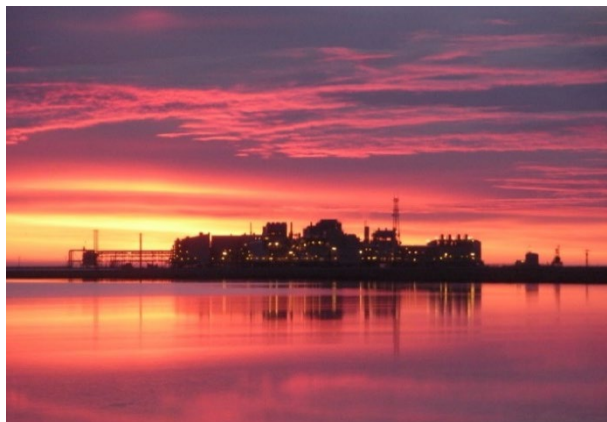


Carbon Program Overview & Update

AML Annual Conference



Presented by Trevor Fulton, Carbon Offset Manager
Office of Project Management & Permitting
Alaska Department of Natural Resources
December 6, 2023



Overview



1. Carbon offset basics
 - Compliance vs. voluntary markets
 - Nature-based carbon projects
 - Demand
 - Benefits to Alaska
2. Program details
 - Current status
 - Draft regulations/public comment
3. Project selection
4. Future opportunities
5. Underground carbon storage



Carbon offsets



Compliance vs. voluntary markets

- Compliance market = government mandated
- Voluntary market = voluntary targets set by companies

State carbon program

- Voluntary/market-based
- Nature-based projects
- Remove CO² from atmosphere

Compliance Carbon Markets

Mandatory systems regulated by government organizations to cap emissions for specific industries.



Compliance
\$899B

Market size
2021

Voluntary Carbon Markets

Where carbon credits can be purchased by those that voluntarily want to compensate for their emissions.

