

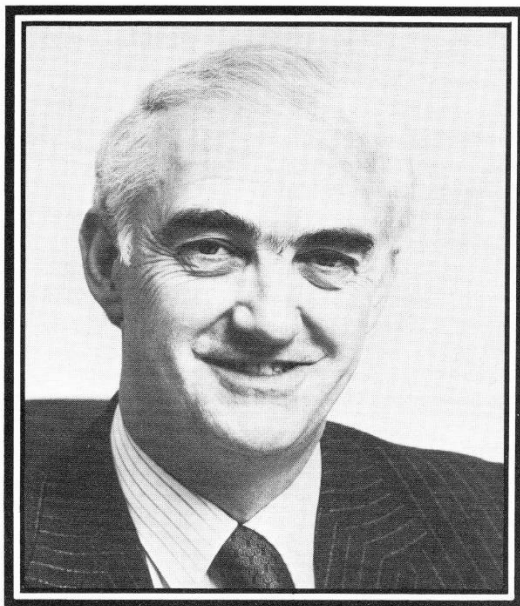
**A Centenary Message from J. Wynford Evans**

**Chairman of South Wales Electricity Board**

*This is a reprint of a document received recently among the South Wales Electricity archive and is an interesting perspective when written by the then Chairman of SWaEB in 1984, although lacking many old electricity photographs of the period discussed.*

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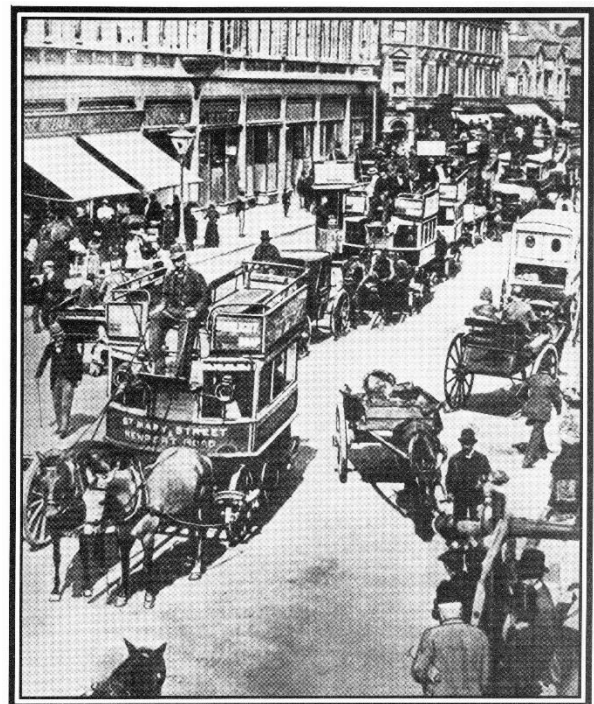
WHEN that first electric light dazzled and astounded our fore-fathers in the Hayes, Cardiff, one hundred years ago, no-one in the crowd that day could have had the slightest idea of the part electricity would play in today's everyday life. Virtually every one of the two million people living in South Wales today uses electricity at some time during the day or night. Electricity is so much a part of their everyday life that is often taken for granted. In fact, though, we owe a great debt of gratitude to these imaginative and far-sighted Victorians who began the process, which made electricity so much the lifeblood of our nation today. Our present lifestyle would not be possible without it.



*J. Wynford Evans*

In the South Wales Electricity Board, we are carrying on that great tradition. By

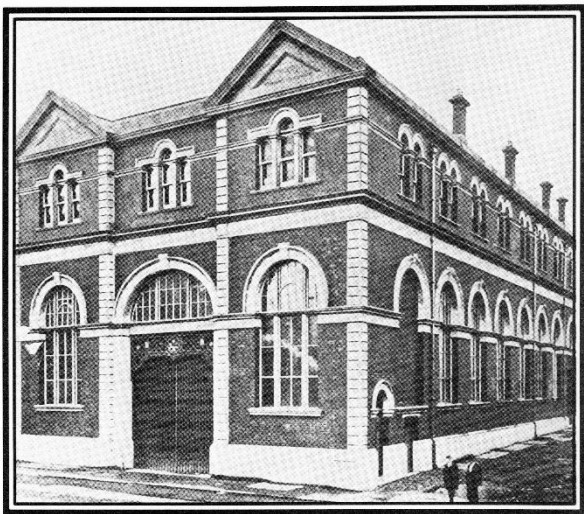
encouraging and developing new techniques in the supply of electricity and constantly looking at the most effective ways of serving our customers, we will be taking electricity efficiently and progressively into the next century.



