RawMaterials RIS Hub Greece

9th Greek Raw Materials Community Dialogue

Prinos CO_2 Storage Project

ENERGEAN
ETHOS Our World, Our Responsibility

ENEARTH

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Prinos Subsurface Lead

RawMaterials
Connecting matters

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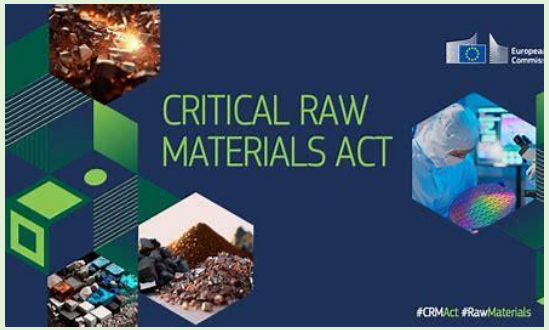
EU strategies

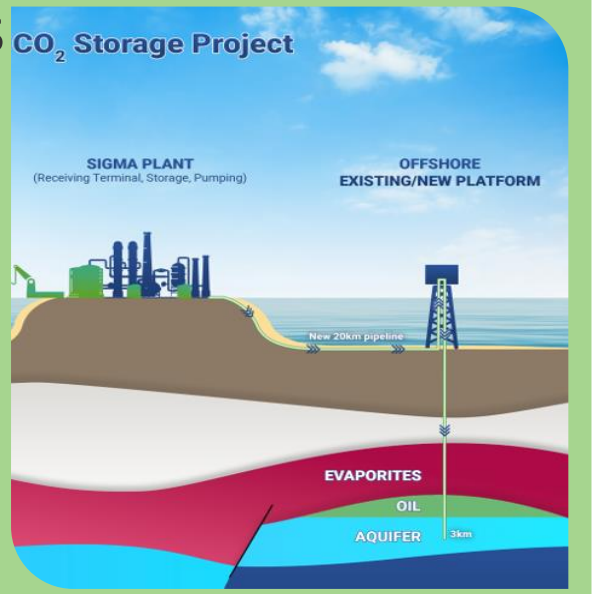
Net Zero Industry Act

Critical Raw Materials Action Plan

2020 New Industrial Strategy



Carbon **C**apture & **S**torage: method to meet these targets for hard to abate industries



