Just Energy Transition Partnerships (JETPs) have been established in Indonesia and Vietnam and help catalyse and coordinate energy transition. ETP is dedicated to ensuring the success of the JETP and is aligning its ongoing and future projects to ensure that the partnerships can leverage collective efforts and expertise. In addition, ETP has delivered, and continues to create, technical support to the JETP secretariats in partnership with others.

In **Indonesia**, ETP's current and requested support to the JETP includes:

- Provision of an Energy Modeler Expert to review energy system analysis, facilitate scenario planning, and conduct risk assessments associated with power system investments during the development of the Comprehensive Investment and Policy Plan (CIPP)
- Provision of a Socio-Economist Expert for comprehensive socio-economic assessments, impact analyses, and advisory services on socio-economic issues related to JETP's energy projects
- Supporting a Working Group on Energy Efficiency and Electrification
- Support to the JETP Secretariat in developing the Captive Coal Roadmap, which aims to align off-grid industrial sectors with low-carbon pathways. The Roadmap will aim to shift captive power users from unabated fossil fuels to renewables, aligning with affordability and net zero emissions goals

In **Vietnam**, ETP was active in providing support to MONRE for the drafting a Resources Mobilization Plan (RMP) outline through a series of studies and policy briefs on international experiences and relevant aspects from other JETPs:

- Analysis of JETP experience in Indonesia and South Africa: A report highlighting key insights from Indonesia and South Africa's energy transition journeys, relevant to Vietnam's context.
- Policy briefs:
 - Historical experiences with fossil to renewable electricity transitions.
 - Background and legal concerns for JETP development and implementation in Vietnam.
 - Financing the JETP RMP in Vietnam.
 - Energy transition in JETP development and implementation in Vietnam.
 - Just and equitable transition in JETP development and implementation.
 - Draft JETP Resources Mobilization Plan (RMP) outline: A comprehensive framework to guide resource mobilization for an effective energy transition.



GENDER MAINSTREAMING

Energy transition is everyone's business. As part of ensuring a just and fair transition, ETP continues to mainstream a gender focus throughout its operations. The ETP Gender Action Plan (GAP) is reviewed regularly and strengthened to ensure the programme continues to foster inclusion.

ETP strives for gender balance in all areas of its operation including ETP staff and contracted implementing partners.

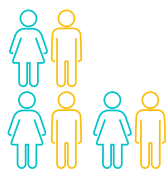
As the team grew, ETP ensured to maintain a gender balance at all levels of the program throughout 2023.

As part of strengthening its efforts, gender considerations will be a part of the evaluation criteria when selecting implementing partners in 2024.

At a programme level, ETP's results-based monitoring framework pursues gender-disaggregated indicator data, and where possible, monitoring of programme impact on gender.

At a project activity level, ETP aims to achieve gender balance in the project teams and among beneficiaries, wherever possible. Through its technical assistance, ETP is also building the capacity of women leaders, and women-owned and managed entities by ensuring all capacity building involves women in their target audiences.

ETP's 2023 activities, including activities by implementing partners, resulted in a total of 12,868 labour days, where 42% (5,416 days) were labour days created for women.



11 out of 19 personnel in the ETP team are women.



39% of staff from implementing partner organisations were women.



22% of organisation founders of ETP's implementing partners were women.



39% participants who attended knowledge sharing sessions, training, consultations and events were women



● ALIGNED PROGRAMMES

As part of its mandate, ETP forges partnerships and alliances. However, specific programmes (SEACEF, CASE) have been defined as 'Aligned Programmes' by funders in part due to their shared objectives, shared funding sources, to adopt a multi-pronged approach to energy transition in the region. ETP's Aligned Programmes support one another's efforts and interventions on the ground by successfully coordinating their strategies and leveraging each other's resources and interventions. Additionally, ETP specifically seeks to develop joint projects and knowledge exchanges with these partners. data gathering, and vision sharing. ETP regularly liaises with TARA to comprehend the viewpoints of civil society on the energy transition.



Team discussion with GIZ-CASE, stakeholders and experts

SOUTHEAST ASIA CLEAN ENERGY FACILITY (SEACEF)



SEACEF, managed by Clime Capital, intends to steer catalytic early-stage finance towards creative, high-impact clean energy initiatives in Southeast Asia.

ETP and SEACEF work together on cutting-edge energy efficiency investments and continue to seek collaborative ventures together.

CLEAN AFFORDABLE SECURE ENERGY FOR SOUTHEAST ASIA (CASE)



The Clean Affordable Secure Energy for Southeast Asia (CASE) programme, funded by GIZ, seeks to significantly change the narrative surrounding Southeast Asia's energy sector in favour of an evidence-based energy transformation in order to raise political aspirations to adhere to the Paris Agreement. ETP and CASE work together on a few projects and continue to seek additional opportunities for collaboration.

ONGOING AND PLANNED JOINT INITIATIVES

- ETP and SEACEF collaborate in the Energy Efficiency sector as SEACEF seeks to fund promising projects implemented by organizations who successfully received grants under ETP's 'Energy Efficiency Innovation Window' (EEIW). Examples include developing a pipeline of bankable energy efficiency projects in the Philippines through EEIW grantee EP Group, and catalysing energy efficiency as a service in Indonesia through EEIW grantee Synergy Efficiency Solutions.
- Coordinating projects on the Demand Side Management and Smart Grid Transformation in the Philippines where SEACEF can support technology transfer.
- Coordinating technical assistance for pump-storage hydro in the Philippines where SEACEF is providing inputs and guidance to the project design in order to strengthen private sector engagement.
- ETP collaborated with CASE on the development of the SIPET energy transition data management project and is a regular contributor sharing details on projects and results.
- CASE regularly contributes valuable feedback and guidance to ETP's strategy and programming in the implementation countries.
- ETP and CASE work together to jointly develop and deliver the ASEAN Power Grid Advancement Program, together with ACE and other partners.

COORDINATION

As a multi-stakeholder partnership with diverse government and philanthropic funders, coordination is at ETP's core. ETP's theory of change, country strategies, and annual programming start with close coordination with government beneficiaries, development partners, and funders' HQ and local posts to minimize overlap, ensure complementarity, avoid siloed and potentially duplicated efforts, and leverage one another's programming and results for effective energy transition.



- In 2023, ETP organized regular coordination meetings with government agencies in implementation countries to continuously review and discuss ongoing and new projects.
- In 2023, ETP organized coordination meetings with Funders' local posts in the region to share information.



- In 2023, ETP organized and/or attended relevant country and regional coordination meetings with development partners including Energy Transition Council's Rapid Response Facility (ETC RRF).

In 2024, ETP seeks to strengthen its coordination efforts including organising meetings with funders' local posts monthly online and quarterly in-person. ETP will also engage more actively in other existing coordination platforms at the country level.

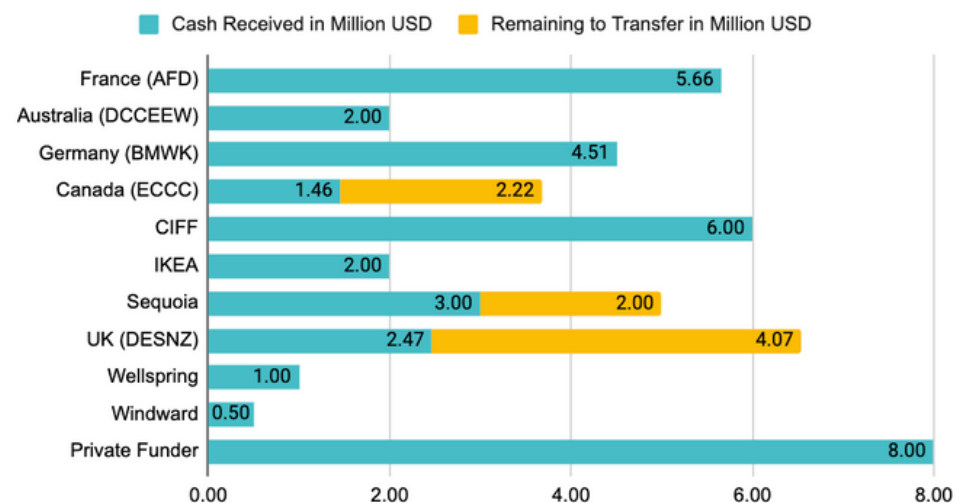
FINANCIAL MANAGEMENT

ETP is a multi-year, pooled fund with government and philanthropic funders who contribute for specific durations within ETP's implementation timeframe.

As of December 2023, the total value of funders' commitments to ETP is USD 45.3 million, inclusive of interest earned.

Value of the Fund as of 31 December 2023

Graph 1: Total Signed Contribution by Funder



Cash Balance (USD) as of 31 December 2023

Description	Amount (USD)
Cash received	37,005,468
Expenditures	12,710,699
Commitments (signed projects and other signed obligations)	5,582,214
Cash Balance*	18,712,555

Table 6: Cash Balance as of 31 December 2023

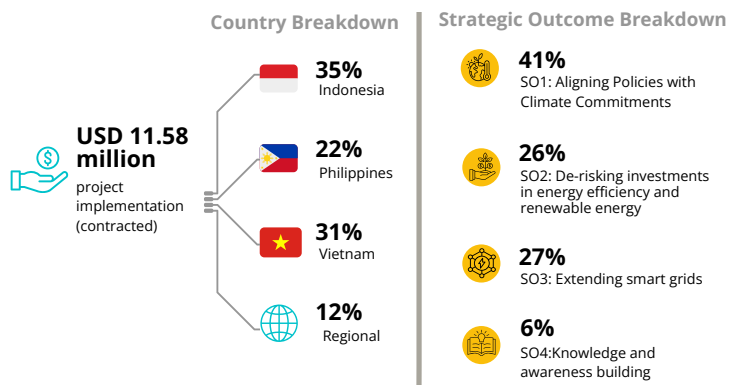
*After accounting for donor contributions to be received in 2024, ETP personnel and operations costs, and the estimated value of approved projects expected to be contracted in 2024, the ETP's cash balance is projected to drop to below \$2 million in 2024, highlighting a need for increased fundraising efforts.

Programme Expenditures

Description	Total Expenditure (USD) 2020-2023	2023 Expenditures (USD)
Secretariat Costs	2,810,464	1,150,074
Implementation		
Strategic Outcome 1	2,583,928	1,955,458
Strategic Outcome 2	1,073,296	747,093
Strategic Outcome 3	2,546,334	1,359,717
Strategic Outcome 4	764,870	197,473
Preparation	168,608	28,812
Monitoring, Evaluation, Audit	176,309	146,815
Country Coordination Costs	1,113,988	696,709
Other Direct Costs	1,043,075	314,675
Contingency	0	0
Total Direct Costs	12,280,873	6,596,826
Total Indirect Costs	429,827	230,884
Total Expenditures	12,710,699	6,827,710

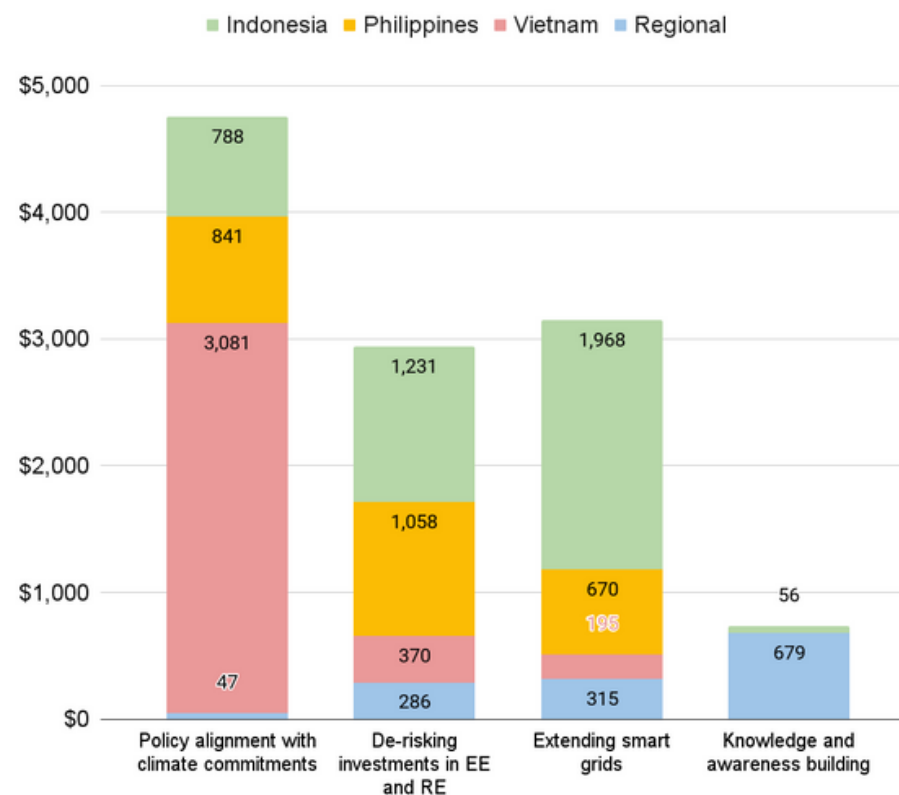
Table 7: Programme Expenditures

Total Value of Projects (2020-2023)



Fund Distribution by Strategic Outcome and Region - Projects (USD)

Graph 2: Total Contract Value (of projects/initiatives supported by ETP) as of 31 December 2023 (in thousands, USD)



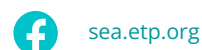
COMMUNICATIONS AND OUTREACH

The power of information drives change, therefore communication and knowledge-sharing are key elements of ETP's work.

ETP utilizes various channels, including the website and social media, to keep stakeholders informed about energy transition initiatives, projects, and opportunities. ETP organized, participated, or delivered key presentations in several high-level events in 2023. The visual on the right provides a snapshot of some of these key events.

A repository of events and activities can be accessed [here](#).

In 2023, a Communications and Reporting Officer was hired to further elevate the visibility of this growing programme and bring attention to ETP's results by developing compelling narratives and highlighting the short and long-term human impact of the critical technical assistance that the programme delivers. This function will also support ETP's engagement and visibility with relevant regional and global high-level events to bring further prominence to the programme's work.



sea.etp.org



[@sea_etp_org](https://twitter.com/sea_etp_org)



[southeast-asia-energy-transition-partnership](https://southeast-asia-energy-transition-partnership.org)



energytransitionpartnership.org

MARCH		
Berlin Energy Transition Dialogue (Germany)	Germany	<ul style="list-style-type: none"> ETP spoke alongside Ministers of Energy from multiple countries and heads of global agencies (IRENA, WTO) at the ministerial session on 'Global Energy Transition: Translating Ambition into Action' sharing its experience on how multilateral partnerships can accelerate energy transition. ETP organized a side event on 'The Role of International Partnerships in Accelerating Southeast Asia's Energy Transition' which brought together a global panel of speakers (including the Head of IKI, Deputy Minister of Indonesia's CMMIA, and the Undersecretary of the Philippine Department of Energy).
MAY		
ETC Ministerial Meeting	Virtual	<ul style="list-style-type: none"> ETP presented programme updates highlighting key projects in the region
IEA Energy Connectivity Training Week	Singapore	<ul style="list-style-type: none"> ETP presented programme updates and highlighted key results from projects
JUNE		
Asia Clean Energy Forum 2023	Philippines	<ul style="list-style-type: none"> ETP delivered a keynote speech at the 'Deep-Dive Workshop: Energy Grid, and Storage Solutions to Addressing the Climate Challenges of Tomorrow.' ETP also organized a Spotlight Session on the 'Impact of the EU's Carbon Border Adjustment Mechanism on Energy Transition in Southeast Asia.'
AUGUST		
ASEAN Energy Business Forum	Indonesia	<ul style="list-style-type: none"> ETP actively participated in a discussion on "Accelerating Power Grid Interconnectivity in Southeast Asia: Enhancing Cooperation with Partners in ASEAN."
ASEAN Ministers of Energy Meeting	Indonesia	<ul style="list-style-type: none"> Signed an MOU together with ASEAN Centre for Energy (ACE) and Clean, Affordable and Secure Energy for Southeast Asia (CASE) towards the implementation of the ASEAN Power Grid Advancement Program (APG-AP).
OCTOBER		
Singapore Energy Week	Singapore	ETP co-hosted a Roundtable Insights session titled "Strategies for success in the ASEAN Power Grid (APG)". This session brought together key stakeholders to explore and discuss crucial pathways for advancing the APG's development and fostering a more interconnected, energy future in the region.
NOVEMBER		
Asia-Pacific Climate Week	Malaysia	ETP joined the conversation at Asia Pacific Climate Week, lending their expertise to a panel titled "Implementing Renewable Energy and Energy Efficiency Goals in the Asia-Pacific for a Low-carbon Future."
Green Big Bang Prelude	Korea	ETP spoke on a panel of experts on "Global Collective Energy Transition" and highlighted the role of the international community and importance of partnerships to enable just energy transition in the region
DECEMBER		
COP28	United Arab Emirates	<ul style="list-style-type: none"> COP28 presented ETP with a unique opportunity to highlight ETP's progress and results to date, forge new connections with potential funders and other key stakeholders committed to energy transition. ETP facilitated 14 side-events, working with over 50 speakers and panelists from funders, partner governments, and expert organizations.

RISKS

ETP continuously evaluates risks in the regional energy transition sector and the political and implementation landscapes where we operate to ensure we can adapt and implement effectively. This page highlights some of key risks at a programme level.

POLICY AND INSTITUTIONAL FLUX

Changes in the policy and institutional landscape and its impact on each country's energy transition needs to be carefully monitored and adapted to in all implementation countries and regional activities. Following changes in government or at institutional level, there is a possibility of shift in priorities that may affect ETP's interventions, which will require adjustments to align with new directives or policies and potentially impact future projects and results.

Mitigation: ETP is proactively engaging with staff and stakeholders at various levels to ensure adaptability and commitment to the programme's overarching goals. By fostering flexibility and open communication, ETP aims to navigate any potential changes smoothly while staying focused on its core mission.

DEMAND OUTPACING FUNDING

ETP's investment in relationships and successfully delivering relevant technical assistance to date has resulted in partner countries seeing ETP as a trusted partner. This has generated a significant increase in requests to deliver more technical assistance across the region. ETP's current funding is insufficient to meet requests for assistance.

Mitigation: ETP continues to engage potential funders, and enhance visibility of impact and results. ETP prioritizes new requests to ensure the technical assistance provided is relevant, bold, ambitious, and needed, and that there is sufficient willingness from partner countries for further implementation.

MANAGING PUBLIC IMAGE AND PERCEPTION

Due to the sensitive and politically charged nature of the energy transition sector in the region, ETP is at risk of being negatively portrayed in the public eye. This can occur through other parties misrepresenting the programme, its results, or even simply publishing ETP's name publicly alongside untrue or unrelated information.

Mitigation: ETP ensures that all relevant technical assistance is officially requested by the partner governments. ETP carefully navigates the media landscape, working closely with consultants to ensure that all outputs are carefully reviewed ahead of public dissemination. Rigorous quality assurance and control methods are in place to uphold quality of deliverables.

NAVIGATING THE DYNAMIC ENERGY TRANSITION LANDSCAPE

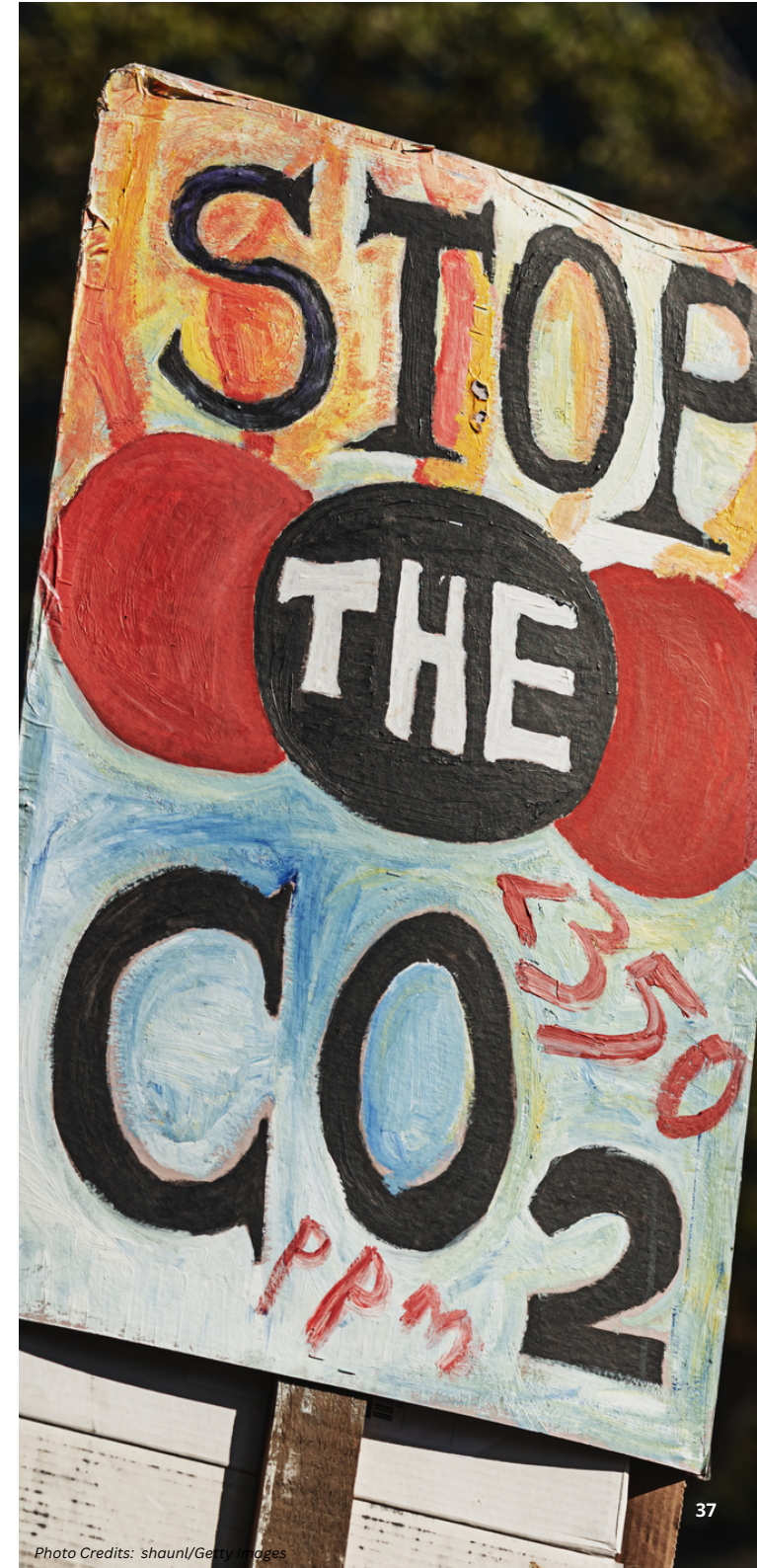
The energy transition landscape in the region is moving at a rapid pace and constantly evolving - requiring ETP to adapt swiftly to changes and pivot support strategies to effectively serve its agenda and align with ETP mandates.

