

FiniteCarbon



Current State of Play in the Voluntary Forest Carbon Market



Chesapeake Bay
Program

November 19, 2020

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VP Portfolio Development
Finite Carbon

Current State of Play – Agenda 1

- Describe the trends in the **projected levels of investments** being made or planned in forest carbon offsets by companies under voluntary carbon markets, and **whether the pandemic economic depression has impacted these planned investments**.
- Describe the **required practices and protocols** necessary to qualify forestland (and afforestation) as eligible for carbon offsets , and what are the average **costs to meet these practices/protocols**, and are there ways government may offer **financing** for example via low interest loans to cover these costs ?
- On **publicly owned forests**, how can managers qualify these lands for carbon offset investments?
- Are the **revenues from carbon offsets sufficient alone to conserve** and restore private forests or is “ blended financing “ necessary in most or all cases?

Finite Carbon Forest Carbon Projects

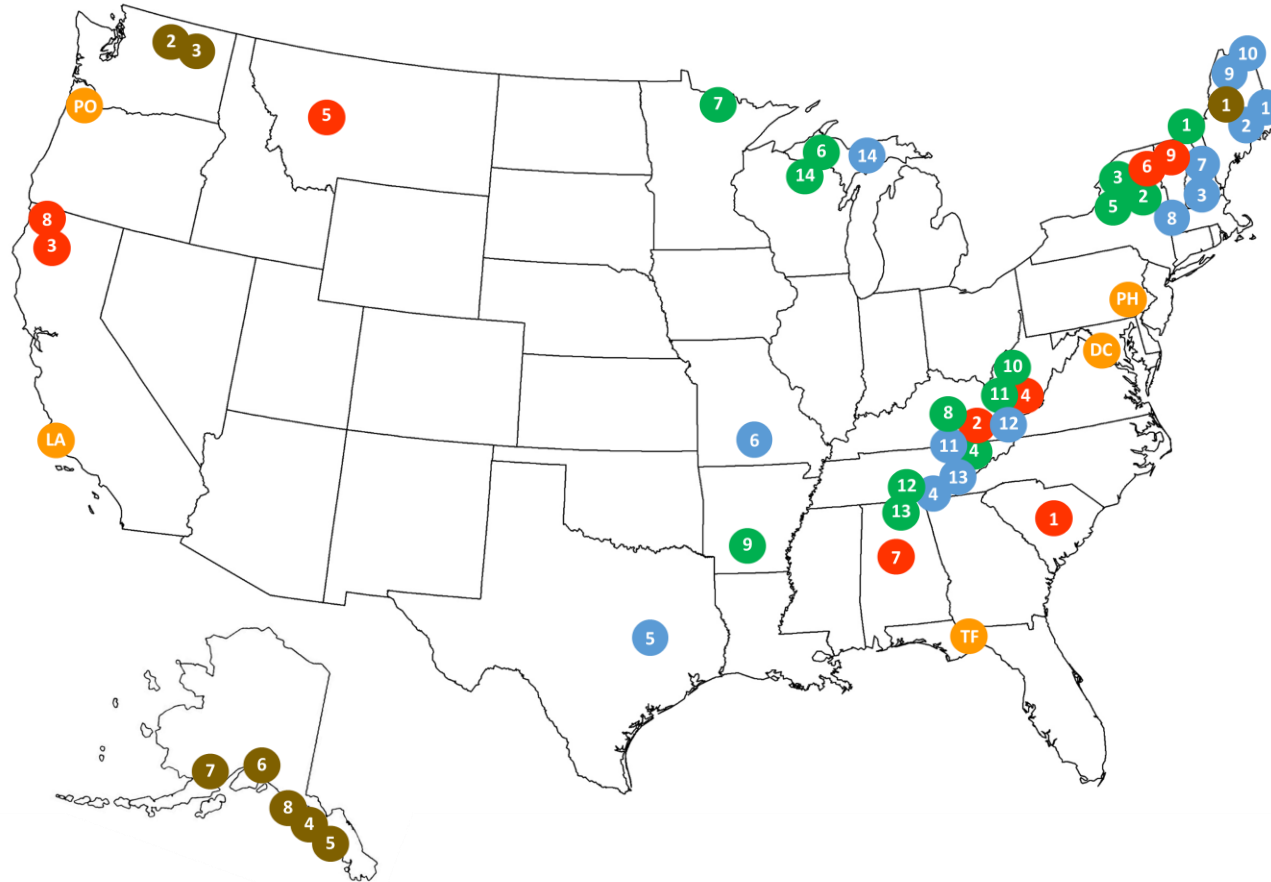
48 IFM Projects • 3.1 million acres

Land Trust and Non-Profit

1. Downeast Lakes LT Farm Cove
2. Downeast Lakes LT Grand Lake Stream
3. NEFF Hersey Mountain
4. TN River Gorge Trust
5. Cooks Branch Conservancy
6. UCC Shannondale
7. Lakes Region Conservation Trust
8. Mass Audubon
9. AMC Silver Lake
10. AMC Maine Woods
11. TNC Ataya
12. TNC Highlands
13. SE Cave Conservancy
14. Hiawatha Sportsmans

Tribes and Alaska Native Corps

1. Passamaquoddy
