

Submitted the INDC in 2015

Contribution to the GHG emission mitigation

Sector	Economy-wide (Energy, Transport, Community Waste Management, Industrial Process and Product Use Including Industrial Wastewater)
Period	from 2012 to 2030
BAU Scenario	To reduce GHG emissions by 20% compared to BAU in 2005 (555 MtCO <sub>2</sub> e)
Unconditional Contribution	To reduce GHG emissions by 20% compared to BAU
Conditional Contribution	To reduce GHG emissions by 25% compared to BAU

References:

- Office of Natural Resources and Environmental Policy and Planning, 2015, "Thailand's Intended Nationally Determined Contribution"
- Ministry of Energy, 2011, "Thailand 20-Year Energy Efficiency Development Plan (2011-2030)"
- Energy Policy and Planning Office, Ministry of Energy, 2015, "Thailand Power Development Plan 2015-2036 (PDP2015)"
- Office of Natural Resources and Environmental Policy and Planning, 2017, "Second Biennial Update Report of Thailand"
- Department of Renewable Energy development and Energy Efficiency, 2015, "Alternative Energy Development Plan: AEDP2015"
- The Renewable and Alternative Energy Development Plan for 25 Percent in 10 Year (AEDP 2012-2021)
- National Greenhouse Gas Mitigation in Energy Sector Action Plan A. D. 2021-2030 (Tentative translation)
- NDC in Transportation Sector Action Plan A. D. 2021-2030 (Tentative translation)
- NDC in Waste Management Sector Action Plan A. D. 2021-2030 (Tentative translation)
- NDC in Industrial Process and Waste Water Sector Action Plan A. D. 2021-2030 (Tentative translation)

Sector	NDC(tCO <sub>2</sub> e)	Other Mitigation Actions(tCO <sub>2</sub> e)	Representative JCM Projects (registered projects and financed projects)	Representative JCM Projects in other countries (registered projects and financed projects)	Relevant Law and Policy	Relevant Ministry	Others (expected improvement policy/ representative Thai/andese association)
<b>Power Generation Infrastructures</b>							
<b>Renewable energy: PV, Wind, Hydro, Biomass and others</b>							
Solar PV	<NDC: Energy Sector> Strategy 1.2: To coordinate the policies and plans with the relevant sectors to drive greenhouse gas mitigation through renewable energy development Plan 1.2.2 Solar energy development: To reduce GHG emissions 4.93 MtCO <sub>2</sub> by 2030	<Alternative Energy Development Plan: AEDP2015> Strategy2: Increasing renewable energy production, utilization and market potential Tactic2.1 Support people and a community to participate in the production an utilization of Renewable Energy Strategy3: Create awareness and access to knowledge and facts of renewable energy Tactic3.1 Develop renewable energy databases and information management systems Tactic3.2 Publicize information, knowledge and stactical data on renewable energy Tactic3.3 Capacity building both in theory and practice to make more ability in utilization of renewable energy Tactic3.4 Development of renewable energy and its related networks and encourage the participation of the whole network both nationally and international level	Introduction of Solar PV System on Factory Rooftop (Expected GHG Emission Reductions: 776tCO <sub>2</sub> /year) Introduction of 0.8MW solar Power System and High Efficiency Refrigerator to Food Factory (Expected GHG Emission Reductions: 349tCO <sub>2</sub> /year) Introduction of 3.4 MW rooftop Solar Power System in Technical Center and Office Buildings (Expected GHG Emission Reductions: 1,617tCO <sub>2</sub> /year) 25 MW Rooftop and Floating solar Power Project in Industrial Park (Expected GHG Emission Reductions: 10,625tCO <sub>2</sub> /year) Introduction of 27 MW Rooftop Solar Power System to Large Supermarkets (Expected GHG Emission Reductions: 13,293tCO <sub>2</sub> /year) Introduction of 5MW Floating Solar Power system on Industrial Water Reservoir (Expected GHG Emission Reductions: 2,706tCO <sub>2</sub> /year) Introduction of 2MW Rooftop Solar Power System for Power Supply in Factory (Expected GHG Emission Reductions: 1,533tCO <sub>2</sub> /year) Introduction of 3.4 MW Rooftop Solar Power System to Air-conditioning parts Factories (Expected GHG Emission Reductions: 1,963tCO <sub>2</sub> /year)	Introduction of Solar PV System at Shopping Mall in Ho Chi Minh, Viet Nam Introduction of 0.5MW solar Power system to Aroma and Food Ingredients Factory, Indonesia 1.6MW Solar PV Power Plant Project in Jakabaring Sport City, Indonesia Introduction of 20 MW Solar Power System in Darkhan City, Mongolia Installation of 2.1 MW solar power Plant for Power Supply in Ulaanbaatar Suburb, Mongolia Introduction of Ultra-lightweight Solar Panels for Power Generation at International School, Cambodia Upscaling Renewable Energy Sector Project (JFJCM): Mongolia and others	Energy Conservation Promotion Act (2007) AEDP (2015-2036) PDP (2015) EEDP (2015) FIT (2013) Net-Metering Scheme (NMS) (2015)	DEDE	Power generation capacity 3,016 MW in 2016 (World Bank/Bloomberg) Rooftop 6.01-6.85 BHT/kwh Community type 5.66BHT/kwh
