

# 台灣中部陸海域之二氧化碳地質封存潛在場址調查及碳封存發展規劃

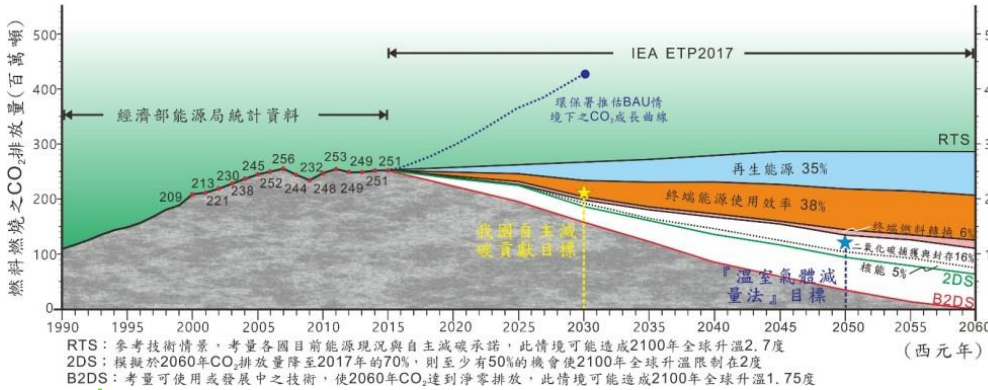
執行單位

國立中央大學

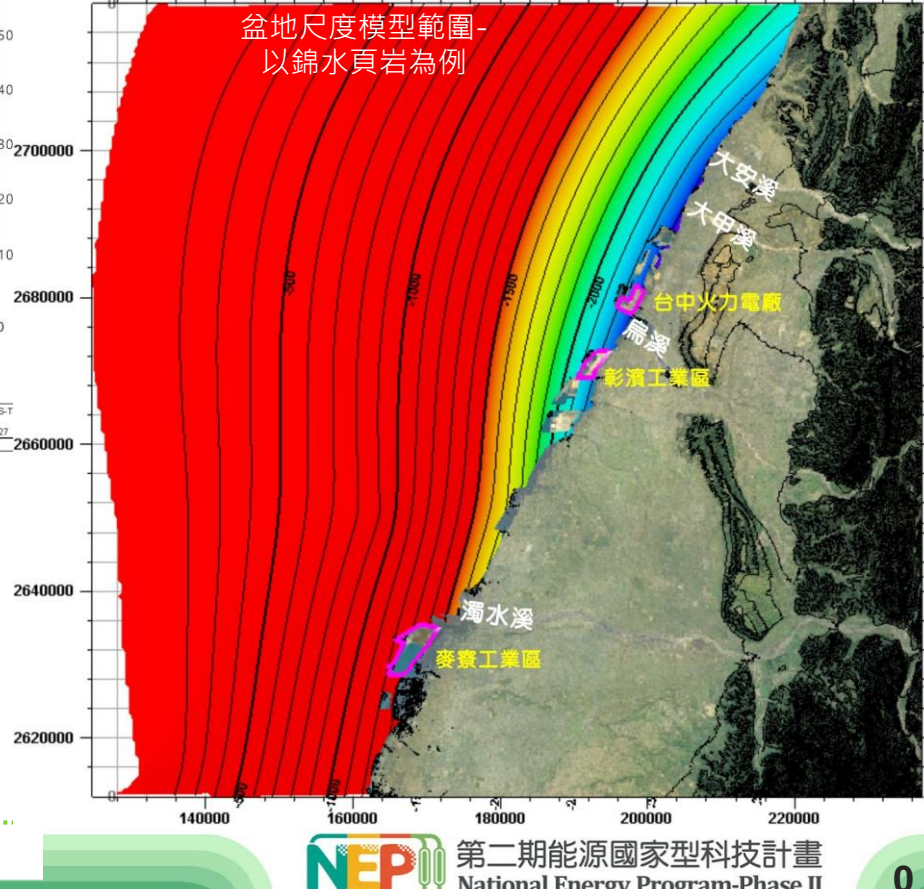
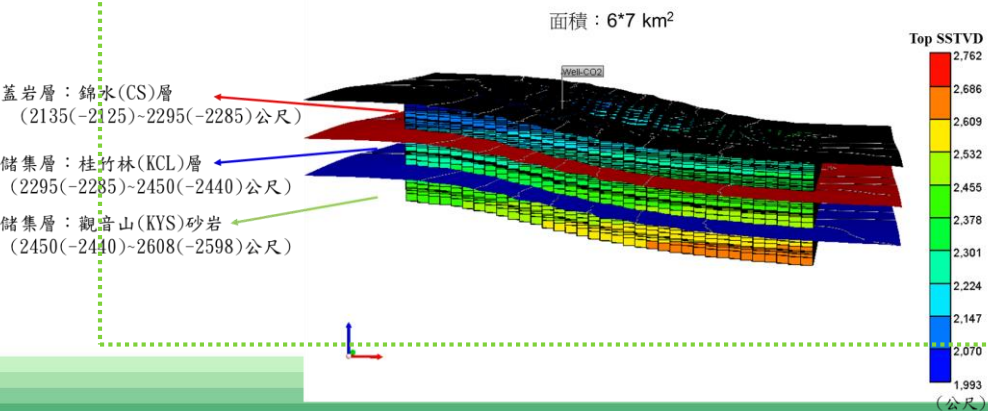
計畫主持人