2. Colville
3. Spokane
4. Sealaska I
5. Sealaska II
6. Ahtna
7. Tyonek
8. Huna Totem



TIMO and REIT

1. TFG Connecticut Lakes
2. TFG Chateaugay
3. Molpus Champion
4. Molpus Little Brimstone
5. Molpus Adirondacks
6. Molpus Ned Lake
7. Molpus Meriwether
8. Molpus Boone Parklands
9. PotlatchDeltic Moro Big Pine
10. Lyme Logan
11. Lyme Wyoming
12. Lyme Skyline Forest AL
13. Lyme Skyline Forest TN
14. Lyme Wisconsin

Corporate and Family

1. Norfolk Southern
2. Alma Land Company
3. Berry Summit LLC
4. Rowland Land Co.
5. Sieben Live Stock Co.
6. ATP Upper Hudson
7. *confidential*
8. *Confidential*
9. Park Forestry

Finite Carbon Office

- DC. Washington DC
LA. Los Angeles
PH. Philadelphia, PA (HQ)
PO. Portland, OR
TF. Tallahassee, FL

71 million offsets issued • \$750 million revenue

Why Landowners Consider Carbon Offset Projects

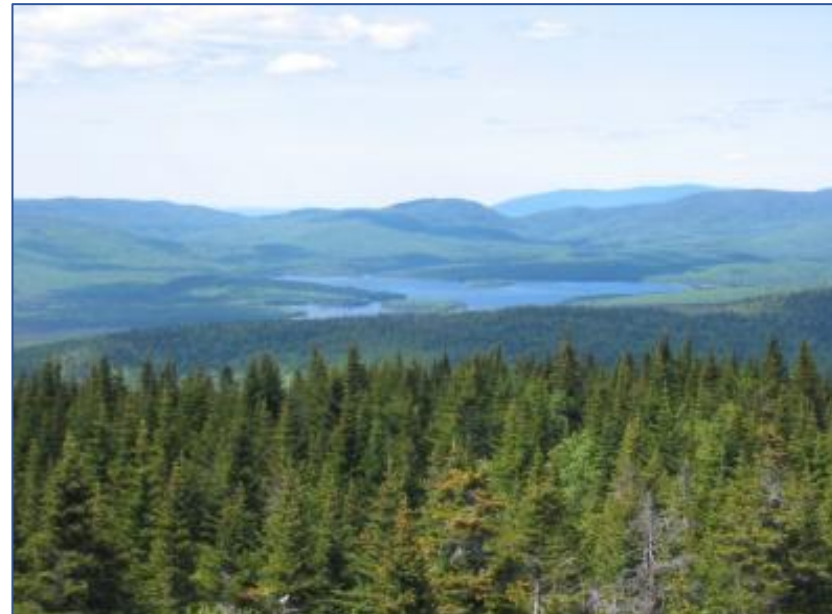
Stewardship + Stability

- New revenue on unmanaged or conservatively-managed forests
- In line with mission + forest practices
- Income for stewardship, taxes, insurance, etc.



Conservation Capital

- Forestland acquisition
- Facilitate conservation easement
- Leverage traditional funding to advance economic development



Corporate GHG Emission Commitments (2020)



SUSTAINABLE ENERGY



Oil giant BP says it wants to have net-zero emissions by 2050

PUBLISHED WED, FEB 12 2020-7:58 AM EST | UPDATED WED, FEB 12 2020-9:17 AM EST

BP Quits Oil Lobby Groups in its Pursuit of a Zero-Carbon Future

The oil and gas giant continues moving further away from its peers in its efforts to reduce carbon emissions.

