

LIST OF ELECTRIC LIGHTING CENTRAL STATIONS IN GREAT BRITAIN.

City, town, or district.	Name of company, if any.	Date of provisional order of license.	The period at which the lighting commenced.	System of lighting used, and names of makers of dynamos.	Power used.	Engines and boilers and their horse-power.	Total number of arc lamps now in use, C.P., and cost per hour.	Total number of incandescent lamps now in use, C.P., and cost per hour.	Number of arc lamps and incandescent used in street lighting.	Number of lamps added during the past twelve months.	The present arrangement for carrying out the lighting.	Present capacity in lamps of generating station.	Description of mains.	Length of mains now laid.	Cost of construction of central stations.	Percentage of the indicated engine power obtained at the terminals of the dynamo under conditions of normal work.	Coal consumption per hour for a unit, 1,000 watts delivered at dynamo terminals. Prices per ton and quality of coal.	Price per unit.	Cost of street lighting (if any) compared with gas.	Price of gas per 1,000 feet.	Name and address of engineer-in-chief.	Additional remarks.	Total cost of mains.	Total works cost per unit.	Total cost per unit, including depreciation, redemption, and management charges.	Approximate number of units generated during six months.	Number of units consumed during six months.	Yearly revenue per 8-C.P. lamp.	Average daily consumption of watts: daily output in watts for six months.
ST. AUUSTELL	Veale and Co., Ltd.	...	March, 1886	Low tension	Steam	Compound engines 170 H.P.	...	...	...	...	...	1,300 16-C.P.	Underground	...	...	...	Welsh	1s. 3d. per hour for 16 C.P.	4s. 6d.	J. M. Cooch	Several motors are used for printing, grinding, stonemasons' work, &c.	...	...	...	...	...	8s.	...	
BATH	City of Bath Electric Lighting Co.	June, 1891	June 24th, 1890	Thomson-Houston for street lighting. Brush alternating for private lighting	Steam	Babcock-Wilcox boilers, Raworth's engines 600 H.P.	10 1,200-C.P.	6,200 8-C.P.	84 arcs	2,300	Contract for seven years	10,000 incandescent, 200 arcs	Underground, Callender's solid system	40	£35,000	...	...	10lb.	6d.	M. C. Ollason	...	£8,000	...	...	...	...	...		
BIRMINGHAM	Birmingham Electric Supply Co., Ltd.	August, 1889	April, 1891	Low tension Crompton dynamos	Steam	Williams and Robinson steel Lancashire type	38 arcs, 1,500-C.P.	7,900 16-C.P.	...	18 arcs, 2,700 16-C.P.	Provisional order	10,000 16-C.P., ultimate capacity 25,000 lamps	Underground, Crompton culvert with copper strip for feeders; Callender's solid system for distributing mains	6,360 yards	...	...	...	...	8d.	J. C. Vaudrey, M.I.E.E., 14 Dale End, Birmingham	...	...	...	...	...	...			
BRADFORD	Corporation	...	...	Two-wire low tension Siemens dynamos and batteries	Steam	Williams engines Lancashire boilers	...	...	...	...	...	...	Underground Siemens armoured cable	1/2 mile	...	...	...	...	...	R. Bailton Brown	Lamps run during summer season	...	...	...	107,000	...	97,000 maximum output		
BRIDOLINGTON	Local authority	...	1890	Thomson-Houston are lighter	Steam	Motive power hired from saw mill	18 arcs of 1,200 C.P.	...	...	...	...	...	Underground armoured cables	4 miles	£41,000	...	...	Welsh, 21s.	7d.	Arthur Wright	...	...	...	...	...	...	...		
BRIGHTON	Corporation	1893	1891	Two-wire low tension Golden dynamos	Steam	Williams engines and Lancashire boilers	Equal to 11,500 8-C.P.	16,000 8-C.P.	...	8,000	...	8,000 8-C.P.	Underground insulated cables	14 miles	...	...	...	...	7d.	G. J. Philpot	...	...	...	...	...	...	...		
