not enter into a fair, just and equitable contract with the corporation, after being allowed every opportunity for so doing at the hands of your honorable body, it should be evident to every fair-minded citizen of Pembroke that you can only proceed to discharge your duty to those for whose interests you are acting by arranging for the purchase and installation of a municipal lighting system. As I have already advised, it will be more in the interests of justice to all concerned to endeavor as far as possible to deal with the company, at the same time showing your willingness to grant favorable terms and conditions in return for equally good faith on the part of the company. If the company, after due negotiations, will not enter into a fair agreement with the corporation—an agreement which can be proven by a disinterested authority to be practicable to both sides—the choice as to the next action to be taken in the matter of obtaining a better and more efficient lighting system will have to remain for yourselves to decide.

INSALLATION COSTS.

1. STREET LIGHTING SERVICE (Capacity, 50 Arc Lamps, 2,000 c.p., of improved type):

(Estimate calculated without regard to any other electrical plant, such as private lighting, etc.)

Arc Generator, capable of supplying fifty 2,000 c.p. lamps..	$2,000
Arc Lamps, suitable for street service (30 installed)	900
Arc Distribution Wiring, including cost of placing on poles	1,950
Poles installed for entire arc circuits, @ $3 each set...	960
Steam Engine—high speed—to be installed in W.W. station	800
Boiler Plant—present boilers can be used to advantage.	
Foundations, for generator and engine, including addition to present waterworks station.....	2,100
Belting, including other accessories to steam plant.....	130
Incidental expenses, including engineering supervision...	1,200
Approximate total cost of plant installed complete..	$9,140

2. PRIVATE LIGHTING SERVICE (Capacity, 2,500 16 c.p. lamps).

(This estimate calculated without regard to any other electrical plant, such as street lighting system, etc.)

Alternator, capacity 2,000 to 2,500 lamps, installed . .	$4,000
Transformers, sufficient for the first two years' supply....	1,000
Incandescent Lighting Distribution, including poles set	8,800
Steam Plant, slow-speed engines, condensing, highest quality, including countershafting and belting, installed	6,500
Foundations and Lighting Station Building, ext'n to W.W.	4,000
Incidental expenses, including engineering supervision...	1,687
Approximate total cost for separate incand'nt plant,	$25,987

3. COMBINED INSTALLATIONS:

By combining the street and private lighting plants under one roof and management, the costs of installing can be materially reduced. Under the same combination the costs of operating can be very considerably reduced.

Arc and Incandescent Plants installed as one whole system, all in complete running order and comprised of materials of the highest obtainable quality and durability, and machinery of highest efficiencies, including addition or extension to permit waterworks pump-house to accommodate electrical plant, can be purchased and installed at a cost not exceeding	$30,000

OPERATING EXPENSES.

(a). STREET ARC LIGHTING (2,000 c.p. lamps):

This estimate is calculated on the basis of the streets being illuminated by fifty arc lamps of 2,000 nominal candle power each, from dark of moon until daylight, every night in the year, and including cloudy nights which would otherwise come under the moonlight schedule. The estimate is further based on the adoption of the latest, most approved, and most economically operating and proportionately small expense for trimming and attendance, the plant to be operated in conjunction with the waterworks system.

Interest, on cost of plant, 5% per annum.....	$457
Depreciation, on cost of plant, 5% per annum.....	457
Carbons and Trimming, Attendance, etc.....	500
Fuel (wood at $1.50 per cord, delivered).....	900
Contingencies (oil, waste, repairs), ample allowance, annual	600
	$2,994
Total cost per annum for 50 lamps of 2,000 candle power,	$2,994.00
Annual cost per 2,000 candle power lamp..	59.88

(b) PRIVATE INCANDESCENT LIGHTING (2,000 16 c.p. lamps):

This estimate is calculated on the basis of a very probable demand during the first years of operation, of not less than 2,000 lamps of 16 candle power each. Also, that the plant be operated in conjunction with the waterworks system, but without regard to street lighting. Highest qualities and efficiencies of apparatus used throughout.

