



CCSM-National Coordinator Meeting (M2)

Country Presentation: Thailand

by

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- **Where is CCS in your country's recent commitment/pledge in the last COP21 (Paris Climate Conference), and its implementation plans (if any)**
- **General update related to CCS storage research/study**
- **Application of the CCS Guideline /methodology – what are the challenges and solutions?**
- **Specific technical needs to be addressed in the program**
- **Recommended experts to be invited and for what specific expertise?**
- **Recommendations / suggestions for future activities (general & specific)**



Thailand's recent pledge in the last COP21 is to reduce CO2 emission by 20-25% by 2030 by reducing road transportation and promoting rail transportation, promote renewable energy, stop deforestation, integrated water management.

Promote sustainable growth by using sufficient economy.



Thailand Climate Change Master Plan (2012-2050)

Short-term plan

- 1. Develop and promote renewable energy**
- 2. Promote Energy Efficiency**
- 3. Green technologies for industries**
- 4. Transportation reform with emphasis on railways**
- 5. Planning and Zoning of Food crop and Energy crop**
- 6. Develop and improve emission model**
- 7. Improve a process on analyzing environmental impact by including CO2 emission**



Thailand Climate Change Master Plan (2012-2050)

Short-term plan: Progress

1. Develop and promote renewable energy
2. Promote Energy Efficiency
3. **Green technologies for industries:** CDM, Crown Standard, Carbon footprint
4. Transportation reform with emphasis on railways
5. **Planning and Zoning of Food crop and Energy crop**
6. Develop and improve emission model
7. Improve a process on analyzing environmental impact by including CO2 emission



Successful projects



Lots of progresses



Lots of efforts, some of progresses, but gaining traction



Minimal progresses*

* This is my personal view.



Thailand Climate Change Master Plan (2012-2050)

Long-term plan

1. **Develop incentive and penalty as a tool for climate change mitigation**
2. **Promote sufficient economy**
3. **Promote sustainable low carbon cities**

CCS is a backup plan.



Thailand Climate Change Master Plan (2012-2050)

Long-term plan: Progress

1. Develop incentive and penalty as a tool for climate change mitigation
2. Promote sufficient economy
3. Promote sustainable low carbon cities

CCS is a backup plan.



Successful projects**

** small impacts



Lots of progresses



Some progresses



Minimal progresses*

* This is my personal view.



Thailand Integrated Energy Blueprint (2015-2036)