Solar PV and Storage Battery		<AEDP2015> Strategy2: Increasing renewable energy production, utilization and market potential Tactic2.1 Support people and a community to participate in the production an utilization of Renewable Energy Strategy3: Create awareness and access to knowledge and facts of renewable energy Tactic3.1 Develop renewable energy databases and information management systems Tactic3.2 Publicize information, knowledge and stactical data on renewable energy Tactic3.3 Capacity building both in theory and practice to make more ability in utilization of renewable energy Tactic3.4 Development of renewable energy and its related networks and encourage the participation of the whole network both nationally and international level		Installation of Solar Power System and Storage Battery to Commercial Facility, Indonesia Smart Micro-Grid system for Preparing Outer Islands for Sustainable Energy Development Project in Aduu atoll, Maldives			
Wind Power	<NDC: Energy Sector> Strategy 1.2: To coordinate the policies and plans with the relevant sectors to drive greenhouse gas mitigation through renewable energy development Plan 1.2.1 Wind energy development: To reduce GHG emissions 1.11 MtCO <sub>2</sub> by 2030	<AEDP2015> Strategy2: Increasing renewable energy production, utilization and market potential Tactics2.1 Support people and a community to participate in the production an utilization of Renewable Energy Strategy3: Create awareness and access to knowledge and facts of renewable energy Tactics3.1 Develop renewable energy databases and information management systems Tactics3.2 Publicize information, knowledge and stactical data on renewable energy Tactics3.3 Capacity building both in theory and practice to make more ability in utilization of renewable energy Tactics3.4 Development of renewable energy and its related networks and encourage the participation of the whole network both nationally and international level		Los Altos II Wind Farm Project, Mexico	Energy Conservation Promotion Act (2007) AEDP (2015-2036) PDP (2015) EEDP (2015) FIT (2014)	DEDE	
Hydro Power	<NDC: Energy Sector> Strategy 1.2: To coordinate the policies and plans with the relevant sectors to drive greenhouse gas mitigation through renewable energy development Plan 1.2.3 Hydro energy development: To reduce GHG emissions 3.19 MtCO <sub>2</sub> by 2030	<AEDP2015> Strategy2: Increasing renewable energy production, utilization and market potential Tactic2.1 Support people and a community to participate in the production an utilization of Renewable Energy Strategy3: Create awareness and access to knowledge and facts of renewable energy Tactic3.1 Develop renewable energy databases and information management systems Tactic3.2 Publicize information, knowledge and stactical data on renewable energy Tactic3.3 Capacity building both in theory and practice to make more ability in utilization of renewable energy Tactic3.4 Development of renewable energy and its related networks and encourage the participation of the whole network both nationally and international level		Rehabilitation Project of Power Generation System at Karai 7 Mini Power Plant, Indonesia 10 MW Mini Hydro Power Plant Project in Lae Ordi River in North Sumatera, Indonesia 10 MW Mini Hydro Power Plant Project in North Sumatra, Indonesia 4 MW Mini Hydro Power Plant Project in Tagubo River in Mindanao, Philippines 15 MW Mini Hydro Power Plant Project in Siguil River in Mindanao, Philippines 0.16 MW Micro hydro Power System in Tagubo Water Supply Facility, Mindanao, Philippines	Energy Conservation Promotion Act (2007) AEDP (2015-2036) PDP (2015) EEDP (2015) FIT (2014)	DEDE	
Biomass Power	<NDC: Energy Sector> Strategy 1.2: To coordinate the policies and plans with the relevant sectors to drive greenhouse gas mitigation through renewable energy development Plan 1.2.4 Biomass-to-energy development: To reduce GHG emissions 64.94 MtCO <sub>2</sub> by 2030	<AEDP2015> Strategy1: preparation of raw materials and renewable energy technologies Tactic1.1 Development of alternative raw materials and potential areas for renewable energy production Strategy2: Increasing renewable energy production, utilization and market potential Tactic2.1 Support people and a community to participate in the production an utilization of Renewable Energy Strategy3: Create awareness and access to knowledge and facts of renewable energy Tactic3.1 Develop renewable energy databases and information management systems Tactic3.2 Publicize information, knowledge and stactical data on renewable energy Tactic3.3 Capacity building both in theory and practice to make more ability in utilization of renewable energy Tactic3.4 Development of renewable energy and its related networks and encourage the participation of the whole network both nationally and international level	Introduction of Biomass Boiler to Cooking Oil Factory (Expected GHG Emission Reductions: 29,759tCO <sub>2</sub> /year) Introduction of Biomass Co-Generation System to Food Factory (Expected GHG Emission Reductions: 7,111tCO <sub>2</sub> /year)	12 MW Biomass Power Plant Project in Aceh Province, Sumatera, Indonesia Introduction of Biomass CHP Plant in Flooring Factory, Ethiopia	Energy Conservation Promotion Act (2007) AEDP (2015-2036) PDP (2015) EEDP (2015) FIT (2014)	DEDE	