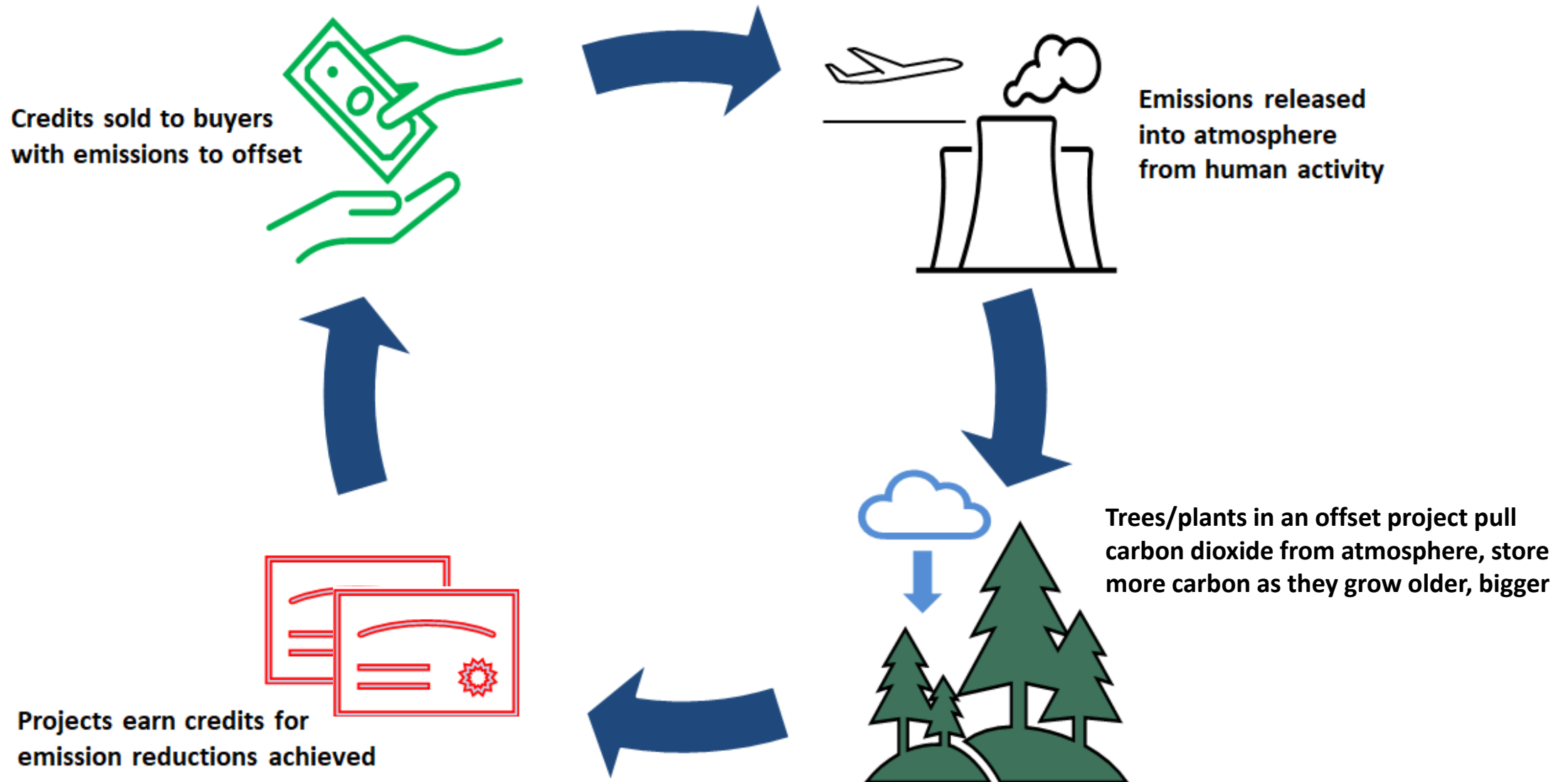


Voluntary
\$2B

Sources: Refinitiv,
Ecosystem Marketplace



Nature-based carbon offsets



Carbon offsets – project requirements

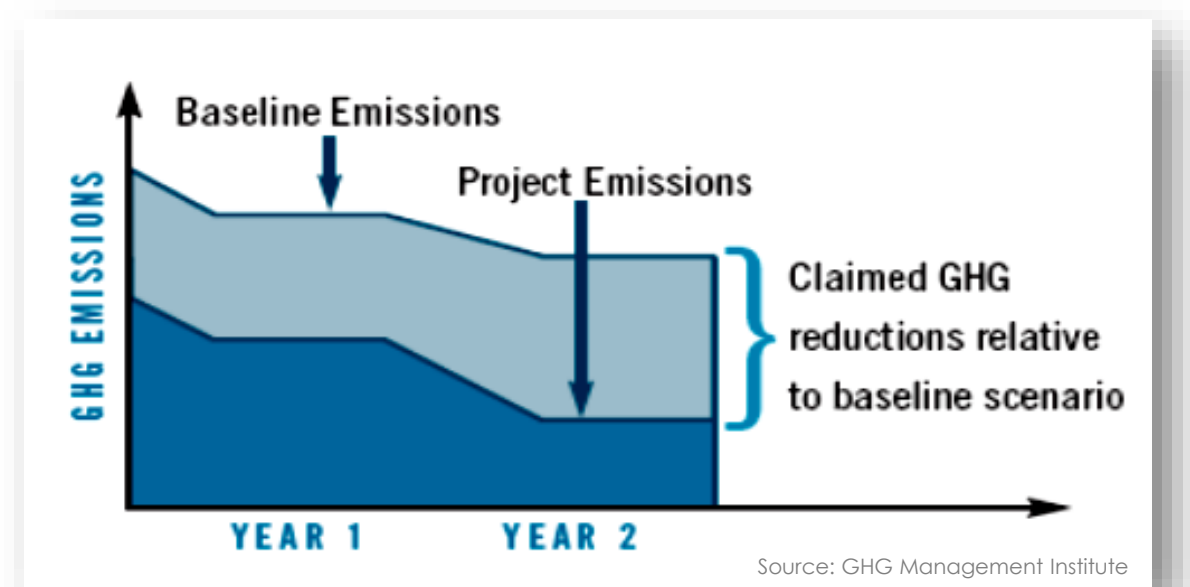


Baseline

- Carbon emissions that would have occurred without the project
- The “business-as-usual” scenario