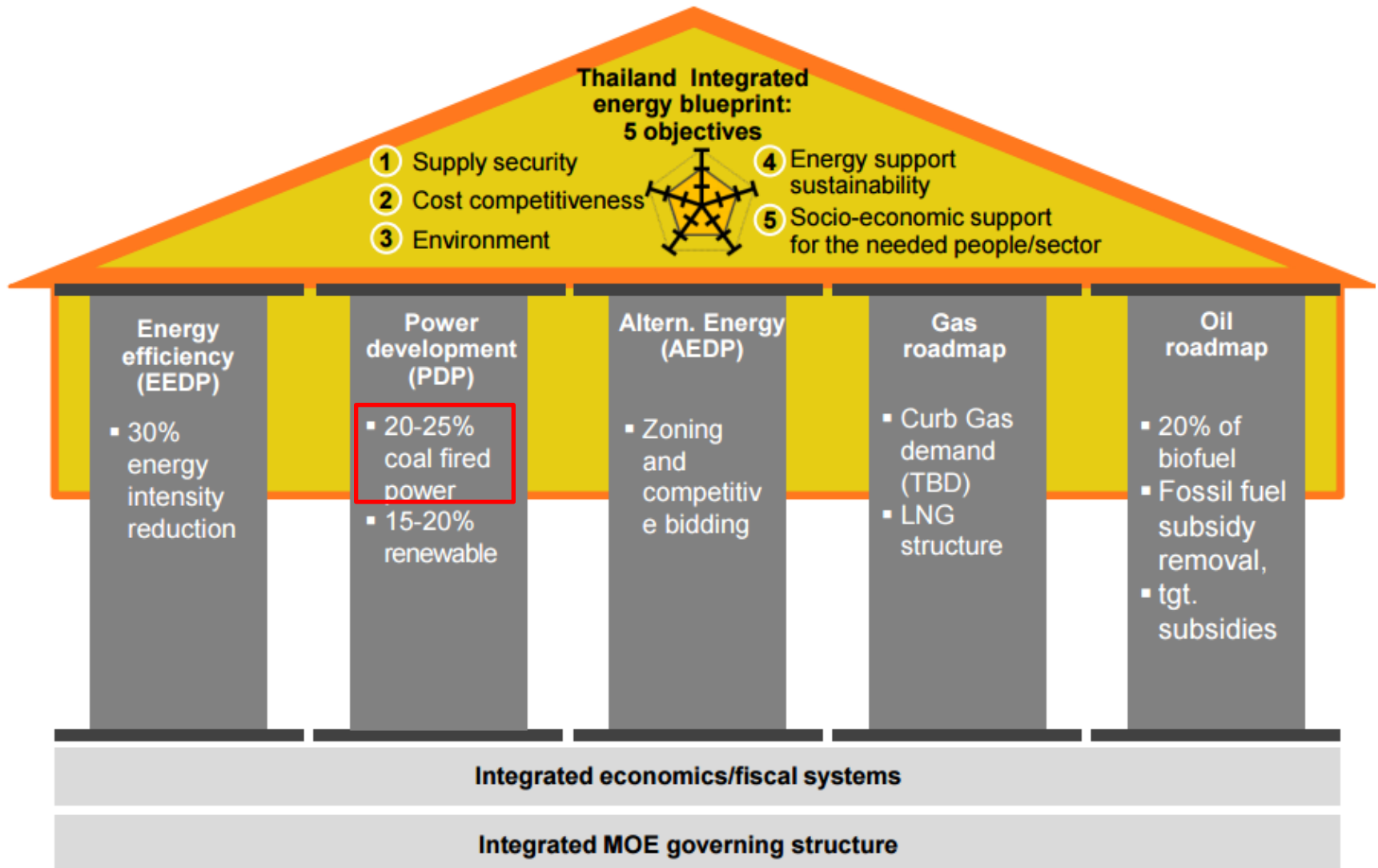
TIEB

THAILAND INTEGRATED ENERGY BLUEPRINT

PDP	POWER DEVELOPMENT PLAN แผนพัฒนากำลังผลิตไฟฟ้าของประเทศไทย*
EEP	ENERGY EFFICIENCY PLAN แผนอนุรักษ์พลังงาน*
AEDP	ALTERNATIVE ENERGY DEVELOPMENT PLAN แผนพัฒนาพลังงานทดแทนและพลังงานทางเลือก
GAS	GAS PLAN แผนบริหารจัดการก๊าซธรรมชาติ
OIL	OIL PLAN แผนบริหารจัดการน้ำมันเชื้อเพลิง



Summary of Thailand Integrated Energy Blueprint





Thailand's Focus

- **Emission Calculation: JGSEE**
- **Chemical Carbon Capture: Chulalongkorn University***
- **Biological Carbon Capture: Consortium (Algae, Forestation)**
- **CCUS: PTTEP CO₂ → CH₄ Project**

* Prof. Bundhit Eua-arporn, a former director of Energy Research Institute will be next president of Chulalongkorn University.



New Potential CO₂ for EOR: no study

Key issue: Proposed new power plant is not CCS ready.

