Senate Bill 48: Carbon Offset Program on State Land

Senate Finance Committee

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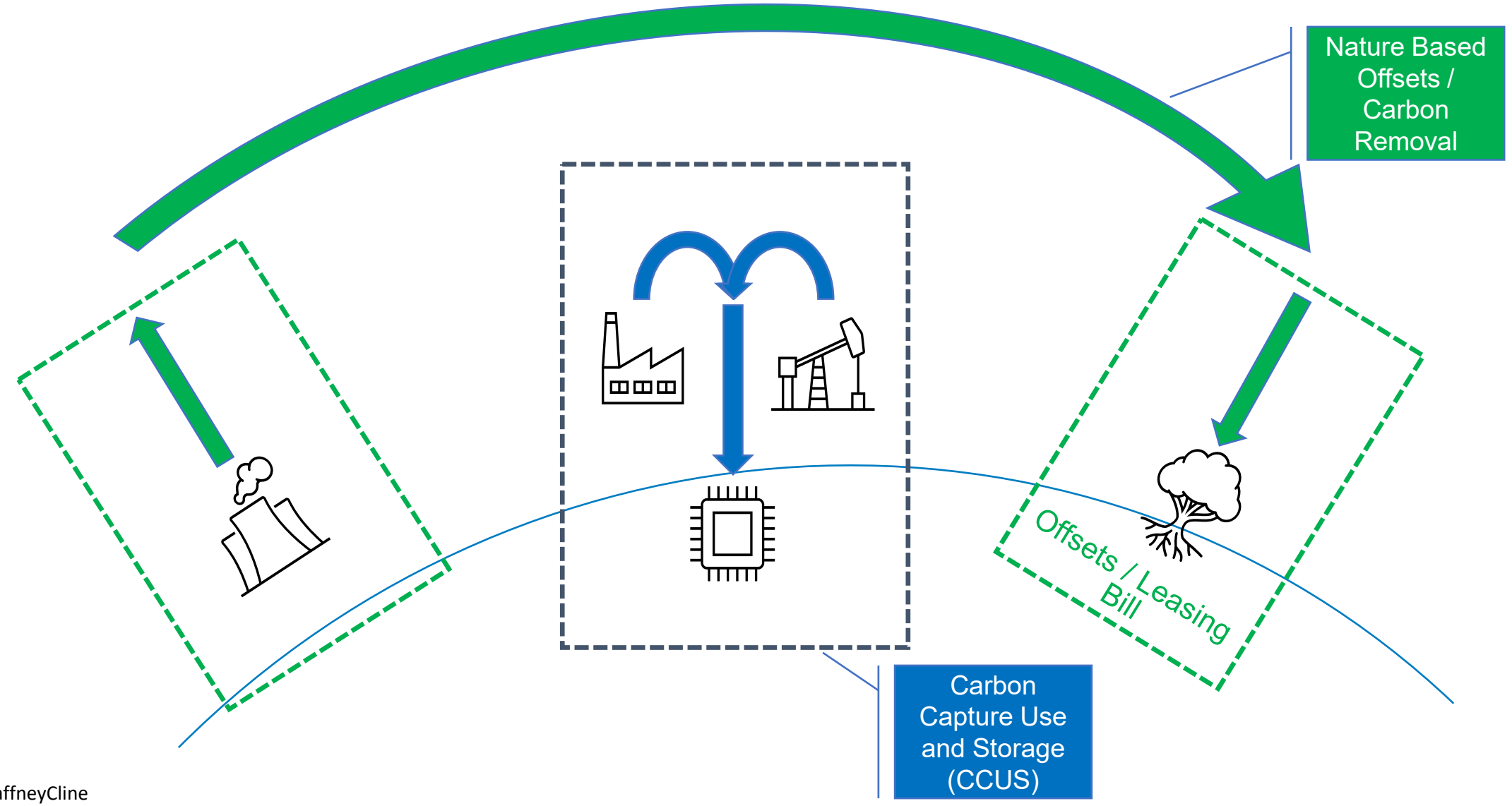
Carbon Management - Simplified



Source: GaffneyCline

Carbon Management - Not So Simple!

