



Supply Base Report: Pinnacle Renewable Energy Inc (Entwistle Division)

Re-assessment

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Completed in accordance with the Supply Base Report Template Version 1.5

For further information on the SBP Framework and to view the full set of documentation see www.sbp-cert.org

Document history

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1 Overview

Producer name: Pinnacle Renewable Energy Inc (Entwistle Division)

Producer address: 7317 Twp. Road, T0E 0S0 Entwistle, Canada

SBP Certificate Code: SBP-06-62

Geographic position: 53.594900, -114.992700

Primary contact: Joseph Aquino, +1 250 562 5562 ext 2220, Joseph.Aquino@drax.com

Company website: <https://www.drax.com/northamerica/?source=pinnacle>

Date report finalised: 31 May 2023

Close of last CB audit: 23 Jun 2023

Name of CB: Control Union Certifications BV

SBP Standard(s) used: SBP Standard 2: Verification of SBP-compliant Feedstock, SBP Standard 4: Chain of Custody, SBP Standard 5: Collection and Communication of Data Instruction, Instruction Document 5E: Collection and Communication of Energy and Carbon Data 1.5

Weblink to Standard(s) used: <https://sbp-cert.org/documents/standards-documents/standards>

SBP Endorsed Regional Risk Assessment: Not applicable

Weblink to SBR on Company website: <https://www.drax.com/ca/sustainability/sustainable-bioenergy/certifications/>

Indicate how the current evaluation fits within the cycle of Supply Base Evaluations					
Main (Initial) Evaluation	First Surveillance	Second Surveillance	Third Surveillance	Fourth Surveillance	Re-assessment
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 Description of the Supply Base

2.1 General description

Feedstock types: Primary, Secondary

Includes Supply Base evaluation (SBE): No

Includes REDII: Yes

Includes REDII SBE: Yes

Feedstock origin (countries): Canada

2.2 Description of countries included in the Supply Base

Country:Canada

Area/Region: Alberta

Sub-Scope: N/A

Exclusions: No

The supply base is the Province of Alberta, which has a total land base of 66.1 million hectares of which 53% or (35 million hectares) is forested, where approximately 77% are within forest management agreement areas. Approximately 77% of Alberta Forests are within the Boreal-mixed forests, which includes several tree species such as white and black spruce, aspen, birch, balsam poplar, lodgepole pine, jack pine, balsam fir, larch and tamarack. There are numerous parks and protected areas within the Province totalling 9.5 million hectares or approximately 14% of the total land base. The Province of Alberta owns all public forested land within the Province totalling 35.2 million hectares. There are no species in Alberta that are currently listed in the CITES data base.

The adjacent lands to the north (Northwest Territories) are dominated by alpine tundra & boreal forest types. Adjacent lands to the east (Saskatchewan) are dominated by sub-boreal & prairie forest types. To the south, there is the interior dry belt forest types in Montana. To the west, there are a range of ecological regimes in British Columbia; including coastal & interior temperate rainforests, interior dry belt, northern boreal forests, and on the edge of tundra forest types.

Alberta has a robust sustainability and certification program covering all managed forest lands in the Province. Alberta Agriculture and Forestry has ISO 9001 certification for all ten offices in the Province conducting compliance monitoring on managed forest lands. Many licensees operating on managed forest lands also have voluntary certification schemes such as SFI, FSC or CSA that monitor forest management activities. All feedstock supplied in the province of Alberta is secondary feedstock. Purchases are facilitated through the central office in Prince George, British Columbia. For a detailed breakdown of the proportion for the Biomass Producer, please see feedstock summary tables below.

