

Early days of electricity in the South-West

Peter Lamb

With the celebration of the centenary of the first public supply of electricity at Godalming in September 1881, it is appropriate to look at the early days of electricity in the South West. Godalming may be credited with the first public supply but, of course, it was not continuous being abandoned three years later. The distinction for the first permanent public supply is usually given to Brighton where the Hammond Electric Light Company commenced a supply in February 1882, beating Thomas Edison's New York Station by some seven months.

Electric light had been seen in the South West prior to these events. From 1850 there are reports of displays involving the illumination of public buildings in the large cities prior to the public supplies being established. This was achieved by the use of mobile gas or steam engines driving small generators, often Gramme dynamos. The story of the early electricity supplies in the South West, as elsewhere, is the story of many individuals doing 'their-own-thing' in different locations and, in the large urban areas, meeting with strong opposition from gas suppliers.

The first public display of electric light, of which I am aware, took place at Truro in October 1850. It was reported in the newspaper *The West Briton* that the electric light was exhibited from the top of the Assembly Rooms, illuminating in turn many landmarks in Truro.

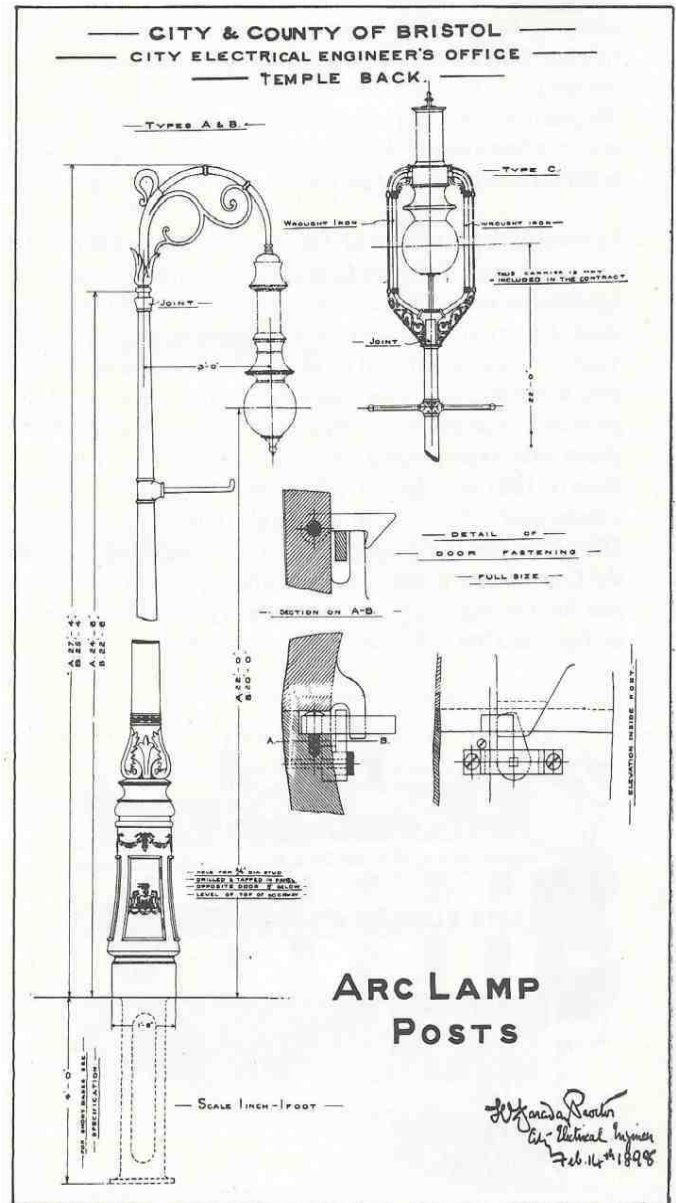
The next known report of a public display of electric illumination was in March 1863 at the Victoria Rooms, Bristol on the occasion of the marriage of the Prince of Wales to Princess Alexandra. This was carried out by a Mr Phillips of Weston-super-Mare, who a year later illuminated the Clifton Suspension Bridge on the occasion of its opening. Bristol Cathedral was illuminated in 1878 and on numerous occasions thereafter. In 1879, a football match was played in the Taunton Park lit by three arc lamps. This was probably the first match played under electric flood light.

