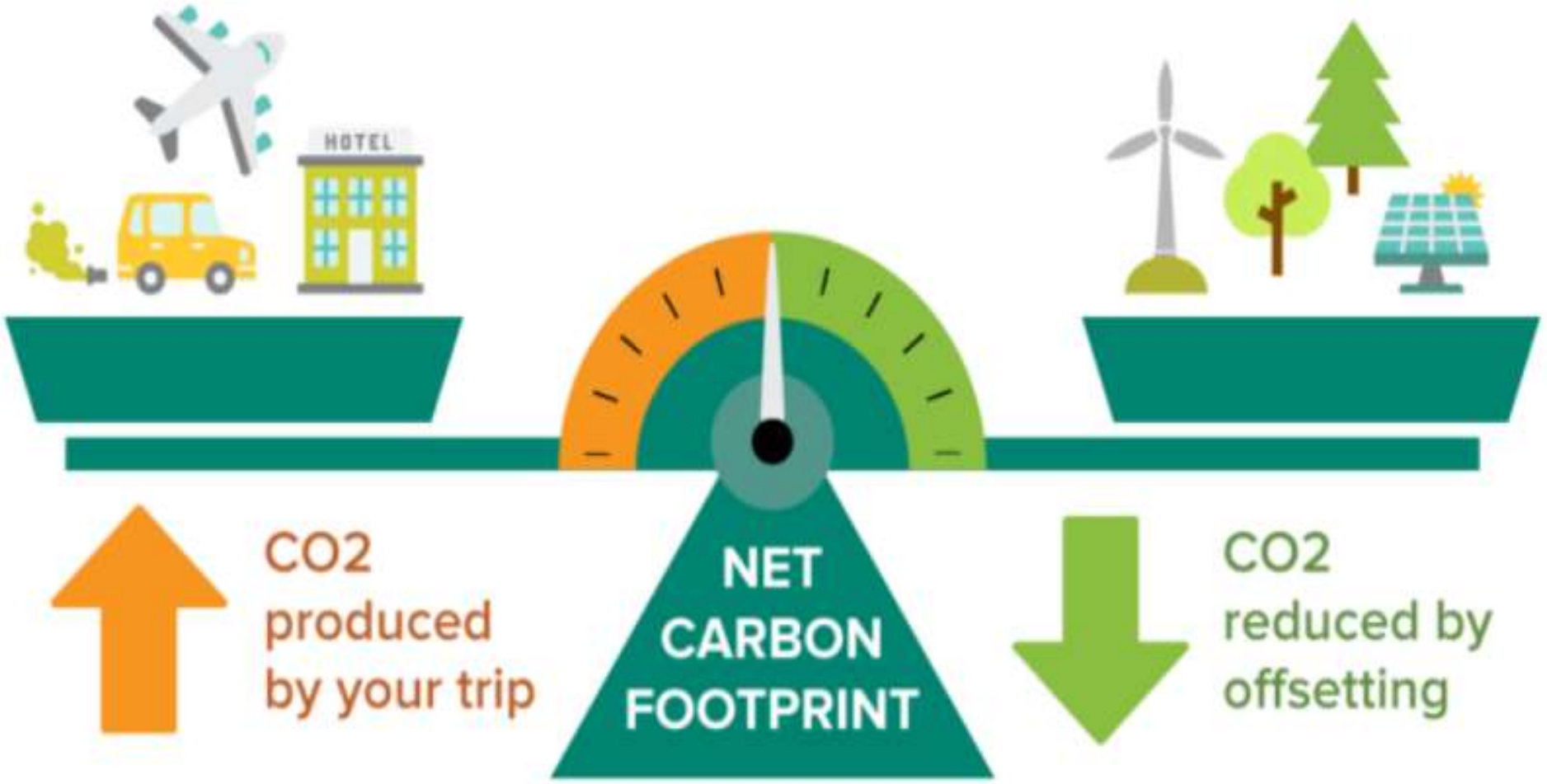
CARBON RHO

PARTNERING WITH LANDOWNERS

to capture the value of natural assets, and provide access to the carbon credit trading market

WHAT IS A CARBON CREDIT?



SUSTAINABLE TRAVEL INTERNATIONAL

INDUSTRY REFERENCE – PROJECT OFFSETS

- 200 MMscfd Plant
- 180,000 MT/Year
- 15,000-90,000 acres*

- Locomotive Diesel Usage (138,000 gallons)
- 1,400 MT/Year
- 117-700 acres*

- 30,000 miles/yr-truck
- 180 MT/Year
- 15-90 acres*

- (3) 2,700 Hp Natural Gas Engines
- 36,000 MT/Year
- 3,000 – 18,000 acres*

- 1.7 Million Ton/year Cement Kiln
- 377,000 MT/Year
- 31,400-188,500 acres*

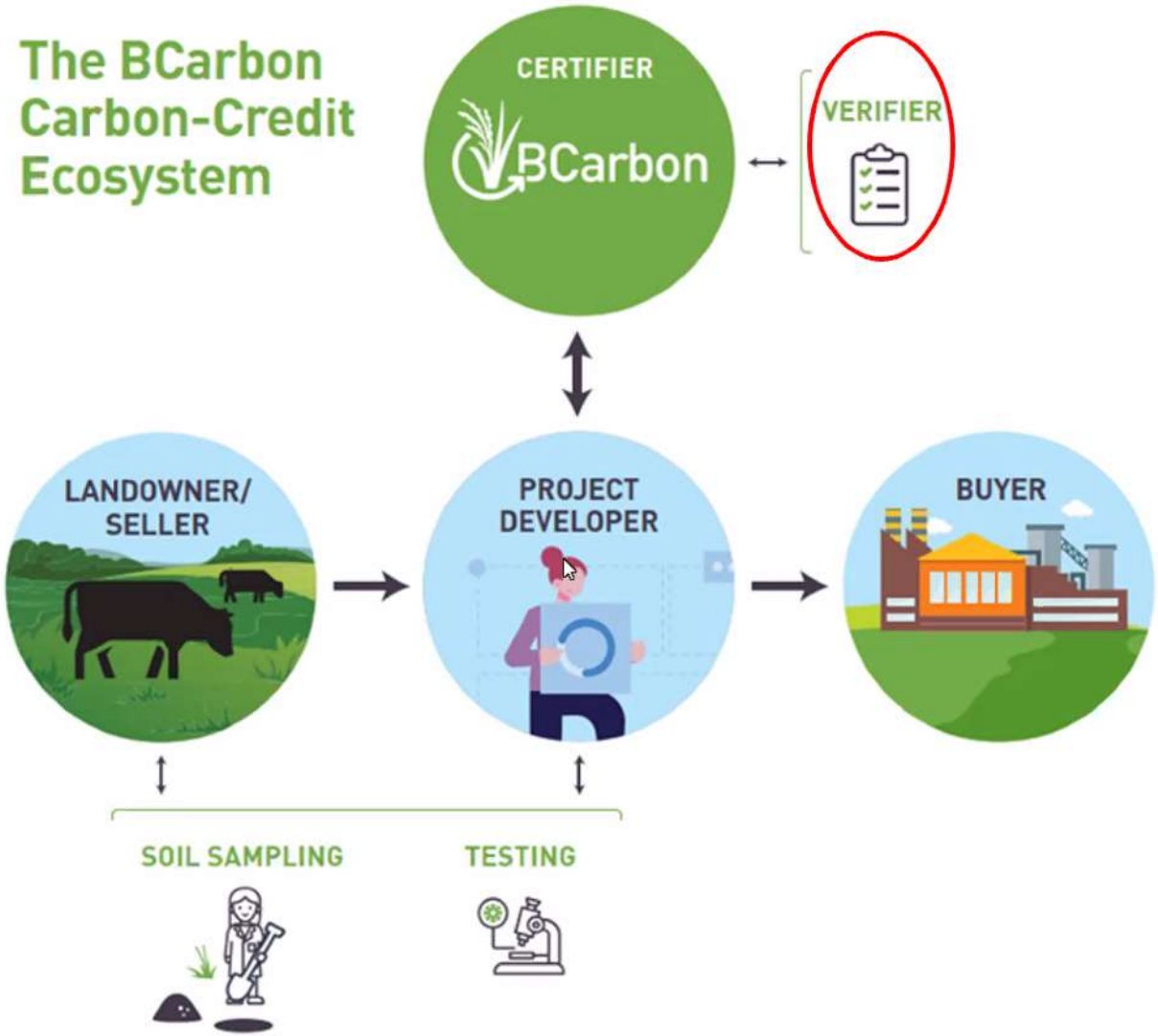
- Typical US Home
- 8.67 MT/Year
- 0.7 – 4.3 acres*