Forest tenure provides the authorization for companies to harvest timber from crown land. There are various forms of tenure; the three main categories of tenures are: forest management agreements (FMA's), timber licenses, and timber permits. Approximately 87% of timber harvested in Alberta is from public lands with a forest management agreement. There can be multiple forest management units (FMU's) within an FMA. Each FMU has specific measurable targets for forest management strategies and is how the Province ensures there is collaborative efforts for management strategies across the landscape level. Management of harvesting volume is governed under the Forests Act. Allowable annual cuts (AAC) are calculated at the FMU level using growth and yield data within the "green areas" of the FMU. An FMA will have one or more FMU's and licensees operating in the FMA are responsible for implementing a Forest Management Plan (FMP) for their FMU. Provincial and FMU AAC's fluctuate over time depending on variables that impact the amount of green area within the FMU such as an increase in parks and protected areas, natural disasters (wildfire or pests) changes in growth and yield data or changes to FMU boundaries. Management of harvesting practices is governed under the Forests Act and is detailed in the FMP's for each operating licensee. Landscape level and site level forest management objectives are described in FMP's. FMP's are forward looking technical documents that can contain management plans for harvesting for a ten year period. The Provincial government, specifically the Ministry of Agriculture and Forestry has a compliance and enforcement division that inspects forest practices to ensure proponents are meeting the requirements of the FMP's. Private land represents a relatively small portion of Alberta's land base and does not overlap with managed forest boundaries.

Private land is considered outside the timber harvesting and managed forest land base, and therefore is not reflected when determining FMU level AAC's. Some parcels of private land contain treed areas that when harvested are sold to various wood product manufacturing facilities. The Agroforestry and Woodlot Extension Society governs best management practices for land owners who conduct timer harvesting on private land The timber and the harvesting practices on private land are governed by various pieces of Provincial and Federal legislation that ensure ownership and legality of timber is legitimate and impacts to natural systems are minimized. Less than 1% of the total fibre procured by PREI is from private land.

The socio-economic landscape of Alberta includes major industries such as oil & gas, agriculture, construction, forestry, manufacturing, mining and tourism.

The BP sourced raw material from 42 suppliers in this supply base for the applicable period.

Roundwood Calculation

The annual allowable cut for Alberta is approximately 31 million cubic meters per year. The proportion of the AAC consumed as primary feedstock at Drax plants is accounted for as follows:

Drax consumes primary feedstock at the Entwistle Division & Northern Pellet Limited Partnership.

Entwistle: Total Primary = 5,264.18 ODT x 2.3 = 12,107.61 m3

12,107.61 m3 / total provincial AAC 31 million m3 * 100 = 0.039% of AAC

Northern Pellet: Total Primary = 7,702.85 ODT x 2.3 = 17,716.56 m3

17,716.56 m3 / total provincial AAC 31 million m3 * 100 = 0.057% of AAC

Supply Base Regions

The province of Alberta is divided into "green zone" forest areas managed by government offices that authorize access to timber resources and "white zone" including private lands. The "green zone" forest areas where Drax sources fibre include[iii]:

1. Calgary Forest Area
2. Edson Forest Area
3. Fort McMurray Forest Area
4. Grande Prairie Forest Area
5. High Level Forest Area
6. Lac La Biche Forest Area
7. Peace River Forest Area
8. Rocky Mountain House Forest Area
9. Slave Lake Forest Area
10. Whitecourt Forest Area

Drax controls fibre deliveries to two biomass production facilities in Alberta, strategically located in areas where residual fibre markets exist. The two biomass production facilities include:

- Entwistle Division (DEN)
- Northern Pellet Limited Partnership (DHL)

Fibre Supply

Drax's feedstock consumption breakdown for Alberta operations are as follows:

Primary	20,286.375 mt	1.92%
Secondary	1,035,601.554 mt	98.08%

Primary fibre is received directly from the forest in the form of roundwood or in-forest chipping. Secondary fibre is pre-consumer residual material or byproducts, received in the form of bark, sawdust, shavings, chips, or other forms. In Alberta during the reporting period, Drax sources primary feedstock from 3 suppliers & secondary feedstock from 39 suppliers.