Mitigation: ETP remains vigilant and responsive to emerging trends and developments in the energy transition sector. Country teams engage regularly with partner countries, development partners, and funder's local posts to ensure ETP's strategy remains aligned. ETP reviews its TA plans semi-annually to ensure they are up-to-date.

INSTITUTIONAL RISK

Following the S3i issue, UNOPS has undergone a thorough assessment, and restructured and strengthened its financial management systems, resulting in reduction of associated risks. Nevertheless, ETP relies on, and is subject to, UNOPS processes for crucial services, including financial management, HR, and procurement, collaborating closely with them. Any delays in these services could adversely affect the effectiveness of ETP.

Mitigation: ETP closely monitors the provision of services by UNOPS and has mechanisms in place to escalate any issues to senior management if necessary. ETP continues to maintain additional review and control processes to ensure high quality programme delivery and project deliverables. ETP will also explore additional opportunities and mechanisms which can be customized for ETP to build flexibility and responsiveness while maintaining strong oversight.





LESSONS LEARNED

MANAGING EXPECTATIONS

As ETP's visibility and engagement with beneficiaries has expanded, it has become crucial to manage expectations. With a surge in requests, there was also an expectation to deliver faster and to support areas outside ETP's mandate. Clear communication on ETP's mandate, organisational policy and procedures is essential to provide beneficiaries with a realistic understanding of timelines. Management of expectations will ensure the programme can deliver commitments and does not overpromise, continue to maintain a positive relationship, balance responsiveness with organization policy, and deliver effectively and transparently.

BUILD AND MAINTAIN AN ADAPTIVE APPROACH TO DELIVERY

In the dynamic landscape of energy transition in the region, and responding to each country's inarguably unique socio-political landscape, ETP must remain agile and adaptive to navigate the evolving space and priorities effectively.

In the Philippines, for example, due to partially deregulated market demands, greater collaboration with private sector, CSOs, and diverse government agencies was more effective. Therefore, consultations with both traditional and non-traditional stakeholders was imperative to widen our scope of understanding. In countries such as Vietnam, better contingency planning was highlighted as a requirement, due to the volatility of the energy sector and the need to mitigate this with more flexible project implementation.

Capitalizing on initiatives like the JETP and the Green Investment and Finance Partnership (GIFP), remaining abreast of emerging technologies becomes imperative as it provides an avenue for collaboration, innovation, and shared knowledge. The programme must develop and utilize effective mechanisms to respond to urgent needs while maintaining portfolio balance.

ETP needs to find that delicate balance between embracing such initiatives, staying aligned with broader national sustainability objectives, and remaining committed to its overarching goal of supporting partner countries to transition to renewable energy.

STRATEGIC PROJECT PRIORITIZATION

Collaboration with partner country stakeholders and building trust through effective delivery of projects has resulted in greater demand for support than available resources. ETP will need to stringently prioritize projects with high impact and strategic alignment with ETP's goals and the country's objectives. ETP must review and strengthen its prioritization criteria, seek opportunities to consolidate similar activities, and leverage impactful partnerships to maximize resource efficiency.

PRIORITIZING ENERGY EFFICIENCY

In the energy transition process, there's a tendency to prioritize renewable energy, often overlooking energy efficiency and conservation. However, energy efficiency plays a crucial role in facilitating the integration of variable renewable energy (VRE) and ensuring reliable power supply. Recognizing the importance of this balance, ETP provided several grants under a 'Energy Efficiency Innovation Window' to increase energy efficiency initiatives. The potential reduction of CO2 emissions identified by these grants confirm the need for additional investment in Energy Efficiency. However, the development and implementation of a grant model designed specifically for 'for-profit' entities (compared to a traditional model built for non-profit development sector organisations currently in use) will be more effective.

ACE Asia Clean Energy
AMPERES Australia – Mekong Partnership for Environmental Resources & Energy Systems
ANU Australian National University
APG ASEAN Power Grid
APG-AP ASEAN Power Grid Advancement Programme
ASEAN Association of Southeast Asian Nations
ASEP-Cells Access to Sustainable Energy Programme-Clean Energy Living Laboratories
BAPPENAS Ministry of National Development Planning
BAU Business as usual
BESS Battery Energy Storage System
BLT Cert. Bao Loc Technology JSC
CASE Clean Affordable Secure Energy Program
CBAM Carbon Border Adjustment Mechanism
CCS Carbon Capture and Storage
CentRE Center for Empowerment, Innovation and Training on Renewable Energy
CFPP Coal-fired Power Plant
CMSC Commission for Management of State (Vietnam)
CMSC Credit Guarantee Mechanism
COP Comprehensive Investment and Policy Plan
CPI Commission for State Capital Management
CREZ Conference of the Parties
CSO Climate Policy Initiative
DCAT Competitive Renewable Energy Zones
DEC Directorate of Energy Conservation
DED Civil Society Organisation
DEN Diagnostic for Competitive Arrangements for Energy Transition
DGM De-risking Guarantee Mechanism
DOE Department of Energy (of the Philippines)
DRC Disaster Recovery Centre
DSL Distribution System Loss
DSM Demand Side-Management
EE Energy Efficiency
EIIV Energy Efficiency Innovative Window
EIAB ESCO-in-a-box
EMMA Energy Market Mechanism Acceleration
EMS Energy Management System
ENDC Enhanced Nationally Determined Contribution
EP EnergyPro
EPIRA Electric Power Industry Reform Act
ERAV Electricity Regulatory Authority of Vietnam
ERC Electricity Regulatory Commission (of the Philippines)
EREA Electricity and Renewable Energy Authority
ESCO Energy Service Company(ies)
ESO Energy Service Office
ESS Energy Storage System
ETP (Southeast Asia) Energy Transition Partnership
ETS Emission Trading System
FDI Foreign Direct Investment
FIT Feed In Tariff
GAP Gender Action Plan

GGGI Global Green Growth Institute
GHG GreenHouse Gas
GMC Grid Management Committee
GOI Government of Indonesia
GSO General Statistics Office of Vietnam
GW Gigawatt
GWP Global Warming Potential
HESS Hybrid Energy Storage System
HFC Hydrofluorocarbon
IEMOP Independent Electricity Market Operator of the Philippines
IES Intelligent Energy Systems Pty Ltd
IGA Investment-grade Audit
IIIE Indonesian Institute for Energy Economics
IKI International Climate Initiative
IRENA International Renewable Energy Agency
JAMALI Java-Madura-Bali
JETP Just Energy Transition Plan
KEN National Energy Policy (of Indonesia,)
LCOE Levelized Cost of Electricity
LGU Local Government Unit
M&E Monitoring & Evaluation
MCC Main Control Centre
MEMR Ministry of Energy and Mineral Resources (of Indonesia)
MEP Mechanical, Electrical and Plumbing
MM Market Mechanism
MOEF Ministry of Environment and Forestry
MOF Ministry of Finance (of Vietnam)
MOIT Ministry of Industry and Trade
MONRE Ministry of Natural Resources and Environment
MOU Memorandum of Understanding
MW Megawatt
NCCS National Climate Change Strategies
NDC Nationally Determined Contribution
NEA National Electrification Administration
NEC National Energy Council (of Indonesia)
NGCP National Grid Corporation of the Philippines
NZE Net Zero Emissions
OECD Organization for Economic Co-operation and Development
OWE Offshore Wind Energy
PDC Philippine Distribution Code
PDP Power Development Plan
PEMC Philippine Electricity Market Corporation
PEP Philippine Energy Plan
PERPI Philippine Energy Research and Policy Institute
PEZA Philippines Economic Zone Authority
PGC Philippines Grid Code
PLN Perusahaan Listrik Negara (Indonesia Electricity Company)
PPA Power Purchase Agreement
PSGG Philippines Small Grid Guidelines
PV Photovoltaics
PVN Petro Vietnam
RBMF Results Based Monitoring Framework
RE Renewable Energy
RPJMN Medium-term National Development Planning (Indonesia)

RUEN National Energy Plan (of Indonesia)
RUKN National Electricity Plan (of Indonesia)
RUPTL Electricity Business Plan (of Indonesia)
SC Steering Committee
SCADA Supervisory Control and Data Acquisition
SDG Sustainable Development Goals
SEA Southeast Asia
SEACEF Southeast Asian Clean Energy Facility
SIPET Southeast Asia Information Platform for the Energy Transition
SOE State-owned Enterprise
TIS Technological Innovation System
TWG Technical Working Group
UNFCC United Nations Framework Convention on Climate Change
UNOPS United Nations Office for Project Services
UN United Nations
VCCI Vietnam Chamber of Commerce and Industry
VEPF Vietnam Environment Protection Fund
VIETSE Vietnam Energy Transition Social Enterprise
VNEEP Vietnam National Energy Efficiency Programme
VRE Variable Renewable Energy
WESM Wholesale Electricity Spot Market (of the Philippines)

ACRONYMS

ANNEXES



Annex 1: List of all on-going projects funded by ETP

	Projects	Implementing Partner	Expected/Actual date of completion
Strategic Outcome 1: Policy Alignment with Climate Goals	[INO] Study on the Financial Implications of the Early Retirement of Coal-fired Power Plants (CFPPs) in Indonesia	Hartree Consultores	29 Feb 2024
	[INO] Streamlining Energy Sector Plans as a Pathway to Achieve Net Zero Emissions (NZE)	Niras International Consulting Indonesia	30 Jul 2024
	[INO] Assisting the Revision of the Indonesia Roadmap of Net Zero Emission (NZE) 2060	NEYEN Consulting SL	30 Nov 2023
	[INO] Supporting Medium-term National Development Planning (RPJMN) 2025–2029 Background Study Indonesia	PT Sustainability and Resistance (Sureco)	31 Oct 2023
	[INO] Preparation of Indonesia's Enhanced Nationally Determined Contribution (NDC) Investment Roadmap for Energy Efficiency	Trama TecnoAmbiental, S.L (TTA)	30 Nov 2023
	[PHI] The Philippines Battery Energy Market Mechanism Support Program	Nel Consulting Limited	7 Oct 2023
	[PHI] Power Development Roadmap for the Bangsamoro Autonomous Region for Muslim Mindanao (BARMM)	Aquatera	30 Sep 2023
	[PHI] Support to the Green Energy Auction Program	Phillip Castro Adviento	31 Dec 2024
	[PHI] Offshore Wind Permitting and Consenting	Niras Asia Manila	15 Jun 2024
	[PHI] Demand Side Management Policy	International Institute for Energy Conservation Inc	14 Dec 2024
	[VIE] Roadmap for the Commission for Management of State Capital (CMSC) toward Net-Zero Emission in Energy State-Owned Enterprises	Vietnam Initiative for Energy Transition (VIET)	31 Jul 2023
	[VIE] National Green Cooling Program	Energy and Environment Consultancy Joint Stock Company (VNEEC)	24 Feb 2024
	[VIE] Development of Nine Key National Standards for Electric Vehicle Charging Infrastructure	Bao Loc Technology Joint Stock Company (BLT. Cert)	30 Apr 2024
	[VIE] Legal Support to Develop the Power Generation Projects in Vietnam (EREA)	NHQuang&Associates	15 Dec 2023
	[VIE] Impact Assessment of European Union's (EU) Carbon Border Adjustment Mechanism (CBAM)	Green Climate Innovation Company	29 Feb 2024
	[VIE] Diagnostic Study on Net-Zero for The Energy Sector in Vietnam	E4SMA S.rL.,	30 Nov 2023
	[VIE] Emission Trading System (ETS) Simulation	Energy and Environment Consultancy Joint Stock Company (VNEEC)	10 Jan 2025
	[VIE] Assessment of Country's Readiness and International Experience for Carbon Trade Exchange Design	Environment and Ecology Institute	14 Jan 2024
Strategic Outcome 2: De-risking investments in energy efficiency and renewable energy	[INO] Catalysing Energy Efficiency as a Service in Indonesia	Synergy Efficiency Solutions	30 Sep 2025
	[INO] Wind Energy Development in Indonesia: Investment Plan	Pondera Consult	30 Jul 2024
	[INO] 1 GW Solar PV Mapping and Development Plan in Jamali Power Grid	Trama TecnoAmbiental, S.L (TTA)	21 Feb 2025
	[PHI] Investment-grade Audit (IGA) Financing Program	Climargy Inc.	31 Oct 2024
	[PHI] ESCO-in-a-box for Southeast Asia	EnergyPro Ltd	31 Oct 2023
	[PHI] Marine Spatial Planning	BVG Associates	8 Sep 2024
	[VIE] Promotion of Energy Efficiency in Supporting and Food Processing Industries in Vietnam	Vietnam Chamber of Commerce and Industry	30 Apr 2025
	[REG] Diagnostic for Competitive Arrangements for Energy Transition (DCAT)	Kuungana	6 May 2024
Strategic Outcome 3: Extending Smart Grids	[INO] Detailed Design to Upgrade the Java-Bali Control Centre	ELC Electroconsults S.p.A	31 Dec 2023
	[PHI] The Philippines Grid Diagnostic and Roadmap for Smart Grid Development	Ricardo AEA	15 Feb 2024
	[PHI] Upgrading Energy Regulations for the Energy Regulatory Commission of the Philippines (ERC)	Ricardo AEA	31 Jan 2024
	[VIE] Development of Vietnam Smart Grid Roadmap	Intelligent Energy Systems Pty Ltd	28 Feb 2024
	[REG] ASEAN Power Grid: Advancement program	Delphos International, Ltd.	20 Jun 2024
Strategic Outcome 4: Knowledge and Awareness Raising	[REG] Energy Transition Roundtable	Australia National University	31 Dec 2023
	[REG] Donor Assistance Mapping on Energy Transition in Southeast Asia	Asia Clean Energy Partners (ACE Partners)	30 Nov 2023
	[REG] Just Coal Transition Platform	Ecorys Brussels N.V External Inbox	31 May 2024

COUNTRY RESULTS: VIETNAM

VIETNAM				
S01 - Policy Alignment with Climate Commitments				
Target	In progress	Achievement		
1	0	1	Revised Country Energy Plans	
100%				
6	3	3	Policy Briefs Presented	
50%				
4	3	0	Policies Adopted	
0%				
2	4	1	Financing Frameworks/Reforms Recommended	
50%				
2	1	0	Financing Frameworks/Reforms Adopted	
0%				
1	0	0	Strengthened National Entity	
0%				
1	3	0	Technical Working Group/ Roundtable/Platform Established	
0%				
			Contract Value USD 2,855,409	
			52%	
			Funds disbursed	
S02 – De-risk Investments in Energy Efficiency and Renewable Energy				
5	1	0	De-risking Instrument Recommendations	
0%				
			Contract Value USD 199,570	
			51%	
			Funds disbursed	
S03 – Extending Smart Grid				
1	1	0	Technical Recommendation	
0%				
1	0	0	Technical Design/Demo/Modelling Projects	
0%				
			Contract Value USD 194,600	
			14%	
			Funds disbursed	
S04 – Knowledge and Awareness Building				
6	6	10	Studies/Research Published	
166%				
		3	Trainings/Capacity building Conducted	
6		12	Consultations Conducted	
		3	Events Conducted/Attended	
300%				
		873	Trainings/Consultations/Events Attendees*	
		451	Trainings/Consultations/Events Female Attendees* (~52%)	
		6	Entities Supported Through Technical Assistance	
			Contract Value USD 0	
			N/A	
			Funds disbursed	
Note: Although the project is tagged to one primary strategic outcome, the project outputs may be spread across one or more strategic outcomes.				

*Attendees who participated in multiple events are included in the count of each event they attended

VIETNAM		Strategic Outcome 1: Policy Alignment with Climate Commitments	
Indicator 1.1-01		Target	Achievement
National energy plans reflect an ambition towards increasing the share of renewable energy/variable renewable energy, improving energy efficiency, and phasing-out fossil fuels		1	1 Revised Country Energy Plans
		100%	
Completed activities			
Achievement: 1			
2022			
1 Revised Power Development Plan (PDP) 8 recommendations submitted			
Indicator 1.1-02.1 & 1.1-02.2		Target	Achievement
1.1-02.1 Number of renewable energy and energy efficiency policies, laws, regulations, and/or technical standards developed and presented to the government entities		6	3 Policy Briefs Presented
		50%	
1.1-02.2 Number of renewable energy and energy efficiency policies, laws, regulations, and/or technical standards revised and adopted by the government entities		4	0 Policy Briefs Adopted
		0%	
Completed activities		Planned projects	
Achievement: 3		Project pipeline: 4	
2022		1 Recommend Net-Zero Transition Strategies to ensure a successful energy transition for the oil and gas industries, thus supporting the achievement of the Just Energy Transition Partnership (JETP) targets and the objectives stated in the PDP 8	
1 Recommendations of a set of technical criteria for reviewing and granting permits for offshore wind development surveys to open financial flows to allow for the expedited addition of 7 GW of offshore wind by 2030 as per PDP 8		2 Recommend-Net-Zero Transition Strategies to ensure a successful energy transition for the coal industry, thus supporting the achievement of the JETP targets and the objectives stated in the PDP 8	
2023		3 Development of the National Standards for Battery Energy Storage System (BESS)	
2 A list of recommended technical assistance and capacity building for Commission for Management of State Capital (CMSC) and the State-Owned Enterprises (SOEs) to realise the coal phasing-down and net-zero emission roadmap development		4 National Standards for Offshore wind design and technical components: Develop national standards for regulating offshore wind power implementation	
3 Recommendations for the technological transformation of the energy sector and identify the policies required to realise the net-zero energy transition			
In progress activities			
Activity count: 3			
1 Development of 9 key national standards for e-vehicle charging infrastructure			
2 Development of the National Green Cooling Program to promote conversion to high energy efficiency and low carbon technologies and increase energy savings in the cooling sector			
3 A detailed roadmap for smart grid development in Vietnam for the period up to 2030, with a vision for 2050, considering policy, legal, economic, technical feasibility, and solutions for implementation			
		★ Recommendation adopted	

COUNTRY RESULTS: VIETNAM

VIETNAM Strategic Outcome 1: Policy Alignment with Climate Commitments			
Indicator 1.2-01 & 1.2-02	Target	Achievement	
1.2-01 Number of renewable energy and energy efficiency related financing frameworks and fiscal reforms developed and presented to the government entities	2	1	Financing Frameworks / Reforms Recommended
	50%		
1.2-02 Number of fiscal policy adjustments, investment framework instruments, established and enacted by the government entities	2	0	Financing Frameworks / Reforms Adopted
	0%		
Completed activities	Planned projects		
Achievement: 1	Project pipeline: 5		
2023			
1 Recommended policy on amending and supplementing Vietnam's current legal framework to implement the auction mechanism and proposed its impact assessment by <ul style="list-style-type: none"> Reviewing the current legal framework, identify impediments and recommendations for change for approval of investment in renewable energy projects Studying the international experience on key legal terms for auction mechanism 	1 Renewable Energy Quota System in Vietnam 2 By piloting of voluntary labelling program, facilitate the set up of the domestic carbon market. 3 Regulatory Framework for Carbon Credit Management 4 Development of Legal Framework for Carbon Trade Exchange 5 Strengthening Investment Environment and Resource Mobilisation for Energy Transition		
In progress activities			
Activity count: 4			
1 Provide recommendations and implementation roadmap to design a carbon tax system in Vietnam			
2 Policy recommendations to the Government of Vietnam to finance energy efficiency projects and ESCO business development			
3 Recommendations for establishment of a carbon market and its operation and management			
4 Policy recommendations for Emission Trading System (ETS) in Vietnam			
	★ Recommendation adopted		
Indicator 1.3-01	Target	Achievement	
Presence of an effective National-level agency/institution	1	0	Strengthened National Entity
	0%		
Planned projects			
Project pipeline: N/A			

VIETNAM Strategic Outcome 1: Policy Alignment with Climate Commitments			
Indicator 1.3-02	Target	Achievement	
Improved dialogue among government ministries and departments for a coordinated response to Energy Transition	1	0	Technical Working Group/ Roundtable/Platform Established
	0%		
In progress activities			
Activity count: 3			
1 Supporting the DCC MONRE, together with UNEP, to develop the National Green Cooling Program, in which, ETP organises several consultation workshops to consult with different stakeholders, government agencies, development partners and the private sector on development scenarios of the cooling sector, cooling standards and recommended policy actions to align the cooling sector in Vietnam with the Paris Agreement, Kigali amendments and the Global Sustainable cooling pledge			
2 Develop a roadmap for an ESCO Association establishment in Vietnam through consultations conducted under Promotion of Energy Efficiency in Supporting and Food Processing Industries in Vietnam project			
3 An energy efficiency network of supporting and food processing manufacturers, ESCOs, financiers and relevant stakeholders in energy efficiency			