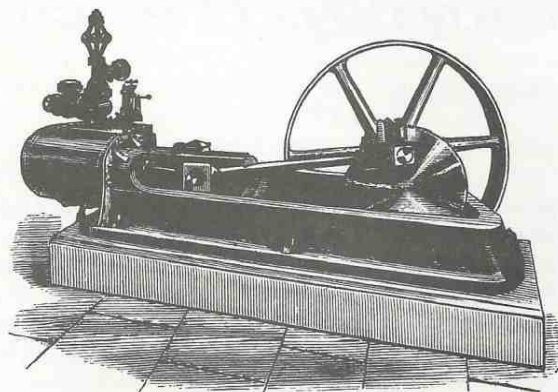
In 1880 the Anglo-Bavarian Brewery at Shepton Mallet had its own generating plant, and this is typical of the period when large private houses, factories and other large buildings had small plant installed. Other such installations included the Merchant Alliance Supply Stores, Stall Street, Bath (1883), the New Promenade Pier, Plymouth (1884), the Exeter Asylum (1885), Wills Factory, Bristol (1886), Torquay Theatre (1887) and the Dartmouth Training Ships (1888). Electric light was used also in 1882 in the boring of the Severn Tunnel.

During this period also, there were experimental systems installed for public lighting by the manufacturing companies and zealous individuals trying to encourage the local authorities to instal 'Central Stations'. The Brush Company installed seven arc lamps in the centre of Bristol in 1881 and Laing, Whorton and Down installed an experimental system in the centre of Exeter in 1887. Although the experiment in Bristol was reported to be

successful, it had little effect on the Corporation's Electrical Committee due to the economic advantage of gas over electricity at that time, but there was greater interest shown at Exeter.

The most enthusiastic individual and definitely the pioneer of the time in the South West was Mr H G Massingham from Bath. He was not an engineer but owned a chain of boot and shoe shops throughout the West Country. He was so impressed with the special lighting display he witnessed at Bristol Cathedral in November 1878, that he hired the engine and generator and removed them to Taunton where he set up a demonstration of twelve arc lamps in 1880. It was next reported in December 1886 that he had signed a seven-year agreement with Taunton Corporation to light the streets of the town by the Thomson-Houston arc-light

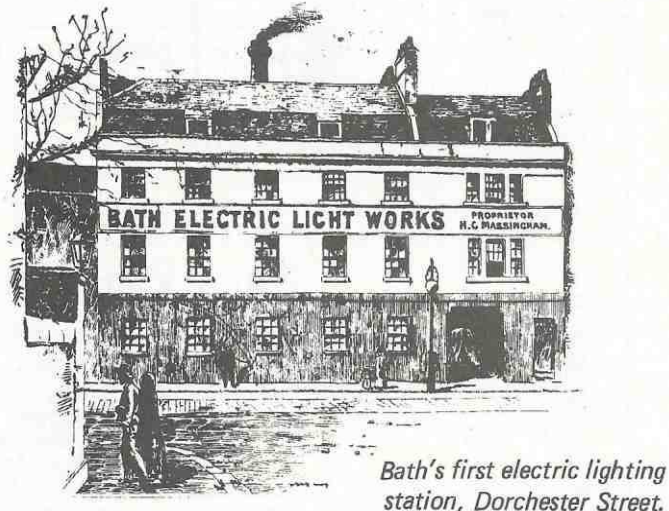




Non-Condensing Engine made by Messrs. Easton and Waldegrave, of Whitehall Ironworks, for the Taunton Installation.

system (AC). However, tradition has it in Taunton that supply was commenced in 12 December 1885. A small station was established in his boot and shoe premises at Corporation Street, where power was obtained by using locally made 40 hp steam engines, driving Thomson-Houston dynamos. The arc lamps were supplied via overhead wires. The Taunton Electric Light Company was thus established and thereby the first public supply in the South West, the Castle Hotel being one of the first consumers. Taunton claims to be the first permanent supply in the country rivalling Brighton, by saying that Brighton was not completely successful. This is not born out by national documents. Taunton's installation had its problems too, within a few years it was found necessary to acquire new premises and build a larger central station at St James Street.

