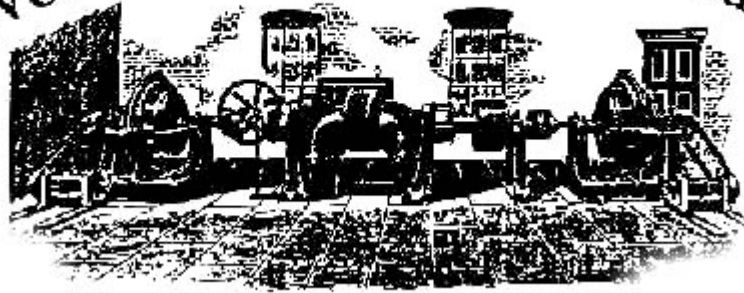


# South Western Electricity Historical Society



Lynmouth Hydro Scheme 1890

The following document comes from the  
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This site contains all the necessary contact information you may require.

Do visit the site – you may find more items of interest.

## Supplement to HISTELEC NEWS No.23 April 2003

### Electricity In Cornwall - Part 2 - Cornwall Electric Power Company

by Eric Edmonds

*Continuing our story of "Electricity in Cornwall" with Part 2 extracted from 6 articles in the Trevithick Society Annual Journal No. 29 as above written by Eric Edmonds, who I failed to say last time, that he is President of the Trevithick Society.  
This edition also includes three appendices :*

**Appendix 2** - Hayle Generating Station, mainly plant details

**Appendix 3** - Areas That Were Never Supplied by CEPCo . . .

**Appendix 4** - Staff-Management & Engineering Department

#### **Dolcoath Mine and The Cornwall Electric Power Act 1902**

Sinking of the Williams' Shaft had been started in 1896, in order to improve the haulage of ore from the mine. It was also evident from the start that the existing Cornish pumping engines would soon have to be replaced. Consideration was given by the mine to generating their own supply and the Cornwall Electric Power Syndicate was formed, with Mr. F Harvey as Chairman, and Mr. O.Wethered as Vice-Chairman. They were respectively Chairman and Vice-Chairman of Dolcoath Mine Ltd. Clearly a lot of work was done on this study. The Syndicate was registered as a limited company on 23.6.1902 and on 23rd June 1902 the Cornwall Electric Power Act received the Royal Assent. The area covered was "the whole of the County of Cornwall, exclusive of the Scilly Isles and the rural districts of Stratton and Holsworthy" (Clause 36). Land for two generating stations was detailed in the First Schedule - at Par Harbour, on the boundaries of St. Blazey and Tywardreath parishes owned by Mr. C.E. Treffly, and in the parish of Phillack at Hayle on property owned by Harvey & Co. Ltd.

#### **The Cornwall Electric Power Co.**

The 1902 Act incorporated this company and conferred powers on it. It was first registered by the Syndicate on 23.6.02 with a Capital of £45,000, though the first meeting was not held until 31.1.06 at Dolcoath Mine, when Mr. F. Harvey took the chair, supported by Mr. Wethered with Mr. J.A. Stonecham as Secretary. At that meeting they resolved to pay the Syndicate £2,364.19.4 being their expenses in promoting the Act. For a while the Duchy Development Association got control of the company. They signed contracts to supply Dolcoath Mine and Wheal Vor from a power station at Hayle, but these proposals fell through and control reverted to Dolcoath Mine.

On 6.12.07 the Company, on the advice of Dolcoath Mine gave an option to Edmundsons to purchase the rights of the 1902 Act, and on 3.10.08 Edmundsons resolved to take up this option. On the same date, the CEPCo., held another meeting at Dolcoath Mine and three Directors nominated by Edmundsons were present, and thereafter, Messrs. F Harvey, O.Wethered and L.C. Foster are not listed in the Minute Book. Mr. C.H. Jones took over as Secretary.

In 1908 the Royal Cornwall Polytechnic Society chose Camborne as the site for their annual exhibition, the theme being mining equipment and plant. On the first evening a discussion was held, with Mr. R.A. Thomas, Manager of Dolcoath Mine and Chairman of Camborne U.D.C. in the chair. The subject was "Pumping Machinery at Deep Levels". Amongst the speakers was Mr. L.A. Hards, who naturally spoke in favour of using electricity. So did Mr. W.A. Scott, a Consulting Engineer from Cardiff, who had experience of electric pumping in several South Wales collieries. He was consultant to Dolcoath Mine and later to Geevor Mine. Urban EScO won a Diploma for their exhibits.

At the 14th A.G.M. of Dolcoath Mine Ltd., held on 24.2.09, it was announced that the study of the pumping problem by the Consulting Engineer had proved that it would be cheaper to install electric pumps in preference to a Cornish steam pumping engine. Likewise, that a saving of over £20,000 capital outlay would be made purchasing from the Supply Co. compared with the cost of building and running their own generating station. On 7.12.09 an Agreement was signed between Dolcoath Mine, Urban ESCo, CEPCo and the Merchant Trust, as mortgagees of Carn Brea Generating Station. This agreement was for 700kW on duplicate lines at 3000v 25 cycles AC, and included the Mine's right to take over Carn Brea Generating Station, if Urban ESCo ceased to trade. The Consulting Engineer to Dolcoath Mine, Mr. W.A. Scott. had had a lot of experience of 25 cycles supply and insisted on it. Dolcoath had obtained the 1902 Act and so dictated terms. The affairs of CEPCo were by then handled by the staff in the office of Urban ESCo at Carn Brea. They now held all the £10 shares in the £45,000 capital of CEPCo. Mr. L.A. Hards was now Engineer & Manager of both companies. Plans for further major extensions at Carn Brea were abandoned and the decision made to build Hayle Generating Station. The Cornwall Power Company Ltd. was formed in 1926 by Edmundsons to adopt an agreement for the sale of all their Ordinary Shares in CEPCo. They duly acquired all the Ordinary Shares and over half the 5% Preference Shares.

