

CARBON: FROM THE FOREST TO THE MARKET

A "FIREHOSE" REVIEW OF KEY ELEMENTS OF THE SYSTEM AND PROCESS

FUNGIBILITY--TREES TO ROCs

FOR A CORPORATION



The Company



Assets



Stocks

An entity



Physical,
measurable
and
quantifiable



Tradeable

FOR A FOREST



The Forest



Carbon



Registry Offset
Credit

HOW IT WORKS...

- I. PROGRAM PRINCIPLES (ADDITIONALITY, PERMANENCE)
- II. INSTITUTIONS (GOVERNMENT AGENCIES, REGISTRIES, EXCHANGES)
- III. PROGRAM RULES (LAWS, REGULATORY OVERSIGHT, PROTOCOLS)
- IV. MARKET PARTICIPANTS (DEVELOPERS, LANDOWNERS, VERIFIERS, BUYERS, BROKERS)

VOLUNTARY vs COMPLIANCE

VOLUNTARY:

PARTICIPATION IN GHG
REDUCTION IS **OPTIONAL**

COMPLIANCE:

PARTICIPATION IN GHG
REDUCTION IS **MANDATORY** (CAP
AND TRADE)

EXAMPLES OF NA COMPLIANCE PLAYERS...

PROVINCES OF QUEBEC AND ONTARIO (WESTERN CLIMATE INITIATIVE)

CALIFORNIA AIR RESOURCES BOARD (ARB)

REGIONAL GREENHOUSE GAS INITIATIVE (RGGI)

ALLOWANCES vs. OFFSETS

ALLOWANCES

- REPRESENT 1 TONNE OF CO₂e
- A RIGHT TO POLLUTE UNDER A C&T
- GENERALLY GIVEN TO CAPPED ENTITIES AT NO COST
- CAN BE TRADED
- PRICES SUBJECT TO SUPPLY AND DEMAND, AND **PROGRAM RULES**

Now FORGET Allowances

OFFSETS

- REPRESENT 1 TONNE OF CO₂e
- CREATED EITHER BY AN EMISSION REDUCTION OR SEQUESTRATION
- MAY BE PART OF A C&T, BUT USUALLY A SMALL PART
- CAN BE TRADED
- PRICES SUBJECT TO SUPPLY AND DEMAND, BUT ARE TYPICALLY CLOSE TO ALLOWANCE PRICES
- REPRESENT THE REAL COST OF EMISSION REDUCTIONS – OFTEN VIA SECONDARY MARKETS

I. PRINCIPLES

(OFFSET CREDITS)

- ADDITIONAL
- REAL: MEASURABLE AND QUANTIFIABLE
- VERIFIABLE
- PERMANENT
- LEAKAGE (*actually, avoiding Leakage*)

II. INSTITUTIONS

- **GOVERNING BODIES** (CARB, RGGI, MINISTRIES, UN)
 - ✓ LAWS ENABLING THE PROGRAM AND RULEMAKING
 - ✓ RULES (...covered entities, invalidation periods, buffer pools, reversals, verification requirements, offsets)
- **REGISTRIES AND EXCHANGES**
 - ✓ REGISTRIES: VERRA, ACR, CAR (TRACK AND EXTINGUISH OFFSETS)
 - ✓ EXCHANGES: AUCTIONS, CTX

III. RULES 1: Programs for Forests

- **IMPROVED FOREST MANAGEMENT (IFM)**
 - **REFORESTATION/AFFORESTATION (RF/AF)**
 - **AVOIDED CONVERSION (AC)**

 - REDUCING EMISSIONS FROM DEFORESTATION AND DEGRADATION (REDD)
-
- (NON-FOREST)
 - LANDFILL GAS CAPTURE, AG METHANE, MINE METHANE, DESTRUCTION OF OZONE-DEPLETING SUBSTANCES. IMPROVED RICE CULTIVATION, CONSERVATION CROPPING.

RULES 2: **PROTOCOLS**

- IMPROVED FOREST MANAGEMENT (NO TLA)
 - OWNERSHIP, GENERAL ELIGIBILITY, LEGALITY
 - ALLOWABLE ACTIVITIES (ADDITIONALITY)
 - METHODOLOGIES (MEASUREMENT, MODELING, CALCULATIONS)
 - **BASELINE AND BUSINESS AS USUAL (BAU)**
 - MONITORING AND REPORTING
 - VERIFICATION

RULES 3: **OVERSIGHT**

(THE WHOLE WORLD IS WATCHING)

- VERIFICATION
- AUDITING
- REGISTRY REVIEW
- AGENCY REVIEW

INTERIM GUIDANCE AND CLARIFICATION, PROTOCOL UPDATES,
NEW PROTOCOL DEVELOPMENT

IV. MARKET PLAYERS

- COMPANIES
 - ✓ COMPLIANCE (ALLOWANCES AND OFFSETS)
 - ✓ VOLUNTARY (OFFSETS)
- DEVELOPERS
- BROKERS/INTERMEDIARIES
- LANDOWNERS
- PUBLIC

SECONDARY MARKET TRADING

REVIEW

- COMPLIANCE VS VOLUNTARY
 - NS proposing a Compliance System, but Voluntary is also an option
- UNDERLYING PRINCIPLES (RAVP)
- PROGRAM ARCHITECTURE AND RULES
 - (offsets “may” be a part)
- MARKETS AND MARKET PLAYERS

WHAT I DIDN'T COVER

(Implications for smallholders)

- DEVELOPMENT AND VERIFICATION COSTS AND ECONOMIES OF SCALE
- AGGREGATION OPTIONS FOR SMALL LANDOWNERS
- THE COST OF PERMANENCE
- WHAT HAS THE LAST DECADE TAUGHT US AND WHERE IS THIS WHOLE EFFORT GOING?

THANKS!

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