Source: GaffneyCline

Carbon Offsets - Markets

"The voluntary carbon market: 2022 insights and trends" report by Shell and BGC

2021

Compliance market soared to

~$850bn in value

2.5x value of **2020**

~15 $GtCO_2$ transacted volume

The voluntary market reached

~$2bn in value

4x value of **2020**

~500 $MtCO_2$ transacted volume

Source: SP Global Refinitiv, Ecosystem Market Place, BCG analysis

2022

was a record-breaking year for both compliance and voluntary carbon markets

During which, approximately **166Mt** of carbon emissions were covered by retirements

Voluntary markets expected to be **5x** bigger by 2030

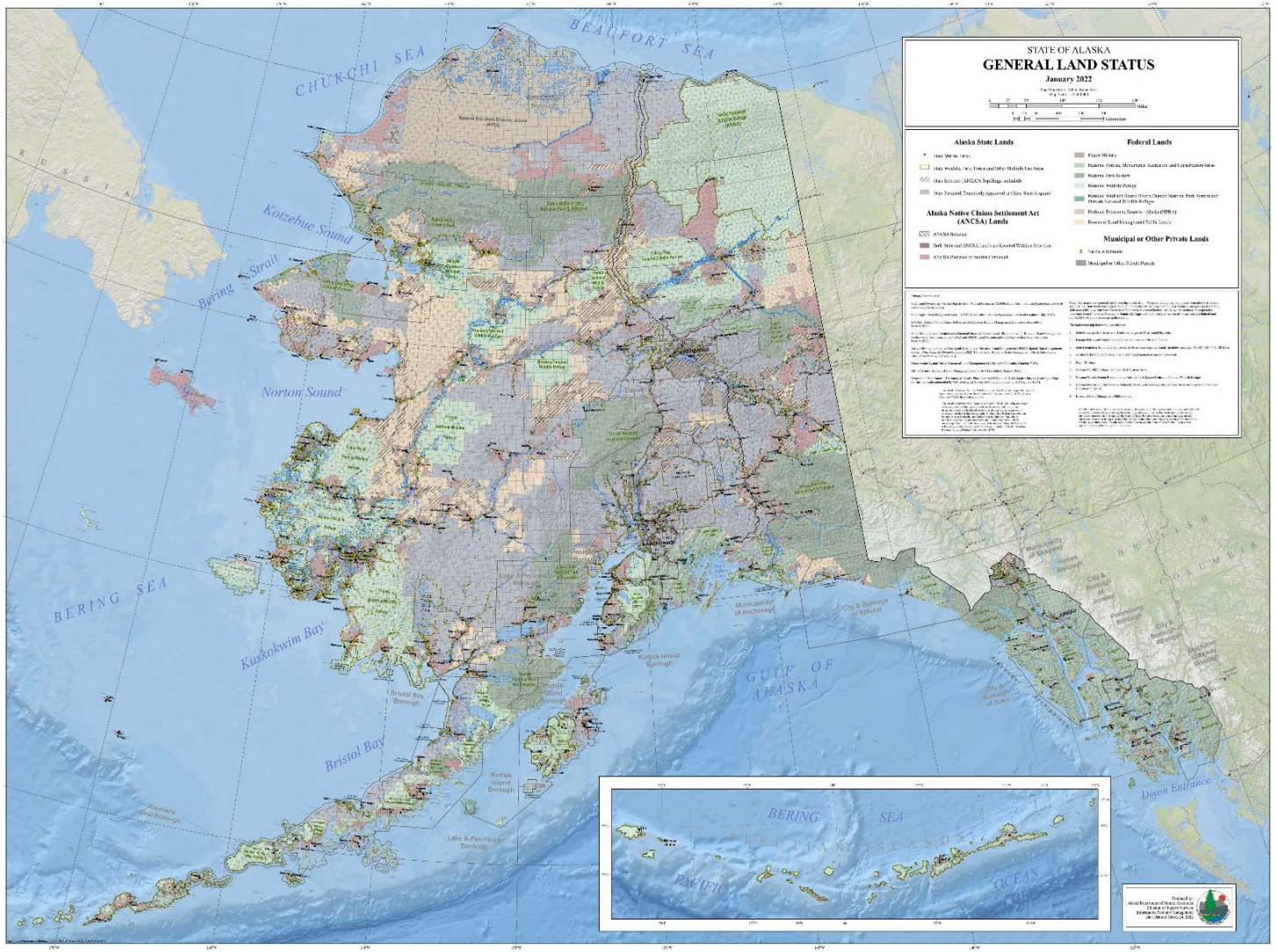
Reaching a market size of **$10-40 bn** in value and **0.5-1.5** $GtCO_2$ in scale[4]