*Denotes average annual carbon sequestration rate for forestry project ranges from 2-12 tons/acre-yr (full offset)

CARBON MARKETS & STRUCTURE

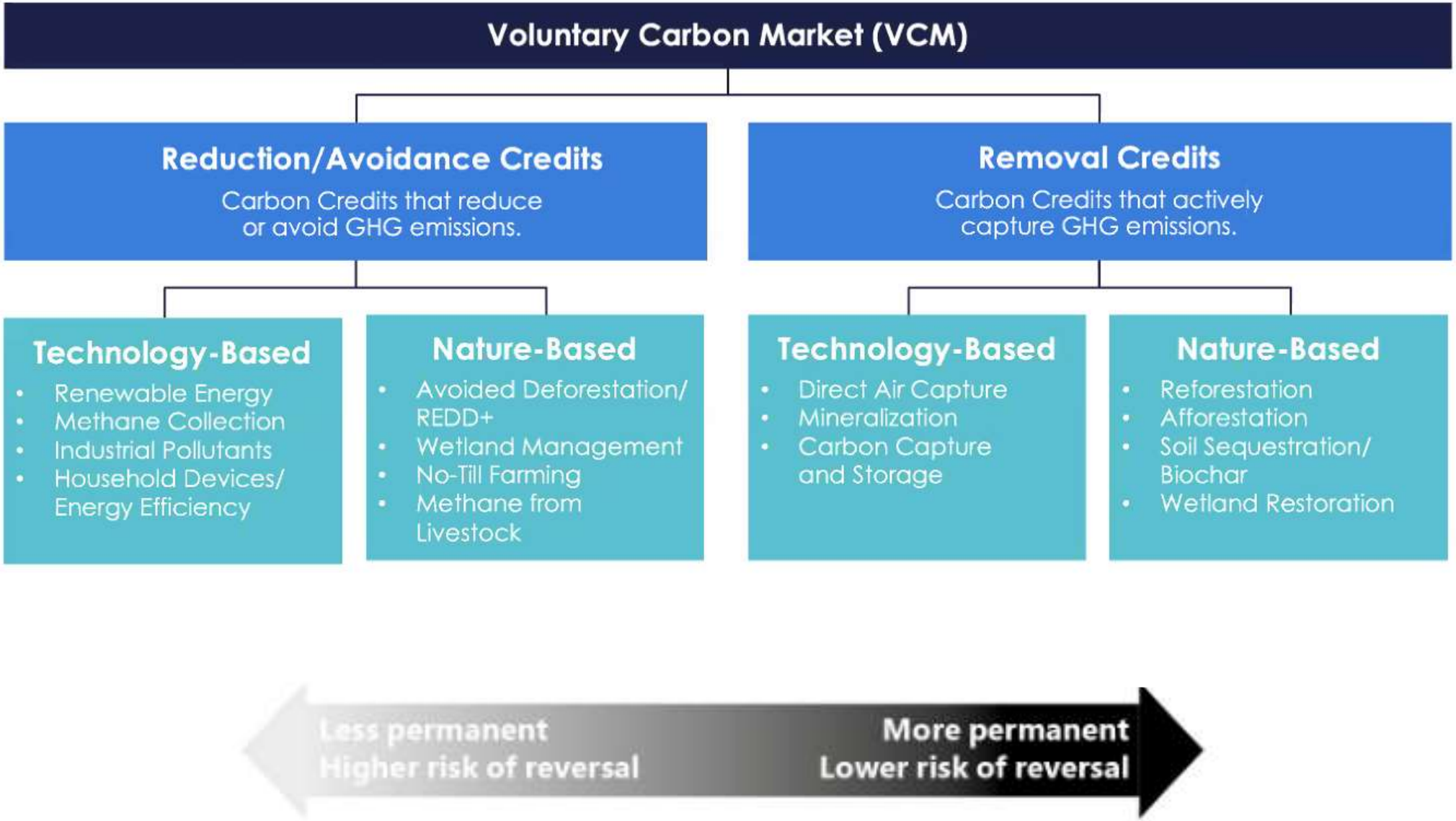
- CARBON MARKET DRIVERS & PRICING SIGNALS
  - Carbon Taxes
  - Cap and Trade Regulated (California, Washington & RGGI)
    - EXAMPLE - EU Emission Trading System is a blend
  - Baseline & Credit Regulated Markets
- PRIMARY INSTRUMENTS
  - Renewable Energy Credits (REC)
  - Emission Allowances
  - *Carbon Credits / Offsetting*

NATURE-BASED CARBON CREDIT VALUE CHAIN



BCarbon
Working lands for climate solutions

WHAT IS A CARBON CREDIT? DEVIL IS IN THE DETAILS



Source: Platts S&P Commodity Insights

OKLAHOMA FOREST-BASED CARBON OPPORTUNITY

Forest Carbon Annual Sequestration Rates for Select Forest Types

Metric Tons CO2e / Acre / Year

Source: USFS

CARBON MANAGEMENT & FORESTRY

- FOREST-BASED CARBON PROTOCOLS
  - Afforestation, reforestation and revegetation (ARR)
  - Improved forest management (IFM); and
  - Avoided conversion (REDD+ Projects and similar)

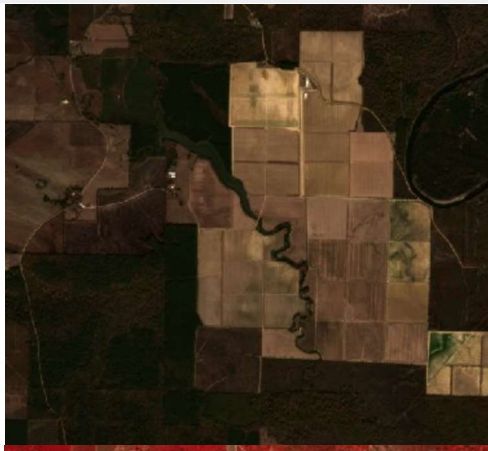
- AFFORESTATION, REFORESTATION & REVEGETATION
  - Highly “Additional” Long-term opportunity with high-density hardwoods
  - Land conversion 20⁺ year commercial term (Renewable to 100 years)

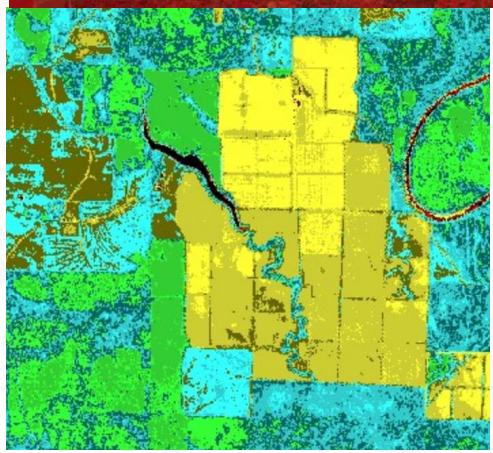
- IFM – ALIGNS W/ MANAGED TIMBER OPERATORS
  - Accrual of carbon credits vs business as usual practices
  - Generally, 40-year term but may include 1-year harvest deferrals (e.g. NCX)