BLACKROCK

Activists cheer BlackRock's landmark climate move but call for vigilance

Divestment decision by the world's biggest fund manager called a breakthrough - but only a first step



▲ Hundreds of youth climate activists staged a demonstration outside of the BlackRock offices in San Francisco as part of a nationwide youth climate strike in December. Photograph: Justin Sullivan/Getty Images



ARTICLE | ENVIRONMENT

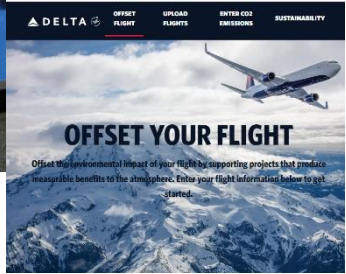
Delta commits \$1 billion to become first carbon neutral airline globally

Staff Writer | Feb 14, 2020 7:00am



IN SUMMARY

Airline sets vision for meaningfully reducing emissions and advancing sustainability.



The Voluntary Story

Corporate buyers use voluntary offsets to connect with:

Shareholders • *Board members* • *Stakeholders*

Offsets as GHG-reduction strategy can be contentious →

Buyers source quality projects w/ current + new ESG co-benefits

- ✓ Pandemic → economic environment like '09
- ✓ Corporate GHG-commitments → 10-30 yr goals

How resilient is offset demand in near-term, mid-term?

US airline Delta halves 2019 offset purchases due to COVID-19

Published 12:35 on July 31, 2020 / Last updated at 18:01 on July 31, 2020 / Americas, Aviation/CORSIA, Climate Talks, International,

Marathon Petroleum to shut two US refineries: Update

Published date: 03 August 2020

Adds detail from earnings call.

Share:

in    

Marathon Petroleum will close about 200,000 b/d of California and Rocky Mountains refining capacity in the latest refining shutdowns hastened by a pandemic-fueled plunge in transportation demand.

Companies making major GHG-reduction commitments

Offset market in transition = varied offerings for landowners

Due diligence + informed decisions =
landowners + service providers answering:

Carbon product offered: offset, cost-share payment, annual lease for delayed harvest?

Landowner commitments + for how long?

Deal structure:

- Guaranteed vs option payments or full consignment?
- Who pays costs and when?
- Offtake terms (pricing, volume, term, fees)?
- Program status: **fully baked** or **still in development**?

Voluntary Offset Pricing (2017-18)

| | 2017 | | | 2018 | | |
|---|-------------------------------|------------------|----------------|-------------------------------|------------------|-----------------|
| | VOLUME MtCO ₂ e | AVERAGE PRICE | VALUE | VOLUME MtCO ₂ e | AVERAGE PRICE | VALUE |
| FORESTRY AND LAND USE | 16.6 | \$3.4 | \$63.4M | 50.7 | \$3.2 | \$171.9M |
| RENEWABLE ENERGY | 16.8 | \$1.9 | \$31.5M | 23.8 | \$1.7 | \$40.9M |
| WASTE DISPOSAL | 3.7 | \$2.0 | \$7.4M | 4.5 | \$2.2 | \$10.0M |
| HOUSEHOLD DEVICES | 2.3 | \$5.0 | \$11.8M | 6.1 | \$4.8 | \$29.5M |
| CHEMICAL PROCESSES/ INDUSTRIAL MANUFACTURING | 2.6 | \$1.9 | \$4.9M | 2.5 | \$3.1 | \$7.9M |
| ENERGY EFFICIENCY/ FUEL SWITCHING | 1.1 | \$2.1 | \$3.3M | 2.8 | \$2.8 | \$7.8M |
| TRANSPORTATION | 0.1 | \$2.9 | \$0.2M | 0.3 | \$1.7 | \$0.5M |

Source: Ecosystem Marketplace (2019)

Pre-COVID: Voluntary offset demand up, but prices flat.