VIETNAM Strategic Outcome 2: De-risk Investments in Energy Efficiency and Renewable Energy			
Indicator 2.2-01	Target	Achievement	
Number of new and existing, national and international, financing options / instruments de-risked and opened for private and blended financing	5	0	De-risking Instrument Recommendations
	0%		
In progress activities	Planned projects		
Activity count: 1	Project pipeline: 1		
1 A scalable energy efficiency bench-marking tool for supporting and food processing manufacturers	1 Strengthening investment environment and resource mobilisation for Energy Transition by providing recommendations for innovative financing mechanisms and partnerships to support renewable energy initiatives, including green finance and carbon credits		

COUNTRY RESULTS: VIETNAM

VIETNAM

Strategic Outcome 3: Extending Smart Grid

Indicator 3.1-01	Target	Achievement	
Number of technical recommendations and solutions implemented by the grid operators for planning and operation, leading to smart grid	1	0	Technical Recommendation
	0%		
In progress activities			
Activity count: 1			
1	Developing a smart grid roadmap from 2030 to 2050 – to overcome shortcomings that prevented the smart grid development, constraining the greater penetration of renewable energy in the national grid		

Indicator 3.1-02	Target	Achievement	
Number of technical design, demo, modelling projects supported for smart infrastructure	1	0	Technical Design/Demo/Modelling Projects
	0%		
Planned projects			
Project pipeline: N/A			

VIETNAM

Strategic Outcome 4: Knowledge and Awareness Building

Indicator 4.1-01	Target	Achievement	
Number of studies, research, new evidence gathered and published, for raising awareness, improving the knowledge base, driving decisions, and dissemination	6	10	Studies/Research Published
	166%		
Completed activities		In progress activities	
Achievement: 10		Activity count: 6	
2023			
1	A report on coal abatement scenarios and coal phase-down roadmap with technical and financial implications for Coal-fired Power Plants (CFPPs) under the SOEs' management. Technical and financial solutions to fill in the gap left by phased-out CFPPs are included		
2	A report on roadmap to support CMSC and the SOEs to take firm actions toward energy transition and contribute to the country's commitment to Energy Transition agenda and to contribute to the achievement of Paris Agreement		
3	A comprehensive study assessing and quantifying the impact of Carbon Border Assessment Mechanism (CBAM) on export products (especially energy-intensive industries), energy transition, national economy and implementation of NDC of Vietnam; and providing recommendations to minimise the negative impacts and contribute to the development of the sectoral mitigation plan and carbon market		
4	Study on assessing energy sector net zero scenarios by 2050, with the objective to support the Government of Vietnam to realise their National Energy Master Plan		
5	Developed a study report on the current status of smart grid development		
6	A report on international experience and best practices for smart grid development		
7	Report on policies to amend and supplement Vietnam's current legal framework to implement the auction mechanism		
8	An international experience report on key legal terms for auction mechanism		
9	A report on legal recommendations for design and implementation of auction mechanism		
10	A report on assessment of expected impacts of the proposed legal recommendations for power generation projects		
	1	A report on roadmap for smart grid development in Vietnam	
	2	An in-depth study analysing the implications and providing recommendations on the roadmap and the design of the carbon tax system in Vietnam	
	3	A report on identifying and exploring existing/innovative ideas/best practices on energy efficiency solution with applicability to supporting and food sectors	
	4	An in-depth research of energy efficiency, energy consumption and available energy efficiency verification tools among supporting and food processing manufacturers	
	5	Report on assessment of country's readiness and international experience for carbon trade exchange design	
	6	A report for policy recommendations for Emission Trading System (ETS) in Vietnam	

COUNTRY RESULTS: VIETNAM

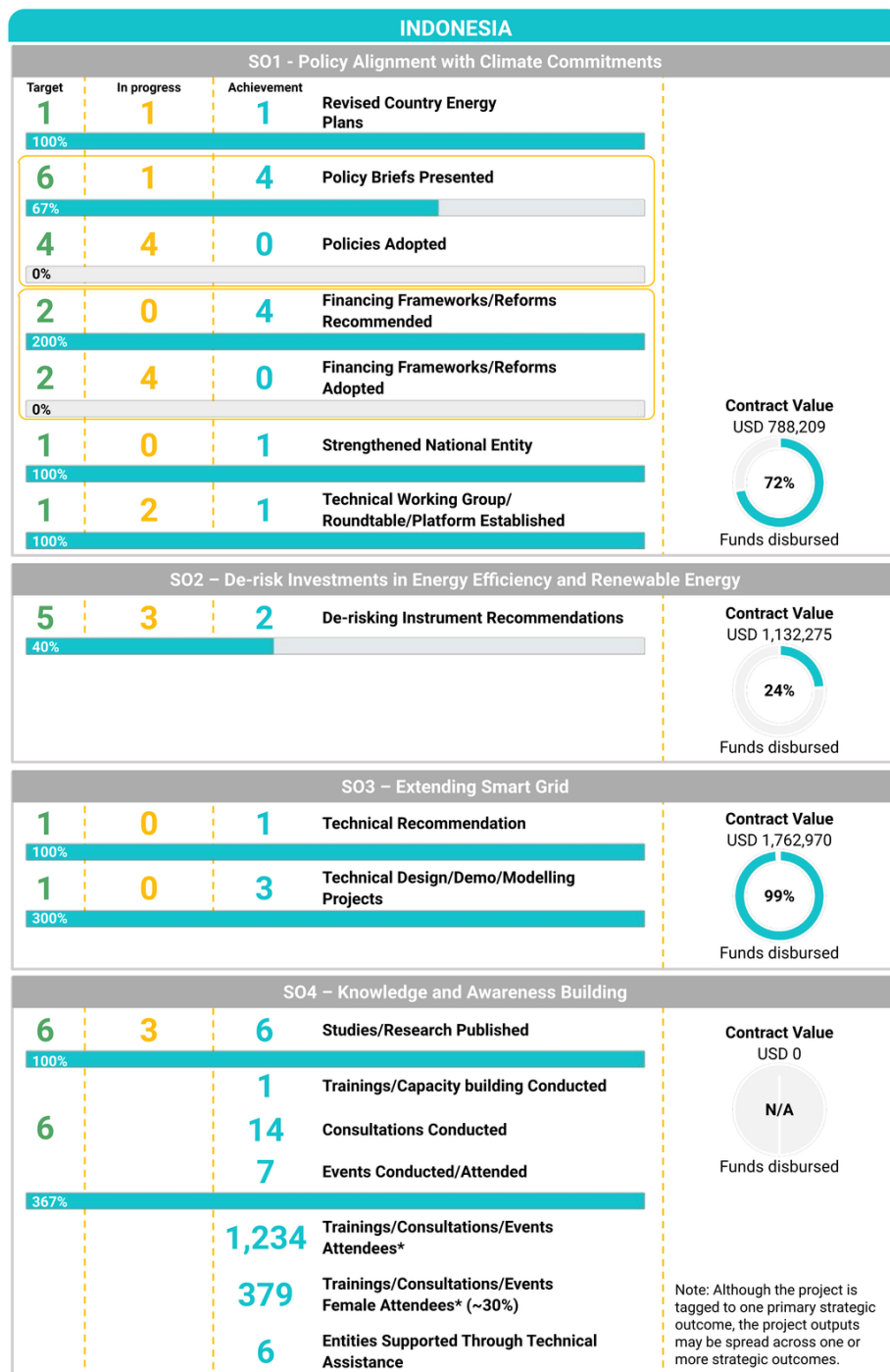
VIETNAM		Strategic Outcome 4: Knowledge and Awareness Building	
Indicator 4.1-02, 4.1-02 A & 4.1-02 B		Target	Achievement
4.1-02 Number of trainings, knowledge sharing events, and/or awareness workshops organised at national and regional levels building institutional capacity and knowledge networks		6	3
			12
			3
		300%	
4.1-02 A Total number of attendees (for tracking only)		873	Trainings/Consultations/Events Attendees*
4.1-02 B Total number of female attendees (for tracking only)		451	Female attendees* (~52%)
Completed activities		Planned activities	
Achievement: 18		Activity pipeline: 10	
2023			
Training or capacity building			
1 One training on accompanying businesses to meet requirements related to economical and efficient management and use of energy through the application of ISO 50001:2018		1 One consultation workshop to gather comments from relevant stakeholders to finalise National Green Cooling Program the Program and its implementation roadmap	
2 One study tour organised for the Ministry of Finance to study about the ETS in South Korea		2 Seven workshops to disseminate the national standards to the policymakers and policy executors	
3 One coaching session for Global Food - an agricultural processing and exporting enterprise to develop a bankable EE project		3 One workshop to disseminate the results of the ETS simulation	
		4 Organisation of one hybrid consultation with key stakeholders to present and discuss the draft Smart Grid Roadmap and to publicise the results of the project	
Consultations		Planned projects	
4 Two consultation workshops with CBAM stakeholders (local government, public and private enterprises, associations and NGOs)		Project pipeline: 1	
5 Three workshops conducted with stakeholders to discuss findings of the study - Diagnostic Study of Net-zero for Energy Sector in Vietnam		1 Public awareness campaign on energy transition on multimedia channels	
6 One inception workshop was held for the stakeholders of the Emission Trading System Simulation project			
7 Two consultations on the draft National Green Cooling Program and its roadmap. These workshops helped collect comments from relevant stakeholders to finalise the program and its implementation roadmap			
8 Three consultations were organised to collect comments and feedback from relevant stakeholders on the findings of the legal, institutional and infrastructure gaps and the recommended model for the establishment of the CTX in Vietnam			
9 One inception workshop was held for the stakeholders of the Promotion of Energy Efficiency in Supporting and Food Processing Industries in Vietnam project			
COP28 side events			
10 The role of financial institutions in mobilising finance to accelerate the implementation of net zero emissions commitments in Vietnam			
11 Impact of the EU's Carbon Border Adjustment Mechanism on Vietnam's Energy Transition and its Regional Implications			
12 The Role of the Carbon Market and Credit Trading Mechanism towards Vietnam's Net Zero Goal			

*Attendees who participated in multiple events are included in the count of each event they attended

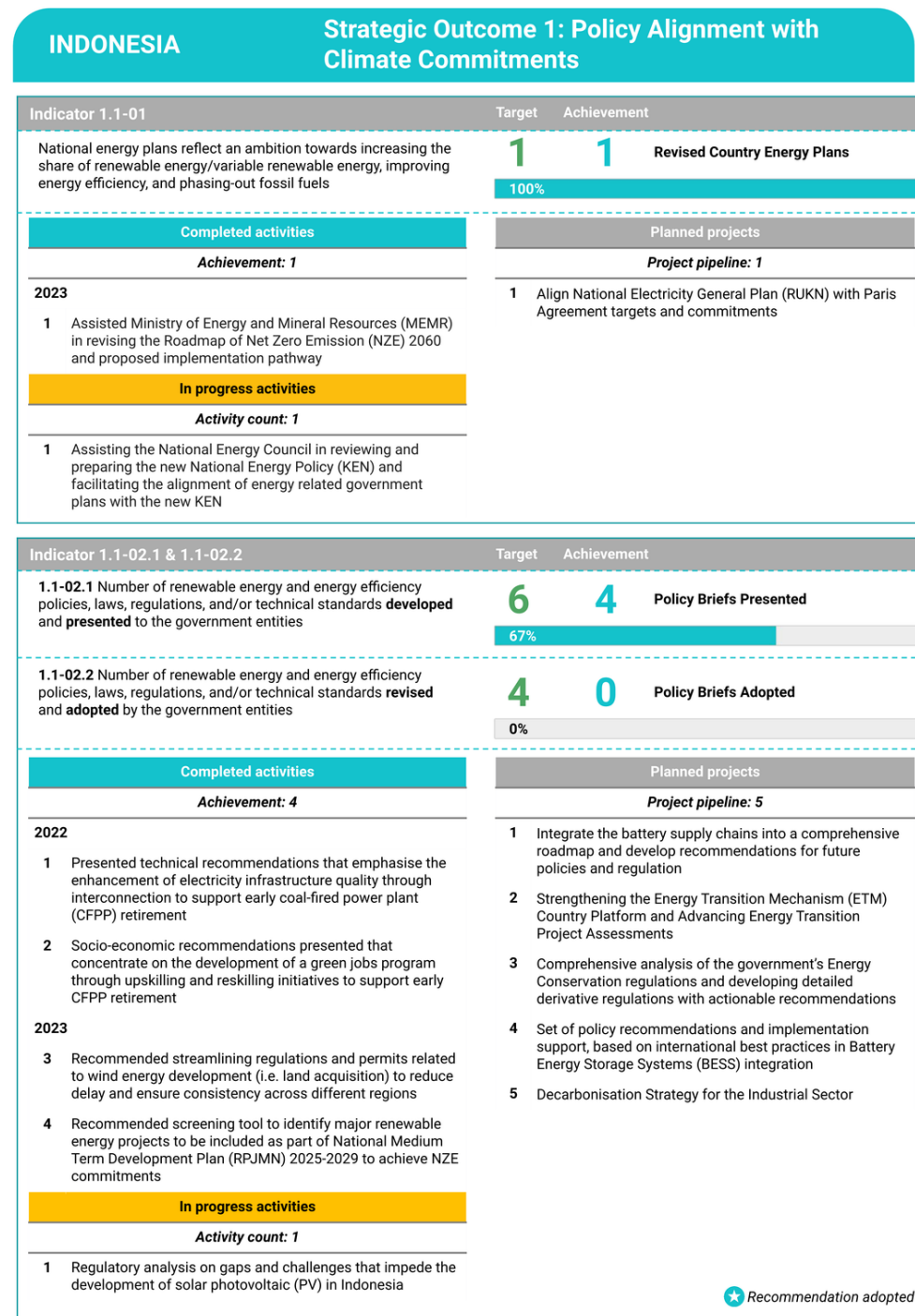
VIETNAM Strategic Outcome 4: Knowledge and Awareness Building			
Indicator 4.1-04			
Total number of entities supported through Technical Assistance		6	Entities Supported
Entities supported			
1	Ministry of Finance (MOF)	4	Ministry of Science and Technology (MOST)
2	Ministry of Natural Resources and Environment (MONRE)	5	Commission of State Capital Management at Enterprises (CMSC)
3	Ministry of Industry and Trade (MOIT)	6	Vietnam Chamber of Commerce and Industry (VCCI)

Note - IN. 4.1-03 – "No. of articles, press-releases on social-media, and mass-media, for outreach" has an overall target. It is captured in the Strategic Outcome infographics section

COUNTRY RESULTS: INDONESIA



*Attendees who participated in multiple events are included in the count of each event they attended



COUNTRY RESULTS: INDONESIA

INDONESIA

Strategic Outcome 1: Policy Alignment with Climate Commitments

Indicator 1.2-01 & 1.2-02	Target	Achievement	
1.2-01 Number of renewable energy and energy efficiency related financing frameworks and fiscal reforms developed and presented to the government entities	2	4	Financing Frameworks / Reforms Recommended
	200%		
1.2-02 Number of fiscal policy adjustments, investment framework instruments, established and enacted by the government entities	2	0	Financing Frameworks / Reforms Adopted
	0%		
Completed activities	Planned projects		
Achievement: 4	Project pipeline: 3		
2022	<ol style="list-style-type: none"> 1 Presented the recommendation of electricity tariff adjustment as a fiscal reform to maintain Perusahaan Listrik Negara's (PLN) financial stability in delivering the energy transition to support early CFPP retirement 2 Presented recommendations on incentives to increase investment in renewable energy and energy efficiency sectors to support early CFPP retirement 3 Presented recommendations to mitigate the impact of subsidies on electricity to support early CFPP retirement 		
2023	<ol style="list-style-type: none"> 1 A comprehensive policy draft and implementation support for designing and implementing incentive and disincentive mechanisms for energy transition projects 2 Provide a guideline for government incentivising/subsidy schemes of batteries for electric vehicles (EV), solar PV and other renewable energy power plants 3 Assess any possible fiscal and non-fiscal incentives and disincentives for industrial sector decarbonisation that will be adopted by the government as a basis to develop future policies and regulation 		
4 Recommended incentives such as tax credits or subsidised loans to encourage users to invest in energy efficient appliances to contribute to Indonesia's NDC targets			

★ Recommendation adopted

INDONESIA

Strategic Outcome 1: Policy Alignment with Climate Commitments

Indicator 1.3-01	Target	Achievement	
Presence of an effective National-level agency/institution	1	1	Strengthened National Entity
	100%		
Completed activities	Planned projects		
Achievement: 1	Project pipeline: 2		
2023	<ol style="list-style-type: none"> 1 Strengthened the Ministry of National Development Planning (BAPPENAS)'s presence as the coordinator to manage energy sector goals in the RPJMN 		
1 Strengthened the Ministry of National Development Planning (BAPPENAS)'s presence as the coordinator to manage energy sector goals in the RPJMN	<ol style="list-style-type: none"> 1 Strengthening the presence of 3 national-level institutions; Ministry of Energy and Mineral Resources (MEMR), PLN, and National Energy Council (DEN) in national electricity planning 2 Strengthening the ETM Country Platform and Advancing Energy Transition Project Assessments 		
Indicator 1.3-02	Target	Achievement	
Improved dialogue among government ministries and departments for a coordinated response to Energy Transition	1	1	Technical Working Group (TWG) / Roundtable/Platform Established
	100%		
Completed activities	Planned projects		
Achievement: 1	Project pipeline: 3		
2023	<ol style="list-style-type: none"> 1 Established TWG for wind energy sector development led by Ministry of Energy and Mineral Resources (MEMR) 		
In progress activities	Activity count: 2		
1 Establish a TWG to align and streamline Net-Zero Emission (NZE) 2060 plans with the National Energy Policy	<ol style="list-style-type: none"> 1 Establish a TWG to identify and analyse applicable Energy Saving Insurance (ESI) models relevant for Indonesia 2 Establish a TWG consisting of the Ministry of Finance, MEMR, Ministry of State-Owned Enterprises, Ministry of Manpower, and related local government to improve dialogue among government entities related to the impact of early CFPP retirement 3 Support Energy Conservation Working Group under Ministry of Energy and Mineral Resources and JETP Working Group on Energy Efficiency and Electrification 		
2 Manage and convene a Solar PV TWG bringing together all key stakeholders relevant to solar power development			

COUNTRY RESULTS: INDONESIA

INDONESIA				Strategic Outcome 2: De-risk Investments in Energy Efficiency and Renewable Energy	
Indicator 2.2-01		Target	Achievement		
Number of new and existing, national and international, financing options / instruments de-risked and opened for private and blended financing		5	2	De-risking Instrument Recommendations	
		40%			
Completed activities		Planned projects			
Achievement: 2		Project pipeline: 2			
2023					
1 Zero or low-cost financing mechanism recommended to the government to support Indonesia's early retirement of CFPP		1 Create a pilot project for Energy Saving Insurance (ESI) models, including innovative financing mechanisms			
2 Recommended the use of microfinance initiatives and investment incentives to support small-scale renewable energy developers with affordable financing options and attracting private capital		2 Create a coherent and economically viable decarbonisation business model that can effectively improve industrial sector decarbonisation efforts in Indonesia			
In progress activities					
Activity count: 3					
1 Identification and assessment of financing options to guide investors and de-risk wind energy development projects					
2 Perform 15 Level 1 Energy Audits and conduct five Investment Grade Audits (IGA) for energy efficiency projects					
3 A solar PV development and investment plan for 1 GW solar energy integration into the Java-Bali power grid					

INDONESIA

Strategic Outcome 3: Extending Smart Grid

Indicator 3.1-01

Number of technical recommendations and solutions implemented by the grid operators for planning and operation, leading to smart grid

1

1

Technical Recommendation

100%

Completed activities

Activity count: 1

2023

1

Developed technical recommendations on how to install and integrate the Supervisory Control and Data Acquisition (SCADA)/Energy Management System (EMS) in PLN's new Main Control Centre (MCC) and Disaster Recovery Centre (DRC) building for Java-Bali electricity system. The proposed modifications and construction is underway

Planned projects

Project pipeline: 2

1

Recommendations for implementing the smart grid development roadmap

2

Roadmap of Indonesia Super Grid Development to increase RE Development

Indicator 3.1-02

Number of technical design, demo, modelling projects supported for smart infrastructure

1

3

Technical Design/Demo/Modelling Projects

300%

Completed activities

Achievement: 3

2023

1

Technical designs of SCADA/EMS for new control centers with renewable energy integration capabilities to remove physical barrier enabling variable renewable energy in the Java-Bali electricity system

2

Technical designs of new MCC building with renewable energy integration capabilities to remove physical barrier enabling variable renewable energy in the Java-Bali electricity system

3

Technical designs of new DRC building with renewable energy integration capabilities to remove physical barrier enabling variable renewable energy in the Java-Bali electricity system

Planned projects

Project pipeline: 1

1

Integrating BESS into the Grid for Energy Transition

COUNTRY RESULTS: INDONESIA

INDONESIA

Strategic Outcome 4: Knowledge and Awareness Building

Indicator 4.1-01	Target	Achievement	
Number of studies, research, new evidence gathered and published, for raising awareness, improving the knowledge base, driving decisions, and dissemination	6	6	Studies/Research Published
	100%		
Completed activities	Planned projects		
Achievement: 6	Project pipeline: 9		
2023			
1 Conducted a study on the financial implications of the early retirement of CFPP capturing the overview of policy and regulatory framework, fiscal and social implications of initiatives, and financial framework of CFPP retirement strategy	1	Innovating New Incentives Mechanism for Energy Transition Projects	
2 Developed a roadmap of onshore wind development in Indonesia	2	Supply Chain Integration of Battery Value Chains for Energy Transition in Indonesia	
3 Completed background study for RPJMN 2025-2029, consisting of an overview of current trajectory of national medium-term plans, renewable energy deployment priorities and recommendations for RPJMN 2025-2029	3	Energy Saving Insurance to De-risk Energy Efficiency Project	
4 Developed energy efficiency investment roadmap to support Indonesia's enhanced Nationally Determined Contribution (NDC) targets	4	Roadmap of Skilled Workforce Development to Support Energy Transition in Indonesia	
5 Developed a revision for Indonesia's Roadmap to NZE 2060	5	Strengthening the Energy Transition Mechanism (ETM) Country Platform and Advancing Energy Transition Project Assessments	
6 Literature review of emerging technology proposed by Government of Indonesia (GOI)	6	Strengthening Implementation of Government Regulation on Energy Conservation in Indonesia	
	7	Integrating Battery Energy Storage System (BESS) into the Grid for Energy Transition	
	8	Decarbonisation Strategy for the Industrial Sector	
	9	Roadmap of Smart Grid Development	
In progress activities			
Activity count: 3			
1 Study on comprehensive assessment of potential sites for wind energy development			
2 A study on lessons learned from solar PV development in Indonesia and solar irradiance data mapping and assessment of at least 100 potential production sites amounting to 1 GW through publicly accessible database			
3 Develop data-based insight briefs and compile real data using remote monitoring Internet of Things (IoT) equipment from four bankable energy efficiency projects to test multiple energy efficiency business models			

