

# SUPPLEMENT TO THE **HISTELEC NEWS** NO.S15

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### **CHRISTY BROTHERS IN THE SOUTH WEST**

**by Peter Lamb and the late Eric Lodge**

Christy Bothers from Chelmsford were very active in the South West very shortly after the turn of the last century. Say "Christys" today and people may think of the antique dealers "Christies", but in the 30's, it was synonymous with electricity supply and contracting. Frank Christy had established Christy Brothers & Co. Ltd. in Chelmsford in 1883. He was a mere 18 years old, but had had a short apprenticeship with Crompton & Co. Col. Crompton encouraged him to set up in business on his own as an electrical contractor. His first major contract was to install 200 lights in a bacon factory in Waterford, Ireland, which was followed up by installations in paper mills in Scotland, Devonshire and Kent.

#### **FRANK CHRISTY**

At the turn of the century the Company turned their attention to the electrification of small towns and villages among them being Frinton-on-Sea, Heytesbury, Milford-on-Sea, Tadcaster and Yarmouth, I. O. W. The first Christy supply in the South West was at Bude in Cornwall in 1908. The initial plant

comprised two 60 H.P. National engines operated from suction gas, with the supply being D.C. on a 3 wire system 200/400 volts. His initial D.C. influences would have come from Col. Crompton, who was a strong advocate of D.C. A battery system was part of the installation, in order to maintain a supply at night. Later a diesel set manufactured by Carol Frers of Ghent was included and still later a Ruston-Hornsby semi-diesel. There was terrific competition with the Gas Company, but the street lighting was secured for electricity, which helped to make the Bude Electric Light Company highly successful. The only way for the Christy engineers to get to Bude and the surrounding territory in those early years was via the stagecoach, so you may understand that they had to be pretty keen. Particularly since they also established an adjacent undertaking at Holsworthy about the same time.

The next supply Company to be established was the Clevedon & District Electric Supply Company in 1911, which later became the North Somerset Electric Supply Company Ltd. The original Company was started by Frank Christy with a small generating station at Gas Lane, Portishead, which comprised of two 50 H.P. semi-diesel Petter Engines. The supply was commenced in August, 1913 (The original building still stands today; address now Old Mill Road). Later these engines were supplemented by a Hindley Vertical Gas Engine. Distribution then was at D.C. 3 wire, 200/400 volts.

An A.C. system was established at the time of the first Great War, when the Admiralty decided to build a shipyard at Portbury. A tremendous battle ensued between Bristol Corporation Electricity Department and the North Somerset Company, over who should give a supply. The Board of Trade decided in favour of the North Somerset Company, but after all that, Bristol Corporation had to provide a 6.6 kV supply at the base of Clifton Gorge at Ashton, which was transformed up to 11 kV and thence to Portbury via underground cable. Since this occurred towards the end of the War, the final irony of this tale was that the War ended before the Shipyard became a reality. However, this set the pattern of the North Somerset Company for obtaining their bulk supplies of electricity from Bristol Corporation at Bower Ashton (6.6 kV) and Whitchurch (11 kV) in 1925. At Bower Ashton the supply was transformed to 11 kV and later 33 kV (at Kennel Farm 1936) and at Whitchurch 11 kV and 33 kV for transmission to Wells, Street and Langport.

The North Somerset Company had their head office at Bower Ashton and in 1933 there were 16 branch offices throughout the area of supply. By this time they had taken over the Winscombe and Cheddar Electric Supply Companies in 1928, the Wedmore Company, the Mid Somerset Electric Supply Company, based at Street both in 1929 and the Burnham and District Electric Supply Company. Christy Brothers acquired these undertakings and bulk supplies were provided in order to shut down their small generating stations.

