

STATEMENT OF MR. HUGH MacRAE

President of The Tide Water Power Co.

At Meeting of City Council Yesterday With Reference to Commercial and Municipal Lighting—Report on Fayetteville Municipal Lighting Plant by Mr. Raymond Hunt.

I have asked Councilman Wood certain questions in order to clarify the atmosphere so that I might talk directly to the point. I believe that the members of this Council, representing as they do the best interests of all of the citizens of Wilmington, will be free from prejudice, and will avoid being influenced by preconceived ideas which may have been based on incomplete or erroneous information furnished them by others.

There was much talk throughout the country five or ten years ago about municipal lighting plants. The subject was carefully studied and experiments tried both in this country and abroad. A commission which was sent from the United States to study the subject of municipal lighting plants of Europe returned and reported that the sentiment there after long trials, under conditions more satisfactory than obtained in the United States, was not favorable to municipally managed lighting plants. In this country perhaps from 90 to 95 per cent of all of the progressive cities in the United States are lighted by private corporations. Had municipal lighting plants been better for the citizens than the privately owned plants, undoubtedly progressive cities like Atlanta, Charlotte, Richmond, Baltimore, Philadelphia, New York and Boston, would have adopted them. There are, of course, exceptions to all rules, but these exceptions can be covered with 5 per cent of the total number, and the 95 per cent establish the rule.

It is true that towns which are too small to prove attractive to private investors, are often lighted by small municipally owned plants; and in some cases especially where nearby water powers were available, they have been operated successfully. I have here a book containing a list of 208 defunct municipal lighting plants in the United States. In the Middle Western States where the idea has been more frequently tried than elsewhere, and where the people are far more progressive and up-to-date in legislation than in the older States, the failures have been in the greatest number. They have adopted as a better and more efficient method of privately owned lighting corporations, under the control of public service commissions which can prevent unreasonable charges and compel good service.

In this connection I was told by the Commissioner of Corporations of the United States, within the past two weeks, that, "The fact that the public service corporation placed itself under the corporation commission is an immediate given an exclusive and indeterminate franchise. In other words no competition was allowed; but the rates and the service were under the control of the commission."

Last year, at our request, the Public Utility Corporations of North Carolina were placed under control of the Corporation Commission. I will refer to a few of the municipally operated plants in North Carolina which have been abandoned: Goldsboro, N. C.—The Electrical World of May 18, 1912, it was stated that the municipal electric light plant had been purchased by the Carolina Power Company, of Raleigh, for \$125,000, which includes a 50-year franchise for lighting the city and for furnishing electricity for lamps and commercial purposes.

private corporation would have gone about the building of these plants in a business-like way with contracts drawn so that the plants would be up-to-date and absolutely efficient.

"Municipal ownership is not the success it should be because no little attention is paid it by those governing the city. There are a great many towns in this State that own the public utilities and there is only one of them that, to my knowledge, broke even last year, at the same time rendering service that the people desire. In this connection, I will state that at one time was nearly in sympathy with municipal ownership; but seeing its complete failure as a result of bad management and inefficiency, I have come to the conclusion that it is a failure."

A soap box primary showed that a large majority of the citizens favored selling the municipal electric light and water plants. One voter wrote his ticket "Cash sell; give it away and stop expense."

It is presumed that most of these 208 examples of defunct municipal lighting plants were operated without competent and failures because of inefficient management. It is my belief that the Tide Water Power Co., is today making a success of its business entirely because of a degree of efficiency which is would be practically to give to any municipal light plant on account of the changes brought about by frequent changes of administration and of policy and the necessity of giving experience to new men with new theories. The men who are operating the Tide Water Power Company today were originally trained or educated for this kind of work, and they have given effective continuous service to the company for periods ranging from eleven to 16 years. There is not a man connected with the company from track hand to manager who in the opinion of the Board of Directors could be replaced advantageously. The organization has been favorably commented upon many times by experts who have visited Wilmington in connection with examinations of the company's properties made at times when bond issues were offered for this kind of work, and the same favorable comment has been made in regard to the up-to-date and efficient equipment of the company's plant.

