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NORTHWEST TERRITORIES  
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NORTHWEST TERRITORIES

SESSIONAL PAPER NO. 8  
(First Session, 1966)

SUBSIDIZATION OF ELECTRIC POWER IN THE N.W.T. AND YUKON

DISPOSITION

Accepted as Read .....

Amended..... See Text

Rejected..... See Text

Deferred..... See Text

Not Considered.

## SUBSIDIZATION OF ELECTRIC POWER IN THE N.W.T. AND YUKON

### 1. Background

At the November, 1964 Session of the N.W.T. Council Air Marshal Campbell presented a motion recommending that

- "(a) wiring, etc. for electric lights and services be included in the future government or Territorial standard homes;
- (b) a program of installation of wiring for electric lights and services for those houses already constructed be implemented;
- (c) a standard rate not in excess of 4¢ per KWH be charged the householder, regardless of location."

After consideration of this motion, Council requested the Administration to present to the February, 1965 Session of Council an indication of the subsidy that would be required to bring the cost of electricity in the Northwest Territories down to 5¢ per KWH.

A technical paper indicating the subsidy that would be required for this purpose was prepared by the Engineering Division of the Northern Administration Branch and was presented to the February Session of Council as Sessional Paper No. 7. A copy of this paper is attached as Appendix 'A'.

When Sessional Paper No. 7 was presented to the Council, Council indicated clearly that they wished such a subsidy program to proceed. The Commissioner pointed out that since such a program had far reaching financial implications, it would have to be referred to the Federal Government before implementation.

Following the February Session of the Territorial Council, therefore, further discussions took place within the Department in order to examine all the implications, advantages and disadvantages of such a subsidy program. As a result of these studies, two alternative courses of action, which will meet the objectives of Council, are presented in this paper.

### 2. Present Policy

Power is provided in the Yukon and N.W.T. at present in the following three ways:

#### (a) By private utility

This is the case in such major centres as Whitehorse and Yellowknife as well as in some smaller locations, such as Fort Providence and Old Crow.

#### (b) By the Northern Canada Power Commission

The Commission provides bulk power to private utility companies in Whitehorse and Yellowknife and generates power and sells it at cost in such locations as Fort Smith and Fort Simpson.

#### (c) By the Department of Northern Affairs and National Resources, or other Government Department

The Department generates power and sells it to the private sector in many small settlements throughout the Northwest Territories, while in others the power

may be generated by another government department but sold through the Department of Northern Affairs to the private sector. It is policy that when the power-load at a settlement exceeds 100 kilowatts, the Northern Canada Power Commission shall be asked to take on the responsibility for power generation. Power sold by the Department is sold at cost, but provision has been made for regional pricing to balance power rates in geographical areas composed of both large and small settlements. Pending the determination of exact costs, an interim rate of 12¢ per KWH has been established. A copy of Order-in-Council P.C. 1961-29/1121 dated August 4, 1961, outlining this current policy is attached as Appendix 'B'.

As mentioned above, when power is provided by the Department of Northern Affairs and National Resources, it is sold at cost. This, too, is the practice of the Northern Canada Power Commission and generally that of other government departments, although with some departments the make-up of the cost price does not include capital amortization. Power provided by private utilities is sold at rates established by these utilities but subject to the provisions of the appropriate ordinances in the Territories (Public Utilities Ordinance).

#### Deficiencies in Present Policy

The first and major deficiency in the present policy is that the cost of electric power is higher than many citizens in the Territories can afford to pay. This is particularly true in the smaller settlements where the use of electricity is minimal and the consumer has to bear the naturally heavy overhead and amortization costs. In the larger settlements, these costs are spread over more consumers, thus making more reasonable prices possible. A regional pricing system like that in the Northwest Territories creates equality but raises costs in larger settlements. The cost of domestic power for a modest dwelling in a small settlement at 12¢ per KWH can easily exceed \$20 per month, even if electricity is only used for lighting and a minimum number of appliances, such as radio, refrigerator, toaster, electric kettle, etc. Coupled with this, the owner of such a dwelling will probably have to pay about \$40 per month for heating and perhaps a further \$15 for minimum water supply and sewage disposal facilities.

