



Thailand's Economy Update

Department of Alternative Energy
Development and Efficiency

Wisaruth Maethasith

15th - 16th March 2023

Long-term Energy Efficiency Implementation 2022 - 2037

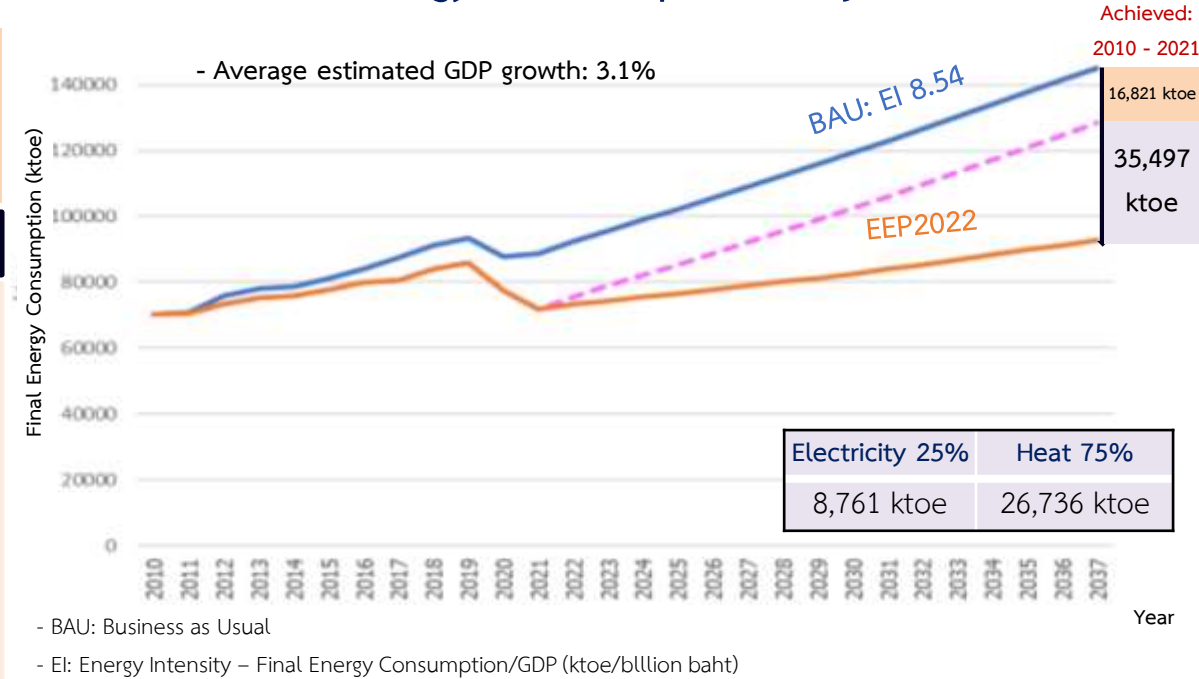
Goal: Energy Intensity reduction by 36%

(approx. 52,318 ktoe) by 2037 – base year 2010

Compulsory	Voluntary	Complement
<ul style="list-style-type: none"> Energy Management Standards Energy Codes (Industrial, Buildings, Residential, Farming) Energy efficiency in land transport 	<ul style="list-style-type: none"> Equipment Standards and Labeling Financial incentives Innovations (IoT, Smart tech., Big Data, AI, etc.) Energy efficiency in transport sector (EV, mode shifting) Energy efficiency in residential sector (Efficient/Smart Home) RE-Integrated Equipment (Biomass boiler/furnace, Solar heat, etc.) Energy Efficiency Resources Standards (EERS) (Consultation, Fuel switching, etc.) 	<ul style="list-style-type: none"> Human Resources Development (HRD) <ul style="list-style-type: none"> Energy Manager Energy Auditor Technologies Public Relation/Awareness Research and Development

Source: DEDE

Final Energy Consumption Projection



Energy Saving (ktoe) by Sector

Sector	Electricity	Thermal	Total	Percentage
1. Industrial	4,033	8,399	12,432	35
2. Commercial	2,964	578	3,542	10
3. Residential	1,566	208	1,774	5
4. Agricultural	198	512	710	2
5. Transportation	0	17,039	17,039	48
รวม	8,762	26,735	35,497	100



Thailand's effort on Building Energy Code and toward net zero energy building, built on the collaboration during ECAP under SOME-METI Work Programme

Building Energy Code:

- In collaboration with Department of Public Works and Town & Country Planning, new or retrofitted buildings must comply with building energy code (**announced in the royal gazette - ACTIVE**)
- Applicable for 9 types of building with area larger than 2,000 m²



Components to be considered:

1. Envelope system
2. Electric lighting system
3. Air-conditioning system
4. Water heating appliance
5. Renewable energy system
6. Whole building energy

Pilot ZEB (inside DEDE)



Building Info:

Building type:	Office building
Gross floor area:	2,650 m ²
Number of floors:	6 floors
Number of occupants:	150
Estimated finish date:	March 2023
Construction cost:	82M Baht (approx. 2.4 million USD)

Key information:

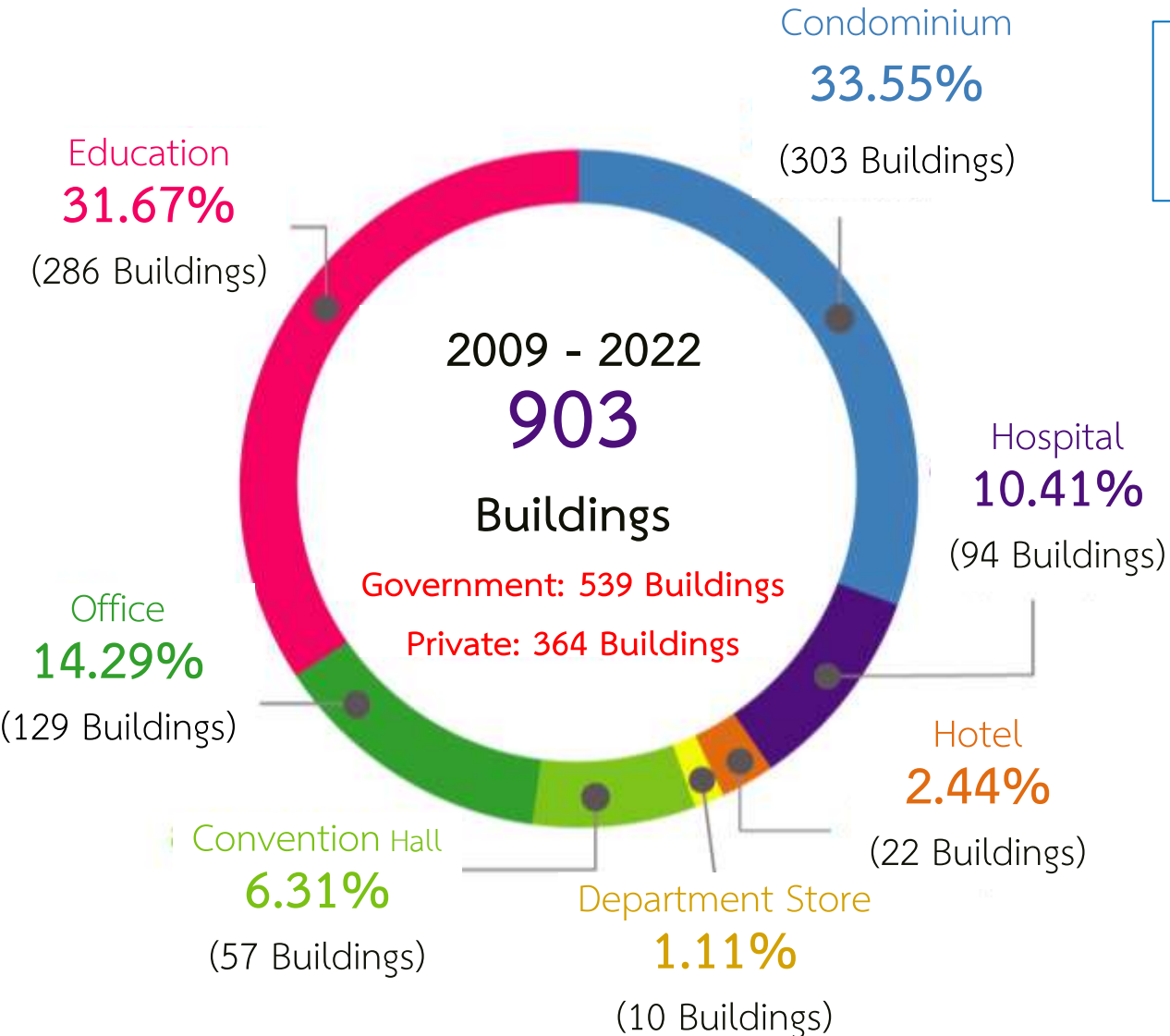
- 97.56 kWp Monocrystalline Solar PV (142,437 kWh/year)
- Low U-Value building envelope, with WWR = 0.2
- VRF air-conditioning system (COP = 4.25 – 4.95), with energy recovery ventilator