- KEY CONCEPTS – VALUE DRIVERS FOR CREDITS
  - New market has differentiated credits (voluntary vs compliance)
  - ***Additivity, permanence & leakage drive value***
  - Maximize returns on natural capital by understanding net zero drivers

CARBON CREDIT VALUE DRIVERS

- ADDITIVITY
  - Would benefit happen w/o project?
- PERMANENCE (DURABILITY)
  - Where and how long captured carbon is stored
- LEAKAGE
  - Project-Level example
    - Owner preserves one area and harvests in another
    - Often safeguarded by full ownership enrollment
  - Market-Level example
    - Supply demand dynamics induce harvesting (Carbon drives scarcity)





REGISTRIES - CARBON CREDIT CERTIFICATION

Gold Standard

CLIMATE ACTION RESERVE

GLOBAL CARBON COUNCIL

BCarbon

PLAN VIVO
For nature, climate and communities

CARBON MANAGEMENT – REGISTRIES & PROTOCOLS

- PROMINENT PROTOCOLS FOR REGISTRIES
  - American Carbon Registry
    - 7 currently published AFOLU protocols (4 forest-based protocols)
    - Baseline using modeling of maximizing NPV of harvested wood products
    - Multiple carbon storage "buckets" for net emission/reductions
  - Verra
    - ARR, IFM, REDD+ and Avoided Conversion (Shrublands and Grasslands)
    - IFM Control plots vs "treatment" plots (e.g. new management practices)
    - Includes carbon storage in wood products
  - BCarbon
    - Houston-based registry, affiliated with Baker Institute at Rice University
    - Voluntary crediting framework
    - Vision of reducing barriers to entry (land management varies)

PROJECT BASELINE & WHY IT MATTERS

- Baseline as a Starting Point for Carbon Accounting
- Accurate Baseline Required for Defining Net Benefit
  - Interplay with additionality (Would it happen w/o project)

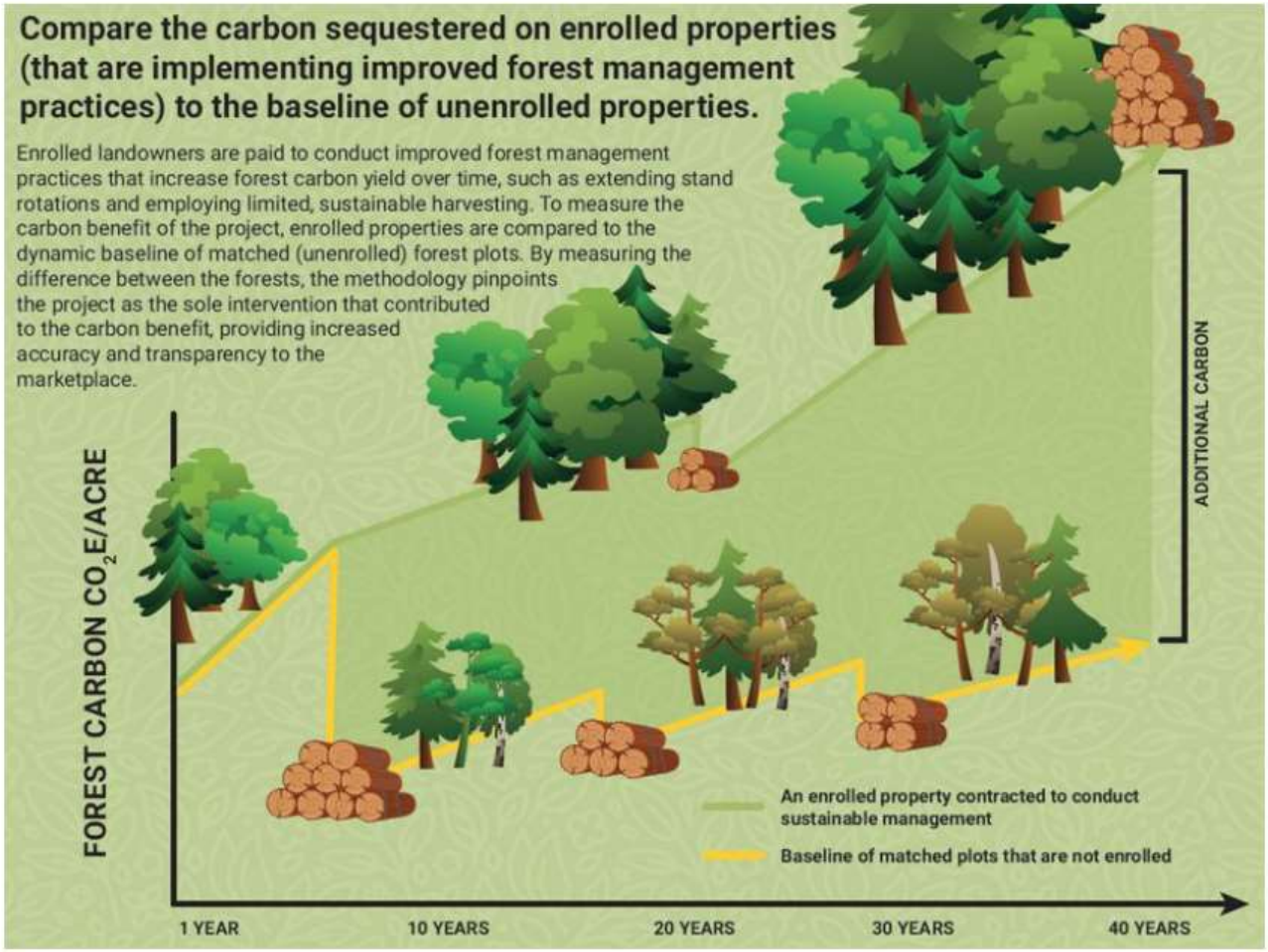
Additionality is the property of an activity being *additional*. A proposed activity is *additional* if the recognized policy interventions are deemed to be causing the activity to take place. The occurrence of additionality is determined by assessing whether a proposed activity is distinct from its baseline (see below).

A **baseline** is a prediction of the quantified amount of an input to or output from an activity resulting from the expected future behavior of the actors proposing, and affected by, the proposed activity in the absence of one or more policy interventions, holding all other factors constant (*ceteris paribus*). The conditions of a baseline are described in a baseline scenario.