The difficulties of owning and operating a house in the North have been recognized insofar as the Eskimo population is concerned by the new rental housing scheme under which fully serviced dwellings will be rented at a subsidized rent. In the case of other residents of the N.W.T. and Yukon, some provision has been made to offset the exceptionally high costs of dwellings by the payment of a subsidy towards the capital cost of such dwellings. Little has been done, however, to help towards the reduction of the operating costs of housing by subsidy, although the introduction of bulk oil storage, better transportation, etc. have naturally exerted a downward influence on the cost of power, heating and other services.

The second deficiency in the current policy is the provision that the consumer is required to finance the cost of any extension to power distribution lines that may be required to service his property. This provision was included in the current policy simply to keep the cost of power down to the 12¢ per KWH rate. In many cases, however, even if a subsidy down to 5¢ per KWH or less were introduced, it would not be possible for the consumer to take advantage of this subsidy because he could not afford to pay for the necessary extension to the power lines.

MOTION

The Council has, as an objective, the provision of electric lights in all homes in the Northwest Territories, where practical or reasonable.

To this end I move that we recommend to the Hon. Mr. Laing, Minister of Northern Affairs and National Resources that

- (a) up to 300 KWH per month of electricity be provided to homes in the Northwest Territories at a rate of 1 1/2¢ per KWH.
- (b) amounts consumed in excess of this be charged for at prevailing rates.
- (c) grants of between \$300 to \$400 be made for the installation of appropriate wiring to the householders who do not already have their homes adequately wired for lighting purposes.
- (d) this program to include such new generating capacity and power lines as necessary to be provided for out of Territorial-Federal funds and be included in the annual budget in the same way that the many Welfare and Assistance Programs are already provided for.
- (e) the 1965-66 Supplementary Budget to be presented to the next session of Council includes sufficient funds to start this program during this fiscal year.

This recommendation is made on the basis that we believe that a family should have reasonable lights for seeing, reading, studying, etc., to assist them in acquiring the basis for a reasonable standard of living.

EXPLANATION

The rate presently being charged in the Northwest Territories by Government-sponsored power companies is generally 12¢ per KWH. This makes it almost prohibitive for the average family to have

electric lights in its home. For example, the six communities of Ontario listed pay an average of \$4.23 for 300 KW.

This level of consumption in the Northwest Territories would cost \$36.00 per month - \$432.00 per year. At this point I would like to remind you that the average income earned by citizens of the Northwest Territories is reported to be \$1,286.

To bring the problem closer to home, the average consumption in the houses of Ottawa amount to approximately 900 KWH per month at a cost of \$6.03. The same amount of power would cost the householder in the Northwest Territories \$108.00 per month - \$1,296.00 per year.

The third, but lesser deficiency in the current policy is that it does not make any provision for the consumer to be able to borrow money to wire his house, even if he is able to afford the rate levied. The Home Improvement Loans by C.M.H.C. are not yet generally available in the Territories.

#### Basic Conclusions

Any new policy that may be developed for the subsidization of electrical power should provide for the payment of costs for electrical distribution up to the consumer's meter, otherwise many persons may not be able to take advantage of the cheaper power simply because they will not be able to afford the cost of extending the distribution lines.

A subsidy policy should take into account the fact that power is being generated by more than one agency and, consequently, subsidy proposals must be capable of being implemented both through government departments and private utility companies.

#### Simplicity of Administration must be the Keynote

The normal establishment of utility rates places a premium on the first few kilowatt hours taken by the consumer, simply because these are the most expensive kilowatt hours to the utility company. This means that those least able to afford power end up paying more per kilowatt hour for it because of their very low consumption. A subsidy policy should therefore take into consideration the first few kilowatt hours consumed.

Provision should be made along with any power subsidization program for assistance towards the wiring of private homes. The easiest way to accomplish this would be through an expanded service on Home Improvement Loans, a subject which is discussed in a separate paper for consideration of the Council.