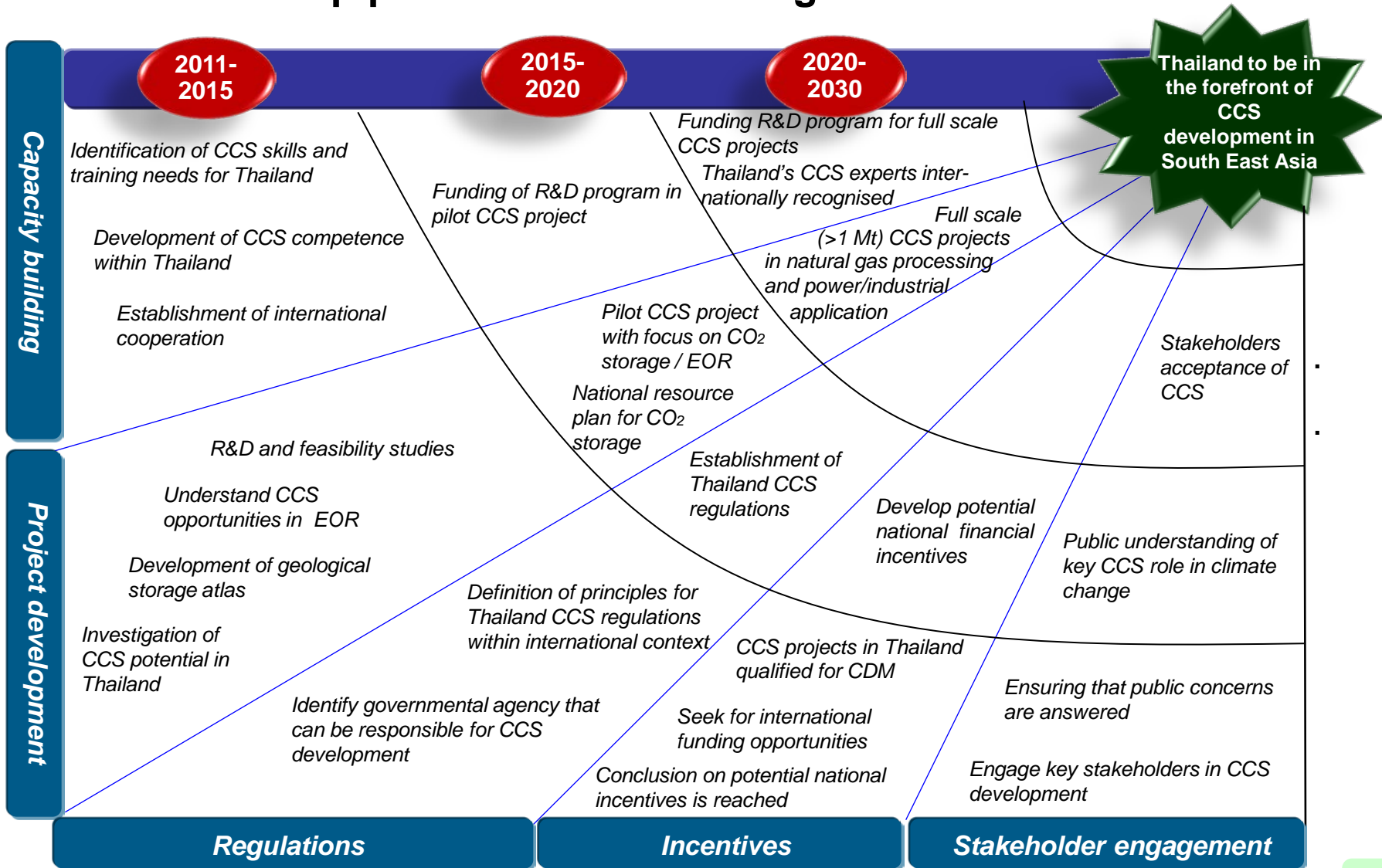


Source: PTT



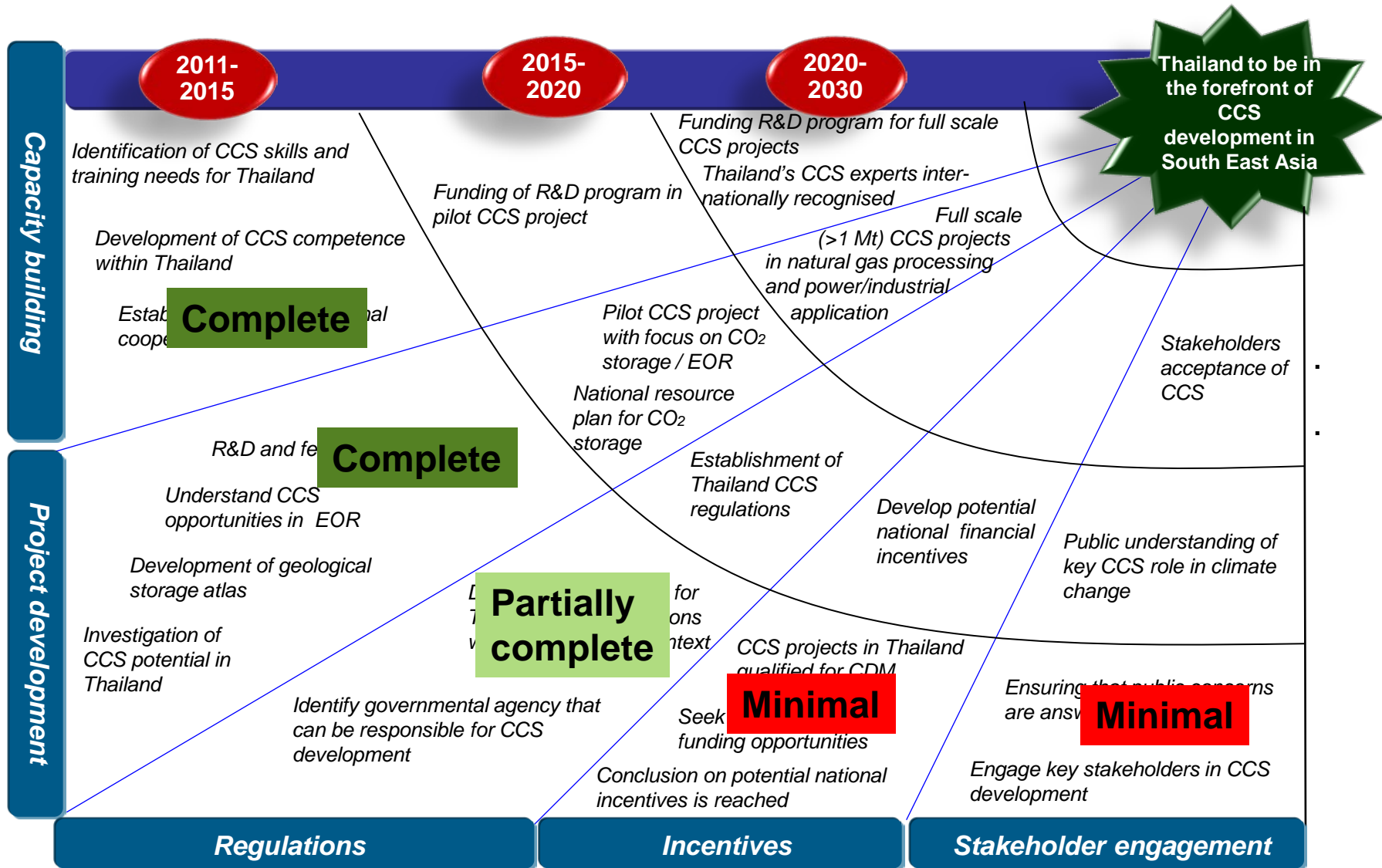
Thailand CCS Roadmap for E&P Industry

CCS is a backup plan for Climate Change Master Plan.





Thailand CCS Roadmap for E&P Industry





Application of CCS Guideline

- Thailand already calculated and map CO₂ storage capacity.
- Challenge: Not much support from government and industry.

Technical Needs

- Public engagement
- Incentive / carbon tax examples
- CCS policy maker

Recommend Experts

- 270 strategies (www.270strategies.com)
- World Bank

Suggestions for Future Activities

- A workshop with a result of CCS public engagement plan
- A workshop about economic aspect and policy of CCS



Thank you question