Source - GHG Management Institute, What is Additionality? (Part 2) Michael Gillenwater

IFM DYNAMIC BASELINE - FAMILY FOREST CARBON

The Nature Conservancy



DISCERNABLE ADDITIONALITY By measuring the difference between the forests over time, the methodology isolates the program as the key intervention that can be credited with creating the carbon benefit.

https://www.nature.org/en-us/newsroom/verra-voluntary-carbon-market-accounting-methodology-dynamic-baseline/

FOREST CARBON – MEASUREMENT MATTERS

Change in biomass of living trees (ΔB_{TREE_BSL}) is estimated as follows:

Equation 4

$$\Delta B_{TREE\_BSL,t} = \sum_j A_{BSL,j} \times I_{V,j,t} \times D_j \times BEF_{1,j} \times (1 + R_{l,j}) - \sum_j B_{LOSS\_BSL,j,t}$$

WHERE

$\Delta B_{TREE\_BSL,t}$	Change in biomass of living trees in baseline, in year t; MT d.m.
$A_{BSL,j}$	Area under trees of species or group of species j; ha
$I_{V,j,t}$	Current annual increment in stem volume of trees of species or group of species j, in year t; $m^3\ ha^{-1}\ yr^{-1}$
D_j	Basic wood density for species or group of species j; MT d.m. m^{-3}
$BEF_{1,j}$	Biomass expansion factor for conversion of annual net increment (including bark) in stem biomass to increment in total above-ground tree biomass for species or group of species j; MT d.m. $(MT\ d.m.)^{-1}$
$R_{l,jj}$	Root-shoot ratio appropriate for biomass increment for species or group of species j; MT d.m. MT^{-1} d.m
$B_{LOSS\_BSL,j,t}$	Loss of tree biomass of species or group of species j in year t; MT d.m.
j	1, 2, 3, … tree species or group of species in the given stratum in the baseline scenario
t	1, 2, 3, … t* years elapsed since the start of the A/R ACR project activity

FOREST CARBON – MEASUREMENT MATTERS

BCarbon

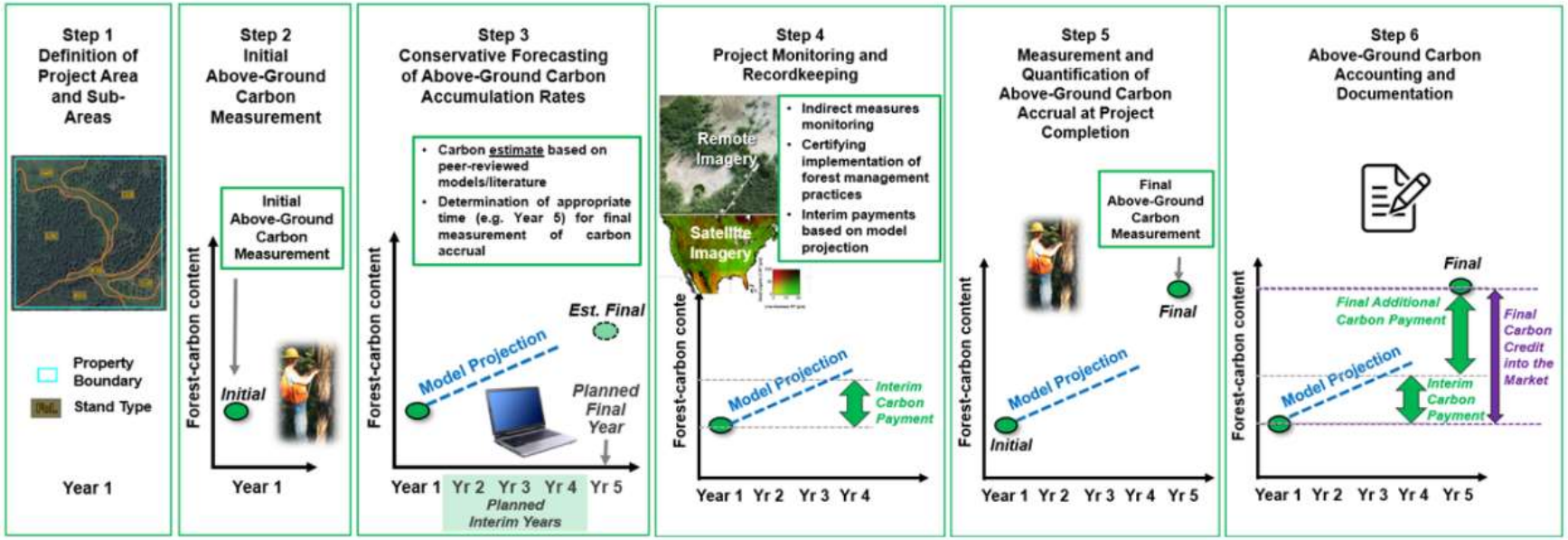


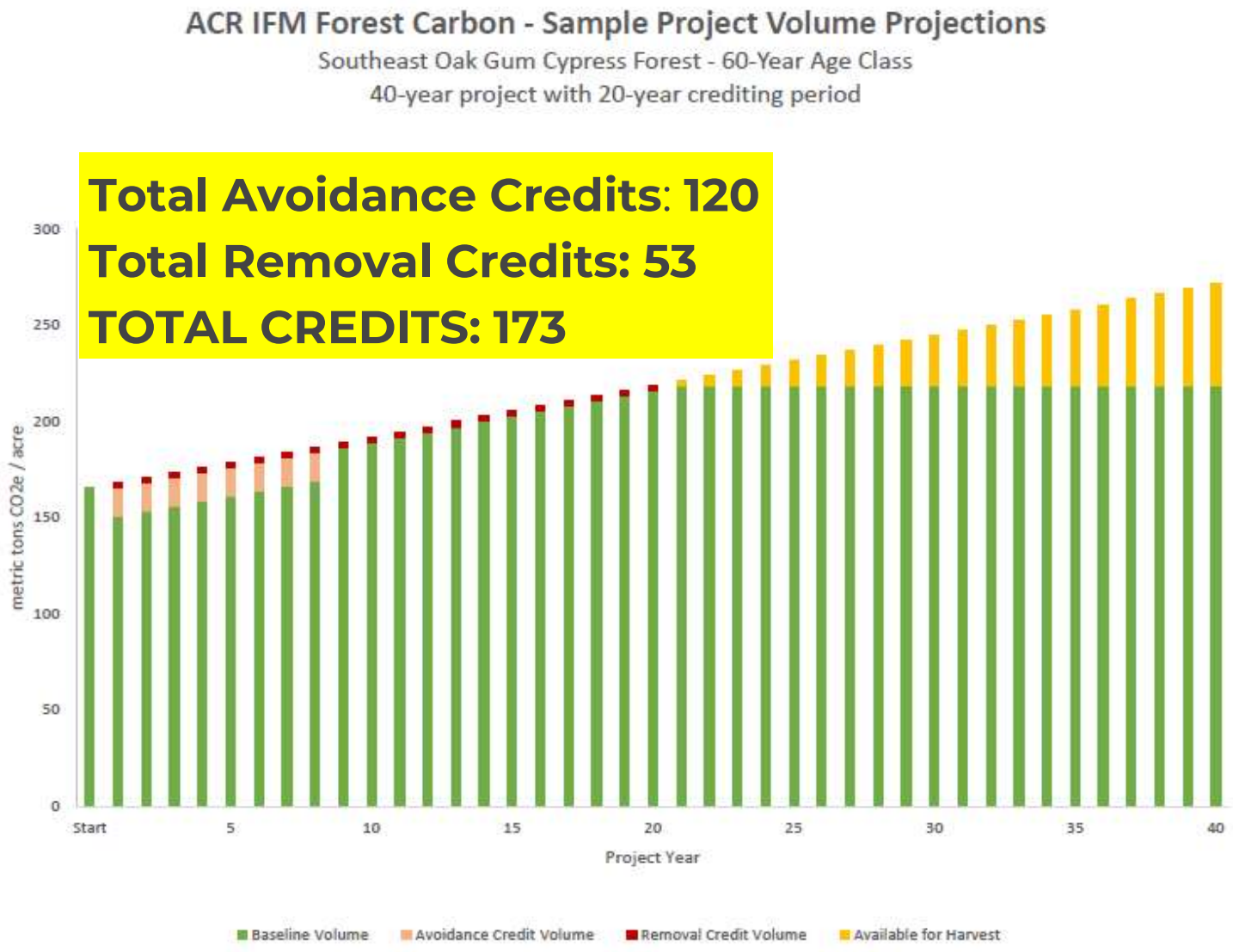
Figure 1: Illustration of 7-Step Process for Quantification of Above-Ground Carbon Accrual Over Time (Satellite imagery at Step 4 courtesy of NASA Jet Propulsion Laboratory).