#### Alternative Policy No. 1

Adoption of this policy would simply place a ceiling on the cost of electrical power in the N.W.T. and Yukon of 5¢ per KWH. The cost of this subsidy would approximate \$250,000 per year, which would include the additional cost for extending distribution lines now paid for by the consumer.

The administration of such a policy would be quite simple with respect to those areas where power is generated and sold by a government department or the Northern Canada Power Commission and could be handled without too much difficulty in those areas where power is generated or sold by a private utility. In the latter case, however, some control would have to be exercised over the rate structure of the private company which could be done under the Public Utilities Ordinance.

#### Advantages of Alternative No. 1

- (a) Simple to implement and administer.
- (b) Grants equal treatment to all.
- (c) By merely placing a ceiling on power costs, the normal practice of establishing stepped rates below the ceiling by the power company to encourage consumption will not be upset.

Disadvantages of Alternative No. 1

- (a) A reduction to 5¢ per KWH is not sufficient to make the rates attractive to most private consumers in the Territories. If electricity were to be used to an extent similar to what a southern consumer would use it, costs would be in the neighbourhood of \$40 per month. Even with greatly reduced consumption, costs would still be in the region of \$10 per month.
- (b) By an across-the-board subsidy, even those able to pay a higher rate would receive assistance. This might place an undue advantage on the use of electricity as opposed to other sources of energy, both for private and business purposes. This, in turn, might result in an unnatural and uneconomic increase in generating facilities.

Alternative Policy No. II

This alternative would bring down the cost of essential power to domestic consumers only to a rate equivalent to that prevailing in southern Canada. It would ~~not~~ in effect be an equalization policy for householders.

From a study of typical net monthly residential bills for electricity in various municipalities in southern Canada, it would appear that the average southern Canadian rate for electricity is about 1 1/2¢ per KWH. At Appendix 'C' is a list of a few of the municipalities that have been used to establish this average. It must be mentioned that the first few kilowatt hours of electricity used by the consumer are the most expensive and this factor is reflected in the average.

A power consumption of about 150 kilowatt hours per month will meet the minimum needs of a consumer. An example of what this usage would permit is given in Appendix 'D'. It should be noted that this amount of electricity would not permit the use of electric driers, ranges or water heaters.

This policy would bring the cost of electricity for the first 150 kilowatt hours used by a domestic consumer in the Northwest Territories or Yukon down to 1 1/2¢ per kilowatt hour, or if the full subsidized amount is used, to \$2.25 a month. A consumer using more than 150 kilowatt hours per month would be required to pay the normal rate applicable in the community.

In addition to subsidizing the first 150 kilowatt hours of power, it would be proposed also to amend Order-in-Council P.C. 1961-29/1121 to permit the construction of distribution lines to be incorporated into the overall electricity cost, subsidizing this if necessary to keep an upper price ceiling of 12¢ per KWH.

This would have the effect of making the consumer responsible only for the wiring of his dwelling. The amount of subsidy required just to cover this question of distribution line construction would not be more than \$20,000 annually for ten years and would probably be considerably less.

The total effect of this policy would be to permit every resident of the Northwest Territories and Yukon to receive the minimum essential requirements for electric power at a cost of \$2.25 per month. It would give no assistance, however, towards commercial consumers.



Advantages of Alternative No. 2

- (a) Puts a subsidy where it is most needed, namely, in the hands of the poor.
- (b) Limits the subsidy to a predictable amount, controlled by population growth only. Alternative No. 1 places no limit on the subsidy but because of the relatively high rate, the amount of subsidy is likely to be self-limiting, although not as predictable as that for this alternative.
- (c) Simple to implement and administer,

Disadvantages of Alternative No. 2

- (a) By subsidizing the power that is most expensive to produce, namely the first few kilowatt hours per consumer, the subsidy will be higher than that provided under the first alternative.
- (b) There will be a considerable disparity between the power rates paid by a private consumer and those paid by businesses. This could lead to problems of domestic power being used incorrectly to supplement commercial needs.
- (c) Where private utility companies are involved, objections are likely to be received from these companies because of the lack of incentive given to the consumer to use more power.