Entwistle's fibre supply consists of 1.05% Primary Feedstock & 98.95% Secondary Feedstock. 64.6% of Primary & 86.2% of Secondary Feedstock is SBP Compliant with the rest being SBP Controlled.

[i] Forest Governance in the Province of Alberta. 2016. Province of Alberta. Accessed from: https://www.sfmcanada.org/images/Publications/EN/AB_info_Provinces_and_territories_EN.pdf [ii] Sustainable Forest Management, 2015 Facts and Statistics. 2017. Agriculture and Forestry. Accessed from: [https://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/formain15744/\\$FILE/2015-AAC-Fact](https://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/formain15744/$FILE/2015-AAC-Fact)

[iii] Alberta forest areas map. 2020. Province of Alberta. Accessed from: <https://www.alberta.ca/assets/documents/af-forest-areas-map-july-30-2020.pdf>

Country: Canada

Area/Region: Saskatchewan

Sub-Scope: N/A

Exclusions: No

The supply base is the Province of Saskatchewan, which has a total land base of 65 million hectares of which 53% or 34.3 million hectares is forested, where approximately 34% (11.7 million hectares) are within the province's commercial forest areas. All of Saskatchewan's commercial forest areas are within the Boreal-mixed forests, which includes several tree species such as white and black spruce, aspen, balsam poplar, lodgepole pine, jack pine, & balsam fir. There are numerous parks and protected areas within the province totalling approximately 9% of the total land base. The Province of Saskatchewan owns most of the forested land within the Province totalling 33.2 million hectares (~97%). The other 3 percent of the provincial forest is owned either Federally (2%) or privately (1%).

The adjacent lands to the north (Northwest Territories & Nunavut) are dominated by alpine tundra & boreal forest types. Adjacent lands to the east (Manitoba) are dominated by sub-boreal & prairie forest types. To the south, there is the interior dry belt forest types in Montana & North Dakota. To the west, the land base is dominated by boreal & sub-boreal forest types in Alberta.

Feedstock supplied in the province of Saskatchewan is classified as secondary feedstock originating from sawmills. Purchases are facilitated through the central office in Prince George, British Columbia. For a detailed breakdown of the proportion for the Biomass Producer, please see feedstock summary tables in section 3.3.

Many licensees operating in the commercial forest lands have voluntary certification schemes such as SFI, FSC or CSA that monitor forest management activities. Forests with at least one form of FM certification account for ~62% of the commercial forest area (6,672,844 hectares as of 2021).

For each timber supply area (TSA) in the commercial forest and fringe forest (Crown agriculture) zones, a harvest volume schedule (HVS) is calculated. The HVS is also known as an annual allowable cut (AAC) or

sustainable wood supply in other Canadian jurisdictions. The HVS is determined based on the results of a timber supply analysis, which provides the output of the selected long-term forest resource management strategy using complex computer modelling. To ensure forest sustainability, the amount of timber harvested must not exceed the HVS for a specified term. Licensees are required to ensure their timber harvest levels do not exceed the HVS in each TSA. Stakeholders want to be assured that overharvesting is not occurring in provincial forests. This indicator provides stakeholders with evidence that the harvest at the provincial scale is being conducted on a sustainable basis. Provincial and TSA AAC's fluctuate over time depending on variables that impact the amount of green area within the TSA such as an increase in parks and protected areas, natural disasters (wildfire or pests) changes in growth and yield data or changes to TSA boundaries.

Management of harvesting practices is governed under the Forests Act & Forest Resource Management Act and is detailed in the forest management plan (FMP) for each operating licensee. Landscape level and site level forest management objectives are described in FMPs. FMPs are forward looking technical documents that can contain management plans for harvesting for a twenty-year period. The Provincial government has a compliance and enforcement division that inspects forest practices to ensure proponents are meeting the requirements of the FMP's.