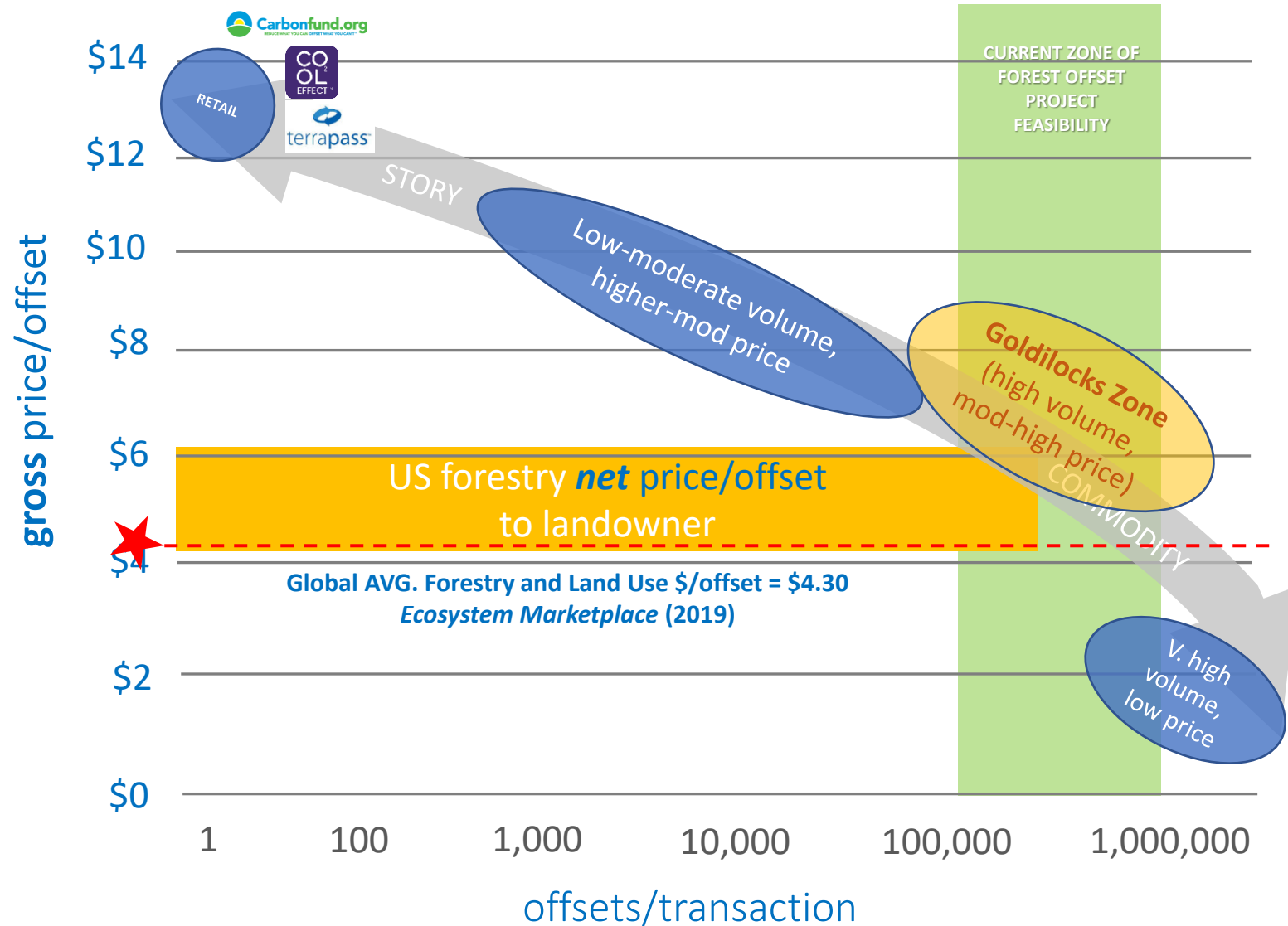
Voluntary Offset Pricing (2019, reported to date)

| | VOLUME MtCO ₂ e | AVERAGE PRICE | VALUE |
|---|-------------------------------|------------------|------------------|
| RENEWABLE ENERGY | 42.4 | \$1.4 | \$60.1 M |
| FORESTRY AND LAND USE | 36.7 | \$4.3 | \$159.1 M |
| WASTE DISPOSAL | 7.3 | \$2.5 | \$18.0 M |
| HOUSEHOLD DEVICES | 6.4 | \$3.8 | \$24.8 M |
| CHEMICAL PROCESSES/ INDUSTRIAL MANUFACTURING | 4.1 | \$1.9 | \$7.7 M |
| ENERGY EFFICIENCY/ FUEL SWITCHING | 3.1 | \$3.9 | \$11.9 M |
| TRANSPORTATION | 0.4 | \$1.7 | \$0.7 M |

Source: Ecosystem Marketplace (2020)

Today: Pricing up (but incomplete reporting); demand has cooled?

"I heard some landowners are getting \$10/ton?" Yes, but...



