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A Proposed Avoided Conversion Protocol for the Alberta Offset System

INITIATED BY:
Alberta Conservation Association

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Initiating group

Alberta Conservation Association

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Formed in 1997, ACA is a not-for-profit, registered charity funded by Alberta's hunters and anglers through license levies and by a growing number of corporate partners. It is governed by a multi-stakeholder Board of Directors made up of representatives from hunting, fishing, trapping and naturalist groups, government, First Nations, Public at Large, industry and academia.

Background

- Some of the ACA's "Corporate Partners in Conservation" must comply with the Specified Gas Emitters Regulation
- These corporate partners have given their support to the development of an Alberta Avoided Conversion Protocol
- ACA engaged EarthEcon to be the lead protocol developer

Lead protocol developer

EarthEcon Inc.

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EarthEcon is an applied economics consultancy that provides analysis and advice regarding natural resources and the environment

Context

- Deforestation is the second largest source of global anthropogenic GHG emissions (Intergovernmental Panel on Climate Change, 2007)
- In 2007 the deforestation of 47,800 hectares in Canada emitted 16 MtCO₂e (Natural Resources Canada, 2009)
- Alberta Agriculture and Rural Development does not collect data on the conversion of forestland to agricultural land use

AVOIDED CONVERSION PROTOCOLS IN OTHER STANDARDS

Greenhouse Friendly

- A voluntary carbon offset program coordinated by the Federal Government of Australia
- Avoided conversion projects have prevented approximately 12,000 hectares of native Australian vegetation from being converted, and as a result, credits for around 1.25 MtCO₂e have been verified (Carbon Pool, undated)

Climate Action Reserve

- CAR protocols are likely to be adopted under three future compliance systems (Hamilton et al, 2009):
 - i. California program
 - ii. Western Climate Initiative
 - iii. U.S. federal program

OVERVIEW OF THE PROPOSED ALBERTA AVOIDED CONVERSION PROTOCOL

Additionality

- The protocol could apply to any privately owned land in Alberta where, at the time of project commencement, the landowner has financial incentive to convert the forestland to a non-forest use
- To confirm that the project area is suitable for conversion, a certified real estate appraiser could show that the forestland would have a higher market value under an alternative land use (similar to CAR)

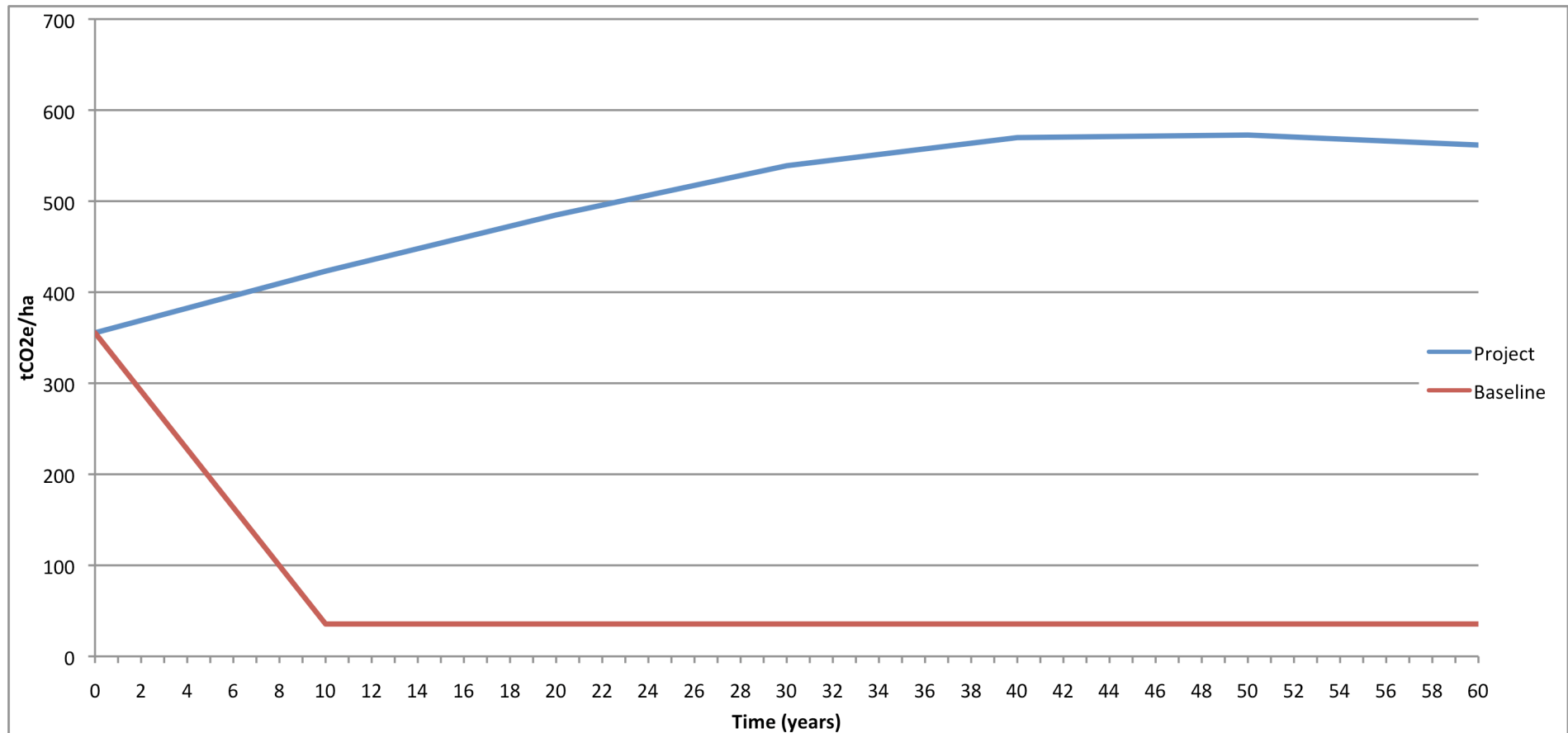
Baseline

- Using the initial carbon inventory as the starting point, the project developer could estimate the baseline over the 60-year project period
- The baseline carbon stored within harvested wood products could be estimated using an approach similar to CAR