### **Carn Brea Generating Station, 1909-1924**

As an interim measure in 1909, when the load had reached 988 kW at Carn Brea, the dynamo on No.5 set was replaced by a 400kW 3000V 25 cycle 3 phase alternator with 3/10kV transformer and 10kV switchgear, and at the same time a Parsons 500 kW Turbo-Generator, 3000V 25 cycles was installed with transformer. South Crofty Mine was then converted to AC from the new 10kV line, which was extended to Dolcoath Mine substation for their 3kV supply. By 1910 Nos.1 to 4 sets had been removed and replaced by two 275kVA Rotary Converters, to maintain the DC supply to the Tramway & consumers in Camborne and Redruth.

After the removal of the Parsons TurboAlternator to Hayle in 1924, the only set left was No.5 with the 400kW Alternator. The boilers were kept alight to provide an alternative supply in the event of station on shut-down at Hayle or of loss of the dual line.

### **The Post-War Slump**

The price of tin went down, the mines and tin streams gradually ran down and ceased work, and unemployment rose. From the March quarter, 1922 the Company ceased to make maximum demand charges, only charging for units until the December quarter 1924. The local Councils cut down on street lighting to make economies and the "West Briton" of 29.9.21 commented about Camborne, which was lit by gas, that it was "not in the best interest of public morality, as large portions of the town are in darkness". There was little new business to connect, certainly no supplies to mines and hence no extension to the 10kV network, other than the conversion of Camborne and Redruth to alternating current in 1920/21.

### **Dolcoath Mine in Difficulties**

Early in 1920 it was apparent that the mine was in trouble and the myth was about to be exploded that "whatever the price of tin - Dolcoath will make a profit". The falling price of tin, coupled with the poor yield, which required some 71 tons of tinstuff to be put through the mill to obtain one ton of tin, together with rising costs of wages, coal and materials, resulted in the mine running at a loss. They could not pay their energy account. The company, faced with increased costs, wanted to increase the energy cost or to suspend the Supply Agreement, were prepared to go to Court.

However, it was too late, as in June the Directors gave notice of closing Dolcoath Mine, and in July, after the B.O.T had refused financial aid, the pumps were lifted from the bottom of the mine. The mine was closed. By January 1921, the Dolcoath account was still unpaid. A Lien upon 35 tons of arsenic, given by Dolcoath Mine Ltd to the Company against the amount owing, was considered, and it was decided to purchase this arsenic:-

In June a settlement was reached as follows:-

To receive cash equal to 5/- in £1	__ £1,041
To purchase for £1,000 35 tons of arsenic	__ £1,000
To take Priority Shares amount of balance	__ £2,123
	__ £4,164

Indeed Dolcoath - Queen of Cornish mines - had had to pawn her crown. In 1926 the Company sold 3,444 10/- shares in Dolcoath at 6/3d each, and lost £667 on the investment. Further hopes were raised on 9.6.27, when the Company signed a new Supply Agreement for supply to the original mine and also to the new shaft at Roskean This was for 400kW maximum, 50kW minimum charge, for three years with a deposit of £200, on which 7 per annum interest would be paid. These hopes did not materialize and the mine finally closed in August 1929. More losses were to come, as the General Reserve Account 1935, shows the writing off of £500-1,000 Dolcoath shares at 10/-.

### **The Legal Side of Electricity Supply in Cornwall**

#### Cornwall Electric Power Act 1902

The first stage of Hayle Generating Station was completed in 1910, and the station at Par Harbour was never built by CEPCo.

