

DESCRIPTION OF ADDITION TO ARC LIGHTING PLANT FOR CIVIC INCANDESCENT
LIGHTING—1000 LIGHTS.

INSTALLATION—The installation of a Civic Incandescent Lighting Plant will add little to the cost of the Arc Lighting Plant.

It would be necessary to increase size of the engine from 500 to 600 horse power. This, with one alternating dynamo of 50 K. W. 1000 light capacity, with exciter and small switchboard would constitute all the necessary station equipment.

The principal outside item would be cost of wire, transformers and additional poles required.

A number of the civic buildings being already wired the cost in this connection would not be high.

OPERATION—The cost of operation in connection with the Arc Lighting Plant will not be great.

The number of lights at present wired together with those to be installed is estimated at 1000.

Two-thirds of this number burning for five hours is a fair average of consumption, i. e. 125,000 Watt hours per night.

Assuming as before that one pound of coal will produce 110,49 Watt hours, this would mean an additional consumption of 888 lbs. per day or 162 tons per annum.

II.—DESCRIPTION OF ELECTRIC INCANDESCENT AND ARC LIGHTING AND POWER PLANT
TO OPERATE IN CONNECTION WITH THE CIVIC ELECTRIC ARC LIGHTING PLANT.
3000 INCANDESCENT, 125 ARC LIGHTS.

While the original cost of the installation of an Incandescent and Arc lighting and Power plant for Commercial purposes would be high the City would be more than compensated for the same by the receipts from the sale of Light and Power.

But a small portion of the residential part of the City being covered, there should be no difficulty in installing the full number of lights (3000). This with the introductions of small motors for power should give an adequate return for the money expended, as well as partially if not altogether wipe out the cost of operating the City Arc Lights.

The principal addition to the Power Station would be the duplicating of the Steam Plant and the introduction of one (1) Alternator, one (1) Power Generator and one (1) Arc Dynamo, together with the necessary Switchboards and Connections.

This can be done without addition to building, the principal outside item would be the cost of Wire, Transformers and additional Poles required.

OPERATION.—The addition to the cost of operation would be coal, extra carbons, the employment of two men for indoor wiring, depreciation and interest on bonds.