Additionality

- The carbon benefit created by a project, above the baseline scenario
- Requires a change in how the resource is managed: either increase carbon removal or decrease carbon emissions
- Not “doing what we would have done”



Carbon offsets – demand



Citibank Vows to Reach Net Zero Goals With Purchase of Carbon Credits

Nasdaq.com, March 8, 2023

Amtrak pledges net-zero greenhouse gas emissions by 2045

Washington Post, Sept 22, 2022

Flying with purpose: Alaska sets new climate goals, including net-zero carbon emissions by 2040

Alaska Airlines, April 21, 2021

T-Mobile Sets Industry-Leading 2040 Net-Zero Commitment

Forbes, Feb 3, 2022

Ford breaks down how it plans to reach its zero emissions commitment

NPR, Nov 16, 2021

Carbon offsets – benefits



- New source of state revenue
- ‘Maximum use’ per Alaska Constitution
- Compatible with existing land and resource use
- Positive environmental impact
- Incentivizes active forest management and rebuilding timber stock
- Does not ‘lock up’ land



SB48 – Carbon Offset Program



- Created two paths for carbon projects
 1. State Carbon Offset Projects
 2. Carbon Management Leases
- Limits project terms to 55 years
- Keeps project areas open to public, resource development
- Provides project evaluation criteria
- Caps commission for contracted services
- Requires annual report to the legislature
- 20% of revenue to renewable energy grant fund



Governor Mike Dunleavy signs SB 48 into law at the Alaska Sustainable Energy Conference, May 23, 2023

Carbon Offset Program



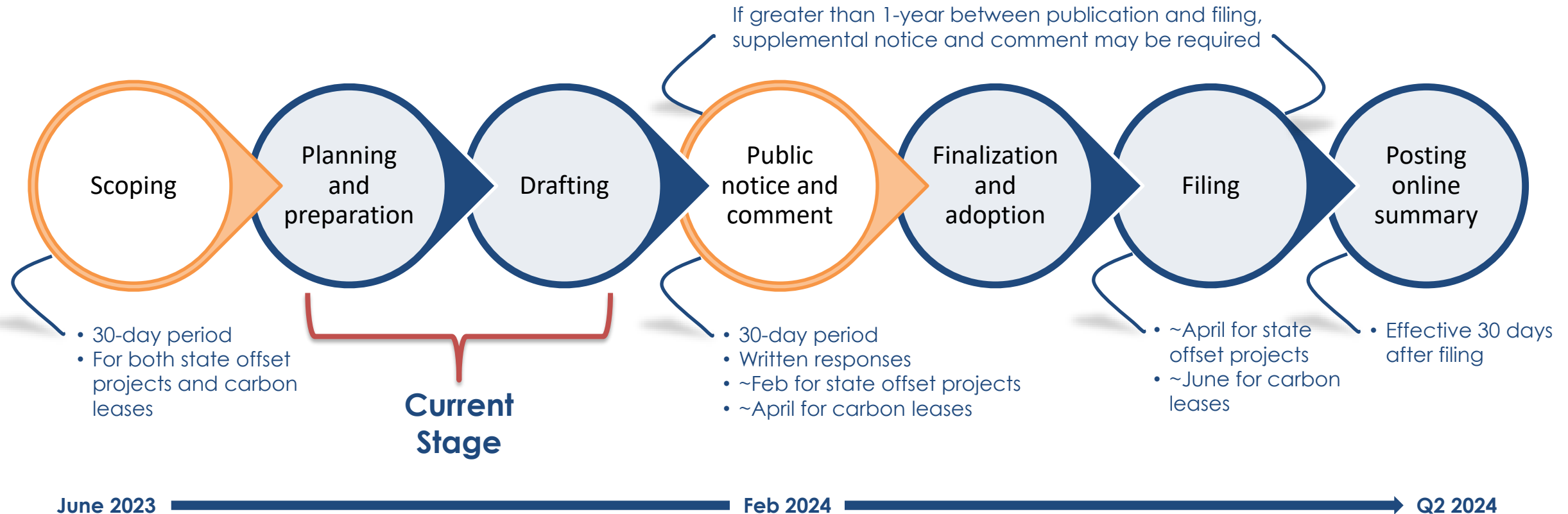
- Hiring program staff
 - Office of Project Management & Permitting
 - Division of Forestry & Fire Protection
 - Division of Mining, Land & Water
- Developing regulations
- Public/agency comment
- Next steps
 - Identify state-led projects
 - Review lease applications