BRIGHTON	Brighton and Hove Electric Light Co.	...	...	Alternating current transformers	Steam	Fowler boilers and engines	...	3,004 19-C.P.	None	50	License	...	Overhead	600 or 800 yards	£1,200	No data	...	25s. per lamp per annum	4s. 6d.	Bogers and Son	...	...	...	...	...	...	...		
BUCKINGHAM	Buckingham Electric Light Co. (private)	1889	1890	Low pressure and accumulators. Two Elwell-Parker dynamos	Steam and water	20 H.P. by water, 20 by steam	...	3,004 19-C.P.	None	50	License	...	Overhead	1,800 yards	£2,000	...	...	£1 per year, 16 C.P.	6s. 8d.	George Reed, The Factory, Chagford	...	...	...	...	...	...	...		
CHAGFORD	G. H. Reed	...	Sept. 1st, 1891	Alternating transformer (Hedgehog) Siemens Bros. dynamos	Water	...	...	300 8-C.P.	30 32-C.P.	...	Contract	...	Overhead, lead-covered paraffin paper insulation	14 miles of street	£14,000	75 per cent.	6-3 lb. Welsh	1s. to 6d. sliding scale; first year averages 7d.	Same	A. H. Pott	...	...	...	...	47,600	...	10s. 6d.		
CHELMSFORD	Crompton and Co.	1890	May 14th, 1890	Alternating current and continuous arc lighting	Steam	Multi-Lancashire and Paxman boilers, Williams engines	19 10-ampères	1,600 private, 1,000 street, 8-C.P.	19 arcs, 250 32-C.P. in.	1,000	Board of Trade license	4,000	Overhead fluid insulator	About 4 miles	£2,000	Stated to be 85 per cent	14 lb., 6s. per ton	3s. 9d.	R. S. Mytton	This company does street lighting only	...	...	...	...	...	...	...		
COWPEN QUAY and WATERLOO, BLYTH	Saunderson and Co.	...	...	Brush arc lamp in series	Steam	Babcock boiler, Chandler engine	19 2,000-C.P.	Only nine in station	19 arc lamps	...	Contract for five years	25 lamps of 2,000-C.P.	Underground vulcanised rubber in cast-iron pipes	20 miles	£31,000	...	Welsh	7d.	M. Ruddle	...	...	...	...	...	...	...			
DUBLIN	Corporation	1890 and 1892	September, 1892	High tension alternating for incandescent direct for arc currents	Steam	3 compound engines of 350 H.P. 8 compound 750 H.P.	80 arcs of 1,200-C.P.	1,200 16-C.P.	80	...	License	4,600 16-C.P.	Underground insulated cables drawn into cast-iron pipes	9 miles	...	70 per cent.	9 lb. Best Welsh, 23s. per ton	9d.	H. W. Wilkinson, Central Station, Eastbourne Electric Light Company	...	...	...	110,000	...	10s.				
EASTBOURNE	Eastbourne Elec. Light Company	1891	Feb., 1892	Low pressure alternating (Mortley), High tension series circuit for arc lighting; Brush arc machines	Steam	Powder and Co.'s engines and boilers, total engine H.P. 400	20 2,000-C.P.	7,000 8-C.P.	16 arc lamps	1,000	License	4,600 16-C.P.	Underground	...	...	...	...	...	...	...	...	...	...	...	...	...			
EXETER	Exeter Electric Light Co.	1891	September, 1889	High tension series circuit for arc lighting; Brush arc machines	Steam	Two compound horizontal non-condensing 120 H.P. each by Fowler; and two Westinghouse triple expansion of 35 H.P.	35 of 1,200-C.P.	4,000 8-C.P.	None	1,300 8-C.P.	Provisional order	7,000 8-C.P.; 60 arcs	Fowler-Waring underground cable (concentric)	About 9 miles	£16,000	Over 85 per cent. at full load	10-8 lb. Nixon's Navigation	7 1/2d., or by contract, 1s. per C.P.	3s. 1d.	T. P. Wilshurst, Electric Light Station, Exeter	...	£4,000	24d.	6d.	85,000	...	8s. by contract, 11s. by meter	114,000 maximum load	
FAREHAM	Fareham Electric Light Co.	...	September 1st, 1890	Thomson-Houston	Steam	...	1 1,200-C.P.	92 20-C.P., 320 16-C.P.	20 arcs; 90 incand.	...	Contract for three years	...	Overhead and underground	16 miles	£5,000 (with mains)	...	Welsh	1s. per C.P. per annum	About the same	3s. 9d.	...	Meters being put in, 6d. per unit	...	...	...	...	...		
