

Allocation for CCUS Hubs

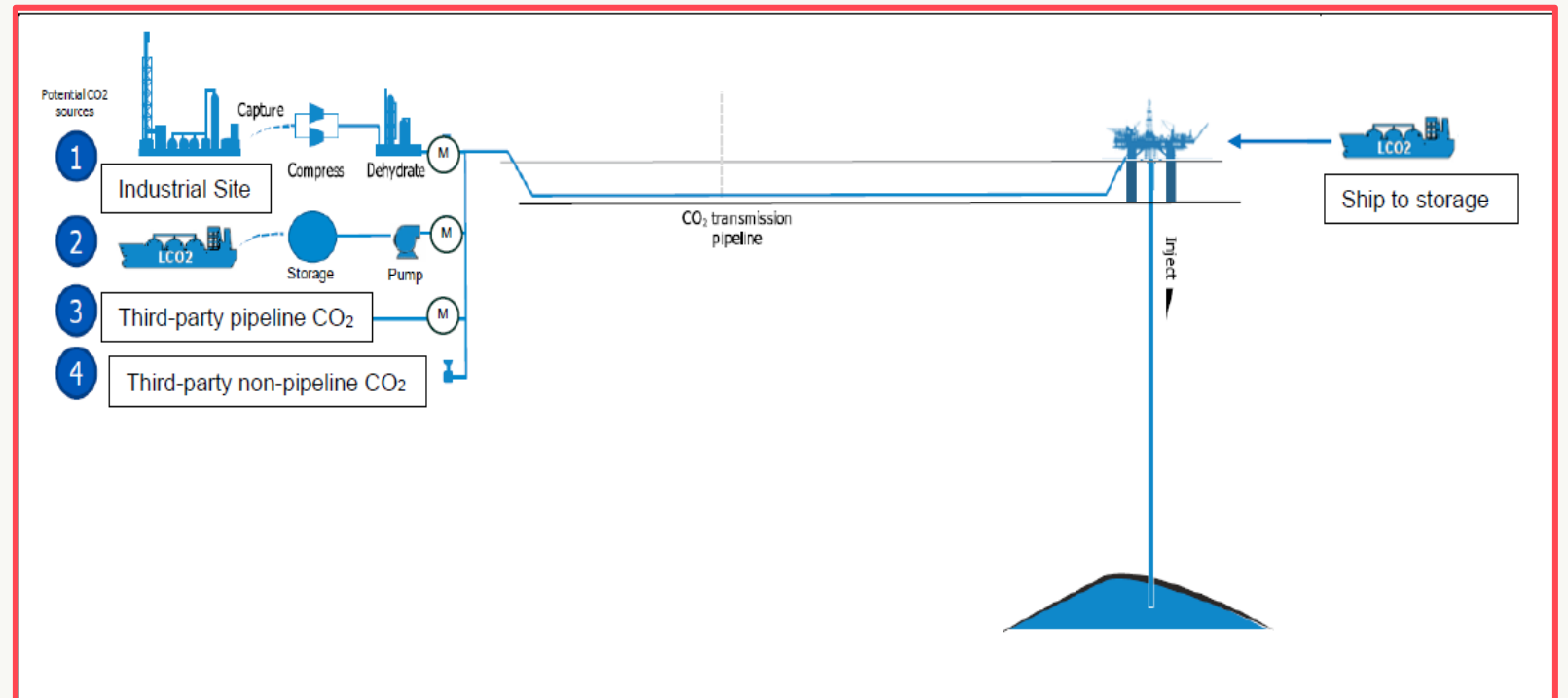
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Allocation for CCUS Hubs

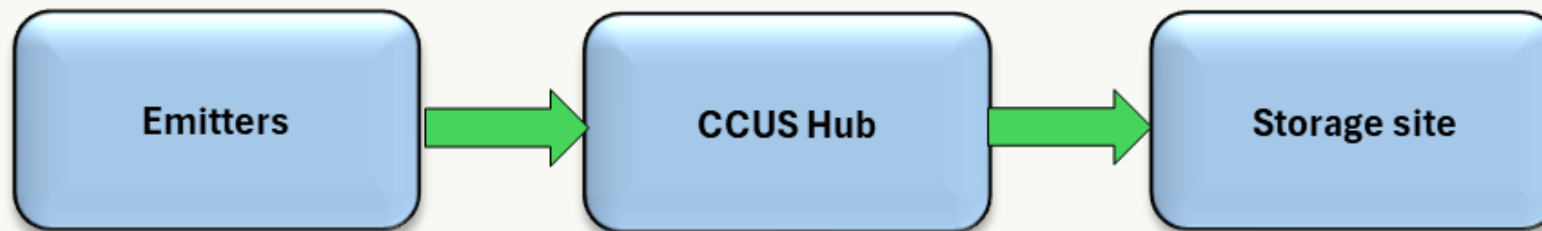
Agenda

- What is a CCUS Hub?
- What drives the need for Allocation?
- Where do we Allocate?
- Questions?