Biogas Power	<NDC: Energy Sector> Strategy 1.2: To coordinate the policies and plans with the relevant sectors to drive greenhouse gas mitigation through renewable energy development Plan 1.2.5 Biogas-to-energy development: To reduce GHG emissions 3.79 MtCO2 by 2030	<AEDP2015> Strategy2: Increasing renewable energy production, utilization and market potential Tactic2.1 Support people and a community to participate in the production an utilization of Renewable Energy  Strategy3: Create awareness and access to knowledge and facts of renewable energy Tactic3.1 Develop renewable energy databases and information management systems Tactic3.2 Publicize information, knowledge and statical data on renewable energy Tactic3.3 Capacity building both in theory and practice to make more ability in utilization of renewable energy Tactic3.4 Development of renewable energy and its related networks and encourage the participation of the whole network both nationally and international level		Introduction of Biogas boiler and Waste Heat Recovery System to Beer Factory: Myanmar	Energy Conservation Promotion Act (2007) AEDP (2015-2036) PDP (2015) EEDP (2015) FIT (2014)	DEDE		
Transmission		<AEDP2015> Strategy1: Preparation of raw materials and renewable energy technologies Tactic1.4 Improve infrastructure to support the production of renewable energy appropriately		Project for a High Efficiency and Low Loss power transmission and Distribution system: Mongolia Introduction of High Efficiency Transmission Line in south-West area (between Barisal and Gopalganj)(JFJCM): Bangladesh	Thailand smart Grid Development Master Plan (2015-2036)	DEDE	EGAT Provincial Electricity Authority (PEA)	
Transformer				Introduction of Amorphous High Efficiency Transformers in Southern Power Distribution Systems: Viet Nam Introduction of Amorphous High Efficiency Transformers in Southern and Central Power Grids: Viet Nam				
Hydrogen System							Japanese case: Hydrogen town in Kita-kyusyu city Hydrogen Strategy in Kawasaki city	
CCS								
Urban Infrastructures								
Waste Power	<NDC: Energy Sector> Strategy 1.2: To coordinate the policies and plans with the relevant sectors to drive greenhouse gas mitigation through renewable energy development Plan 1.2.6 Waste-to-energy development: To reduce GHG emissions 1.63MtCO2 by 2030	<AEDP2015> Strategy1: Preparation of raw materials and renewable energy technologies Tactic1.1 Development of alternative raw materials and potential areas for renewable energy production Tactic1.4 Improve infrastructure to support the production of renewable energy appropriately  Strategy2: Increasing renewable energy production, utilization and market potential Tactic2.3 Promote the reducing of production costs and make renewable energy market more performance		Introduction of Waste to Energy Plant in Yangon City: Myanmar	Energy Conservation Promotion Act (2007) AEDP (2015-2036) PDP (2015) EEDP (2015) FIT (2014)	DEDE	Formulate the environmental standards of waste power Improve profitability by raising treatment cost	
	<NDC Waste Management Sector> Measure1: Greenhouse Gas Mitigation 3. Incinerating solid waste to generate electricity (Waste to Energy): To reduce GHG emissions 465kt-CO2eq				National Solid Waste Management Master Plan (2016-2021) Environmental Quality Management Plan (2017-2021) 20-Year Pollution Management Strategy, Pollution Management Plan (2017-2021) Waste Management Roadmap	DLA DEDE LAO Public Sector	Implement appropriate risk by public sector on implementing BOT and BOO	
Energy Saving Water Supply and WasteTreatment Site		<AEDP2015> Strategy1: Preparation of raw materials and renewable energy technologies Tactic1.4 Improve infrastructure to support the production of renewable energy appropriately		Introduction of High Efficiency Water Pumps in Da Nang City: Viet Nam Energy Saving by Introduction of Inverters for Raw Water Intake Pumps: Viet Nam Energy Saving Wastewater Treatment Plant in Battambang: Cambodia (JFJCM)	Waste Management Roadmap	DEDE	Environmental consideration and spec-in on public procurement	
Energy Management LED Street Lighting Communication and Data Center				Energy Saving for Industrial Park with Smart LED Street Lighting System: Indonesia				
Smart-City, IoT and AI Technology							Japanese Case: BEMS, CEMS, HEMS in Minato-Mirai, Yokohama city	
Solid Waste Recycle	<NDC Waste Management Sector> Measure1: Greenhouse Gas Mitigation							