GALWAY	Galway Electric Co.	1890	June, 1889	Low tension, Crompton and Stator dynamos	Water power	2 100-H.P. Hercules turbines, 12-foot fall	2 2,000-C.P. 1 1/2d. per hour	340 8-C.P., 2 500-C.P., 3 200-C.P., 3d. per hour	Two arcs	150 8-C.P.	Provisional order	3,000 to 4,000 8-C.P.	Underground and overhead	4 miles	...	...	...	5d.	J. E. Pearce, Electric Light Co., Galway	Water power (13 feet head) obtained from lake 15 by 20 miles	...	...	...	...	16,000	...			
GLASGOW	Corporation	...	...	Low pressure three-wire	...	Williams engines	...	...	...	...	...	12,000	Bare copper in culverts	10 miles	...	...	...	7d.	W. Arnot	...	...	...	...	...	...	...			
HALIFAX	Halifax Mutual Electric Light and Power Supply Co., Ltd.	None	January, 1889	Low tension, two-wire, 110 volts. Blakely, Emmott, and Co.'s dynamos	Steam	Two Lancashire boilers, 150 I.H.P. each	80 2,000-C.P. (10d.)	400 16-C.P.	None	100 16-C.P., 10 arcs	...	2,000 lamps of 8-C.P. At present fully loaded	Overhead wires	30 miles	...	...	...	8d., or by contract	2s. 2d.	Managing Director W. Emmott	...	...	...	...	...	...			
HASTINGS	Hastings and St. Leonard's Electric Light Co.	...	...	Alternate current transformer, Morley	Steam	Brush	...	4,000 8-C.P.	...	...	...	...	Underground	30 miles	...	...	...	9d.	E. T. Mercer	...	...	...	...	...	...	...			
KESWICK	Keswick Electric Light Co.	No Provisional order	Sept. 1st, 1889	Alternate current transformers (Kapp) 30 unit made by Johnson and Phillips	Water	Turbines (Victor) 63 H.P.	1 300-C.P. 1s. per hour	730 17-C.P.	...	...	Contract	...	Overhead on Johnson and Phillips fluid insulators	...	...	...	...	1s. per C.P. per annum	4s.	W. R. Rice, engineer in charge	...	...	...	...	...	...			
LIVERPOOL	Liverpool Electric Supply Co.	1889, 1891, and 1892	1888	Direct current, 110 volts, Siemens and Crompton dynamos	Steam	Williams engines, Lancashire boilers	20 1,000-C.P. to 2,000-C.P. each	18,000 16-C.P.	None	3,000 16-C.P.	Provisional orders	37,000 16-C.P.	Underground Callender system	50 miles	...	...	...	7 1/2d.	A. Bromley Holmes	...	...	...	...	...	...	...			
LONDON DISTRICTS - BELGRAVIA and PIMLICO	Westminster Electric Supply Corporation	August 26, 1889	March 2nd, 1891	Generation at 200, and distribution in two parallels of 100 volts each. Battery in parallel with 200-volt dynamo, Crompton and Siemens dynamos	Steam	Williams and Davey-Paxman engines, Davey-Paxman "Economic" boilers and Fraser of same kind. Total I.H.P. 760 (not yet condensing)	...	Total three stations 98,220 8-C.P.	None	...	Provisional order	30,800 8-C.P.	Underground copper in Kennedy type culverts. Insulated cable in Callender conduit	Total length of streets in which mains have been laid, 9 1/2 miles	...	No data	57 for December	7d. per Board of Trade unit	3s.	Prof. A. R. W. Kennedy, F.R.S., M.I.C.E.	...	...	...	...	...	...			