*A Bustling Queen Street in the 1880's.*

Exactly one hundred years ago, a Cardiff businessman switched on a brilliant white light — and the age of electricity in South Wales had dawned. For it was on that night late in 1884 that electric light made its dazzling debut in the area, powered by the first commercial electricity supply in the southern half of the Principality. And what excitement that electric light caused! The horse buses which then used

to trundle along Cardiff's streets were unable to pass through the Hayes, because of the crowd which had gathered to gaze in wonder at this amazing novelty. The light, which hung above the entrance to George Hopkins' American Meat Market, was encased in a lantern with clear glass sides. It was a powerful arc lamp — the brightest man-made light many of the onlookers had ever seen.' In the watching crowd was a small, wide-eyed boy named William Shea. Many years later (in 1924, when he was a maintenance fitter employed by Cardiff Corporation's Electricity Department at The Hayes substation) he remembered the scene. "There was a man in the crowd who called to his mate, 'Mike, come up and see the hydraulic light; 'tis enough to dazzle a hole in your body!' 'Other comments were made, and doubts raised. Would the brilliant glare startle the horses drawing the buses? What effect would it have on the children's eyes? But the horses were more affected by the crowds than by the light, and children continued to stare without harm.



***The old Fish Market was built in the Hayes in 1900 on the site of where the first generator for the City's first lighting supply was located. It was extensively modernised in the 1930's and today houses the Board's largest shop.***

Under a temporary licence granted by Cardiff Corporation, the Anglo-American Brush Company had installed a steam-driven generating plant in a yard at The Hayes to supply direct current for arc lighting in the immediate neighbourhood. It was for this company that the young William Shea —

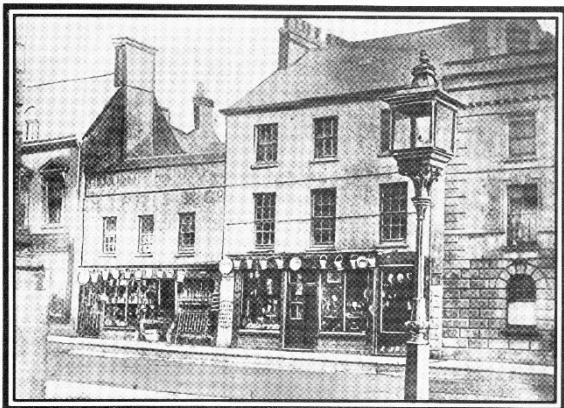
doubtless inspired by his earlier experience — started to work in 1887. He recalled that, apart from providing electricity at 2,000 volts for street lighting, the company supplied light — at the same voltage! — for such now vanished or renamed landmarks as the Old Circus and the Grand Theatre in Westgate Street, the Theatre Royal in Wood Street, the Philharmonic Hall in St. Mary Street and Lavino's Hall in Queen Street, as well as for many still existing shops and for the Queen Street Arcade. He estimated the total load to be equal to 150 arc lamps. However, regulation of the infant electricity industry was beginning to take effect. Legislation had placed local authorities in a favoured position for generating electricity.

The Anglo-American Brush Co. which had no statutory powers, ceased producing electricity in Cardiff in 1889. In 1891 Cardiff Corporation obtained statutory powers, and in 1894 became the first local authority in South Wales to provide a municipal electricity supply. Swansea Corporation had obtained similar powers two years earlier, but did not commence supplies until 1900. The first modest and restricted demand was met by means of "bulk supply" from Cardiff Castle. But in 1894 a new power station was opened at Eldon Road - later to be renamed Ninian Park Road, as the result of a petition by the residents, who complained that "ladies of ill repute" had given the area a bad name. Presumably the coming of electric light temporarily curtailed their activities.