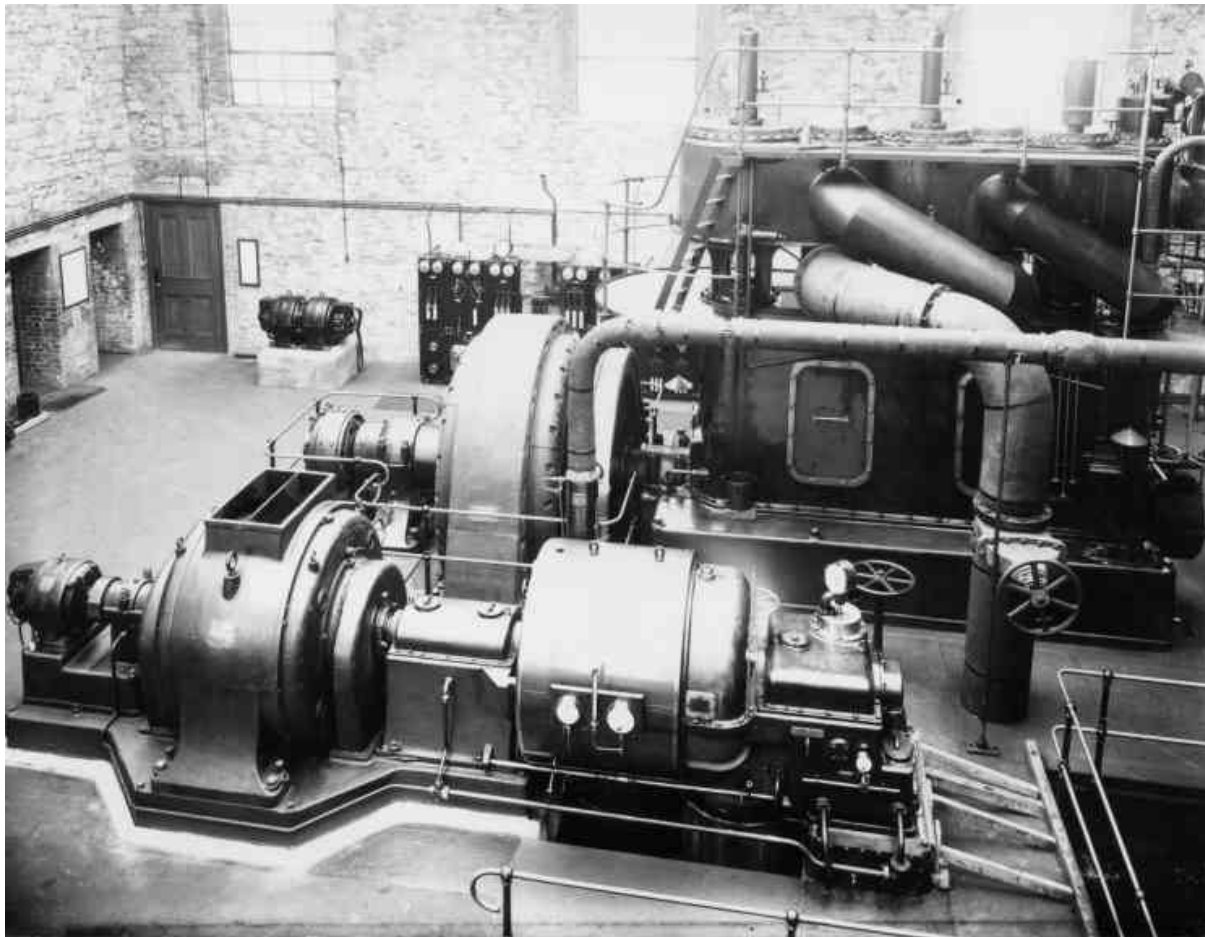


Fig. 1 The First Bellis & Morcom Machine Set 1911

### **The Electricity(Supply) Act 1926**

This Act covered the formation of the Central Electricity Board to oversee the development and operation of all generating stations. The better ones would be regarded as "selected Stations" and would be linked by the proposed 132kv Grid system. The frequency of alternating current supply was standardised at 50 cycles per second, and the CEB could order any non-standard undertaking to change to 50 cycles. The CEB was divided into ten areas and each had to settle a tariff for the purchase of all power generated at each station and also a tariff for the owners to buy back power at cost plus for their operating needs. The Electricity Commissioners had to prepare schemes for the 132kV lines linking

the selected stations in each area, and to put these schemes to the CEB for implementation and then operation.

Hayle was classed as a selected station and the 132kv Grid reached that station in 1932. The change of frequency of the CEPCo 25 cycle network, as well as of plant in Hayle Generating Station, was completed in 1932/33. This Act also encouraged the active development of supply in the country and so Edmundsons promoted the following Orders:-

- 1928 West Cornwall Electricity Special Order
- 1930 East Cornwall Electricity Special Order
- 1933 East Cornwall Electricity Special Order
- 1934 East Cornwall Electricity Special Order

Between 1926 and 1936 Edmundsons acquired the following undertakings:- Newquay, Wadebridge, Padstow, Launceston, Delabole, Bodmin, Looe, Penryn, Liskeard, Callington and Torpoint & Saltash.

### **Cornwall Electric Power Act. 1936**

Power consumers had Supply Agreements with CEPCo. These never totalled more than 67 and most of them had their own substation. As the system developed through the company's area domestic consumers had their Supply Agreements in the name of the subsidiary holding the Order for that area. There were eventually ten such companies. Every transformer was connected to the LV mains through a kWh meter with "2-hourly maximum demand indicator. The total units registered, and the kW MD, were billed each quarter to the subsidiary company. This involved much meter-reading and clerical work to produce each set of annual accounts. This Act increased the capital powers of CEPCo and empowered it to acquire Electricity Order undertakings in and adjacent to its area.