Carbon Offset Program



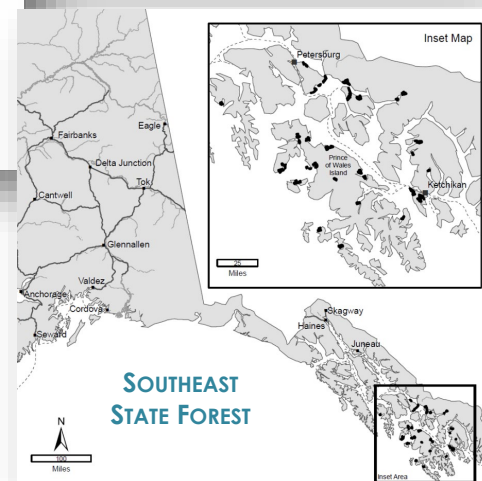
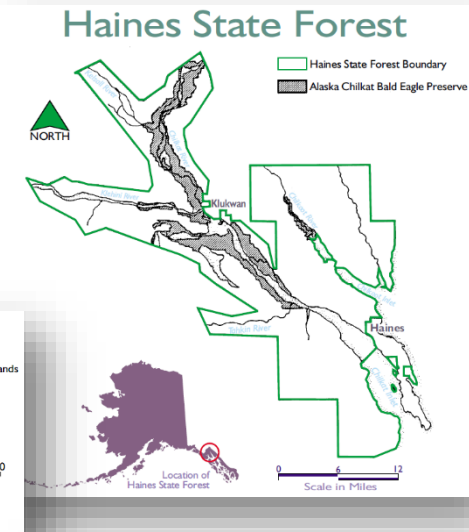
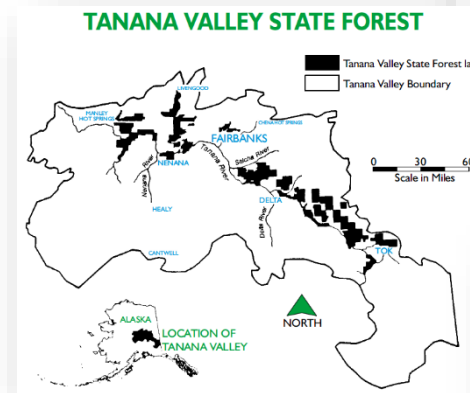
Regulation Process





Carbon offset projects

- State land broadly available, but projects in state forests benefit from existing data/information
- Location depends on land classification, developer interest, and project type
- Project size will vary, depending on the area and on forest characteristics/stocking potential
- Projects should complement existing sectors (i.e. 'grow the pie')



Carbon offsets – future opportunities



- Blue Carbon
 - Nature-based use of ocean and coastal ecosystems to absorb/store carbon
- Wildland Fire
 - Carbon offsets based on reducing wildfire severity/emissions through prescribed burning, thinning, and planned firebreaks
- Biochar
 - Converts waste wood and other biosolids into a carbon product with a range of uses