EXAMPLE IFM MEASURMENT/ACCOUNTING

Oak Gum Cypress Forest

Southeast U.S.– High Stocking

EXAMPLE IFM MEASURMENT/ACCOUNTING



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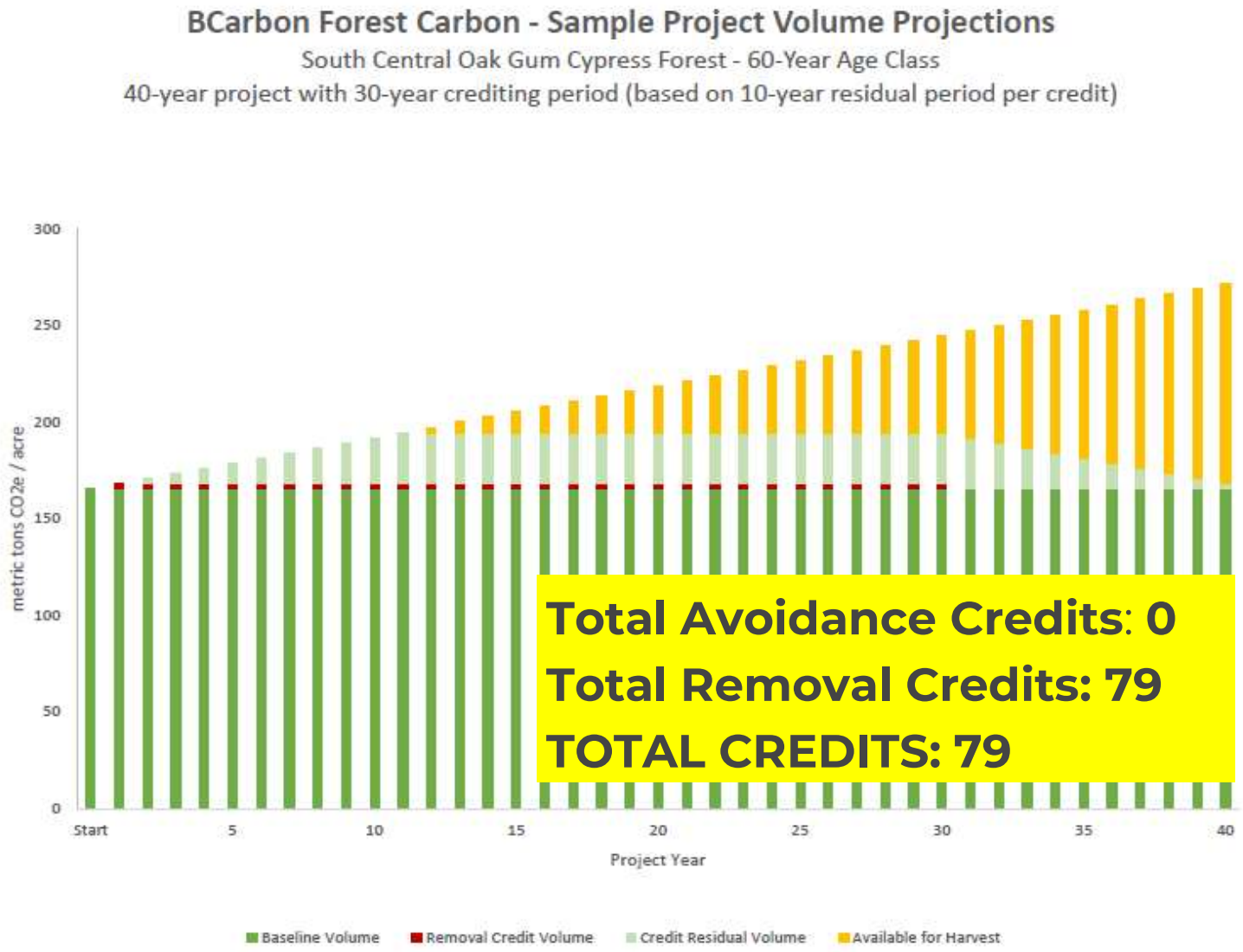