Fig. 2 Hayle Power Station 1934

With the exception of the areas supplied by the three non-associated undertakings (St. Austell, Falmouth & Bude) the whole of the 1902 Act area was now covered by Orders held by ten companies financially associated with CEPCo, under separate accounts. These ten companies, and their Orders, were thus transferred to the Cornwall Electric Power Co., namely:-

Callington & DESCo.Ltd.	Callington & DESO 1924
Camborne ES Co. Ltd.	Camborne ELO 1899.
East Cornwall ESCo. Ltd.	East Cornwall ESO's 1930,1933 & 1934.
Launceston & DESCo.Ltd.	Launceston ELO 1912.
Liskeard Gas & Elect Co.Ltd.	Liskeard ESO 1929
Newquay EL&P Co. Ltd.	Newquay ELO 1904.
Penzance & DES Co. Ltd.	PenzanceELO 1904.
Truro ES Co. Ltd.	Truro ESO 1926.
Urban ES Co. Ltd.	Redruth ELO 1900 & Illogan ELO1903.
West Cornwall ES Co.Ltd.	West Cornwall ESO 1928.

There were 32,782 consumers at the end of 1936 and only one set of accounts was now required. The Urban Electric Supply Co Ltd., as such, was wound up though it lingered on in spirit and the local name of "lectric party" continued to be used for years.

The Capital Expenditure up to 1936 had been :-

	£	s	d
Tramways	44,888.	17.	0
Mineral Line	7,419.	19.	2
Gen. Station & Mains	29,803.	16.	11

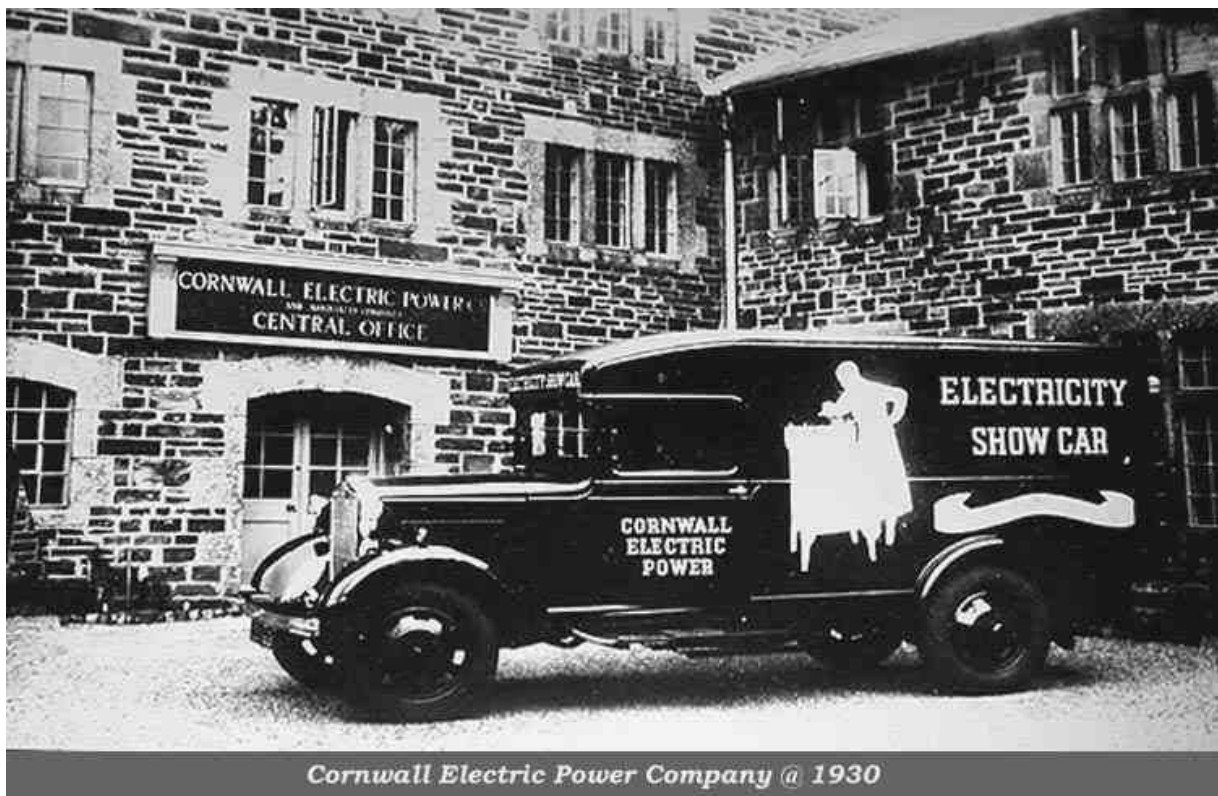


Fig. 3 Cam Brea Premises as the Head Office of Cornwall Electric Power Company

**Electricity Act 1947**

This Act nationalised the Electricity Supply Industry. On Vesting Day 1" April 1948, the distribution side of CEPCo., was transferred to the South Western Electricity Board and Hayle Generating Station to the British Electricity Authority. The gas undertaking in Liskeard went to British Gas. CEPCo., had been steadily developing all over the area. They had made a profit and paid dividends every year, since 1911, except for the two depression periods 1921-1923 and 1931-32, when no MD charges were made, in order to help industrial consumers. There were 59,744 consumers on 31.12.47 and the Capital Expenditure to that date had totaled £3,970.288<sup>^</sup>. The whole of the area, together with

that of St. Austell and Falmouth Undertakings, became Cornwall Sub-Area.