Forest Offset Market Trends



Compliance (CA/Quebec = Western Climate Initiative)

- 190M offsets issued for 180-200M+ total demand (2013-2020)
- Pricing ~\$12+/offset outside CA delivery by 10/2021; \$15+ for CA
- CA C&T/offset program reauthorized for 2021-2030 period, *but*:
- Offset use reduced from 8% to 4/6%, *and*
- “Direct Environmental Benefits” (DEBs) = 50% from CA (+?)
- ***Very limited opportunity for new projects outside CA***



CLIMATE
ACTION
RESERVE



Voluntary (ACR, VCS, and CAR)

- VERRA = 30yr+; ACR = 40yr; CAR = 100yr+
- Corporate social responsibility (CSR) buyers = lower, more sporadic demand; smaller offtake agreements
- Lower pricing relative to compliance (\$4 to \$10/offset)
- Potential for sector-level game changing demand (e.g., international aviation and shipping), but now not until 2025 and this doesn't mean better pricing

Landowner Commitments: *Compliance vs Voluntary*

California ARB



“Golden Rule” Harvest \leq Growth
Natural forest management
Even-aged harvest = 40 acres max $<50BA$



If commercial harvesting, then SFI, FSC, ATFS or state/fed approved plan



Audits

- Harvest updates + desk review (~annual)
- Field verify **every 6 yrs**



Re-inventory **every 6 yrs**
Long term OM costs (~\$350k++)



Limited waiver of sovereign immunity
BIA Section 81 review letter

100+ years

ACR IFM

“Golden Rule” Harvest \leq Growth
Natural forest management
No additional harvest restrictions

If commercial harvesting, then SFI, FSC, or ATFS

Audits

- Harvest updates + desk review (~annual)
- Field verify **every 5 yrs**

Re-inventory **every 10 yrs**
Long term OM costs (~\$200k)

40 years fixed

No additional requirements
Non-federal public forests participate

Compliance

| Region | 1st Year | Annual |
|--------------------|------------|---------|
| California/PNW | \$800-1200 | \$20-40 |
| Coastal Alaska | \$300-1000 | \$10-20 |
| Inland West | \$200-1000 | \$10-20 |
| Southeast Hardwood | \$200-800 | \$10-30 |
| Southeast Softwood | \$150-200 | \$10-20 |
| Lake States | \$100-400 | \$5-20 |
| Northeast | \$100-250 | \$5-10 |

*at historic average \$10/offset (gross); now \$11-12 for non-CA projects, higher for CA in-state projects