INDONESIA

Strategic Outcome 4: Knowledge and Awareness Building

Indicator 4.1-04		
Total number of entities supported through Technical Assistance	6	Entities Supported
Entities supported		
1 Ministry of National Development Planning (BAPPENAS)	4	Perusahaan Listrik Negara (PLN)
2 National Energy Council (DEN)	5	Coordinating Ministry of Maritime and Investment Affairs
3 Ministry of Energy and Mineral Resources (MEMR)	6	JETP Indonesia Secretariat

Note - IN. 4.1-03 – "No. of articles, press-releases on social-media, and mass-media, for outreach" has an overall target. It is captured in the Strategic Outcome infographics section

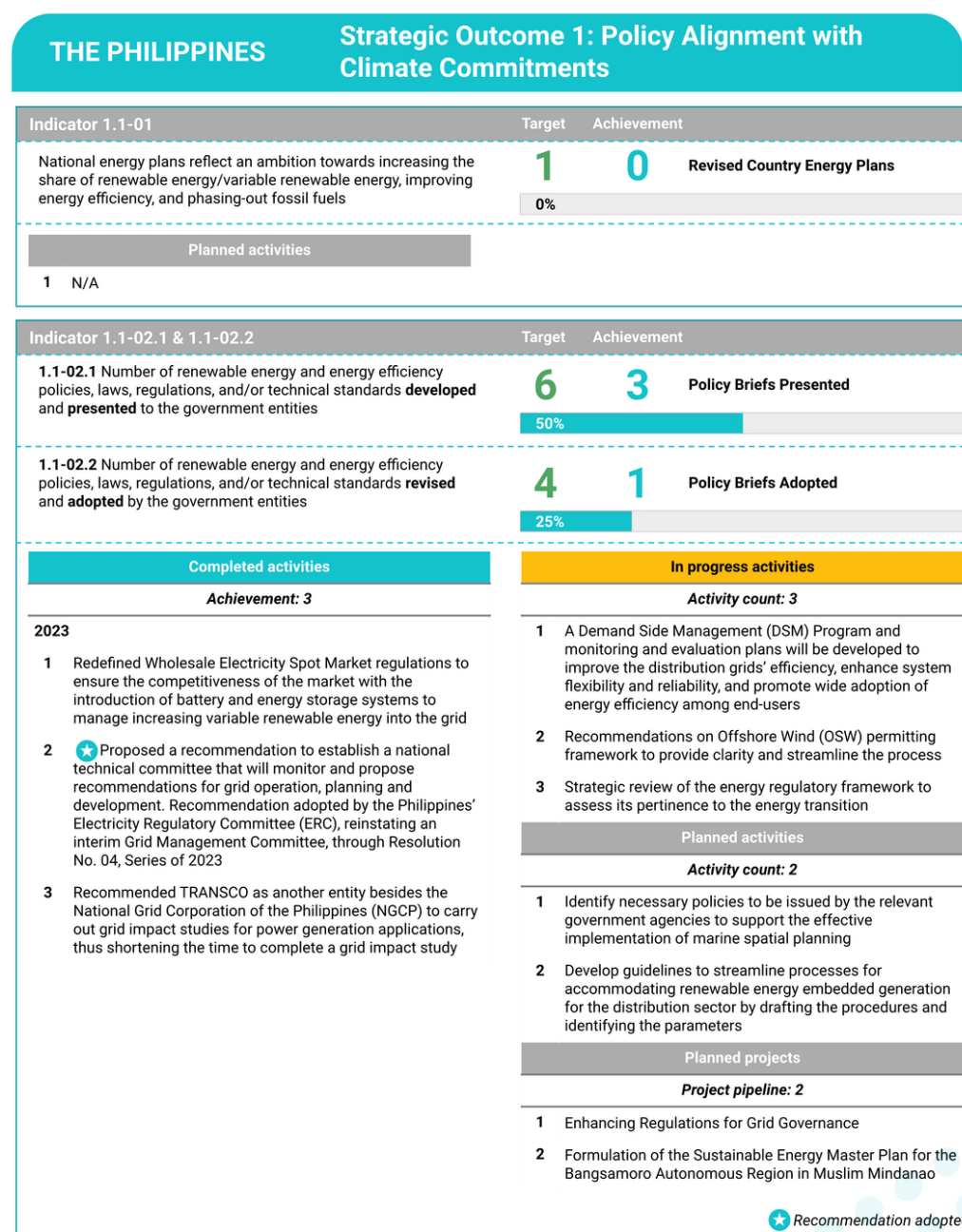
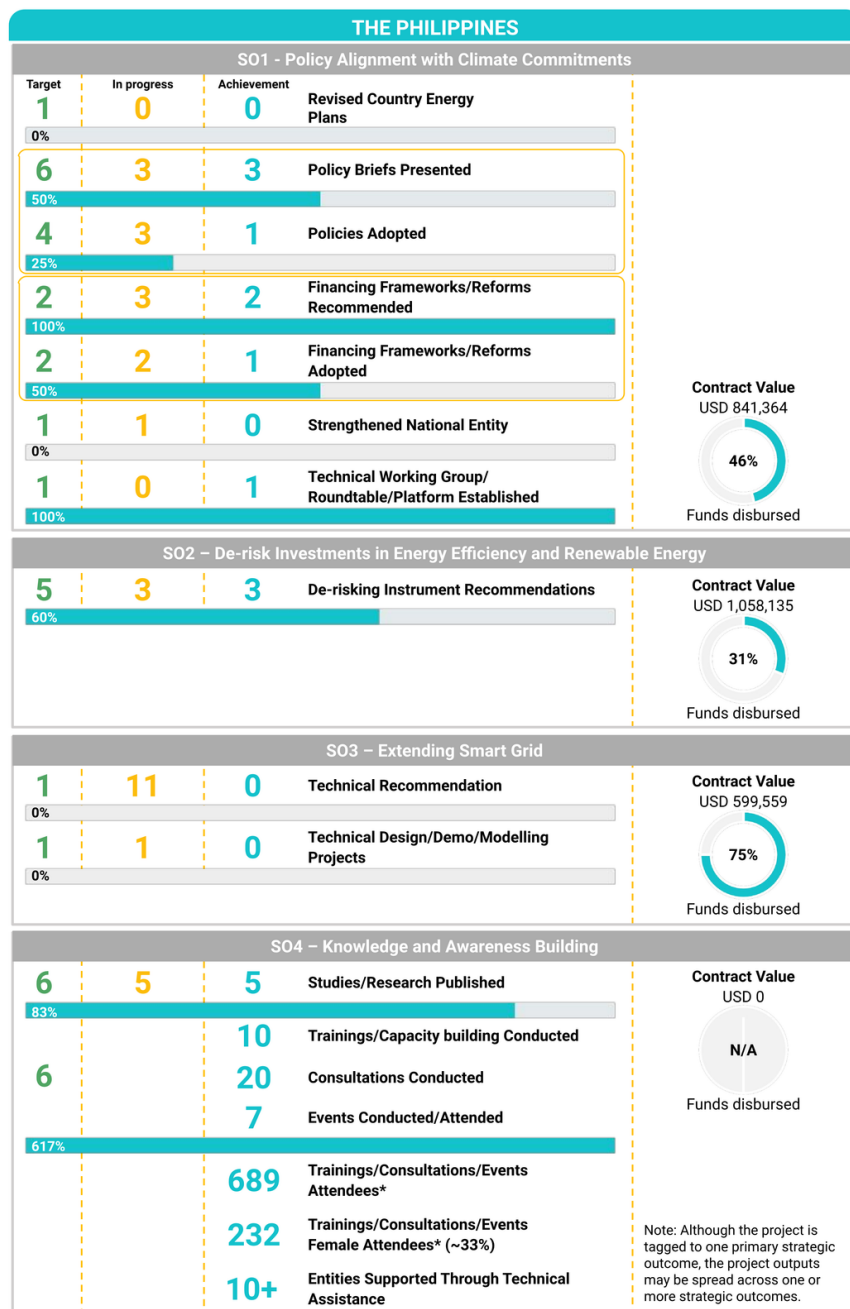
INDONESIA

Strategic Outcome 4: Knowledge and Awareness Building

Indicator 4.1-02, 4.1-02 A & 4.1-02 B	Target	Achievement	
4.1-02 Number of trainings, knowledge sharing events, and/or awareness workshops organised at national and regional levels building institutional capacity and knowledge networks	6	1 14 7	Training/Capacity Building Conducted Consultations Conducted Events Conducted/Attended
		367%	
4.1-02 A Total number of attendees (for tracking only)	1,234		Trainings/Consultations/Events Attendees*
4.1-02 B Total number of female attendees (for tracking only)	379		Female attendees* (~30%)
Completed activities	Completed activities		
Achievement: 22			
2023			
Training or capacity building			
1 Conducted one training session for PLN staff on variable renewable energy (VRE) integration for the new SCADA/EMS platform			
Consultations			
2 Conducted two workshops and two focus group discussions to gather information from relevant ministries and stakeholders (industry association, academicians, etc) to revisit the National Energy Policy (KEN) and prepare the academic manuscript for the new KEN			
3 Conducted three TWG sessions with the Wind Power Development TWG to convene the important stakeholders and gather feedbacks on wind energy sector and development			
4 Conducted two focus group discussions to discuss the results and findings from the background study for Indonesia's Medium-term National Development Planning (RPJMN)			
5 Conducted one focus group discussion to discuss the energy efficiency investment roadmap to achieve NDC targets			
6 Conducted four focus group discussions to revise Indonesia's Roadmap to NZE 2060			
Events			
7 Conducted two dissemination events to discuss the Financial Implication study of early CFPP retirement			
8 Co-hosted the 15 th International Energy Agency Energy Efficiency Policy Training Week with International Energy Agency			
9 Co-hosted "Accelerating Power Grid Interconnectivity in Southeast Asia: Enhancing Cooperation with Partners in ASEAN" at ASEAN Energy Business Forum with ASEAN Centre for Energy and Asian Clean Energy Coalition			
10 Conducted a luncheon with Independent Power Producers to discuss potential funding options and exchange best practices related to Renewable Power Purchase Agreements (PPAs)			
11 Attended as a speaker at 2023 ASEAN Energy Chairmanship Kickoff in Indonesia			
Completed activities	Completed activities		
Achievement: 22			
2023			
Events			
12 Attended as a speaker at Indonesia Sustainability Energy Week			
Planned activities	Planned activities		
Activity pipeline: 4			
1 Three TWG sessions to discuss wind power development in Indonesia			
2 TWG session with key stakeholders to discuss solar power development			
Planned projects	Planned projects		
Project pipeline: 5			
1 Capacity-building programs to design ESI models			
2 Deliver an Energy Transition Training program for PLN's staff, stored online in the PLN HR platform, ensuring accessibility for all employees			
3 Training sessions for trainers to teach and assess the energy transition certification program and Executive Leadership and Change Management Program for middle and top management PLN personnel to capitalise on energy transition business opportunities			
4 Comprehensive training for MEMR, PLN, and DEN to effectively operate the power system planning tool to develop the RUKN and PLN Electricity Supply Business Plan (RUPTL)			
5 Trainings and workshops on technical aspects, safety protocols, maintenance, and operational best practices BESS			

*Attendees who participated in multiple events are included in the count of each event they attended

COUNTRY RESULTS: PHILIPPINES



*Attendees who participated in multiple events are included in the count of each event they attended

COUNTRY RESULTS: PHILIPPINES

THE PHILIPPINES

Strategic Outcome 1: Policy Alignment with Climate Commitments

Indicator 1.2-01 & 1.2-02	Target	Achievement	
1.2-01 Number of renewable energy and energy efficiency related financing frameworks and fiscal reforms developed and presented to the government entities	2	2	Financing Frameworks / Reforms Recommended
	100%		
1.2-02 Number of fiscal policy adjustments, investment framework instruments, established and enacted by the government entities	2	1	Financing Frameworks / Reforms Adopted
	50%		
Completed activities	Planned projects		
Achievement: 2	Project pipeline: 2		
2023			
<ol style="list-style-type: none"> ETP recommended using the existing framework for feed-in tariff payments to address gaps in the auction's payment settlement process. The government of the Philippines adopted ETP's recommendation as an amendment to the Green Energy Auction Program Guidelines through an Amendment to Department Circular No. DC2021-11-0036 Developed recommendations for the payment settlement for actions of non-FIT (feed-in tariff) technologies 	<ol style="list-style-type: none"> A policy on voluntary trading of Renewable Energy Certificates (RECs) to provide market-based incentives for businesses to support and invest in renewables Formulate a Sustainable Energy Master Plan for the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), which will include financing frameworks to access and implement project development financing for renewable energy and energy efficiency projects in the region 		
In progress activities			
Activity count: 3			
<ol style="list-style-type: none"> Develop power purchase agreement template for opt-in mechanism in the green energy auctions Develop Terms of Reference and Call for Notice of the Opt-in Mechanism under the Green Energy Auction Program Review and advise on draft Competitive Selection Process Guidelines for Electric Cooperatives for the National Electrification Administration 			
Indicator 1.3-01	Target	Achievement	
Presence of an effective National-level agency/institution	1	0	Strengthened National Entity
	0%		
In progress activities			
Activity count: 1			
<ol style="list-style-type: none"> Establish a national Strategic Transmission Network Planner to ensure that the grid is ready to connect large variable renewable energy capacities 			

★ Recommendation adopted

THE PHILIPPINES

Strategic Outcome 1: Policy Alignment with Climate Commitments

Indicator 1.3-02	Target	Achievement	
Improved dialogue among government ministries and departments for a coordinated response to Energy Transition	1	1	Technical Working Group/ Roundtable/Platform Established
	100%		
Completed activities	Planned projects		
Achievement: 1	Project pipeline: 3		
2023			
<ol style="list-style-type: none"> Established a multi-stakeholder TWG for the Demand Side Management Policy and Program development 	<ol style="list-style-type: none"> One TWG to coordinate low carbon renewable energy-based energy development in the Bangsamoro Autonomous Region in Muslim Mindanao by 2025 One TWG to provide direction and facilitate coordination to enhance the National Transmission Corporation's capability in transmission planning One TWG to set up Recognized Training Institutions (RTI) throughout the Philippines to promote nationwide energy efficiency practice 		

COUNTRY RESULTS: PHILIPPINES

THE PHILIPPINES

Strategic Outcome 2: De-risk Investments in Energy Efficiency and Renewable Energy

Indicator 2.2-01	Target	Achievement	
Number of new and existing, national and international, financing options / instruments de-risked and opened for private and blended financing	5	3	De-risking Instrument Recommendations
	60%		
Completed activities	Planned activities		
Achievement: 3	Activity pipeline: 4		
2022	1 Four potential IGAs for a food manufacturing facility, university campus, industrial manufacturing, and commercial establishment		
1 Completed Investment Grade Audit (IGA) for an aviation company	Planned projects		
2023	Project pipeline: 4		
2 Completed IGA for a commercial retail establishment	1 Enhancing the Spot Market to Attract Investments to Renewables		
3 Developed ESCO-in-a-box (EIAB) business model for Southeast Asia	2 Formulation of the Bangsamoro Sustainable Energy Master Plan (BARMM)		
	3 Enhancing Hydro Energy Storage Viability		
In progress activities	4 Identify appropriate financing framework and investment schemes to upgrade Electric Cooperative's smart grid		
Activity count: 3			
1 Develop an operating Marine Spatial Planning (MSP) tool that can be used to identify viable sites for offshore wind development, reducing risks of conflict and opposition from other stakeholders			
2 Develop a plan on integrating the permitting process for offshore wind projects into the Energy Virtual One Stop Shop (EVOSS)			
3 Develop an Implementation Plan for Demand Side Management strategies for electric cooperatives, including investment requirements, potential sources of financing. It explores business models and will assess regulatory constraints			

THE PHILIPPINES

Strategic Outcome 3: Extending Smart Grid

Indicator 3.1-01	Target	Achievement	
Number of technical recommendations and solutions implemented by the grid operators for planning and operation, leading to smart grid	1	0	Technical Recommendation
	0%		
In progress activities	Planned projects		
The following recommendations have been prepared and presented to the respective stakeholders, awaiting adoption	Project pipeline: 1		
Activity count: 7	1 Assessment of Electric Cooperatives' readiness for Smart Grid adoption		
1 Philippines Grid Code (PGC) updated, allowing for quicker and increased implementation of variable renewable energy projects			
2 Updated Philippines Distribution grid Code (PDC) to enable a transition to low-carbon energy systems at the distribution level			
3 Small Grid Guidelines of the Philippines (SGGP) updated to allow for modern technologies to increase uptake of variable renewable energy in mini- and micro- grids			
4 Recommended international technical standards for smart grids (covering generator connection, telecommunications, and cybersecurity)			
5 Revised the private Distribution Utility Planning Manual to include specifications for smart grid technologies			
6 Proposed a Smart Solutions Road Map that relates to the general process for developing innovative ideas for addressing ongoing challenges of improving transmission network resilience, reliability, asset utilisation, and safety			
7 Proposed a Smart Energy Transition Road Map, designed for the Philippine energy transition, that provides an approach to addressing the issues anticipated to arise because of the increasing variable renewable energy capacity connected to the transmission network. The assumption being that the variable renewable energy will displace traditional fossil fueled rotating plant			
The following activities are under preparation to be presented to the respective stakeholders			
Activity count: 4			
1 New system loss caps for private distribution utilities and electric cooperatives are being developed to improve grid efficiency			
2 Revising the Electric Cooperatives Planning Manual to include specifications for smart grid technologies			
3 Updating Reliability Standards for Electric Cooperatives			
4 Developing the Demand Side Management Implementation Plan to support Electric Cooperatives adopt demand side measures and smart grid technologies			

COUNTRY RESULTS: PHILIPPINES

THE PHILIPPINES

Strategic Outcome 3: Extending Smart Grid

Indicator 3.1-02	Target	Achievement	
Number of technical design, demo, modelling projects supported for smart infrastructure	1	0	Technical Design/Demo/Modelling Projects
	0%		
In progress activities		Planned projects	
Activity count: 1		Project pipeline: 1	
1 Developing an Energy Storage System Roadmap to ensure grid stability with increasing variable renewable energy		1 Demonstration of smart technologies such as geographic information system (GIS) mapping of the distribution network and renewable energy embedded generation simulations for 15 electric cooperatives to promote smart grid adoption and allow for variable renewable energy uptake	

THE PHILIPPINES

Strategic Outcome 4: Knowledge and Awareness Building

Indicator 4.1-01	Target	Achievement	
Number of studies, research, new evidence gathered and published, for raising awareness, improving the knowledge base, driving decisions, and dissemination	6	5	Studies/Research Published
	83%		
Completed activities		Planned projects	
Achievement: 5		Project pipeline: 10	
2023			
1	Conducted a study on the international electricity market maturity and practices to accommodate battery and energy storage systems		
2	Developed The Philippines Energy Service Company Market Research Report to identify 3 potential market segments (industrial, commercial and government sector) for EIAB		
3	Conducted a stock take of the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) energy landscape and provided recommendations for low-carbon, sustainable development pathways for the region		
4	Prepared a report on cost methodologies for ancillary services to support in defining regulations		
5	Developed a study on the governance of transmission network with policy and regulatory recommendations		
In progress activities			
Activity count: 5			
1	Develop DSM guidebook that will support DUs and economic zones develop and implement DSM plans		
2	Develop a case study report detailing three distinct offshore wind permitting processes in other markets to align the Philippines' permitting processes with industry best practice		
3	Develop a report on the role of energy storage systems to address grid issue		
4	Develop two training programmes for policy makers and energy planners on demand side management planning, implementation and monitoring and evaluation		
1	A report on opportunities for renewable energy in the spot market, including an assessment of risks		
2	A compendium of options for repurposing and replacement of fossil fuel-fired power plant		
3	Two reports on BARMM renewable energy project development for investors		
4	Studies on international experience on implementing compliance and voluntary Renewable Energy Certificate markets and Voluntary Renewable Energy Market (VREM) market and impact assessment		
5	A study on predetermined areas for pump hydro storage and an assessment report on seawater energy storage potential		
6	Establishment of at least one new Recognized Training Institution (RTI) per region and development of e-learning tool for energy efficiency Practitioners' Training Module		
7	Report on rules for monitoring of reliability performance of the transmission system, amended reliability performance indices of power generating units, and rules recommendations on third-party metering services for the Green Energy Option Program		
8	Report on appropriate financing framework and investment schemes to upgrade Electric Cooperatives' smart grid		
9	Set of learning materials and tools for Local Government Academy on sustainable energy planning, renewable energy and energy efficiency training programs		

