Wood Heat Initiative

NS Department of Lands and Forestry

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Background

Response to Independent Review of Forest Practices in Nova Scotia:

"DNR (now the Department of Lands and Forestry) and other relevant agencies of the provincial government, along with municipal governments and regional development agencies, should work together with project developers to support and enable small-scale wood-energy projects that allow low-quality wood to be used in heating hospitals, schools, government office buildings, correctional facilities, and other public buildings."

Government supports this recommendation and has directed our Department along with other respective Departments to seek opportunities within public buildings.

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Concept

The concept is to replace imported fuel oil with a local renewable resource for thermal energy, while increasing markets for underutilized and lower quality wood fibre.

The WHITG

The Wood Heat Intergovernmental Task Group (WHITG), chaired by Lands and Forestry, is mandated to implement the planning and development of the provincial small wood chips heat initiative for public buildings located in various regions across the province.

WHITG Membership to include designated senior Provincial Government Representatives from:

- Department of Lands and Forestry (Chair)
- Department of Transportation and Infrastructure Renewal
- Department of Agriculture
- Department of Business
- Department of Education and Early Childhood Development
- Department of Energy and Mines
- Department of Environment
- Department of Health and Wellness
- Department of Internal Services

Timelines

December 3rd, 2018 – Government released its response to Professor Lahey's Independent Review of Forest Practices.

December 7th, 2018 - Wood Heat Intergovernmental Task Group (WHITG) formed.

January 14th, 2019 - WHITG Inaugural Meeting.

February 4th , 2019 2nd WHITG Meeting.

March 7th, 3rd WHITG 2019

April 25th Next WHITG Meeting

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Approach

Three Concurrent Fronts:

1. Explore option for few small-scale strategic demonstration/pilot facilities across various regions. **This will target implementation within the 2019/20 heating season.**

2. Identification of a comprehensive list of suitable public facilities across the province (existing/under-construction/design stage). Design and undertake a large-scale procurement process. **This will target implementation within the 2020/21 heating season.**

3. Replace old and inefficient current units within public facilities with more modern and efficient systems, saving maintenance/fuel costs.

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Milestones

Jan.–Feb. 2019

WHITG Initiation, site visits, research/identify best practice and implementation approach. Identify pipeline of public buildings as a potential wood heat user facilities.

Mar.–Apr. 2019

Identify buildings shortlist, capabilities, fibre supply, interested regions. Establish good understanding of implementation approach for demonstration projects. Start plan an EOI or RFP for specific sites.

May–June 2019

Start to execute RFP for several demonstration sites.

July–Aug. 2019

Demo site and service providers chosen. Construction of Demo facilities begin.

Dec. 2019

Wood Heat Warming Demo/Pilot Sites in 2019

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Cont.

MAR 2020 - LARGER PROCUREMENT EXPRESSION OF INTEREST DEVELOPED/TENDERED AFTER FIRST DEMO FACILITIES HEAT SEASON.

APR 2020 - ENERGY SERVICE PROVIDERS CHOSEN.

MAY 2020 - CONSTRUCTION OF FACILITIES BEGIN.

DEC 2020 - ALL TARGETED FACILITIES OPERATIONAL.

JAN 2021 - HAND OFF TO EFFICIENCY 1 FOR LONG TERM PROGRAM DELIVERY.

POTENTIAL IMPLEMENTATION INTO COMMERCIAL/RESIDENTIAL MARKETS.

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PEI Experience

TRANSPORTATION, INFRASTRUCTURE AND ENERGY

GOVERNMENT OF PRINCE EDWARD ISLAND

PEI Examples

- Small Heat Load (Schools) 200-800 tonnes @ 35% MC
- Larger Heat Loads (PCH) 1800->2000 tonnes @ 35 % MC
- Small District Heat (Tignish) 500tonnes

Displacement Formula (Rough Estimate) - approx. 100,000 lit equivalent to 300 tonnes at 35% MC

PEI Experience

Transportation, Infrastructure and Energy, Government of Prince Edward Island

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Chipping - Storage - Transportation

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Systems and Boilers

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Facilities

Prince County Hospital, Summerside, PEI

Summerset Manor Nursing Home, Summerside, PEI

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Buildings

Small District Heat (Tignish) PEI

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District Heating

	Customer	Consumption		Flow temperature	
		Actual	Daily	Primary	Secondary
North	1. Heritage Inn	27.3 kW	460 kWh	87.5 °C	78.8 °C
	2. Dalton Seniors	9.3 kW	184 kWh	87.2 °C	77.3 °C
	3. Seniors Apt 1	23.4 kW	214 kWh	85.5 °C	74.5 °C
	4. Seniors Apt 2	29.6 kW	185 kWh	86.0 °C	77.6 °C
	5. Tignish Elementary School	90.8 kW	1950 kWh	88.8 °C	77.3 °C
South	6. Cultural Centre	2.5 kW	139 kWh	83.5 °C	71.6 °C
	7. Dalton Annex	15.3 kW	370 kWh	88.4 °C	76.8 °C
	8. Coop	74.3 kW	1530 kWh	88.3 °C	80.5 °C
	9. Prov. Sign Shop	13.2 kW	260 kWh	88.1 °C	77.5 °C
	10. Post Office	13.0 kW	319 kWh	85.7 °C	80.6 °C
	Total	293 kW	5611 kWh		

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Boilers

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Questions?