The Rural Districts of Stratton and Holsworthy went into Devon Sub-Area and the Undertaking on St. Mary's Isles of Scilly remained in private hands, until taken over by SWEB in 1958.

Edmundsons Electricity Corporation Ltd., had been a very successful company and the Managing Director, Wade H. Hayes, was strongly opposed to nationalisation of the industry. An article of his had been published in "The New English Review" entitled "The Case against Nationalisation of Electricity". In September 1946, he sent a copy of this article to each member of the staff of each associated company including CEPCo. There was also some plain speaking by Lord Royden, the Chairman of Edmundsons at their 50<sup>th</sup> OGM in July 1947. This speech was also recorded in a booklet and circulated to staff.

### **The CEPCo Network at Vesting Day**

Only essential reinforcement had been carried out during the war years, but load growth had been monitored by local load checks. The cold spell early in 1947, necessitated temporary measures to meet the increased domestic load east of Carn Brea and also in the Penzance area, pending receipt of planning approval for new 33/11kV substations and overhead lines as well as financial approval from the new Board (i.e. SWEB).

Annual load checks were introduced in 1947 at all substations with instrumentation. These figures were essential for system operation and also for long term planning, bearing in mind not only the wartime back-log of reinforcement and replacement of some of the original lines, but also the rural development programme and information on new housing. The 1948 figures showed that the domestic load was greater than the week-day industrial load :-

Day of Peak			
Thursday 23.1.48	12.01pm	Hayle BSP	25,260MW
Sunday 22.2.48	12.01pm	Hayle BSP	28,380MW
		Fraddon BSP	29,500MW
		Total	57,880MW

Judgement on the state of the network in Cornwall on Vesting Day is best left to Mr. Stanley Steward, the first Chairman of South Western Electricity Board, who said :-

"With a modern power station at Hayle and the installation of a 33kV and 11kV distribution system throughout the County, electrical development in Cornwall was further advanced than in other parts of the Area ———."

"Apart from Bristol and Cornwall, the distribution system was overloaded in almost every part of the Area\_\_"



Fig4 Hayle Power Station circa 1950

## APPENDIX 2 HAYLE GENERATING STATION

On 13.3.10 CEPCo signed an Agreement with Harvey & Co for the erection of works, etc., on a plot on the south-west side of Hayle Towans, alongside the Hayle River, subject to a Lease when completed. The lease was signed on 13.3.15 and covered the land & rights of way; laying of cables & pipes; obtaining water; railway sidings; the coal conveyor; payment of 6d/ton on all coal landed across the quay and that all coal-handling be done by Harvey & Co workmen. The site to be returned to its original state, when vacated (A.W.O.L.). The contract for Stage 1 buildings was given to Carkeeks of Redruth. They started on 7.5.10 and completed it on 12.12.10 thirty weeks later. All alternators installed between 1910 and 1929 were 25 cycles. Mr.T.H.Edwards was the first Resident Engineer. Generation was started in December 1910 with No.1 Set, the Reyrolle 10kV switchboard and the Hayle-Carn Brea dual 10kVline in service.

- 1910 No. 1 Set. 900kW Belliss & Morcom No.4467 vertical triple expansion; 21inch 29inch & 160psi, 250rpm Dick Kerr alternator, Two Babcock & Wilcox Boilers each 20,000 lbs/hour.
- 1911 No.2 Set. 500kW Belliss & Morcom mixed pressure turbine. Either steamed alone at 160psi, or as combination set taking condensate from No. 1 at 10 psi, Lancashire Dynamo alternator.
- 1912 No.4 Set. 900kW Belliss & Morcom. No.4859. Same as No. 1 Set. Two Babcock & Wilcox Boilers each 10,000 lbs/hour
- 1913 No.3 Set. 500kW Belliss & Morcom mixed pressure turbine, Same as No.2 Set Two Babcock & Wilcox Boilers. each 12,000lbs/hour
- 1914 No.5 Set. 3000kW Richardson & WESTAR Turbinat, gyps N.A.A.C.P.. Two Hancock & Wilco Boilers, each 14,000 lbs/hour. The terminal pole of the 10kV river crossing was moved to the west of the Engine-room to permit this extension.
- 1916 N.B. Set. 3000kW Richardson & Westgarth Turbo-alternator, Same as No. 5 Set..
- 1928 7500kW BTH Turbo-alternator, 25 cycle. Two Babcock & Wilcox Boilers 50,000lbs/hour., BTH 10kV Switchboard. This plant was the first in the Station to operate at 250 lbs/sq in. It was originally coupled to the old 180lbs/sq.in. plant through pressure reducing equipment.
- 1929 One Babcock & Wilcox Pulverised Fuel Boiler, 50,000lbs/hour, Parsons 500kW Turbo-altemator moved from Carn Brea to Hayle, but it never ran satisfactorily and was removed before 1935.