That is comparable to the emissions of the aviation industry, which reached ~1 $GtCO_2$ in 2019[5].

4. Future Size of the VCM, Trove Research, 2021.
5. Aviation report, IEA, 2022.

Carbon Offsets - State Resource Base

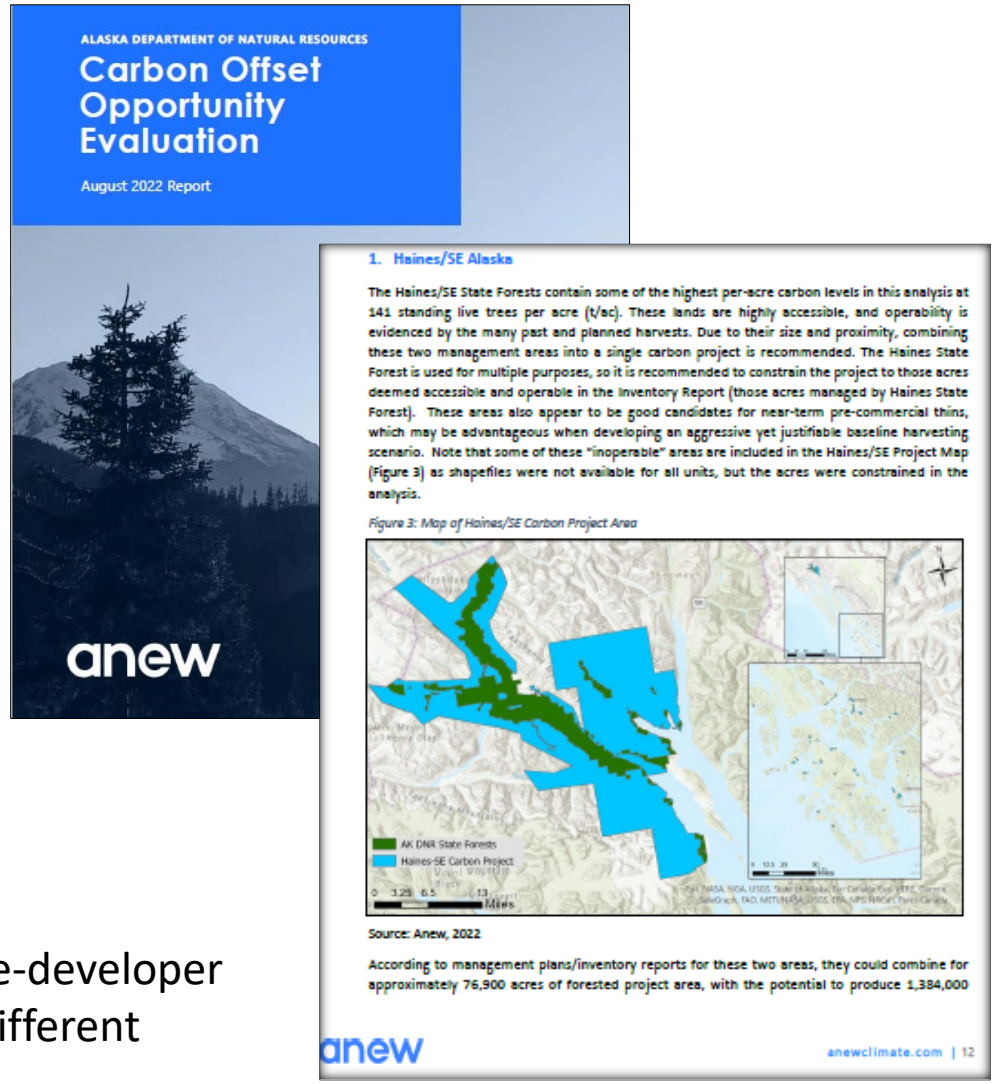
- Tremendous State land and resource base
  - 100 million acres uplands
  - Tens of millions acres forested land
  - 60 million acres tide and submerged lands