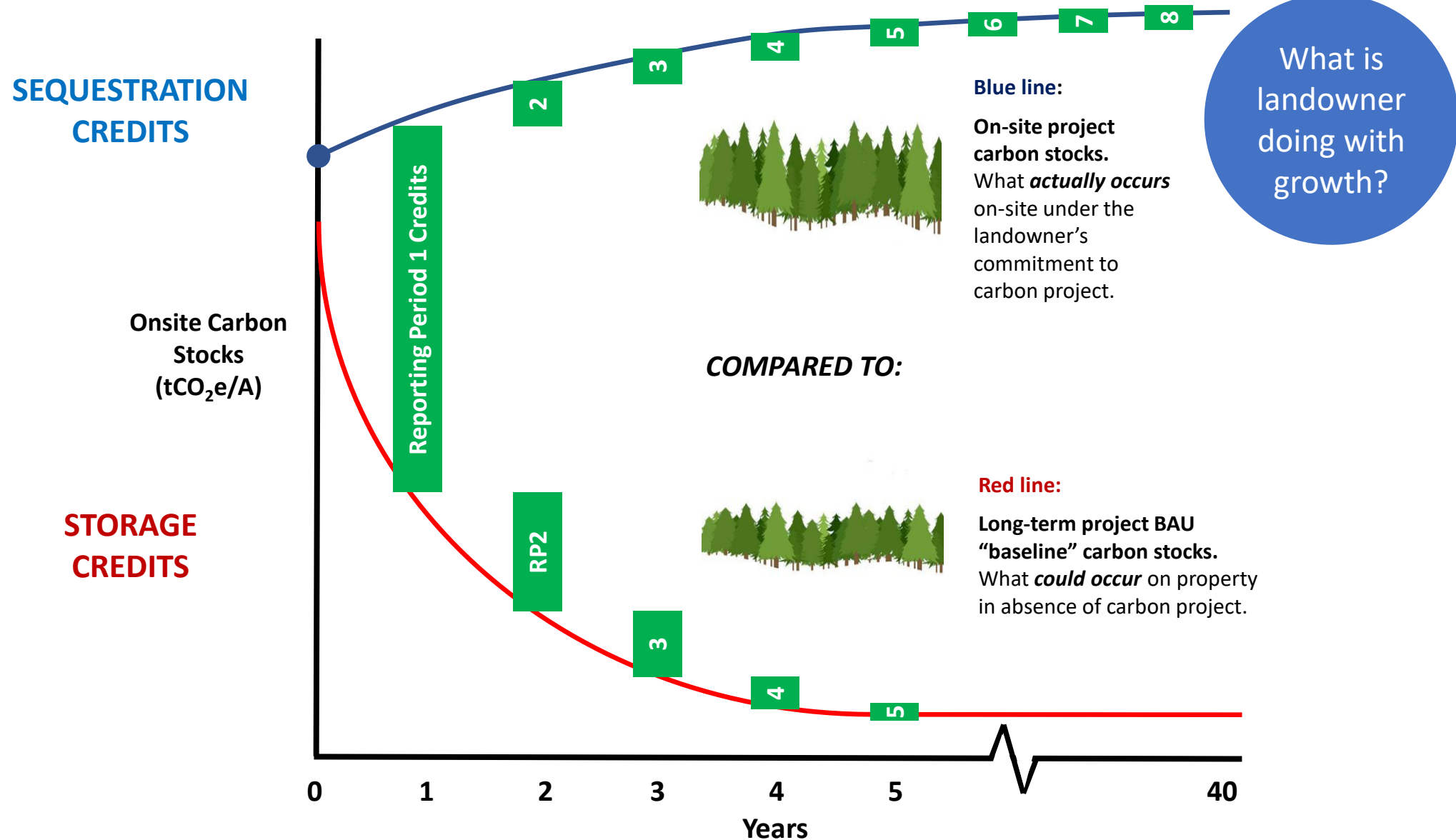
Voluntary

At \$6 to 8 (gross),
\$150 to 450/ac net to landowner
total over first 5 yrs, then \$5 to
10/ac/yr net to landowner