林殿順

- 本整合型計畫之主要工作為二氧化碳地質封存潛在場址調查，建立盆地尺度及場址尺度之地質模型，進行二氧化碳有效封存量之評估，並評估二氧化碳封存的可注性、安全性及風險，研究成果可供未來灌注二氧化碳之重要背景資訊。



錦水/桂竹林-觀音山砂岩系統 (R2) 模型



- 中部陸海域廣域之反射震測與地下地質研究，提出各碳封存系統之蓋岩層與封存層之空間分布以及各封存系統之盆地尺度二氧化碳封存量；
- 針對潛在碳封存場址(如台中電廠、彰濱工業區、王功/麥寮)地區進行精細調查，建立地下地質模型。收集基線(即二氧化碳灌注前)地殼變形與地震資訊，評估各場址大規模灌注二氧化碳安全性與風險分析。計算場址尺度的二氧化碳有效封存量；
- 協助台電精進彰濱區碳封存試驗場之地質模型

# Site Characterization and Development of Carbon Storage Strategy in Western Central Taiwan and Offshore Area

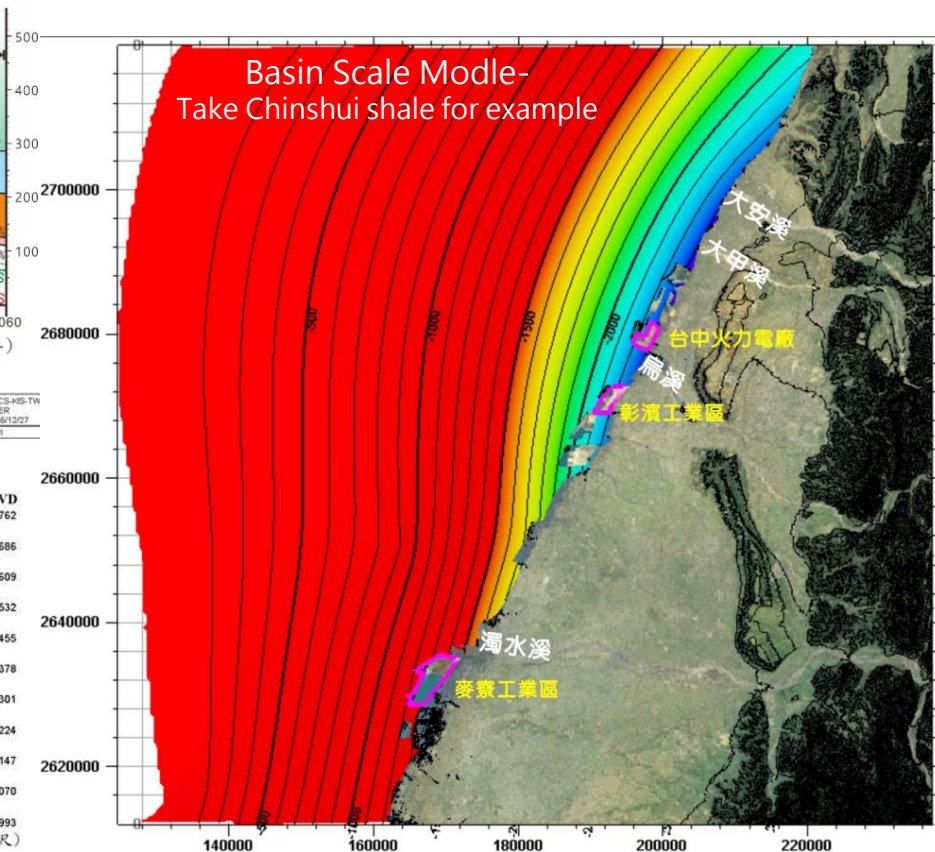
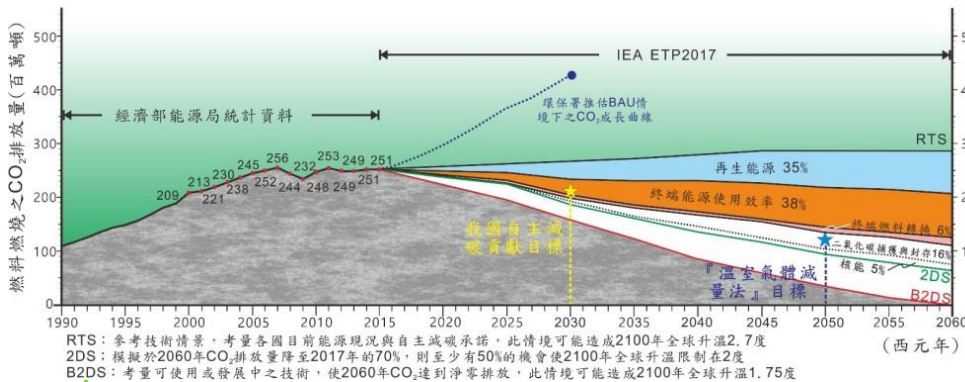
Execution Unit

National Central University, Taiwan

Project Director

Andrew Tien-Shun Lin

- The objectives of this project are (1) site characterization for potential carbon-storage sites and refining both site-scale and basin-scale geological models, (2) evaluating CO<sub>2</sub> effective storage capacity for each candidate site, and (3) assessing injection ability, safety and risk simulation for storage site. Our study results serve as important references for future planning of carbon capture and storage.