Building Energy Code (BEC)

BEC 4.0

- Capacity buildings for stakeholders
- Development of Web-based BEC Tools
- Promotion labeling



BEC Award



Business Building's Labeling Program



Goal: domestic production of ZEV (Zero Emission Vehicle) to account for at least **30%** of total production by 2030

EV Production Target

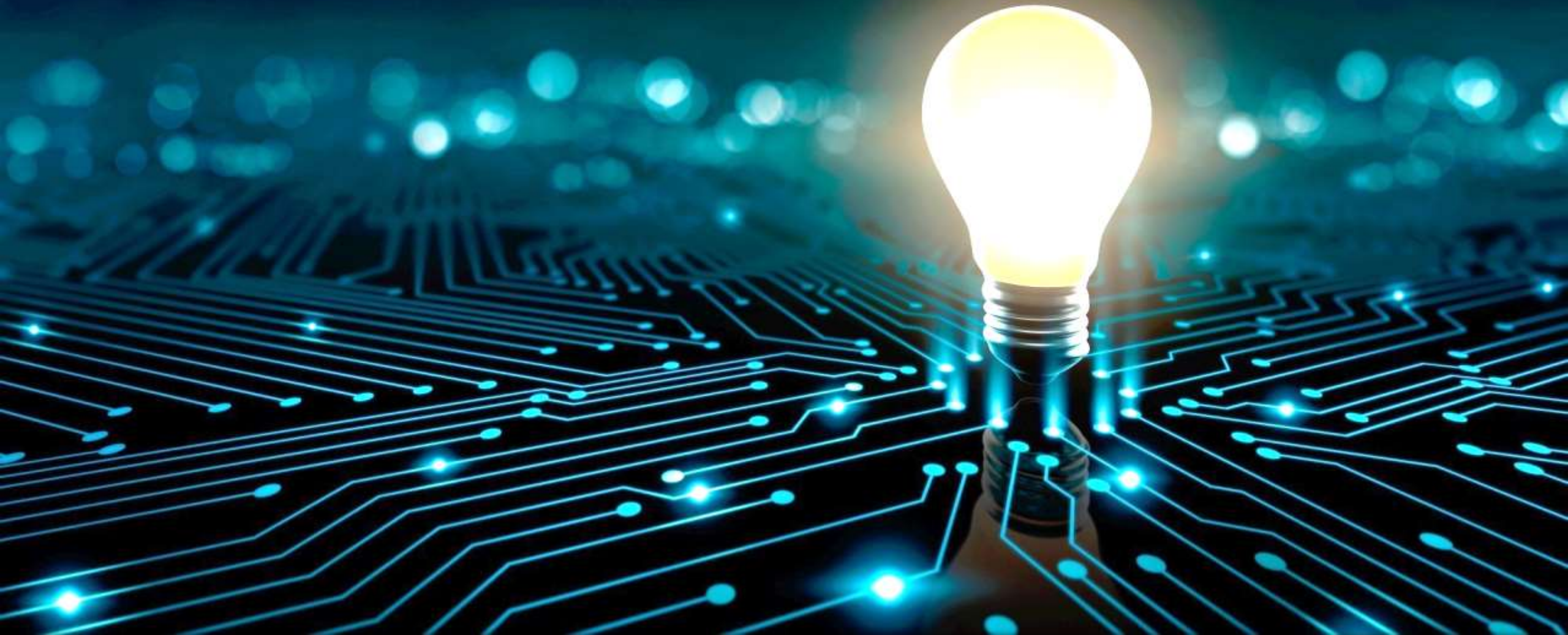
- Cars and Pickup Trucks: 725,000 units
- Motorcycles: 675,000 units
- Bus and Trucks: 34,000 units
- Supporting production of tricycle (Tuk Tuk), passenger ships, and rail transports.

Promotion of EV Utilization

- Cars and Pickup Trucks: 440,000 units
- Motorcycles: 650,000 units
- Bus and Trucks: 33,000 units
- Supporting the deployment of charging stations (12,000 fast-charge stations and 1,450 battery-switching stations for motorcycles)



Thank You



For further information, please contact email: wisaruth_m@dede.go.th