Eric Lodge joined the North Somerset Company in 1932 from the West Gloucester Power Company, where he had his early training. He was appointed by the then General Manager, Ernest Tole, and was paid the princely sum of £6 per week. He was seconded to an interesting travelling showroom with a total staff of three persons including a lady demonstrator, Miss Rousseau. This encompassed the whole of the North Somerset area, including agricultural shows, such as the Bath and West and the North Somerset Shows. Evenings and afternoons were given to practical demonstrations of domestic appliances. Mornings were devoted to obtaining electrical contracts for wiring and installation work, which were passed to the local offices. Close contact was maintained with the local managers and engineers, who gave valuable information on their problems.

Eric said "voltage and copper were in short supply". These were the early days of rural development. "Where to go in and where to stay away was important local knowledge. Engineers today tend to think of the Rural Development Era as that of the 50's and 60's, but it was the private companies who brought the first electricity supplies to the rural areas in the 1930's. The "plums" of the big revenue earnings against capital expenditure had been picked off by the various city and town authorities. It was therefore left to the energetic private enterprises to develop and extend power lines under bulk purchase from the large city undertakings. Eric told a fascinating tale of his personal endeavours in the village of Curry Rivel. He called on a potential consumer, Admiral Sir Frank Notley R.N. Retired, who had his own generator. His house was wired in "Stannos Wiring", which consisted of a single copper conductor in a lead sheath cable suitable for D.C. Eric undiplomatically criticised it, as not being suitable for the new A.C. supply. From which he received the rejoinder "Damm it man, it should be alright, its ship<sup>1</sup>s wiring". It was agreed eventually to install a double wound transformer.

This rural electrification enabled the unit sales to be increased from 11 million in 1931 to 45 million in 1939. In 1934 Eric Lodge was appointed Branch Manager of the Portishead Branch at about the same salary, but it had good prospects! He remembers with fond memories Frank Christy, who would reward his staff by giving all of them an annual bonus of 3 weeks pay - which paid for one's annual holiday! Also in 1929 all the staff of the various Companies were

invited on an outing to Cheddar, Burrington and Wells. The purpose of the outing was not only to have a jolly good time, but also to show people, who had not come into close quarters with rural electrification, some of the things it involved .

The North Somerset Electric Supply Company was quite a family affair, where the Toles were concerned. With Ernest Tole as the General Manager, his brothers, Horace and Jack, were each Branch Manager of Street and Wells respectively. Obviously it contributed to the good working of the company, but in these days, the media would probably have dubbed it nepotism. A considerable effort was required to weld North Somerset into the major undertaking of the Chelmsford based company.

It was another 20 years in 1931, when the next major supply undertaking was established at West Devon. This was created mainly out of three very old undertakings owned by W.G.Heath of Plymouth, i.e. Okehampton, Chagford and Tavistock, together with a number of other small undertakings. The new company, West Devon Electric Supply Co.Ltd., covered an area of 830 square miles and included the development of hydro-electric schemes on the River Tavy. It is an intriguing fact that the new company included in its objectives "To manufacture, sell and supply light and to carry on the business of a Gasworks Company in all its branches". This would have been a relic from the companies, which had been taken over.

The Okehampton Undertaking had been started in 1888 by Mr. Henry Geen, who had put down a small D.C. plant operated by a water turbine on the East Okement River within his own sawmills complex. He added a 50 HP Mackenzie vertical steam engine, with steam from what is believed to be the first Babcock & Wilcox tubular boilers and still later oil engines.

The Chagford company had been started by Mr. G. H. Reed, a millwright and machinist, in his factory in 1891. He had employed Crompton & Co. to install a 2000 volt single phase alternator operated by an old water wheel working under 14 ft. head at a disused woollen mill on the River Teign 1/4 mile upstream from Chagford Bridge. The supply was at 100 cycles with hedge-hog transformers supplying lamps at 100v. The undertaking was purchased by W.G.Heath from Plymouth, who had also set-up a successful undertaking at Tavistock. He had secured a special order (The Okehampton and Tavistock Electricity Supply Order) to cover the two areas.