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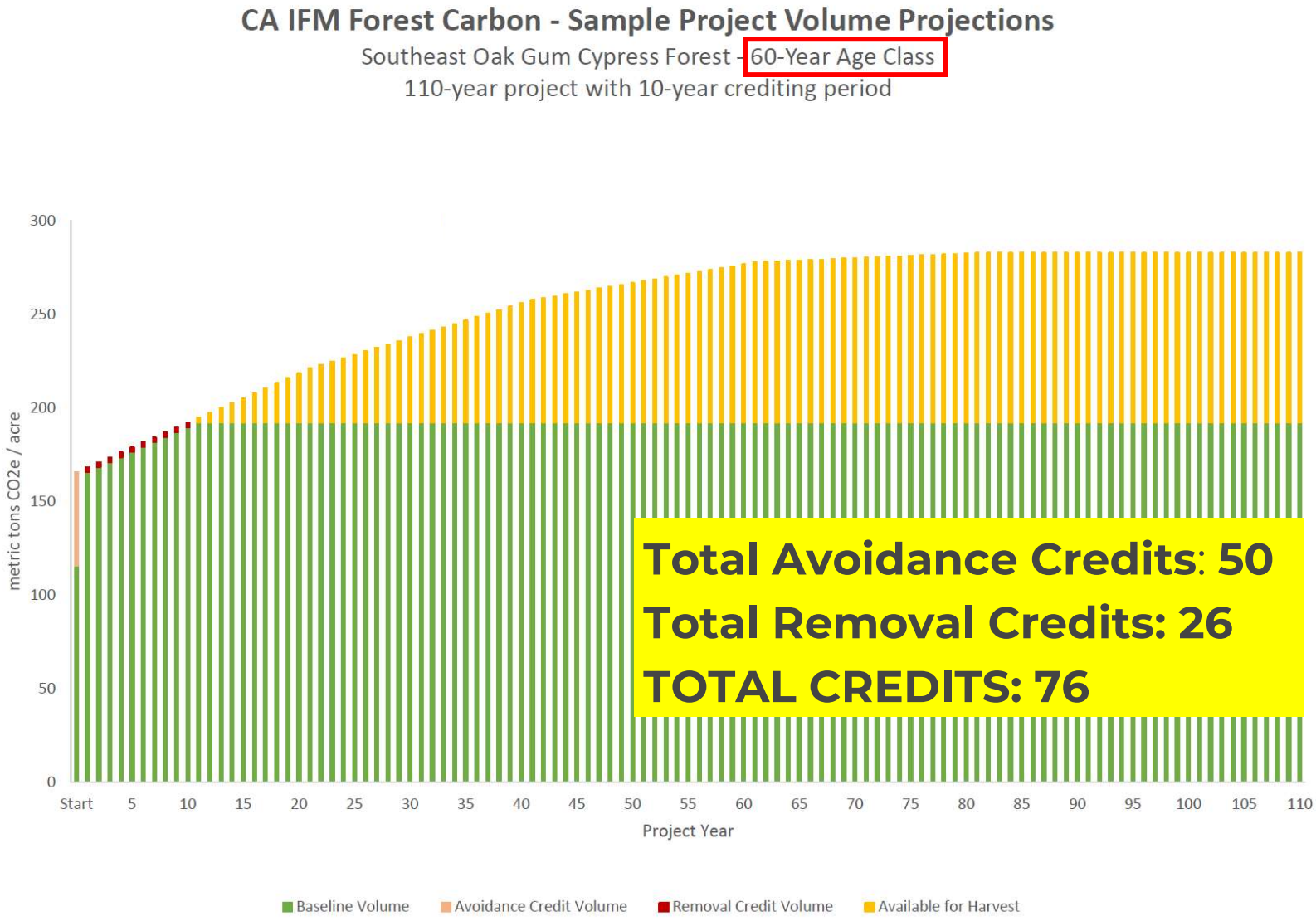
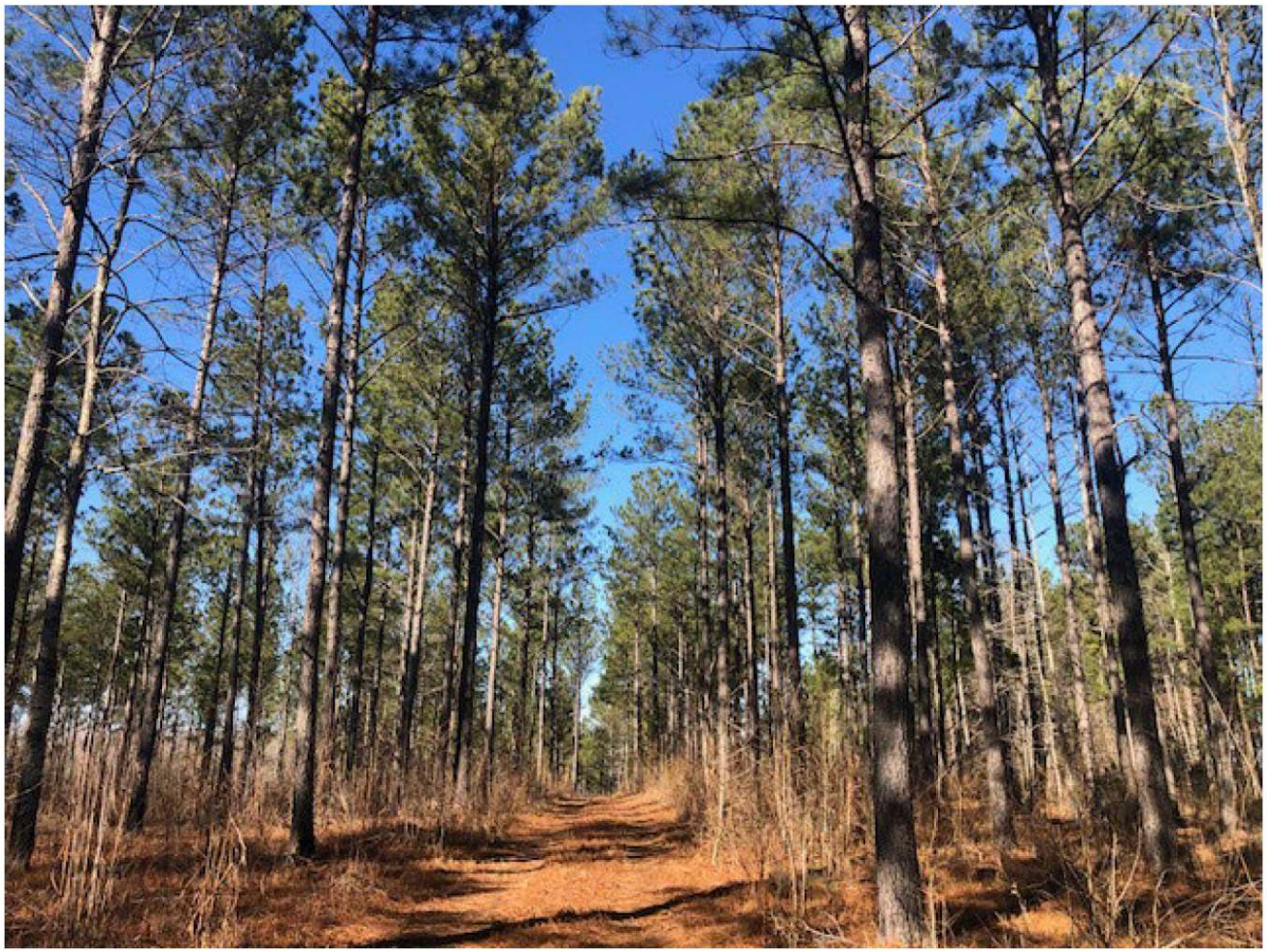