Interest, on cost of plant, 5 % per annum.....	$1,499.35
Depreciation, on cost of plant, 5 % per annum.....	1,499.35
Fuel (wood at $1.50 per cord, delivered)	1,350.00
Labor and Attendance (2 men, at $600 and $360)	960.00
Contingencies (oil, waste, repairs), annual allowance	600.00
	$5,908.70
Total annual cost for 2,000 lamps of 16 c.p..	$5,908.70
" " one lamp "	2.96

(c). COMBINED PUBLIC AND PRIVATE SERVICES:

This estimate is based on the operation of the street and incandescent lighting plants as one system, in conjunction with the waterworks plant, under the one staff of employees, *sufficient for* all practical purposes. Owing to larger steam units required for the combination plant, the consumption of fuel can be very materially reduced through the adoption of engines and steam generating plant of higher efficiencies. The interest on the combined costs will also be below that of the total cost of two separate plants.

Interest on combined cost, $30,000 @ 5 % per annum.....	$1,500
Depreciation on combined cost, $30,000 @ 5 % per annum	1,500
Carbons for arc lighting plant, @ $35 per M.	160
Fuel for two plants—compound condensing engines.....	1,600
Wages—2 men. Lamp trimmer dispensable on account of enclosed type arc lamp, requiring trimming 4 times *per month. Assistant can easily attend to lamps.*	
Wages at rate of $600 and $360 per annum.....	960
Contingencies, under combined operation, annual...	900
	$6,620
Total cost per annum, 2 plants under combined operation,	$6,620

(d). RATES TO CONSUMERS AND APPROXIMATE REVENUES.

The following schedule shows approximately the charges necessary to be exacted for private incandescent lighting in order to cover operating expenses of that system, and at the same time afford free street lighting to the corporation:

	Per Lamp per Annum.
Average rate with 2,000 incandescent lamps in use....	$3.30
" " 2,500 " " "	2.80
" " 3,000 " " "	2.40

The above rates are approximate, but correct within 10 per cent. As the operating expenses do not increase in direct proportion to the number of lamps in use, the greater the number of lamps used in the one plant the lower the price per lamp until that point of demand is reached whereby an increase in capacity of plant and number of attendants is required. Hence the rates to users of incandescent lamps can be proportionately reduced so that the service can be placed within reach of every citizen, and yet the revenue therefrom will always be amply sufficient to afford free street lighting besides covering the private lighting operating expenses. It is on these lines that the negotiations with the Pembroke Electric Light Company should be conducted, particularly with a view toward securing for the majority of the citizens who cannot afford to use the private lighting service at the present rates, a price so that all can ultimately obtain some practical personal benefit from the system which they are now protecting through the medium of the company's franchise.

MOONLIGHT SCHEDULE FOR JANUARY.

Day of Month	Light.	Extinguish.	No. of Hours.
	H.M.	H.M.	H.M.
1....	P.M. 5.10	P.M. 10.30	5.20
2....	" 5.10	" 11.30	6.20
3....	" 5.10	A.M. 12.30	7.20
4....	" 5.10	" 1.30	8.20
5....	" 5.10	" 2.40	9.30
6....	" 5.10	" 3.50	10.40
7....	" 5.10	" 4.50	11.40
8....	" 5.20	" 6.00	12.40
9....	" 5.20	" 6.20	13.00
10	" 5.20	" 6.20	13.00
11....	" 5.20	" 6.20	13.00
12....	" 5.20	" 6.20	13.00
13....	" 6.30	" 6.20	11.50
14....	" 7.40	" 6.20	10.40
15	" 8.50	" 6.20	9.30
16....	" 10.00	" 6.20	8.20
17 ...	" 11.00	" 6.20	7.20
18....	" 11.10	" 6.20	7.10
19....	"	" 6.20	6.10
20 .	A.M. 12.10	" ...	
21....	" 1.20	" 6.20	5.00
22....	" 2.20	" 6.20	4.00
23....	" 3.20	" 6.20	3.00
24....	No Light.	No Light.	....
25....	No Light.	No Light.	.....
26....	No Light.	No Light.	.....
27....	No Light.	No Light.	....
28....	P.M. 5.40	P.M. 8.20	2.40
29....	" 5.40	" 9.20	3.40
30....	" 5.40	" 10.20	4.40
31....	" 5.40	" 11.20	5.40
		Total.....	213.30