Private & Federal lands represent a relatively small portion of Saskatchewan's land base and do not overlap with managed forest boundaries. Harvesting volume is not regulated by the province on either land type but landowners are subject to the Private Land Stewardship Act which protects values such as soil, air, water, and biodiversity. The provincial government estimates that harvesting on these lands equates up to ~4% of the determined AAC. Some parcels of private land contain treed areas that when harvested are sold to various wood product manufacturing facilities. Less than 1% of the total fibre procured by Drax in Saskatchewan is from private or federal land.

The socio-economic landscape of Saskatchewan includes major industries such as agriculture, construction, forestry, manufacturing, mining, and tourism.

The BP sourced raw material from 2 suppliers in this supply base for the applicable period.

Supply Base Regions

The province of Saskatchewan is divided into Commercial Forest areas & Fringe Forest areas managed by government offices that authorize access to timber resources and "Other Use areas" including areas not suitable for forestry activities such as parks and protected areas. The forest areas where Drax sources fibre include[i]:

1. Commercial Forest
 2. Fringe Forest
-
11. North Central TSA
 1. Turtleford TSA

- | | |
|----------------------------|--------------------|
| 12. Turnor TSA | 2. Goodsoil TSA |
| 13. Inland Forests TSA | 3. Birch Hills TSA |
| 14. Meadow Lake TSA | 4. Spiritwood TSA |
| 15. Bronson-Green Lake TSA | 5. Kelvington TSA |
| 16. Glaslyn TSA | |
| 17. North West TSA | |
| 18. Prince Albert TSA | |
| 19. North East TSA | |
| 20. Pasquia Porcupine TSA | |

[i] Timber Supply Areas in the Province of Saskatchewan. 2021. Province of Saskatchewan. Accessed from: <https://geohub.saskatchewan.ca/datasets/saskatchewan::timber-supply-areas/about>

2.3 Actions taken to promote certification amongst feedstock supplier

Customer demand for certified wood products drives extensive forest certification in BC. PREI requires that claim certificates for PEFC certified fibre are issued from PEFC certified suppliers. Drax requires all non-certified suppliers and certified suppliers providing non-certified fibre, sign a supplier declaration verifying their compliance with the various legality, forest management and environmental requirements set out by the certification scheme. Drax promotes certification schemes with suppliers as it is a core value of Drax's business. Drax provides suppliers with the tools necessary to achieve certification compliance through shared knowledge.

2.4 Quantification of the Supply Base

Supply Base

- a. **Total Supply Base area (million ha):** 69,50
- b. **Tenure by type (million ha):** 0.34 (Privately owned), 0.69 (Public), 68.47 (Public)
- c. **Forest by type (million ha):** 64.64 (Boreal), 4.86 (Tundra)
- d. **Forest by management type (million ha):** 69.50 (Managed natural)
- e. **Certified forest by scheme (million ha):** 7.87 (FSC), 1.86 (PEFC), 20.23 (SFI)

Describe the harvesting type which best describes how your material is sourced: Mix of the above

Explanation: Forests can be harvested in a variety of forms. For example: clearcutting, commercial thinning, & ecosystem-based management (EBM). Typical machines used in forestry operations include feller bunchers, skidders, & processors. Maximum clear-cut area regulations for the province are specified in legislation.

Was the forest in the Supply Base managed for a purpose other than for energy markets? Yes - Majority

Explanation: Forest products such as lumber, plywood, veneer, pulp, & strand board are the main markets for Alberta & Saskatchewan forest activities.

For the forests in the Supply Base, is there an intention to retain, restock or encourage natural regeneration within 5 years of felling? Yes - Majority

Explanation: In Alberta, the management of harvesting practices is governed under the Forests Act & Timber Management Regulation. After cutting, the timber disposition holder (cutting authority) has an obligation to ensure the stand is replaced. The cutting authority is then responsible for carrying out reforestation in the year following the cut. They will conduct surveys in the management unit after reforestation and submit them to their local department of the Minister of the Forestry Division. This survey requirement is to be within 2 years after the end of the year in which the area was cut. In Saskatchewan, the Forest Resources Management Regulations specify "Every licensee who holds a licence respecting a forest management agreement, or a term supply licence, that includes the obligation for renewal shall ensure that renewal activities are carried out on all lands in the licence area from which forest products have been harvested"

Was the feedstock used in the biomass removed from a forest as part of a pest/disease control measure or a salvage operation? Yes - Minority

Explanation: Some purchased feedstock was from salvage operations due to fire, insect, or other environmental damage. This may have come in the form of primary or secondary feedstock.