Carbon Offsets - Potential Affirmed

Anew report affirms potential:

- Identifies 3 ‘pilot’ projects
- Improved Forest Management protocols – timber harvest continues
- Revenue potential* of all three:
  - approx. $81.6 million over 10 years
  - approx. $311 million over 40 years



*Revenue potential as estimated by Anew at time of report; total is pre-developer share if any and pre-state program costs. An actual project may have different potential depending on design, costs.

Carbon Offsets – Benefits to Alaska

- New source of State revenue
- Compatible with existing land and resource use
- Positive environmental impact
- Incentivizes active forest management and rebuilding State's timber stock
- Supports the general State economy
- 'Maximum use' per Alaska Constitution
- Does not:
  - 'lock up land'
  - institute emission limits/ cap and trade rules for Alaska businesses

Bill Overview

SB48 - Overview

- Tasks DNR with setting up frameworks to support carbon offset opportunities that align with Alaska's resource and land interests, responsibilities

- Enables carbon offset projects on State land and shorelines

- Does not authorize a specific project

SB48 - Overview

- Provides a process for third parties to lease State land for carbon management purposes (Section 4)

- Establishes the Carbon Offset Program at DNR to undertake State projects (Section 6)

Two Distinct Paths Under SB48

‘Carbon Leases’

Provides process for third parties to lease State land for carbon management purpose (bill sections 3-5)

‘State Projects’

Establishes ‘Carbon Offset Program’ at DNR for State to undertake carbon offset projects (bill sections 1-2, 6-13)

Different costs, revenues under each path

Path 1: Carbon Leases

Path 1: Carbon Management Purpose Leases

- New carbon lease program situated within Alaska Land Act (AS 38.05)
  - Body of statute, regulation under Alaska Land Act applies
    - Best interest findings processes, including preliminary decisions noticed for public comment
- Bill provides alternative competitive award process to accommodate range of State values (vs. competitive bid at auction)
- Division of Mining, Land and Water to administer leasing program

Path 1: Carbon Leases

Costs:

- Promulgate regulations; receive, process applications
- Monitor leases, ensure conditions met
    - 1 full-time, permanent position (total $151.9 in FY24, $141.9 in FY25 onward; Unrestricted General Fund (UGF) until leasing revenue sufficient to cover costs)
    - Will seek to fill out staffing based on program demand through annual legislative budget process

Revenue:

- Indeterminate in amount, timing
- Driven by private sector demand, project value, area of lands leased
- Sec. 4 requires lease compensation to maximize returns to the State