"To a considerable degree the financial reputation of the Tide Water Power Company has helped the financial reputation of the city of Wilmington. Mr. Forbes, of N. W. Harris & Co., stated to me that he was largely interested in purchasing the issue of Wilmington City bonds because of the experience of the Consolidated Railways Light & Power Co. where the experts had made of the Tide Water Power Co., on a previous occasion. The preferred stock and bonds of the Tide Water Power Co. have been offered and sold throughout Pennsylvania, New York and New England by banks of high reputation, and under their unqualified recommendation, in fact, doing this they have, of course, said all that could be said for the City of Wilmington. Therefore in the minds of the investing public, and by the reputations of the City of Wilmington and the Tide Water Power Company have stood and now stand together."

When the Consolidated Railways, Light & Power Co. was originally formed, it eliminated a fight between two or three corporations which fight was destroying these corporations and doing the city no good; in fact, those of you who can remember these conditions will not recall that Wilmington was then a progressive city. The Tide Water Power Company had become so obsolete that they were abandoned as soon as possible. If today we were operating with the same class of plant and equipment, we would be making these reductions, over a period of ten years, when they were not demanded, the company is now in a position to submit the following facts and figures, and does so knowing that they can not be fairly criticised and with satisfaction at the results obtained.

As regards the lighting which was done for the city in the olden days, before the formation of the Consolidated Railways Light & Power Co., each arc light cost the city of Wilmington \$110 per year. These arcs were not nearly so efficient as the present arcs, operated at a cost to the city of \$57 each per year and a cut in the Tide Water Power Co. of \$71.85. A loss of \$14.85 per arc. The total cost sheet is submitted herewith and the success of the plant, which includes fuel, repairs, labor, etc., \$13.60 per arc; general and distribution expense (which includes store rent, expense, accidents, damage, superintendence, bookkeeping, etc.) \$6.60 per arc; investment expense (which includes 6 per cent on that part of the plant necessary to run the arc lamps, depreciation at 5 per cent on the same, proportional taxes, and the pole taxes) \$37.90 per arc; total \$71.85 per arc. The loss to the Tide Water Power Co. of \$14.85 per arc on 125 lamps is a total loss of \$1,856.25. The cost of Tungsten lights figured out in the same manner, show a cost of \$9.60 per light per year and the company receives \$10 per light per year, or a profit of 70 cents per light on 611 lights, making a gain of \$427.70. This leaves a net loss on the combined arcs and Tungsten lights of \$1,428.55. The figure submitted may be referred to any engineer of reputation and will be substantiated.

are operated at a cost to the city of \$57 each per year and a cut in the Tide Water Power Co. of \$71.85. A loss of \$14.85 per arc. The total cost sheet is submitted herewith and the success of the plant, which includes fuel, repairs, labor, etc., \$13.60 per arc; general and distribution expense (which includes store rent, expense, accidents, damage, superintendence, bookkeeping, etc.) \$6.60 per arc; investment expense (which includes 6 per cent on that part of the plant necessary to run the arc lamps, depreciation at 5 per cent on the same, proportional taxes, and the pole taxes) \$37.90 per arc; total \$71.85 per arc. The loss to the Tide Water Power Co. of \$14.85 per arc on 125 lamps is a total loss of \$1,856.25. The cost of Tungsten lights figured out in the same manner, show a cost of \$9.60 per light per year and the company receives \$10 per light per year, or a profit of 70 cents per light on 611 lights, making a gain of \$427.70. This leaves a net loss on the combined arcs and Tungsten lights of \$1,428.55. The figure submitted may be referred to any engineer of reputation and will be substantiated.

In regard to private lighting a reasonable profit is made as we believe through efficiency of management. The prices charged will compare favorably with those of Raleigh, Goldsboro and Asheville, which cities are being supplied with light by private power companies. It should also be kept in mind that electric current furnished for a steam plant is more profitable than for a water plant, and more to be relied upon than furnished by a water power plant where interruptions are frequent and annoying.