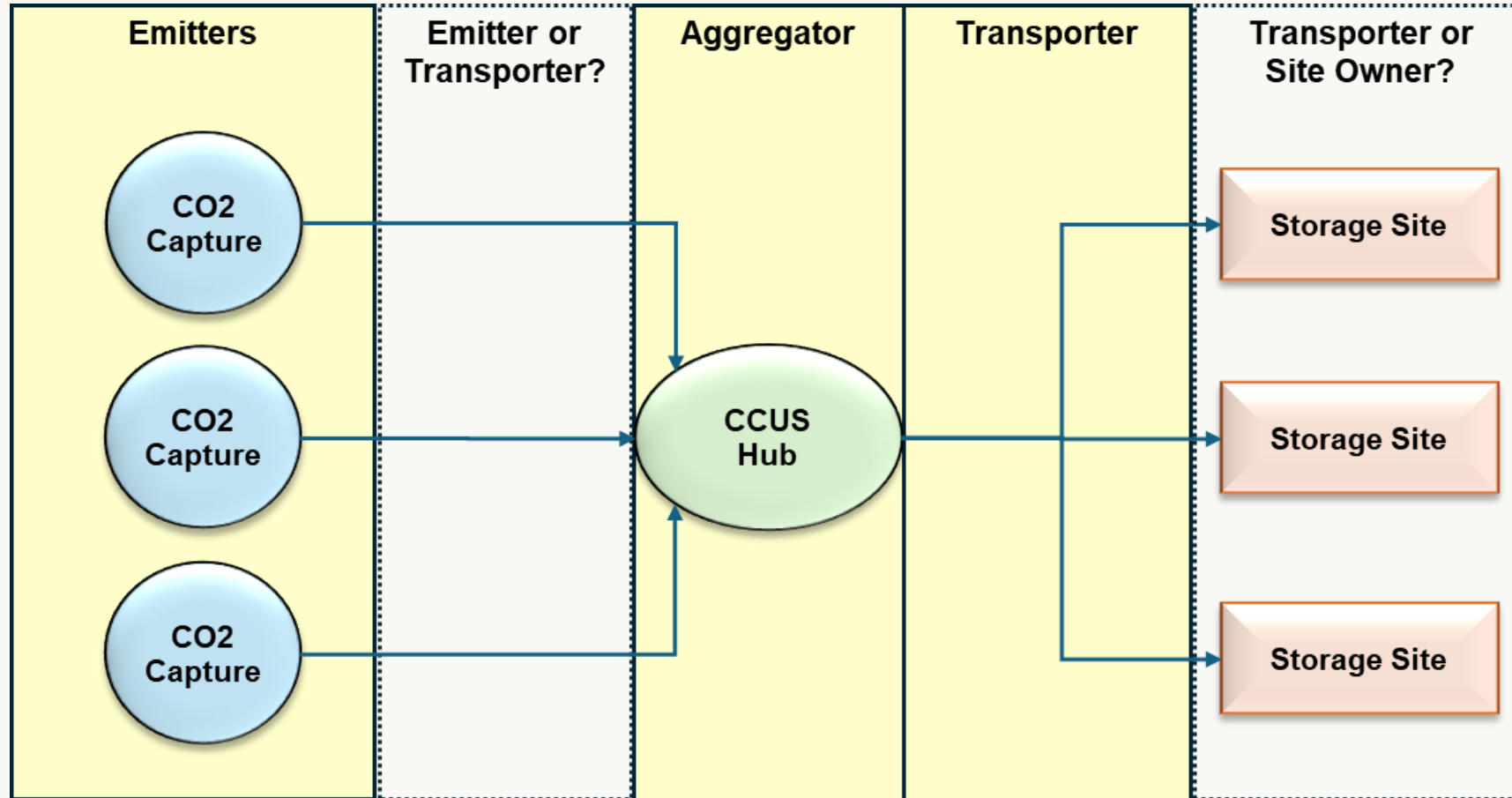
What is a CCUS Hub?

- A CCUS Hub receives Carbon Dioxide (CO₂) from emitting sources and transports it to storage using common infrastructure
- More than 250 projects around the world where CCUS hubs are at some stage of investigation/development
 - Northern Lights; Greensands; Hynet; Northern Endurance; Aramis
- Projects in progress consider storage of national and international emissions
- CCUS Hubs have yet to reach maturity
- What might a CCUS look like?



What is a CCUS Hub?

- A more complex view of a CCUS Hub



What drives the need for Allocation?

- National/International Regulation and Objectives
 - EU-ETS / UK-ETS requirements
 - UK CCS Network Code
 - Measurement standards
- Commercial considerations
 - Robust and equitable rules
 - Subsidies
 - Monetisation of CCS hubs
- Technical considerations
 - Capacity management
 - Curtailments
 - Product quality
- *Analogous to gas transportation systems*



What drives the need for Allocation?

- National/International Regulation
 - EU-ETS / UK-ETS
 - Reduction of compliance obligations and costs through CCS
 - Monitoring, reporting and verification requirements
 - UK CCS Network Code
 - Heads of Terms consultation – December 2023
 - Capacity management
 - Maximisation of storage capacity
 - Forecasting and Nominations
 - Metering requirements
 - Charging structures
 - Analogous to the Uniform Network Code [Gas transportation systems]
- Measurement standards
 - Guidelines published by NSTA (UK) – 28/3/24



What drives the need for Allocation?