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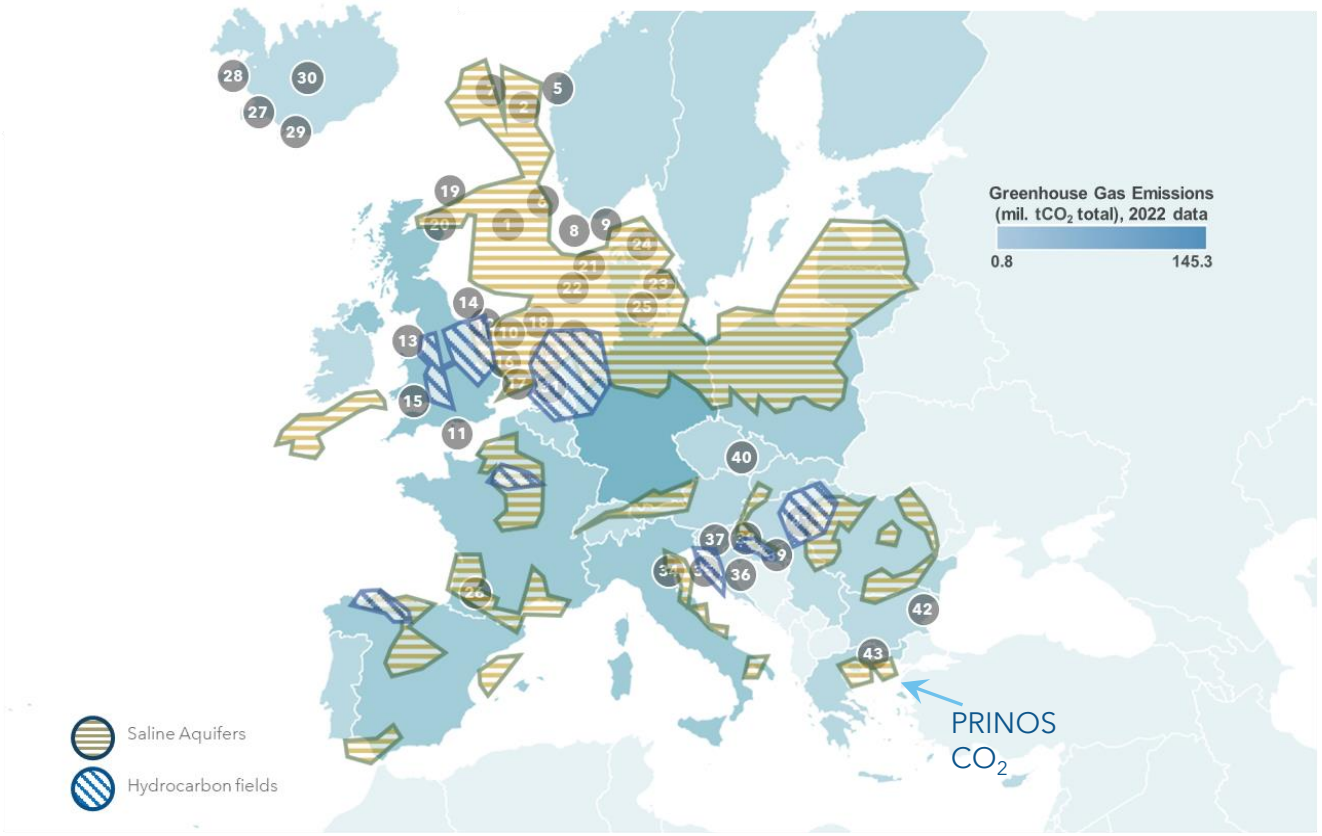
CO_2 storage sites in the EU



Country(*)	Industrial CO_2 emissions (MTPA)	CO_2 injection capacity (MTPA)
Belgium	27.69	0
Bulgaria	6.67	0.8
Czech Republic	14.32	0.4
Germany	145.40	0
Greece	13.76	3
Spain	57.27	0
France	62.58	5.9
Denmark	4.14	6.02
Italy	63.21	0.025
Hungary	6.62	0.7
Netherlands	34.24	12.5
Iceland	1.88	0.57
Austria	22.25	0
Poland	51.87	0
Portugal	9.65	0
Romania	17.95	0
Slovakia	11.83	0
Finland	6.89	0
Sweden	11.44	0
Norway	10.40	35.7
United Kingdom	79	30.2
TOTAL	**659.06**	**95.82**

