

Cambodia EE&C Policy and Support Measures Towards Carbon Neutrality

1. Climate Change Initiatives	
1-1. Name of the initiatives, competent ministries/agencies, and the outline of the initiatives	<p>Development of Clean Energy Transition Roadmap Towards Carbon Neutral Society' project, supported by JICA, had just been launched by Cambodia. Owing to its recent inception, specific details were not yet available. Updated NDC is the key document that set the target for Cambodia to reduce 41.7% of CO₂ by 2030. The introduction of the sub-decree 122 was enacted on 06 June 2023: aimed to reduce the Special Duty on PHEV, Truck and EV Truck. The introduction of the sub-decree 18 was enacted on 09 Feb 2021: aimed to reduce the Special Duty on EVs from 30% to 10%.</p> <p>Initiatives currently under development:</p> <ul style="list-style-type: none">- Drafting the National Transport Policy which also emphasized the importance of EV and mechanism to boost EV adoption and EV manufacturing & draft EV Policy;- Drafting Cambodia National E-mobility Roadmap & draft of EV Charging Station Permission License;
1-2. Specific contents of the climate change initiatives	<ul style="list-style-type: none">- Aim for 100% renewable energy ratio of power generation by 2025.- Cambodia is blessed with renewable energies such as hydropower, solar power, and biomass, but other than hydropower, it has not been fully utilized yet.Cambodia is expected to use hydroelectric power generation centered on the Mekong River, biomass power generation using discarded animals and plants, and solar power and wind power as renewable energy.- Projected total of 495 MW Solar PV by 2023
1-3. Laws/regulations related to climate change measures, by name and year of introduction/revision	
1-4. Climate change action targets (NDC)	<ul style="list-style-type: none">- COP26 Statement: Increasing share of clean energy, Not Developing any new coal power plants, Formulating a Long-Term Strategy for Carbon Neutrality, & Seizing opportunity for green economy (investment, funds, etc)- "Long-Term Strategy for Carbon Neutrality" was prepared in December 2021.12- In July 2021, the signing of a Memorandum of Understanding with Chinese and Russian partners to build a nuclear power plant was announced. However, the Kingdom is still working on a nuclear law, which is expected to be finalized by 2023. <p>[Goals toward carbon neutral]</p> <ul style="list-style-type: none">-GHG emissions reduction by 27% by 2030 (BAU)(Reported to be 40% at R5 post meeting); contribution to LULUCF is 4.7 tCO₂e/ha/year.-In the energy sector, reduce emissions by 16% by 2030 / 1.8MtCO₂eq emissions reduction (BAU basis).- In the industrial sector, 7% emission reduction by 2030 (manufacturing only) / 0.390MtCO₂eq emission reduction (BAU basis)- In the transportation sector, 3% reduction in emissions by 2030/ 0.727MtCO₂eq reduction in emissions (BAU basis)- Increase forest cover to 60% of the land area and maintain that level beyond 2030. This would be 4.7 tCO₂e / ha / year with LULUCF's contribution.- By 2029, 2 million hectares of community forestry, a total of 120,000 km of forest borders, 500,000 hectares of high-value commercial plantations will be established, and 10 million seedlings will be distributed annually (based on 2010 levels). <p>[Guideline for achieving the target]</p> <ol style="list-style-type: none">1. Do not install new coal power generation facilities beyond those already committed to projects.2. Use natural gas as a distributed transition fuel.3. Invest in liquefied natural gas (LNG) imports, storage, and infrastructure.4. Increase solar, hydro, biomass, and other renewable energy sources to 35% of the power generation mix by 2050, 12% of which will be solar.5. Investment in power grid modernization, flexibility, and storage. Energy efficiency measures in buildings and industry.6. Conversion of cooking fuels to electricity.7. Substitution of coal in the industrial and power sector. <p>Long-Term Strategy for Carbon Neutrality is the guiding document that aim to introduce 70% of electric motorcycles, 40% of electric cars and urban buses in Cambodia vehicle fleet by 2050.</p>
1-5. Budgetary measures for climate change initiatives	
2. Measures toward Carbon-Neutral	
2-1. Carbon tax initiatives	N/A
2-2. Carbon credit and carbon trading initiatives	N/A
2-3. Trend of new technologies for climate change measures	
2-3-1. Hydrogen	Low-carbon energy alternatives to uncommitted projects will be evaluated and considered in the future, including emerging technologies such as Carbon Capture Utilization and Storage (CCUS) and hydrogen
2-3-2. Fuel ammonia	NA
2-3-3. CCUS	Low-carbon energy alternatives to uncommitted projects will be evaluated and considered in the future, including emerging technologies such as Carbon Capture Utilization and Storage (CCUS) and hydrogen
2-3-4. Biofuel	NA
2-3-5. Renewable Energy	<ol style="list-style-type: none">1. Leveraging hydropower with the utilisation of pumped-hydro storage (PHS) are highlighted as the focus of RE development,2. As part of the effort to increase RE by 71% (compared to 60% currently) of installed power capacity by 2030, the government provide subsidies for the land of solar power projects, highlighting the country's focus on maintaining the affordability,
2-3-6. Nuclear power	NA
2-3-7. Storage battery	In case the deployment of small single lines coupled with solar power and BESS turn out to be cost-inefficient, other approaches will be considered in order to provide a temporary step-up in affordability and quality of electricity access to those remaining villages, including Solar Home Systems (SHS) and solar-powered battery charging stations at the village level.
