

Green technology incentives in Malaysia

Malaysian Investment Development Authority (MIDA), Malaysia

<https://www.mida.gov.my/>

Green technology presents a solution in balancing the needs for economic development and responsibility towards the environment. As there is a growing global need in dealing with climate change; sustainable development and green technology need to go hand in hand in driving the economy, creating jobs, and attracting investments.

In 2015, at the United Nations Climate Change Conference (Conference of Parties, COP21) in Paris, the Government has committed to reducing Greenhouse Gas (GHG) emissions by 45% by 2030, based on 2005 GDP. This target was set for 35% on an unconditional basis and 10% on a conditional basis upon receipt of climate finance funding, technology transfer, and capacity building from developed countries.

The green technology agenda in Malaysia consists of a range of initiatives and policies which aim to increase the use of environment-friendly approaches in every sector to reduce the reliance on fossil fuels and environmental impact. This agenda will not only spur Malaysia's economy and social well-being but also drives the by services/system providers as well as to motivate companies to acquire assets that have been verified as green. As part of Budget 2020 measures, the Government continues to prioritize green adoption to spur economic multiplier effects by extending the Green Investment Tax Allowance for the purchase of green technology assets and Green Income Tax Exemption on the use of green technology services until 2023. The ITE has also been extended for companies which undertake solar leasing activities so as to increase interest and participation in the Net Energy Metering Scheme (NEM) which was introduced by the Sustainable Energy Development Authority (SEDA). Green Technology Incentives: Towards Achieving Sustainable Development in Malaysia nation's development trajectory on a low carbon and climate resilience pathway.

The National Green Technology Policy (NGTP), which was launched in 2009 recognized green technology as a driver to accelerate the national economy and promote sustainable development. It emphasizes on four focus areas of green initiatives: energy, building, transportation, and waste management.

Provisions of an Investment Tax Allowance (ITA) for the purchase of green technology assets and an Income Tax Exemption (ITE) on the use

of green technology services and system were necessary to strengthen the utilization of green applications. These initiatives serve to encourage investments in green equipment production and the adoption of green technology by services/system providers as well as to motivate companies to acquire assets that have been verified as green.

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Companies are advised to submit application for Investment Tax Allowance before incurring the first qualifying capital expenditure (CAPEX) on the related project or assets. As for Income Tax Exemption, companies are advised to submit application to MIDA before issuing the first invoice of qualifying business sale.

In 2019, a total of 427 green technology projects were approved with the investment amount of RM4.33 billion and 12 green services projects of a total investment of RM31.67 million.

As of January to September 2020, MIDA has approved 479 green technology projects with investments amounting to RM2.23 billion despite the challenging global economic environment; an encouraging indicator of potential high investment flows and interest in green technology in Malaysia. Over the past 5 years of the incentive initiatives, MIDA sees positive outcomes in increased renewable mix of power generation, green technology services providers, and better waste management.

Amid the COVID-19 pandemic, MIDA received more than 900 applications from January to December 2020. This reflects a positive trend in companies that are committed to minimize the degradation of the environment, reduce greenhouse gas emission, promote a healthy life, and increase the use of renewable energy as well as natural resources. It is certainly in line with the Government's aspiration towards sustainable development goals (SDGs), aspired by the United Nations.

(Source: MIDA e-Newsletter December 2020)

Clean Technology Fund

The Clean Technology Fund (CTF), one of two multi-donor trust funds under the Climate Investment Funds (CIF) framework, promotes scaled-up financing for demonstration, deployment and transfer of low-carbon technologies with significant potential for long-term greenhouse gas emissions savings implementation in renewable energy, energy efficiency, and clean transport in emerging market middle-income and developing economies.

For more information, access:

<https://www.climateinvestmentfunds.org/topics/clean-technologies>

Bio-Circular-Green economy in Thailand

National Science and Technology Development Agency (NSTDA), Thailand

<https://www.nstda.or.th/>

A new model called Bio-Circular-Green (BCG) has been conceptualized to underpin Thailand 4.0 policy as a strategy to drive the economic and social development. BCG is an integration of bioeconomy, circular economy, and green economy,

- **Bioeconomy** involves the production of renewable biological resources and the conversion of these resources into value added products.
- **Circular economy** aims at reusing and recycling resources.
- **Green economy** determines to keep economy, society, and the environment in balance, leading to sustainable development.
- It is believed that BCG model will **enable Sustainable Development Goals (SDGs)** through the promotion of sustainable agriculture, clean energy, and responsible consumption and production, ensuring the conservation and sustainable utilization of biodiversity, and protecting environment and ecosystem.

Thailand's competitive advantage in bioeconomy

Fundamental concept of bioeconomy is the value creation of resources. As Thailand is blessed with robust agricultural activities, rich natural resources, and diversity in term of both biological resources and physical geography, the country is in an excellent position to take on bioeconomy.

Thailand is among top producers and exporters of several agricultural commodities and aquacultures such as rice, cassava, sugarcane, para rubber, and shrimp. Some of these crops are of significant importance to both food and energy security. In addition to strong biomass production sector, food industry and other related industry in the value chain also represent a large industrial sector in Thailand. The food industry contributed approximately 23% of the country's GDP and the value of Thailand's food industry, including local consumption and exports, is expected to reach USD102 billion in 2017.

Thailand is situated in "Indo-Burma"—a biodiversity hotspot that is ranked as the eighth most biodiverse region in the world. Hosting several forest types and aquatic habitats, Thailand is estimated to support about 10% of all species of living organisms in the

world. Significant investment has been made to support biodiversity research and establish world-class infrastructure for preserving microorganisms with the purpose of utilization study, making the country No. 6 in the world in term of microbial collection.

Thailand's vision and national policy

In November 2019, Thailand's Ministry of Higher Education, Science, Research and Innovation (MHESI) unveiled a proposal entitled "BCG in Action: The New Sustainable Growth Engine" mapping out strategies to drive BCG agenda forward.

Blessed with rich natural resources and strong agricultural activities, Thailand will apply the BCG model to focus on four s-curve industries—namely agriculture and food; bioenergy, biomaterial, and biochemical; medical and wellness; and tourism and creative economy. Science, technology, and innovation have enormous roles to play in this BCG movement. Innovations can be employed to enhance the capacity and competitiveness of players across the value chain, both upstream and downstream, in all four s-curve industries. With proper agricultural innovations, farm productivity and efficiency can be raised, benefiting the whole bioeconomy as biomass is the foundation of all industries in the bioeconomy model. Farm production improvement also boosts income of farmers and communities, and thereby reducing social disparity. Innovative technology can be applied to add value to resources and agricultural products, and thereby enhancing the competitiveness of downstream industries. High-value products for the agriculture and food industry could be, for examples, functional food ingredients; for health and medicine industry are biopharmaceuticals and precision medicine treatment; for energy and chemicals industry are valorized fuels and chemicals, and for tourism industry a medical or knowledge-based tourism.

The four target industries currently have a combined economic value of 3.4 trillion THB (21% of GDP). BCG model has a potential to increase the economic value to 4.4 trillion THB (24% of GDP) in the next 5 years.

BCG strategy consists of 4 drivers and 4 enablers, involving close collaborations among the government, industry, communities, academia, and international organizations.

Clean Energy Transitions Programme

The Clean Energy Transitions Programme (CETP) of International Energy Agency (IEA) leverages the IEA's unique energy expertise across all fuels and technologies to accelerate global clean energy transitions, particularly in major emerging economies. CETP activities include collaborative analytical work, technical cooperation, training and capacity building and strategic dialogues.

For more information, access:

<https://www.iea.org/programmes/clean-energy-transitions-programme>