Subsidy Costs

Under Alternative No. 1, the estimated cost of subsidy for the Northwest Territories is \$200,000 per year. This estimate allows for the extension of power distribution lines to serve all consumers, takes into account the necessary increase in power generating capacity and allows for new consumers and an increase in consumption by existing consumers. In the Yukon Territory, the anticipated subsidy cost would be \$50,000, based on the same assumptions.

The estimated cost of subsidy under Alternative No. 2 would be \$360,000 annually in the Northwest Territories and \$110,000 annually in the Yukon. This estimate takes into account the funds required to extend the distribution system to all consumers without upsetting the present 12¢ per KWH price ceiling.

GENERAL COMMENT

1. There are alternatives that could be considered, including variations or combinations of the two given above.
2. There is no evidence available to show that power costs are subsidized in the provinces of Canada, although cases of power rates in large communities being used to subsidize power rates in small communities within a province are common.
3. If the Council is contemplating a subsidy, the cost of which would be covered by a new or increased tax in the Territory, then presumably the method of subsidy and its size is in large measure a matter for the Government of the Northwest Territories to decide. If it is to be financed by the Federal Government directly or indirectly, then it would have to be considered by the Government of Canada in light of its responsibilities for the North and its relations with the provinces of Canada.

PROPOSED SUBSIDIZATION OF ELECTRIC ENERGY  
COSTS IN THE NORTHWEST TERRITORIES

In November, 1964, Council discussed the possibility of subsidizing electric energy costs throughout the Northwest Territories so that domestic and commercial users of electricity could buy power at five cents per Kilowatt - hour. Council recommended that the Administration conduct a survey of the cost of such a subsidy.

The Present Situation

At most northern settlements electric power is supplied by the Department of Northern Affairs and National Resources. The Treasury Board, in August 1961 granted authority to the Northern Administration Branch to sell electric power and provide services in respect thereof, to private consumers in remote locations in Northern Canada where alternative local sources are not available, under the following terms and conditions:

- (a) That power will only be provided to private consumers where in a given community the federal government has at least 50% of the total power requirement in that community:
- (b) That the size of plant in any single community will not exceed 100 Kilowatts output (not including standby) without specific Treasury Board approval:
- (c) That the private consumer will, in each case, bear the cost of extensions to the distribution system which may be required to service his property, such extensions to become the property of the Crown upon completion:
- (d) That in order to eliminate differences in power rates between adjacent communities, regional rates will be established, which will in no case be less than the highest average rate charged by Northern Canada Power Commission in the region concerned:
- (e) That pending establishment of regional rates (to be computed subject to paragraph (d) on an average of the cost to the consumer in the Communities within a region) an interim rate of 12 cents per Kilowatt - hour will be charged in all communities:
- (f) That the cost to the consumer will be based on:
  - (i) cost of operating and maintaining powerhouse, generating plant, distribution system and associated facilities, such cost to include operator's wages, accommodation and other benefits, materials and supplies; repairs and improvements:
  - (ii) amortization of capital facilities at 6% interest over 15 years:
  - (iii) overhead at 5% of (i) and (ii) to cover meter reading, billing, etc., until actual costs can be established.

At a few settlements the Department of Northern Affairs and National Resources buys bulk power from other government departments for use by the department and for resale to private consumers, e.g. Baker Lake, Cambridge Bay, Coppermine, etc. At these locations the department retails power under the same terms that exist at locations where the department operates its own generating stations.

At some settlements, where the load exceeds 100 KW, the Northern Canada Power Commission is the government agency responsible for electric power generation

and distribution. At these locations rates recommended by the General Manager and approved by the Treasury Board are charged. N.C.P.C. provides power at Fort Smith, Fort Simpson, Fort Resolution, Fort Inuvik, Frobisher Bay.

At Enterprise, Fort Providence, Hay River and Yellowknife, private utility companies operate under electric energy franchises granted by the Commissioner in Council.

#### Survey of Private Consumers

Appendix 1 has been prepared from existing records of actual consumption at various locations where electric energy is available. Estimated figures have been added based on a conservative forecast of the annual increase in domestic and commercial consumption at each community which might result from the reduced cost of power if a subsidy were provided.