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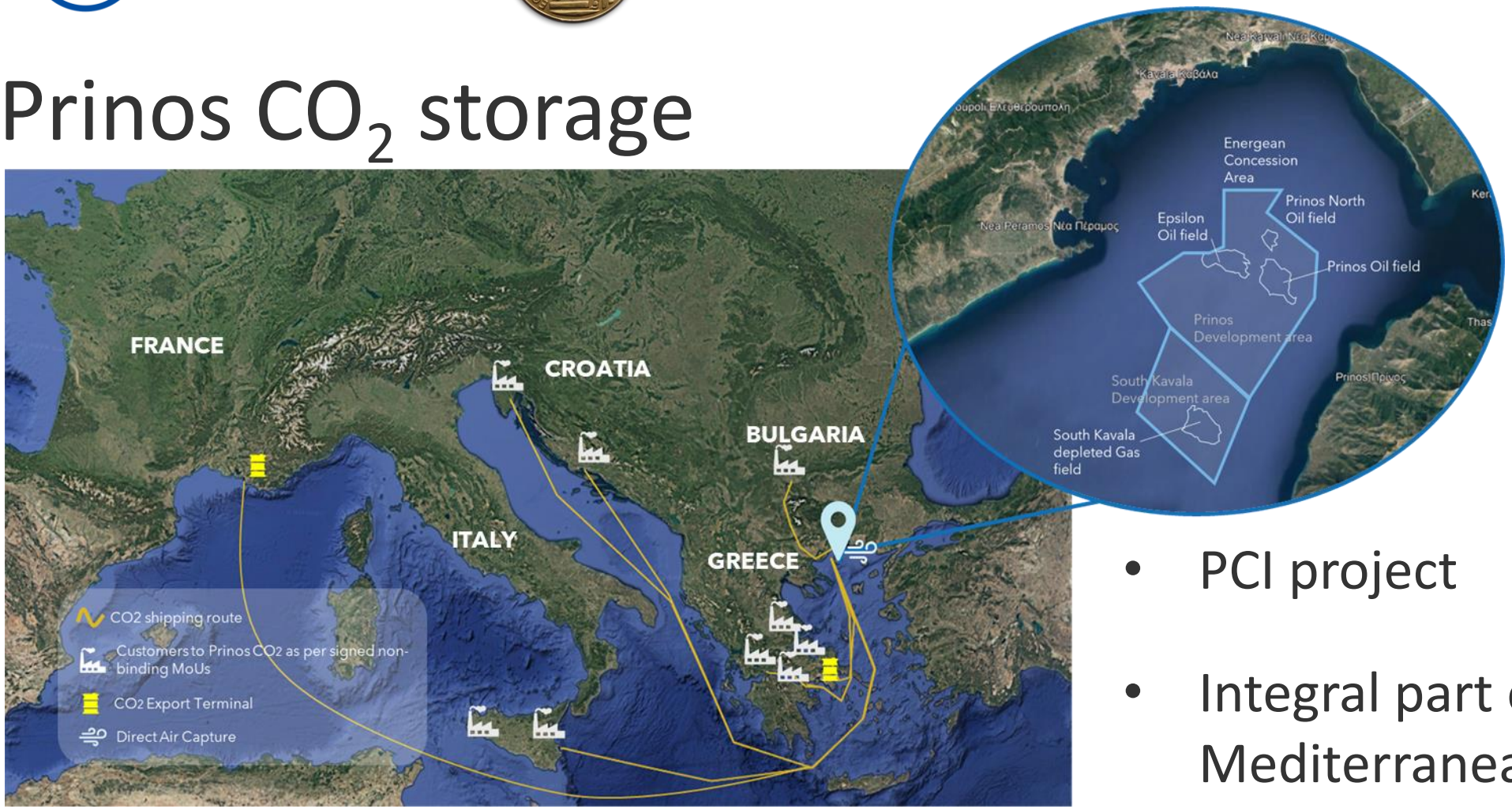
Prinos CO_2 storage



- PCI project
- Integral part of the Mediterranean CCS Strategic Plan

PCI list

European Commission

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Prinos CO_2 storage

- Existing experience from O&G operations, offshore project development, excellent HSE track record
- Use of existing onshore & offshore infrastructure
- Existing knowledge of the reservoir, producing HC for >40 years
- Prinos reservoir is considered ideal for CO_2 storage due to its structure and depth
- Prinos Basin has the capacity for a scalable CCS project
- Prinos is strategically located to serve emitters of the region