Estimated conversion rate

- A standard conversion rate could be used to estimate the temporal component over which the conversion might occur (similar to CAR)
- A standard conversion rate spreads the conversion over the first 10 years of the project

Typical project and baseline projections



Conservativeness

Discount factors could account for uncertainties surrounding:

- permanence risk (unanticipated reversals)
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- conversion risk
- leakage

Permanence risk (unanticipated)

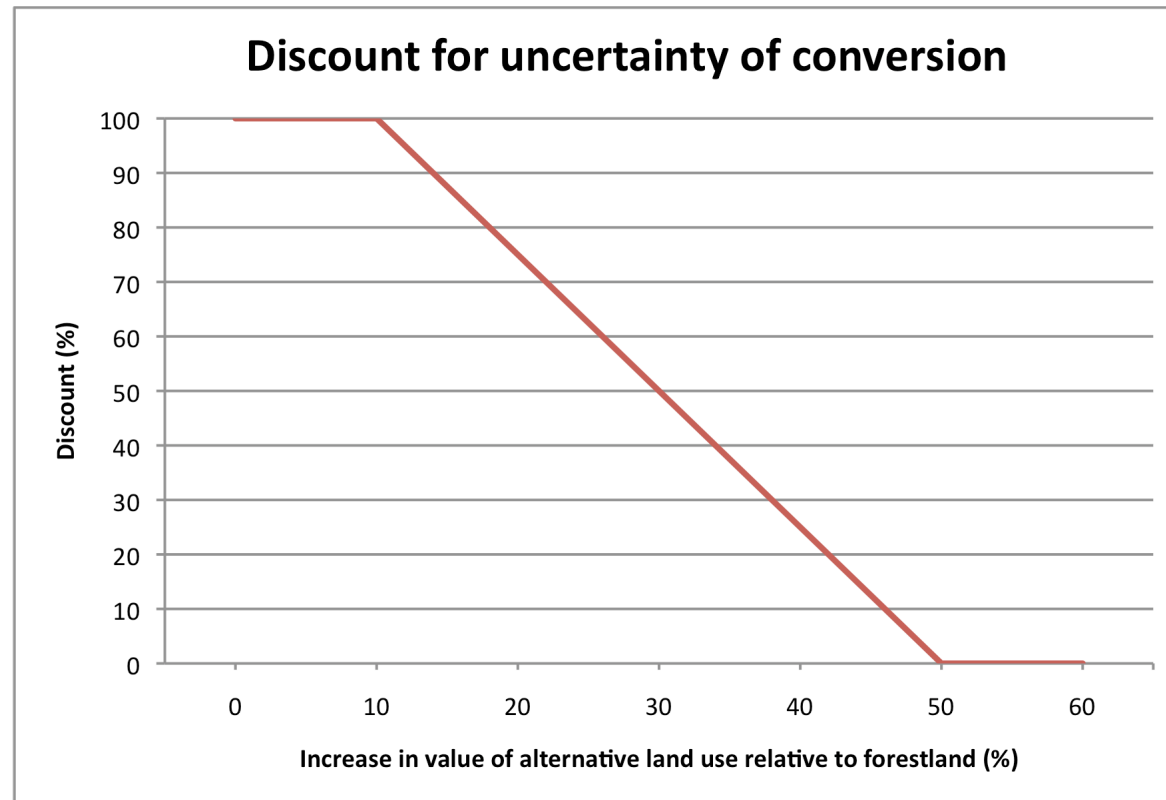
- To reduce the risk of reversal, a conservation easement could be placed upon the property title (similar to CAR)
- Reversals from fire, insects, and disease could be nullified using a buffer pool
- To supply the buffer pool, an 8% discount could be applied to the total number of offsets

Permanence risk (anticipated)

- Anticipated reversals (natural mortality) could be nullified using a reserve pool
- To supply the reserve pool, the discount factor could be set such that it collects 1.5X the expected reversals from natural mortality
- At the end of the project, any offsets remaining in the reserve pool could be returned to the project developer

Conversion risk

- If the real estate appraisal for the alternative land use is not more than 50% greater than the value as forestland, then a conversion risk discount could be applied (adapted from CAR)



Leakage

- A discount factor similar to that used by CAR (3.6%) could account for leakage

Measurement, monitoring, verification

- The project developer could field survey the initial carbon inventory, and then field survey every 6 years afterwards (unless a major reversal were to occur) over the 60-year project period
- Before any offsets are sold, a qualified third-party could verify that the survey methodology is appropriate

Net benefits

- Besides generating carbon offsets, avoided conversion also provides numerous environmental co-benefits — such as improved wildlife habitat and biodiversity

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