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ไปรษณีย์ไทย
Thailand Post

Thailand's Green Finance Ecosystem

By

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Climate Finance Expert

The Creagy Co.,Ltd.

Thailand's Green Finance Ecosystem



**Ms. Kannikar
Srithunyalucksana**
Climate Finance Expert



Experience:

2021 - Present	Partner, The Creagy Co.,Ltd.
2008 – 2020	Senior Policy Analyst, Energy for Environment Foundation (E for E)
2007 – 2008	Project Engineer, Siam Cement Trading Co.,Ltd. (SCT)
2004 – 2007	Engineer, Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy

Qualification:

- ✓ Over **20 years of experience** in climate change, renewable energy, and sustainable development
- ✓ Expert in **project management, technical assistance, and multi-stakeholder coordination** with strong public-private interface
- ✓ Proven track record leading **ADB, GIZ, UNDP, World Bank, DCCE, and TGO** - supported climate policy, climate finance, and energy policy projects in Thailand
- ✓ Trusted advisor to top **Thai corporates across the energy, finance, and industrial sectors** on climate risk and transition strategy aligned with global net-zero goals

Objectives

- ✓ Discuss Thailand's Green Finance Ecosystem (both international and national) to finance green transition projects for national postal services
- ✓ Explain current trends in public and private climate/green project finance sources including volume and sectors
- ✓ Describe the differences between different types of financing mechanisms, financing tools and recent innovation
- ✓ List at least 3 international and national potential financing resources to support green transition projects in the postal sector in Thailand.
- ✓ Discuss Thailand sources of green/climate finance including categories of entities and examples of each category
- ✓ Provide at least two examples of projects that are conducted by State Owned Enterprises (SOEs) and related financing tools: renewable energy; transport;
- ✓ Provide an overview on the applicability for Thailand Post and potential issues of financing vehicles.

OVERVIEW

1. Thailand's green finance ecosystems
2. International and national financing resources
 - ❑ Current trends in public and private climate/green project finance sources
 - ❑ Thailand's sources of green/climate finance and case study
3. Financing mechanisms, financing tools and recent innovations
4. Examples of SOE projects and related financing tools: renewable energy; transport
5. Overview on the applicability for Thailand Post and potential issues of financing vehicles.

Section I

Thailand's green finance ecosystems

Key Players in Green Finance Ecosystem

Policy Makers / Regulators



Sources and Intermediaries

International Sources

Multilateral Climate Funds
e.g.

- GCF
- GEF
- AF

Multilateral DFI
e.g.

- World Bank
- IFC
- ADB

Bilateral DFI
e.g.

- JICA
- IKI
- UK Pact

National Sources

Public Sector

- Government
- National Fund
- National DFI
- SOE

Private Sector

- Commercial FI
- Corporation
- Household / Individual

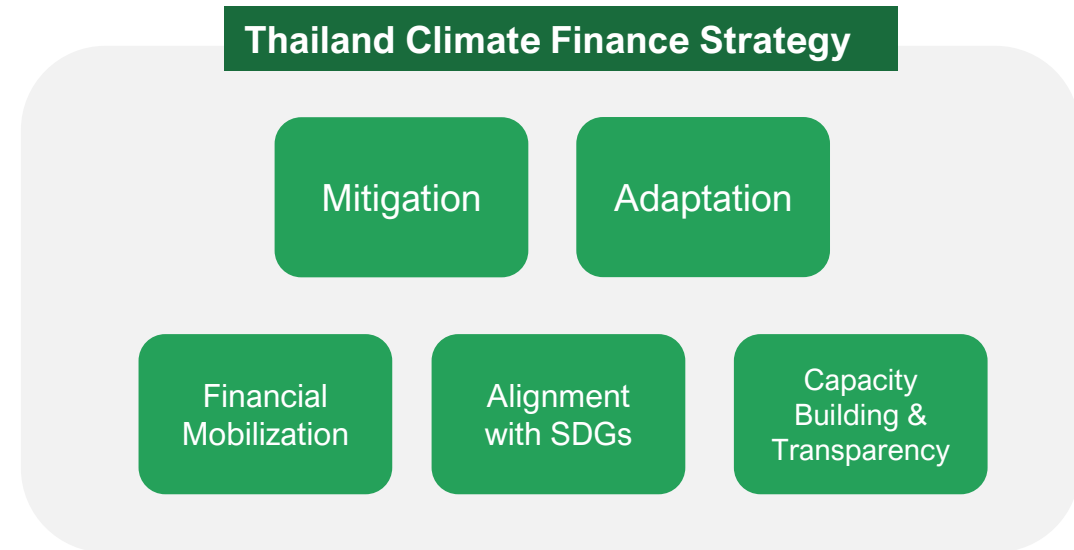
Market Builders & Supporting Ecosystem



Climate Finance Strategy was developed to serve as a guiding framework for allocating financial resources to address climate challenges and priority projects.

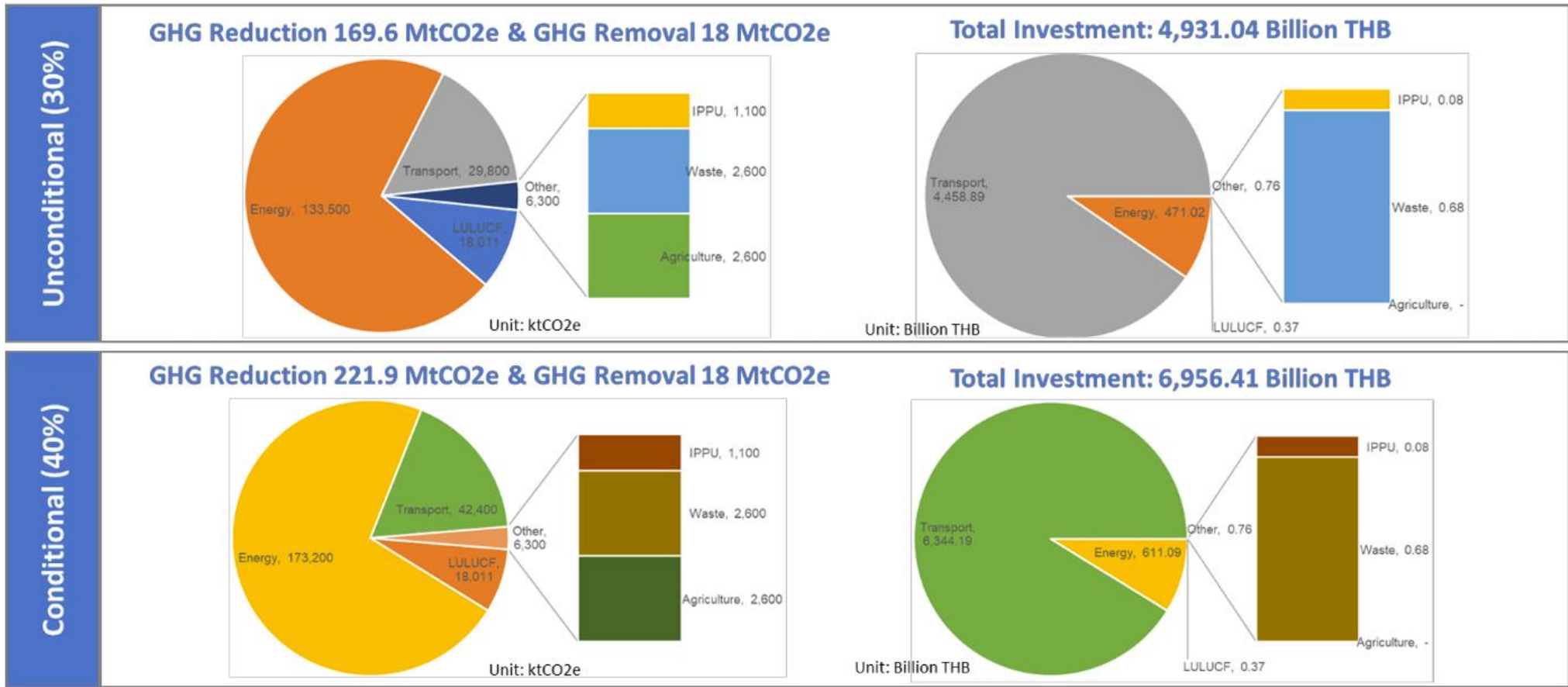


Source: Thailand Climate Finance Strategy 2030 (DCCE)












Thailand's approach to climate finance involves securing funds from various sources – public, private, and international – to support both mitigation, which focuses on reducing emissions, and adaptation,

It was estimated that Thailand requires approximately THB 5,000 billion (unconditional target) and up to THB 7,000 billion (conditional target) to meet its NDC commitments.