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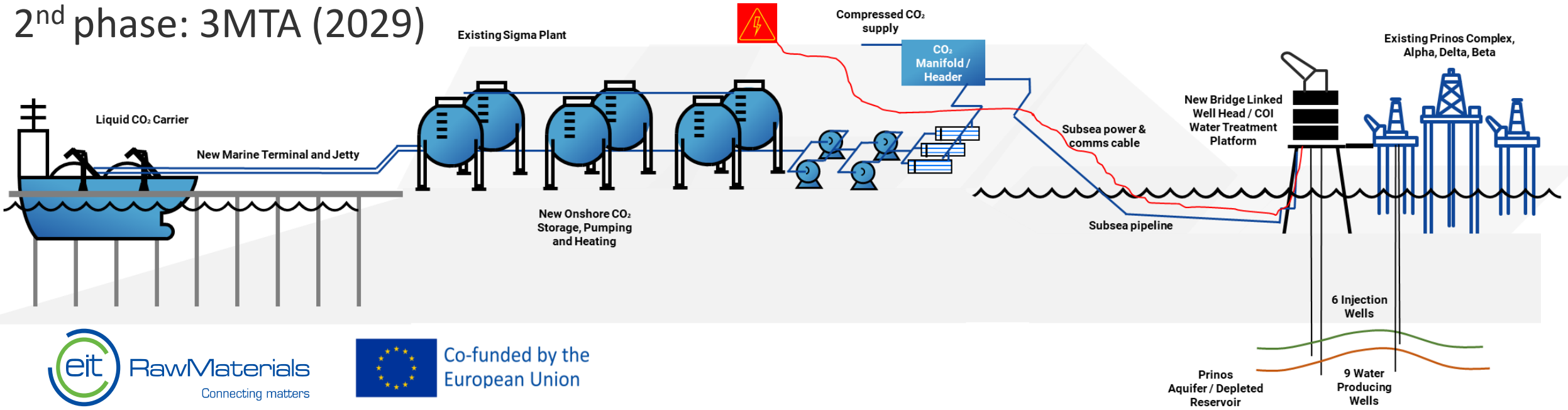
Prinos CO_2 storage

Total investment: >1B€

Storage capacity ≈ 60MT CO_2

1st phase: 1MTA (2026)

2nd phase: 3MTA (2029)



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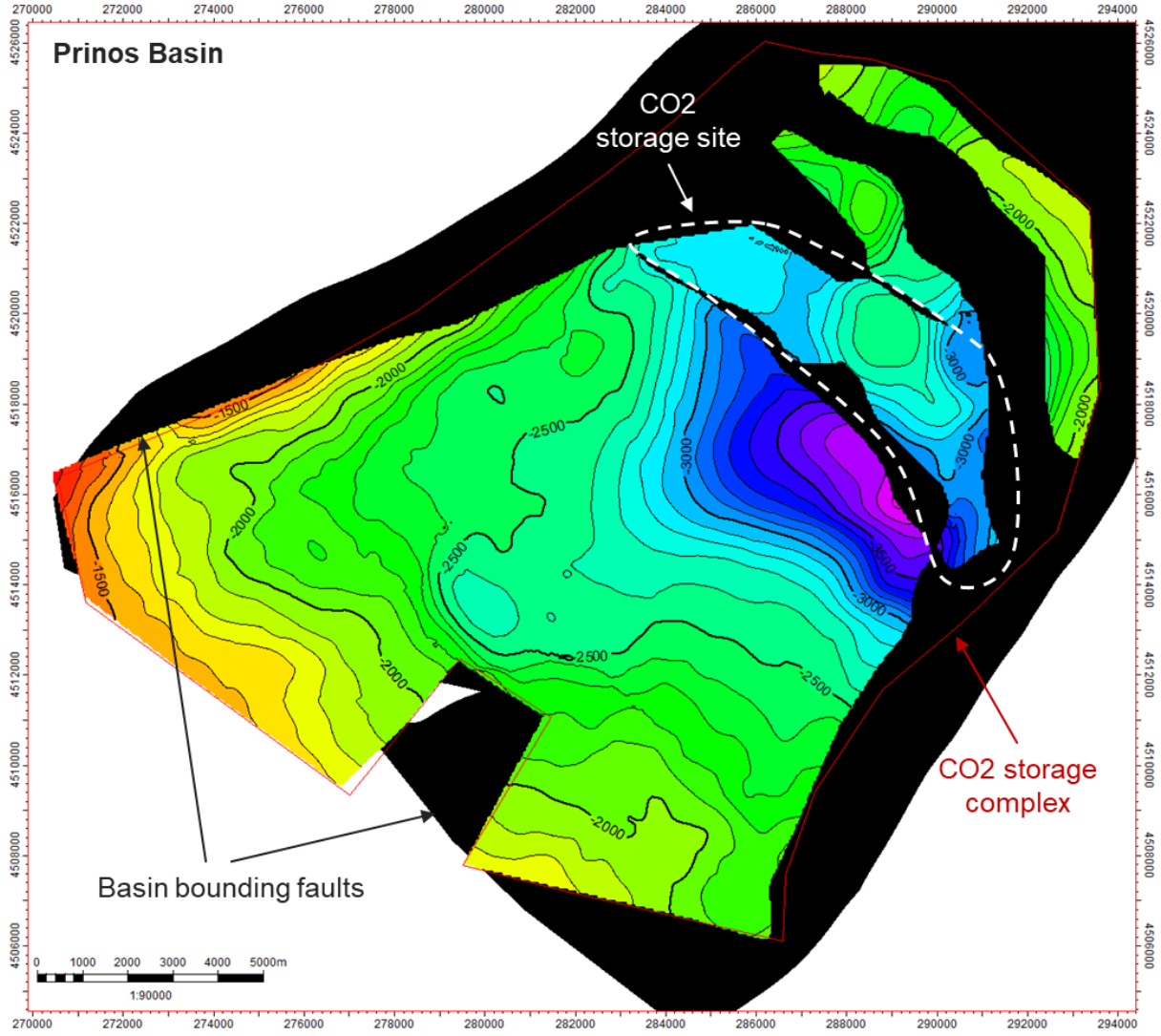
Prinos CO_2 storage