In regard to rates for power we can demonstrate that the Tide Water Power Co.'s rates will compare favorably with those given in Raleigh, Goldsboro and Asheville. These statements we will be glad to have verified by experts.

Under these conditions Mr. Wood has stated he would be satisfied, and his statement is borne out by the fact that he invited the Carolina Light & Power Co. to come to Wilmington. Had they come, obviously the idea of a municipal light plant would have been eliminated. As to the merits claimed by the city engineer, no competent engineer will try to demonstrate that a small plant will generate power as cheaply as a large modern plant, and a plant being built and undertaken to do work for private customers, the business could only be obtained by competing with the Tide Water Power Co. At once a proposition is stated which would bring about similar conditions to those existing before the formation of the Consolidated Railways Light & Power Co. Even if the municipal plant was successful in getting business, it could not possibly be successful in making a profit; and even granted that it could make a profit, the expense of building and getting new business would always require the expenditure of more money than the profits amounted to. This is not a theory, it is light by the experience of the Consolidated Railways Light & Power Co. where the company, though operating profitably, ran deeper into debt month by month and year by year without being in position to pay dividends. It would never have been possible to pay dividends had the Tide Water Power Co. not been formed. The authorized bond issue of two million dollars. After the credit of the company was established these bonds were sold from time to time in the North for the purpose of providing for the necessary extensions at the rate of about \$100,000 a year. At the present time the Tide Water Power Co. has about \$1,500,000 of bonds authorized, and as fast as they are sold, will bring capital from other sections to be invested in the rebuilding of Wilmington. If this credit should be destroyed either temporarily or permanently by a municipal plant, the investment of this amount of capital in Wilmington, which would be a great factor in the city's future development, would be lost. Other developments which have been planned in the country around Wilmington, and which are even more important than the development of the Tide Water Power Company, and which are dependent upon the success of the Tide Water Power Co., would be crippled or abandoned if the Tide Water Power Co. ceased to be a successful corporation.

The municipal plant at Fayetteville has been held out as an example of what can be accomplished here. It is well to point out that the plant in Fayetteville was operated without competition as to furnishing electric light and power to consumers. In order to be in a position to place before you the facts we have had an examination made of the municipal plant at Fayetteville by Mr. Raymond Hunt, who on two previous occasions, has examined the plant and all of the surrounding conditions, including the statements of the company for parties interested in Fayetteville. I submit herewith Mr. Hunt's report, which gives all details, and which brings out some startling facts. I wish especially to call your attention to the following:

\$28,677.14, including a check for \$5,447.50 paid by the city to the municipal lighting plant for lights furnished to the city, and these lights were furnished by the municipal plant to the city at a cost of \$8 more than the cost would have been at the rates which the Tide Water Power Co. furnishes similar lights to the city of Wilmington.

2. The disbursements for the year were \$14,070.83, as shown by the company's statement. Included in these disbursements is the item of \$7,050.55 for electric power, which was purchased of the Fayetteville Traction Co. at 1 cent per kw. This rate is less than half the proper rate which should have been paid for power, and it resulted in ruining the Traction Company which was sold out at auction day before yesterday. In estimating therefore the results of the Fayetteville proposition, you should include both companies—the one furnishing the power, which was sold out at auction day before yesterday, and the other, the power, which was supposed to have made a profit of about \$14,000. Further careful investigation, however, shows that the statement of cost did not include the following important items, which should have been charged:

Loss in taxes on \$66,735.67, \$1,540.00
Loss in license tax 1/4th of the amount paid by the Tide Water Power Co., 975.00
Loss in tax on poles (750 poles at 20c), 150.00
Interest on 750 kw. plant (\$56,735) at 5 per cent, 2,836.78
Depreciation on plant as per Commission's report, 2,000.00
Excess paid by the city to itself for lights, 665.00

Amount to be deducted from earnings claimed, \$8,166.78

For purposes of comparison there should also be deducted \$10,575.82 (for power at 2 1/2c per kilowatt minus charges by the city) which in future they will have to pay 2 1/2c per kilowatt for power if they buy it from the Carolina Light & Power Co. This deduction would leave a net loss to the city of Fayetteville for a year's operation of \$4,136.17.

