

TRADE-MATCHED

Application Number T4

Electronic application received May 31, 1999
Certified original (with signature) application received on June 7, 1999

1. Seller Information

Applicant

Saskatchewan Environment and Resource Management (SERM)
Forest Ecosystems Branch
Box 3003
800 Central Avenue
Prince Alberta, Saskatchewan S6V 6G1
web site: <http://www.gov.sk.ca/serm/www/forest/intro.htm>

Contact Person

Mark Johnston, Manager
Forest Science Programs
Forest Ecosystems Branch
Saskatchewan Environment and Resource Management (SERM)
Box 3003
800 Central Avenue
Prince Alberta, Saskatchewan S6V 6G1
phone: 306-953-2491
fax: 306-953-2360
e-mail: johnston@derm.gov.sk.ca

Certification Official:

Mark Johnston on May 31, 1999

Entity NAICS Code

9129

2. Buyer Information

Applicant

SaskPower
2025 Victoria Avenue
Regina, Saskatchewan S4P 0S1
web site: <http://saskpower.com>

Contact Persons

Rick Patrick, Vice President
Power Production
SaskPower
2025 Victoria Avenue
Regina, Saskatchewan S4P 0S1
phone: 306-566-2955
fax: 306-566-3312
e-mail: rpatrick@saskpower.sk.ca

Certification Official

Rick Patrick on May 31, 1999.

Entity NAICS Code

2211

3. Project Information

Title

Forest-based Carbon Offset Project

Location

Hudson Bay region of east-central Saskatchewan

Type

A combination of reforestation (812) and forest preservation (821)

Start Date

October 1, 1999

Projected Life of Project

50 years

Greenhouse Gas Reduced

CO₂

Projected Total Tonnes of CO₂-equivalent Reduced

22,000,000

Project associated with voluntary programs

Voluntary Challenge & Registry

Written Project Description

This project is a trade-matched agreement between the Forest Ecosystems Branch, Saskatchewan Environment and Resource Management (SERM), and Saskatchewan Power Corporation (SaskPower). This agreement is made up of two components: (1) direct carbon sequestration through the establishment of white spruce plantations in east-central Saskatchewan; and (2) forest protection in the form of Forest Carbon Reserves established by the government of Saskatchewan, in which trees formerly available to be harvested are now protected. The total amount of carbon emissions reduced as a result of this agreement is 6 million tonnes C or 22 million tonnes CO₂ equivalent.

The tree planting component will provide for the planting of approximately 5 million seedlings in areas designated Not Sufficiently Restocked (NSR) in east-central Saskatchewan. These areas were subject to timber harvest in the past but have not been replanted. Our agreement calls for 5 million seedlings to be planted at an average planting density of 1500 stems per hectare, resulting in a total of 3333 ha. of plantations. Planting will be carried out over the first four years of the agreement. Based on our provincial growth models, we estimate that at maturity (i.e., 90 years), approximately 210,000 tonnes of carbon will have been sequestered on the 3333 ha. Over the 50 year life of the agreement, approximately 185,000 tonnes will have been sequestered. We will measure actual carbon sequestration on these sites annually by destructively sampling individual trees, drying and weighing them to determine dry-weight biomass. Assuming biomass is 50% carbon, these measurements will indicate how much carbon is being fixed annually. These sites have been forested in the past and currently support non- merchantable biomass, so

our assumption is that soil carbon will not change substantially as a result of reforestation. We propose to make credits available at the beginning of the agreement based on the amount of carbon sequestered over the entire rotation period (90 years).

The Forest Carbon Reserves will be established across the province as part of the provincial Representatives Areas Network program. These areas were formerly part of the annual allowable cut of various Forest Management Agreement Areas, but have been withdrawn from harvesting, thereby reducing carbon emissions. Credit will be based on the amount of volume that would have been harvested in the absence of this agreement. From existing forest inventory data we have estimated that approximately 178,000 ha of FCRs will be required in order to deliver the remaining 6 million tonnes of emission reductions called for in this agreement. Given the uncertainty inherent in traditional forest inventory data, we will undertake a detailed biomass inventory of these sites. Fixed-area measurement plots 10 m x 10 m will be established at a density of one plot per 500 ha, on which tree height and diameter will be measured on all trees of merchantable size. Species-specific biomass equations will be used to determine total aboveground merchantable biomass on each plot; these values will be used to estimate total standing carbon stocks across all the FCRs. These measurements will be repeated every five years to track changes in carbon stocks over time. The province has recently established a new fire suppression system and a recent review has shown that provincial area burned has been cut by about 50%. We feel this will allow us to keep carbon loss due to leakage to a minimal level.

Additional Information

1. Potential uncertainties

There is a risk of loss of sequestered carbon due to forest fires or forest insect and disease outbreaks. To reduce these risks, there are several programs being carried out by the Saskatchewan government in partnership with the forest industry. The province has recently implemented an aggressive initial attack fire fighting system which has been shown to be very effective in limiting area burned. In addition, the province has a spruce budworm control program targeted at area of current infestations.

2. Economic and environmental impacts of the project.

Reforestation of NSR areas will have several benefits. This land will be returned to productive forest land and will contribute to the maintenance of economic development in eastern Saskatchewan. These areas will not be reforested without the funding made available through this agreement. In addition, there are environmental benefits in re-establishing forest on these NSR areas, including soil stabilization, wildlife habitat and amenity values.

Third Party Review

None