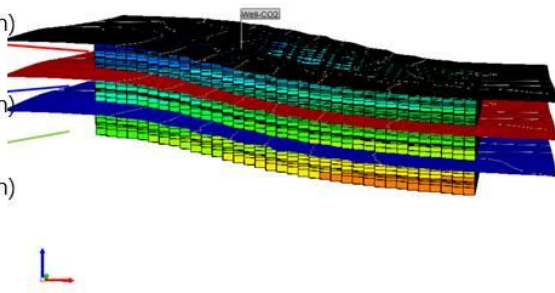


## R2 System in site scale (6\*7 km<sup>2</sup>)

Cap rock: CS shale  
(2135(-2125)~2295(-2285) m)

Reservoir: KCL formation  
(2295(-2285)~2450(-2440) m)

Reservoir: KYS sandstone  
(2450(-2440)~2608(-2598) m)



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- Regional assessments of carbon storage systems onshore and offshore central Taiwan and evaluating CO<sub>2</sub> effective storage potential;
- Carrying out detail investigations for potential carbon storage sites (e.g., Taichung Power Plant, Changbin Industrial Park, Wangkung/Mialiao area) including establishing detailed subsurface geological models for each site, baseline information on crustal deformation and seismicity, evaluating site-scale capacity for effective CO<sub>2</sub> storage and assessing possible safety concerns and risk of large-scale CO<sub>2</sub> injection scenario;
- Refining the geological model for the Changbin test site.