Path 1: Carbon Leases

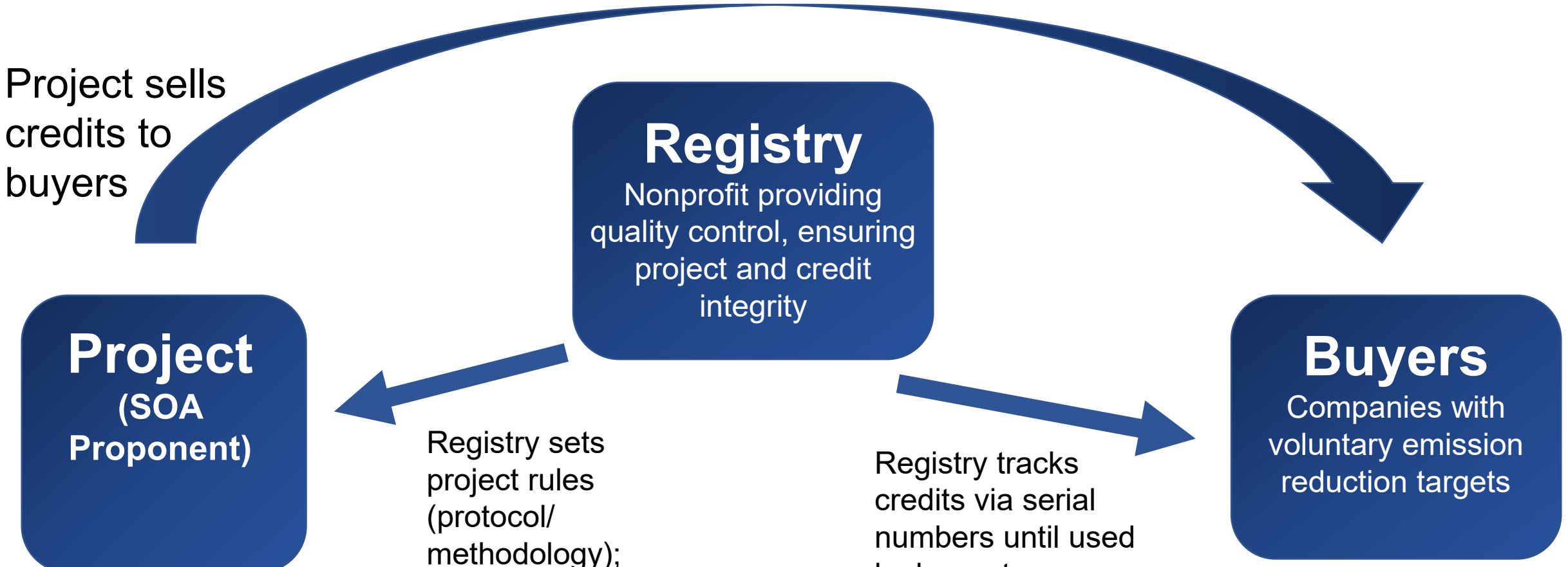
- Hypothetical examples:
  - Company leases 10,000 acres of State land for 55 years, invests capital to plant trees/regenerate forest; may be 20+ years before project generates credits; State gets annual fee for land lease, percentage of carbon revenue once generating credits
  - Kelp farm overlays carbon offset project to help kelp production economics; State gets annual fee for land lease, some percentage of carbon revenue

Path 2: State Projects

Path 2: State Projects - Overview

- SB48, section 6, stands up ‘Carbon Offset Program’ for State to undertake its own carbon offset projects
- State is project proponent – ‘owns’ the project
- State may work with a partner, contractors (project developer)
- Costs to start up, manage project over term
- Project generates credits for carbon stored on landscape
- State sells credits to buyers
- Revenue from sales flows to new Carbon Offset Revenue Fund established in section 6

Path 2: State Projects - Parties



Path 2: State Projects - Costs

- Fixed program costs regardless of number of projects
    - New Carbon Offset Program housed under existing Office of Project Management and Permitting (OPMP); 2 full-time, permanent positions ($192.4 in FY24; $367.8 in FY25; $309.8 in FY26 onward, UGF until revenues sufficient to replace UGF)
    - Supported by Division of Forestry and Fire Protection (DOF); 1 full-time, permanent position (total $147.3 in FY24; $137.3 in FY25 onward, UGF until revenues sufficient to replace UGF)
    - Initial capital to OPMP to establish framework, retain expertise ($425.0 UGF in FY24 only)
- Project-dependent costs
    - Project feasibility analysis, implementation, ongoing project maintenance (inventories, modeling, audits)

Path 2: State Projects

Project-dependent costs, cont.

- Variety of ways for State to approach projects
  - State use State staff, funds
  - State contract with project developer(s), service providers
- Project developer(s) offer range of terms, services
  - ‘Turnkey’ – developer fronts project costs; receives fixed share of revenue once project generates credits
  - ‘Ala carte’ – one or more companies are contracted in fee-for-services approach to perform specific project tasks (inventory, marketing, etc.)

Path 2: State Projects - Scenarios

- Scenarios feature potential pilot projects identified by Anew
- Not conclusive view of State's carbon offset potential – DNR anticipates additional opportunities
- DNR may or may not proceed with pilots, as described in Anew report, if SB48 passes
- State Forests are likely primary objectives due to high carbon storage potential
- Revenue dependent on number, timing, size of projects; verifiable carbon stored; credit price; marketing success
- On credit sale, revenue flows to Carbon Offset Fund

Path 2: State Projects – 1-Project Scenario

Haines State Forest and Resource Management Area - as described in Anew report

Please note, the individual Haines and SE analyses results differ slightly from the combined effort due to the incorporation of additional data following the initial combined analysis.

