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Department of Alternative Energy Development and Efficiency
MINISTRY OF ENERGY

RE Scenario for Thailand

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Thailand emissions target

- Thailand NAMA sets the target of 7-20% reduction from the baseline in 2020

Scenario category	Annex I	Non-Annex I
A-450 ppm CO_2-eq	**–25% to –40% below 1990**	• Substantial deviation from baseline in Latin America, Middle East, East Asia and Centrally-Planned Asia • **Non-Annex I: -15% to -30% below baseline**
B-550 ppm CO_2 eq	–10% to –30% below 1990	• Deviation from baseline in Latin America and Middle East, East Asia • Non-Annex I: 0% to -20% below baseline
C-650 ppm CO_2-eq	0% to –25% below 1990	• Non-Annex I: 10% above to 10% below baseline

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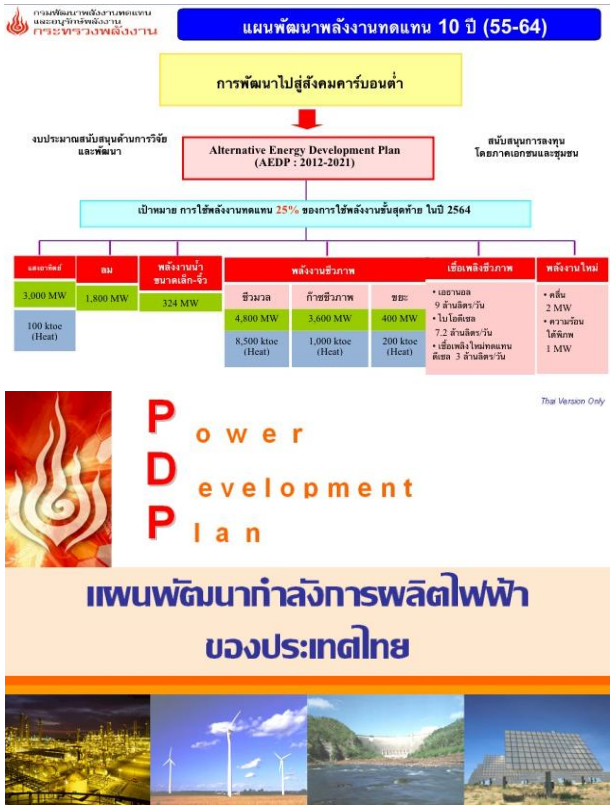
Policy and Plan

- Alternative Energy Development Plan 25% in 10 year (AEDP)
  - (2012 – 2021)
- Energy Efficiency Development Plan (EEDP)
  - (2011 – 2030)
- Power Development Plan (PDP)
  - (2012 – 2030)



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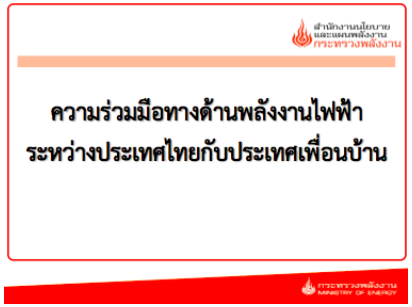
Integration of Policies and plans

AEDP

PDP

EEDP

Others



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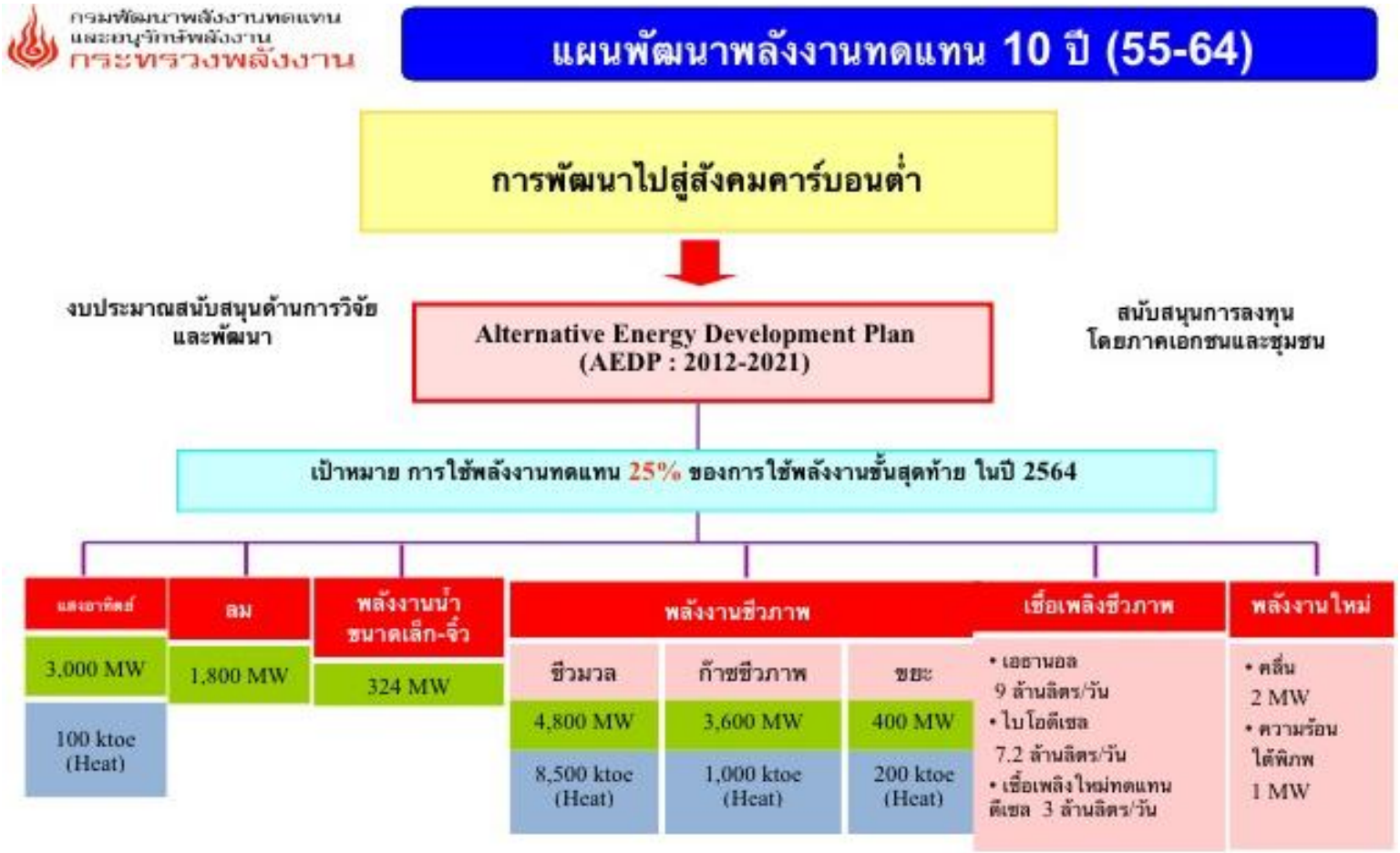
AEDP