Full assessment to mature & de-risk CO_2 storage:

- seismic data, geological formation, well data
- 3D static & dynamic models
- storage dynamic behaviour over time
- sensitivities & risk assessments



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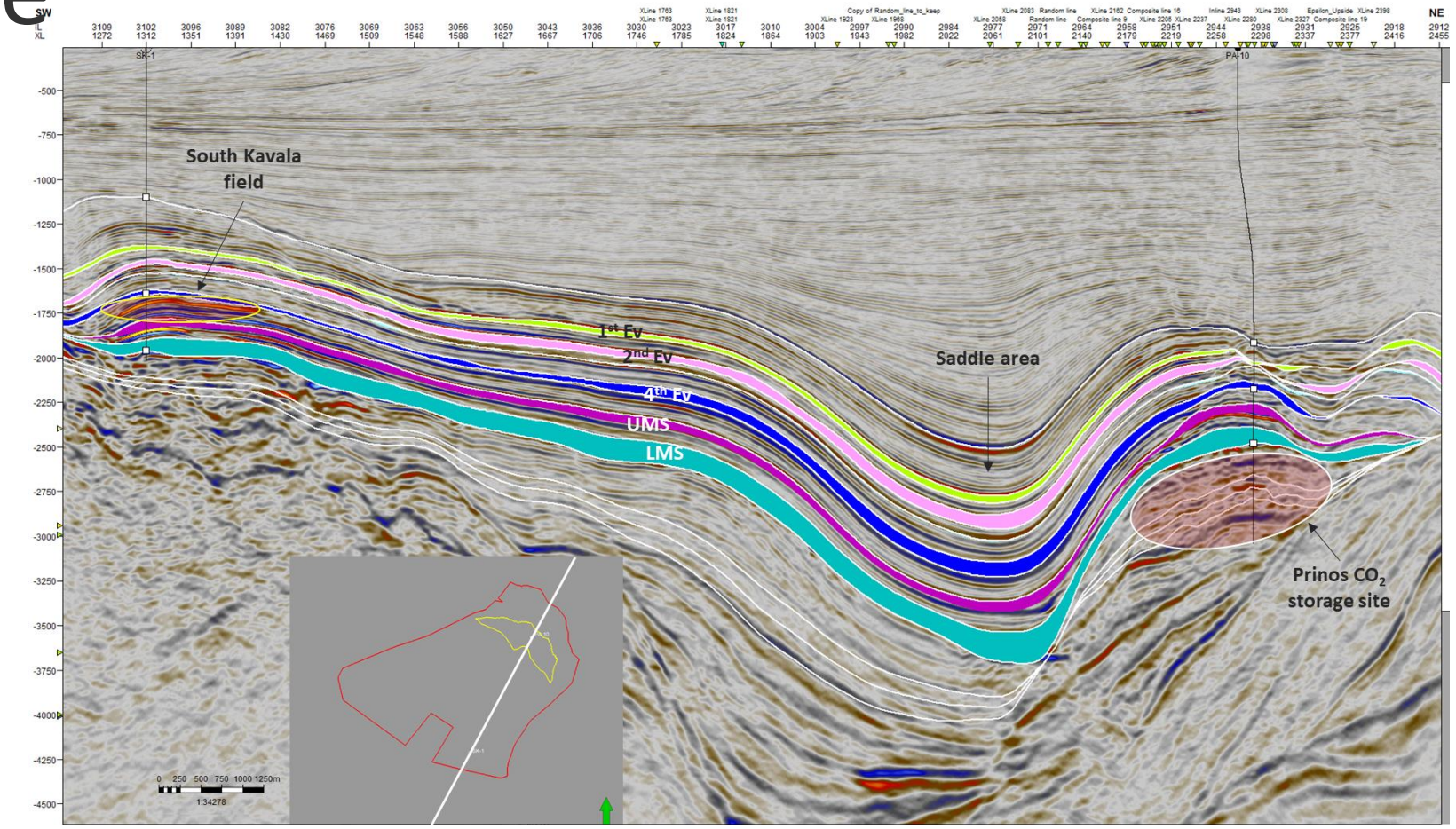
Prinos CO_2 storage