COUNTRY RESULTS: PHILIPPINES

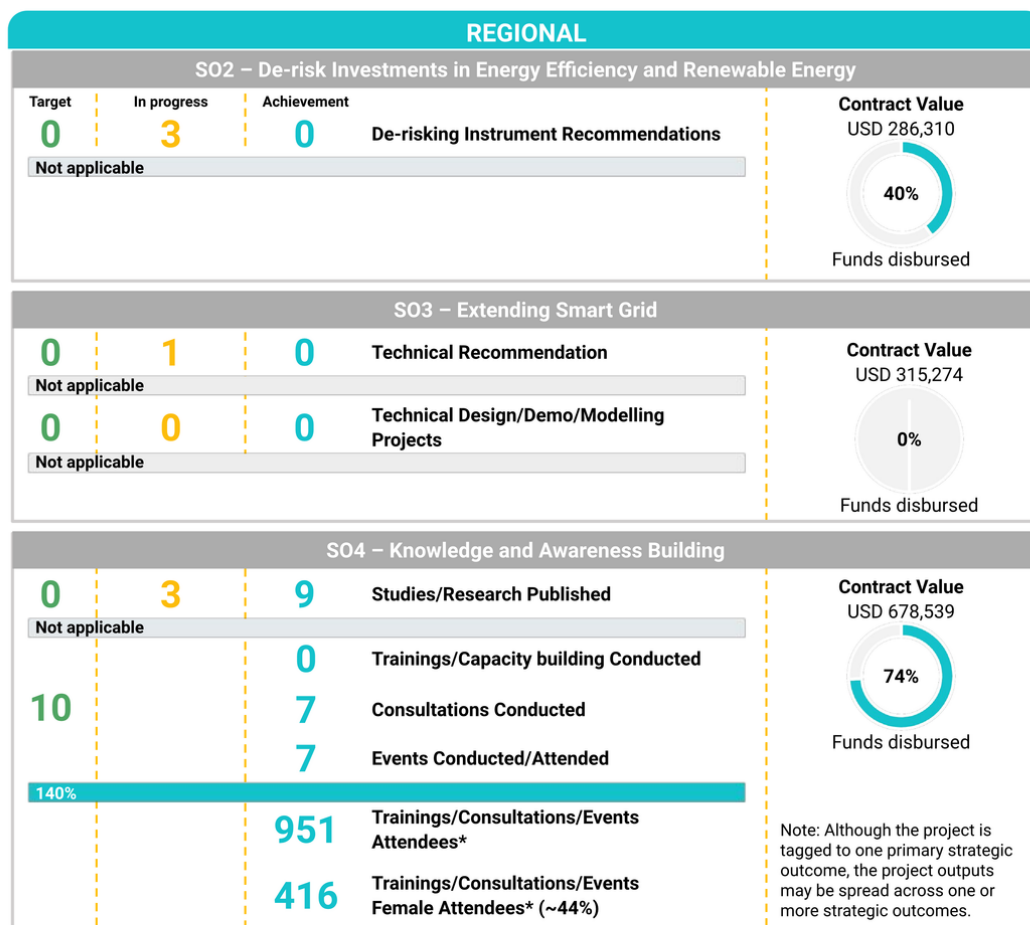
THE PHILIPPINES		Strategic Outcome 4: Knowledge and Awareness Building	
Indicator 4.1-02, 4.1-02 A & 4.1-02 B		Target	Achievement
4.1-02 Number of trainings, knowledge sharing events, and/or awareness workshops organised at national and regional levels building institutional capacity and knowledge networks		6	10
			20
			7
			Events Conducted/Attended
		617%	
4.1-02 A Total number of attendees (for tracking only)		689	Trainings/Consultations/Events Attendees*
4.1-02 B Total number of female attendees (for tracking only)		232	Female attendees* (~33%)
Completed activities		Completed activities	
Achievement: 37		Events	
2023		16 Attended as a moderator at Energy Transition Council Thematic Working Groups Meeting	
Training or capacity building		17 Attended as a speaker at The Just Coal Transition Platform (JCTP) at Philippines' Climate Investment Funds (CIF-ACT) Stakeholders Meeting for Coal Transition Plan	
1 Ten ESCO-in-a-box training sessions		COP28 side event	
Consultation		18 Unlocking Offshore Wind's Role in the Philippines' Energy Transition	
2 Five consultations on hybrid energy storage system, Department of Energy (DOE) Circular and implications for Wholesale Electricity Spot Market (WESM) carried out with: Philippine Electricity Market Corporation (PEMC), Independent Market Operator of the WESM (IEMOP), National Grid Corporation (NGCP), Energy Regulatory Commission (ERC), Department of Energy		Planned activities	
3 Three focus group discussions for the Philippines Grid Code (PGC), the Philippines Distribution Code (PDC), the Philippines Small Grid Guidelines (PSGG)		Activity count: 3	
4 Two focus group discussions for the development of the BARMM Power Sector Development Roadmap and one Renewable Energy Project Development workshop to strengthen BARMM's capacity and build their confidence in scaling up investments for sustainable power systems in the region		1 Capacity building sessions for energy policy makers, planners and distribution utilities on Demand Side Management guides and implementation	
5 One workshop with PEMC (Philippines Electricity Market Corporation) and Independent Electricity Market Operator of the WESM (IEMOP) to discuss the results on Philippines Battery Energy Market Mechanism Study		2 Workshops and capacity building sessions on Marine Spatial Planning tool development and usage	
6 One workshop for data collection on baseline permitting processes undertaken for offshore wind development		3 Capacity building workshops on offshore wind permitting and consenting	
7 Two interagency workshops for smart grid roadmap development and grid governance study		Planned projects	
8 Two workshop sessions with TWG members for Demand Side Management Policy and Program development		Project pipeline: 8	
9 One workshop to discuss the development of Marine Spatial Planning tool		1 Training sessions for PEMC and IEMOP on price simulations and analyses	
10 One workshop to discuss recommendations for the Green Energy Auction Program		2 Consolidated trainings on PLEXOS and Power System Simulator for Engineering (PSSE) to build policymakers' capability in integrated power sector planning that includes power generation and transmission	
11 One consultation with Local Government Academy to discuss on local energy planning, financing, and awareness to clean energy transition		3 Capacity-building workshops on clean energy planning and renewable energy, and organization of the Sustainable Energy Summit with the Ministry of Environment, Natural Resources and Energy	
Events		4 Awareness training sessions on voluntary Renewable Energy Certificate trading, delivered to government agencies and potential VREM participants	
12 Conducted a two-day seminar to discuss the recommendations for ancillary services to renewable energy		5 Capacity-building activities for the DOE Renewable Energy Management Bureau to develop and implement pump hydro storage energy projects	
13 Attended as a speaker at The Renewable Energy Policy Dialogue		6 Capacity-building sessions for Energy Efficiency Practitioners on use of Learning Content Management System	
14 Attended as a speaker at Asia Clean Energy Forum 2023's Empowering Energy Efficiency		7 Investment forums and capacity-building workshops on Geographic Information System (GIS) mapping and renewable energy embedded generation optimisation	
15 Attended as a speaker at Energy Transition Council National Dialogue		8 Workshop and a set of pilot trainings on sustainable energy planning, renewable energy and energy efficiency	

*Attendees who participated in multiple events are included in the count of each event they attended

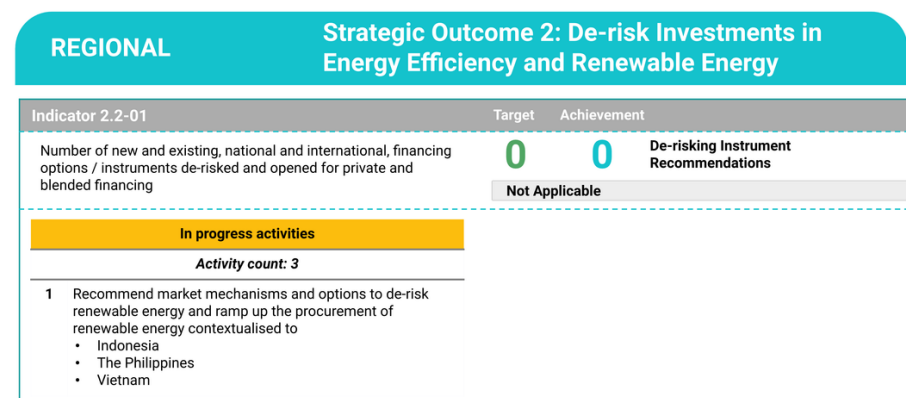
THE PHILIPPINES		Strategic Outcome 4: Knowledge and Awareness Building	
Indicator 4.1-04		Total number of entities supported through Technical Assistance	
		10+	Entities Supported
Entities supported			
1	Ministry of Environment, Natural Resources and Energy (MENRE)	6	Philippine Offshore Wind Joint Industry Programme
2	Department of Energy (DOE)	7	Local ESCO – TrySkyLink
3	Philippine Electricity Market Corporation (PEMC)	8	Local ESCO – SmartPower
4	Energy Regulatory Commission (ERC)	9	Local ESCO – Stratcon
5	Ministry of Environment, Natural Resources, and Energy of the Bangsamoro Autonomous Region in Muslim Mindanao	10	Private sector entities

Note - IN. 4.1-03 – "No. of articles, press-releases on social-media, and mass-media, for outreach" has an overall target. It is captured in the Strategic Outcome infographics section

REGIONAL RESULTS



*Attendees who participated in multiple events are included in the count of each event they attended



REGIONAL RESULTS

REGIONAL

Strategic Outcome 3: Extending Smart Grid

Indicator 3.1-01	Target	Achievement	
Number of technical recommendations and solutions implemented by the grid operators for planning and operation, leading to smart grid	0	0	Technical Recommendation
	Not Applicable		
In progress activities			
Activity count: 1			
1 ASEAN Power Grid Advancement Roadmap to increase renewable energy in the Total Primary Energy Supply			

REGIONAL

Strategic Outcome 4: Knowledge and Awareness Building

Indicator 4.1-01	Target	Achievement	
Number of studies, research, new evidence gathered and published, for raising awareness, improving the knowledge base, driving decisions, and dissemination	0	9	Studies/Research Published
Not Applicable			
Completed activities		Planned projects	
Achievement: 9		Project pipeline: 3	
2023			
1	Developed two reports on Donor Mapping for the Southeast Asia energy transition		
2	Developed an issue paper on blended finance for the energy transition in Indonesia, the Philippines and Vietnam		
3	Diagnostic study on barriers and opportunities for Energy Efficiency development		
4	A policy brief on grid & financing challenges for energy transition in Indonesia		
5	A policy brief on enabling an increased share of renewable energy in the Philippines electricity mix		
6	A policy brief on managing Vietnam's grid issues for effective energy transition		
7	A policy brief on exploring options to finance decarbonisation of the energy sector in Indonesia and Vietnam		
8	Energy Transition Roundtable digital library: A web page hosting all the recordings, event details, session notes, findings from the roundtable discussions		
In progress activities			
Activity count: 3			
1	Develop country-specific pathways, capacity building measures and templates for approval and implementation of optimal market-based competitive arrangements, improving flexibility in power procurement mechanisms for enabling smooth and expeditious access to variable renewable energy sources in <ul style="list-style-type: none">IndonesiaThe PhilippinesVietnam		
1	Study on twinning arrangement for decarbonisation in Southeast Asia		
2	Perception survey in selected coal regions in Southeast Asia		
3	A learning and capacity needs assessment of Just Transition stakeholders		

REGIONAL RESULTS

REGIONAL		Strategic Outcome 4: Knowledge and Awareness Building	
Indicator 4.1-02, 4.1-02 A & 4.1-02 B		Target	Achievement
4.1-02 Number of trainings, knowledge sharing events, and/or awareness workshops organised at national and regional levels building institutional capacity and knowledge networks		10	7 Consultations Conducted
			7 Events Conducted/Attended
		140%	
4.1-02 A Total number of attendees (for tracking only)		951	Trainings/Consultations/Events Attendees*
4.1-02 B Total number of female attendees (for tracking only)		416	Female attendees* (~44%)
Completed activities		Planned activities	
Achievement: 14		Activity pipeline: 4	
2023		1 Twinning programs to foster the exchange of knowledge, experience and good practices between local, regional and global coal regions	
Consultations		2 Two consultations (in Indonesia, the Philippines) an aim to integrate market mechanisms in the regular operations in the energy sector operations, including the off takers in each country	
1 Two workshops in Indonesia and two workshops in the Philippines with an aim to integrate market mechanisms in the regular operations in the energy sector operations, including the off takers in each country (DCAT)		3 One Annual Forum for a region-wide, multi-stakeholder dialogue on transition-related issues between coal regions in Southeast Asia	
2 One consultation conducted for ASEAN Power Grid in Jakarta			
3 One consultation to share expectations from COP event			
4 One Policy Dialogue- Advancing Regional Cooperation in Southeast Asia's Energy Transition to meet the Paris Agreement Goals in 2030			
Events			
5 Energy Transition Dialogue 2023			
COP28 side events			
6 The Power of Partnerships to Advance the Energy Transition in Southeast Asia			
7 Raising Ambitions on Accelerating the Phase out of Coal in Southeast Asia			
8 Powering Just Coal Transition in Southeast Asia: Leveraging Experiences and Cooperation			
9 Just Transition Platform Launch Event Building a Just and Equitable Future: The Importance of Convening Stakeholders for Just and Equitable Transition			
10 Key Financiers and their Roles: Innovative Financing Mechanisms to Accelerate Energy Transition in Southeast Asia			
11 Climate Finance Mobilising, Capacity Building and Technology Innovation Transfer for Climate Change Adaptation			

Note - IN. 4.1-03 – “No. of articles, press-releases on social-media, and mass-media, for outreach” has an overall target. It is captured in the Strategic Outcome infographics section



PROJECTS AT A GLANCE

PROJECT AT A GLANCE: VIETNAM

VIETNAM

Strategic Outcome 1: Policy Alignment with Climate Commitments

Impact Assessment of EU's Carbon Border Adjustment Mechanism

Implementation partner: Green Climate Innovation Company (GREENCIC)

Implementation period: Nov 2022

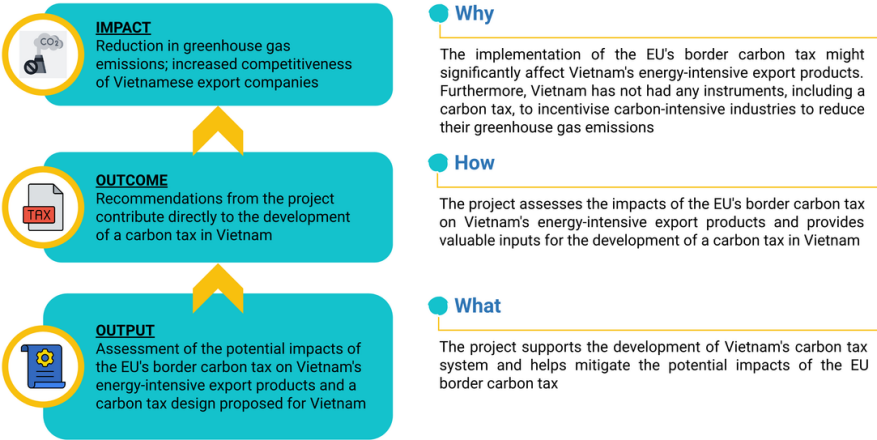
87%

 Feb 2024

Funds disbursed (as of 31 Dec 2023):

72%

Stakeholders/beneficiaries: Government agencies: MONRE, MOIT, Department of Tax Policy (Ministry of Finance); Associations: Vietnam Cement Association, Vietnam Aluminum Association, Fertilizer Association Vietnam



Key outputs		Progress (as of 31 Dec 2023)
1	A comprehensive study assessing and quantifying the impacts of CBAM on export products (especially energy-intensive industries), energy transition, national economy and implementation of NDC of Vietnam; and providing recommendations to minimize the negative impacts and contribute to the development of the sectoral mitigation plan and carbon market	Completed
2	Stakeholder consultations and workshops to introduce and consult the findings/recommendations with relevant ministries, local government, public and private enterprises, associations and NGOs	Completed
3	An in-depth study analyzing the implications and providing recommendations on the roadmap and the design of the carbon tax system in Vietnam	Ongoing, to be completed by Q1/FY24

“A robust monitoring, reporting, and verification system in Vietnam is key for the country to ensure smooth adaptation of the CBAM. This is to ensure a sustainable future for Vietnam's industries and economy toward net-zero emission by 2050”

Nguyen Van Minh
Director of the Economics and Climate Change Information Division under the Department of Climate Change at the MONRE

VIETNAM

Strategic Outcome 1: Policy Alignment with Climate Commitments

National Green Cooling Program

Implementation partner: Energy and Environment Consultancy Joint Stock Company (VNEEC)

Implementation period: Feb 2023

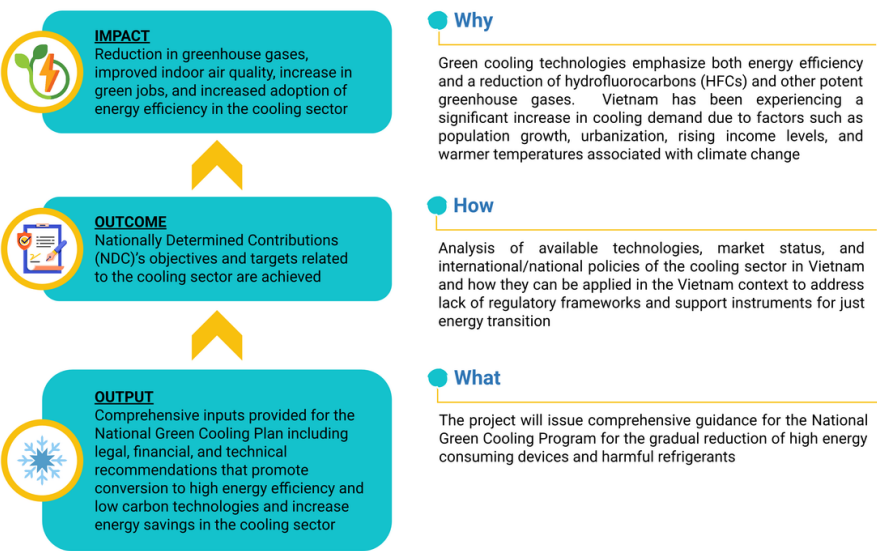
85%

 Feb 2024

Funds disbursed (as of 31 Dec 2023):

47%

Stakeholders/beneficiaries: Ministry of Industry and Trade (MOIT), Ministry of Natural Resources and Environment (MONRE), Ministry of Science and Technology (MOST), Ministry of Agriculture and Rural Development (MARD), Ministry of Transportation (MOT)



Key outputs		Progress (as of 31 Dec 2023)
1	Comprehensive review and recommendations for existing policy, strategies, plans and technologies that are related to energy efficiency and cooling sector/subsectors	Ongoing, to be completed by Q1/FY24
2	Development of the National Green Cooling Program and its roadmap	Ongoing, to be completed by Q1/FY24
3	Review and analysis on financing, implementation approaches & business models for green cooling development and investment	Ongoing, to be completed by Q1/FY24

“Cooling indirectly contributes to climate change by increasing the demand for electricity (largely still generated from fossil fuels) and through the leakage of ODS, GHG, which have a much higher global warming potential than CO2 emissions. If left uncontrolled, the emissions from cooling are expected to double by 2030 and triple by 2100”

Nguyen Tuan Quang
Deputy Director of the Department of Climate Change at the MONRE

PROJECT AT A GLANCE: VIETNAM

VIETNAM

Strategic Outcome 1: Policy Alignment with Climate Commitments

Roadmap for the Commission for Management of State Capital toward Net-Zero Emission in Energy State-Owned Enterprises

Implementation partner: Vietnam Initiative for Energy Transition (VIET)

Implementation period: Aug 2022 July 2023

Funds disbursed (as of 31 Dec 2023):

Stakeholders/beneficiaries: Commission for Management of State Capital at Enterprises (CMSC), Vietnam Electricity (EVN), Cao Ngan Power Plant (TKV), PVPower - Vung Ang 1 (PVN)



IMPACT

Identifying long-term roadmap for the SOEs to reach net-zero by 2050, along which coal fired power plants are gradually shut-down and replaced by renewable energy plants



OUTCOME

The provided recommendations for achieving net-zero emissions while ensuring power supply reliability are incorporated into the decision-making process



OUTPUT

Enabling CMSC and the Government to achieve net-zero emissions through a coal retirement plan and financing strategy for energy transition investments in SOEs

Why

The rationale behind this project is the support CMSC, as the representative of Govt.'s shares at the State-Owned Enterprises (SOEs) to develop and execute a comprehensive roadmap aimed at systematically reducing coal consumption in coal-fired power plants operated by SOEs

How

This project involves offering recommendations to CMSC, SOEs, and other pivotal decision-makers to accelerate the execution of the roadmap

What

The initial phase of this project has produced a roadmap that supports CMSC in guiding SOEs towards achieving net-zero emissions while ensuring the reliability of power supply. The later phase is to support CMSC and SOEs to access appropriate finance for coal phasing down

Key outputs

- | | Key outputs | Progress (as of 31 Dec 2023) |
|---|---|------------------------------|
| 1 | Development of the roadmap to support CMSC and the SOEs to take firm actions toward energy transition and contribute to the country's commitment to Energy Transition agenda and to contribute to the achievement of Paris Agreement | Completed |
| 2 | A report on coal abatement scenarios and coal phasing-down roadmap with technical and financial implications for CFPPs under the SOEs' management. Technical and financial solutions to fill in the gap left by phased-out CFPPs are included | Completed |

Progress (as of 31 Dec 2023)

“

This is an extremely valuable and essential support to SOEs in the process of building a roadmap for coal-fired power transition, and at the same time creating conditions to promote transparent and reliable conditions of the clean energy market

”

*Dinh The Phuc
Director General, Department of Energy, Commission for Management of State capital at Enterprises (CMSC)*

VIETNAM

Strategic Outcome 1: Policy Alignment with Climate Commitments

Legal Support to the Development of Power Generation Projects in Vietnam

Implementation partner: NHQuang&Associates

Implementation period: Jan 2023 Dec 2023

Funds disbursed* (as of 31 Dec 2023):