2-3-8. Initiatives for Smart City	

	<p>The ASEAN Smart Cities Network (ASCN) was established at the 32nd ASEAN Summit in 2018. ASCN is a collaborative platform working toward the common goal of smart and sustainable urban development, with 26 cities from 10 ASEAN member countries participating as pilot cities. In Cambodia, Phnom Penh, Siem Reap, and Batambang are participating. The following is an overview of the action plans for Phnom Penh and Siem Reap.</p> <p>Phnom Penh</p> <p>Vision: To improve the urban environment and the quality of life of citizens.</p> <p>Areas of focus: infrastructure construction, design of public spaces, improvement of public spaces and public transportation.</p> <p>Strategic Goals: Improve pedestrian space, redesign public spaces, improve efficiency of public bus service</p> <p>City Project 1: Phnom Penh aims to increase pedestrian traffic through the activation, restoration, and diversion of sidewalks on 11 major streets. This project is expected to bring about an end to traffic congestion.</p> <p>The project has the advantage of managing unlicensed street vendors and illegal parking, thereby making better use of public space.</p> <p>2. Siem Reap</p> <p>Vision: Siem Reap as a beautiful, unique and ideal tourist destination characterized by the harmony of Khmer history, art and nature.</p> <p>•Priority areas: "culture, heritage and tourists", personal safety and security, clean environment and resource management.</p> <p>Strategic Goals: "Link waste management and security data for drainage, pedestrian and vehicular traffic," develop smart waste management methods, install CCTV at major tourist and traffic spots, install drainage/flood control sensors</p> <p>City Project 1: Installation of enhanced security systems such as CCTV and traffic sensors.</p> <p>City Project 2: Develop infrastructure for solid waste and wastewater management.</p>
	2-3-9. Initiatives for Smart Grid
	There is a feasibility study of a smart grid in the suburbs of Phnom Penh, but organized efforts are in the works.
	2-3-10. Initiatives for demand response
	DR programmes are not available
	2-3-11. Others
	2-4. Key Points to Promote and Support Climate Change Measures
	<p>The carbon neutrality roadmap is currently under development, which includes the plan to stop the new coal power plants and convert to LNG by 2030 (around 100 MW).</p> <p>As announced by Samdech Akka Moha Sena Padei Techo Hun Sen, Prime Minister of the Kingdom of Cambodia, during the 2020 United Nations Climate Ambition Summit, this “Long-Term Strategy for Carbon Neutrality (LTS4CN)” is yet another testament to our consistent, strong commitment and political will to address climate change.</p>
	3. Energy Conservation initiatives
	3-1. Name and outline of energy policies, and ministries/agencies in charge of the policies.
	<p>Priority 5 areas</p> <p>1) Energy saving in the industrial field 2) End user products 3) Energy saving of buildings 4) Energy saving of shipping electricity in rural areas 5) Efficient use of biomass resources for housing and industry</p> <p>Energy Transition Sector Development Programme, focusing on three major reform programmes including: (1). Energy planning and institutional strengthening, (2). Acceleration of circular economic transition and low carbon emissions; and (3). Transparency and competitiveness for investments in new energy projects</p>
	3-2. Name and outline of energy efficiency and conservation(EC) policies, and ministries/agencies in charge of the policies.