Date	Total Credits (pre- leakage and buffer)	Leakage Credits (30%)	Buffer Credits (18%)	Conservation Credits	Removals Credits	Conservation Credit Price (dollars)	Removal Credit Price (dollars)	Gross Project Revenue (dollars)	Project Expense (dollars)	Net Project Revenue (dollars)	Developer Share (20%) *if any (dollars)	DNR Program Costs (dollars)	Net State Revenue (dollars)
2023	157,000	-47,000	-19,000	41,000	50,000	15.00	25.00	1,865,000	(376,920)	1,488,080	(297,616)	(447,100)	743,364
2024	157,000	-47,000	-19,000	41,000	50,000	16.00	26.00	1,956,000	(28,470)	1,927,530	(385,506)	(447,100)	1,094,924
2025	157,000	-47,000	-19,000	41,000	50,000	17.00	27.00	2,047,000	(28,470)	2,018,530	(403,706)	(447,100)	1,167,724
2026	157,000	-47,000	-19,000	41,000	50,000	18.00	28.00	2,138,000	(28,470)	2,109,530	(421,906)	(447,100)	1,240,524
2027	157,000	-47,000	-19,000	41,000	50,000	19.00	29.00	2,229,000	(28,470)	2,200,530	(440,106)	(447,100)	1,313,324
2028	157,000	-47,000	-19,000	41,000	50,000	20.00	30.00	2,320,000	(165,970)	2,154,030	(430,806)	(447,100)	1,276,124
2029	157,000	-47,000	-19,000	41,000	50,000	21.00	31.00	2,411,000	(28,470)	2,382,530	(476,506)	(447,100)	1,458,924
2030	119,000	-34,000	-19,000	16,000	50,000	22.00	32.00	1,952,000	(24,220)	1,927,780	(385,556)	(447,100)	1,095,124
2031	90,000	-26,000	-14,000	0	50,000	23.00	33.00	1,650,000	(21,500)	1,628,500	(325,700)	(447,100)	855,700
2032	85,000	-25,000	-11,000	0	49,000	24.00	34.00	1,666,000	(21,330)	1,644,670	(328,934)	(447,100)	868,636
TOTAL	**1,393,000**	**-414,000**	**-177,000**	**303,000**	**499,000**	**19.50**	**29.50**	**20,234,000**	**(752,290)**	**19,481,710**	**(3,896,342)**	**(4,471,000)**	**11,114,368**
2033-2062	2,185,000	-653,000	-274,000	0	1,258,000	25.00	34.00	42,772,000	(1,864,000)	40,908,000	(8,181,600)	(13,413,000)	19,313,400
TOTAL	**3,578,000**	**-1,067,000**	**-451,000**	**303,000**	**1,757,000**	n/a	n/a	**63,006,000**	**(2,616,290)**	**60,389,710**	**(12,077,942)**	**(17,884,000)**	**30,427,768**

- Shows potential share to project developer contracted on commission-type basis. Other contractual frameworks may apply instead.
- Includes $309,800 per FY for 2 positions at OPMP and $137,300 per FY for 1 position at DOF; does not include one-time costs related to adding new positions; does not include potential commercial and legal expertise costs (requesting one-time capital of $250,000 for expertise)