Remark: The monetary figures have been estimated based on mitigation measures considered in the recent versions of sectoral NDC action plans, while prorated to cover larger reduction targets of 30% and 40% for unconditional and conditional potentials, respectively¹⁵. Detailed analysis must be conducted after the revised NDC sectoral action plans published, expected by the first quarter of 2024.

Strategic Prioritization of Climate Finance in Thailand

		Mature Technologies (TRL ≥ 8)	Immature Technologies (TRL < 8)	
		Unconditional NDC	Conditional NDC	Beyond NDC
Feasible Projects	Without investment barriers	Domestic Sources <ul style="list-style-type: none">Public: National budget, Public fund (ENCON Fund, Environment Fund, ..)Private: Private companies, Commercial banks		
			 Article6	
Non-feasible Project	With investment Barriers	 THE WORLD BANK		
		 GREEN CLIMATE FUND		
Enabling Environment		 gef		
		 IKI	 jica	 Australian Aid
				 THE AUSTRALIAN WATER PARTNERSHIP

Source: Thailand Climate Finance Strategy 2030 (DCCE)

Thailand is in a process of developing several instruments to mobilize and scale up climate finance.

Information Instruments

Thailand Taxonomy

Guiding Green & Transition Investments

a classification system that defines which economic activities are considered sustainable or contribute to climate goals

Financial Instruments

Sustainable Finance

Mobilizing Resources for the Green & Transition

Sustainable/Climate finance specifically refers to funds directed towards climate mitigating and climate adaptation

Economic Instruments

Carbon Pricing Instruments (CPIs)

Driving Behavioral Change

Putting a price on carbon can encourage businesses and individual to adopt lower-carbon practices and invest in cleaner technologies

Thailand Taxonomy

Taxonomy is:

- ✓ A system for classifying economic activities to separate sustainable activities from those that are unsustainable and harmful to the environment and climate.
- ✓ A convenient tool for use by economic agents, financial market participants and government agencies.
- ✓ A tool to categorise financial flows and increase transparency in disclosure, issuance of green financial instruments and financial decision-making.
- ✓ A tool to decarbonise those activities that have the potential to affect the climate (climate material) or environment.
- ✓ A living document

Taxonomy is NOT:

- ✗ A tax collection. The name Taxonomy contains "Tax" but it's not a tax.
- ✗ A classifier of activities into 'good' and 'bad'.
- ✗ A tool for assessing the financial or economic characteristics of an activity.
- ✗ Prohibit lending. Loans can still be issued according to the policies of financial institutions.
- ✗ Prohibit investment. Investments can still be made according to the risk appetite of each individual.

Traffic Lights System of Taxonomy

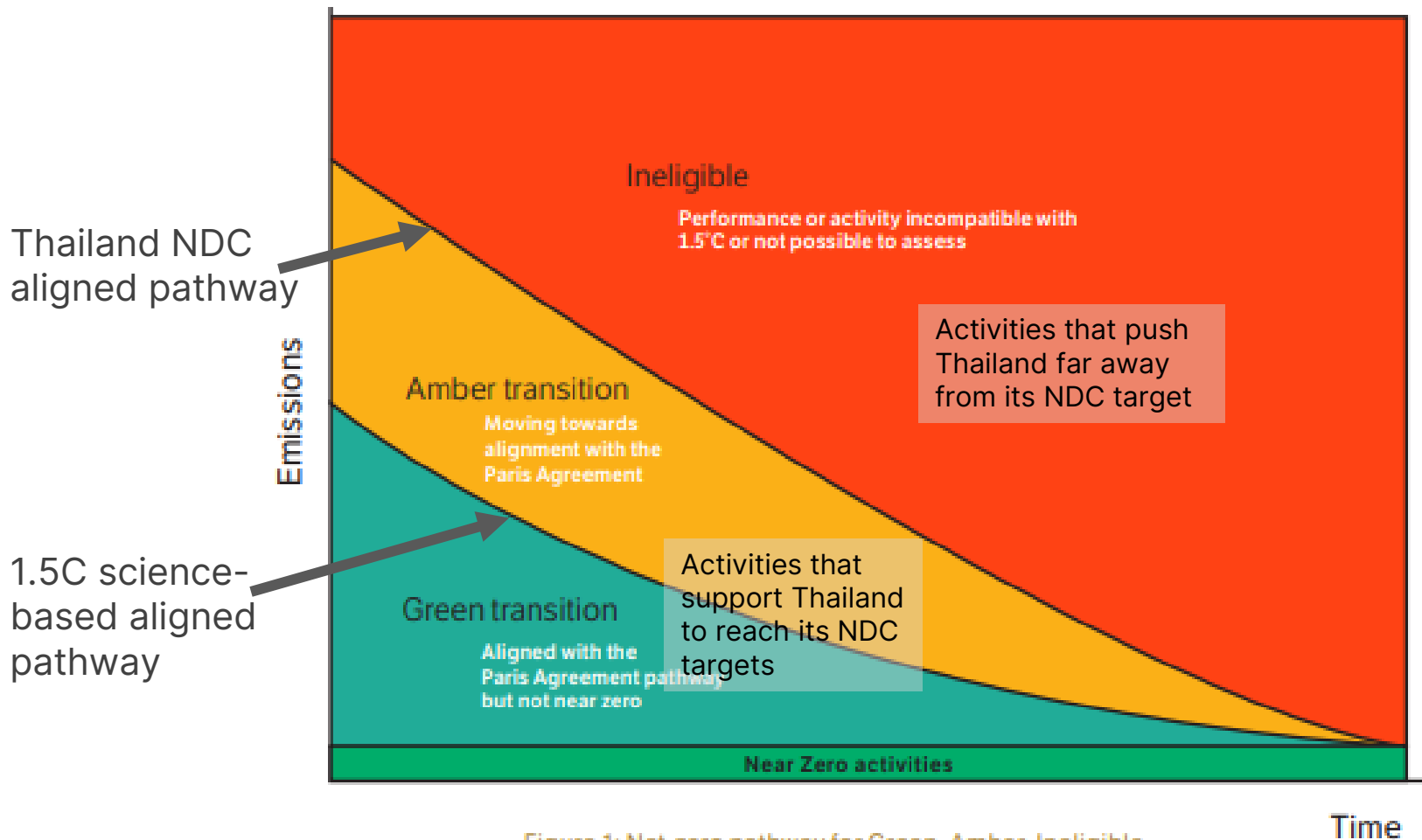


Figure 1: Net-zero pathway for Green, Amber, Ineligible

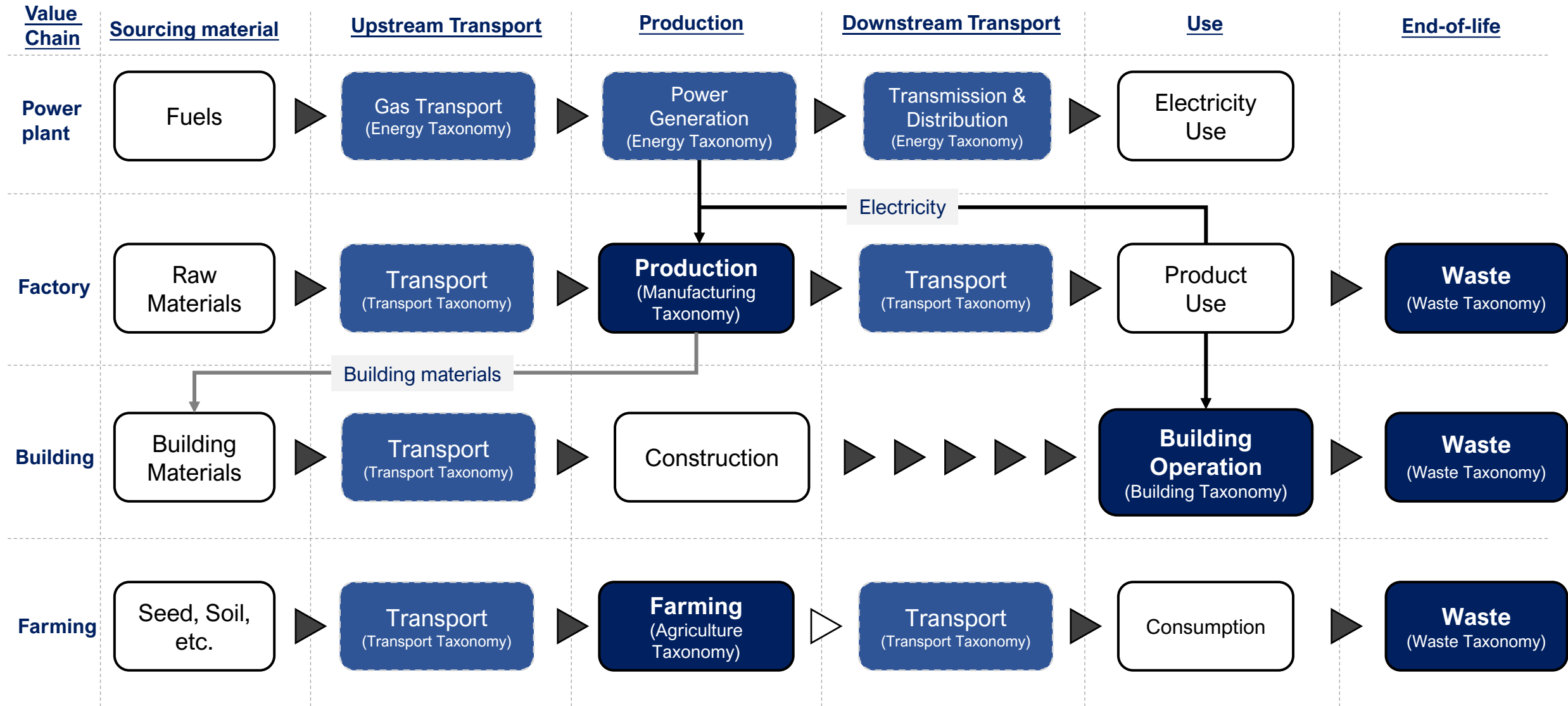
Green: activities that contribute substantially to climate change mitigation by operating at net zero, or are on a pathway to net zero by 2050. The pathway and accompanying thresholds are based on climate science.