Flushed with his success at Taunton, Mr Massingham in 1887 pressed Bristol, Bath and Exeter Corporations to make agreements with him. Bristol's consultant Mr William Preece Chief Electrical Engineer to the Post Office, visited the Taunton installation, and reported that it appeared to be very successful but nevertheless he did not recommend the go-ahead. Not put off by this rebuff, Massingham pressed ahead with experimental displays in both Weston-super-Mare in 1887 and Bath in 1888. Bath Corporation signed a seven-year contract with him and a supply was started in 1890 from the Dorchester Street site, under the banner of the City of Bath Electric Light Company. Both the Taunton and Bath companies were taken over by their respective authorities after the seven years had elapsed.

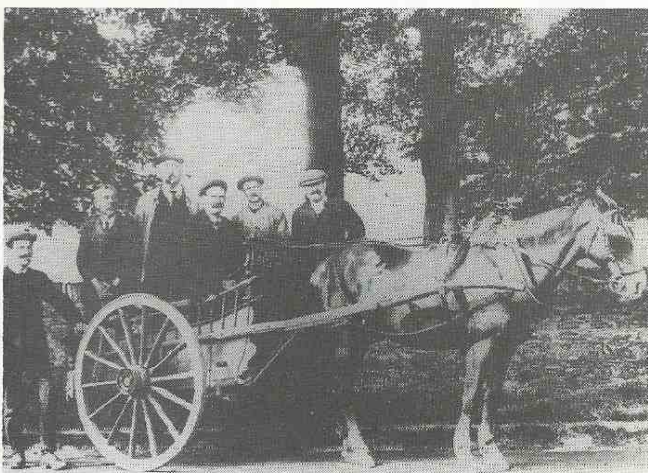
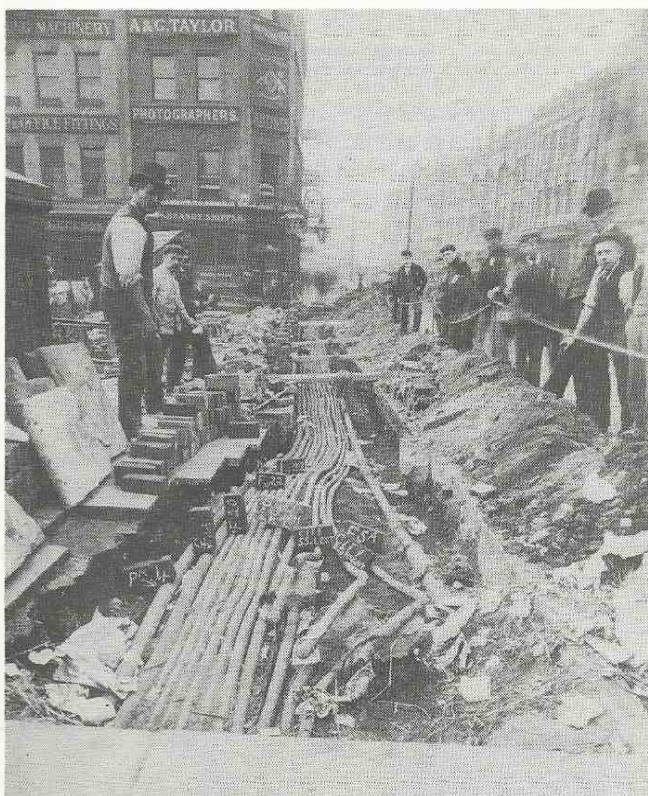
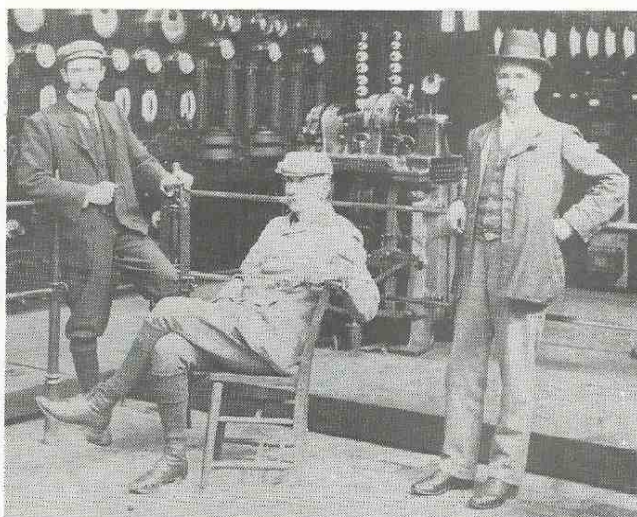


Bath's first electric lighting station, Dorchester Street.