Stakeholders/beneficiaries: Electricity and Renewable Energy Authority, MOIT



IMPACT

Increased deployment of renewable energy at competitive prices



OUTCOME

The policy recommendations provided enables the implementation of an auction mechanism for power source development projects



OUTPUT

Policy recommendations for revision of Electricity Law, focusing particularly on auction mechanisms

Why

Well designed auction mechanisms for renewable energy procurement ensure transparency, competitive pricing, encourages innovation, accelerates deployment, diversifies participation and allocates risks evenly amongst stakeholders

How

This project conduct an analysis of the existing legal framework relevant to the development of power sources in Vietnam and proposes steps forward and provides the technical legal drafting to implement the recommendations

What

This project provides recommendations for a streamlined policy on auction mechanism

Key outputs

- | | Key outputs | Progress (as of 31 Dec 2023) |
|---|--|------------------------------|
| 1 | Development of 4 reports.
(i) A review report on the current legal framework, identify impediments and recommendations for change;
(ii) An international experience report on key legal terms for auction mechanism;
(iii) A report on legal recommendations for design and implementation of auction mechanism;
(iv) A report on assessment of expected impacts of the proposed legal recommendations | Completed |
| 2 | Development of a new legal framework for approval of investment on new renewable energy projects and transmission grid in Vietnam | Completed |
| 3 | Consultation meeting with EREA/MOIT and key stakeholders | Completed |

Progress (as of 31 Dec 2023)

PROJECT AT A GLANCE: VIETNAM

VIETNAM

Strategic Outcome 1: Policy Alignment with Climate Commitments

Development of 9 Key National Standards for E-Vehicle Charging Infrastructure

Implementation partner: Bao Loc Technology Joint Stock Company (BLT. Cert)

Implementation period: May 2023 Apr 2024

Funds disbursed (as of 31 Dec 2023):

Stakeholders/beneficiaries: SMEs Development Support Center 2 (SMEDEC 2)

IMPACT

Creating 9 communication standards between charging stations and the electricity grid enables installation and licensing by station owners which directly aids green transport growth in Vietnam, indirectly reducing 52.4 million tons of greenhouse gas by 2030 and 106.2 million tons by 2050

Why

There is a lack of standards, and these are essential for establishing a robust framework for the development and implementation of electric vehicle charging infrastructure. This framework ensures compatibility, safety, and efficiency

OUTCOME

The national standards for e-vehicle charging stations establish the foundation for the long-term development of the green transport sector, reduce emissions and accelerate the energy transition

How

In the process of developing the standards, the project will engage in collaboration with a diverse range of partners from both the public and private sectors

OUTPUT

Developing e-vehicle charging infrastructure standards and disseminating national standards to industry and stakeholders

What

The objective of this project is to lay the foundation for the formulation of official standards for electric vehicle charging stations in Vietnam

Key outputs	Progress (as of 31 Dec 2023)
1 Development of 9 key national standards for e-vehicle charging infrastructure	Ongoing, to be completed by Q1/FY24
2 Organize workshops to disseminate the national standards to the policymakers, policy executors and relevant stakeholders (local and international manufacturers, importers, automobile producers, VCCI and professional communities)	To start in Q2/FY24
3 The standards are announced on media platforms and applied for production and import of products	To start in Q2/FY24

VIETNAM

Strategic Outcome 1: Policy Alignment with Climate Commitments

Assessment of Country's Readiness and International Experience in Carbon Trade Exchange Design

Implementation partner: Environment and Ecology Institute (EEI)

Implementation period: Jul 2023 Mar 2024

Funds disbursed (as of 31 Dec 2023):

Stakeholders/beneficiaries: Legal Department, Ministry of Finance(MOF)

IMPACT

Carbon market in Vietnam is well designed for implementation

Why

Carbon market is an important legal tool to accelerate GHG reduction while creating sources of financing for enterprises' efforts to decarbonize their operations and productions, particularly the energy intensive sectors

OUTCOME

The country's readiness and infrastructure for carbon market development are well analysed and the design of the carbon market is recommended to the government

How

The country's current legal and infrastructure status and international experience are analysed to identify gaps and to recommend appropriate design of the carbon market

OUTPUT

- An analysis of the country's readiness and international experience.
- Policy recommendations for the carbon market design and development

What

The objective of this project is to facilitate the government of Vietnam's efforts to establish the carbon market as an important tool for decarbonization of the economy

Key outputs	Progress (as of 31 Dec 2023)
1 Communication and knowledge sharing	Completed
2 Analysis of the current gaps and international experience in carbon trade exchange development	Ongoing, to be completed by Q1/FY24
3 Recommended carbon trade exchange design for consultation	Ongoing, to be completed by Q1/FY24
4 Final recommendations for carbon trade exchange establishment	Ongoing, to be completed by Q1/FY24

PROJECT AT A GLANCE: VIETNAM

VIETNAM

Strategic Outcome 1: Policy Alignment with Climate Commitments

Diagnostic Study on Net-Zero for The Energy Sector in Vietnam

Implementation partner: E4SMA S.r.l.

Implementation period: Jan 2023 100% Nov 2023

Funds disbursed (as of 31 Dec 2023): 100%

Stakeholders/beneficiaries: Department of Oil, Gas and Coal, Ministry of Industry and Trade (MOIT)

IMPACT

Achieve COP26 commitment by 2050, relying on key transformations, optimal investments, and combinations of resources to support the energy transition

OUTCOME

The recommendations offered technical, social and commercially feasible pathways to a low carbon energy sector in Vietnam which were utilised by policy makers

OUTPUT

Financial, technological, and legal recommendations for net-zero strategies in the energy sector

Why

The Vietnamese government recognizes the need for a dedicated and diverse analytical process to achieve net-zero emissions by 2050 while ensuring energy security, decarbonization, and improved economic outcomes

How

This study examines mechanisms, focusing on climate financing, technology, and policy measures, to support the transition of energy sector

What

This project identifies appropriate energy transition pathways toward renewable energy sources while mitigating potential negative social impacts

Key outputs	Progress (as of 31 Dec 2023)
1 A deep-dive study on net-zero emission scenarios for the energy sector with a comprehensive analysis of technical, financial and institutional implications of the transition from fossil fuel to renewable energy generation in Vietnam.	Completed
2 A list of recommended further technical assistance that ETP can provide to the Government Agencies to address the technical, financial and institutional impediments to realize the net-zero emission targets.	Completed
3 Consultation workshops with regular and frequent engagement with the country authorities, development partners and relevant stakeholders	Completed

“ Oil, Gas and Cold Department will support the study and function as a focal point connecting with key stakeholders in energy sector of Vietnam

Ms. Ngo Thuy Quynh
Deputy Director of the Oil, Gas and Coal Department of the MOIT

”

VIETNAM

Strategic Outcome 1: Policy Alignment with Climate Commitments

Emission Trading System Piloting and Simulation in Vietnam

Implementation partner: Energy and Environment Consultancy Joint Stock Company (VNEEC)

Implementation period: July 2023 31% Jan 2025

Funds disbursed (as of 31 Dec 2023): 17%

Stakeholders/beneficiaries: Department of Climate Change (DCC), Ministry of Natural Resources and Environment (MONRE)

IMPACT

The development of carbon market as a financing tool in Vietnam facilitates the country's transition to a low-carbon economy

OUTCOME

Improved knowledge for all the carbon market stakeholders, including policy makers, financial institutions, banking sector, market makers and emitters

OUTPUT

Development of web-based carbon simulation platform

Why

The Vietnamese government recognises the carbon market as an essential tool to facilitate the low-carbon economy transition

How

This project provides knowledge and hand-on experience for the trainees and recommendations for the policy makers on how carbon market should be organised in Vietnam

What

Four training sessions will be organised for different groups of trainees to facilitate their understandings and readiness for the Emission Trading System (ETS) establishment and operation by 2027

Key outputs	Progress (as of 31 Dec 2023)
1 A survey of the potential stakeholders' readiness for the ETS.	Completed
2 Planning a carbon market master class for key government officials to learn and exchange governance knowledge and experience of ETS	Completed
3 A report for policy recommendations for ETSin Vietnam	Ongoing, to be completed by Q1/FY25
4 Development of a web-based carbon simulation platform for Vietnam	To start in Q1/FY24

PROJECT AT A GLANCE: VIETNAM

VIETNAM

Strategic Outcome 2: De-risking investments in energy efficiency and renewable energy

Promotion of Energy Efficiency in Food Processing and Supporting Industries in Vietnam

Implementation partner: Vietnam Chamber of Commerce and Industry (VCCI)

Implementation period: May 2023 Apr 2025

Funds disbursed (as of 31 Dec 2023):

Stakeholders/beneficiaries: Ministry of Industry and Trade (MOIT), Ministry of Agriculture and Rural Development (MARD), Small and Medium Enterprises (SMEs)



IMPACT

Contribute to promoting efficient resource utilisation, accountable manufacturing supply chains and a reduction in GHG emissions in Vietnam's two most energy-intensive sectors



OUTCOME

Public and private sectors enhance energy efficiency in supporting food processing and support industry enterprises increasing investments in energy efficiency projects



OUTPUT

Energy efficiency benchmarking tool is developed, ESCO network association implemented and policy recommendations to unlock energy efficiency financing presented to government stakeholders

Why

Limited adoption of energy efficiency solutions persists in food processing and supporting industries, hindering potential energy savings and GHG emission reductions

How

The project is conducted by analysing current policy, in-depth research on energy consumption and available energy efficiency verification tools of supporting and food processing manufacturer

What

This project supports private sector to access financing for energy efficiency investments, networking among manufacturers, financiers, and Energy Service Companies (ESCOs)

Key outputs	Progress (as of 31 Dec 2023)
1 A scale-able EE benchmarking tool for supporting and food processing manufacturers in place	To start in Q1/FY24
2 Dissemination of policy recommendations to the Government of Vietnam on financing EE projects and ESCO business development	To start in Q4/FY24
3 Set up and facilitate a working group/task force team to develop the road-map for an ESCO Association establishment and provide technical support to strengthen operations of the EE network	To start in Q4/FY24
4 Prepare 3 EE investment projects for three Vietnamese enterprises, which are presented to potential financiers	To start in Q4/FY24

VIETNAM

Strategic Outcome 3: Extending Smart Grids

Development of Vietnam Smart Grid Roadmap to 2030, vision to 2045

Implementation partner: Intelligent Energy Systems

Implementation period: Aug 2023 Feb 2024

Funds disbursed (as of 31 Dec 2023):

Stakeholders/beneficiaries: Electricity Regulatory Authority of Vietnam, MOIT



IMPACT

The project will support the government of Vietnam to define their pathway for development of smart grid roadmap until 2030 with a vision to 2045



OUTCOME

The pathway for smart grid development is defined, which guide the investment in smart grid to reduce installments and encourage renewable energy development



OUTPUT

- An Analysis of smart grid status in Vietnam
- A review of international experience
- A recommended roadmap for smart grid development

Why

The integration and advancement of renewable energy hinge on the development of an adaptive and smart grid infrastructure, as the variability of sources like wind and solar power necessitates a resilient transmission system to unlock their full potential and ensure a smooth transition to a sustainable energy future

How

The technical assistance involves a comprehensive analysis of Vietnam's grid system and comparison with global benchmarks, considering international experiences and reviewing technological trends to pinpoint gaps and determine suitable solutions for the advancement of the smart grid infrastructure in Vietnam

What

Current status of Vietnam grid to be analysed and compared with international experience, which serves as the reference for development of smart grid roadmap for Vietnam

Key outputs	Progress (as of 31 Dec 2023)
1 An analysis of Vietnam's national grid system status	Completed
2 A review of international experience	Completed
3 A recommended roadmap for smart grid development until 2030 with a vision to 2045 for Vietnam	Ongoing, to be completed by Q1/FY24

PROJECT AT A GLANCE: INDONESIA

INDONESIA

Strategic Outcome 1: Policy Alignment with Climate Commitments

Study on the Financial Implications of the Early Retirement of Coal-Fired Power Plants in Indonesia

Implementation partner: Hartree Consultores

Implementation period: Jul 2022 Feb 2024

Funds disbursed (as of 31 Dec 2023):

Stakeholders/beneficiaries: Ministry of National Development Planning (BAPPENAS), Ministry of Energy and Mineral Resources (MEMR)



IMPACT

Expedite the phasing out of coal-fired power plants (CFPP) in Indonesia

Why

Effectively phasing down coal demands a detailed plan, with comprehensive and detailed understanding of the financial aspects of early retirement. This enables a gradual transition, opening opportunities for renewable energy investments, creating green jobs, and cutting greenhouse gas emissions



OUTCOME

Government announces an official roadmap for early retirement of power plants

How

This project reviewed and evaluated the Government's plans for early retirement and provided a comprehensive and quantitative analysis of the financial implications of the proposed early retirement roadmap at the national financial and fiscal levels.



OUTPUT

Policy recommendations on the early retirement plans of coal-fired power plants in Indonesia and its financial implications

What

ETP provided a systematic and cohesive methodology to address critical factors, including broader implications on the electricity sector, such as PLN's financial position, tariff structure, subsidies, energy sector financing, and state fiscal conditions. ETP also prepared prioritisation tool for an assessment of coal fired power plants for early retirement and a roadmap for their retirement

Key outputs	Progress (as of 31 Dec 2023)
1 Map of the past and existing policy and regulatory framework including roadmaps, and financing frameworks for early CFPP retirement, review of high-level implication of early CFPP retirement program to PLN financial and state fiscal conditions	Completed
2 Deep dive analysis of the early CFPP retirement impact to the PLN financial and state fiscal conditions	Completed
3 Identification of measures, factors, risks, opportunities and 1-2 (showcase projects) that can deliver the early CFPP retirement program	Completed
4 Sensitivity analysis on the early CFPP retirement program to the electricity subsidy and tariff as well as regional economic impact	Completed
5 Recommendation in regards to policy, fiscal frameworks, and resource allocation	Completed
6 Early CFPP retirement roadmap	Ongoing, expected completion Q1/FY24



This study has well described the impact of early CFPP retirement to the energy security, state fiscal, and regional economics that can become the input for the long-term national development planning (RPJPN) 2025-2045

Nizar Marizi

Director of Energy, Mineral, and Mining Resources, Ministry of National Development Planning (Bappenas)



INDONESIA

Strategic Outcome 1: Policy Alignment with Climate Commitments

Streamlining Government of Indonesia Plans as a Pathway to Achieve Net Zero Emissions

Implementation partner: PT Niras International Consulting Indonesia

Implementation period: May 2023 Jul 2024

Funds disbursed (as of 31 Dec 2023):

Stakeholders/beneficiaries: National Energy Council (DEN), Ministry of Energy and Mineral Resources (MEMR), BAPPENAS



IMPACT

Effective and ambitious climate action plans with reference to climate agreement targets and commitments

Why

Ensuring alignment and cohesion among the plans, will create an effective coordination among different government entities to support energy transition. It will strengthen policy and regulatory certainty that will become the foundations for attracting finance and investment for energy transition projects



OUTCOME

Strengthen national energy plans to reflect a clear and cohesive commitment to Energy Transition agenda

How

All current government plans related to energy transition will be reviewed using a comprehensive methodology and technical recommendations will be provided to enhance and streamline the national energy plans



OUTPUT

Aligned and cohesive energy transition plan across different government entities and capacity building program to ensure the sustainability

What

The Government of Indonesia (GOI) has multiple roadmaps and plans for achieving emissions reductions. Each roadmap is built on different divergent assumptions and unaligned targets. ETP assists the GOI in establishing a streamlined approach to align the plans with Indonesia's climate commitments

Key outputs	Progress (as of 31 Dec 2023)
1 Assess, identify, and provide recommendations to align government plans with Roadmap to Net Zero Emission (NZE) 2060	Ongoing, to be completed by Q1/FY24
2 Literature review on emerging technologies proposed by GOI's long-term planning, such as hydrogen, ammonia, nuclear and Carbon Capture and Storage (CCS)	Ongoing, to be completed by Q1/FY24
3 Provide a streamlined approach/methodology that can ensure the coherence of government plans to pursue alignment with the climate commitment	Ongoing, to be completed by Q1/FY24
4 Establish a Technical Working Group (TWG) for relevant stakeholders to coordinate, reinforce issues resolution, and provide inputs on Roadmap to NZE 2060	Ongoing, to be completed by Q2/FY24

PROJECT AT A GLANCE: INDONESIA

INDONESIA

Strategic Outcome 1: Policy Alignment with Climate Commitments

Assisting the Revision of the Indonesia Roadmap of Net Zero Emission (NZE) 2060

Implementation partner: NEYEN Consulting SL

Implementation period: Aug 2023 100% Nov 2023

Funds disbursed (as of 31 Dec 2023): 100%

Stakeholders/beneficiaries: Ministry of Energy and Mineral Resources (MEMR)

IMPACT

Orchestrated efforts in achieving the net zero emission (NZE) targets through comprehensive and transparent implementation pathway

OUTCOME

Fostering national commitment from the energy supply and demand sector to implement the net zero emission pathway until 2060

OUTPUT

Clear and transparent guidance and action plans to deliver the net zero emission (NZE) commitments and objectives

Why

To achieve the global zero-emission target, Indonesia needs to update its 2060 NZE roadmap, fostering understanding and agreement among relevant ministries, particularly those in the energy sector

How

Conducting a comprehensive review of the existing roadmap, incorporating the latest assumptions, data, and policies to ensure precise alignment with the government's net-zero emission program implementation plans

What

The initial version of Roadmap NZE 2060 was launched at COP26. Considering the dynamic of energy sector in Indonesia including the latest Just Energy Transition Partnership (JETP) commitment, Indonesia needs to update its NZE roadmap

Key outputs

Progress (as of 31 Dec 2023)

1

The draft of the revised Roadmap NZE 2060

Completed

“This Indonesia Net Zero Emission Roadmap shall reflect energy transition measures initiated from the upstream (extraction, transformation, and transmission & distribution) to downstream (energy demand) sectors”

Gigih Udi Atmo
Director of Energy Conservation, MEMR

INDONESIA

Strategic Outcome 1: Policy Alignment with Climate Commitments

Supporting Medium-term National Development Planning (RPJMN) 2025–2029 Background Study Indonesia

Implementation partner: PT Sustainability and Resilience (Sureco)

Implementation period: Aug 2023 100% Oct 2023

Funds disbursed (as of 31 Dec 2023): 100%

Stakeholders/beneficiaries: BAPPENAS

IMPACT

Integration of RE power plant projects to assist the achievement of renewable energy shares which further reducing CO₂ emissions

OUTCOME

The 2025-2029 Medium-term National Development Plan will include a measurable and transparent renewable energy power plants

OUTPUT

Establishment of screening tool to help identify and justify the readiness and success criteria of renewable energy power plant project that can be included in the 2025-2029 Medium-term National Development Plan (RPJMN)

Why

Bappenas requires a mechanism to assess indicators, readiness levels, and success levels of renewable energy projects intended for inclusion in the Medium-term National Development Plan (RPJMN)

How

The study develops a screening tool to assess and validate the readiness of renewable energy generation technology, emphasizing technical aspects while also considering non-technical factors, notably the financing mechanism

What

The 2020-2024 RPJMN evaluation of the renewable energy power plants projects reveals challenges in both technical and non-technical aspects. A mechanism is needed to identify and validate the readiness of renewable energy generation projects eligible for inclusion in the 2025-2029 RPJMN

Key outputs

Progress (as of 31 Dec 2023)

1

The establishment of Technological Innovation System (TIS) to assist in identifying and justifying the readiness of renewable energy power plant to be included in the 2025-2029 RPJMN

Completed

2

A set of recommendations to effectively implement the readiness of renewable energy technology to accelerate the energy transition in Indonesia by 2030

Completed

“Looking ahead to the next RPJMN, there is a strategic shift towards focusing on the energy sector's development, particularly in the realm of renewable energy. The primary objective of the meeting is to disseminate the progress and assessment results, shedding light on the comprehensive study that encompasses the preparation of a list of renewable energy projects, technology readiness, available resources, financing mechanisms, and relevant policies”

Nizhar Marizi
Director of Energy Resources, Mineral, and Mining, BAPPENAS

PROJECT AT A GLANCE: INDONESIA

INDONESIA

Strategic Outcome 1: Policy Alignment with Climate Commitments

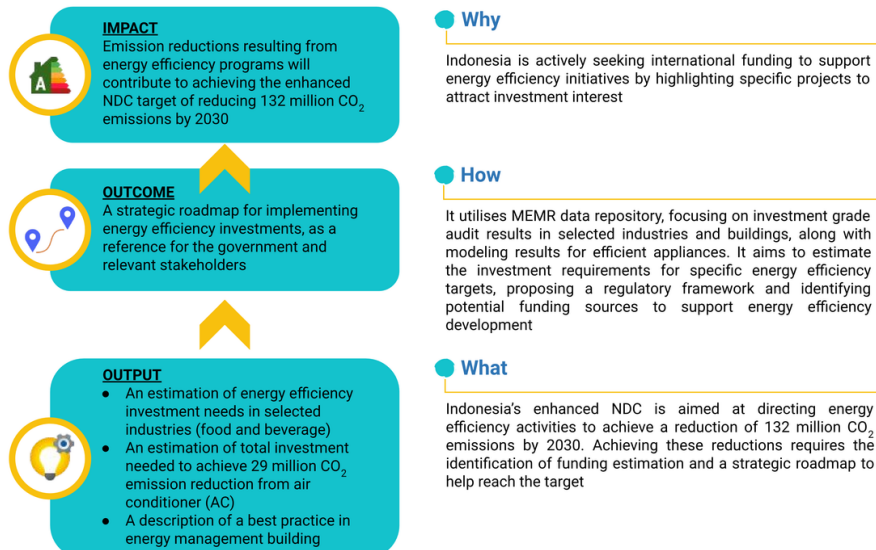
Preparation of the Indonesia's Enhanced Nationally Determined Contribution (NDC) Investment Roadmap for Energy Efficiency