Amber: activities that are not presently on a net zero pathway, but are either:

- Moving towards a green transition pathway within a defined time frame; or
- Facilitating significant emissions reductions in the short term with a prescribed sunset date.
- Aligned with country policy & plan

Red: activities that are harmful to the objectives of the taxonomy

Thailand Taxonomy Coverage of Selected Activities (Simplified)



Examples of Thailand Taxonomy Applications



Corporate Reporting & Strategy

- **Sustainability Reporting:** Companies can report the percentage of their economic activities (e.g. CapEx, revenue) that meet the taxonomy criteria.
- **Strategic Planning:** Identifying areas for green investment and transition within the company to improve taxonomy alignment over time.
- **Supply Chain Management:** Encouraging suppliers to adopt more sustainable practices that align with taxonomy criteria.



Financial Products

- **Structuring Green Bonds/Loans:** Defining eligible projects and activities for which proceeds can be used.
- **Creating Sustainable Investment Funds:** Setting criteria for portfolio selection.
- **Benchmarking:** Comparing the sustainability level of different financial products.



Investment Decisions

- **Screening:** Identifying investments that meet specific environmental criteria.
- **Due Diligence:** Assessing the environmental performance and risks of potential investments or loans.
- **Portfolio Allocation:** Shifting capital towards taxonomy-aligned assets.



Policymaking

- **Developing Green Standards and Incentives:** Using the taxonomy as a basis for official green labels for financial products or services.
- **Informing Public Spending:** Guiding government investments and public procurement towards sustainable options.
- **Monitoring National Progress:** Tracking the growth of the green economy.

Section II

International and national financing resources

Green Finance Ecosystem: Sources and Intermediaries

Policy Makers / Regulators



Sources and Intermediaries

International Sources

Multilateral Climate Funds

e.g.

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- AF

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Market Builders & Supporting Ecosystem

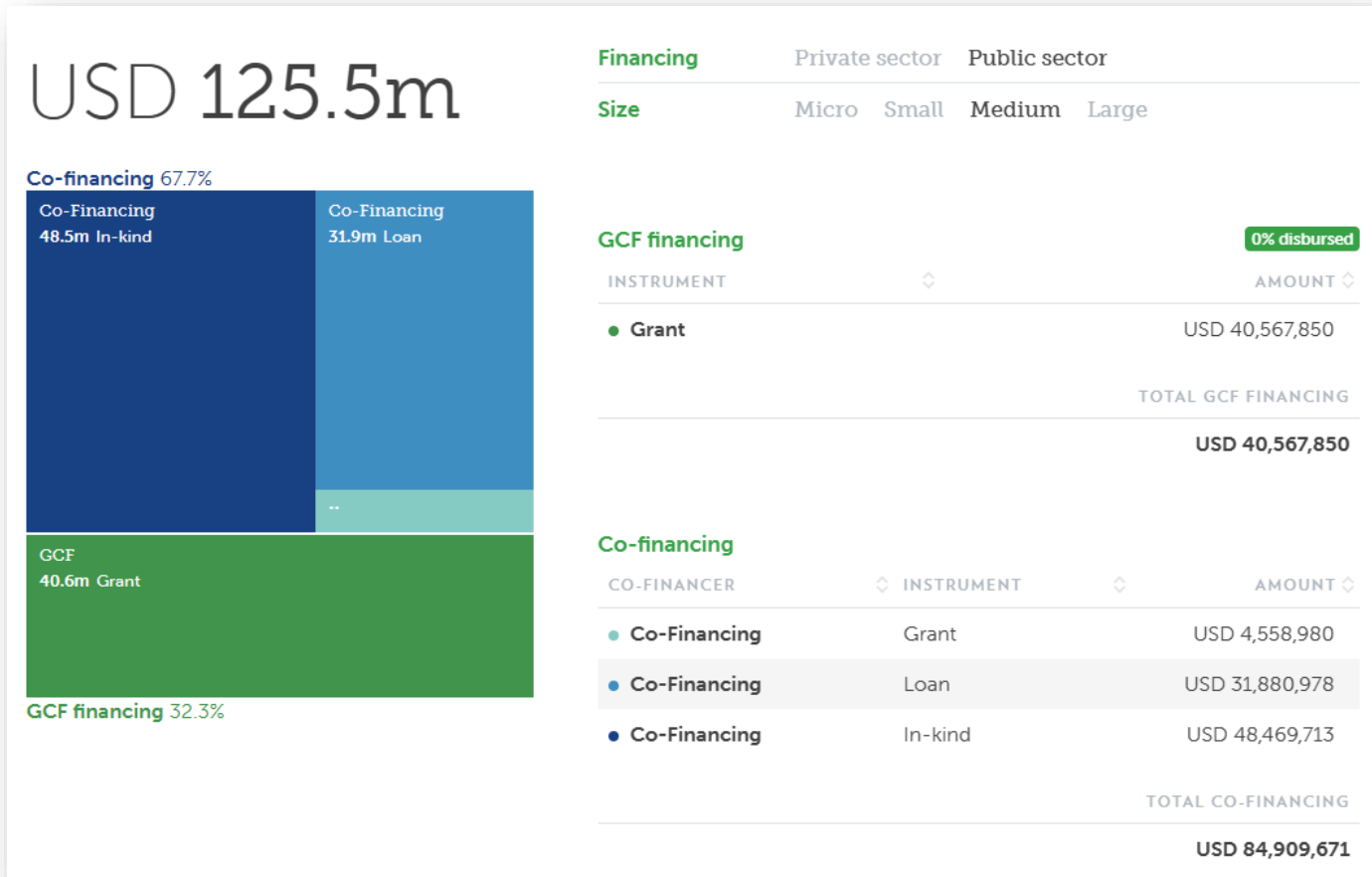


Examples of International Public Fund

Funding Source	Type	Sector Focus	Eligibility	Details
Green Climate Fund (GCF)	<ul style="list-style-type: none"> • International • Public 	Cross-sector	<ul style="list-style-type: none"> • Country Ownership: Projects must align with the host country's climate strategies • Accredited Entities (AEs): Applicants must partner with GCF-accredited entities. 	Project Scale: Covers micro (\leq USD 10M) to large-scale (\geq USD 250M) projects.
Asian Development Bank (ADB)	<ul style="list-style-type: none"> • International • Public 	Cross-sector	<ul style="list-style-type: none"> • Developing Member Countries (DMCs) of ADB. • Public sector entities (government agencies, state-owned enterprises). • Private sector entities, including companies and financial institutions. • Non-governmental organisations (NGOs) and civil society organisations (CSOs) in partnership with eligible entities. 	Funding models: <ul style="list-style-type: none"> • Public Sector Loans (Sovereign loans for government-led projects, or typically requires co-financing or guarantees from the recipient government.) • Private Sector Investments Grants and Technical Assistance • Blended Finance

Green Climate Fund to invest 40.6 million USD to strengthen climate-smart rice farming in Thailand

Thai Rice: Strengthening Climate-Smart Rice Farming



- On 25 October 2023, GIZ and the Green Climate Fund (GCF) signed the Funded Activity Agreement (FAA) for the project “Thai Rice: Strengthening Climate-Smart Rice Farming”.
- The GCF has approved a 40.6-million USD grant contribution towards the project. The co-financing is provided by Thai public sector partners including the Thai Rice Department, the Bank for Agriculture and Agricultural Cooperatives (BAAC) and the Office of Natural Resources and Environmental Planning (ONEP). It is supported by the German Federal Ministry for Economic Cooperation and Development (BMZ) and private sector partners.
- This project will support more than 250,000 smallholder farmers Thai rice farmers and service providers in the adoption of a series of climate-smart technologies and practices and deliver farmer-friendly financial products to sustainably manage rice farming

ADB - BGRIMM

ADB, B.Grimm Power Expand Support for Renewable Energy in ASEAN

A \$235 million loan will accelerate renewable energy development in Southeast Asia, reinforcing regional climate and energy goals.