The next public supply to be established after Taunton was at St Austell by Mr J E Veale in 1886, although some documents quote 1887. A small electric light works was established at North Street, St. Austell, consisting, it is believed, of small 20 hp steam engines and Crompton dynamos. The *Royal Cornwall Gazette* of June 26 1890 said 'At first only about half a dozen tradesmen had the courage to enter into negotiations with Mr Veale'. Expert advice had been obtained from Gisbert Kapp, an Austrian who had been trained at Zurich as an engineer and then joined Col Crompton at Chelmsford. Later he joined Preece in advising Bristol on their supply. The St Austell supply was not continuous however, it being abandoned in 1903 and new plant laid down a year later with the establishment of a new company.

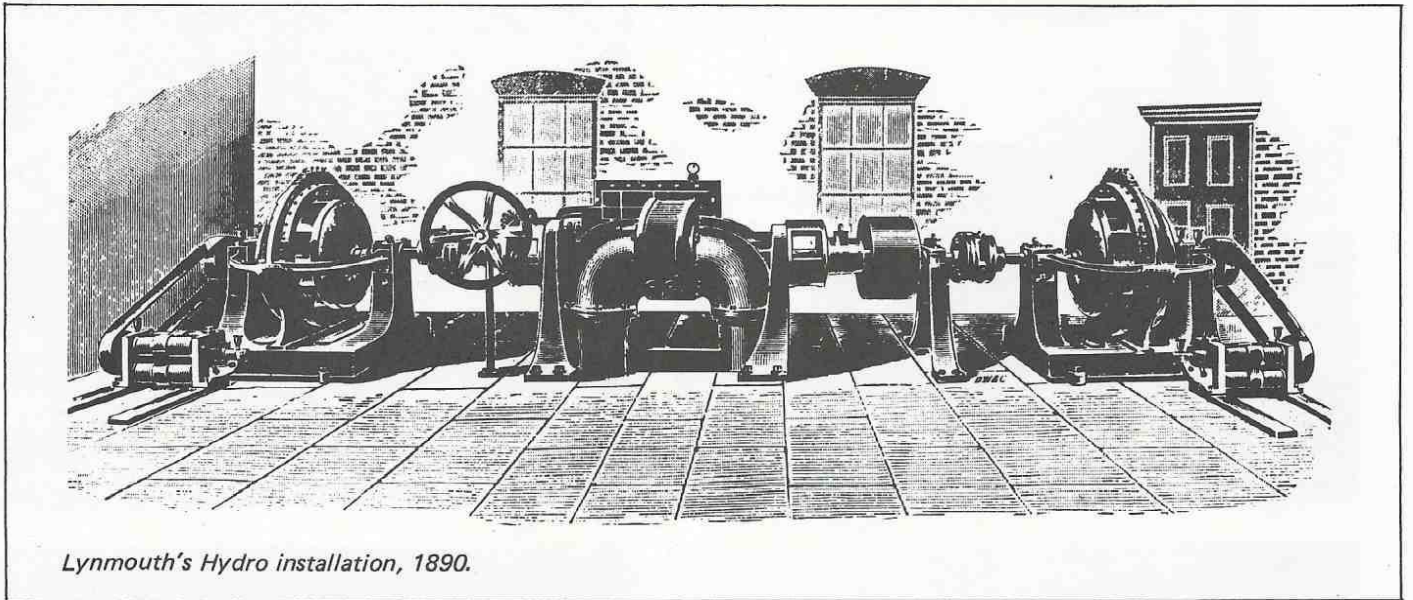
Three other supplies all by private companies, are known to have been commenced before 1890 in the South West and these were at Okehampton in 1888, Keynsham near Bristol, and Exeter, both in 1889. To Okehampton can be attributed the first water powered supply in the South West. It is believed that the initiator, Mr Henry Geen, installed a turbine on the East Okement River to give power to a sawmills, which he had founded, the dynamo being a Crompton 110v DC machine. According to the technical press of the time, the station was still under construction in 1890, but this probably referred to an expansion to provide public supplies. At Keynsham only a very small installation was involved to provide an initial supply to the 'public hall', but at Exeter a small central station was established at New North Road, an installation at Trews Weir having been tried unsuccessfully for a very short time. The new station was equipped with two 25hp Westinghouse triple-expansion engines for arc lamps and two 150 hp engines for private supplies. Distribution was via overhead wires which were replaced with underground mains in 1892. One of the first consumers was the New Theatre Royal which is not surprising since the previous theatre had been burnt down due to a fire caused by gas lighting in August 1887. This was a factor which may have contributed to Exeter's keenness. The New North Road station was replaced by a new station at Haven Road in 1903.