Generation at the new power station was at 2,400 volts, single phase, 40 cycles distributed at 100 volts. There was also a 1,200volt system for direct current arc lighting. All things considered, the price was quite reasonable at six old pennies per unit. Initially, unmetered supplies had been provided at a charge of 15s per eight-candle power lamp per annum.

The Hayes, birthplace of electrical lighting in South Wales, was not being forgotten. An imposing new fish-market was built there in 1900, and beneath it was an underground substation which was opened in the same year, and in a very much modernised form, is still

playing an important part in the distribution of electricity to the heart of the city. The building also now houses the Board's largest shop.



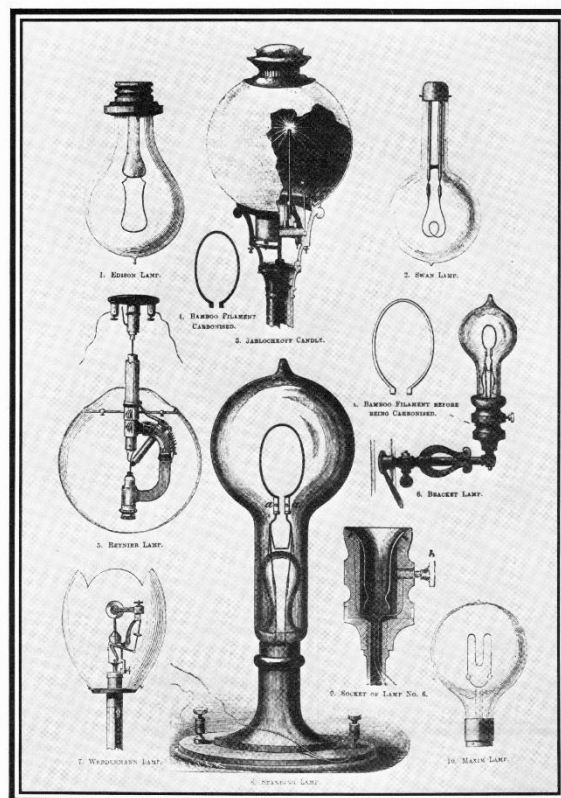
*A View of the Hayes in the late 19<sup>th</sup> Century*

Gradually the distribution network grew. In addition to The Hayes, underground substations were commissioned at Wood Street, Charles Street, Frederick Street and Fitzalan Place, and others followed in outlying districts.

The electricity department made phenomenal progress. In 1897 its annual sales were 308,000 units. Ten years later, unit sales were nearly three and a half millions a year, and by 1937 the figure stood at 117 million units. These figures reflected in microcosm the growth of the electricity industry throughout Britain. Today, well over 10,000 million units a year are sold to the 860,000 consumers in South Wales.

Meanwhile, back in 1891, electric light was reported to have caused quite a stir at Nantymoel, near Bridgend. An arc lamp had been installed temporarily in a local hall as an added attraction for a bazaar, the power coming from generating plant in a neighbouring building. The new-fangled light had the desired effect, it attracted curious crowds and gave a welcome fillip to business. Furthermore, two local shopkeepers were so impressed that they resolved to have 'the electric light' to illuminate their own business. Electric light was suddenly in demand not just in Cardiff, but in the valleys too. But the very powerful, high voltage arc lamps were hardly suitable for domestic use.

The popularity of electric lighting in the home soared with the availability of the incandescent light bulb, first demonstrated by the chemist Joseph Swan in 1879. The light, produced by a fine filament in a vacuum-sealed glass bulb produced brilliant illumination at relatively low voltage. It was ideal for use in the home. People were no longer content with the dim light of oil and gas lamps, with their unpleasant smells and sooty emissions. Soon, various electrical appliances became available, fires, cookers, kettles and toasters to name but a few. Electricity became essential to our everyday living. Today it's hard to imagine what our lives would be like without power that is available at the flick of a switch.