- ✓ **Key Players:** B.Grimm Power (Thailand's leading power producer) and the Asian Development Bank (ADB)
- ✓ **Goals:** Enhance renewable energy capacity and promote sustainable power solutions in ASEAN member countries
- ✓ **Approach:** Develop solar, wind, biomass, and energy storage projects through distributed and utility scale systems across ASEAN
- ✓ **Achievements:** Initiated regional expansion of B.Grimm Power's clean energy portfolio. Since the project launch, renewable energy capacity has grown steadily, with increasing share in the portfolio and extended operations across ASEAN.



Source: [ADB](#)

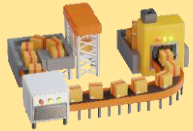
Potential Public Finance: National Climate Fund

Fee Collection from GHG
Emissions under ETS

National
Climate
Fund

Support in investment to
reduce GHG emissions
throughout the supply chain

High GHG emission activities



Machine / Equipment that
contributes to GHG Emissions



Fossil fuel
vehicle



Fossil-based
electricity generation



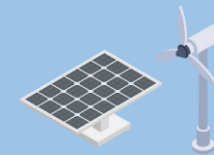
High GHG emission
manufacturing



Transition away

investment from
high GHG emission
activities toward net-zero
aligned activities

Net-zero aligned GHG emission activities



Clean Energy



Clean transport



Green
Buildings




Sustainable
agriculture &
forestry



Sustainable
waste
management

Examples of National Public Fund

Funding Source	Type	Sector Focus	Eligibility	Details
Thai Climate Initiative (ThaiCI) through Environmental Fund	<ul style="list-style-type: none">Domestic fund from international financial sourcePublic	Iron and steel <i>(for this specific call for proposal)</i> 	<p>Criteria for applicants:</p> <ul style="list-style-type: none">Must be an operator in the iron and steel industry.Must be a small or medium-sized enterprise (SME).Annual revenue does not exceed 500 million baht (data must be verified by financial statements for the latest year at the time of submission).Must be a legally registered entity under Thai law. <p>Application Submission Period: 1 November - 30 December 2024</p> <p>Funding Amount: 50,000 - 5 million baht per project/applicant</p>	<ul style="list-style-type: none"><u>Scope:</u><ul style="list-style-type: none">Collection and analysis of <u>greenhouse gas emissions data</u> by the operator, including baseline data and data following the project implementation.Replacement or installation of <u>equipment/technology for emission reduction</u> in the production process.Application of <u>renewable energy technologies</u> or <u>energy efficiency</u> measures, including the replacement or installation of machinery or equipment to utilise renewable energy to reduce greenhouse gas emissions sustainably.<u>Source:</u> https://envfund.onep.go.th/thaici-steelindustry-2567
Energy Conservation Fund (ENCON Fund)	<ul style="list-style-type: none">DomesticPublic	Energy efficiency	<ul style="list-style-type: none">Eligible Sectors: Industrial, commercial, government, and residential sectors.Project Scope: Energy efficiency improvement, renewable energy deployment, or energy-saving innovation.Entities: Open to Thai businesses, local government bodies, and educational institutions.	<ul style="list-style-type: none"><u>Source:</u> https://enconfund.go.th https://enconfund.go.th/แนวทางการหลักเกณฑ์และลำดับ/

TTB green transformation program



สินเชื่อเพื่อการเปลี่ยนผ่านของธุรกิจ ที่เป็นมิตรกับสิ่งแวดล้อม

ttb green transformation program

- สร้างความเปลี่ยนแปลงสู่ความยั่งยืนด้านสิ่งแวดล้อม
- สร้างผลตอบแทนในระยะยาวควบคู่ไปกับการสร้างผลกระทบเชิงบวก หรือลดผลกระทบเชิงลบต่อสังคมและสิ่งแวดล้อม

Receive consultation for environmentally friendly investments from environmental investment experts.

Types of Environmentally Friendly Investments

- | | | |
|---|--|---|
| <ul style="list-style-type: none">• Renewable energy• Energy efficiency• Sustainable water & waste water management | <ul style="list-style-type: none">• Pollution prevention & waste management• Clean transportation• Green buildings | <ul style="list-style-type: none">• Sustainable management of natural resources |
|---|--|---|

รายละเอียดผลิตภัณฑ์

หัวข้อ	Corporate	SME
วัตถุประสงค์	สนับสนุนการลงทุน Green Project ที่เป็นมิตรต่อสิ่งแวดล้อม	
อัตราดอกเบี้ย	พิเศษ สำหรับ 2 ปีแรก 2.99% - 4.99%	
ระยะเวลา	สูงสุด ไม่เกิน 10 ปี	สูงสุด ไม่เกิน 20 ปี
ค่าธรรมเนียม	ฟรี	

หมายเหตุ • สำหรับบริษัทที่มีรายได้ไม่เกิน 3,000 ล้านบาท • หลักเกณฑ์และเงื่อนไขการอนุมัติเป็นไปตามที่ธนาคารกำหนด

Loan for Environmentally Friendly Business Transformation

ttb green transformation program

- Drive transformation towards environmental sustainability.
- Create long-term returns while reducing negative impacts or contributing positive impacts on society and the environment.

Corporate Loans

- Interest Rate: Special for the first 2 years (2.99% - 4.99%)
- Loan Term: Up to 10 years
- Collateral Fee: Free

SME Loans

- Interest Rate: Special for the first 2 years (2.99% - 4.99%)
- Loan Term: Up to 20 years
- Collateral Fee: Free



สินเชื่อธุรกิจเพื่อลดคาร์บอน

สำหรับแต่ละอุตสาหกรรมโดยเฉพาะ

Financing
Products for

Transition

สินเชื่อที่จะช่วยให้ธุรกิจของคุณ เปลี่ยนผ่านไปสู่คาร์บอนต่ำ

- ✓ เพิ่มประสิทธิภาพการผลิตและบริการ
- ✓ ลดการใช้พลังงาน
- ✓ บริหารจัดการต้นทุนในการลดคาร์บอนอย่างคุ้มค่า
- ✓ พร้อมรับมือกับมาตรการด้านสิ่งแวดล้อมต่างๆ



อัตราดอกเบี้ยแพคเกจสินเชื่อธุรกิจเพื่อลดคาร์บอน

ระยะเวลาไม่เกิน 5 ปี
MLR* -1.25%

ระยะเวลาดั้งแต่ 5-8 ปี
MLR* -1.0%

*อัตราดอกเบี้ย MLR อ้างอิงตามประกาศอัตราดอกเบี้ยเงินให้สินเชื่อของธนาคาร

Financing Products for Transition

Business loan for 4 sectors including

- Food and Beverage
- Hotel and Healthcare
- Packaging and Plastics
- Auto parts and Hardware

Decarbonization technology

- Solar cell system
- Energy efficiency
- E-Mobility

This loan will help business

- increase efficiency of products and services
- reduce energy use
- effectively manage decarbonization cost
- deal with environment measures and policies



Example of climate actions to decarbonize in industries

กดและเลื่อนเพื่อดูข้อมูลภายในตาราง

Decarbonization measures	ธุรกิจอาหารและเครื่องดื่ม (Food and Beverage)	ธุรกิจโรงแรมและเฮลท์แคร์ (Hotel and Healthcare)	ธุรกิจแพ็คเกจจิ้งและพลาสติก (Packaging and Plastic)	ธุรกิจชิ้นส่วนยานยนต์/ฮาร์ดแวร์ (Auto parts and Hardware)
การใช้พลังงานทดแทน Renewable Energy	1. Biogas (Boiler/heating) 2. Solar Rooftop	Solar Rooftop		
การเพิ่มประสิทธิภาพการใช้พลังงาน (Energy Efficiency)	Cooling system	Cooling system	Cooling system	Cooling system
	Drive/transmission system	-	Drive/transmission system	Drive/transmission system
	Heating/Hot Water system	Heating/Hot Water system	Heating/Hot Water system	-
การกำจัด/บำบัดของเสีย (Waste Treatment)	Food/organic waste management	Food/organic waste management	-	-