	1. Reduction of solid waste before going to the disposal sites: To reduce GHG emissions 404kt-CO2eq				National Solid Waste Management Master Plan (2016-2021) Environmental Quality Management Plan (2017-2021) 20-Year Pollution Management Strategy, Pollution Management Plan (2017-2021)	PCD DIW DOH TGO		
	<NDC Waste Management Sector> Measure2: Encouraging Greenhouse Gas Mitigation							
	1. Reduce solid waste and increase management efficiency 1.1.1 Reduce plastic and styrofoam food containers in government places (Plastic waste decreases: -20% by 2021, -30% by 2030 Styrofoam decreases: -100% by 2021)						all government agencies OPDC	
	1. Reduce solid waste and increase management efficiency 1.1.2 Reduce plastic and styrofoam food containers in tourist olaces, including national park/ geological parks and zoos (Plastic waste decreases: -5% by 2021, -10% by 2025, -20% by 2030 Styrofoam decreases: -100% by 2021)						DNP DNR	
	1. Reduce solid waste and increase management efficiency 1.1.3 Reduce plastic and styrofoam food containers in fresh markets (Plastic waste decreases: -10% by 2021, -20% by 2030 Styrofoam decreases: -50% by 2021, -100% by 2025)						BMA	
	1. Reduce solid waste and increase management efficiency 1.1.4 Reduce plastic and styrofoam food containers in schools, religious places and residences (Plastic waste decreases: -2.5% by 2025, -5% by 2030)						BMA	
	1. Reduce solid waste and increase management efficiency 1.1.5 Reduce plastic and styrofoam food containers in private sector					National Solid Waste Management Master Plan (2016-2021) Environmental Quality Management Plan (2017-2021) 20-Year Pollution Management Strategy, Pollution Management Plan (2017-2021) Waste Management Roadmap	FTI	
	1. Reduce solid waste and increase management efficiency 1.1.6 Develop a database system for plastics (Data on plastic use is available on a yearly basis)						Plastics Institute of Thailand PCD	
	1. Reduce solid waste and increase management efficiency 1.2.1 Reduce food rubbish from markets, department stores, and hotels (Food rubbish decreases: -25% by 2025, -50% by 2030)						DLA BMA OBEC OHEC OPEC	
	1. Reduce solid waste and increase management efficiency 1.2.2 Promotion campaign on reducing organic waste in foodshops, canteens, and residences						BMA	
	1. Reduce solid waste and increase management efficiency 1.3.1 Promote and encourage the design and use of products and containers for the environment (D/E) to enable easy reuse and recycling, reduce hazardous materials, reduce including hazardous substances in products						BMA	
	2. Increase the reuse of solid waste 2.1.1 Separate solid waste at government agencies						Governmental agencies	
2. Increase the reuse of solid waste 2.1.2 Separate solid waste in schools, religious places, markets, private business places, and residences						BMA OBEC OHEC DEQP		
2. Increase the reuse of solid waste 2.1.3 Develop a solid waste separation method for the recycled data collection system						PCD Plastics Institute		

Transport Infrastructures							
Public Transport Fuel conversion and Electric Vehicles	<p>&lt;NDC Transport Sector&gt;  Plan1.2.2.2 Develop the mechanism to promote transport mode shifting (Project1.2.2.2-1 Improve the public hybrid bus service in town and out of town)</p> <p>Plan 1.1.3.2 Improve the efficiency of public service city buses (Project1.1.3.2-1 Procure 35 electric buses and construct electric charging stations  Project1.1.3.2-2 Procure 1,453 hybrid buses  Project 1.1.3.2-3 Rent 400 (7years) hybrid buses)</p> <p>Plan 1.2.3.2 Improve the efficiency of public city buses (Project1.2.3.2-1 Replace the air-conditioning system in public vans with 4,626 electric mini-buses (affiliated buses)  Project 1.2.3.2-2 Encourage bus, taxi and minibus services to use hybrid systems in Bangkok and its vicinity and 6 provincial cities, including Chiang Mai, Khon Kaen, Phitsanulok, Phuket, Nakorn Ratchasima and Songkhla  Project1.2.3.2-3 Replace delivery motorcycles with electric motorcycles in Bangkok and its vicinity and 6 provincial cities, including Chiang Mai, Khon Kaen, Phitsanulok, Phuket, Nakorn Ratchasima and Songkhla)</p>	<p>&lt;AEDP2015&gt;  Strategy1: Preparation of raw materials and renewable energy technologies  Tactic1.2 Development of the high efficient renewable raw materials management and utilization model  Tactic1.4 Improve infrastructure to support the production of renewable energy appropriately</p> <p>Strategy2: Increasing renewable energy production, utilization and market potential  Tactic2.4 Develop the renewable energy law and rules to encourage the development of renewable energy appropriately</p> <p>&lt;20-Year Energy Efficiency Development Plan (2011-2030): EEDP&gt;  (2)Strategic Approach: Energy Conservation Promotion and Support  2.2 Transport Sector: Support the development of infrastructure contributing to traveling and goods transportation with high energy efficiency transport system, e.g. construction of the bus rapid transit (BRT) system, double-track railway, etc  2.2 Transport