Full assessment to mature & de-risk CO_2 storage



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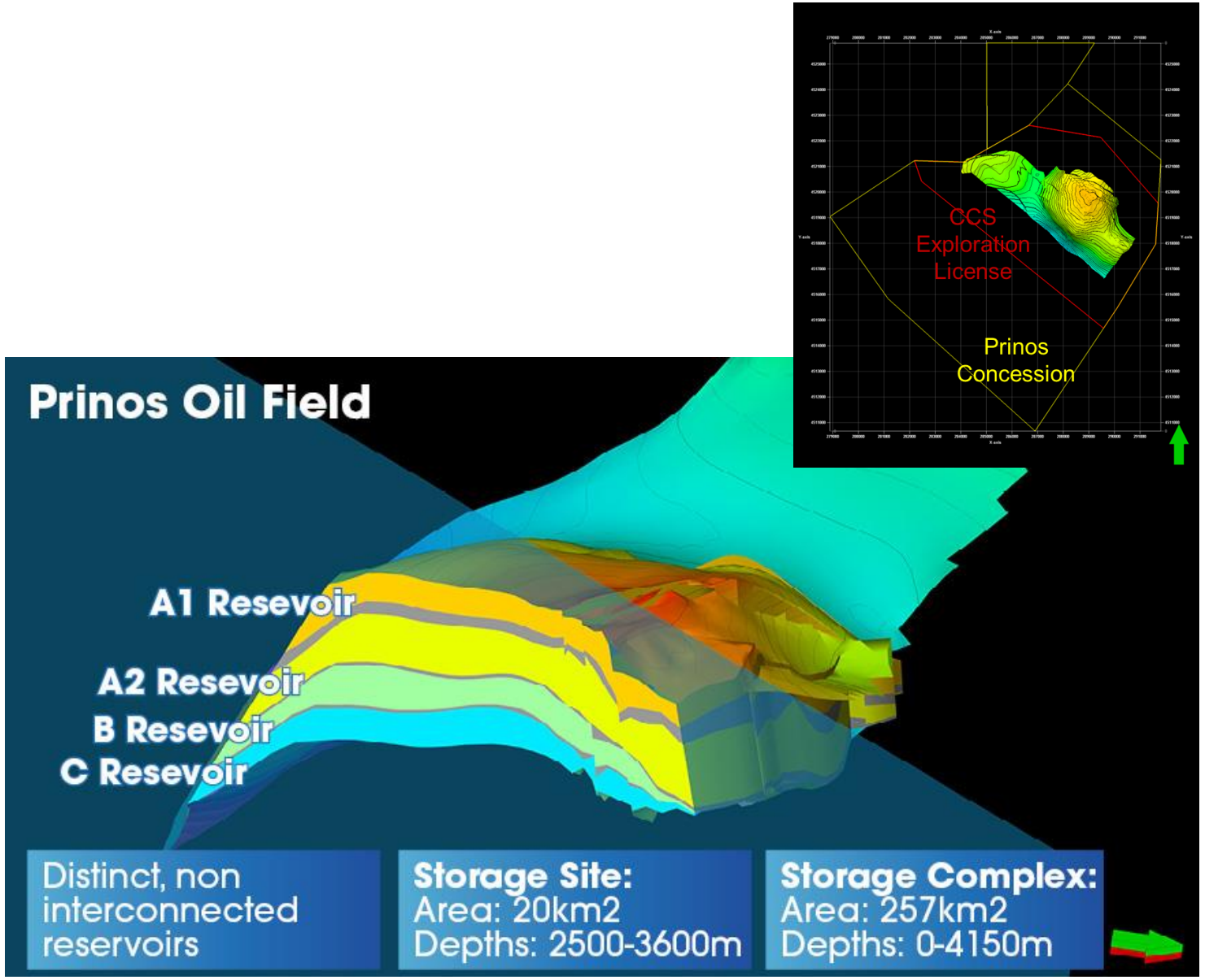
Prinos CO_2 storage

