

The History of Electricity on Alderney and of Alderney Electricity Ltd from 1936 to 2014

(Thanks are due to Moira Brooks-Effard, who has allowed us to draw on her extensive insights and research into the history of the Company)

Electricity generation first arrived on Alderney to provide power for the quarrying industry. It was not until the mid-1930's that grid electricity became available to the community after the States passed a law granting rights to an individual to supply electricity on island.

The supply was fed from an 8kW 220V d.c. generator with a 150 Ah battery back-up. Supply was available in the vicinity of the Corvee, with a feed to the airport. People without direct access to the grid could also bring the batteries from their radio sets to be charged.

The Alderney Light and Power Company was formed in 1939 and took over responsibility though this was short-lived as German Forces invaded in June 1940. With the military demands, the d.c. system became over-loaded, and the German's chose to roll out a 4 wire 3 phase a.c. system, renovating the Channel Island Granite Company diesel generator (genset) near the harbour.

An interesting observation from the German era is that, as a military installation, it needed to avoid single point of failure. The island was divided into seven districts, each with a feed substation. Power was distributed around the island at 10,300V. To support the generating station at the harbour, the original power station at La Heche was upgraded with a.c. gensets and a further two diesel powered stations were built, one at Fort Albert and one near the Telegraph Tower. In the event of a blockage or other external influence restricting access to diesel supplies, a steam powered station was built on Wide Lane, however this suffered technical issues early on and never became fully operational. Each station was connected to its local area network but could also be connected to the distribution grid in the event of genset failure elsewhere. It is only now that distributed generation is replacing the centralised model.

Whilst the system was reported as close to fully operational at the end of the German occupation, by the time that the islanders returned and had appraised their circumstances, it seems that parts of the system had fallen into disrepair. The Royal Engineers operated the electricity system immediately after the war, with the assistance of interned German technicians and labour, but when the military withdrew, responsibility was returned to the Alderney Light and Power Company. For a series of financial and operational reasons, the Company struggled to keep the system operation and by 1949, it had become apparent that the system needed significant investment, guided by a capable engineering team. Directors from Messrs Christy Brothers Ltd visited the island in 1949 and, following discussion in early 1950 with both the States of Alderney and that of Guernsey, who by this time were operating under a shared services accord, agreed to take charge. The Christy Brothers had been overseeing several municipal electricity systems prior to the nationalisation of the UK electricity industry in 1948 and as a provider of technical services to the electricity industry, were a good fit for the Alderney community. Dialogue with Alderney Power and Light Ltd re transition terminated less than amicably, so the Christys suggested that the States terminate the present concession, deadlines having been missed, purchase the assets and re-sell to a new company. They also suggested that new long-term Concession be granted to the new company, generally on the lines of the Electricity Concession Law 1936 and 1948.

When Geoffrey Christy visited the island to assess the state of the infrastructure, he assessed that most of the existing equipment was unserviceable in the short to medium term and would need to be replaced. Estimates were presented to the Christy Board that capital expenditure of £13,000 would be required in the first year rising to over £26,000 in year 4. In today's terms this would be over

£450,000 rising to over £800,000. To give this some context, AEL's underlying annual capital expenditure to maintain the network and generating assets is currently between £250,000 and £350,000 per annum. The Christy Brothers were proposing to spend the equivalent of twice this amount for the first 4 years on a network that was significantly less extensive and technically advanced. This gives a clear indication of the state of the infrastructure at that time.

The Christy Brothers had serious misgivings about taken on the commitment however Alderney Electricity Ltd was incorporated in 1951 as the vehicle for this transition.

The link between AEL and the community was established from the outset, though this was a consequence of uncertainty about the viability for the Alderney economy and the resultant impact on AEL. The Christy's determined that the community needed some "skin in the game" and proposed that if one third of the initial capital requirement (£25,000) could be raised from the community through the sale of equity, the Christy's would acquire the remaining two thirds. The intention was a broad participation from the community, the target being 8,500 of the authorised issue of 25,000 ordinary shares. In the end, the community issue was undersubscribed and both States of Alderney and Guernsey stepped in to meet a minimum community commitment. Of the 25,000 £1 shares authorised, the following were issued.

- Christy Brothers 5,000 (27%)
- Christy Family 4,500 (24%)
- CB Company Secretary (A. A. Gates) 1,000 (5%)
- Community 1,673 (9%)
- States of Alderney 3,165 (17%)
- States of Deliberation 3,165 (17%)
- **Total 18,503**

AEL took control of the assets, became responsible for the electricity supply on 1st April 1952. The Alderney Electricity Concession Law was enacted the following year and the Island's association with the Christy Brothers began.

One of the first tasks was to build a new power station at York Hill Quarry (on the site of the current power station) and run a pipeline to the inner harbour to receive bulk fuel supplies. Significant network upgrades were made through the 50's connecting most of the island's properties to the grid. The Germans had extended the island's network but only connected the military installations and the various buildings that they were using. When the Alderney community began to return at the end of 1945, it was a matter of some luck whether your property had a supply. The Concession Law enshrined key rights of access to supply for the community.