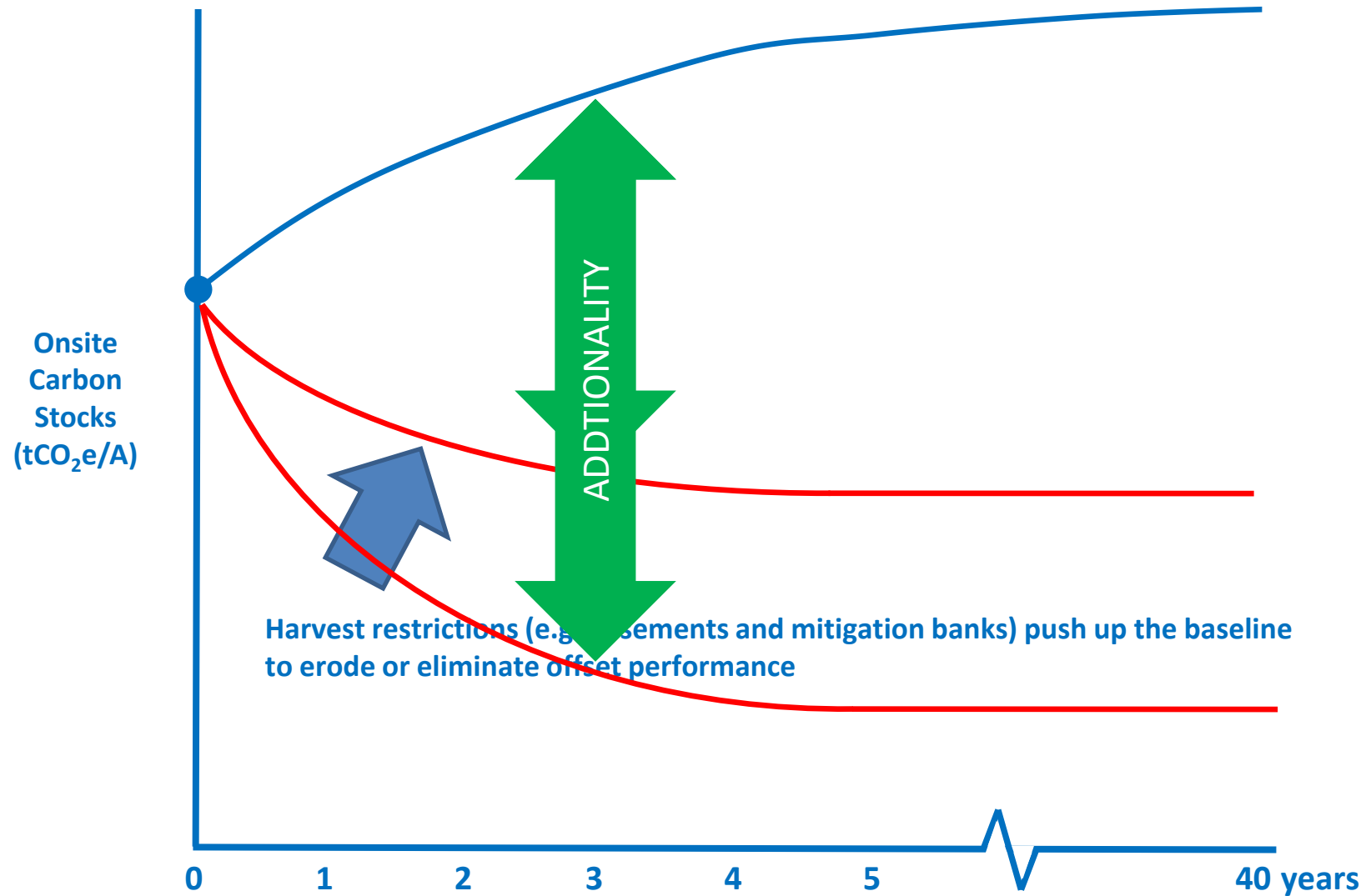


- Lower barriers to entry
- More forestry friendly
- Better cost/benefit
- Can pool projects
- Demand picking up

Quantifying ACR IFM Project Performance



Easements and Carbon “Additionality”



Voluntary Carbon Project Development Cycle



Land Trust Alliance and Finite Carbon Partnership

Strategic partners since 2017

- Connect land trusts to carbon finance
- Focused on education to LT community



Partnership has evolved...

- New LTA/Finite program agreement
- Pooled voluntary land trust projects (two to three land trusts per project)
- LTA member, accredited land trust fee lands

LTA offset publications (Fall '20):

- Carbon Offsets + Conservation Easements
- Carbon 101 for Land Trusts



<https://www.landtrustalliance.org/topics/climate-change/forest-carbon-offset-pilot-program>

RESOURCES AND TOOLS

PUBLICATION



Carbon Offsets in Conservation Easements: The Essentials for Land Trusts

Author: Land Trust Alliance

Year Published: 2020

This publication offers practical guidance to land trust practitioners on drafting conservation easements with carbon offsets in mind.

PUBLICATION



Carbon Markets: Are They Right for Your Land Trust?

Author: Land Trust Alliance

Year Published: 2020

This publication lays out the basics of carbon markets and how land trusts can use them to achieve their conservation and stewardship goals.