- Commercial considerations
 - Robust and equitable rules
 - Need to have a robust and reliable set of rules to measure, monitor, and allocate CO₂ movements
 - Transportation system operation
 - Subsidies
 - No product to sell
 - Subsidies in the form of CFDs required to make projects viable
 - Monetisation of CCS hubs
 - Capacity charge
 - Flow charge
 - Network charge
 - Quality excursions?

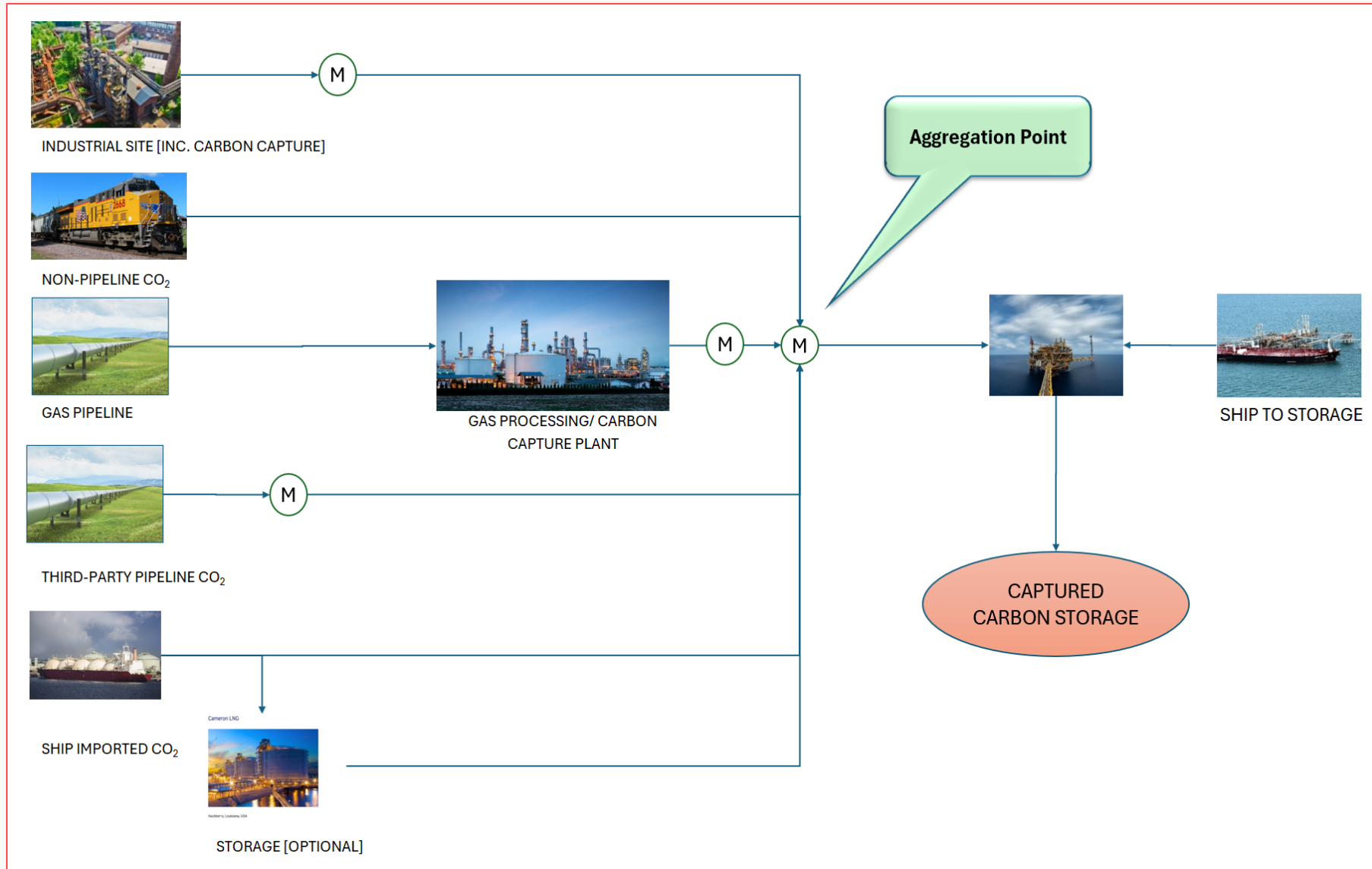


What drives the need for Allocation?

- Technical considerations
 - Capacity management
 - Curtailments
 - Product quality
 - Transportation and processing requirements
- Analogous to gas transportation systems



Where do we Allocate?



Concluding remarks

Agenda

- What is a CCUS Hub?
- What drives the need for Allocation?
- Where do we Allocate?

CCUS Hubs are an emerging business venture where Regulation, Commercial arrangements and Technology are under continual development.

The ideas expressed in this presentation are a view as to how allocation fits into this picture



Questions?