From this Appendix it can be seen that the cost of subsidizing power down to 5 cents KWH is estimated at \$183,756 for the first year's operation.

It is anticipated that the annual subsidy cost will increase as annual consumption goes up. During the first few years this growth would probably be from 5% to 10% but would eventually taper off due to lower production costs brought about by greater consumption.

#### Other Factors Requiring Consideration

Before new consumers can be connected to an electric power supply source, it will be necessary for many to have their premises wired for electric power. The cost of wiring a small house to acceptable minimum standards is from \$250 and up.

From experience the Department has had with private consumers, at Aklavik for instance, it appears doubtful whether many of the prospective customers can afford to pay the costs involved.

Under existing policy prospective customers are required to pay the cost of power-line extensions to their property; such costs are approximately \$1.50 per foot. Premises as close as 100 feet from an existing powerline, for instance, would be required to pay \$1.50 for a service line. The minimum costs for wiring and connection to a powerline 100 feet from a small house would therefore be \$400.

The extra administrative load brought about by applying a subsidy would have to be considered. It would appear that the subsidy would start off at approximately the figure named and might require a staff increase to ensure the efficient administration of such extensive collections.

It should be borne in mind when considering the subsidization of electric power in the Territories that electricity is only one of several services. It might be incongruous to subsidize electric power without considering also heat, water, and sewer.

The "average rate" for power can be misleading. Although the private utility Companies and N.C.P.C. show an average rate much lower than the 12 cents charged by D.N.A. & N. R. the various rate structures used by these companies start off by charging up to 35 cents a KWH for the first few units used, after which the cost per KWH drops very rapidly. Special consideration should be given to rate structures. The price of the first few KWH used is of paramount importance.

## APPENDIX 1

TABLE OF CONSUMPTION AND COSTS OF ELECTRIC ENERGYALL SETTLEMENTS N.W.T.

LOCATION	Arctic Red River	Cambridge Bay	Carlsons Landing	Coppermine
KW Capacity of Plant	20	D.O.T.	10	D.O.T.
Total Units Generated	38,000		15,000	350,000 (Estimated)
Unit Cost (Resale)	12¢	12¢	12¢	12¢
Federal Load (KWH)	35,000	120,000 (Estimated)	15,000	300,000 (Estimated)
Federal Costs	\$4,200	\$14,400 (Estimated)	\$18,000	\$36,000
Other Consumers Load	3,000	18,300	0	50,000
Other Consumers Cost	\$360	\$2,196	0	\$6,000
Cost of Subsidy For Others	\$210	\$1,281	0	\$3,500
Anticipated Increase of Others Load	18,000	60,000	0	5,000
Cost of Subsidy For Increased Load	\$1,260	\$4,200	0	\$350
Total Cost of Subsidy	\$1,470	\$5,481	0	\$3,850
Remarks				

Location	Fort Franklin	Fort Good Hope	Fort Liard	Fort Norman	Fort Providence
KW Capacity of Plant	25	D.O.T.	120	100	150
Total Units Generated	48,000		33,900	300,000	187,000
Unit Cost (Resale)	12¢	12¢	12¢	12¢	12¢
Federal Load (KWH)	28,000	100,000 (Estimated)	31,900	291,000	147,000
Federal Costs	\$3,360	\$12,000	\$3,828	\$25,920	\$17,640
Other Consumers Load	20,000	6,000	2,000	9,000	40,000
Other Consumers Cost	\$2,400	\$720	\$240	\$1,080	\$4,800
Cost of Subsidy For Others	\$1,400	\$420	\$140	\$630	\$2,800
Anticipated Increase Of Others Load	30,000	30,000	4,500	30,000	60,000
Cost of Subsidy For Increased Load	\$2,100	\$2,100	\$315	\$2,100	\$4,200
Total Cost of Subsidy	\$3,500	\$2,520	\$455	\$2,730	\$7,000