ธนาคารกรุงเทพ

สินเชื่อบัวหลวงกรีน
เพื่อการเปลี่ยนผ่าน
สู่ความยั่งยืน
ด้านสิ่งแวดล้อม

Bualuang Green
Financing for Transition
to Environmental Sustainability



วัตถุประสงค์
เพื่อสนับสนุนธุรกิจที่ต้องการปรับตัวเปลี่ยนผ่าน (Transition) ไปสู่ความยั่งยืนด้านสิ่งแวดล้อม (Environmental sustainability) ในการลงทุน 3 ด้าน ได้แก่ การหลีกเลี่ยงหรือลดการปล่อยก๊าซเรือนกระจก (Greenhouse gas emissions) การปรับตัวรองรับการเปลี่ยนแปลงสภาพอากาศ (Adaptation) การหลีกเลี่ยงหรือลดการสร้างมลพิษ (Pollution)

ประเภทสินเชื่อ
เงินกู้ (Term Loan)

วงเงินสินเชื่อ
พิจารณาตามความเหมาะสมและความจำเป็นของลูกค้าหนี้แต่ละราย

อัตราดอกเบี้ย
ปีที่ 1-2 MLR - 1.25% ต่อปี
หลังจากนั้น MLR - 1.00% ต่อปี ตลอดอายุสัญญา

ระยะเวลา
สูงสุดไม่เกิน 8 ปี

ระยะเวลายื่นคำขอ
วันนี้ - 31 กรกฎาคม 2569

ค่าธรรมเนียมวงเงิน
Font End Fee 0.25% ของวงเงินที่อนุมัติ (ปกติ 3.0%)

หลักประกัน
จดจำนองหลักทรัพย์ / เครื่องจักร / บสย. / บุคคล หรืออื่น ๆ ตามที่ธนาคารกำหนด

คุณสมบัติผู้ขอสินเชื่อ

- เป็นนิติบุคคลที่จดทะเบียน หรือบุคคลธรรมดา ที่จดทะเบียนการค้า / ทะเบียนพาณิชย์ มีสถานะประกอบการและประกอบธุรกิจในประเทศไทย
- จบการเงินที่แสดงต่อกรมสรรพากร ผลประกอบการในปีล่าสุดต้องไม่ทำไร
- D:E ต้องไม่เกิน 3:1
- ไม่มีประวัติเสียหายทางการเงิน
- อื่น ๆ ตามที่ธนาคารกำหนด





Bualuang Green Financing for Transition to Environmental Sustainability

- Investments to Reduce Greenhouse Gas Emissions:**
Such as investing in energy-efficient building upgrades, improving energy efficiency, and replacing fossil fuel-powered equipment with electric alternatives like heat pumps.
- Investments in Climate Change Adaptation:**
For example, precision farming technology to reduce water, fertilizer, and pesticide use; EVAP (evaporative cooling) systems to lower greenhouse temperatures and prevent external diseases; and technologies to enhance water management and recycling.
- Investments to Avoid or Reduce Pollution :**
Including wastewater treatment systems and air pollution control systems to reduce pollutants like PM 2.5.



krungsri
กรุงศรี

เครือ MUFG หนึ่งใน
สถาบันการเงินที่ใหญ่ที่สุดของโลก

Krungsri SME Transition Loan

สินเชื่อรุรกิจเพื่อการเปลี่ยนผ่านสู่ความยั่งยืน

ดอกเบี้ยต่อปี **3.5%**
2 ปีแรก



วงเงินสูงสุด 100% ผ่อนสบายสูงสุด 10 ปี

จุดเด่นผลิตภัณฑ์*



ดอกเบี้ยพิเศษต่อปี
3.5% ใน 2 ปีแรก



วงเงินสูงสุด 100%
ของมูลค่าโครงการ



ผ่อนชำระสบายๆ
นานสูงสุดถึง 10 ปี

สินเชื่อรุรกิจเพื่อการ เปลี่ยนผ่านสู่ความยั่งยืน (Krungsri SME Transition Loan)

Purpose of Loan Application

To improve business operations or invest further to reduce fossil fuel energy use, decrease waste or greenhouse gas emissions, and manage or dispose of operational waste. Examples include installing EV chargers, purchasing, building, or upgrading energy-efficient factories, investing in wastewater treatment ponds, and adopting circular waste management innovations.

Examples from leading financial institutions



สินเชื่อธุรกิจ

สินเชื่อธุรกิจเพื่อโลก เพื่อเรา (Green Forward)

สินเชื่อเพื่อสนับสนุนธุรกิจที่เป็นมิตรกับสิ่งแวดล้อม เพื่อความยั่งยืนของธุรกิจ

วงเงินรวมสูงสุด
50 ล้านบาท

ผ่อนนานสูงสุด
7 ปี

ดอกเบี้ยเริ่มต้น MRR
-0.5% ต่อปี*



Loans for Manufacturers, Sellers, and Users for the Following Activities:

- Improving energy efficiency
- Preventing and controlling pollution
- Businesses supplying and distributing products that support environmentally friendly production or consumption, and/or come from responsible sources
- Providers or Consultants for businesses in environmental management or sustainable business practices.
- Women Entrepreneurs (holding more than 50% of shares).
- Interest Rates: Starting from MRR-0.5% to a maximum of MRR+2.5% per year.

Examples from leading financial institutions

Krungthai's loan for sustainability (ESG)

- Interest 4% per year
- Repayment term of 10 years



Green Financing

พลิกธุรกิจไทย สู้ความยั่งยืน

สินเชื่อกรุงไทยเพื่อความยั่งยืน (ESG) เพื่อธุรกิจที่ใส่ใจสิ่งแวดล้อม และสังคม

ดอกเบี้ยยเริ่มต้น **4%** ต่อปี

ผ่อนนาน สูงสุด **10 ปี**

วงเงินกู้ สูงสุด **100%** ของมูลค่าลงทุน

วางแผนกู้ดี **✔ธุรกิจดี**

SME

The advertisement features a vibrant green background with a city skyline and various sustainable technology icons like solar panels, wind turbines, and electric cars. A group of people in business attire are shown in the center, surrounded by a futuristic car and a globe. The text is in Thai, highlighting the bank's commitment to ESG financing.

Example of Private Finance

Green Bond, Climate Bond, Sustainability-link Bonds

Green Bond Issuance: 2018 - 2021

Issuer name	Amount issued in THB	Amount issued in USD	Issue date	Use of proceeds
SPCG Public Company Limited	THB1.5bn	USD46.87m	Oct-2021	Renewable energy
BCPG Public Company Limited	THB2bn	USD62.5m	Sep-2021	Renewable energy
BCPG Public Company Limited	THB1bn	USD31.25m	Sep-2021	Renewable energy
BCPG Public Company Limited	THB1bn	USD31.25m	Sep-2021	Renewable energy
BCPG Public Company Limited	THB4bn	USD125m	Sep-2021	Renewable energy
BCPG Public Company Limited	THB4bn	USD125m	Sep-2021	Renewable energy
B. Grimm Power Public Company Limited	THB3bn	USD93.75m	Jul-2021	Renewable energy
Toyota Leasing (Thailand) Co., Ltd.	THB2bn	USD64.1m	Apr-2021	Clean transport
BTS Group Holdings (PCL)	THB8.6bn	USD278m	Nov-2020	Transport
Ratch Group PCL	THB8bn	USD257m	Nov-2020	Energy
Global Power Synergy PCL (GPSC)	THB2.5bn	USD80.3m	Aug-2020	Energy, Waste
Global Power Synergy PCL (GPSC)	THB1bn	USD32.1m	Aug-2020	Energy, Waste
Global Power Synergy PCL (GPSC)	THB1.5bn	USD48.1m	Aug-2020	Energy, Waste
Bank for Agriculture and Agricultural Cooperatives (BAAC)	THB 6 bn	USD 187.3m	Aug-2020	Forestry
PTT PCL	THB2bn	USD65.8m	Jul-2020	Land Use
Energy Absolute PCL	THB3bn	USD98.5m	Oct-2019	Energy
Energy Absolute PCL	THB4bn	USD129.5m	Aug-2019	Energy
Energy Absolute PCL	THB3bn	USD97.4m	Jul-2019	Energy
BTS Group Holdings	THB13bn	USD413.2	May-2019	Transport
B. Grimm Power PCL	THB5bn	USD153m	Dec-2018	Energy
TMB Bank	USD60m	USD60m	Jul-2018	Energy, Waste
Total		USD2.48bn		

Sustainability-linked Bonds (SLB): 2021

Issuer name	Amount issued in THD	Amount issued in USD	Issue date
Thai Union Group PCL	THB5bn	USD151m	Jul-2021
Indorama Ventures PCL	THB5bn	USD151m	Nov-2021
Indorama Ventures PCL	THB3bn	USD91m	Nov-2021
Indorama Ventures PCL	THB2bn	USD61m	Nov-2021
Thai Union Group PCL	THB450m	USD14m	Nov-2021
Thai Union Group PCL	THB1.5bn	USD46m	Nov-2021
Total		USD513m	



BAAC: Green Bond

BAAC Green Bond Initiative 2024:

BAAC achieve to become the first Specialized Financial Institution (SFI) in Thailand that issues green bonds under the Security and Exchange Commission's (SEC) criteria for green bond filing and issuance.