EXAMPLE IFM MEASURMENT/ACCOUNTING

Managed Pine Forest

Southeast U.S.– High Stocking



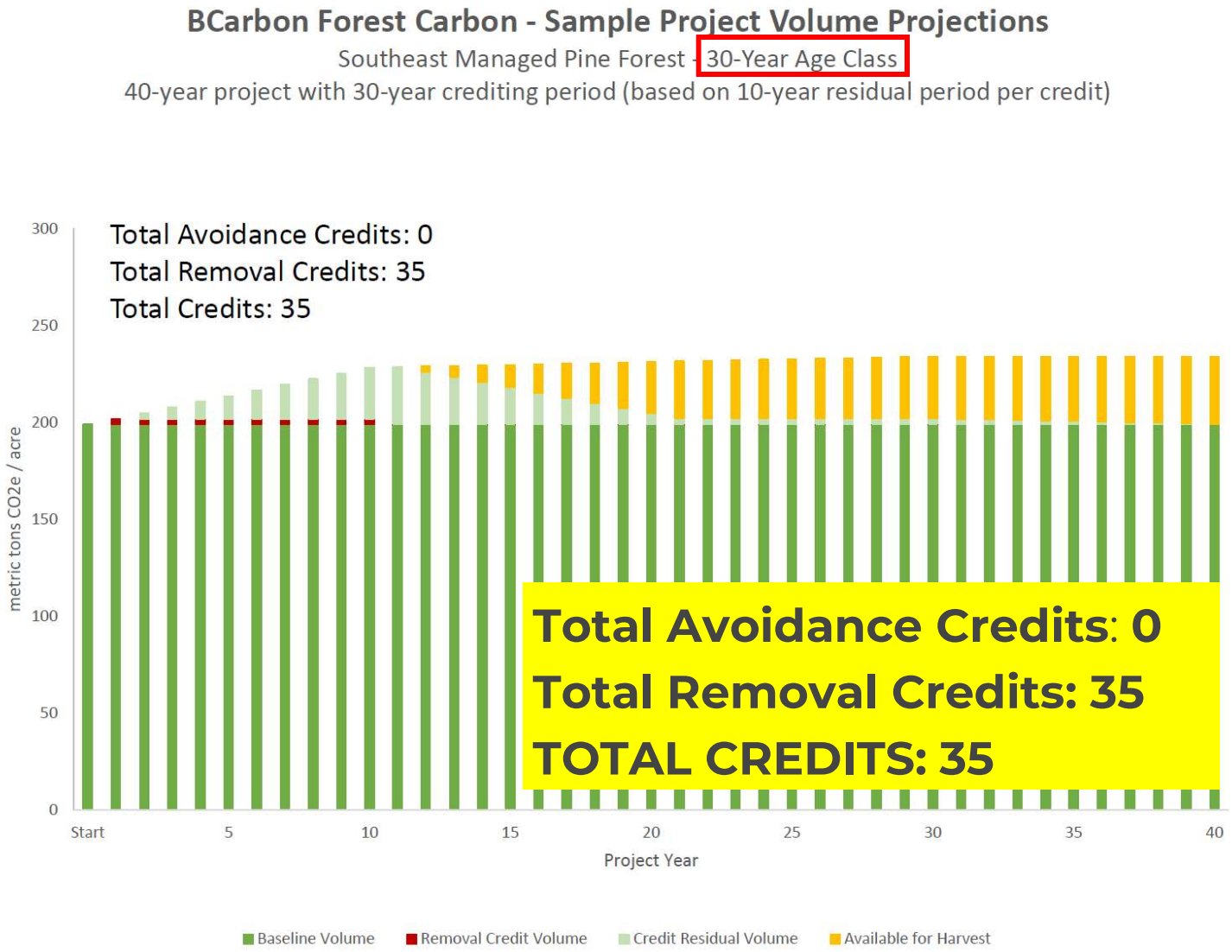
EXAMPLE IFM MEASURMENT/ACCOUNTING

Forest does not meet criteria for ACR IFM project

OR

Forest does not meet criteria for California compliant IFM project

EXAMPLE IFM MEASURMENT/ACCOUNTING



EXAMPLE IFM MEASURMENT/ACCOUNTING

BCarbon Forest Carbon - Sample Project Volume Projections

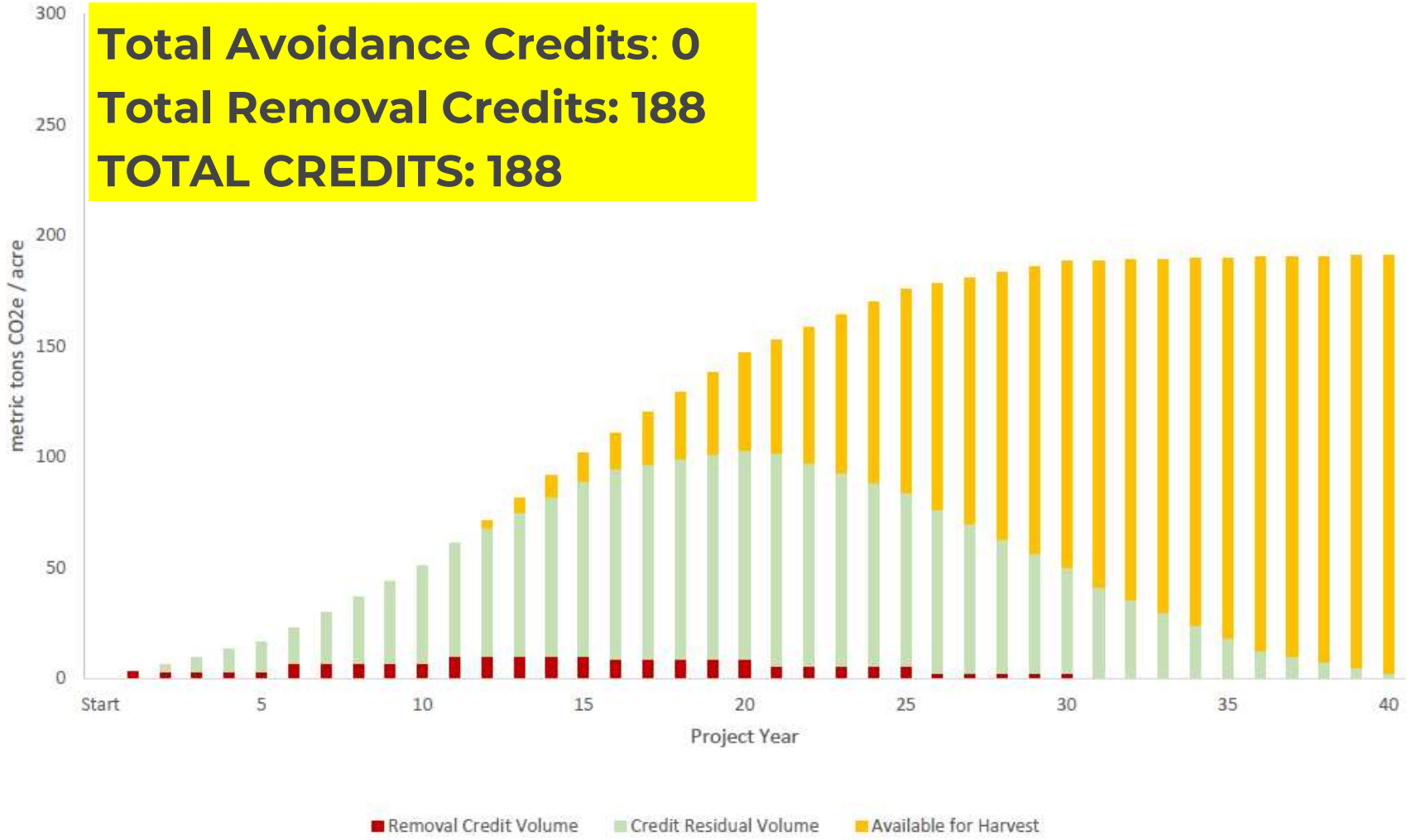
Southeast Managed Pine Forest - 0-Year Age Class (Reforestation)

40-year project with 30-year crediting period (based on 10-year residual period per credit)

Total Avoidance Credits: 0

Total Removal Credits: 188

TOTAL CREDITS: 188



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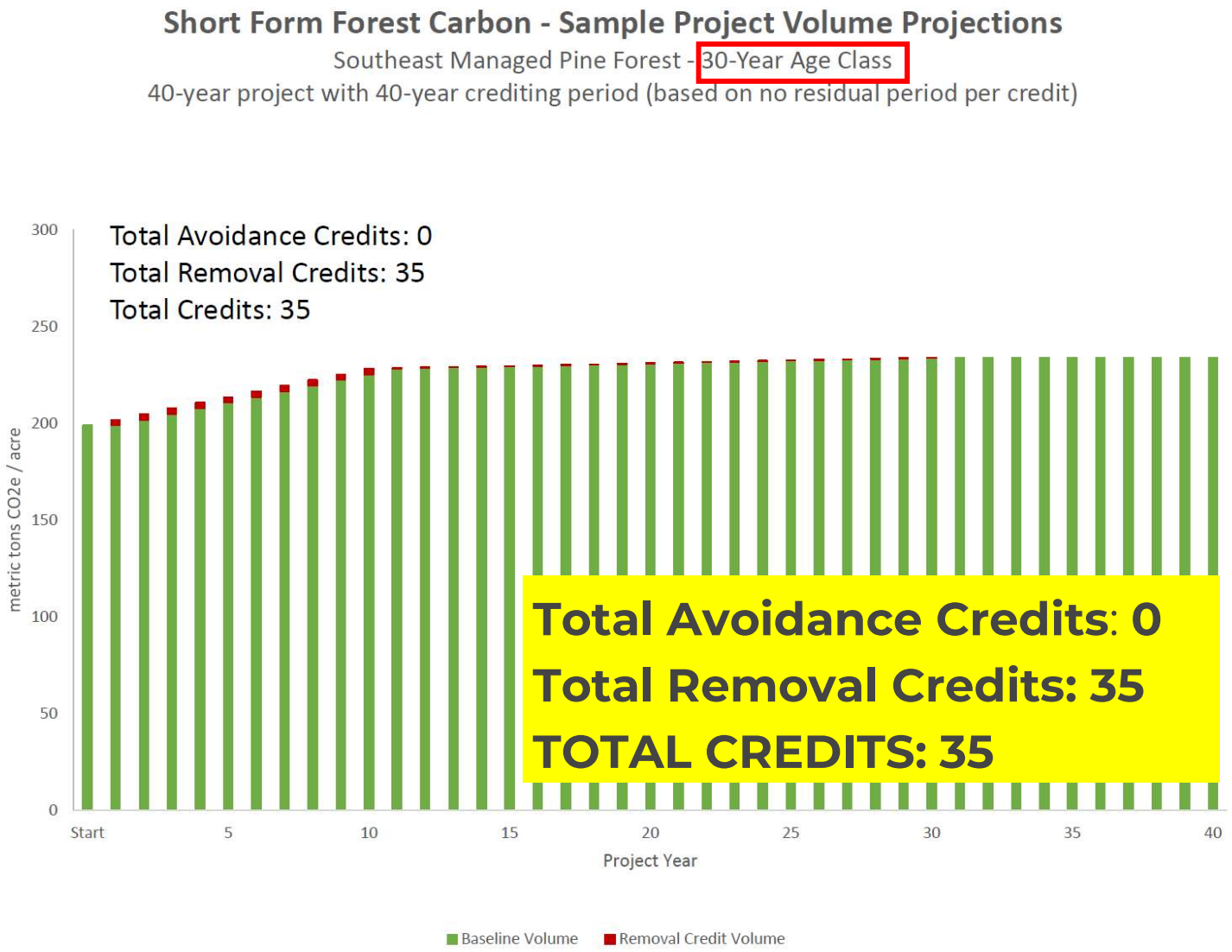