Remarks

Location	Wrigley	Gjoa Haven	Hay Camp	Jean Marie River	Lac La Martre
KW Capacity of Plant	10	30	130	15	10
Total Units Generated	18,000	140,000	98,000	28,000	33,000
Unit Cost (Resale)	12¢	12¢	12¢	12¢	12¢
Federal Load (KWH)	12,000	100,000	98,000	28,000	33,000
Federal Costs	\$1,440	\$12,000	\$10,760	\$3,360	\$3,960
Other Consumers Load	6,000	40,000	0	0	0
Other Consumers Cost	\$760	\$4,800	0	0	0
Cost of Subsidy For Others	\$420	\$2,800	0	0	0
Anticipated Increase of Others Load	6,000	12,000	0	6,000	6,000
Cost of Subsidy for Increased Load	\$420	\$840	0	\$420	\$420
Total Cost of Subsidy	\$840	\$3,640	0	\$420	\$420
Remarks					

Location	Little Buffalo R.	Nahanni Butte	Peace Point	Pelly Bay	Pine Lake
KW Capacity of Plant	10	25	10	30	8
Total Units Generated	8,000	28,000	8,000	131,000	9,000
Unit Cost (Resale)	12¢	12¢	12¢	12¢	12¢
Federal Load (KWH)	8,000	25,000	8,000	128,000	9,000
Federal Costs	\$960	\$3,000	\$960	\$15,360	\$1,080
Other Consumers Load	0	3,000	0	3,000	0
Other Consumers Cost	0	\$360	0	\$360	0
Cost of Subsidy For Others	0	\$210	0	\$210	0
Anticipated Increase of Others Load	0	12,000	0	12,000	6,000
Cost of Subsidy For Increased Load	0	\$840	0	\$840	\$420
Total Cost of Subsidy	0	\$1,050	0	\$1,050	\$420

Remarks

Location	Rae	Snowdrift	Spence Bay	Stagg River	Sweetgrass
KW Capacity of Plant	120	20	30	30	40
Total Units Generated	109,000	35,000	119,000	48,000	70,000
Unit Cost (Resale)	12¢	12¢	12¢	12¢	12¢
Federal Load (KWH)	94,000	26,000	107,000	48,000	70,000
Federal Costs	\$11,280	\$3,120	\$12,840	\$5,760	\$8,400
Other Consumers Load	15,000	9,000	12,000	0	0
Other Consumers Cost	\$1,800	\$1,080	\$1,440	0	0
Cost of Subsidy For Others	\$1,050	\$630	\$840	0	0
Anticipated Increase of Others Load	45,000	6,000	18,000	0	0
Cost of Subsidy For Increased Load	\$3,150	\$420	\$1,260	0	0
Total Cost of Subsidy	\$4,200	\$1,050	\$2,100	0	0
Remarks					



Location	Tuktoyaktuk	Arctic Bay	Broughton Island	Cape Dorset	Clyde River
KW Capacity of Plant	100	20	50	100	20
Total Units Generated	144,000	36,000	88,000	160,000	50,000
Unit Cost (Resale)	12¢	12¢	12¢	12¢	12¢
Federal Load (KWH)	133,000	27,000	86,000	100,000	47,000
Federal Costs	\$15,960	\$3,240	\$10,320	\$12,000	\$5,640
Other Consumers Load	11,000	9,000	2,000	60,000	3,000
Other Consumers Cost	\$1,320	\$1,080	\$240	\$7,200	\$360
Cost of Subsidy For Others	\$770	\$630	\$140	\$4,200	\$210
Anticipated Increase of Others Load	60,000	15,000	18,000	60,000	12,000
Cost of Subsidy For Increased Load	\$4,200	\$1,050	\$1,260	\$4,200	\$840
Total Cost of Subsidy	\$4,970	\$1,680	\$1,400	\$8,400	\$1,050
Remarks					