Sector: Exercise Travel Demand Management (TDM) concurrently with promotion of the use of public transport system to reduce travel demand and traveling by private vehicles, e.g. road-pricing</p> <p>(3)Strategic Approach: Public Awareness (PA) Creation and Behavioral Change  3.3 Transport Sector: Planning and improvement of land use in support of traveling via public transport systems and non-motorized transport (NMT)</p> <p>(4)Strategic Approach: Promotion of Technology Development and Innovation  4.1 Promote R&amp;D on highly energy-efficient equipment technology and change in traveling behavior  4.2 Promote energy-saving equipment demonstration to enhance wide commercial deployment</p>			Ministry of Transport's Strategic Action Plan (2017-2021) Transport Infrastructure Development Strategy (2015-2022)	OTP	
CNG				Introduction of CNG-Diesel Hybrid Equipment to Public Bus in Semarang, Indonesia		DEDE	Greening new-constructed MRT and BTS
Electric Vehicles and Motorcycles	<p>&lt;NDC Transport Sector&gt;  Plan1.1.3.1 Improve energy consumption efficiency by private cars (Project1.1.3.1-1, 2)Adjust the excise tax rate based on the amount of CO2 emissions (reflecting the direct fuel wastage) for cars, motorcycles  Project1.1.3.1-3 Adjust the annual tax rate for cars based on the amount of CO2 emissions(reflecting the direct fuel wastage rate)  Project1.1.3.1-4 Expand use of electric vehicles)</p>	<p>&lt;EEDP&gt;  (1)Strategic Approach: Mandatory Requirements via Rules, Regulations and Standards  1.1 Transport Sector: Enforce energy efficiency labeling for new vehicles  1.2 Transport Sector: Enforce the minimum fuel economy standard for vehicles</p> <p>(2)Strategic Approach: Energy Conservation Promotion and Support  2.1: Transport Sector: Encourage high energy efficiency labeling for vehicles</p> <p>(3)Strategic Approach: Public Awareness (PA) Creation and Behavioral Change  3.1 Carry out PR and campaigns to create awareness and provide training on information about engine maintenance and eco-driving to enhance safety while reducing pollution  3.2 Introduce tax measures to promote utilization of high energy efficiency and environmentally friendly vehicles, e.g. eco-cars and electric motorcycles  3.3 Transport Sector: Planning and improvement of land use in support of traveling via public transport systems and non-motorized transport (NMT)</p> <p>(4)Strategic Approach: Promotion of Technology Development and Innovation  4.1 Promote R&amp;D on highly energy-efficient equipment technology and change in traveling behavior  4.2 Promote energy-saving equipment demonstration to enhance wide commercial deployment</p>			Ministry of Transport's Strategic Action Plan (2017-2021) HEPS, MEPS (2013) Eco-Car Programme Phase2 (2013) Biodiesel blending mandate (2012) Eco-Sticker (2014)	OTP	Increase covered items on GPP (EV, LEV)
Renewable Energy /Energy Efficiency Port (Shore Power Supply, Automatic RTG etc...)	<p>&lt;NDC Transport Sector&gt;  Plan1.1.2.2 Improving the infrastructure to support transport modes by the water transport system  Plan1.3.2.2 Improve the infrastructure to support transport mode shifting to the water transport system  (Project1.3.2.2-1 Study and manage queuing of vessels at the ports  Project1.3.2.2-2 Establish a one-stop service at Bangkok Port  Project 1.3.2.2-3 Develop a database system and logistics data monitoring  Plan1.2.3.5 Replace electrical equipment, e.g. light bulbs in the transport system infrastructure  Project1.2.3.5-1 Replace with energy-saving LED in all types of ports)</p>		Introduction of Energy Efficient Equipment to Bangkok Port (Expected GHG Emission Reductions: 5,491tCO2/year)		Transport Infrastructure Development Strategy (2015-2022)	OTP	
Renewable Energy /Energy Efficiency Airport (Shore Power Supply, Airconditioner etc...)	<p>&lt;NDC Transport Sector&gt;  Plan1.1.3.4 Improve the energy consumption efficiency at airports (Project1.1.3.4-1 Construction the 3rd runway and the 4th runway at Suvarnabhumi Airport)</p>				Transport Infrastructure Development Strategy (2015-2022)	OTP	
Substitution of Ethanol for Gasoline in Transport	<p>&lt;NDC Energy Sector&gt;  Strategy1.2 To coordinate the policies and plans with the relevant sectors to drive greenhouse gas mitigation through renewable energy development  Plan1.2.7 Ethanol fuel development: To reduce GHG emissions 3.74MtCO2 by 2030</p>				AEDP (2015-2036) PDP (2015) EEDP (2015)	DEDE	
Freight Transport Switch from Road	<p>&lt;NDC Transport Sector&gt;  Plan 1.1.3.5 Promote logistics' management for energy saving (Project1.1.3.5-1 Promote logistics and transport management (LTM) for energy saving  Project1.1.3.5-2 Research and development of logistics and transport management application (LTMA) for energy saving)</p>			Modal Shift from Truck to Cargo Ship with Freshness Preservation Reefer Container, Viet Nam	Transport Infrastructure Development Strategy (2015-2022)	OTP	

Industrial Infrastructures							