Implementation partner: TramaTecnAmbiental (TTA)

Implementation period: Aug 2023  Nov 2023

Funds disbursed (as of 31 Dec 2023):  100%

Stakeholders/beneficiaries: Ministry of Energy and Mineral Resources (MEMR)



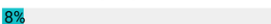
Key outputs	Progress (as of 31 Dec 2023)
1 Energy Efficiency Investment Strategy Roadmap with an estimation of investment needs to achieve emission reduction from AC, building management, and selected industry (food and beverage)	Completed

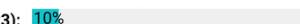
INDONESIA

Strategic Outcome 2: De-risking investments in energy efficiency and renewable energy

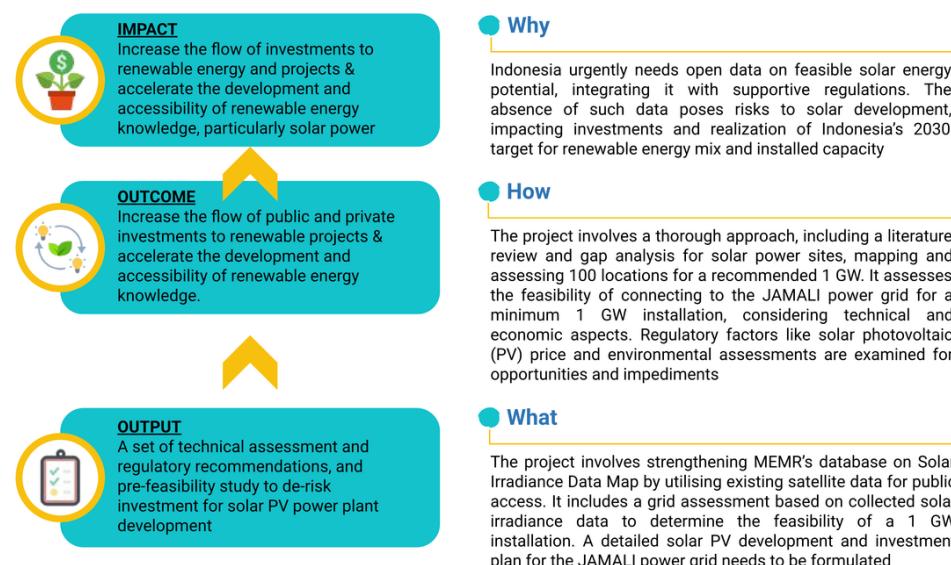
1 GW Solar PV Mapping and Development Plan in JAMALI Power Grid

Implementation partner: TramaTecnAmbiental (TTA)

Implementation period: Nov 2023  Feb 2025

Funds disbursed (as of 31 Dec 2023):  10%

Stakeholders/beneficiaries: BAPPENAS



Key outputs	Progress (as of 31 Dec 2023)
1 Manage and convene a solar PV TWG bringing together all key stakeholders relevant to solar power development	To start in Q1/FY24
2 Solar irradiance data mapping and assessment on at least 100 potential production sites amounting to 1 GW through publicly accessible database	To start in Q1/FY24
3 Regulatory analysis on gaps and challenges that impede the development of solar PV in Indonesia	To start in Q2/FY24
4 Grid integration assessment and recommendations to integrate solar PV to JAMALI grid	To start in Q2/FY24
5 A solar PV development and investment plan for 1 GW the JAMALI power grid	To start in Q4/FY24

PROJECT AT A GLANCE: INDONESIA

INDONESIA

Strategic Outcome 2: De-risking investments in energy efficiency and renewable energy

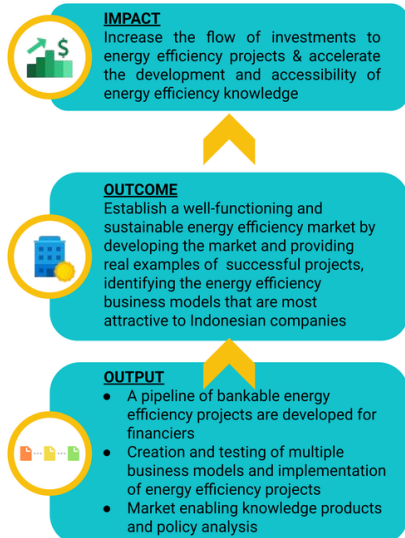
Catalysing Energy Efficiency as a Service in Indonesia

Implementation partner: Synergy Efficiency Solutions (SES)

Implementation period: Oct 2023 12% Sep 2025

Funds disbursed (as of 31 Dec 2023): 17%

Stakeholders/beneficiaries: The Coordinating Ministry of Economic Affairs, The Ministry of Energy and Mineral Resources



Why

With very few successful energy efficiency projects having been implemented, policy makers, financiers, potential energy efficiency project hosts and energy efficiency companies have no proof of concept to model projects on. This has resulted in skepticism and a lack of trust in energy efficiency practitioners and the ESCO business model

How

Perform 15 Level 1 Energy Audits and conduct 5 Investment Grade Audits (IGA) for energy efficiency projects. Collaborate with a reputable Indonesian law and consulting firm to align with local regulations and bolster the business model. Implement Smart Joules IoT remote energy monitoring to produce insightful knowledge products tailored for industries and financial institutions

What

Establish a well-functioning and sustainable energy efficiency market in Indonesia by pursuing three interventions related to a) developing the market and providing real examples of successful projects, b) identifying the energy efficiency business models that are most attractive to Indonesian companies and c) building capacity by providing products and policy analysis

Key outputs	Progress (as of 31 Dec 2023)
1 A pipeline of bankable EE projects	Ongoing, to be completed by Q3/FY24
2 Develop data analytics based insight briefs aimed at policy makers and financial institutions to enhance knowledge and understanding	To start in Q1/FY25
3 Creation and testing of multiple EE business models on bankable projects from the pipeline developed	To start in Q2/FY24
4 Provide real data from implemented projects	To start in Q3/FY24

INDONESIA

Strategic Outcome 2: De-risking investments in energy efficiency and renewable energy

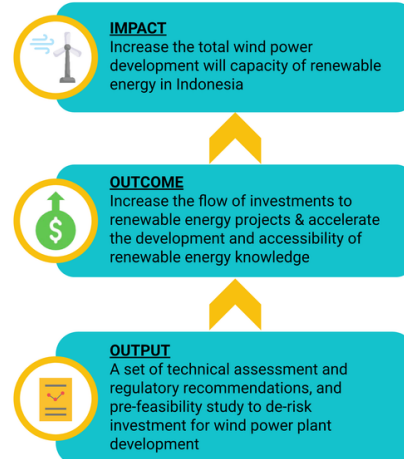
Wind Energy Development in Indonesia: Investment Plan

Implementation partner: Pondera Consult

Implementation period: May 2023 53% Jul 2024

Funds disbursed (as of 31 Dec 2023): 55%

Stakeholders/beneficiaries: Ministry of Energy and Mineral Resources (MEMR)



Why

De-risking additional wind sites and associated auction tenders in Indonesia aims to increase renewable energy share from the current 15% to 16%, with variable renewable energy reaching 3.8%, through the addition of 600 megawatts and concurrent reduction of greenhouse gas emissions

How

The activities in this project link the Government agencies and PLN, to agree on de-risking measures for the specific wind locations, which will lead to improvement in the bid conditions for harnessing 600 megawatt of additional wind power development through a preparation of pre-feasibility documentation

What

ETP provides assistance to identify barriers and assess and develop derisking measures, including collect area-specific wind-speed data, land, road and grid access, and other risk areas, including the permitting processes and recommended solutions and pre-feasibility study for promising sites. The final report will assess the feasibility and development maturity of wind sites and list various potential source of funding and the preferred financing mechanism

Key outputs	Progress (as of 31 Dec 2023)
1 Wind energy sector development roadmap to deliver successful wind energy development in Indonesia	Completed
2 Permitting assessment and regulation development support to propose recommendations for current policy and regulation	Completed
3 Establish Technical Working Group (TWG) for relevant stakeholders to coordinate, reinforce issues resolution, and provide inputs on wind sector development	Completed
4 Wind energy potential mapping, gap analysis and site selection to determine suitable sites that would lead to feasible wind projects	Ongoing, to be completed by Q2/FY24
5 Investment opportunities guide to guide investors and de-risk Indonesian wind projects	To start in Q2/FY24



To drive the energy transition in Indonesia, utilisation of wind energy can become one of the important contributors to the transition process. Therefore, the creation of the roadmap is needed to guide wind energy development effectively and efficiently. The Ministry of Energy and Mineral Resources expresses our gratitude for ETP-UNOPS, in accommodating the creation of the roadmap, which can serve as a guideline for the Government, public and private sector businesses, and other stakeholders involved in developing the wind energy sector



Andriah Feby Misna, Director of Various New and Renewable Energies
Directorate General of New, Renewable Energy, and Energy Conservation
Ministry of Energy and Mineral Resources

PROJECT AT A GLANCE: INDONESIA

INDONESIA

Strategic Outcome 3: Extending Smart Grid

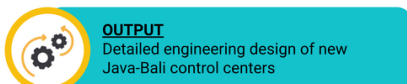
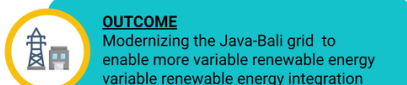
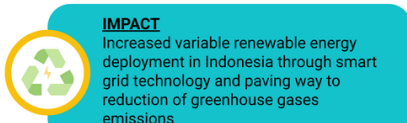
Upgrading and Modernising the Java-Madura-Bali Electricity Control Centre

Implementation partner: ELC Electroconsults

Implementation period: Sep 2021 Dec 2023

Funds disbursed (as of 31 Dec 2023):

Stakeholders/beneficiaries: Perusahaan Listrik Negara (PLN), Ministry of Energy and Mineral Resources (MEMR)



Why

The existing grid control system in the Java-Madura-Bali (JAMALI) region had reached its end of life and has been unable to integrate variable renewable energy into the grid, necessitating urgent modernisation efforts. The new control center will serve as a backbone of the energy system, fostering grid stability and flexibility, thus removing a physical barrier to energy transition and integration of clean energy in Indonesia

How

This project provides multi-disciplinary analysis and specifications, such as planning, preparation of the Supervisory Control and Data Acquisition (SCADA)/Energy Management Systems (EMS) technology, building infrastructures, and human resources of the JAMALI Main Control Center (MCC) and Disaster Recovery Control Center (DRC). These efforts are crucial to ensuring that the quality of the technology complies with international standards, thus facilitating the effective integration and utilization of renewable energy sources through high quality smart grid technology

What

ETP provides technical assistance to develop Detailed Engineering Design (DED) of new Java-Madura-Bali (JAMALI) control centers to develop a modern solution capable of effectively managing and controlling the grid. The objective is to ensure seamless integration and management of renewable energy sources within the grid

Key outputs	Progress (as of 31 Dec 2023)
1 Detailed engineering design for SCADA/EMS technology	Completed
2 Detailed engineering and infrastructure design for JAMALI MCC and DRC buildings	Completed
3 Finalising tender process for SCADA/EMS	Completed
4 Finalising tender process for JAMALI MCC and DRC building constructions	Completed
5 Capacity building for PLN staff involved in control centre managements	Completed

“ETP's support in terms of technicality and system perspective is unique and invaluable for the Energy Transition process in Indonesia. We, at PLN, express our sincere appreciation for ETP's support and warmly extend an invitation to continue our fruitful collaboration in the long term”

Sinthya Roesly
Chief Financial Officer of PLN

PROJECT AT A GLANCE: THE PHILIPPINES

THE PHILIPPINES

Strategic Outcome 1: Policy Alignment with Climate Commitments

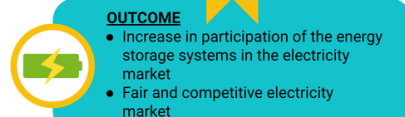
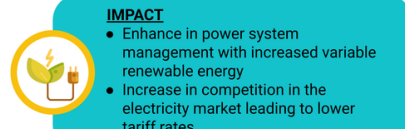
The Philippines Battery Energy Market Mechanism Support Program

Implementation partner: Nel Consulting Limited

Implementation period: Dec 2021 Oct 2023

Funds disbursed (as of 31 Dec 2023):

Stakeholders/beneficiaries: Philippine Electricity Market Corporation



Why

The influx of variable renewable energy generation into the grid will require energy storage system (ESS) to stabilise and ensure its reliability

How

A robust and fair market mechanism for ESS increases private sector confidence in the market, encouraging more investments in energy storage and renewable energy-ESS hybrids. Energy storage enhances grid stability as variable renewable energy generation increases

What

ETP recommended the rules for the participation of standalone ESS and renewable energy - ESS hybrids in the Wholesale Electricity Spot Market. The rules are aligned with the recent ESS policy released by the Department of Energy on April 2023. The rules include guidance to ensure fair competition with the participation of ESS

Key outputs	Progress (as of 31 Dec 2023)
1 Refined Wholesale Electricity Spot Market (WESM) regulations to incorporate provisions for battery energy storage system (BESS) and other ESS and aligned with new policy (DC 2023-04-008) on storage systems	Completed
2 Conformance, compliance monitoring, and competitiveness recommendations	Completed

“The study's recommendations will be harmonised with the Market Operator's (IEMOP) proposed rules changes to be submitted to the DOE”

Aldrin W. Reyes
Market Development Division / Market Assessment Group, Philippine Electricity Market Corporation

PROJECT AT A GLANCE: THE PHILIPPINES

THE PHILIPPINES

Strategic Outcome 1: Policy Alignment with Climate Commitments

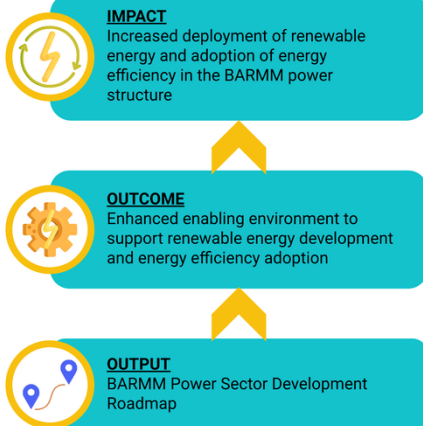
Power Development Roadmap for the Bangsamoro Autonomous Region for Muslim Mindanao

Implementation partner: Aquatera

Implementation period: Mar 2023 Sep 2023

Funds disbursed (as of 31 Dec 2023):

Stakeholders/beneficiaries: Ministry of Environment, Natural Resources, and Energy (MENRE)



Why

Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) is a newly established political entity that seeks the support of development partners for its regional growth. Because of this, the BARMM Government has the opportunity to set a 100% renewable energy target for its power generation but is unsure on how to do this

How

This project will help achieve the national target of 50% renewable energy in the power generation mix by 2040. With the Roadmap in place, this will ensure that BARMM will strive for renewable and sustainable power systems with the energy transition opportunities and strategic objectives identified in the Power Sector Development Roadmap

What

ETP assisted the Ministry of Environment, Natural Resources, and Energy of the BARMM formulate a Power Sector Development Roadmap. It sets the pathway for BARMM to implement sustainable power systems while adhering to the development goals defined in their Bangsamoro Organic Law and Bangsamoro Development Plan 2023-2028

Key outputs

- 1 BARMM Power Sector Development Roadmap
- 2 Renewable Energy Development Workshop

Progress (as of 31 Dec 2023)

- Completed
Completed

“Through the collaborative efforts of the ETP, Aquatera, and MENRE, the development of the BARMM Power Sector Development Roadmap amplifies our dedication to propelling the BARMM region towards innovative clean energy and sustainable development visions”

Nasiri Abas
Director, Energy Management and Development Services,
Ministry of Environment, Natural Resources, and Energy

THE PHILIPPINES

Strategic Outcome 1: Policy Alignment with Climate Commitments

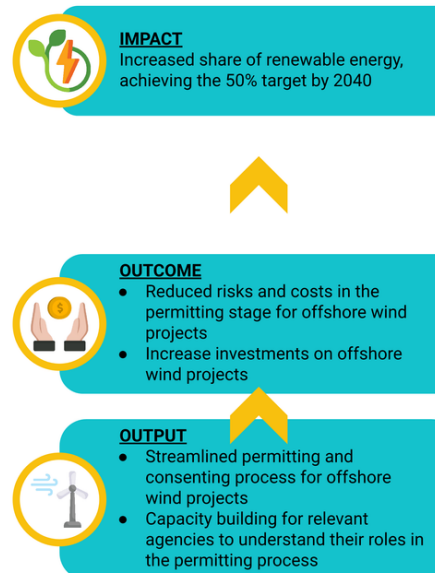
Offshore Wind Permitting and Consenting

Implementation partner: Niras Asia Manila

Implementation period: Jun 2023 Jun 2024

Funds disbursed (as of 31 Dec 2023):

Stakeholders/beneficiaries: Department of Energy



Why

There is no clear procedure for acquiring the necessary permits for developing offshore wind projects in the Philippines. Developers do not know which national, regional, and local government entities it needs to liaise with or what requirements are asked across different stages of the permitting process. Some government agencies are not aware of their responsibilities in awarding permits. The uncertainty adds costs and time in developing projects

How

A clear and streamlined permitting process will hasten project development and lead to the timely construction of offshore wind projects. It reduces risks in the early stages of the project, enhancing investor confidence into the sector

What

This project will develop a clear permitting process for offshore wind projects, preventing regulatory overreach to minimize delays in implementing projects

Key outputs

- 1 Permitting and consenting process for offshore wind projects
- 2 Capacity-building sessions on offshore wind permitting and processes
- 3 Plan integrating offshore wind permitting process in the national permitting platform for energy projects

Progress (as of 31 Dec 2023)

- Ongoing, to be completed in Q2/FY24
Ongoing, to be completed in Q3/FY24. First workshop held in Q4/FY23
To start in Q2/FY24

PROJECT AT A GLANCE: THE PHILIPPINES


THE PHILIPPINES

Strategic Outcome 1: Policy Alignment with Climate Commitments

Support to the Green Energy Auction Program


Implementation period: Feb 2023 47% Dec 2024

Stakeholders/beneficiaries: Department of Energy - Energy Utilisation Management Bureau




IMPACT

- Increased renewable energy generation
- Enhanced competition in the generation sector leading to lower electricity rates



OUTCOME

- Effective auction process
- Increased participation in the auctions
- Reduced off-taker risks to encourage more private investments into renewables



OUTPUT

- Policy advice on settlement framework for auction adopted by the government
- Opt-in purchase agreement template (on going)

Why

The government envisions the Green Energy Auction to be the primary procurement mechanism for renewable energy generation. Gaps in implementation may reduce investors confidence in the system

How

This work ensures the effectiveness of the auctions as a purchasing mechanism for renewable energy generation, encouraging more private generators to participate. The auctions reduces off-taker risks and enhances competition within the sector leading to lower tariffs for end-users

What

ETP provides legal support to address gaps in the implementation of the Green Energy Auction Program, specifically on the payment settlement scheme for winning bidders. ETP is also drafting the template for the "opt-in" purchase agreement to be implemented in future auction rounds. The opt-in scheme will allow distribution utilities to bid for specific quantities under the auction

Key outputs	Progress (as of 31 Dec 2023)
1 Recommendations for the payment settlement framework for winning bidders of green energy auctions	Completed. Recommendation adopted (Amendment to Department Circular No. DC2021-11-0036)
2 Power purchase agreement template for opt-in mechanism in the green energy auctions	On-going, to be completed Q2/FY24

“Energy is a key driver of the economy and there is no way for them to reach their collective aspirations unless they bring in sufficient, sustainable energy resources and of course having sustainable energy consumptions to which this particular program being developed pertains

”

Patrick T. Aquino, Director
Department of Energy, Energy Utilization Management Bureau (EUMB)
(From the closing remark of the second DSM TWG meeting)

THE PHILIPPINES

Strategic Outcome 1: Policy Alignment with Climate Commitments


Demand Side Management Policy

Implementation partner: International Institute for Energy Conservation Inc

Implementation period: Jun 2023 36% Dec 2024


Funds disbursed (as of 31 Dec 2023): 30%

Stakeholders/beneficiaries: Department of Energy - Energy Utilization Management Bureau




IMPACT

- Reduced energy consumption and increased penetration of renewable technologies for grid supply resulting in reduction of GHG emissions and displacement of fossil fuel-based power generation



OUTCOME

- Increased adoption of demand side management programs



OUTPUT

- DSM Policy
- DSM Program: Implementation Plan and Monitoring and Evaluation Framework
- DSM Toolkits
- Capacity building for Policy Makers, Distribution Utilities, and Economic Zones

Why

The Philippines government, with support from the development community, has implemented several projects on Demand Side Management (DSM), Energy Efficiency, and Renewable since the early 1990's. Eventually, the Energy Efficiency and Conservation Act was finally passed into law in 2019. However, relevant rules and guidelines for DSM is yet to be established

How

DSM strives to enhance distribution grid efficiency, flexibility, and reliability, while encouraging energy efficiency among end-users by influencing consumption patterns and reducing peak demand. A well-implemented DSM Policy with a clear framework and capacity building activities, such as the DSM Toolkit, is crucial for the sustained success of these efforts

What

The DSM Policy project is a technical assistance to the Department of Energy that aims to develop the Philippines' DSM Policy and design a DSM Program suitable for the distribution utilities and economic zones. A DSM Toolkit will be developed and corresponding capacity building will be delivered for the distribution utilities, economic zones, and policymakers

Key outputs	Progress (as of 31 Dec 2023)
1 DSM Policy and Program Options	Ongoing, to be completed by Q2/FY24
2 Six DSM Case Studies	Ongoing, to be completed by Q1/FY24
3 Capacity Building for Policy makers and Energy Planners	Ongoing, to be completed by Q1/FY24
4 DSM Implementation Plan and Monitoring and Evaluation Framework	To start in Q1/FY24
5 DSM Toolkit for Distribution Utilities and Economic Zones	To start in Q1/FY24
6 Capacity Building for Distribution Utilities and Economic Zones	To start in Q1/FY24