- **Capacity**: amount of CO_2 safely stored
- **Injectivity**: commercial rate of CO_2
- **Containment**: safe and permanent CO_2 storage
- **Monitoring**: observe and verify the injected CO_2



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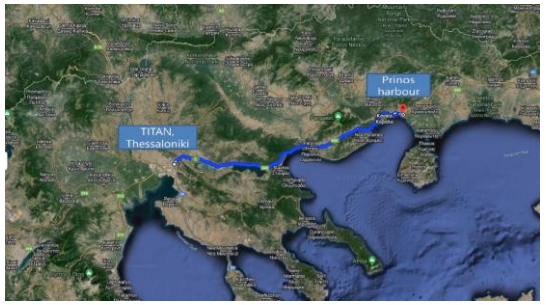
Prinos CO_2 storage project - EU pilot projects

HERCCULES



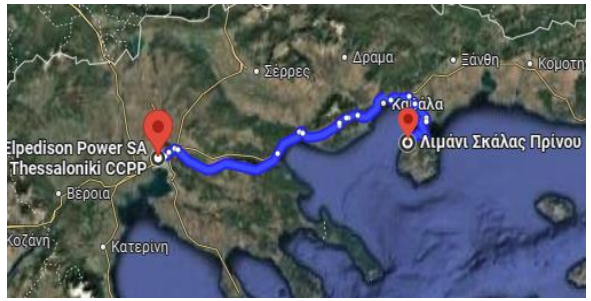
HERCCULES
full CCUS chain demonstration

Total investment: 29.6M€

Consortium: 23 participants + 4 affiliates

TITAN → 20 x CO_2 containers (*400t CO_2*) → Prinos CO_2 Storage site

COREU



COREu

Total investment: 29.3M€

Consortium: 39 participants + 2 affiliates

ELPEDISON → 2 x CO_2 containers (*40t CO_2*) → Prinos CO_2 Storage site

RawMaterials Connecting matters

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Way Forward

- State Aid for 150M€ in the context of RRF has been secured for the 1st phase of the project
- ≈ 650M€ have been allocated so far to CCS projects in Greece, with very tight timelines
- Storage permit and ESIA pending approvals by HEREMA & Ministry
- Plan to proceed fast to the “full capacity” of Prinos CO_2 storage injectivity / capacity
- Scale up CO_2 storage capacity investigating stacked saline aquifers CO_2 storage capacity within the basin

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Take Away Messages

- Prinos CO_2 storage can provide a solution to hard to abate industry towards their way to sustainability and NET ZERO targets – obvious advantage for domestic hard to abate industry (proximity)
- Challenges to achieve the target:
  - Implementation of a stable investment environment
  - Regulations in place and in line with EU & funding mechanisms
  - Time alinement and coordination among all players of the CCS chain: emitters, transport and storage site operators
  - Political & public awareness and support
- Great opportunity for Greece to create a hub to decarbonize industry

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Thank you!

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