The other small undertakings, which were purchased, were non-statutory and included Bere Alston, Horrabridge, Yelverton, Hatherleigh, Chillaton, North Tawton, Easton, Stibb Cross and Princetown, at which would have been situated small generating plants. Frank Christy persuaded W.G.Heath to co-operate

with the new venture making him a director with an obvious financial interest. The task of welding these units into one undertaking was enormous for the Christy Brothers. Larger plant was required at both Okehampton and Bude and an 11kV line was installed to link up these stations and to enable the shutdown of the small plant. Included in this system was their first hydro-electric scheme installed at Mary Tavy in 1932. Water was taken from the River Tavy at Hillbridge Weir using an old leat and cutting a new one. A small reservoir was installed, from where a 36 inch pipe conducted the water to three turbines, which ran at 1000 r.p.m. coupled to three 250 kW alternators. A second scheme was installed at Mary Tavy in 1936.

### MARY TAVY POWER HOUSE

Also at Morwellham Quay on the River Tamar, a similar turbine house was installed to utilise the water from the River Tavy at Tavistock. The ambitious scheme involved the re-opening of a derelict canal built originally in 1803 from Tavistock to the tidal River Tamar. The canal included a 1 1/2 mile tunnel under the Morwell Down, which had been disused for over 90 years. The two Turgo turbines were connected to two 360 kW alternators.

At Okehampton the old engines were replaced in 1931 with 120 HP Davey-Paxman 3 cylinder engine and a 240 HP Davey-Paxman 4 cylinder engine and at Bude a 175 HP 5 cylinder Ruston engine was installed to run in parallel with the hydro-schemes. It is fascinating to understand the working of this West Devon system. To meet conditions of drought, two 500 kW diesel sets were installed as standby at Mary Tavy. But for most of the year, the water turbines would carry the base load and the diesel engines the peak loads. In times of drought, the condition was reversed, the engines at Mary Tavy, Bude and Okehampton took the base load and the water stored in the reservoirs carried the peaks.

At nationalisation only the three hydro-generating schemes remained. Mary Tavy, Morwellham and Chagford came under the control of the BEA/CEA and

then latterly the CEGB, who shutdown the Chagford plant a few years ago. At privatisation National Power inherited the two major schemes, which they immediately sold to South West Water. Frank Christy would turn in his grave or would he? He was a bit of a wheeler-dealer himself!!

Frank Christy must have been quite a man, not only was he a director of the North Somerset and West Devon companies, but also the St.Austell and Culm Valley companies. The latter had been a wholly owned company of Christy Bros., but had been sold to Whitehall Securities in order to create a grand scheme called West of England Electricity. The agreement between the two holding companies was interesting. Christy Bros agreed to turn over their interests in Cullompton, Silverton and Bradninch, in exchange for the sole rights as contractors for the construction of the transmission system and changeover (presumably D.C. to A.C.) in the valley. It was also agreed that they would manage the undertaking for a term of 7 years. The Teignmouth Company was owned jointly by Christy Brothers and W.G.Heath, both of whom sold out to Whitehall Securities. It all sounds like a grand game of monopoly! However the bottom line always included contracting options involving many undertakings in the South West, including the Borough of Tiverton Electricity Supply.

However it may be concluded that it was due to the individual enterprise of Frank Christy, who lived to a ripe old age of 93, which enabled the electrical development of some of the most remote parts of the South Western Peninsula.

**Note :** *This article appeared in SWEB News in two instalments in 1983.*

*The late Eric Lodge was promoted within SWEB to Commercial Engineer, Bristol East Commercial District in 1951. He retired about 1980 enjoying a healthy retirement mainly on the golf course.*

*More information is contained in a book produced by Bill Tincknell "A History of the Christy Group 1858-1985", with a major contribution" by Roger Christy, Chapter 6 "The Supply Undertakings". Both Bill and Roger are Society members. Bill was a senior manager with Christys and Roger Christy, being the grandson of Frank Christy, served most of his working life as an engineer with SWEB. Roger has donated a copy of the book to the Society Archives.*

**References :** Much of the information contained here has not only been obtained from the S.W. Archives, but also from a paper prepared by A.A.Gates (A Christy Brothers Director) in 1964, which Eric obtained from Chelmsford.