- ✓ **Key Players:** BAAC issued Thailand's first SFI Green Bond, with EY Singapore confirming alignment with ASEAN and ICMA standards. The British Embassy Bangkok and PDMO supported the review and underwriting process.
- ✓ **Goals:** Promote sustainable agriculture, restore forests, expand clean energy, and enhance rural livelihoods through environmentally responsible financing.
- ✓ **Approach:** In August 2020, BAAC issued a THB 6,000 million Green Bond to fund two major credit programs: **Go Green: Forest Credit**, focusing on afforestation, and **Green Credit**, supporting sustainable agriculture, clean energy, and environmental protection. The issuance aligns with ASEAN Green Bond Standards and ICMA Green Bond Principles.

✓ Achievements:

Go Green: Forest Credit

Disbursed THB 290.35 million, resulting in the planting of 980,409 trees across 12,148 rai and sequestering 30,607 tons of CO₂e.

Green Credit

Disbursed THB 12,788.68 million, with key outcomes including:

- 893,478 tons of organic or safe food produced across 166,875 rai
- 3,570 MW of renewable energy generated across 1,619 facilities
- 523 environmental conservation projects implemented over 11,781 rai



Source: รายงานประจำปีพันธบัตรเพื่ออนุรักษ์สิ่งแวดล้อม (Green Bond) ปีบัญชี 2563

PEA's Sustainability Bond

Provincial Electricity Authority (PEA) Sustainability Bond:

Thailand's state utility operator, Provincial Electricity Authority (PEA), is issuing its first sustainability bond with support from the Asian Development Bank (ADB).

- ✓ **Key Players:** PEA (Thailand's state utility), supported by ADB in issuing its first sustainability bond.
- ✓ **Goals:** Promote renewable energy, improve energy access, enhance climate resilience, support Thailand's carbon neutrality and net-zero targets, and develop a sustainable bond market.
- ✓ **Approach:** Raise funds through a sustainability bond to support clean energy, climate adaptation, and electricity access projects.
- ✓ **Achievements:** Successfully raised THB 1 billion in PEA's first sustainability bond, setting a milestone for ESG-led public financing in Thailand.



Source: [ADB](#)

BTS

Green and Sustainability-Linked Bonds for Urban Rail Transit

BTS Group pioneered Thailand's green and sustainability-linked bond market to finance low-carbon electric rail systems and support national climate goals.

- ✓ **Key Players:** BTS Group Holdings (BTSG), issuer and operator of Bangkok's electric mass transit systems
- ✓ **Goals:** To finance and refinance low-carbon transit projects, especially the Pink and Yellow electric monorail lines, and align funding strategies with long-term sustainability objectives
- ✓ **Approach:** Issued green bonds in 2019 and 2020 totaling THB 21.6 billion (USD 691 million), including Thailand's largest green bond in 2020 (THB 8.6 billion), to support dedicated monorail projects. In 2022, BTSG launched Thailand's first sustainability-linked bond, linking corporate environmental targets with financing terms.
- ✓ **Achievements:**
 - Demonstrated leadership as the country's first repeat green bond issuer
 - Achieved strong market response with SLB oversubscribed by 1.67 times
 - Contributed to the growth of Thailand's ESG bond market and low-carbon public transit development

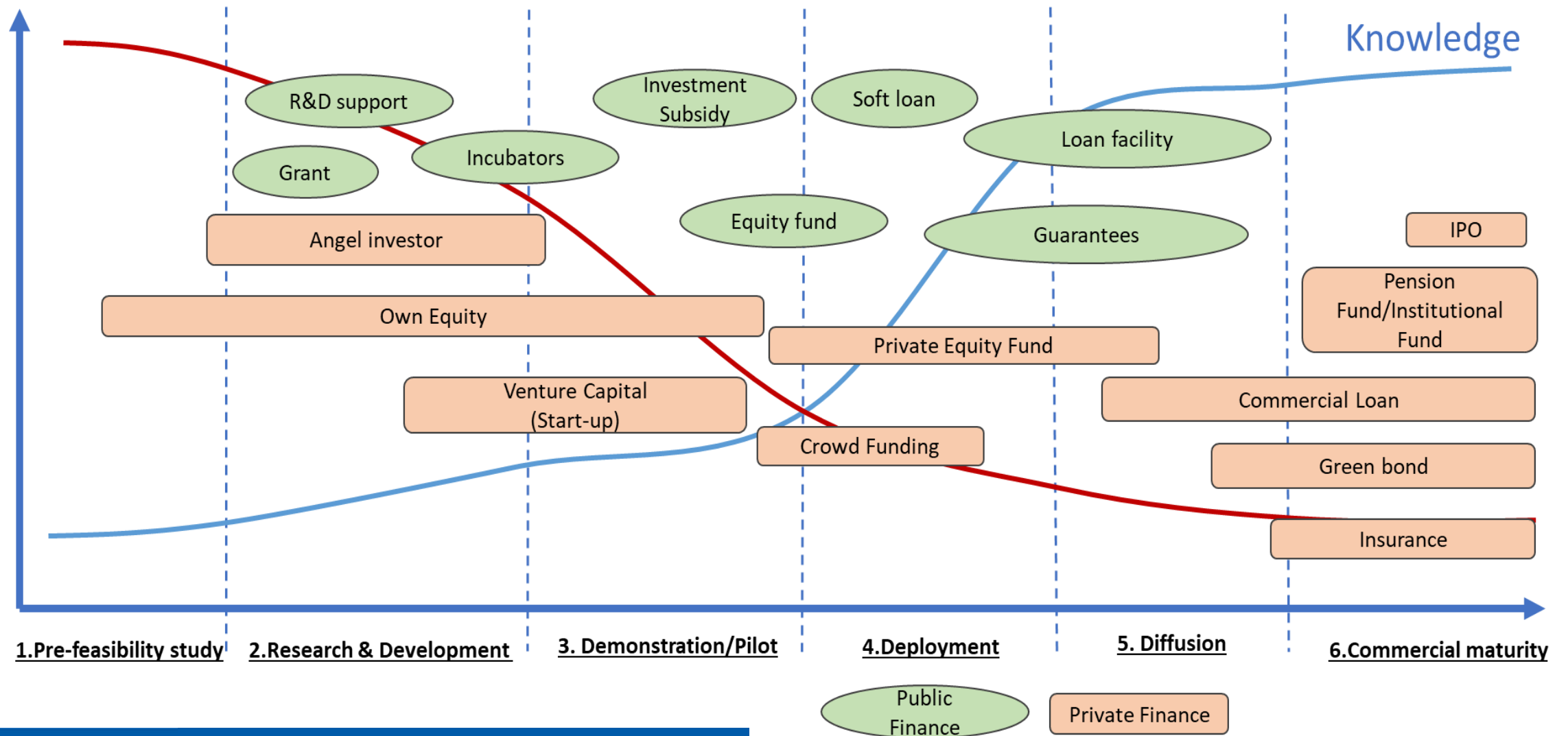


Source: [Climatebond](#), [BTS Group](#)