What is the estimated amount of REDII-compliant sustainable feedstock that could be harvested annually in a Supply Base (estimated): 0,00 tonnes

Explanation:n/a - REDII SBE has not been completed for the supply base.

Feedstock

Reporting period from: 01 Jan 2022

Reporting period to: 31 Dec 2022

- a. **Total volume of Feedstock:** 600,000-800,000 tonnes
- b. **Volume of primary feedstock:** 1-200,000 tonnes
- c. **List percentage of primary feedstock, by the following categories.**
 - Certified to an SBP-approved Forest Management Scheme: 60% - 79%
 - Not certified to an SBP-approved Forest Management Scheme: 1% - 19%
- d. **List of all the species in primary feedstock, including scientific name:** Picea glauca (white spruce); Picea mariana (black spruce); Populus tremuloides (aspen); Populus balsamifera (balsam poplar); Pinus contorta (lodgepole pine); Pinus banksiana (jack pine); Abies lasiocarpa (subalpine fir); Larix laricina (tamarack); Larix lyallii (alpine larch); Larix occidentalis (western larch); Picea engelmannii (engelmann spruce); Pseudotsuga menziesii (Douglas-fir); Tsuga heterophylla (western hemlock);
- e. **Is any of the feedstock used likely to have come from protected or threatened species?** No
 - Name of species: N/A
 - Biomass proportion, by weight, that is likely to be composed of that species (%): N/A
- f. **Hardwood (i.e. broadleaf trees): specify proportion of biomass from (%):** 1,65
- g. **Softwood (i.e. coniferous trees): specify proportion of biomass from (%):** 98,35
- h. **Proportion of biomass composed of or derived from saw logs (%):** 0,00

- i. **Specify the local regulations or industry standards that define saw logs:** Local sawmill specifications
- j. **Roundwood from final fellings from forests with > 40 yr rotation times - Average % volume of fellings delivered to BP (%):** 100,00
- k. **Volume of primary feedstock from primary forest:** 0 N/A
- l. **List percentage of primary feedstock from primary forest, by the following categories. Subdivide by SBP-approved Forest Management Schemes:**
 - Primary feedstock from primary forest certified to an SBP-approved Forest Management Scheme: N/A
 - Primary feedstock from primary forest not certified to an SBP-approved Forest Management Scheme: N/A
- m. **Volume of secondary feedstock:** 600,000-800,000 tonnes
 - Physical form of the feedstock: Chips, Sawdust, Offcuts, Clean chips or dust
- n. **Volume of tertiary feedstock:** 0 N/A
 - Physical form of the feedstock: N/A
- o. **Estimated amount of REDII-compliant sustainable feedstock that could be collected annually by the BP:** 700000,00tonnes

Proportion of feedstock sourced per type of claim during the reporting period				
Feedstock type	Sourced by using Supply Base Evaluation (SBE) %	FSC %	PEFC %	SFI %
Primary	0,00	0,00	100,00	0,00
Secondary	0,00	0,00	100,00	0,00
Tertiary	0,00	0,00	0,00	0,00
Other	0,00	0,00	0,00	0,00

3 Requirement for a Supply Base Evaluation

Note: Annex 1 is generated by the system if the SBE is used without Region Risk Assessment(s). Annex 2 is generated if RED II SBE is in the scope.

Is Supply Base Evaluation (SBE) is completed? No

N/A

Is REDII SBE completed? No

N/A

4 Supply Base Evaluation

Note: Annex 2 is generated if RED II is in the scope.