CHICHESTER parish and a portion of KENSINGTON parish	Chichester Electricity Supply Co., Ltd.	Sept. 1890, for Chelsea; Aug. 1890, for Kensington	September, 1889	Low pressure and secondary batteries (E.P.S.) in sub-stations with continuous current motor transformers, constant pressure at feeding points. Elwell-Parker dynamo	Steam	7 Williams and Robinson G.G. engines 80 I.H.P., two Williams and Robinson H.H. engines 125 I.H.P., Babcock and Wilcox boilers	Two	35,000 8-C.P.	None	6,000 8-C.P.	Provisional order	40,000 8-C.P.	Underground Callender-Webber bitumen concrete conduits and Callender's bitumen cable. Drawing in system and feeding points	About 20 miles	...	No data	Welsh	8d. per Board of Trade unit	3s. 1d.	Frank King	...	...	...	...	...	...			
ST. JAMES'S, WEST-MINSTER	St. James's and Pall Mall Electric Light Co., Ltd.	License, 1888; provisional order, 1890	April 4th, 1889	Three-wire continuous low-pressure current from dynamos by Siemens Bros. and Latimer Clark, Muirhead	Steam	Williams engines, 3,800 indicated H.P., six Davey-Paxman loco-boilers, 3,800 effective I.H.P.	About 50 scattered over the district	45,000 8-C.P.	...	8,000 8-C.P.	Provisional order	60,000 8-C.P., 100,000 wired	Underground bare copper strip on porcelain insulators in iron culvert; armoured cable, iron pipes and vulcan. rubber services	8 miles, including services and small cable runs	...	Over 80 per cent.	Average of 7 lb. throughout the year (1891) Welsh	7d.	3s. 1d.	Sydney T. Dobson, A.M.I.C.E., of Mason's Yard, Duke Street, St. James's	...	...	...	...	...	...			
KENSINGTON	Kensington and Knightsbridge Electric Lighting Co., Ltd.	License and provisional orders obtained, 1887 and 1888	Jan., 1887	Low tension with secondary batteries, Siemens and Crompton and Co. dynamos	Steam	Williams engines, 1,800 H.P., Babcock boilers, 2,180 H.P.	...	46,089 8-C.P.	...	9,208 8-C.P.	Provisional order	66,895 8-C.P.	Underground copper strip in culvert and Henley's cable in iron pipes, three-wire and feeder systems	11 miles and 700 yards	...	68 per cent. full load, 76 per cent. half. Mean 81 per cent.	8d., with rebate to large consumers according to scale	3s. 1d.	B.E. Crompton, Mansion House Buildings, E.C.	...	...	...	...	...	...				
LONDON	Electric Supply Corporation	1889	1889	High tension, 10,000 volts, Ferranti	Steam	Hick Hargreaves	85	47,000 16-C.P.	...	16,000	...	100,000	Underground concentric	70 miles	...	...	Welsh, 15s. 6d.	7d.	2s. 6d. and 3s.	P. Walter d'Alton	...	...	...	...	...	...			
LONDON	Metropolitan Electric Supply	...	...	Low pressure, continuous moderate pressure	Steam	Compound horizontal engines and water tube boilers, about 1,100 H.P. total	...	25,000 16-C.P., about 1s. 4d. per hour	None	4,000 10-C.P.	Provisional order	30,000 8-C.P. lamps installed	Underground in cast-iron pipes	23 miles	...	No data	Anthracite	8d., subject to discounts	...	Albert Gay	...	£18,500	...	...	...	...			
ST. MARY ABBOTS, KENSINGTON	House to House Electric Supply Co., Ltd.	1889	March, 1889	Alternating current transformer system. Low-voltage	Steam	Williams and Robinson 1,600 H.P.	10 2,000-C.P.	25,000 8-C.P.	None	15,000 8-C.P.	Provisional order	45,000 8-C.P.	Underground Callender cables run in Callender bitumen casing	14 miles	...	No data	...	7 1/2d.	3s. 1d.	H. A. Farie, Mather and Platt, 16 Victoria street, S.W.	...	...	...	...	...				
ST. MARTINS-IN-THE-FIELDS	Electricity Supply Corporation, Ltd.	...	October 29th, 1890	Direct current, low tension, 100 volts. Mather and Platt dynamos	Steam	Williams and Robinson 1,600 H.P.	10 2,000-C.P.	25,000 8-C.P.	None	15,000 8-C.P.	Provisional order	45,000 8-C.P.	Underground copper in Kennedy type culvert. Insulated cable in Callender conduits	Total length of streets in which mains have been laid, 9 1/2 miles	...	No data	...	7d.	3s.	Prof. Kennedy.	...	...	...	...	...	...			