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The principles of Levels 1, 2, 3 and 4

Level 1	Level 2	Level 3	Level 4
• No effort (not business as usual)	• Effort described by most stakeholders as achievable	• Effort needing significant change – hard but deliverable	• The maximum possible due to physical/ practical constraints only • (similar to 'technical potential')

We used these broad guidelines for developing the trajectories in each sector. Clearly, there is an element of judgement, particularly when comparing very different sectors. The aim is to achieve broadly comparable levels of effort in each trajectory across the different sectors

RE Scenarios

Trajectory selection							Trajectory Descriptions			
Supply				YOUR CHOICE	LIMIT		1 (or A)	2 (or B)	3 (or C)	4 (or D)
Electricity Generation	Electricity Generation	II.a	Nuclear power stations	1	4		No new nuclear power installed	~2 1GW power stations	~4 1GW power stations	~10 1GW power stations
		I.a	Coal-fired power plant	2			No new coal-fired power installed	additional 4,400 MW in 2030	additional 8,800 MW in 2030	additional 35,000 MW in 2050
		I.b	CCS plant	1			No coal-fired power installed with CCS	10% coal-fired power installed with CCS in 2020	50% coal-fired power installed with CCS in 2030	80% coal-fired power installed with CCS in 2050
		III.a	Wind	2	4		Existing wind turbines	600 MW in 2021 and is sustained	1,800 MW in 2021 and is sustained	3,600 MW in 2050
		III.b	Hydro	2	4		Supply of electricity is maintained at current levels 135 MW	Supply grows slowly, additonal 324 MW by 2021 and is sustained	Supply grows slowly, additonal 2X324 MW by 2021 and is sustained	Supply grows slowly, additonal 2X324 MW by 2021 and is sustained
		III.c	Geothermal	2	4		No deployment of geothermal electricity generation	Supply of geothermal electricity grows slowly, additonal 1 MW in 2030 and is sustained	Supply of geothermal electricity grows slowly, additonal 1 MW in 2030 and is sustained	Supply of geothermal electricity grows slowly, additonal 1 MW in 2030 and is sustained
		III.d	Solar	2	4		Supply of electricity is maintained at current levels 1259 MW	2,000 MW in 2021 and is sustained	4,000 MW in 2030 and is sustained	40,000 MW in 2050
		III.e	Biomass	3	4		Existing biommass power plants 2382 MW	3,600 MW in 2021	4,800 MW in 2021	6,200 MW in 2050

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Ways of Level 1 should be set

- Tomorrow **government announced** that x technology would no longer be supported, and it was clear that the private sector would not do it alone.
- No action is taken to change x behaviour, so **current trends** continue into the future.
- **Public opinion** was so strongly against x technology that government prohibited its use within the country.

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Ways of Level 2 and 3 should be set

- Levels 2 and 3 are designed to show two levels of **realistic** government intervention for a technology or behaviour.
- Level 2 could be used to show **existing policies** for a sector i.e. the RE target in the existing policies that are possible to achieve.
- Level 3 should be **ambitious**, but still look within the realms of possibility.
- Level 3 is **more than what is currently being done**. The RE target in the existing policies that are not possible to achieve will be set at Level 3.

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Ways of Level 4 should be set

- Maximum RE potentials
- Estimation of RE share (%) for the year 2050
- The opinion of the **most ambitious** stakeholder
- Drawing an example of something achieved in **another country**.