INTRODUCING



CORE
C A R B O N

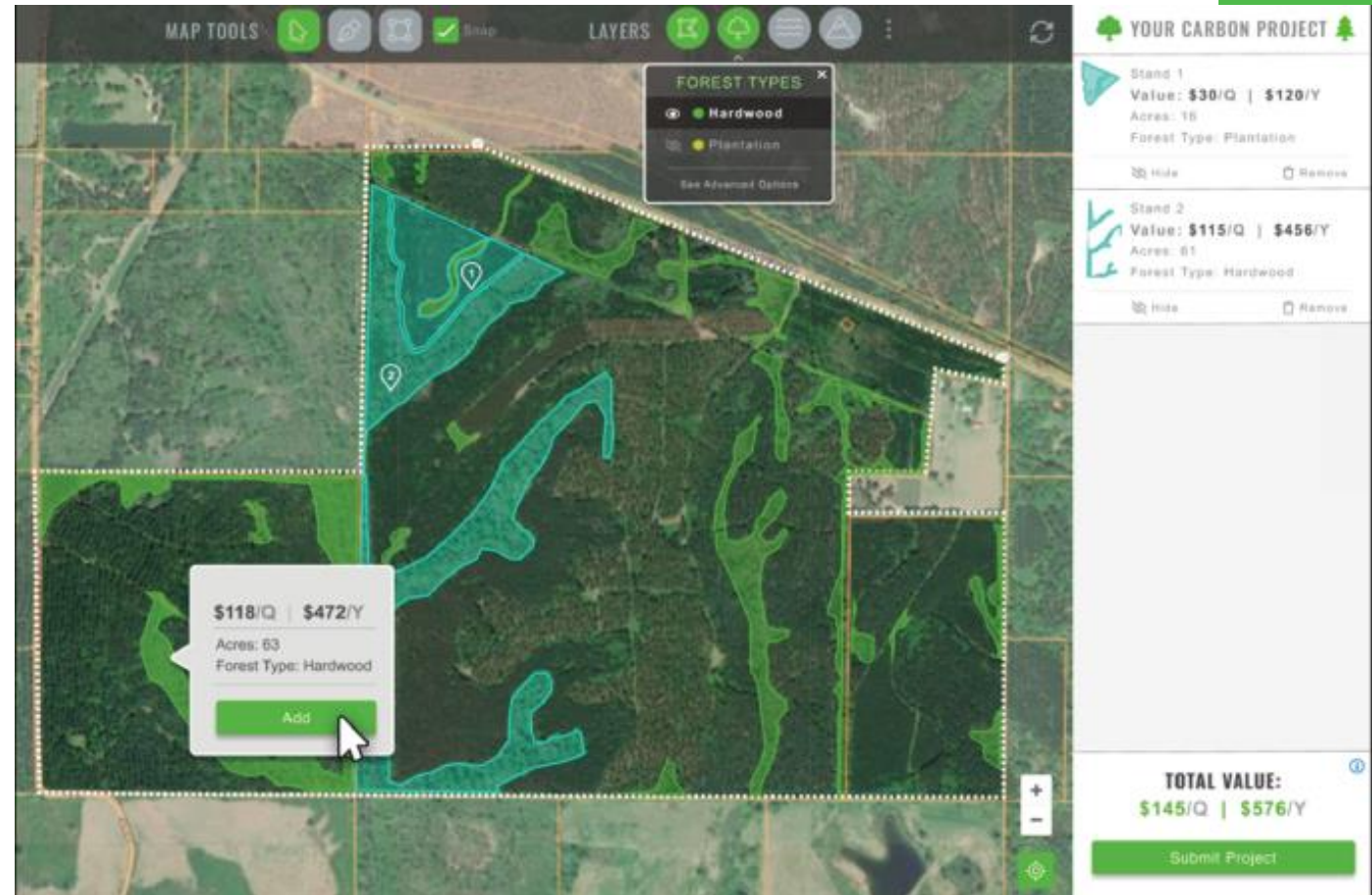
By **Finite**Carbon

BIG OPPORTUNITIES FOR SMALL LANDOWNERS.

[LEARN MORE](#)

How Does CORE Work?

- Free web-based platform for smaller lands to access carbon market
 - ✓ 40 to 5,000 acres
- Pooled-owner voluntary methodology with American Carbon Registry
- Technology reduces or eliminates landowner's measurement, monitoring and verification costs
- Landowners can:
 - ✓ self-enroll
 - ✓ work with consulting forester
 - ✓ Work with regional CORE Partner
- Early 2021 launch



Disclaimer: Values included in image are placeholders only to illustrate possible outcomes when CORE Carbon platform is launched.

Current Status + Next Steps

- Platform development complete → beta testing + refining
- 1st methodology (forest protection / harvest deferral) in progress w/ ACR
- Next steps = peer review + public comment + revisions

Sign up to learn more about CORE Carbon:

[COREcarbon.com](https://corecarbon.com)

Video on CORE Carbon:

youtube.com/watch?v=wdEpA-BMewo

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- **Landowner commitments** + for how long?
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- Program status: **fully baked** or **still in development**?



- **Permanence / Leakage**
 - ✓ Best practice: use verified methodology and standard (ACR, CAR, VERRA)
- **Additionality**
 - ✓ Best practice: ensure baseline modeling is reasonable and justifiable
 - ✓ Best practice: use project offsets to meet program buffer pool requirements
- **Layering with Conservation Project**
 - ✓ Best practice: work with accredited land trust + refer to guidance documents (Land Trust Alliance)

Finite Carbon and offset verifier NSF Certification, LLC on the Finite Carbon - Spokane Tribe of Indians IFM project.

Thank you!



Questions?

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Tina Sentner with carbon offset verifier NSF Certification, LLC on the Finite Carbon - Spokane Tribe of Indians IFM project.