There are other items mentioned in the report which will show you it is probable that the loss is even greater than that. It is particularly important also to note that the city of Fayetteville has got to rebuild its plant at a cost of \$35,000, and at the present time it is a problem to know how the money can be raised. From Mr. Hunt's report we note that the prices charged by the city of Fayetteville to its citizens are higher than those charged by the Tide Water Power Co. in Wilmington, and the service is not nearly so satisfactory. Four large industries have closed down in the past year, and it is not conceivable that a factory and the silk mill. Labor is paid \$1 and \$1.25 per day; whereas labor in Wilmington receives \$1.50 or more. The street cars in Fayetteville are the joke of the town, and it has been five months since a street car has been operated in that city. If Fayetteville puts in the new steam plant contemplated, the interest and depreciation on that additional investment will add more than \$2,000 a year to the annual loss. It seems pretty clear therefore from the actual figures, that it would not be wise to follow in the path blazed out by the municipal plant of Fayetteville.

In regard to the firm of the J. B. McCrary Company from Atlanta, who have made a proposition to do engineering, construction and financing of a municipal plant for Wilmington, I would say that within the past few months I have had some correspondence with this firm and have from them a statement of the work which they have done and which they are competent to do. From their own statement, I have with me, they have constructed successfully a large number of small plants in the smaller towns of Georgia and Alabama. My impression is that they have been fairly successful in this class of work. They do not claim that they have built plants in any large towns or cities, nor do they claim that they have built plants which have competed successfully with large modern lighting corporations. For instance, they were in Atlanta, but are not doing the lighting of Atlanta; in fact, their field seems to be in small towns which are not particularly attractive to the average public service corporation of large towns. I have with me, they claim that they would be willing to, or could, successfully finance a plant suitable to do private lighting in Wilmington, on the fact of their business.

First, because the McCrary Company wrote to me with a view to getting our firm to take some of their bonds in order to enable them to finance their plant. Second, because no bankers would join them in initiating a long drawn out fight that eventually they would directly or indirectly have to carry this financial burden during the period of competition for business. As to their proposition for making a survey and giving an opinion on the situation here for the sum of \$750, seems to me that it would be paying \$750 for what you and they already know may be done. It requires primarily business judgment.

REPORT ON THE FAYETTEVILLE MUNICIPAL PLANT.

(By Raymond Hunt.)
November 19th, 1913.
The following tabulations are taken from the printed statements of the Commission for the year 1913:

ELECTRIC LIGHT PLANT.	
Receipts:	To July 1st, 1913.
Collections Private Consumers	223,211.94
Merchandise Sold	17.70
City Subscription for Lights	5,447.50
Total Income	\$ 28,677.14
Disbursements:	
Incandescent Lamps	70.30
Supplies	1,324.19
Insurance	81.07
Electric power	7,050.55
Freight and Drayage	238.83
Salaries, Wages and Extra Labor	3,213.98
Repairs and Duplicate Parts	329.25
Street Lamps and Repairs	398.03
Miscellaneous	52.01
50 Per Cent. of Office Expense	1,306.62
Oil and Waste
Total Disbursements	\$14,070.83

PROPER DEDUCTIONS FROM NET, AS SHOWN IN REPORT OF THE CITY OF FAYETTEVILLE.