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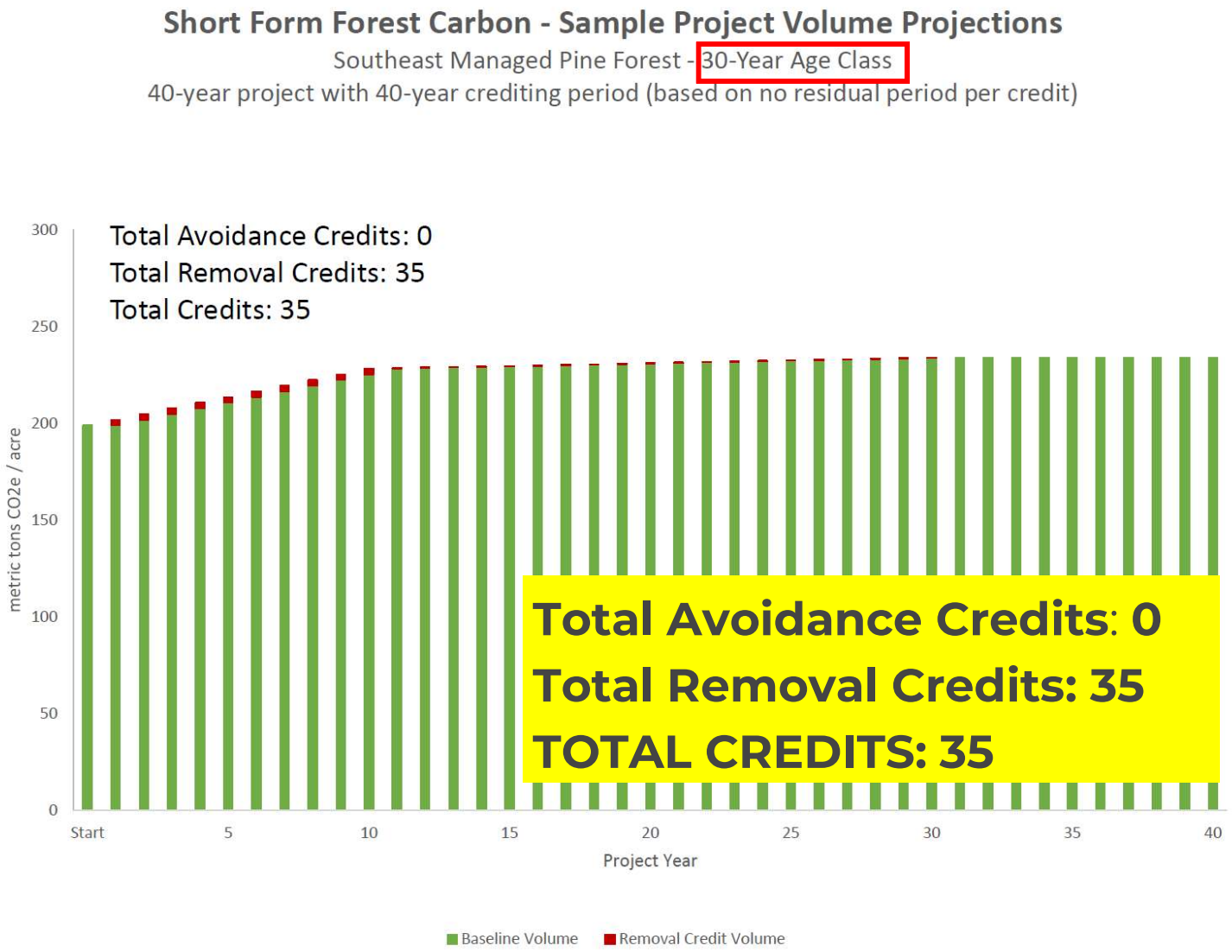
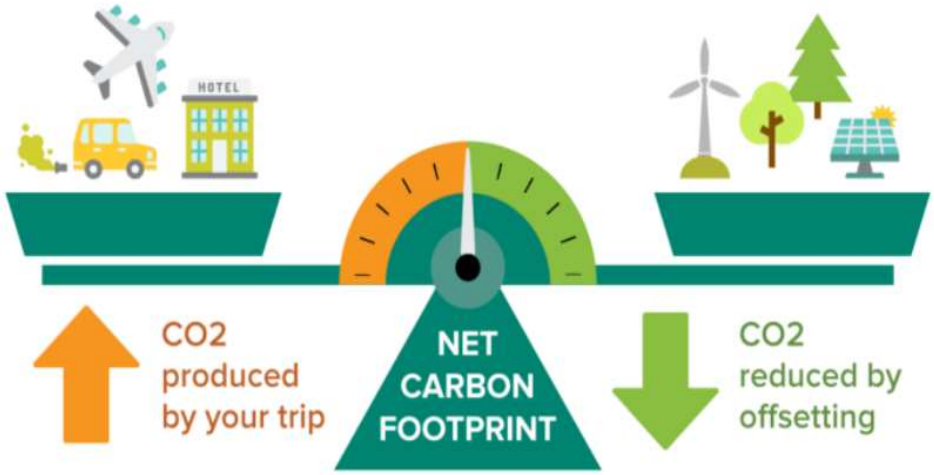


MEASUREMENT MATTERS – FINANCIAL INSTRUMENT



$15/Ton

$210MM

14MM $MTCO_{2E}$/YEAR

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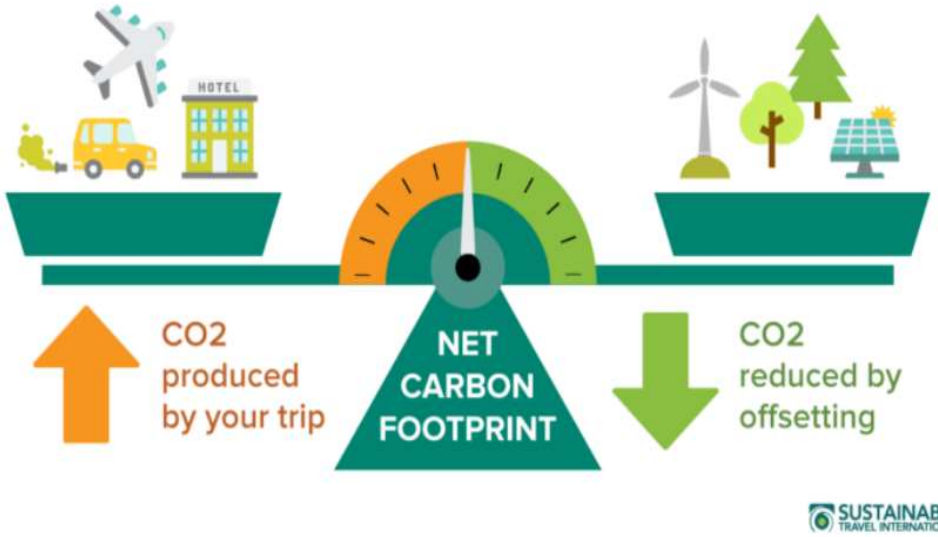

$50/Ton

$700MM

14MM $MTCO_{2E}$/YEAR