An Electric Plant for Hamilton.

The Council of the City of Hamilton, Ontario, has secured estimates from Percy Domville, electrical engineer, on the cost of installing an electric plant to be owned and operated by the city. The report is in two divisions discussing :

(1) An electric arc plant for lighting the streets only.

(2) An electric incandescent, power and arc lighting plant for commercial and civic purposes.

It is proposed that the plant be situated on the site adjoining the Sewage Interception Works, the advantage being the utilization of all surplus power from that establishment, plenty of water for condensing purposes, and a saving in labor, since the present engineer and foreman with an additional assistant would be sufficient to operate both steam plants. The power station and boiler house is estimated as containing 6000 square feet of floor space, so planned and located as to allow of additions being made when necessary.

(1) The Electric Arc Plant Only :

For an electric arc plant, for street lighting only there would be required one 500 horse-power Tandem Compound Condensing engine and Condenser, capable of supplying power for 550 arc lamps of 2000 candle power each, or 650 arc lamps of 1200 candle power each. There would be 636 boiler horse power in three units. Two boilers would be sufficient for general running purposes, but it is deemed advisable to have one in reserve.

The electric plant would include five arc dynamos of 125 light capacity each, switchboard, 500 double carbon lamps with globes, 50 miles of line and 1760 cedar poles.

The report states that the "estimated cost of coal for operating is of considerable importance, fuel being the principal operating expense. With the latest type of Compound Condensing Engines, fitted with economizers, etc., a great saving of fuel can undoubtedly be affected. The amount of coal required is variously estimated from 5 pounds per horse power per hour for a simple non-condensing engine to 1,765 per horse power per hour for a triple compound condensing engine." The estimated cost of operation, however is based on a consumption of 4 1 pounds per horse power per hour.

For the above plant to light city streets only (500 arc lights,) the cost of installation is estimated complete at \$97,130. The total annual cost of operation, including depreciation, would be \$27,277. This would make the cost per lamp \$54.55 per annum.

The additional cost of installing a 1000 light incandescent plant for lighting city buildings would amount to \$10,075, with an additional \$1000 per annum for operation.

(2) An Electric Incandescent and Arc Lighting and Power Plant for Commercial and Civic Purposes.

With respect to the above plant, supplying 3000 Incandescent and 125 Arc lights for commercial purposes the report states that "while the original cost of 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 for the sale of light and power."

"There should be no difficulty in installing the full number of lights (3000 incandescent.) This with the introduction of small motors for power should give 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 an alternator, a power generator, an Arc dynamo, together with the necessary switchboards and connections. This would involve an additional expenditure of \$40,516 for installation and \$9,332.50 additional yearly for operation.

The comparative costs, then, are : Cost of installing an Arc lighting plant for street purposes only \$97,130 Annual cost of operation 27,277 Cost of installating a plant as above for street purposes together with 1000 incandescent lights for civic purposes only \$107,205 Annual cost of operation 28,277

Cost of installing a plant for all

civic and commercial purposes 137,646 Annual cost of operation 36,609

(With the reservation in the last case that the income from commercial lighting and power would largely if not wholly cover the cost of the street lighting.)

The report says with respect to the present street lighting system, "it is evident a much better distribution of lights can be made than at present. Many lamps are so placed that the radiating power is to a degree lost, either by their being too high, or hung without proper allowance being made for the shadow cast by trees. These lamps can be so stationed as to give the full candlepower of the light generated."

Society of Municipal Improvement.

The annual convention of the American Society of Municipal Improvement, hold last month in Washington, was at ended by a large number of dolegates from the cities of the United States and Canada. It is sometimes imputed that these meetings are organized for the pulpose of providing junketings for municipal councillors and officials, and that any money spent in sending delegates is practically was ed. This view is an extremely narrow one. Much good has resulted from such associations in this country, and in no line is there greater need for thorough organization and education than in the matter of municipal improvement. Following closely all movements of this character, so as to be able to criticise or recommend and to profit by their deliberations, it is the practice of THE MUNICI-PAL WORLD to attend as many of these meetings as possible.

A representative of THE MUNICIPAL WORLD attended this convention for the first time in its history and is convinced that the objects of the association are most laudable. Valuable papers were read on subjects of vast importance to municipalities, and an official report of the meeting should be secured by every municipal council.

The p'anning of sewage systems, disposal of sewage, construction of waterworks plants, filteration, water supplies, street railway construction, electroleysis, street paving, road-making, principles of taxation, municipal government and kindred subjects were discussed by men of wide experience and national reputation. In all of these subjects many municipalities are interested and every municipality is interested in some of them.

The value of these deliberations cannot be overestimated, as the result of the study, experience and life-work of these men is fully and freely given. The information is such as would cost a municipality working independently, an enormous amount of money, and in fact would be difficult, if not impossible to Here the men from different secure. parts of the continent meet on one platform and give in detail the practice followed in different localities, subjected to the varying influences of climate, soil and the many other conditions which tend to perp'ex in the planning of such work.

The next annual convention was fortunately secured for Toronto, to be held probably during September of 1899. The opportunity will thus be afforded to all councillors and municipal officers in Ontario, of attending and listening to the best of American authoriti s on municipal affairs.

None interested in municipal matters shou'd in any way underes imate the privilege thus afforded-one which is of two rare an occurence to be lo t. Every council in Canada shou'd send at least one delgeate. Toron'o can be easily and cheaply reached, and the information received, if used to advantage, may save some municipalities many thousands of dollars in the construction of their works, besides securing an efficiency of vast b nefit to the people and economy in future maintenance and operation. It will repay every individual to attend the convention at his personal expense, for it is educational influences of this kind which enable men to take an intelligent and up-to-date view of municipal politics.