	<p>A.National Policy, Strategy and Action Plan on Energy Efficiency in Cambodia</p> <p>1) Already created</p> <p>(i) Rectangular Strategy-Phase 4</p> <p>(ii) National Strategic Development Plan (NSDP) 2019-2023</p> <p>(iii) Updated NDC</p> <p>(iv) Long-Term Strategy for Carbon Neutrality</p> <p>2) Those in the final stages of government approval</p> <p>(i) National Energy Efficiency and conservation Policy (NEEP)2022-2030</p> <p>(ii) Sub-decree on EE in appliances</p> <p>(iii) Resource Efficiency and Cleaner Production Strategy and Action plan</p> <p>B. EC strategy plan to reduction of the CO2 emission in 2035 by 23% or 3 million tons of CO2</p>
	3-3. Specific contents of EC policies
	<p>1. Workshops on energy conservation in building and energy management</p> <p>2. Training on Energy Audit in industry and building</p> <p>3. To continue to develop on Energy Efficiency Standard & Labeling for electrical appliances,</p> <p>4. Demand Side EE Market Assessment Study</p> <p>5. Under development for Transport in the NEEP draft: EV and EVCS promotion and usage</p> <p>Key programs implemented in 2022-2023 as part of Cambodia's energy efficiency policy supported by the European Union, United Nations Development Programme, Asian Development Bank, World Bank, Japan International Cooperation Agency include: (i) piloting energy efficiency and solar microgrids, (ii) development of a clean energy transition roadmap towards, (iii) launch of an e-mobility roadmap.</p> <p>Other initiatives in progress includes: (i) Production of an energy efficiency promotion video for Cambodia, (ii) Launching the 2nd edition of the Cambodia Energy Efficiency Competition, and (iii) Finalising the sub-decree on management and promotion of electrical appliance energy efficiency.</p> <p>MME has selected two priority action plans for the start of implementing EE Work including: establishment of sub-decree on the management and improvement of energy efficiency of electrical appliances (Approved on 11th August 2023); and development of energy management programs for commercial and industrial buildings in collaboration with relevant development partners (Under Development).</p>
	3-4. Name and year of introduction/revision of laws/regulations related to EC measures
	<p>In progress</p> <p>Under arrangement to review of National Policy, Strategy and Action Plan on Energy Efficiency</p> <p>Cambodia's National Energy Efficiency Policy (NEEP) for 2022-2030 aims to reduce total energy consumption by at least 19% by the year 2030 compared to a Business-as Usual (BAU) scenario. The policy encompasses a range of areas, including appliance energy efficiency, energy use in buildings and industries, energy-efficient building design, promotion of electric vehicles, fuel efficiency, and streetlighting. The legal framework for this policy includes a sub-decree on the management and promotion of electrical appliance energy efficiency, and provisions covering areas such as responsible institutions, registration procedure and energy efficiency labelling of designated electrical appliances, inspection, verification, and enforcement, and penalties.</p> <p>NEEP Activities under development:</p> <ul style="list-style-type: none"> - Preparing Sub-decree on “Establishment of National Committee on Energy Efficiency”; - Establish the energy consumption level of industries and buildings that consume more energy than the level set by the Ministry to consider this consumer as a “Designated Energy Consumers”; - Develop guidelines on “Energy Performance Standards” for operation and for key power consumption equipment; - Prepare procedures for issuing energy management certificates or energy audits; - Monitor and improve energy management systems in compliance with universally recognized energy management standards; - Establish a mechanism for Designated Energy Consumers to report their energy consumption data.
	3-5. EC goals
	<p>Cambodia's National Energy Efficiency Policy for 2022-2030 aims to reduce total energy consumption by at least 19% by the year 2030 compared to a Business-as-Usual (BAU) scenario.</p> <p>Energy saving target by 2030</p> <p>Residential sector Energy consumption rate: 20%, energy efficiency target: 34% reduction</p> <p>Building sector Energy consumption rate: 9.5%, energy efficiency target: 25% reduction</p> <p>Industrial sector Energy consumption rate: 42.95%, energy efficiency target: 20% reduction</p> <p>Transportation Energy consumption rate: 27.5%, energy efficiency target: 5% reduction</p> <p>Public sector Energy consumption rate: 0.05%, energy efficiency target: 29% reduction</p>

3-6. Green (EC) building Code	
	Ministry of Mines and Energy (MME) will lead the development of the Building Energy Code, in collaboration with Ministry of Land Management, Urban Planning and Construction (MLMUPC) and through inputs received using a multi-stakeholder approach.
3-7. Display system for EC performance of the building	
	non
3-8. Items based on EC Law	
3-8-1. Designation criteria of designated business operator	
	(draft) Type 1 Factory: <20,000,000 kwh/y Type 2 Factory: 20,000,000 < x > 10,000,000 kwh/y Type 1 Building: <8,000,000 kwh/y Type 2 Building: 8,000,000 < x > 4,000,000 kwh/y
3-8-2. Number of designated business operators	
	200
3-8-3. Obligations which designated business operator shall comply with	
	Under Development
3-8-4. Contents of energy management system	
	Key outcomes of programs implemented in 2022-2023 include: (i) Drafts for building energy management and energy efficiency procurement guidelines, (ii) Strengthening of energy planning and governance, acceleration of low carbon and circular economy transition, and creation of transparent and competitive investment environment for new energy solutions. Cambodia intends to establish the EMS program once the sub-decree on energy efficiency and conservation is approved by the government. Cambodia is currently in the process of seeking this approval.