Section III

Financing mechanisms, financing tools and recent innovations

Financial instruments by level of technology development



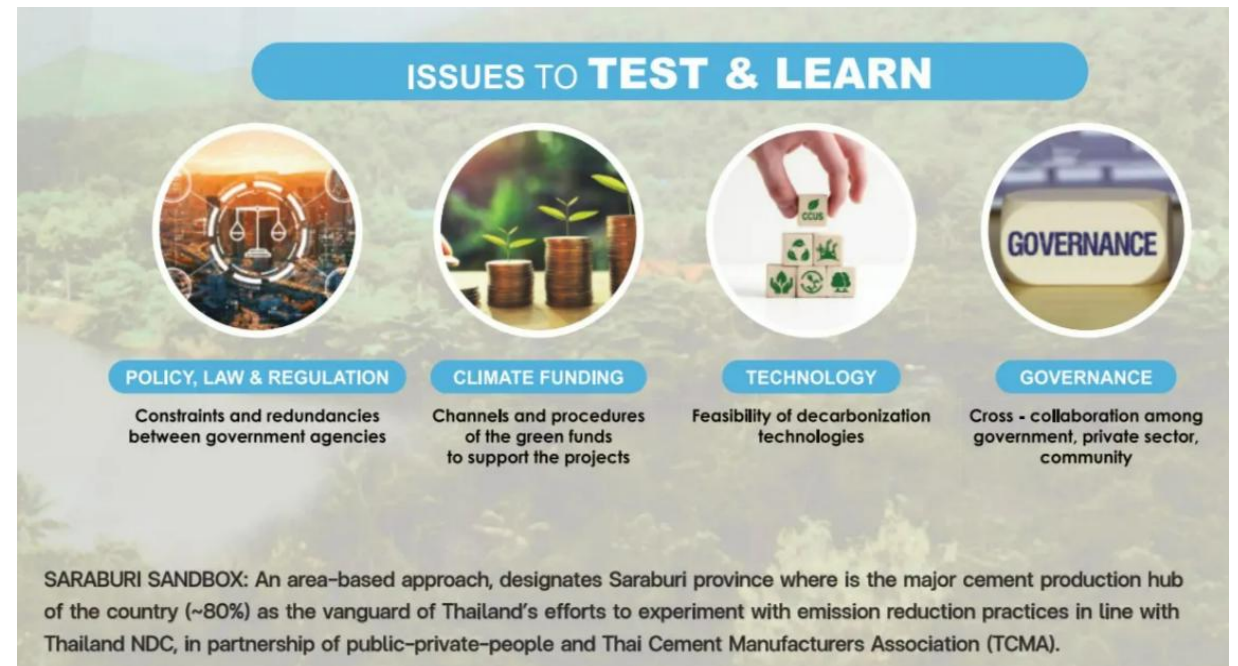
Examples of Blended Finance

PPP Partnership: SARABURI SANDBOX

Saraburi Sandbox:

Thailand's first low-carbon model city launched in Saraburi, supported by Environment and Climate Change Canada (ECCC).

- ✓ **Key Players:** Collaboration among TCMA, Thai and Canadian governments, UNIDO, and the Global Cement and Concrete Association (GCCA).
- ✓ **Goals:** Promote sustainable practices in cement and concrete industries; aligns with Thailand's Net Zero target by 2050.
- ✓ **Approach:** Emphasizes Public-Private-People Partnerships (PPP) for green technology and innovation.
- ✓ **Achievements:** Accelerated carbon reduction, global recognition at the World Economic Forum, and a model for sustainable transformation.



Case Study: Bangkok E-Bus

Situation:

Thailand is currently not using electric buses on scheduled routes as a means of public transport. This is the result of a lacking infrastructure and manufacturing capacity of e-buses & batteries.



Source: <https://www.international.klik.ch/news/publikationen/bangkok-e-bus>

Mitigation activity:

- Operation of e-buses on privately owned, scheduled public bus routes in the Bangkok Metropolitan Region.
- Reducing greenhouse gas emissions and air pollution through electric mobility.
- The programme aims to introduce electric vehicles for private public transport in Thailand's capital Bangkok to reduce greenhouse gas emissions on a broader scale.

Bilateral Cooperation Approach:

- The programme will be implemented in accordance with the **Paris Agreement Article 6**, the Nationally Determined Contributions of Thailand (Thailand's NDC), and the bilateral agreement **between Switzerland and Thailand**.
- Energy Absolute will enter into agreements with privately-owned operators of scheduled bus routes in the Bangkok Metropolitan Region with the objective to replace 100% of the existing internal combustion engine bus fleets. A charging station service network for these e-buses will be implemented.
- The total cost of ownership (TCO) of electric buses are currently much higher than the ones for internal combustion engine (ICE) buses. Carbon finance by the KliK Foundation from the purchase of up to **500,000 International Transferred Mitigation Outcomes (ITMO) until 2030** shall be used to levelling the total cost of ownership differential between baseline buses and the programme e-buses.

Climate Finance for Adaptation

SIX Key Sectors of Thailand's National Adaptation Plan



Financial Instruments for Adaptation

Grants

- Non-repayable funds to support adaptation projects or programs.
- For example, the GCF has provided a grant of USD 3 million to support the formulation and implementation of Thailand's NAP.

Loans

- Repayable funds that are borrowed from lenders, such as banks or development agencies, to finance adaptation projects or programs.
- For example, the Asian Development Bank (ADB) has provided a loan of USD 100 million to support the climate resilience and green growth project in Thailand.

Equity

- A form of ownership that is invested by shareholders, such as private companies or investors, in adaptation projects or programs.
- For example, the Global Environment Facility (GEF) has provided equity financing of USD 10 million to support the climate-smart lending platform in Thailand.

Bonds

- Debt securities that are issued by issuers, such as governments or corporations, to raise funds from investors for adaptation projects or programs.
- For example, Thailand's Bank for Agriculture and Agricultural Cooperatives (BAAC) has issued green bonds worth USD 60 million to support climate-smart agriculture in Thailand.

Section IV

Business models and related financing tools for renewable energy and transport

Business models and financial instruments for promoting decarbonization in power sector

Business models			Financial instruments
Generators	Consumers	Facilitators	
<ul style="list-style-type: none"> Self-consumption Wholesale PPA 	<ul style="list-style-type: none"> On-site private wire PPA ✓ ESCO ✓ Leasing (long-term PPA) Direct off-site PPA Sleeved PPA Aggregated PPA Mini-utility PPA 	<ul style="list-style-type: none"> Community Energy Virtual power plant Aggregation Reverse auction 	<ul style="list-style-type: none"> Crowdfunding Feed-in tariff scheme Renewable Energy Certificate (REC) Net-metering On-tax bill financing Tax incentives Green bond Pay as you go (off-grid)

- Wholesale PPA: term of contract that buyer will purchase electricity from generator at a fixed period of time and a fixed rate.
- On-site private wire PPA: Entities (buyers and sellers) are located on land adjoining energy generation assets. The assets generate power which is delivered directly to the offtaker, and not via the electricity distribution network.
- Off-site PPA (i.e., Direct off-site PPA, Sleeved PPA): contracts between a project developer (and likely backed by a financial counterparty) and a company, where the RE installation is not sited at the location of the company's electricity usage.
- Long-term PPA: contract between buyers and sellers up to 30 years
- Aggregated PPA: One project developers with multiple offtakers
- Utility PPA: contracts that can be closed between the owner of renewable energy assets and a utility/energy trader acting as the corporate buyer. However, a merchant PPA can also be completed between a corporate or public institution and a utility/energy trader working as a supplier

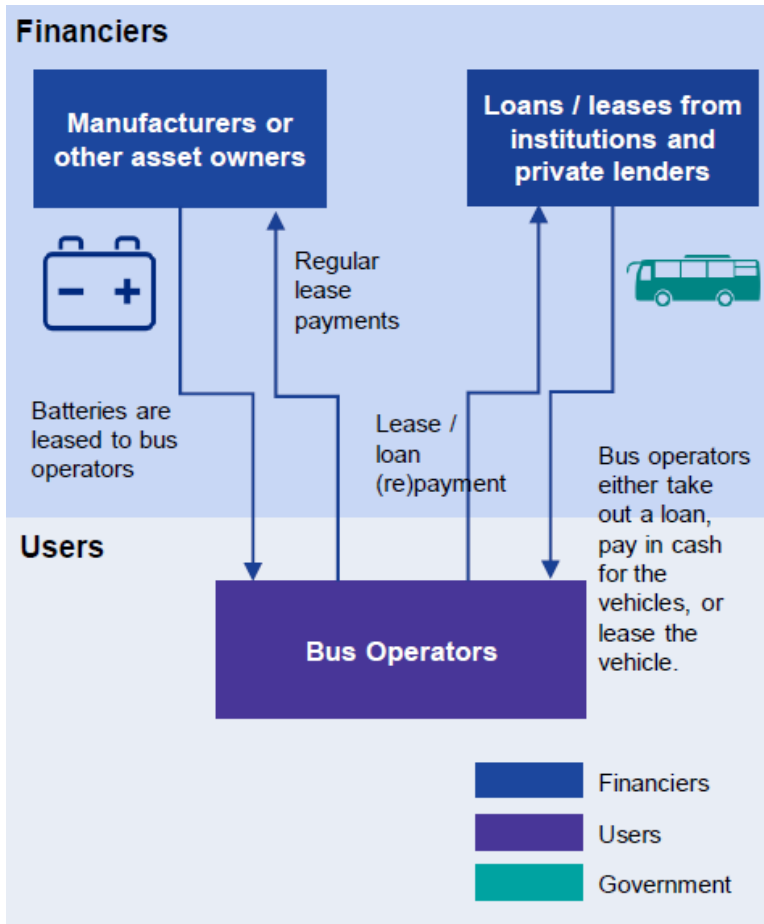
Source: <https://ember-climate.org/insights/research/global-electricity-review-2022/>

