

GOING NUCLEAR

Climate vows loom over the draft Power Development Plan, which provides a blueprint for electricity for 25 years. 4

Climate pressure spurs Thailand's energy revamp

New power plan backs renewables and nuclear, writes Yuthana Praiwan

Thailand's clean power supply and energy trade are poised for changes under the draft Power Development Plan (PDP), which will shape the country's electricity landscape from 2026 to 2050.

The new PDP seeks to accelerate renewable energy projects and introduce nuclear power into the mix, according to energy officials and executives.

These measures are seen as vital to Thailand's pledge to cut greenhouse gas emissions, a commitment reaffirmed at the UN climate summit in Brazil in November 2025.

If approved later this year, the 2026 PDP will serve as a roadmap towards Thailand's net-zero target for 2050, balancing emissions with carbon absorption.

NDC 3.0

Thailand's updated climate plan, known as NDC 3.0, underpins the push for more renewable energy.

"We presented our NDC 3.0 at the UN Framework Convention on Climate Change last year," said Prasert Sinsukprasert, energy permanent secretary.

Deemed nationally determined contribu-



The Egat headquarters on Charan Sanitwong Road in Nonthaburi. The authority could become a developer and operator of small modular reactors. SEKSAN ROJJANAMETAKUN

tions, NDCs serve as the official climate action plan for each country.

The current effort is Thailand's third revision of its climate pledge at the Paris Agreement, which calls on nations to limit global warming to less than 2°C.

Countries submitted their first plans between 2015 and 2016, followed by NDC 2.0 between 2020 and 2021.

"NDC 3.0 is a major reason for the changes to the PDP," Mr Prasert said.

Under the new plan, Thailand must cut emissions to 152 million metric tonnes of carbon dioxide equivalent by 2035 from the 2019 baseline of 379 MtCO₂eq.

The country will be assessed on its ability to reach net zero by 2050, 15 years earlier than it previously targeted, he said.

Between 2024 and 2025, several countries submitted their NDC 3.0 pledges. Brazil committed to a 59-67% emissions cut by 2035, while the United Arab Emirates pledged a 47% reduction, according to NDC Partnership, a global coalition launched in 2016 to help developing nations turn their climate promises into reality.

Cambodia submitted its NDC in August 2025, committing to reduce greenhouse gas emissions by 16% unconditionally — and by up to 55% with support.

These updates reflect growing international pressure to align with the Paris Agreement's 1.5°C goal.

2024 PDP SCRAPPED

The 2024 PDP was jettisoned despite passing public hearings because of objections from analysts as well as political changes.

Calls from energy analysts to revise key electricity generation issues along with a change of government led to the withdrawal of the plan, which had been slated for implementation from 2024 to 2037.

The plan advocated for renewables to account for 51% of Thailand's power mix by 2037, up from 22% in 2024. Critics said the target is outdated.

"The 51% proportion is too low," said Naruechon Dhumrongpiyawut, chief executive of Gunkul Engineering, a clean energy developer.

She said foreign investors, especially data centre operators, require vast amounts of clean energy and limited supply could deter investment.

The fate of the 2024 PDP highlights the challenges of balancing technical feasibility, political realities and investor confidence.

Analysts said the new plan must be more ambitious to keep pace with global energy trends.

SMR DEVELOPMENT

Beyond renewables, nuclear power is being considered to help Thailand meet its climate commitments.

Officials are studying small modular reactors (SMRs), nuclear units of up to 300 megawatts each, roughly one-third the size of traditional reactors, according to the International Atomic Energy Agency.

The 2024 PDP proposed two SMRs, each with a capacity of 300MW, to begin operations towards the end of the plan.

Mr Prasert said the new PDP may include more SMRs, though details remain under review by the PDP committee.

The Electricity Generating Authority of Thailand (Egat) was previously tasked with developing the SMR projects.

The Energy Ministry is assessing readiness in terms of technology, legal frameworks and the agencies involved.

Private firms are also exploring SMR development, with officials noting any that are prepared could proceed alongside Egat.

Globally SMRs are gaining traction as a safer, more flexible nuclear option to help countries reach their net-zero goals.

Energy specialist Viraphol Jirapraditkul said the 600MW capacity outlined in the 2024 PDP was insufficient, urging higher targets in the new plan.

He said SMR projects would require international support, including subsidies, low-interest loans, guarantees and investment.

Wattanapong Kurovat, director-general of the Energy Policy and Planning Office, said public feedback would be sought once the 2026 PDP draft is complete, before submission to the National Energy Policy Committee.

Regarding whether political instability could derail progress, he declined to comment directly, but stressed climate action is now a global mandate.

"Thailand is committed to climate plans, no matter which government is in power," said Mr Wattanapong.

Thailand first explored nuclear power in the 1970s, but abandoned the idea after discovering natural gas in the Gulf of Thailand.

Nuclear energy was later included in the 2010 PDP, with a 2,000MW project slated for 2020-21. That plan was shelved in 2011 following the Fukushima disaster in Japan.

Scientists note SMRs are designed with enhanced safety features and environmental safeguards, making them a more viable option for Thailand's future energy mix.