Loss in Taxes (State, County and City) @ \$2.68 on \$56,735.67	1,540.00
Loss—License Tax (privilege) at 1/4th the rate paid by Tide Water Power Co.	975.00
Loss in Taxes on Poles (in 1913, 750 poles @ 20c.)	150.00
Interest on cost of plant @ 5 per cent on \$56,735.67	2,836.78
Depreciation on plant as per Commission's report, 1911, etc.	2,000.00
Fayetteville pays itself higher rates for street lighting than the T. W. P. Co. charges Wilmington (1911 and 1912 estimated, 1913 actual figures)	665.00
Deductions from Earnings	\$ 8,166.78

By reason of contract with Fayetteville Traction Co., by which current has been purchased at 1c. per kw. hr., which contract has put the Fayetteville Traction Co. in the hands of Receivers, and which has made it possible for the City of Fayetteville to make the above showing. At the 2 1/2c rate, charged by the Southern Power Company to the cities of High Point, Greensboro, etc., which is the same rate as the Carolina L. & P. Co. have quoted the City of Fayetteville, the increased expense would have been:

7050.55 k.w.hrs. x 1 1/2c. (The difference)	10,575.82
Total deductions on the Basis of Wilmington.	\$18,742.60
EXTENSION AND ENLARGEMENT ACCOUNT.	
Wire and Hardware extending Street Limits	449.54
Electric Meters (Factory cost, freight not added)	1,326.75
Transformers, for new work (Factory cost, freight not added)	321.66
Total extensions	2,097.94
Check to City of Fayetteville	(net) 12,508.47
Earnings	\$14,606.43
Proper deductions from Earnings	8,166.78
Net Earnings	6,439.65
On the basis of 2 1/2c. current cost, instead of 1c., the expenses would be increased	10,575.82
The Net Loss would have been	\$ 4,136.17

The lighting, power, water and sewers in Fayetteville are owned and operated by the city. These departments are all under one permanent Public Works Commission, and one superintendent with one force of men, runs all departments. The plants are operated very economically, if anything too much so, for the best interests of the city. For instance, negro firemen are employed, and a lower rate of wages is paid all employees than is paid in Wilmington.

The lighting plant was installed in 1902 and rebuilt in 1905. It is, however, out of date and inadequate to serve the city's needs. It consists of one Corliss 315 H. P. engine belted to one 200 K. W. generator. This runs non-condensing as there is no water at the present site. There was also one 100 H. P. valve, non-condensing engine at the electric plant, which was being moved about two miles out in the country to the waterworks plant. The city is purchasing a small generator to belt to the engine to help carry the Winter peak lighting load.

The city has an unusual contract with the Fayetteville Traction Company, a local concern, which has a small water power about 12 miles west of Fayetteville and has a franchise to run street cars, etc. This contract specifies that the city is to pay 1 cent per kw. hr. for all current which it requires up to a maximum of 300 H. P. or 224 Kilowatts; and if the water power fails to deliver current the city runs its steam plant to supply the current and charges the Traction Company with the cost of coal and labor. This contract has been in operation about five years and still has five years to run, with the privilege of renewal, at the option of the city, for another ten years. This contract has proven very advantageous to the city during this first five-year period, and has en-

abled the commission to make fine reports. The Traction company, however, has not made enough from the contract to keep its plant in repair, so that the city has had to advance more money for wages and coal used by the Traction company than the total cost of the current as supplied by the contract; so that the Traction company instead of receiving anything from the city for all the current which it has supplied from its water power, has current debts to the city to show for the use of its water power.

The Traction company, therefore, which represents about \$115,000.00 of investment, is practically worthless. It has been through one receivership, and will be sold December 15th at another receiver's sale. The water power of the Traction company is in bad shape; the dam is leaking and in bad repair; the water wheel foundation has shifted so that the step-bearing is expected to give way at any time; and the 100 K. V. A. transformers are burned out. The only other source of revenue of the Traction company was the operation of street cars and that has never paid.

The physical condition of the Traction company's plant, and the fact that the city now requires more than that 224 K. W. limit, as specified in the city to provide capacity to carry its present loads. If the water power should break down at present, the city would be compelled to cut off its street lights, and would not be able to supply voltage enough to properly burn the lights in the stores and residences.