*Lamps for Electric Lights*

The first street lighting installations in Cardiff were not, it seems, as bright as some people would have expected. Edward Jones, an electrical engineer with Cardiff Corporation, and later the Board's first deputy chairman, wrote: "much disappointment was felt at the quality of the light. The glass in the lanterns being of the crinkled type: the object being to get better diffusion. "The latter object was however obtained at a big sacrifice of useful light. The only time these lamps gave a decent

light was when the bottom carbon was short and the arc near the bottom of the glass, as the lantern was much narrower at the bottom than at the top. “Unfortunately for the long-suffering public this only happened early in the mornings before they were about. The passing of the rectified arc lighting was the occasion of rejoicing on our part as its upkeep was constant source of worry and anxiety.”

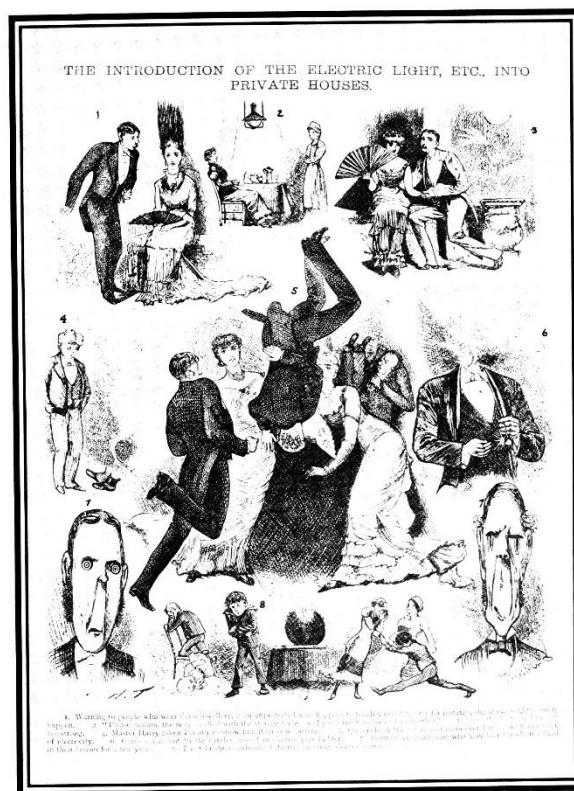
Customers of the Anglo Brush Company, who wanted to know how much electricity they had used, referred not to a meter, but to a two foot ruler. As accurate meters were not available in the 1880s, the company estimated consumption by how much carbon had been burned in the arc lamps. An employee, equipped with a ruler, was sent out at regular intervals to measure consumption.

In the early years of the century, electricity department staff in Cardiff could count on an audience of interested onlookers, whenever repairs were being carried out. Breakdowns always drew ‘big houses’, wrote Mr Jones. “One of those occasions, a breakdown in a transformer tank in Queen Street on a Sunday night, a huge crowd had assembled and were looking. The cover of the tank had been removed and the Chief was there. One of our men was attending to H.T. fuse and to get the plug out which was rather stiff, accidentally shorted the H.T. live terminals with his screw driver.

“The result was disastrous to the terminals and screw driver, and the resultant fireworks was awe inspiring, so much so that the huge crowd struggling to get a look in, vanished as if by magic in a couple of seconds. It is marvellous how such a big crowd could make themselves scarce in such a short time.”

Anyone can make a wrong prediction, but it’s difficult to be more off-target than this gem from a local authority committee in the 1870s. After investigating the prospects for electric light in the home, it reported: “We are quite satisfied that the electric light can never be applied indoors without production of an offensive smell, which undoubtedly causes headaches, and in its naked state it can never

be used in rooms of even large size without damage to sight.”



### *Cartoons on the Introduction of the Electric Light into Private Houses*

1. If an unprotected wire touches a necklace
2. Please M'am the man's called with a storage force.
3. Jones thinks the light far too strong.
4. Master Harry takes Tommy to see the new battery in the pipe-lighter.
5. Quadrille with an over escape of electricity.
6. Curious accident by a careless use of an electric pipe-lighter.
7. Portrait of a gentlemen who has had electric fluid in their houses for a few years.
8. The Christmas galvanic battery pudding currants etc.