70

PROJECT AT A GLANCE: THE PHILIPPINES

THE PHILIPPINES

Strategic Outcome 2: De-risk Investments in Energy Efficiency and Renewable Energy

Marine Spatial Planning Tool

Implementation partner: BVG Associates

Implementation period: Sep 2023 Sep 2024

Funds disbursed (as of 31 Dec 2023): 0%

Stakeholders/beneficiaries: Department of Energy



IMPACT

Increased share of renewable energy, achieving the 50% target by 2040



OUTCOME

- Effective implementation of offshore wind projects
- Increase investments on offshore wind projects



OUTPUT

- MSP Tool
- Plan for the integration of MSP into Energy Virtual One Stop Shop (EVOSS)
- Capacity building workshops

Why

The Philippines is putting in place the first steps towards large-scale marine renewable energy by harnessing its 178 GW offshore wind energy potential. However, the absence of marine spatial planning (MSP) in the country is a significant barrier, providing risks and causing hurdles to renewable energy project developers. When an effective MSP process is finally developed, the Philippines will be able to diversify its power generation mix, attaining 50% renewables share by 2040

How

The establishment of the MSP process will be based on global best practices. It involves evaluating and collecting environmental, technical, and social data and identifying data gaps. These are collectively represented as constraints, defined as spatial factors that limit the development zone of the offshore wind farms. The MSP development will be closely coordinated with key stakeholders, engaging with government and private stakeholders to address the constraints for offshore wind projects, reducing future conflicts with other sea and ocean users. The MSP datasets will be embedded in an existing government portal to ensure that information will be updated and the operation will be sustained

What

This project will help the Philippines establish an MSP process and develop a Tool (MSP Tool), which will primarily facilitate the development of the marine renewable energy sector. These aim to reduce uncertainties and the potential conflict in subsequent renewable energy project development stages. The development of a marine spatial planning process, which sets out the steps to identify zones for development, de-risks projects, and can accelerate the development of offshore wind will expedite the development of the offshore wind industry and will be crucial for the country to meet its energy decarbonization targets and provide the country with an economically competitive form of energy

Key outputs

- Marine Spatial Planning Tool
- Plan that details the integration of the MSP into the national mapping platform
- Capacity building workshops

Progress (as of 31 Dec 2023)

- Ongoing, to be completed by Q2/FY24
- To start in Q2/FY24
- To start in Q2/FY24

THE PHILIPPINES

Strategic Outcome 2: De-risk Investments in Energy Efficiency and Renewable Energy

ESCO-in-a-box (EIAB) for Southeast Asia

Implementation partner: EnergyPro Ltd

Implementation period: Mar 2022 Oct 2023

Funds disbursed* (as of 31 Dec 2023): 83%

Stakeholders/beneficiaries: Partner ESCOs - TrySkyLink, SmartPower, and Stratcon through EP Group



IMPACT

Increased deployment of energy efficiency measures and increased energy savings



OUTCOME

Increased investments in energy efficiency projects



OUTPUT

- ESCO-in-a-box Platform for Southeast Asia
- Energy Efficiency Fund Design

Why

Energy efficiency services in Southeast Asia remain underdeveloped. In the Philippines alone, the estimated market potential is at USD 160 billion. There is an appetite to deploy energy efficiency finance across the region, but this is hampered by a lack of in-country capacity to deliver energy-saving projects that meet the needs of business customers: high quality, de-risked, competitively financed, and delivered in a convenient manner by a trusted Energy Service Company

How

Energy Service Companies and host facilities are provided with means to implement bankable energy efficiency projects. With the new Super ESCO established, energy efficiency projects will be easier and faster to be mobilized, thus increasing investments in energy efficiency and helping achieve the energy intensity reduction of the country

What

This grant project is creating the first Super ESCO in Southeast Asia using the ESCO-in-a-box® Platform developed by EP Group. The Super ESCO provides a suite of applications usable by the Energy Service Companies and will also coordinate a regional energy efficiency fund that integrates seamlessly with the ESCO-in-a-box proposition

Key outputs

- Adapt ESCO-in-a-box platform for Southeast Asia
- Award EIAB licence to in-country partner ESCO
- Develop, design, and launch Energy Efficiency Fund

Progress (as of 31 Dec 2023)

- Completed
- Completed
- Completed



An energy efficiency fund could be a catalyst in opening opportunities for ESCOs to implement projects. I think ESCO-in-a-box could help in the capacity building of all stakeholders



SmartPower Managing Director

PROJECT AT A GLANCE: THE PHILIPPINES

THE PHILIPPINES

Strategic Outcome 2: De-risk Investments in Energy Efficiency and Renewable Energy

Investment-grade Audit Financing Program

Implementation partner: Climargy Inc.

Implementation period: May 2022 Oct 2024

Funds disbursed (as of 31 Dec 2023):

Stakeholders/beneficiaries: Private sector host entities



IMPACT

Increased deployment of energy efficiency measures and increased energy savings



OUTCOME

Increased investments in energy efficiency projects and improve access to finance for energy efficiency industry players



OUTPUT

- At least 12 Investment-grade audit Reports
- Pipeline of bankable energy efficiency projects

Why

There is unwillingness and lack of capacity from both host entities and Energy Service Companies to fund for an investment-grade audit. Host entities normally refuse to pay for an expense prior to understanding what returns (energy savings) they would secure, while Energy Service Companies find it difficult to finance the Investment-grade audits (IGA) themselves given their limited capital

How

The investment-grade audits will result to bankable energy efficiency projects. With this criteria, it will be accessible for host facilities to secure financing from financial institutions for them to invest on their energy efficiency projects, which contributes to the reduction of energy intensity of the country

What

This grant project is implementing Investment-grade audits for at least 12 facilities. An investment-grade audit is a detailed analysis of a facility's energy consumption that determines the potential for energy efficiency improvements. The audit establishes the bankability of energy efficiency projects to ensure their financing and implementation

Key outputs

- At least 2 IGAs conducted
- Pipeline of bankable energy efficiency projects (10 projects)

Progress (as of 31 Dec 2023)

Ongoing, to complete a total of six IGAs by Q4/FY24
Ongoing, to be completed by Q4/FY24

THE PHILIPPINES

Strategic Outcome 3: Extending Smart Grid

Upgrading Energy Regulations for the Energy Regulatory Commission of the Philippines

Implementation partner: Ricardo AEA

Implementation period: Dec 2021 Jan 2024

Funds disbursed (as of 31 Dec 2023):

Stakeholders/beneficiaries: Energy Regulatory Commission (ERC)



IMPACT

- Increased renewable energy generation
- Increased adoption of smart grid technologies
- Reliable grids with the influx of variable renewable energy



OUTCOME

- Flexible grid
- Enhanced grid efficiency
- Clear pathways for the adoption of smart grid technologies



OUTPUT

- Revised Grid Codes incorporating renewable energy technologies and energy storage
- Revised and new regulations on grid efficiency, reliability, and smart grid technologies

Why

Existing grid codes and regulations do not effectively accommodate and manage variable renewable energy and these lack clear guidelines in the connection of energy storage systems and other smart grid technologies that are necessary for the energy transition

How

Upgrading the technical codes and regulations ensures smooth and efficient integration of variable renewable energy and maintain grid stability and reliability

What

ETP is revising the Philippines' grid code, distribution code, and small grids code to include provisions for the safe interconnection and operation of renewable energy generators. Regulations on grid efficiency are being enhanced, and guidelines for the adoption of smart grid technologies are incorporated in planning manuals of distribution utilities

Key outputs

- Revisions to the Philippines' Grid Code (presented to ERC)
- Revisions to the Philippines' Distribution Code (presented to ERC)
- Revisions to the Philippines Small Grid Guidelines (presented to ERC)
- Rules for smart grid facilities incorporated in the planning manuals of distribution utilities
- New distribution system loss caps
- Grid reliability standards

Progress (as of 31 Dec 2023)

Completed
Completed
Completed
Completed
Ongoing, to be completed by Q1/FY24
Ongoing, to be completed by Q1/FY24

PROJECT AT A GLANCE: THE PHILIPPINES

REGIONAL

Strategic Outcome 3: Extending Smart Grids

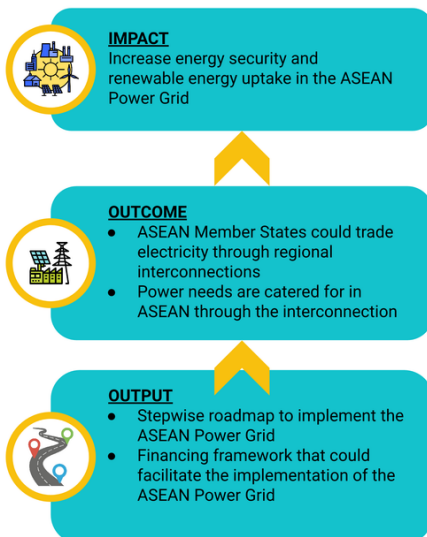
ASEAN Power Grid Advancement Program (APG-AP) Output 2 - Roadmap

Implementation partner: Delphos International

Implementation period: Nov 2023 Jun 2024

Funds disbursed (as of 31 Dec 2023): 0%

Stakeholders/beneficiaries: ASEAN Centre for Energy (ACE)



Why

The ASEAN Power Grid (APG) has been a long-standing ambition in Southeast Asia that could promote energy security while deploying renewable energy into the grids. To achieve this, a working multilateral power trade is needed by the region and the APG-AP will fill this gap by developing a stepwise roadmap with its financing framework to implement the APG

How

Through the stepwise roadmap, the APG implementation will be phased into several steps with clear actions and outputs to monitor. In addition, the financing framework will provide the available options that the APG stakeholders could leverage to advance the implementation of multilateral power trade

What

The project will develop a stepwise roadmap and its financing framework for implementing the APG with a working multilateral power trade arrangement. In doing so, the project will consult with various APG stakeholders through workshops to ensure buy-in from the ASEAN Member States

Key outputs	Progress (as of 31 Dec 2023)
1 Develop a roadmap that will foster systematic stepwise progression of the APG from the current study to implementation stage	Ongoing, to be completed by Q2/FY24
2 A Financing Framework to pursue the implementation of a multi-country energy trade in Southeast Asia	Ongoing, to be completed by Q2/FY24
3 Events in the workshop and/or seminar format to consult with stakeholders and disseminate the finding	Ongoing, to be completed by Q2/FY24
4 Policy briefs to share findings from the ASEAN Power Grid roadmap	To start in Q1/FY24

PROJECT AT A GLANCE: REGIONAL

REGIONAL

Strategic Outcome 2: De-risking investments in energy efficiency and renewable energy

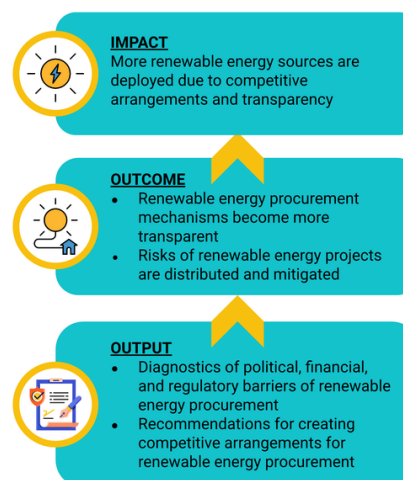
Diagnostic for Competitive Arrangements for Energy Transition (DCAT)

Implementation partner: Kuungana

Implementation period: May 2023 May 2024

Funds disbursed (as of 31 Dec 2023):

Stakeholders/beneficiaries: Indonesia - Directorate of Electricity, Ministry of Energy and Mineral Resources, Philippines - Renewable Energy Management Bureau, Department of Energy



Why

The ambition to increase renewable energy uptake comes with the needs to improve the regulatory framework that would enable competitive arrangements to take place

How

Competitive market mechanisms will increase the interest from private sector, the major resources for renewable energy deployment

What

Southeast Asian countries aim to increase the share of renewable energy in the energy mix to meet their climate ambitions. This project aims to accelerate the process by de-risking renewable energy investment through the strengthening of competitive market arrangements in Indonesia, the Philippines, and Vietnam

Key outputs	Progress (as of 31 Dec 2023)
1 Recommend Mechanisms (such as competitive procurement) that can be used to ramp up the procurement of renewable energy and the commercial terms (such as those established through PPAs) under which successful projects are subsequently contracted.	Ongoing, to be completed by Q1/FY24
2 Diagnose the legal, economic, financial, and political economic conditions that relate to exploring a greater use of competitive and transparent market mechanisms in place of the conventional and more stagnant power purchasing systems; and develop country-specific pathways, capacity building measures and templates for approval and implementation of optimal market-based competitive arrangements.	Ongoing, to be completed by Q1/FY24
3 Stakeholder consultations and workshops to introduce and consult the findings/ recommendations with relevant ministries, local government, investors, donors and developers	Ongoing, to be completed by Q2/FY24

PROJECT AT A GLANCE: REGIONAL

REGIONAL

Strategic Outcome 3: Extending Smart Grids

ASEAN Power Grid Advancement Program (APG-AP) Output 2 - Roadmap

Implementation partner: Delphos International

Implementation period: Nov 2023 Jun 2024

Funds disbursed (as of 31 Dec 2023): 0%

Stakeholders/beneficiaries: ASEAN Centre for Energy (ACE)



IMPACT

Increase energy security and renewable energy uptake in the ASEAN Power Grid



OUTCOME

- ASEAN Member States could trade electricity through regional interconnections
- Power needs are catered for in ASEAN through the interconnection



OUTPUT

- Stepwise roadmap to implement the ASEAN Power Grid
- Financing framework that could facilitate the implementation of the ASEAN Power Grid

Why

The ASEAN Power Grid (APG) has been a long-standing ambition in Southeast Asia that could promote energy security while deploying renewable energy into the grids. To achieve this, a working multilateral power trade is needed by the region and the APG-AP will fill this gap by developing a stepwise roadmap with its financing framework to implement the APG

How

Through the stepwise roadmap, the APG implementation will be phased into several steps with clear actions and outputs to monitor. In addition, the financing framework will provide the available options that the APG stakeholders could leverage to advance the implementation of multilateral power trade

What

The project will develop a stepwise roadmap and its financing framework for implementing the APG with a working multilateral power trade arrangement. In doing so, the project will consult with various APG stakeholders through workshops to ensure buy-in from the ASEAN Member States

Key outputs

		Progress (as of 31 Dec 2023)
1	Develop a roadmap that will foster systematic stepwise progression of the APG from the current study to implementation stage	Ongoing, to be completed by Q2/FY24
2	A Financing Framework to pursue the implementation of a multi-country energy trade in Southeast Asia	Ongoing, to be completed by Q2/FY24
3	Events in the workshop and/or seminar format to consult with stakeholders and disseminate the finding	Ongoing, to be completed by Q2/FY24
4	Policy briefs to share findings from the ASEAN Power Grid roadmap	To start in Q1/FY24

REGIONAL

Strategic Outcome 4: Knowledge and Awareness Building

Energy Transition Roundtable

Implementation partner: ANU (Australian National University), AMPERES

Implementation period: Dec 2021 Dec 2023

Funds disbursed* (as of 31 Dec 2023): 89%

Stakeholders/beneficiaries: Public



IMPACT

- Knowledge dissemination and sharing
- Capacity building for effective energy transition
- Thought leadership shaping the future of energy transition



OUTCOME

- Enhanced leadership driving energy transition in the region.
- Collaborative partnerships for innovative solutions.
- Informed decision-making for sustainable practices



OUTPUT

- Professional development for energy transition leaders and stakeholders in the Southeast Asia
- Access to a network of energy transition champions and stakeholders
- Online library with valuable resources related to energy transition

Why

The project aims to accelerate the energy transition in Southeast Asia by addressing critical challenges. By offering professional development, networking opportunities, and a comprehensive resource library, the projects empower participants to lead sustainable and innovative energy initiatives. The rationale is to build a strong network of informed stakeholders capable of driving impactful outcomes for a greener future

How

The projects drive lasting impact by empowering leaders through workshops and seminars, enhancing their capabilities. They foster collaboration through a networking platform, enabling participants to develop innovative solutions collectively. Moreover, the projects facilitate knowledge sharing through an online resource library, enabling informed decisions and contributing to thought leadership in Southeast Asia's energy transition domain

What

The projects involve conducting workshops and seminars to provide professional development opportunities for energy transition leaders and stakeholders in Indonesia, the Philippines, and Vietnam

Key outputs

		Progress (as of 31 Dec 2023)
1	Conduct a successful publicity campaign and bring in a significant audience to each topical session	Completed
2	Policy brief - Recommendations for energy policy and energy transition in Indonesia, the Philippines and Vietnam	Completed
3	Develop an online library and recorded and a live forum for continuing access to new concepts and technologies under testing and piloting, as well as best practices, enabling the SEA countries' energy transition leadership to continue their continuous learning	Completed

PROJECT AT A GLANCE: REGIONAL

REGIONAL

Strategic Outcome 4: Knowledge and Awareness Building

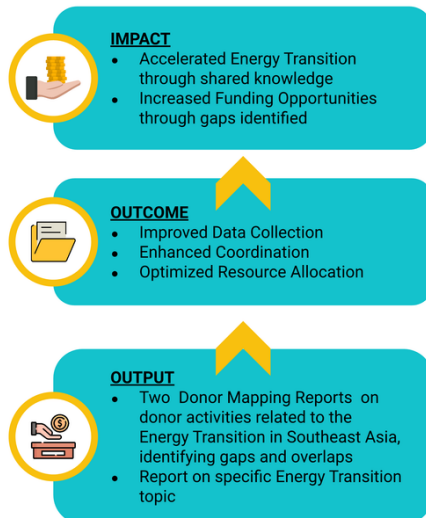
Donor Assistance Mapping on Energy Transition in Southeast Asia

Implementation partner: Asia Clean Energy Partners (ACE Partners)

Implementation period: Nov 2022 Nov 2023

Funds disbursed (as of 31 Dec 2023): 100%

Stakeholders/beneficiaries: N/A



Why

This project is crucial for meeting the Paris Climate Agreement objectives and addressing climate change challenges in Southeast Asia. The project's strategic approach fosters collaboration among stakeholders, maximizing the impact of their efforts in building a greener and more resilient future

How

Through research and collaboration, the project's knowledge sharing efforts will have a significant impact on the Energy Transition in Southeast Asia by facilitating informed decision-making and optimizing resource allocation to avoid duplication of efforts

What

The project addresses the lack of donor mapping in the energy field, which leads to duplications in efforts. Through comprehensive donor mapping reports, the project identifies gaps and overlaps in technical assistance activities related to renewable energy, energy efficiency, and sustainable infrastructure

Key outputs	Progress (as of 31 Dec 2023)
1 Develop a reporting regime for strategic analytical assessments on the donor mapping database and identify gaps and possible overlaps of issue based donor activities and prepare regularly strategic and pioneering reports on donor activity, identification of gaps and risk of overlaps	Completed
2 Continuous support to identification of donor assistance in specific subsector areas to be featured in ETP's concept notes on need basis.	Completed
3 Develop an issue-based report on specific energy transition	Completed

REGIONAL

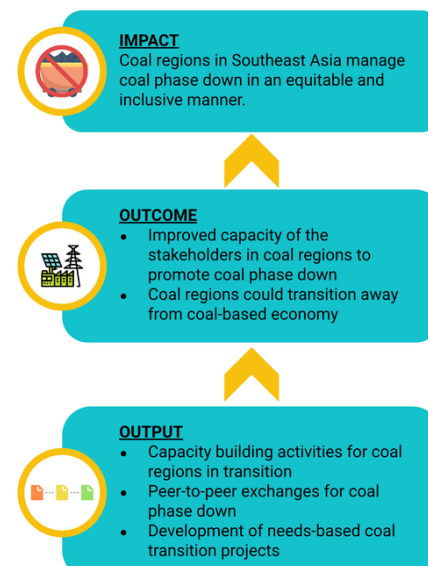
Strategic Outcome 4: Knowledge and Awareness Building

Just Coal Transition Platform Southeast Asia

A Southeast Asia energy transition partnership initiative

Level of funding: \$6,000,000

Stakeholders/beneficiaries: Coal Regions/Communities



Why

Southeast Asian countries are among the largest producers and consumers of coal, and phasing down coal is inevitable to meet their climate commitment. However, there is a lack of capacity building opportunities that could cater the needs of the stakeholders in the coal regions in Southeast Asia to transition away from coal

How

Stakeholders in coal regions will have access to information and resources needed to implement activities that will lead to coal phase down. As coal transition takes time to achieve, the establishment of coal transition platform will allow multi-stakeholder dialogues and collaborations to continue beyond the project's timeline

What

The project provides a convening platforms for stakeholders in the coal regions in Southeast Asia and partners working on just coal transition to exchange lessons and experiences and to come up with initiatives that could advance coal phase down. The initial incubation period is five years, during which the Platform will identify its permanent host

Key outputs	Progress (as of 31 Dec 2023)
1 Coal Learning Academy to build capacity of stakeholders on tailor-made transition-related issues.	To start in Q2/FY24
2 Socio-economic Data Repository containing relevant information to assess transition challenges in coal regions.	To start in Q2/FY24
2 Peer Dialogues to allow discussions on the challenges and opportunities of coal transition in the affected regions.	To start in Q3/FY24
5 Twinning Programs to foster the exchange of knowledge, experience and good practices between coal regions.	To start in Q3/FY24
6 Coordinated access to technical assistance and financing for transition projects or programs for coal regions.	To start in Q4/FY24
7 Sustainability Plan to define options for the Platform's future modalities beyond the five-year incubation period.	To start in Q4/FY24
8 Annual Forums inviting relevant stakeholders to share achievements and lessons and develop action plans.	To start in Q4/FY24



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