The second water powered plant to be installed was at Lynmouth in 1890, and this time promoted by Charles Geen, brother of the Henry Geen who installed the Okehampton supply. Water from the River Lyn was directed to two 14 inch turbines capable of yielding 200 hp and coupled to



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- 1 Exeter's first electric lighting station, New North Road.
- 2 Engineers at Taunton's second electricity works, St James Street, 1900.
- 3 Cables being laid along Baldwin Street, Bristol 1895.
- 4 Harold Faraday Proctor, Bristol's first Chief Engineer, relation of Faraday.
- 5 Jointers' cart, Shirehampton Road, Bristol, 1912.



Lynmouth's Hydro installation, 1890.

Mordey alternators. Mr Geen had keen competition from adjacent Chagford where George Reed built an iron water-wheel in 1891, which was used to generate electricity initially for lighting a local woollen factory. Generation, as at Lynmouth, was at 2000v AC and lead covered cables, with paraffin paper insulation, were used to transmit the electricity up to the village for house and street lighting. These Devonshire installations were pioneering efforts as the reports in the press of the day indicated in August 1891: 'Water-power stations are so few and far between in this country':

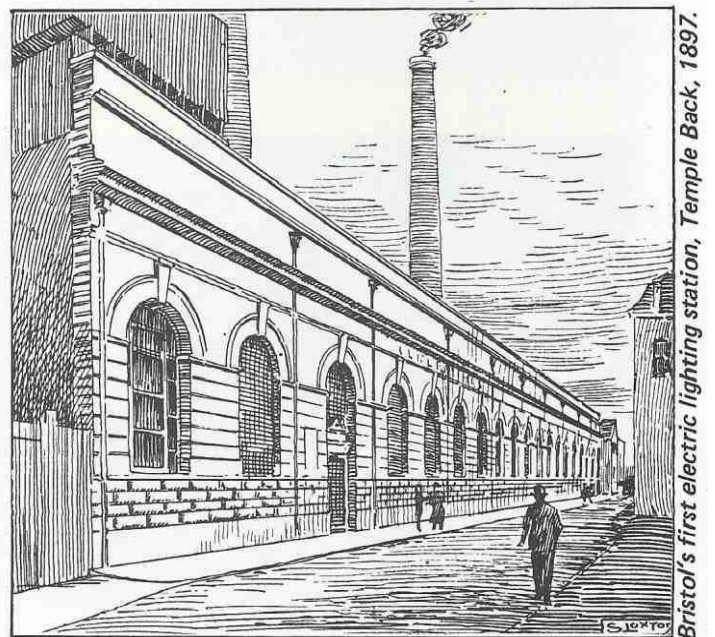
At this time, with Taunton establishing the first public supply in the South West involving a central station, and the larger municipal authorities doing nothing, it must have seemed that Taunton was the electrical centre of the South West. This was particularly so since one of the leading switch and fusegear manufacturers of the day was F M Newton of Taunton. It is not, therefore, surprising that the West of England and South Wales Electrical Exhibition was held in August 1891 at the Central Station of the Taunton Electric Light Company at St James Street. It was reported that Sir Lintorn Simmons opened the exhibition and there was 'a small electric launch moored near the bridge' and 'the electric bus has not yet commenced to run'. It sounds very original for the period, involving 40 exhibitors. F M Newton's exhibit involved a 'Taunton' dynamo driven by a 5hp Priestman oil engine charging a set of 34 accumulators.