Path 2: State Projects – 3-Project Scenario

Haines State Forest, Tanana Valley State Forest and Mat-Su pilot projects, concurrently													
Date	**Total Credits (pre- leakage and buffer)**	**Leakage Credits (30%)**	**Buffer Credits (18%)**	**Conservation Credits**	**Removals Credits**	**Conservation Credit Price (dollars)**	**Removal Credit Price (dollars)**	**Gross Project Revenue (dollars)**	**Project Expense (dollars)**	**Net Project Revenue (dollars)**	**Developer Share (20%) * if any (dollars)**	**DNR Program Costs (dollars)**	**Net State Revenue (dollars)**
2023	443,000	-126,000	-56,000	41,000	220,000	15.00	25.00	6,115,000	(1,128,920)	4,986,080	(997,216)	(447,100)	3,541,764
2024	443,000	-126,000	-56,000	41,000	220,000	16.00	26.00	6,376,000	(83,470)	6,292,530	(1,258,506)	(447,100)	4,586,924
2025	443,000	-126,000	-56,000	41,000	220,000	17.00	27.00	6,637,000	(83,470)	6,553,530	(1,310,706)	(447,100)	4,795,724
2026	443,000	-126,000	-56,000	41,000	220,000	18.00	28.00	6,898,000	(83,470)	6,814,530	(1,362,906)	(447,100)	5,004,524
2027	443,000	-126,000	-56,000	41,000	220,000	19.00	29.00	7,159,000	(83,470)	7,075,530	(1,415,106)	(447,100)	5,213,324
2028	443,000	-126,000	-56,000	41,000	220,000	20.00	30.00	7,420,000	(495,970)	6,924,030	(1,384,806)	(447,100)	5,092,124
2029	443,000	-126,000	-56,000	41,000	220,000	21.00	31.00	7,681,000	(83,470)	7,597,530	(1,519,506)	(447,100)	5,630,924
2030	405,000	-113,000	-56,000	16,000	220,000	22.00	32.00	7,392,000	(79,220)	7,312,780	(1,462,556)	(447,100)	5,403,124
2031	376,000	-105,000	-51,000	0	220,000	23.00	33.00	7,260,000	(76,500)	7,183,500	(1,436,700)	(447,100)	5,299,700
2032	371,000	-104,000	-48,000	0	219,000	24.00	34.00	7,446,000	(76,330)	7,369,670	(1,473,934)	(447,100)	5,448,636
TOTAL	**4,253,000**	**-1,204,000**	**-547,000**	**303,000**	**2,199,000**	**19.50**	**29.50**	**70,384,000**	**(2,274,290)**	**68,109,710**	**(13,621,942)**	**(4,471,000)**	**50,016,768**
2033-2062	10,239,000	-2,876,000	-1,324,000	0	6,039,000	25.00	34.00	205,326,000	(5,977,000)	199,349,000	(39,869,800)	(13,413,000)	146,066,200
TOTAL	**14,492,000**	**-4,080,000**	**-1,871,000**	**303,000**	**8,238,000**	n/a	n/a	**275,710,000**	**(8,251,290)**	**267,458,710**	**(53,491,742)**	**(17,884,000)**	**196,082,968**

- Shows potential share to project developer contracted on commission-type basis. Other contractual frameworks may apply instead.
- Includes $309,800 per FY for 2 positions at OPMP and $137,300 per FY for 1 position at DOF; does not include one-time costs related to adding new positions; does not include potential commercial and legal expertise costs (requesting one-time capital of $250,000 for expertise)

Path 2: State Projects – Carbon Offset Fund

- The fund is outside the general fund (GF)
- Revenue automatically flows into the fund – “shall” be deposited
- Appropriations do not lapse
- Used for purposes of Carbon Offset Program
  - Required project maintenance over term (varies; recurring inventories, audits, to support further credit issuance)
  - Program administrative costs (including DNR staff)
  - Initiate new carbon offset projects (feasibility, start-up, implementation costs)

Sectional Analysis

Sectional Analysis – CS for SB48(RES) \S

Section	Page	Provision
Sec. 1	1	Procurement code exemption for Carbon Offset Program contracts (State projects)
Sec. 2	1-2	Non-general fund program receipts conforming to Sec. 6 (State projects)
Sec. 3-5	2-5	State land leases to third parties for carbon purposes (carbon leases)
Sec. 6	5-11	Establishes new Carbon Offset Program at Department of Natural Resources (State projects)
Sec. 7-9	11	Enable projects on Haines State Forest Resource Management Area (State projects)
Sec. 10-13	11-12	Enable projects on State Forests generally (State projects)
Sec. 14	12-15	Disallows carbon lease/project costs as oil and gas lease expenditures
Sec. 15	15	Immediate effective date

Thank you

Joe Byrnes, Legislative Liaison

Department of Natural Resources

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