Source: NOAA



Source: Alaska Dept. of Natural Resources



Source: US Dept. of Agriculture

Carbon offsets – municipalities



Municipal projects

- Similar opportunities/benefits
- Muni → carbon registry
- Dependent upon
 - Protocol availability
 - Resource/acreage
 - Land use compatibility

Project examples

- Forestry-based
- Waste management
- Wildland fire reduction

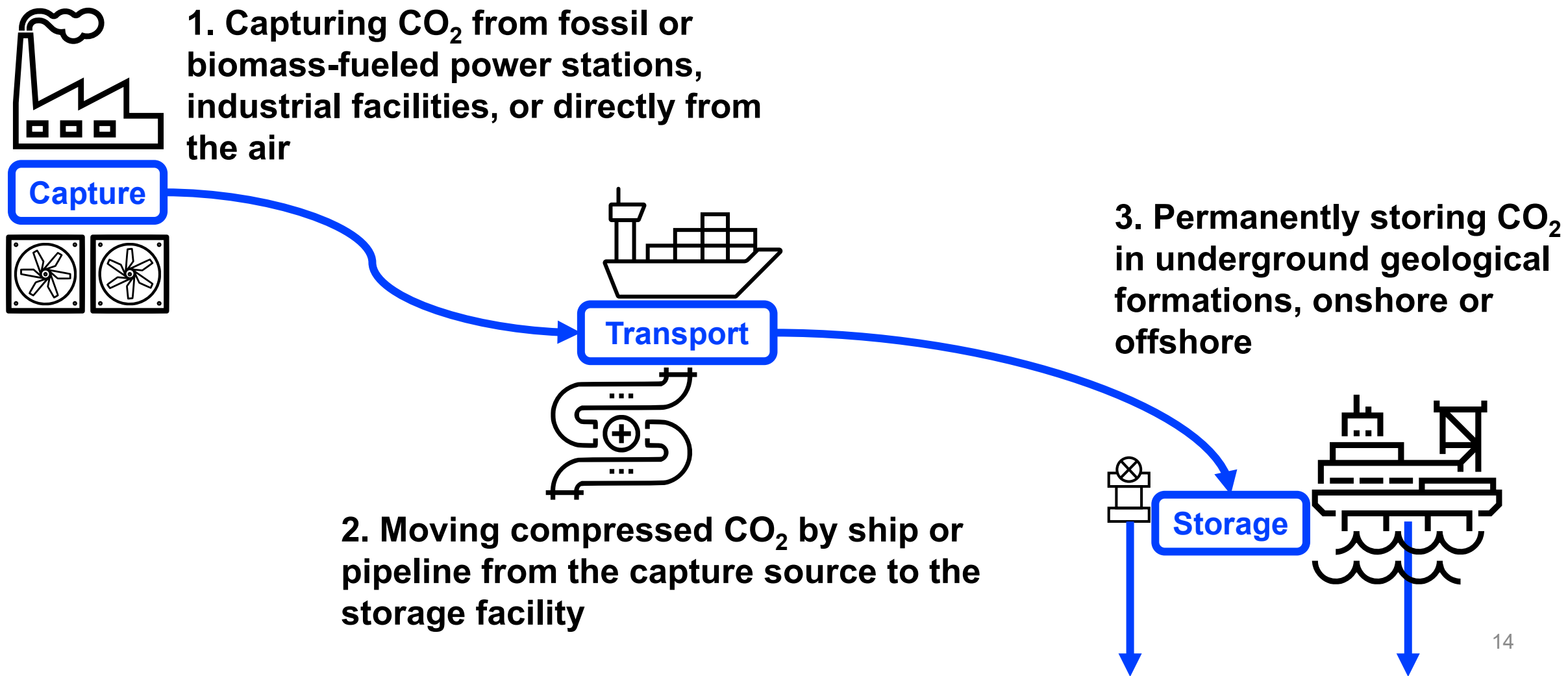
Project aggregation

- Partner with state
- Share costs, increase benefits





Underground carbon storage (CCUS)



Contact



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