Location	Grise Fiord	Hall Lake	Igloolik	Lake Harbour	Pangnirtung
KW Capacity of Plant	30	50	70		70
Total Units Generated	70,000	70,000	136,000		110,000
Unit Cost (Resale)	12¢	12¢	12¢		12¢
Federal Load (KWH)	67,000	67,000	127,000		89,000
Federal Costs	\$8,040	\$8,040	\$15,240		\$10,680
Other Consumers Load	3,000	3,000	9,000		21,000
Other Consumers Cost	\$360	\$360	\$1,080		\$2,520
Cost of Subsidy For Others	\$210	\$210	\$630		\$1,470
Anticipated Increase of Others Load	33,000	15,000	30,000		30,000
Cost of Subsidy For Increased Load	\$2,310	\$1,050	\$2,100		\$2,100
Total Cost of Subsidy	\$2,520	\$1,260	\$2,730		\$3,570
Remarks					

Location	Pond Inlet	Resolute Bay	Baker Lake	Coral Harbour	Eskimo Point
KW Capacity of Plant	120	D.O.T.	D.O.T.	70	100
Total Units Generated	98,000	88,000	350,000 (Estimated)	120,000	174,000
Unit Cost (Resale)	12¢	12¢	12¢	12¢	12¢
Federal Load (KWH)	81,000	86,000	30,000 (Estimated)	84,000	153,000
Federal Costs	\$9,720	\$10,320	\$36,000	\$10,080	\$19,560
Other Consumers Load	17,000	2,000	50,000	36,000	21,000
Other Consumers Cost	\$2,040	\$240	\$6,000	\$4,320	\$2,520
Cost of Subsidy For Others	\$1,260	\$140	\$3,500	\$2,520	\$1,470
Anticipated In- crease of Others Load	30,000	18,000	5,000	24,000	30,000
Cost of Subsidy For Increased Load	\$2,100	\$1,260	\$350	\$1,680	\$2,100
Total Cost of Subsidy	\$3,360	\$1,400	\$3,850	\$4,200	\$3,570

Remarks:

Location	Rankin Inlet	Whale Cove	Inuvik	Frobisher Bay	Fort Smith
KW Capacity of Plant	500	100	N.C.P.C.	N.C.P.C.	N.C.P.C.
Total Units Generated	860,000	160,000	7,070,000	8,200,000	5,440,000
Unit Cost (Resale)	12¢	12¢	*Average 5.8¢	*Average 7¢	*Average 5.4¢
Federal Load (KWH)	843,000	157,000	6,250,000	7,300,000	4,000,000
Federal Costs	\$101,160	\$18,840	\$339,000	\$438,000	\$194,000
Other Consumers Cost	\$2,040	\$360	\$47,500	\$63,000	\$77,000
Cost of Subsidy For Others	\$1,190	\$210	\$6,560	\$18,000	\$5,600
Anticipated In- crease of Others Load	45,000	21,000	82,000	90,000	144,000
Cost of Subsidy For Increase Load	\$3,150	\$1,470	\$656	\$1,800	\$560
Total Cost of Subsidy	\$4,340	\$1,680	\$7,216	\$19,800	\$6,160
Remarks					

Location	Fort Simpson	Fort McPherson	Aklavik	Hay River	Enterprise
KW Capacity of Plant	N.C.P.C.	275	90	Northland Utilities	Northland Utilities
Total Units Generated	1,980,000	700,000	400,000	2,917,000	170,000
Unit Cost (Resale)	*Average 9¢	*Average 12¢	*Average 15¢	*Average 6.01¢	*Average 8.89¢
Federal Load	1,700,000	650,000	325,000	112,000	74,000
Other Consumers Load	280,000	50,000	75,000	2,805,000	96,000
Other Consumers Cost	\$25,200	\$6,000	\$11,250	\$166,700	\$8,200
Cost of Subsidy For Others	\$11,200	\$3,500	\$7,500	\$28,330	\$3,840
Anticipated Increase of Others Load	28,000	5,000	7,500	100,000	9,600
Cost of Subsidy for Increased Load	\$1,120	\$350	\$750	\$1,010	\$384
Total Cost of Subsidy	\$12,320	\$3,850	\$8,250	\$29,340	\$4,224

Remarks

\* Average cents/KWH shown above is sales divided by KWHS producing an "average rate" but actual rates range from 4.5¢ to 35¢/KWH depending on locality, class of service (viz domestic, commercial power, etc) and magnitude of consumption.

