THE CANADIAN ENGINEER

TABLE 2.—AVERAGE MINIMUM COST (AT IO STATIONS) PER KILOWATT HOUR.

	Cents.	Cents.
Coal	68	
Stores	06	
Wages	30	
Repairs	18	
		I.22
Rent, etc	06	
Salaries, etc	.26	
		.32
Interest	84	
Sinking fund		
		1.28
		CONTRACTOR
		2.82

the list of forty lowest costs. Turning next to the influence of "load factor," it is seen that there are only twenty-three appearing in the table giving the best results; and finally, the importance of low fuel costs is shown by the fact that out of about forty best returns twenty-nine appear in the list of lowest total costs. All these figures tend to show that no single favorable factor is in itself sufficient to command success.

Referring to the average price per kilowatt hour obtained for private supply for the years 1896-1901, inclusive, it must be noted that during these six years, the companies have reduced their average charge from 12.02 cents to 9.92 cents, a difference of 2.1 cents per kilowatt hour; while the municipalities although starting at the lower level of 10.76 cents, have been able to reduce their charges by a still greater amount of 2.22 cents, bringing down the price to 8.54 cents.

No	JO 10 10 10 10 10	JTPUT.	LOAD FACTOR	2.	FUEL CO	STS.	TOTAL (COSTS.
	· · · · · · · · · · · · · · · · · · ·					Per 1,000		Per 1,000
	Town. 1,000	Watt Hrs.	Town. Pe	r Cent.	Town.	Watt hour. Cents.	Town.	Watt hour. Cents.
I	Liverpool	20,018,142	Bootle	29.42	Accrington	.32	Bolton	I.92
2	Manchester	10,502,299	Liverpool	24.23	Monmouth	.38	Bradford	2c.
3	Glasgow	9,282,044	Stepney	22.74	St. Helen's	.52	Liverpool	2c.
4	Edinburgh	7,760,807	Shoreditch	21.29	Leeds	.54	Nottingham	2.62
5	Bradford	4,901,172	Leith	19.79	Wakefield	.64	Leeds	2.08
6	Brighton	4,860,480	Rathmines	19.16	Edinburgh	.68	St. Helen's	2.08
7	St. Pancras (London)	4,729,840	Ayr	18.31	Leigh	.70	Edinburgh	2.14
8	Nottingham	4,094,897	Wimbledon	18.05	Glasgow	.72	Bootle	2.18
0	Birmingham	3,391,099	St. Helen's	17.84	Burton	.76	Stepney	2.46
10	Bolton	3,120,709	Bolton	17.81	Bradford	.78	Southport	2.46
II	Leeds	3,055,165	Ashton-under-Lyne	17.11	Burnley	.80	Leith	2.48
12	Bristol	2,756,624	Monmouth .	16.88	Manchester	.82	Glasgow	2.54
13	Shoreditch	2,734,613	Pembroke	16.77	Govan	.84	South Shields	2.58
14	Halifax	2,557,548	St. Pancras	10.55	Bolton	.88	Sheffield	2.62
15	Sheffield	2,487,584	Sunderland	16.54	South Shields	.88	Darwen	2.68
16	Sunderland	2,375,557	Halifax	16.40	Wigan	.90	Crewe	2.74
17	Islington	2,186,044	Blackburn	16.28	Motherwell	.92	Dundee	2.74
18	Hampstead	2,127,173	Barking Town	16.00	Nottingham	.92	Motherwell	2.90
TO	Blackpool	2,018,132	Stafford	15.9.1	Sheffield	.92	Halifax	2.94
20	Blackburn	2,002,141	King's Lynn	15.58	Dundee	.96	Blackburn	2.96
21	Dundee	1,859,943	Bradford	15.57	Halifax	.96	Ashton-under-I	_yne 2.96
22	Portsmouth	1,847,790	Brighton	15.56	Swansea	.96	Sunderland	2.98
23	Crovdon	1,810,387	Leyton	15.01	Bury	.98	Aberdeen	3.02
24	West Ham	1,583,421	Aberdeen	14.92	Southport	.98	Ayr	3.10
25	Aberdeen	1,546,569	Edinburgh	14.75	Stepney	IC.	Huddersfield	3.16
26	Hull	1,490.099	South Shields	14.67	Liverpool	IC.	Chester	3.18
27	Southport	1,462,407	Wigan	14.61	Newport, Mon.	. IC.	Govan	3.24
28	Hammersmith	1,461,427	Govan	14.60	Huddersfield	· I.2	Leicester	3.26
20	Southampton	1,430,222	Ealing	14.52	Nelson	16	Stockport	3.28
30	Bootle	1,327,432	Crewe	14.47	Leicester	I.10	Wakefield	3.30
31	St. Helen's	1,237,965	Bedford	14.36	Leith	I.IO	Leigh	3.32
32	Belfast	1,206,699	Southampton	14.28	Chester	I.12	Wigan	3.36
22	Huddersfield	1,179,849	Southwark	14.23	Darlington	I.I4	Cheltenham	3.38
31	Derby	1,081,487	Southport	14.22	St. Anne's	I.I.4	Manchester	3.38
25	Leicester	1,042,302	Hammersmith	14.20	Gloucester	1.16	Burnley	3.40
36	Oldham	1,042,055	Blackpool	14.18	Lincoln	1.16	Swansea	3.42
37	Stepney	1,008,037	Chester	14.14	Bootle	1.18	Brighton	3.44
38	Cardiff	1,006,763	Harrogate	14.08	Crewe	1.18	Tynemouth	3.48
30	South Shields	985,646	Worcester	14.06	King's Lynn	1.18	Worcester	3.48
40	Ashton-under-Lyne	977,044	Croydon	14.04	Dewsbury	I.20	King's Lynn	3.50
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In connection with the cost of production, there are many factors which have an important bearing upon this, but the three which are usually considered to have the greatest influence on costs are output, load factor, and cost of fuel. In order to see how this works out in actual practice, four tables have been prepared. The first one consists of the forty stations having the largest output. The second gives the forty stations with the highest load factor. The third shows the forty stations with the lowest costs per kilowatt hour for fuel, and the fourth gives the forty stations with the lowest total costs per kilowatt hour. Referring first to the influences of "output" on costs, out of the forty stations with the highest "output," only twenty-four appear in It will be noticed that, taking the last year's returns available, viz., 1901, that no less than 50 per cent. of the companies are obtaining 10 cents per 1,000 watt hour and over for their current, whilst in the case of the municipalities only $19\frac{1}{2}$ per cent. obtain such a large rate of revenue. This is an important point to notice, as municipalities are often twitted with showing a very poor return on the capital expended. They can at least point to the fact that they are supplying their consumers at a much lower rate than is the case with private companies. Had the municipal stations charged the same rate as the companies, they would have enjoyed an increased revenue during 1901 of no less than 2,222,595, equal to 2.62 per cent. on the capital invested.