MAYFAIR	Westminster Electric Supply Corporation, Ltd.	August 26th, 1889	March 24th, 1891	This station is still working on two-wire system with batteries in parallel with dynamo, but is about to be changed over. Elwell-Parker and Crompton dynamos	Steam	Williams engines, Paxman "Economic" boilers, and similar boilers by Fraser, Total 1,500 I.H.P., non-condensing	About six arcs	...	None	...	Provisional order	62,500 8-C.P.	Underground copper in Kennedy type culvert. Insulated cable in Callender conduits	Total length of streets in which mains have been laid, 9 1/2 miles	...	No data	...	7d.	3s.	Prof. Kennedy.	...	...	...	...	...	...			
NOTTING HILL	Notting Hill Electric Light Company	...	May, 1891	Direct current Crompton's dynamos	Steam	Williams engines, Babcock and Wilcox boilers	Seven	10,000 8-C.P.	...	3,500	Provisional order	20,000	Underground, three-wire system	8 miles	£20,000	75 per cent.	Between 8 and 9 lb.	8d.	3s. 1d.	George Schulz, Central Station, Bulmer Place, W.	...	...	...	...	...	10s.			
ST. PANCRA'S	Electricity department of the Vestry	1883	Nov. 9th, 1891	Continuous current 110 volts, three-wire system. Kapp's multipolar dynamos	Steam	Williams triple expansion engines, Babcock and Wilcox boilers	...	11,000 16-C.P.	56 arcs being erected	8,000	Provisional order	10,000 16-C.P., 90 arcs	Underground culvert. Bare copper strip on insulators	6 1/2 miles	£92,000 including mains	No data	...	8d., and 3d. for day supply	2s. 9d.	J. T. Baron, M.I.E.E., Vestry Hall, St. Pancras	...	£34,504	...	...	...	...			
WESTMINSTER	Westminster Electric Supply Corporation, Ltd.	Aug. 26th, 1889	Nov. 11th, 1890	Generation at 200 volts and distribution in two parallels of 100 volts each; batteries in parallel with 200-volt dynamos, Golden, and Mather and Platt	Steam	Williams engines, Babcock boilers, total I.H.P. of engines 1,120 (not yet condensing)	About a dozen arcs	...	None	...	Provisional order	45,000 8-C.P.	Underground. Copper in Crompton culverts and insulated cable in pipes and casing	Total length of streets in which mains are laid, 4 1/2 miles	...	No data	...	7d.	3s.	Prof. A. R. W. Kennedy.	...	...	...	...	...	...			
LYNTON	Hans H. Benn	...	...	Alternate current transformer	Water	O. L. Hett's turbine	...	1,200 8-C.P.	378 C.P.	...	...	...	...	...	...	...	...	...	...	Hans H. Benn	...	...	...	...	...	...			
NEWCASTLE	Newcastle and District Electric Lighting Co., Ltd.	...	...	Alternate current transformer	Steam	Parsons's turbines	...	10,500	...	...	License	Ultimate capacity will be 50,000	Underground	...	...	...	...	4 1/2d.	1s. 9d.	W. O. Hunter	...	...	...	...	...	...			
NEWCASTLE	Newcastle Electric Supply Co.	1890	1890	Alternate current transformer 2,000 volts, Morley	Steam	Bobey engines, Lancashire boiler	...	14,366 8-C.P.	...	...	...	...	Underground concentric cables	10 miles	...	46 per cent.	21 lb. steam coal 5s. 10d.	4 1/2d.	1s. 10d.	...	Figures given are for twelve months' working	...	2-9d.	327,521	244,470	...			