It seems that the Christy's effort was successful as an extract from an article in the Guernsey Press from 1959 testifies.

**Extract of Article printed in the Guernsey Press 11th March 1959.
GREAT PROGRESS OF ALDERNEY ELECTRICITY UNDERTAKING**

*(From our Alderney Correspondent)
In Alderney, lights are switched on and off literally thousands of times in 24 hours without a thought of the industry and organisation necessary to produce the electric power we take so much for granted. Perhaps the two commonest thoughts on electricity are unpleasant, usually on the occasion of a rare*

*breakdown, or when the bill arrives!
Nowadays the electric supply in Alderney is good, but how many of us ever cast our minds back to the days prior to 1952 when the supply was only from 6 a.m. to midnight, and probably during that short period there were anything up to half a dozen failures?*

In those days every room had to have its candle! Now there is a 24 hour service and electricity consumption has gone up from 250,000 units in 1949-50 to approximately 750,000 units per annum nowadays, and there are very few candles to be seen!

Christy Brothers continued running the electricity undertaking until 1978. Christy Brothers Limited had been sold and the new owners did not want to continue running Alderney Electricity.

The States of Alderney bought the Christy Brothers shares, also those of the Christy family and associates, becoming the majority shareholder.

The States of Alderney approached several island residents, and a new Board of Directors was appointed.

The late 70's to the mid 80's was a time of change characterised by disagreements between the Board and the States of Alderney as majority shareholder. There was a high turnover of Board members during this period. In particular, the Board had begun to look at the importation of bulk fuels for purposes other than electricity generation. The States were opposed to this change.

From the mid 80's through to 2014 a period of stability returned to the affairs of AEL, largely due to the influence of Board Chair, Mr W. R. (Dick) Haines ably supported by Miss Moira Brooks-Effard. Miss Brooks-Effard was island born and joined the company in 1967, witnessing the more turbulent period first hand.

The biggest change for AEL during the 20 years to 2007, was taking over sole responsibility for the importation and distribution of fuel types other than diesel. In 2005, the incumbent aviation fuel supplier lost the concession at Alderney Airport. On island there was a high level of concern that the loss of aviation grade petrol, AvGas, could have a detrimental impact on both commercial flights and private aviation. The States approached AEL and, after initial reluctance from the Board, the Company took over aviation fuelling using a new storage area at the harbour and a new vehicle, all bought paid for by the States.

In 2008, the development and extension of the commercial quay necessitated a new fuel pipeline. It was deemed too costly to extend the pipeline to the facilities of the alternative heating oil suppliers, so the pipeline was only terminated at the tank farm behind the power station. AEL became the de facto supplier of heating oil, kerosene. Finally in 2010, Fuel Supplies Channel Islands, withdrew the supply of unleaded petrol in 2,500 litre ISO tanks. These smaller tanks could be handled directly by the garages. A new petrol storage facility was built alongside the AvGas facility, at the expense of the States, and AEL became the import and wholesaler. The irony of the States antipathy towards AEL plans for fuel imports in the early 1980's is not lost.

As Chair of the Board, Mr Haines also presided over a further significant upgrade to the network and generation infrastructure as Chairman of the Board. The major upgrades initiated by the Christy Brothers had been operational for 30 years, some being well beyond their anticipated service life. Electricity consumption continued to grow and two larger Blackstone diesel gensets were acquired second-hand and installed at the York Hill station to meet anticipated growth in demand. The new

engines required the size of the station be increased and a new shell was built over the entire. This defined the footprint of the station as it exists today.

Between 1995 and 2005, electricity consumption on the island doubled; peak consumption reached nearly 2MW. The increase was the result new business arriving on island, particularly the e-gambling industry, combined with the increasing influence of the internet and social media and low cost electrical and white goods offering greater convenience and more flexible life-style choices. This same impact was seen globally through this period. Of primary concern was the estimate that consumption would further double before 2015. In 2005, the power station had 9 gensets of which, typically, 7 might have been running concurrently. The available head room was limited meaning that, with gensets out of service for maintenance, brownouts (loss of power to designated sections of the island) were not uncommon. Based on growth estimates, demand would overwhelm the station within three years. Again, Alderney reached for the candles. In 2005, the Company purchased three larger Paxman gensets, each capable of delivering 2 MW. These were operational by the end of 2007.

For Alderney and AEL the predictions failed to match reality. The 2007 recession, triggered by the sub-prime mortgage crisis in the US, triggered an oil price crisis and crude prices rocketed to \$150 per barrel through 2008. As all of Alderney's electricity is generated using fossil fuels and the underlying cost of transportation to the island is high, the impact on Alderney's electricity price was marked and the effects of the recession deepened. Oil prices slumped through 2009, but the damage to Alderney's economy was done and energy efficiency had become fact rather than something paid lip service. From 2010, electricity consumption began to fall, averaging 3% per annum. Initially the primary effect was a reduction in population, but after 2013, high efficiency white goods and low energy had the major effect.

As of 2014, it had become clear that a further extensive upgrade to network and power station would be required before 2020. The Company started these work programmes in 2015 and 2016 respectively.