The municipal authorities were much slower in both the country as a whole and in the South West. There were many reasons for this. Generally they were better advised on the economics and viability of establishing electrical distribution systems, being able to afford expensive consultants. Also the competition with gas was much stronger in the large conurbations and in many cases the local councillors had investments in the local gas companies. Even Mr Preece, Bristol's consultant, admitted to having investment in the gas industry.

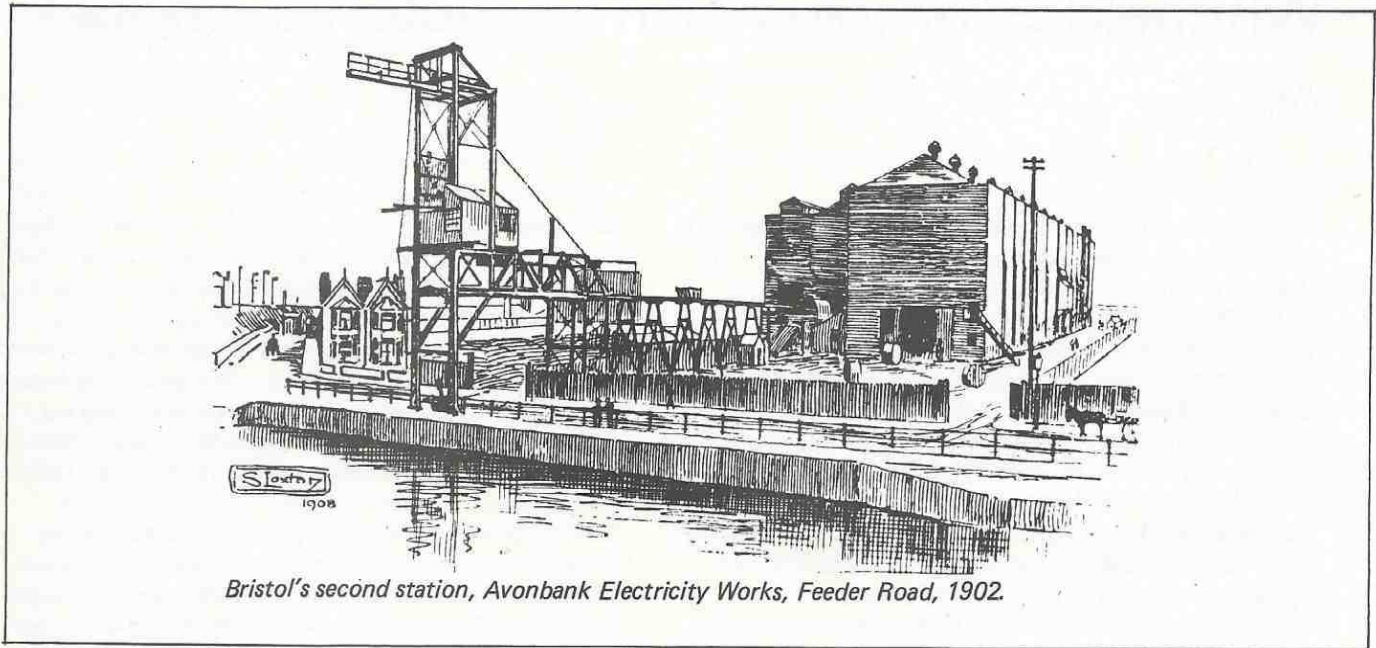
Bristol Corporation's electricity supply in 1893 was one of the first municipal supplies to be established in the country, and only three preceded it. A central station was established

at Temple Back and two systems were offered. AC for the domestic supplies and DC for the street lighting arc lamps. The Temple Back building is still standing today although it is largely disused and awaiting redevelopment.

There appears to be a gap of three years in the establishment of further supplies in the South West from then on, which seems to have been caused by a wait-and-see policy. This was adopted by most other authorities and potential companies awaiting the price of a unit of electricity produced to come down and be more competitive with gas. Mevagissey was next to have a public supply in 1896, followed closely by two supplies established by local authorities, Torquay (1898) and Plymouth (1899). At Torquay a relatively small central station was built at Beacon Quay right on the front of the harbour. This was a most unsuitable position since there was no room for expansion, and also the smoke from the boilers tended to blow straight into the windows of the Imperial Hotel on the cliff above. Extreme difficulty was incurred in



Bristol's first electric lighting station, Temple Back, 1897.