Location	Payne Bay	Chesterfield Inlet	Yellowknife	Norman Wells	Total All Settlements
KW Capacity of Plant	100	R.C. Mission	Plains Western Ltd.	Imperial Oil Ltd.	
Total Units Generated	107,000	No figures available	11,000,000		
Unit Cost (Resale)	12¢		*Average 5¢	7¢	
Federal Load (KWH)	104,000		94,300	10,000	24,928,200
Federal Costs	\$12,480		\$4,843	\$700	1,732,890
Other Consumers Load	3,000		N.A.	NIL	6,720,300
Other Consumers Cost	\$360		N.A.	N.A.	465,646
Cost of Subsidy For Others	\$210		N.A.	N.A.	120,041
Anticipated Increase of Others Load	3,000		N.A.	N.A.	1,281,600
Cost of Subsidy for Increased Load	\$210		N.A.	N.A.	63,715
Total Cost of Subsidy	\$420		NIL	NIL	183,756
Remarks					

P.C. 1961-29/1121

4th August, 1961.

NORTHERN AFFAIRS AND NATIONAL RESOURCES

The Board recommends that authority be granted to sell electric power and to provide services in respect thereof, to private consumers in remote locations in Northern Canada where alternative local sources of supply are not available, in accordance with the following terms and conditions:

- a) That power will only be provided to private consumers where in a given community the federal government has at least 50% of the total power requirement in that community;
- b) That the size of plant in any single community will not exceed 100 kilowatts output (not including standby) without specific Treasury Board approval;
- c) That the private consumer will, in each case, bear the cost of extensions to the distribution system which may be required to service his property, such extensions to become the property of the Crown upon completion;
- d) That in order to eliminate differences in power rates between adjacent communities, regional rates will be established, which will in no case be less than the highest average rate charged by Northern Canada Power Commission in the region concerned;
- e) That pending establishment of regional rates to be computed subject to paragraph d) on an average of the cost to the consumer in communities within a region, an interim rate of 12¢ per kilowatt hour will be charged in all communities;
- f) That the cost to the consumer will be based on:
  - (i) cost of operating and maintaining power house, generating plant, distribution system and associated facilities, such cost to include operators' wages, accommodation and other benefits, materials and supplies, repairs and improvements.

- (ii) amortization of capital facilities at 6% interest over 15 years;
- (iii) overhead at 5% of (i) and (ii) to cover meter reading, billing etc., until actual cost can be established.

(signed R.B. Bryce)

Clerk of the Privy Council



Typical Net Monthly Residential Bills  
in Various Municipalities  
 (300 K.W.H./Month/Block)

ONTARIO

Bellville	\$2.70
Burlington	\$5.94
Chatham	\$5.08
Guelph	\$4.45
Peterborough	\$4.21
Sarnia	\$4.45
Ft. William	\$2.81

QUEBEC

Shawinigan W&P	\$4.85
St. Johns	\$5.00
Quebec	\$4.08
Gatineau	\$3.09
Montreal	\$4.12

SASKATCHEWAN

Regina	\$2.26
Saskatoon Rural (6-50 Meters)	\$3.45
Designated Northern Rural	\$5.21

ALBERTA

Grand Prairie	\$6.63
Edmonton	\$3.86
Medicine Hat	\$3.93
Peace River	\$9.45

MANITOBA

Southern Rural	\$ 7.50
Northern Rural	\$11.75

BRITISH COLUMBIA

Kitimate	\$6.00
B.C. Rural	\$7.50
Trail	\$5.80
Princeton	\$6.40

APPENDIX "D"

Typical Residential  
 Loan for the Average Northern  
Home Using Approximately 150 KWH per Month

LIGHTING:-

LOAD IN K.W.H.

Based on Burning 100 watts  
 continuously for 12 hours/day  
 for a 30 day Month 36

APPLIANCES:-

Floor Polisher	2
Food Mixer	1
Automatic Fry Pan	20
Hand Iron	11
Radio	10
Toaster	3
Vacuum Cleaner	3
Washing M/C	4
Oil Burner	27
Hot Plate	<u>33</u>

Total K.W.H./Month 150