Steel, Aluminum and Cement	<NDC Industrial Process and Product use Sector, including Industrial Wastewater> 1. Clinker Substitution Measure 1.1 Use of clinker substitute materials in the hydraulic cement production process: To reduce GHG emissions 750ktCO2 by 2030 1.2 Using cement substitution materials in ready-mixed concrete: To reduce GHG emissions 100ktCO2 by 2030	<AEDP2015> Strategy2: Increasing renewable energy production, utilization and market potential Tactic2.1 Support people and a community to participate in the production an utilization of Renewable Energy  <EEDP> (1)Strategic Approach: Mandatory Requirements via Rules, Regulations and Standards 1.1 Industrial Sector: Enforce the specific energy consumption (SEC) standards for the production process  (2)Strategic Approach: Energy Conservation Promotion and Support 2.1: Industrial Sector: Develop the SEC database and benchmark both domestic and overseas SEC  (3)Strategic Approach: Promotion of Technology Development and Innovations 3.1 Industrial Sector: Promote R&D on high energy-efficiency equipment/appliances with large markets and manufacturing bases in Thailand	Introduction of 12 MW Power Generation system by Waste Heat Recovery for Cement Plant (Expected GHG Emission Reductions: 31,180tCO2/year)	Power generation by Waste Heat Recovery in the Tuban Plant of PT Semen Indonesia: Indonesia Power Generation by Waste-Heat Recovery in Cement Industry: Indonesia	Energy Conservation Promotion Act (2007) Energy Industrial Act (2007) High Energy Efficiency Standard for Equipment and Machinery (2009) Persons Responsible for Energy Management (2009)	DEDE	Formulate energy saving benchmark on steel sector  Relevant associations: Association of Thai Steel Industry Thai Cement Manufacturers Association
Chemical and Pulpe		<AEDP2015> Strategy2: Increasing renewable energy production, utilization and market potential Tactic2.1 Support people and a community to participate in the production an utilization of Renewable Energy  <EEDP> (1)Strategic Approach: Mandatory Requirements via Rules, Regulations and Standards 1.1 Industrial Sector: Enforce the specific energy consumption (SEC) standards for the production process  (2)Strategic Approach: Energy Conservation Promotion and Support 2.1: Industrial Sector: Develop the SEC database and benchmark both domestic and overseas SEC  (3)Strategic Approach: Promotion of Technology Development and Innovations 3.1 Industrial Sector: Promote R&D on high energy-efficiency equipment/appliances with large markets and manufacturing bases in Thailand	Introduction of High Efficiency Ion Exchange Membrane Electrolyzer in Caustic Soda Production Plant (Expected GHG Emission Reductions: 2,110tCO2/year)	Introduction of High Efficient Old Corrugated Cartons Process at Paper Factory: Indonesia	Energy Conservation Promotion Act (2007) Energy Industrial Act (2007) High Energy Efficiency Standard for Equipment and Machinery (2009) Persons Responsible for Energy Management (2009)		
Factory Co-Generation Factory Energy Efficiency (Chiller, Refrigerator, Pump, Process etc)	<NDC Energy Sector> Strategy1.1: To coordinate the policies and plans with the relevant sectors to drive greenhouse gas mitigation through energy consumption capacity improvement: To reduce GHG emissions 27.46 MtCO2 by 2030 Plan1.1.1 Energy conservation standard enforcement in controlled factories/buildings: 5.86 MtCO2 - Energy conservation compliance and promotion under the law on factory control - Energy consumption capacity promotion for steam production and utilization systems for controlled factory projects - Energy consumption capacity promotion for air compression systems for controlled factory projects  Plan1.1.5 Energy conservation-related action contribution/subsidy - Intence energy efficiency improvement for factories and SME building projects	<AEDP2015> Strategy2: Increasing renewable energy production, utilization and market potential Tactic2.1 Support people and a community to participate in the production an utilization of Renewable Energy  <EEDP> (1)Strategic Approach: Mandatory Requirements via Rules, Regulations and Standards 1.1 Industrial Sector: Enforce the specific energy consumption (SEC) standards for the production process  (2)Strategic Approach: Energy Conservation Promotion and Support 2.1: Industrial Sector: Develop the SEC database and benchmark both domestic and overseas SEC  (3)Strategic Approach: Promotion of Technology Development and Innovations 3.1 Industrial Sector: Promote R&D on high energy-efficiency equipment/appliances with large markets and manufacturing bases in Thailand	<Factory Co-Generation> Introduction of Co-generation System to Motor Parts Factory (Expected GHG Emission Reductions: 5,940tCO2/year) Installation of Co-generation Plant for On-Site Energy Supply in Motorcycle Factory (Expected GHG Emission Reductions: 7,414tCO2/year) Introduction of Gas Co-generation System