The present steam plant of the city is inadequate and very uneconomical, so that the situation is so critical that the commission is afraid to take on any more load until something is done. Motor customers are discouraged and advised to put in steam plants; in fact, there are only 50 H. P. in motors connected to the city lines; whereas 1,400 H. P. in electric motors are in use in Wilmington. This scarcity of power tends to drive away small industries which cannot run economically without electric power. Electric light customers are discouraged, so

much so that the Gas company selling illuminating gas at \$1.75 per thousand (as compared with Wilmington's rate of \$1.25 per thousand) has a good share of the lighting business.

The commission, therefore, is called upon to solve this situation. There are three solutions discussed: (1) Purchase the current from the Carolina Light & Power Company, who already have a sub-station in Fayetteville, and supply power to three or four cotton mills. This company offers to supply current to the city at 2 1/2 cents per K. W. Hr., which is 2 1/2 times the present cost; or, (2) Increase the size of their present steam plant, which would be very unwise as there is no condensing water available, poor facilities for handling coal, and consequently an economical plant cannot be built at the present site; or, (3) Purchase or lease an entirely new site and scrap the old steam plant and build a new power house. The latter solution has been decided on as the best thing to do; and a location near the railroad track about a mile from the present plant has about been decided on. This means a large expenditure of new money; and as there has been no depreciation fund or other money set aside from the earnings amounting to \$8,166.78, the real solution, the commission will have to borrow money to build the plant. It has been decided to borrow the money on long-term notes, which it is hoped can be done at 5 per cent, or if the machinery is purchased on long-term notes bearing 5 per cent, that the city would pay proportionately higher prices.

It is the intention to scrap the entire present plant except the 315 H. P. engine and the 200 K. W. generator, and install a 500 K. W. steam turbine plant, equipped with condenser and water in boilers, and operated by 200 K. W. unit would then be used in case of breakdowns of the new equipment. It is estimated by the commission that \$35,000 will be required to build the new plant. This will mean increased interest charges, and increased costs of operation over the present contract price of 1 cent per K. W. Hr. The prices now charged by the city for light and power are higher than are charged in Wilmington, and the service is not near as satisfactory and reliable.

From the tabulated figures for the last three years, the year ending July 31st, 1913, the following showing:

The apparent net earnings were \$4,606.43; after making the proper deductions for loss in taxes, interest, depreciation and overcharge for street lighting amounting to \$8,166.78, the real net earnings were \$6,439.65. This showing was made possible by reason of the 1 cent per K. W. contract with the Traction Company. On the basis of 2 1/2 cents current, which is the rate charged by the Southern Power Company and the Carolina Light & Power Company to municipalities, the net earnings would have been \$10,575.82 more for electric current and would have lost \$4,136.17 on last year's operation of the electric plant.

If Fayetteville puts in a new steam plant and does not purchase current from the Carolina Light & Power Company, the city will have interest and depreciation on \$35,000 more investment, it will also cost more than 1 cent per K. W. Hr. to generate the surplus current which is not included under the 1 cent per K. W. Hr. contract.

Furthermore, as both the electric department and the water and sewerage departments are operated by the same superintendent, same force of laborers, same office expense, etc., it is a matter of bookkeeping based partly on estimates, as to the cost of each department. It is, therefore, possible that some of the profits of the electric department should have gone to the water and sewerage department, as the latter department has made a comparatively poor showing, as the following statement will show:

Water and Sewerage Account for the Year Ended July 31st, 1913:
Receipts \$14,932.91
Disbursements 7,827.71
Apparent Net Earnings for Year \$ 7,105.20

Proper Deductions from Above:
Loss in taxes at 2.68 on \$130,000 = 3,484.00
Depreciation at two per cent. on \$130,000 = 2,600.00
Bond interest at five per cent. on \$130,000 = 6,500.00
Total Deductions \$12,584.00

Actual Loss on W. & S. Account on the Statements of the Two Departments, we find:
Department, 1913 \$ 6,439.65
Actual Loss Water and Sewerage Department 1913 5,478.80
Actual Net Earnings of Department, 1913 960.85
Therefore Fayetteville has less than \$1,000 net profit on last year's operations.