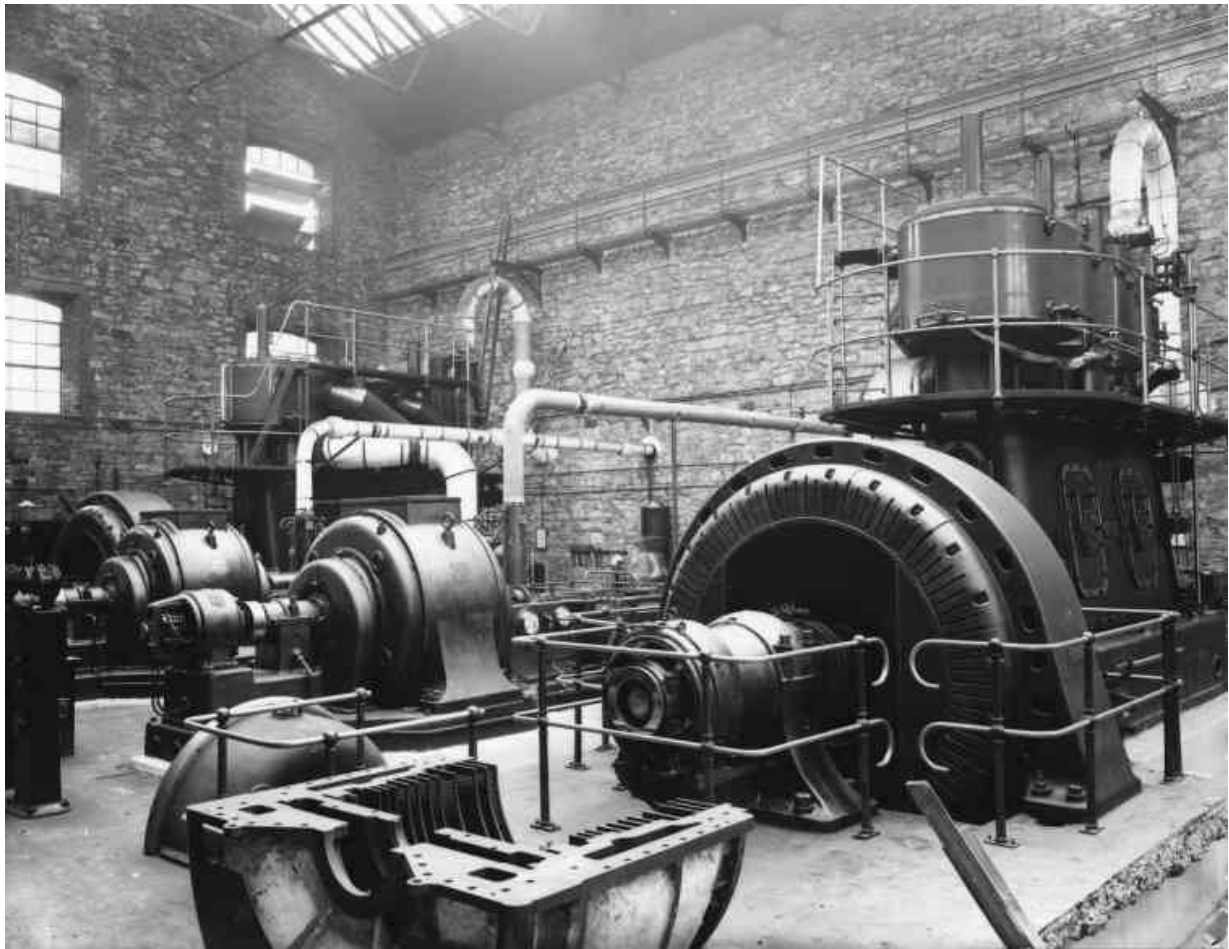


- 1930 Control Room established - combined generation & system control.
- 1932 Sterling Boiler, 100,000lbs/hour. 10,000kW English Electric Turbo-alternator, 50 cycle. There was not enough 50 cycle load in Cornwall to test this set, Three insulated troughs were setup as a water resistance, The tests were satisfactory and the set was accepted from the makers.
- 1933 Hayle Power Station was connected to the Grid. Power could now be imported or exported, since the connection to the BSP being two cables on the new English Electric type OLF switchboard with double bus-bars. The 10,000kW set was also connected to the new board, as was the output from two 2,500kVA Frequency Changers, which were temporarily connected to the Reyrolle board. The Change of Frequency of all consumers was then carried out, using the dual lines after one side had been diverted to the new switch-board. The 7,500kW BTH set was then changed to 50 cycles and also diverted to the new board. The BTH board was kept and eventually installed in the temporary Grenville 33/11kV S/S. The whole cost of this work was borne by CEB. Hayle started to export to the Grid and was designated a Selected Station.
- 1935 English Electric 300kw Turbo-alternator installed, primarily for pumping circulating water for the condensers should the station shut down and was controlled from the Control Room.
- 1936 All 25 cycle generators. Nos. 1 to 6. were offered for sale as scrap, subject to mutilation, with eight Babcock & Wilcox boilers; the Reyrolle board, fourteen assorted motors and thirteen transformer windings. The tanks of the latter were kept for transformer oil storage at Cam Brea, 50 cycle capacity
- 1938 I.C.I. built and managed the British Ethyl Works close to the gate, to extract bromine from seawater. This was required as all anti-knock agent in petrol and hitherto only available from Germany. A supply at 11kV was connected and also pipes to supply process steam. The seawater had to be hot, so the condenser cooling water outlet was diverted into these works. To obtain maximum output from I.C.I. the station was run out of merit throughout night periods at just over half load to raise the temperature of the seawater, which they took at the rate of two million gallons/hour. (Associated Octol took over 1.1.48). Heavy snow fell all over England early in December and Hayle was required for the first time to provide maximum generation.
- 1939 One Stirling Boiler, 100,000 lbs/hour, one English Electric 15,000kw Turbo-alternator. At maximum load on tides exceeding 16ft, there was little flow in the Hayle River for some 2 1/4 hours, The water in the pool around the intake pipe passed through the condensers approximately three times, reaching 78°F before cold water came in with the next tide. The eventual capacity was likely to be 70,000kW so additional storage for at least 3,000,000 gallons/hour of cooling water was required. A 'dam was built in Camsew Pool to impound water and 100,000 cubic yards of sand was dredged out to increase the capacity. Here, in April 1939, a shaft was sunk 110ft down. A 7inch diameter tunnel was then driven under the river to a similar shaft, with pumps beside the power station. This work was completed in July 1941, giving the station two source cooling water. The Engineer in charge was Mr B O Rees
- 1947 Two Stirling Boilers, each 100,000lbs/hour, one English Electric 15,000kW Turbo-alternator This was the first of the H.P plant, running at 425psi, 33kV Air-blast Switchgear installed for Alternator transformers 11/33kV, and all outgoing 33kv lines. A new Control Room was set up in the same building
- 1949 One Yarrow Boiler 200,000lbs/hour, one English Electric 20,000kw Turbo-alternator
- 1959 One Yarrow Boiler, 200,000lbs/hour, one BTH 20,000kw Turbo-alternator.