and Absorption Chiller to Fiber Factory (Expected GHG Emission Reductions: 17,851tCO2/year)  <Factory Energy Efficiency> Energy Saving for Air-Conditioning in Tire Manufacturing Factory with High Efficiency Centrifugal Chiller (Expected GHG Emission Reductions: 385tCO2/year) Installation of High Efficiency Air Conditioning System and Chillers in Semiconductor Factory (Expected GHG Emission Reductions: 2,588tCO2/year) Energy Saving by Air-Conditioning control System in Precision Parts Factories (Expected GHG Emission Reductions: 2,351tCO2/year) Introduction of High-efficiency Boiler System to Rubber Belt Plant (Expected GHG Emission Reductions: 2,923tCO2/year) Introduction of Heat Recovery Heat Pumps to Food Processing Factory (Expected GHG Emission Reductions: 1,056tCO2/year) Introduction of Energy Efficient Refrigeration system in Industrial Cold Storage (Expected GHG Emission Reductions: 295tCO2/year) Introduction of Energy Saving Refrigerator and Evaporator with Mechanical Vapor/Recompression in Amino Acid Producing Plant (Expected GHG Emission Reductions: 2,285tCO2/year) Introduction of High Efficiency Chilled Water Supply System in Milk Factory (Expected GHG Emission Reductions: 1,219tCO2/year) Energy Saving for Semiconductor Factory with High Efficiency Centrifugal Chiller and Compressor (Expected GHG Emission Reductions: 620tCO2/year) Reducing GHG emission at Textile Factory by Upgrading to Air-aving Loom(Samutprakam) (Expected GHG Emission Reductions: 646tCO2/year)	<Factory Co-Generation> Introduction of Gas Co-generation System and Absorption Chiller to Motor Parts Factory: Indonesia Installation of Gas Co-generation System for Automobile Manufacturing Plant: Indonesia  <Factory Energy Efficiency> Introduction of High Efficiency Centrifugal Chiller to Rubber Products Factory: Viet Nam Introduction of Energy Saving Equipment to Brewery: Viet Nam Introduction of Energy-Efficient Air Conditioners in a Lens Factory: Viet Nam Installation of High Efficiency Kiln in Sanitary Ware Manufacturing Factory: Viet Nam Energy Saving in Acid Lead Battery Factory with Container Formation Facility: Viet Nam Introduction of Energy Saving Equipment to Automotive Wire Production Factory: Viet Nam Introduction of High Efficiency Injection Molding Machine to Plastic Parts Factory: Indonesia Energy Saving by Introduction High Efficiency Autoclave to Infusion Manufacturing Factory: Indonesia Introduction of Absorption Chiller to Chemical Factory: Indonesia Energy Saving for Air-conditioning and Process Cooling at Textile Factory: Indonesia Energy Saving in Industrial Wastewater Treatment System for Rubber Industry: Indonesia Introduction High Efficiency Looms in Weaving Mill: Indonesia Introduction of High Efficiency Once-through Boiler in Golf Ball Factory: Indonesia Reducing GHG Emission at Textile Factories By Upgrading to Air-saving Loom: Indonesia Energy Saving through Introduction of Regenerative Burners to the Aluminum Holding Furnace of the Automotive Components Manufacturer: Indonesia Energy Efficient Refrigerants to Cold Chain Industry: Indonesia Energy Saving for Textile Factory Facility Cooling by High-efficiency Centrifugal Chiller: Indonesia Energy Savingby Installation of Double Bundle-type Heat Pump: Indonesia Installation of High Efficiency Centrifugal Chiller for Air Conditioning System in Clothing Tag Factory: Bangladesh	Energy Conservation Promotion Act (2007) Energy Management in Designed Factories and Buildings (2009) High Energy Efficiency Standard for Equipment and Machinery (2009) Persons Responsible for Energy Management (2009) Energy Management Auditors (2012) AEDP (2015-2036) PDP (2015) EEDP (2015)	DEDE	Relevant associations: Federation of Thai Industry Thai Chamber of Commerce
Commercial Infrastructures							
Renewable energy/Energy Efficiency Shopping Mall and Office	<NDC Energy Sector> Strategy1.1: To coordinate the policies and plans with the relevant sectors to drive greenhouse gas mitigation through energy consumption capacity improvement: To reduce GHG emissions 27.46 MtCO2 by 2030 Plan1.1.1 Energy conservation standard enforcement in controlled factories/buildings: 5.86 MtCO2 - Energy conservation compliance and promotion under the law on controlled private buildings - Energy conservation compliance and promotion under the law on controlled public buildings - Energy consumption capacity promotion for chiller systems for controlled building projects  Plan1.1.2 New building construction standard for energy conservation enforcement: 0.66 MtCO2 - Building design coordination center management for energy conservation projects  Plan1.1.5 Energy conservation-related action contribution/subsidy - SOP support for SMEs and/or residential studies and pilot projects - SOP support for SMEs and/or residential projects - Intence energy efficiency improvement for factories and SME building projects - Energy saving appliance usage demonstration in public buildings