4.1 Scope

Feedstock types included in SBE: N/A

SBP-endorsed Regional Risk Assessments used: Not applicable

List of countries and regions included in the SBE:

Country: N/A

Indicator with specified risk in the risk assessment used:

N/A

Specific risk description:

4.2 Justification

N/A

4.3 Results of risk assessment and Supplier Verification Programme

N/A

4.4 Conclusion

N/A

5 Supply Base Evaluation process

N/A

6 Stakeholder consultation

N/A

6.1 Response to stakeholder comments

N/A

7 Mitigation measures

7.1 Mitigation measures

N/A

7.2 Monitoring and outcomes

N/A

8 Detailed findings for indicators

Detailed findings for each Indicator are given in Annex 1 in case the Regional Risk Assessment (RRA) is not used.

Is RRA used? N/A

9 Review of report

9.1 Peer review

N/A

9.2 Public or additional reviews

N/A

10 Approval of report

Approval of Supply Base Report by senior management			
Report Prepared by:	Gage Wasylyshen	Sustainability Certification Lead	31 May 2023
	Name	Title	Date
<p>The undersigned persons confirm that I/we are members of the organisation's senior management and do hereby affirm that the contents of this evaluation report were duly acknowledged by senior management as being accurate prior to approval and finalisation of the report.</p>			
Report approved by:	Joseph Aquino	Director of Sustainability	31 May 2023
	Name	Title	Date

Annex 1: Detailed findings for Supply Base Evaluation indicators

N/A

Annex 2: Detailed findings for REDII Supply Base Evaluation

Section 1. RED II

Country:Canada	
(i) The legality of harvesting operations	
Type of Risk Assessment used	<input type="checkbox"/> Level A – proof at national or sub-national level <input type="checkbox"/> Level B – management system at forest sourcing area level
Level A risk assessment description	N/A
Level B management system at the level of the forest sourcing area	N/A
(ii) Forest regeneration of harvested areas	
Type of Risk Assessment used	<input type="checkbox"/> Level A – proof at national or sub-national level <input type="checkbox"/> Level B – management system at forest sourcing area level
Level A risk assessment description	N/A
Level B management system at the level of the forest sourcing area	N/A
(iii) That areas designated by international or national law or by the relevant competent authority for nature protection purposes, including in wetlands and peatlands, are protected unless evidence is provided that the harvesting of that raw material does not interfere with those nature protection purposes	
Type of Risk Assessment used	<input type="checkbox"/> Level A – proof at national or sub-national level <input type="checkbox"/> Level B – management system at forest sourcing area level
Level A risk assessment description	N/A
Level B management system at the level of the forest sourcing area	N/A
(iv) That harvesting is carried out considering the maintenance of soil quality and biodiversity with the aim of minimising negative impacts	
Type of Risk Assessment used	<input type="checkbox"/> Level A – proof at national or sub-national level <input type="checkbox"/> Level B – management system at forest sourcing area level

Level A risk assessment description	N/A
Level B management system at the level of the forest sourcing area	N/A
(v) That harvesting maintains or improves the long-term production capacity of the forest.	
Type of Risk Assessment used	<input type="checkbox"/> Level A – proof at national or sub-national level <input type="checkbox"/> Level B – management system at forest sourcing area level
Level A risk assessment description	N/A
Level B management system at the level of the forest sourcing area	N/A
LULUCF criteria 29(7)	
Type of Risk Assessment used	<input type="checkbox"/> Level A – proof at national or sub-national level <input type="checkbox"/> Level B – management system at forest sourcing area level
Level A risk assessment description	N/A
Level B management system at the level of the forest sourcing area	N/A

Section 2. RED II detailed findings for secondary and tertiary feedstock

10.1 Verification and monitoring of suppliers

N/A

10.2 Feedstock inspection and classification upon receipt

N/A

10.3 Supplier audit for secondary and tertiary feedstock

N/A