- 1971 Distribution Control Room moved to Pool in the original Carn Brea Boiler House.
- 1972 All plant installed from 1928 to 1932 taken out of service.
- 1973 Associated Octol closed in September and ceased to take the hot cooling water. The station gradually slipped down the Merit Table, as by now a number of large modern power stations were taking the base load, and it was seldom called upon to generate. The station was eventually closed and all the plant was removed. The BSP, of course, remained, and SWEB took over the switch-houses as a number of the 33kV & 11kV switches were part of the distribution system.

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The office furniture and other moveable items were offered for sale by auction on 12th April 1977 In June 1981 the two stacks were felled and in the following December the Turbine house and the Boiler House were demolished. The ground was then cleared, in accordance with the original Agreement The last Station Superintendent was Mr. R.G. Sandercock.



**Machine Set No.4 - 900kW & No.3 - 500kW Machine Set Turbine nearing completion  
1912-13**

### **APPENDIX 3**

#### **AREAS NEVER SUPPLIED BY CORNWALL ELECTRIC POWER COMPANY**

##### ***ST. AUSTELL***

- 1888 Veale & Co Ltd obtained ELO 1884 and commenced supply at 220/1 IOv DC from works in the town (SX 012526), but ceased in 1903.
- 1904 Undertaking acquired from the United Kingdom Tramway Light Railway & Electrical Syndicate by the St. Austell & D.E.L & P.Co. Ltd., formed in 1901. They had obtained the ELO 1901, which covered the St. Austell Urban & Rural Council areas and the borough of Fowey
- 1927 Pontsmill Generating Station (SX 07405573), AC 50 cycles, and 11kV line to town, which was gradually changed to AC 11kV line to Fowey and system slowly extended.
- 1935 Bulk supply from CEPCo, Fraddon to Trefice S/S,
- 1948 The St. Austell company became South Cornwall District under the Manager of Cornwall Sub Area of SWEB . BEA took over Pontsmill, soon closing and dismantling it.

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##### ***MEVAGISSEY***

- 1896 Non-statutory supply commenced from West Quay (SX 015447) at 220v DC. The public lighting was the first in Cornwall.
- 1907 Mevagissey EScO Ltd formed to take over the assets from the Liquidator. Voltage changed to 230v 3-wire DC. Special Order 1933 obtained by local council to safeguard the undertaking.
- 1934 The company acquired by the St. Austell & D.E.L & P. Co., who built an 11kV line to the village, converted the network to 415/240v and closed the station.

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**BUDE**

Bude and the rest of the Rural district of Stratten & Holsworthy were excluded from the powers of the Cornwall Electric Power Act 1902 in Clause 36.

- 1898 Some residents tried to raise interest in a supply but failed.
- 1903 Mr. Keat, a previous objector, supplied a few neighbours.
- 1905 Christy Bros interested and obtained the ELO 1906.
- 1907 Bude ESCo Ltd formed by Christy Bros and ELO 1906 passed to them. Generating Station built in Burn View and supply at 200/400- shire DC:
- 1930 Decision to convert to AC 50 cycles and expand by 11kV lines. Alternator set added,
- 1931 West Devon ESCo Ltd, also in Christy group, take over and install second alternator set,
- 1932 11kV line from Okehampton to Tavistock.
- 1934 Hydro-stations at Morwellham and Mary Tavy - Hillbridge on to 11kV system, which reached Bude in 1936 and where a third alternator set was added.
- 1937 Mary Tavy - Wheal Jewel Hydro-station on 11kV network.
- 1948 The West Devon ESCo., became the West Devon District of the Devon Sub Area of SWEB, less Tavistock, which went into the Plymouth District. Bude Generating Station closed and dismantled after Bude 33/11kV S/S had been built by SWEB.