Business models for promoting electrification in transport sector

New mechanisms	Lease	Bond	Loan	Guarantee
<div>Demand aggregation</div> <div>Integrated end-to-end financing</div> <div>Revolving fund</div>	<div>Sale-and-leaseback</div> <div>Operating lease</div> <div>Component lease</div> <div>Financial lease</div>	<div>Green bond</div>	<div>Concessional loan</div> <div>Mezzanine loan</div>	<div>Partial risk guarantee (PRG)</div> <div>Residual value guarantee</div>

- The table above illustrates the status of global financing options.
- While operating/financial/sale lease and concessional loan are instruments that already exist, component lease, integrated end-to-end financing and green bond are instruments that are emerging.
- Meanwhile, guarantee, revolving fund, demand aggregation and mezzanine loan are potential instruments to promote public bus electrification.

Component Lease : Case study of United Kingdom (2019)



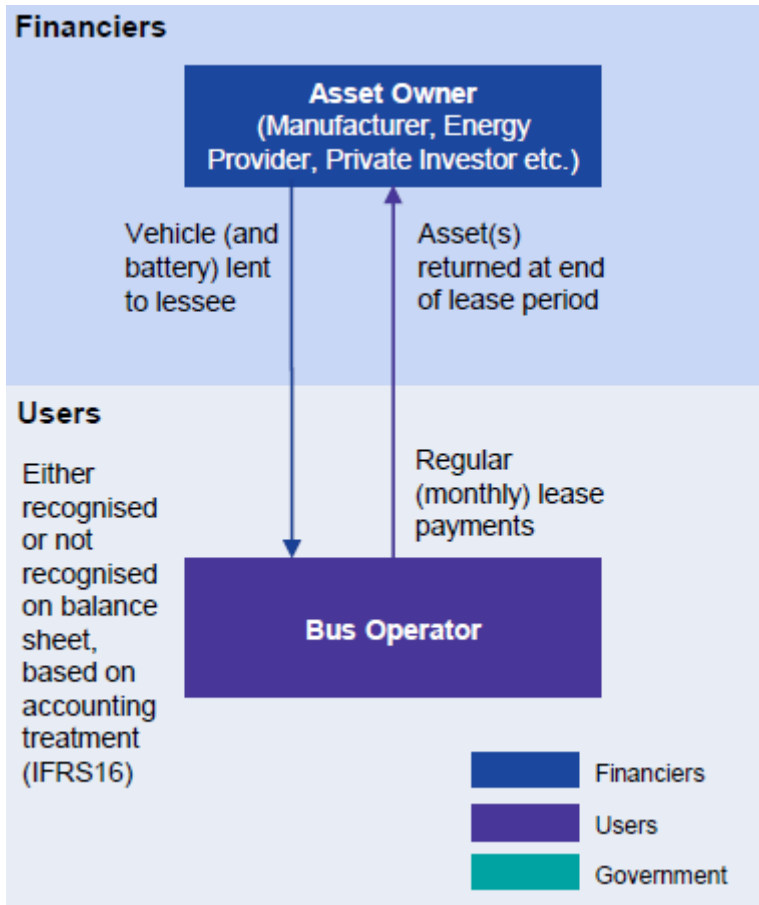
- **Activity:** Deployment of 34 electric buses (Service in the southern of London)
- **Owner of buses:** Abellio London Bus (bus operator with 750 buses)
- **Owner of battery and charging stations:** Zenobe Energy which is a manufacturer and service provider of battery energy storage systems in the UK

Barriers removed by the business model:

- Operators are not subject to a high initial investment on electric buses, which is higher than that of ICE buses due to the battery cost. Operators initially purchase only buses that are close to the cost of ICE buses, while battery owners invest in batteries and charging stations.
- Operators have no risk of residual value of batteries.
- Operators do not have to bear the burden of battery deterioration or damage.

<https://www.cpt-uk.org/media/yo2du40i/ze-bus-financing-information-and-ideas-pack.pdf> & <https://www.zenobe.com/news-and-events/abellio-and-zenobe-energy-to-bring-34-electric-buses-to-london> & <https://www.sustainable-bus.com/news/abellio-owns-the-buses-zenobe-owns-the-batteries-a-new-financing-scheme-in-london/>

Operating Lease : Case study of India (2021)



<https://www.cpt-uk.org/media/yo2du40i/ze-bus-financing-information-and-ideas-pack.pdf> & <https://timesofindia.indiatimes.com/city/bengaluru/karnataka-govt-eyes-green-rewards-from-pricey-electric-push/articleshow/80182608.cms>

- The local government of Karnataka, India, provided support for 390 electric buses (90 small feeder buses, 300 full-sized buses).
- The central and local governments jointly provided investment subsidies of approximately 3.8 million THB/vehicle to the operating lessor, provided that the lease fee charged to operators can be increased by not more than 1% per year (from the base level of about 10% per year).
- Transport Department provides a 15-year operating lease to the Bangalore Metropolitan Transport Corporation.
- The local government subsidizes around 5% - 8% of the operating cost per kilometer in the early years.
- The local government is the fare collector, and it is expected to break even in the 4th year.
- The government supports the domestic battery manufacturing industry, which aims to lower battery prices and reduce the cost of electric buses.

Barriers removed by the business model:

- An operator does not have to bear the burden of high initial investment. The operating lessor helps absorb the upfront costs and charges a monthly lease to the operator.
- The lessor is responsible for maintaining and repairing electric buses. This helps to solve the operator's limited capacity to repair and maintain electric vehicles.
- An operator has no risk of residual value. The lessor takes the risk, which can be mitigated through regular maintenance, including training the operator on proper operation and basic day-to-day maintenance.

Section V

Applicability for Thailand Post and potential issues of financing vehicles

Applicability of Climate Finance to Thailand Post

1. **The Climate Finance Strategy 2030 (DCCE) encourages the mobilization of both public and private finance** for sectors such as renewable energy, green transport, energy efficiency, and low-carbon infrastructure, all of **which are relevant to Thailand Post's operations.**

2. **Thailand Post can tap into various climate finance sources:**

- ☐ **Multilateral funds:** GCF and ADB loans for infrastructure and transport innovation.
- ☐ **National funds:** ENCON Fund for energy efficiency improvements or ThaiCI Fund for climate-related activities.
- ☐ **Commercial green loans from banks:** with terms designed for sustainability and transition financing
- ☐ **Issuance of Green Bond or Sustainability-linked Bond**

3. **The Thailand Taxonomy helps define what investments are considered “green”:**

- ☐ Thailand Post projects such as EV fleet transition, solar rooftop installations on depots, or green building upgrades would be categorized as “Green” or “Amber” aligned depending on the emissions and transition pathways.
- ☐ This alignment facilitates reporting, green bond issuance, and financial product eligibility.

Recommendations

- ✓ **Start with Low-Risk Green Projects**

Pilot solar rooftops or building energy retrofits with ENCON or commercial green loans.

- ✓ **Collaborate for E-Mobility Transition**

Partner with energy firms, EV leasing companies, or use models like the *Bangkok E-Bus* to scale clean transport.

- ✓ **Leverage Public-Private Partnerships (PPPs)**

As demonstrated in *Saraburi Sandbox*, PPPs are viable to introduce innovation in infrastructure projects.

- ✓ **Seek Accreditation/Partnerships**

Work with GCF-accredited entities or local climate finance experts to design and fund large-scale initiatives.

- ✓ **Develop a Green Finance Roadmap**

Align internal sustainability strategy with financing instruments and Thailand's taxonomy.

WHAT IGNITES CREATIVE ENERGY?



COMMITMENT



COMPETENCE



COLLABORATION



COMMUNICATION



COMPASSION



CREATIVITY



CLARITY



CONTENTIOUSNESS



COFFEE

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