3-8-5. Contents of energy manager system	
	Preparing an energy management pilot project for government buildings
3-8-6. Contents of the periodic report system	
	Under Development
3-8-7. Energy saving regulation for equipment “MEPS”: “Name of applicable equipment” and classification of “mandatory/voluntary”	
	EE Standard and Labeling Sub-Decree (Prakas on Energy Efficiency Label for Designated Appliances) under development. Will cover various household appliances and cookstoves, building and industrial equipment and regulations to enforce MEPS. Currently considering the model provided by ECCJ under Scheme 3, along with the recommendations from the CSPF project, for the upcoming air conditioner MEPS. Transport: (Under Development) One of the Action Plans under the draft NEEP transport sector is for Cambodia to enact regulations to introduce fuel efficiency standards for Internal Combustion Engine vehicles in road transport.
3-8-8. Energy-saving “labeling” system: “Name of applicable equipment” and classification of “mandatory/voluntary”	
	EE Standard and Labeling Sub-Decree for Electrical Appliances and Equipment under development. Will cover various appliances and will start with Air Conditioner
3-8-9. MEPS, labeling: Name of “certification body”	
	(draft) General Department of Energy, Ministry of Mines and Energy
3-8-10. MEPS, labeling: Is there “performance evaluation agency” and if so, its name?	
	(draft) The qualified testing laboratory must be accredited by a Conformity Assessment Body that is recognized by Department of Accreditation (DA) of the Cambodian Accreditation National Council (CANC) or through the recognition mechanism of the Asia Pacific Accreditation Cooperation (APAC)
3-8-11. Status to create restrictions by "benchmarks".	
	non
3-8-12. Status to create "EC guideline" and "EC manual".	
	non
3-9. EC propelling measures	
3-9-1. Financial support(Subsidies, Tax incentives,Low-interest loan, Funds)	
	1)Subsidies : Under Development under the Draft NEEP 2)Tax incentives : Under Development under the Draft NEEP 3)Low-interest loan : Under Development under the Draft NEEP 4)Funds : EUFI-DPF
3-9-2. Supports for energy audit	
	Yes, Business operators such as public buildings, hotels at the short-term strategy.
3-9-3. EC award system	
	ASEAN Energy Awards on EE&C: 1) Le Royal Hotel (Retrofitted), year 2001, No.10 2) Angkor Century Hotel (New and Existing), 2003. No.7 3) The Sothea Hotel (New and Existing), 2011. No.6
3-9-4. EC training center. And the name and activities if any.	
	Under Development under the Draft NEEP: Training Program Implementation with Certification for Energy Auditors
3-9-5. ESCO Business Support	
3-9-6. Supports for R&D	
	EUFI-DPF
3-10. ESCO business deployment	
	Under Development under the Draft NEEP: Establishment of a system for the empanelment and rating of ESCOs
3-11. Subsidy for fuel	
	non
3-12. Subsidy for electricity bills	
	\$150 million USD in 2023
3-13. Name of the government organization which controls energy conservation matters	
	Ministry of Mines and Energy, formulates and implements National Policy, Strategy and Action Plan on Energy Efficiency relating to supply, development and management of energy resources.
3-14. Name of the EC promotion organization (private organization such as ECCJ)	
	1. Ministry of Information , 2. Ministry of Land Management, Urban Planning & Construction, 3. Ministry of Mines and Energy
3-15. Cooperation related to energy conservation by Japan	
	1.METI/ECCJ: Dispatch of experts, Acceptance of trainees 2.Multilateral cooperation: Japan-AMS (ASEAN Member States) cooperation 3.PROMEEC (EC for business building 2001-2011) 4. AJEEP Scheme-2,3 (2010 -) 5. AJEEP Scheme-4,5 (2022 -)
3-16. Cooperation related to energy conservation by foreign countries except Japan	
	AMS(ASEAN Member States) and EUEI PDF, UNIDO, European Comission, IFC, ADB, UNDP Energy Efficiency, GGGI Green mobility, WB Clean Cookstove, EU Switch Asia Promotion of Sustainable Energy Practices in Garment Sector
3-17. Achievements of Joint Crediting Mechanism (JCM)	
	- As a JCM equipment subsidy project, the 2019 Biomass / Solar Hybrid Power Generation Project (WWB Co., Ltd.) and the introduction of 1.1 MW solar power generation system to international schools (Asia Gateway Co., Ltd.) were implemented. -None in FY2020, 2021, and 2022.