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**FALMOUTH**

- 1903 The Borough of Falmouth obtained the ELO 1903, covering the whole of the borough, but decided not to own their own undertaking.
- 1904 The Electric Supply Corporation Ltd took over the ELO 1903 with a clause in the Agreement that all the town refuse was to be burnt as fuel.
- 1906 Electricity Works on Beacon Hill commenced supply. Two boilers, one with grate for refuse. Two Belliss & Morcom 120kW dynamo sets. Supply at 460/230v DC to town by 3-core cables. Proposal for electric buses on tyres not accepted.
- 1919 Second boiler with refuse grate added.
- 1936 Bulk supply from CEPCo's Falmouth 33/11 kv S/S to new substation at Park Terrace, from which they built an 11kV ring to three substations and a spur to Works transformer. The network was converted to 400/230v AC. Two 120kW alternators were fitted on the Belliss & Morcom sets with relays for running in parallel with CEPCo.
- 1948 The Showroom and network came under the Manager of the Central Cornwall District. The BE took over the Works and stopped generation in 1951 after paying the Borough £17,000 to buy out the remaining period of the contract for refuse disposal. The site then taken over by SWEB and remained as store and report centre, but recently cleared and sold for residential purposes.

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**ST. MARY'S. ISLES OF SCILLY**

The St. Mary's (Scilly) ESCo Ltd was registered in 1931 by Mr. E.C. Sydney, who had also been managing director of the Mevagissey company. The undertaking was taken over by SWEB and came under the District Manager West Cornwall on 18th April 1958.

**APPENDIX 4****STAFF - MANAGEMENT & ENGINEERING DEPARTMENT**

The staff from 1902 have already been mentioned in the earlier chapters.

- 1932 Change of Frequency section set up in Bennett's former works at Roskear. Mr. R. McFarlane joins that section.
- 1934 Mr. D.H. Kendon as Deputy Engineer & Manager
- 1935 Mr. L.A. Hards retired, Mr. Kendon as Manager and Mr. A.C. Owen as Engineer. Mr. Bennett was Commercial Manager and Mr. S. Smith. Chief Accountant.

- 1936 Bennett's works had been vacated and general increase in staff at Cam Brea necessitated building 3-storey wing at rear after demolition of boiler-house stack. Engine-room became Substation and transformer store. The Boiler-house, became the Garage and floor added above, with vehicle ramp from yard, housed Fitters Carpenters and Cooker Section, Canteen built on North Crofty burrow.
- 1938 Mr. Kendon moved to Shropshire, Worcester & Staffordshire Company. Mr. Chven became Manager and Mr. Bailey from Head Office the Engineer.
- 1939 Mr. G. Richards to Newquay as District Manager. Mr.RG. Sandercock to Hayle Generating Station. A number of employees called up by RNVR, TA & RAFVR and others for national service. Mr.Bennett retired and Mr. G. Richards as Commercial Manager. Two Engineers for regional maintenance duties - Mr. McDonald to western area,
- 1946 Mr. Thompson to central area and Mr.O.Dring the eastern area. Two outposted Engineers - Mr. R.Symons - Liskeard; Mr.Timberlake - Penzance and Mr. H. Mitchell continuei in Camborne & Redruth. Mr.L.F. Weir to Hayle as Control Engineer.
- 1947 Mr.Bailey left to join Ewbank & Partners, formed by Mr. C.H.P.Ewbank, Chief Engineer of Edmundsons as consultants.They became Consulting Engineers to Edmundsons by an Agreement dated 30.10.46. Mr. N.R.C. White appointed Engineer and Mr.L.F. Weir the Deputy. Mr. McFarlane moved to the East Anglian Company and Mr. L. Locker appointed as Substation Engineer 1948. 1st April. Mr. A.C.Owen as Manager, Cornwall Sub Area and Miss Gribble his Secretary. Mr. C. Richards, Sub Area Commercial Officer and Mr. S. Snúth, Sub Area Accountant, soon to retire and be succeeded by Mr. R. Gilliam. Mr. H.R.C. White to District Manager, West Cornwall. and Mr. L.F. Weir now Sub Area Engineer and Mr. L.Locker Deputy. (Manager East Cornwall 1951). Mr.H.S. Sowell Overhead Line Construction & Transport. Mr. Jock Emslie - Underground Mains. Mr. J. Pengelly - Planning Mr.F.Ripper - Meter Room, Mr. C.T. Cook - Draughtsman, Mr. E. Holliday - Wayleave Officer, Mr.Dovey - Garage & Yard Foreman. Miss.M.Thomas - Senior Typist. O/H Line Gangs - Foremen, Mr. E. Wallace, Mr.W.Jose, Mr.J.Hollow, Mr.A.Honvell & Mr D. Hollow. U/G Cable Gang - Mr.J.Chivell. Senior Jointer - Mr.H.Chappel. Fitters - Mr. H.Barker, Mr. W.Martin & Mr.J.Williams. Senior Carpenter Mr.F.Dunstan.
- 1951 Cornwall Sub Area divided into five Districts, each with District Manager and District Engineer, District Commercial Engineer & District Senior Clerk. Mr.C.M.Isherwood - Deputy Sub Area Engineer.

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