outside the network control project	<AEDP2015> Strategy2: Increasing renewable energy production, utilization and market potential Tactic2.1 Support people and a community to participate in the production an utilization of Renewable Energy  <EEDP> (1)Strategic Approach: Mandatory Requirements via Rules, Regulations and Standards 1.1 Large Commercial Building Group: Enforce the Ministerial Regulation on Building Design for Energy Conservation, B.E. 2552 (2009) 1.2 Large Commercial Building Group: Enforce energy efficiency labeling for new government buildings  (2)Strategic Approach: Support for the development of energy-saving building prototypes 2.1 Large commercial Group: Encourage building energy efficiency labeling  (3)Strategic Approach: Support for the development of energy-saving building prototypes 3.1 Large Commercial Group: Support the construction of demonstration buildings to be energy-saving building prototypes (e.g. government buildings)  (4)Strategic Approach: Human Resources and Institutional Capacity Development 4.1: Large Commercial Group: Build up professionals in building design inspection	Introduction of 30 MW Rooftop Solar Power system to Large Supermarkets (Expected GHG Emission Reductions: 13,293tCO2/year) Introduction of LED Lighting to Sales Stores (Expected GHG Emission Reductions: 2,318tCO2/year) Energy Saving at Convenience Stores with High Efficiency Air-Conditioning and Refrigerated Showcase (Expected GHG Emission Reductions: 4,970tCO2/year)	Introduction of Solar PV System at Shopping Mall in Ho Chi Minh: Viet Nam Low Carbon Hotel Project in Vietnam: Improving the Energy Efficiency of Commercial Buildings by Utilization of High Efficiency Equipment: Viet Nam Promotion of Green Hospitals by Improving Efficiency/Environment in National Hospitals in Vietnam: Viet Nam Energy Saving for Air-Conditioning at Shopping Mall with High Efficiency Centrifugal Chiller: Indonesia Installation of Solar Power System and Storage Battery to Commercial Facility: Indonesia Introduction of LED Lighting to Sales Stores: Indonesia Energy Saving for Air-Conditioning at Shopping Mall with High Efficiency Centrifugal Chiller: Indonesia Installation of Inverter-type Air Conditioning System, LED Lighting and Separate Type Fridge Freezer Showcase to Grocery Store in Indonesia: Indonesia	Energy Conservation Promotion Act (2007) High Energy Efficiency Standard for Equipment and Machinery (2009) Persons Responsible for Energy Management (2009) Energy Management Auditors (2012) AEDP (2015-2036) PDP (2015) EEDP (2015) building Energy Code (2009)	DEDE	Introduce energy saving incentive scheme (Green tax, floor area ratio bonus)  Release lease and ESCO on public procurement  Improve environmental standard of increasing covered items on GPP
Residential Infrastructures							
Renewable Energy/Energy Efficiency Smart Meter and Home System		<AEDP2015> Strategy2: Increasing renewable energy production, utilization and market potential Tactic2.1 Support people and a community to participate in the production an utilization of Renewable Energy  <EEDP> (1)Strategic Approach: Energy Conservation Promotion and Support 1.1 Small Commercial Building & Residential Group: Encourage home energy efficiency labeling, particularly in the housing estate business 1.2 Small Commercial Building & Residential Group: Encourage the use of high energy-efficiency equipment/appliance, e.g. CFL tubes, high efficiency LPG stoves, etc  (2)Strategic Approach: Promotion of Technology Development and Innovations 2.1 Small Commercial Building & Residential Group: Promote R&D on high energy-efficiency equipment/appliance, e.g. LED light bulbs, heat-pump water heaters, etc 2.2 Small Commercial Building & Residential Group: Support the design and construction of demonstration energy-saving homes			Thailand Green Label (1994) Energy Efficiency Labeling Program	EGAT	
High Efficiency Residential Air Conditioning					Energy Standards for Room Air Conditioners	MOI	Strengthen compulsory and voluntary MEPS and HEPS
High Efficiency Residential Refrigerator							Improve environmental standard of increasing covered items on GPP
High Efficiency Residential Lighting							Enhance business incentive of lease and ESCO
Solar Water Heater					EEDP (2015)	DEDE	
Agricultural Infrastructures							
Rice Cultivation System (Waste Water and Pump)							
Aquaculture							
Technical Improvement (Improvement Quality and Power Generation)				Energy Saving and Work Efficiency Improvement by Introducing a New Chip-On-Board LED System in Vietnam: Viet Nam			
F-gas							
Destruction of F-gas			Project on Introduction of Scheme for Fluorocarbons Recovery and Destruction with Utilization of Existing Waste Incineration Plant (Expected GHG Emission Reductions: 12,499tCO2/year)	Development of collection Scheme and Introduction of Dedicated System for Destruction of Used Fluorocarbons: Viet Nam			
Alternative Device with Low GWP							