NORTHAMPTON	Northampton Electric Light and Power Co., Ltd.	1893	March, 1891	Direct current low tension, Crompton dynamos	Steam	Three Scott and Hodgson's compound engines, 120 I.H.P. each; two Daniel Adamson Lancashire boilers, 125 H.P. steam	20 from 5 to 20 ampères	4,000 8-C.P.	7 100-C.P.	1,000 8-C.P.	Provisional order	7,000 8-C.P.	Crompton's underground mains	2 miles	£7,000	No data	Hard Steam, 12s. 9d.	6d. a unit, subject to 10 per cent. discount	2s. 4d.	B. E. Beale, Angel Lane, Northampton	...	...	...	30,000	...	...			
NOTTINGHAM	Muirhead and Co.	...	March, 1891	Low tension, Clark, Muirhead and Co.	Steam	Williams triple expansion engines, Babcock and Wilcox boilers	4 arcs, 3,000-C.P.	800 16-C.P.	200	...	License	670 16-C.P.	Overhead wires	1 mile	£3,000	...	10s. 8d.	7d. or 30s. per 16-C.P. per annum	2s. 6d.	J. Farr	...	...	...	...	...	...			
OXFORD	Oxford Electric Light Co.	June, 1892	...	H.T. continuous Parker dynamos motor generator transformers at sub-stations	Steam	Triple expansion surface condensing engines, locomotive boilers	161,200-C.P.	5,000 8-C.P.	16 arcs	All since June, 1892	P.O.	15,000 8-C.P.	H.T. Silvertown, L.T. Callender's lead-covered	8 miles L.T., 7 miles H.T.	...	...	Welsh	8d.	J. H. M. McLean	...	...	...	...	...	...				
PRESTON	British Insulated Wire Co.	...	September, 1892	Brush alternating system	Steam	Raworth, Brownell, and Tangye	12 2,000-C.P.	1,070 12-C.P.	12 arcs	...	...	6,000	Underground B.I.W. system	12 miles	£7,000 approximate	80 per cent.	Steam coal	7d.	4s. 8d.	...	...	£9,000	...	...	...	10s. 6d. to 15s.			
PRESTON	National Electric Supply Co., Ltd., Preston	1890	October, 1890; temporary plant	Three-wire low tension system, Latimer Clark, Muirhead, and Co.	Steam	Bellis compound	Fifty	6,000 8-C.P.	...	3,000 8-C.P.; 30 arcs	...	30,000 8-C.P.	Underground 3-wire	5 miles	...	...	15 per cent. discount if paid within 21 days	3s. 9d.	F. P. Bennet, Laurel Villas, Ashton-on-Bibble, Preston	Transformed from temporary to permanent station	...	...	...	41,000	40,000	6s. 8d.	100,000 daily output		
READING	Laing, Wharton, and Down Syndicate	...	March, 1889	Thomson-Houston	Steam	Two Brownell-Lindley 25 H.P. and Westinghouse, one at 50 H.P., one at 25 H.P.	71 arcs of 1,200-C.P.	800 8-C.P.	None	...	Agreement with Corporation	Plant fully loaded	Overhead	4 1/2 miles	...	No data	...	Are by contract. Incandescent by meter	5s.	F. P. Vestman, The Island, Reading	Company object to give details on account of alterations	...	...	...	...	...	...		
SHEFFIELD	Sheffield Electric Light and Power Co.	...	...	Alternate current transformer	Steam	...	...	...	...	...	...	6,000 8-C.P.	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
SOUTHAMPTON	Southampton Electric Light Co.	1890	May, 1891	Low tension three-wires with batteries, Crompton dynamos	Steam	Two Marshall boilers, 20 and 40 H.P.; one Bobey 40 H.P. engine; Williams, 60	13 arcs	2,500 8-C.P.	None	1,500	License	2,700 8-C.P.	Underground Crompton system	1 1/2 miles	£4,300	£4,000	Welsh at 17s. 9d.	10d., with rebate	2s. 10d.	K. A. Scott-Moncrieff	...	£6,000	3-6d.	24,000	23,000	...	12,300		
TANTON	Taunton Electric Light Co.	...	1888	Thomson-Houston	Steam	Williams	79 arcs	920 16-C.P.	37 arcs	7 arcs and 800 8-C.P.	Provisional Order	90 arcs, 1,300 16-C.P.	Overhead and underground	8 miles	...	...	18s. per ton	6d.	3s. 8d.	H. E									