

THAILAND 2050 NET ZERO CEMENT & CONCRETE ROADMAP



THAILAND COMMITMENT

- 2030 Achieving NDC 40%
- 2050 Achieving Carbon Neutrality
- 2065 Achieving Net Zero Greenhouse Gas Emissions

THAILAND NDCs

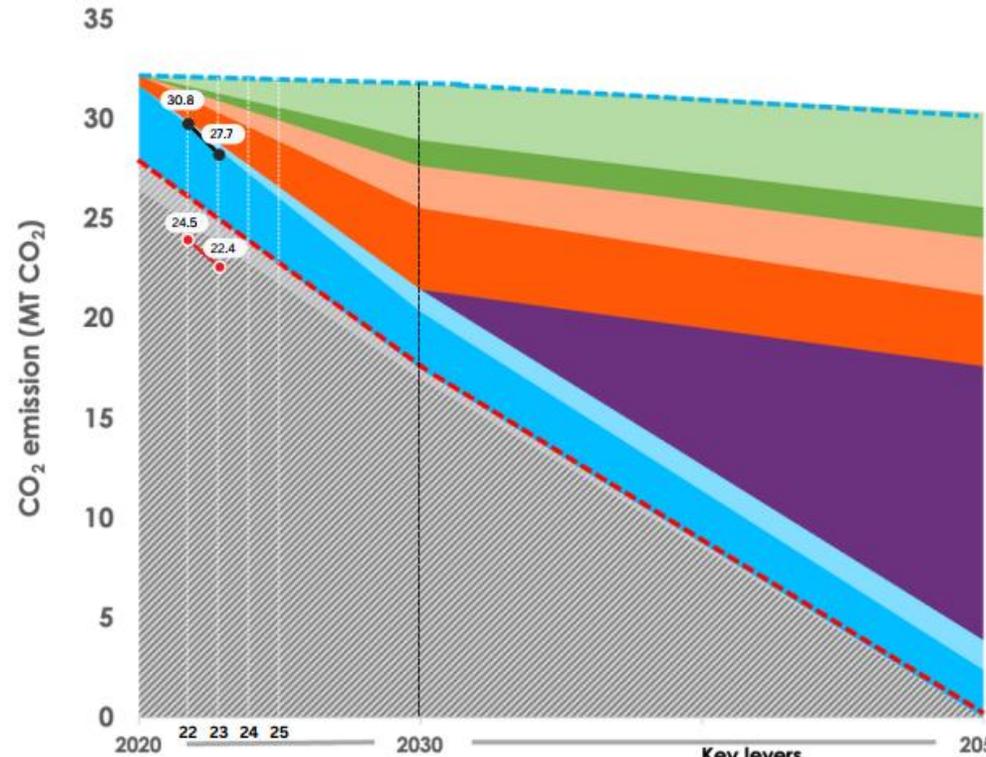
THE INDUSTRIAL SECTOR
(Cement industry)

AREA-BASED APPROACH
(Saraburi Province)



COP27
SHARM EL-SHEIKH
EGYPT 2022

Officially announcement at COP27
November 2022



Contributions to achieve net zero

Efficiency in design and construction 15%

Efficiency in concrete production 5%

Savings in cement & binders 10%

Savings in clinker production 12%

Carbon capture & utilization/storage (CCUS) 45%

De-carbonization of electricity 5%

CO₂ sink: recarbonation 8%

% Contribution to net zero

- client brief to designers to enable optimisation
- design optimisation
- construction site efficiencies
- re-use and lifetime extension
- optimised mix design
- optimisation of constituents
- continue to industrialise manufacturing
- quality control
- portland clinker cement substitution. Also expressed through clinker binder ratio
- Alternatives to portland clinker cement
- thermal efficiency
- Savings from waste fuels ("alternative fuels")
- use of decarbonated raw materials
- use of hydrogen as a fuel
- carbon capture at cement plants
- decarbonisation of electricity used at both cement plants and in concrete production
- natural uptake of CO₂ in concrete a carbon sink

Total reduction 100%

Key levers

- Binders
- Design & Construction
- AF (RDF & Biomass)
- CCUS
- Design & Construction
- Binders (Hydraulic cement, Calcined clay)
- AF (RDF & Biomass)

- Net zero pathway
- CO₂ emissions from electricity
- Direct net CO₂ emissions