

LEGISLATIVE ASSEMBLY OF THE

NORTHWEST TERRITORIES

5TH COUNCIL, 30TH SESSION

SESSIONAL PAPER NO. 10-30

TABLED ON JUNE 14, 1965



10 May, 1965.

NORTHWEST TERRITORIES

SESSIONAL PAPER NO.10
(Second Session, 1965)

PROPOSAL TO BURN WOOD IN THE SCHOOL AT AKLAVIK

DISPOSITION

Accepted as Read.....

Amended..... See Text.

Rejected..... See Text.

JUN 21 1965

Deferred..... See Text.

Not considered.

PROPOSAL TO BURN WOOD IN THE SCHOOL AT AKLAVIK

The Commissioner undertook to have a study made of Mr. Trimble's proposal that wood instead of oil be used to heat the school at Aklavik.

The study brought out figures that are of the same order as Mr. Trimble's, namely consumption of oil in the school at 330 gallons per day at an approximate cost of \$40 per day. Wood for the same purpose would be three cords per day. These quantities are apparently for cold winter days. The study reports costs for wood that are higher than Mr. Trimble's, namely \$20 per cord for cutting, \$10 per cord for hauling and \$30 per day for additional staff for operating for a total cost per day for wood of \$120.

Looked at over the entire year of heating in mild weather, the daily consumption of fuel, whether oil or wood becomes very much less. However, furnacemen's labour costs tend to make a further imbalance against the proposal of wood.

The only other factor is a greater fire hazard when burning wood.

A study was done three years ago on the proposal to use wood throughout Aklavik instead of oil. The result was set forth in Sessional Paper No. 14 at the First Session of 1963. -- A copy of this is attached.

ADDITIONAL COST OF USING WOOD
TO HEAT BUILDINGS AT AKLAVIK

Purpose

The purpose of this paper is to examine the comparative costs of using wood in place of oil to heat buildings in Aklavik and thereby providing additional employment for local residents.

General Information

At the present time only the Federal School building at Aklavik is heated with wood. All other federal buildings use oil. The school requires about 200 cords of wood per year which is obtained by contract with local individuals without supervision by the Department. A twenty-four hour janitor staff is required at the school to keep the wood furnace operating. The delivery of oil to the other departmental buildings is a simple operation and their furnaces require little attention.

In examining the possible cost of heating all departmental buildings with wood, it is assumed that suitable wood can be cut within 10 to 15 miles of Aklavik and that there is a sufficient supply of local labour to cut, haul and distribute the wood to all the buildings. Because of the greatly increased dependence on wood as a fuel, if used in all departmental buildings, it would not be reasonable to rely on small contracts with local individuals to supply the quantity which would be required. This would mean that the Department would have to organize and supervise a wood cutting, hauling and distributing project which would ensure the supply of sufficient amounts of fuel when needed. For the purposes of this examination of costs, it is assumed that the wood would be hauled from the cutting site to the settlement, rather than barged in by water. Cutting and hauling would be easier in the winter, and winter is the season when additional employment is most needed.

Examination of Costs

(a) Federal School

The 200 cords of wood used each year to heat the federal school cost \$4,000.00 (\$20.00 per cord). Carrying wood, stoking the furnace, and carrying ashes requires one man day of labour at \$1.75 an hour for 200 days, at a cost of \$3,500.00. The total cost for the use of wood is \$7,500 a year.

Fuel oil is delivered to the various buildings at Aklavik at a cost of 25.3¢ per imperial gallon. It is estimated that the amount of fuel oil required to heat the federal school is 17,800 gallons per year which would cost \$4,500. The cost of fuel oil, if used at the school, would therefore be approximately \$3,000 a year less than the present cost of using wood. However, if the school were heated by oil, it is estimated that the amount now paid cut in relief would increase by approximately \$1,500.00; so the use of wood for heating the school in the net result costs \$1,500.00 more than heating by oil.

(b) Other Departmental Buildings

All other departmental buildings in Aklavik are now heated by oil with an annual consumption of 73,400 gallons, at an annual cost of \$18,582.

It is estimated that it would require 1,000 cords of wood to heat these buildings for the average heating season. It is thought that the supply of this quantity of wood would have to be arranged on a supervised basis to ensure delivery, and it would also be necessary to engage staff to distribute the wood and stoke furnaces in the various buildings in which it is used. The total annual cost of supplying this quantity of wood and using it in the various departmental buildings (other than the school) is estimated at \$47,675, an increase of \$29,093 in annual cost. Details of the cost of the several operations are given in the attached appendix.

The furnaces in these buildings are now fitted to burn oil and many will present a costly problem to convert for wood. The total cost of conversion of all these units is estimated at \$50,000 and it is thought that this should be amortized over about 10 years, giving an annual amortization cost of about \$7,500. Adding this cost to the cost of wood fuel, the total increase in costs for heating these federal buildings would be approximately \$36,593.

(c) Private Buildings

It is, of course, up to the individual concerned to decide what type of fuel he will use. Unless there were a cost incentive (which, on the basis of the estimated costs for supplying wood for departmental buildings, would require a substantial subsidy), it is unlikely that the average householder now using oil would wish to convert to wood and give up the convenience and economy of oil.

(d) Implications on the Cost of Relief

The principal reason for considering the use of wood fuel is the increased wage employment which it would provide. For purposes of this examination, it is estimated that the effect of this increased wage employment on relief costs would be \$13,650.

Conclusion

The increase in the cost of heating departmental buildings (other than the school) with wood instead of oil would be substantial even after allowing for the reduction in relief payments consequent upon increased employment.

APPENDIX

ANLAVIK - STUDY OF WOOD VERSUS OIL AS A FUEL
FOR DEPARTMENTAL BUILDINGS (OTHER THAN THE SCHOOL)

Heating of other Dept'l Bldgs. - Oil
Cost of oil: 73,400 gallons @ 25.31¢ 18,592 18,582

Heating of other Dept'l Bldgs. by Wood
Estimated quantity of wood - 1000 cords
Initial cutting .7 per cord (labour) 7,000

Camp Costs
Camp buildings (\$6,000) amortized
over 6 years 1,000
Moving and setting up 500
Cook and assistant (6 weeks) 1,600
Camp wood 100
Camp food (24 men for 6 weeks) 4,500
Other materials 500 3,200

Trucking
Bombadier and trailer
(amortized yearly cost) 1,900
Oil and maintenance 825
2 men @ \$.15/day for 125 days 3,750 6,475

Cutting and Splitting
Cutting 250 M/day @ \$.15 3,750
Splitting,
150 M/day @ \$.15 2,250 6,000
27,675
Stoking (1,000 M/days @ \$.15
and ash removal) 15,000
Supervisor (one year) 5,000
Total Wood Cost: 47,675

Additional cost of using wood 47,675
Amortized yearly equipment cost to
convert to wood - \$50,000 at 15% 29,093
Gross increased costs of using wood 7,500
36,593

Relief Saving (Estimated)
24 @ 1½ months (cutting) 36
2 @ 5 months (trucking) 10
6 @ 2½ months (splitting) 15
3 @ 10 months (stoking) 30
91 man-months

Net relief saving 91 man-months @150 13,650 13,650
Net increased costs of using wood 22,943