Bristol's second station, Avonbank Electricity Works, Feeder Road, 1902.

First Public Supplies in South West

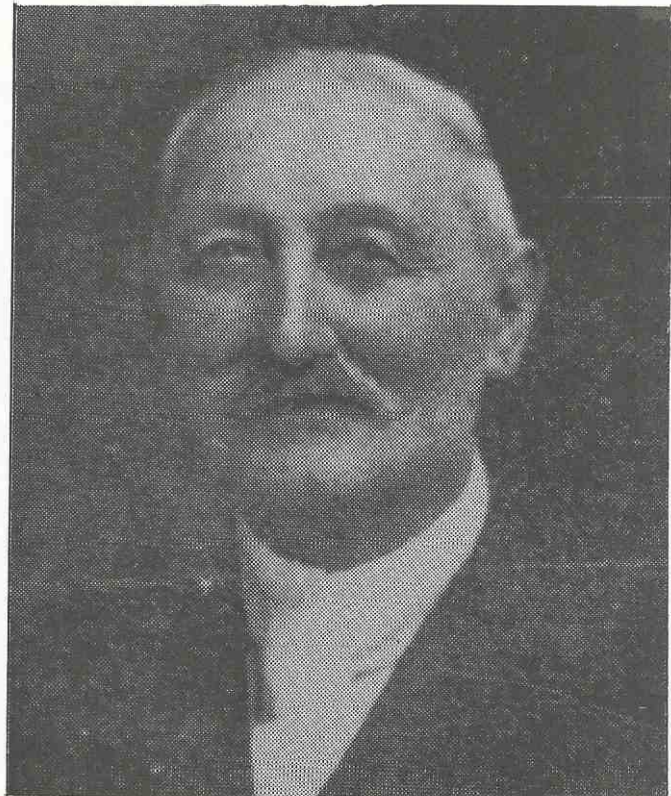
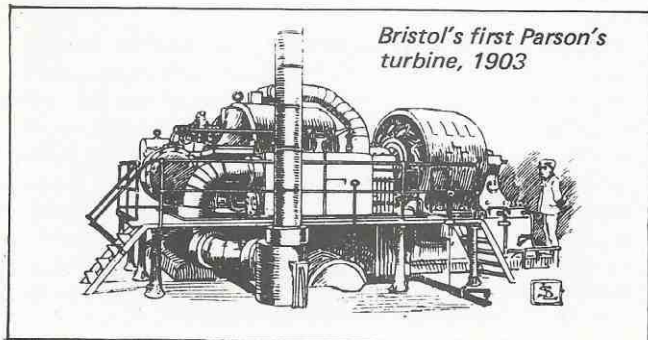
obtaining a suitable alternative site. Eventually, much later, an adjacent undertaking at Newton Abbot was taken over and the site of their power station developed to supply Torquay. Plymouth on the other hand established their central station on a more sensible site where reasonable expansion was possible at Prince Rock. It was opened by a gentleman of high renown in the industry at that time, Sebastian Z de Ferranti, who had established what has been described as the first truly large central station at Deptford ten years earlier.

- 1885 Taunton
- 1886 St Austell
- 1888 Okehampton
- 1889 Keynsham
- 1889 Exeter
- 1890 Bath
- 1890 Lynmouth
- 1891 Chagford
- 1893 Bristol
- 1896 Mevagissey
- 1898 Torquay
- 1899 Plymouth

By 1900 there were eleven known undertakings and by 1920 this had grown to twenty eight. From this time, a great thrust forward was seen with many more companies being set up. However many amalgamations were also taking place such that by the time of nationalisation, there were 39 undertakings, some of which were under joint ownership such as Christys and Edmundsons.

It can be seen that every locality has its own fascinating tale of pioneering endeavour, each meeting the many challenges that occurred in those early days.

For this brief look into the past, considerable assistance was received from two retired engineers, Eric W A Edmonds of Cornwall and Arthur Frost of Taunton, for which they are thanked. Other information was obtained from past copies of the Electrician and the SWEB's Avonbank Archive Library.



Henry G Massingham, the South West pioneer of electricity supply.