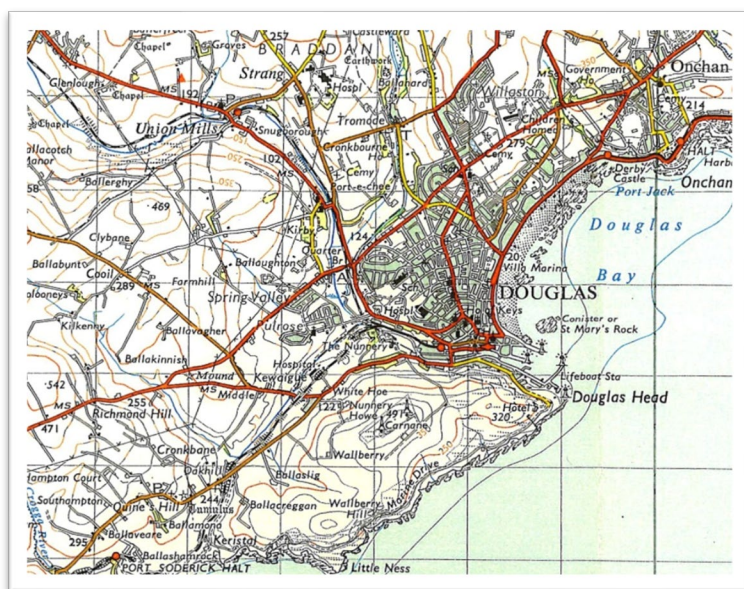


ELECTRICITY IN THE ISLE OF MAN

DR. G.T. BLOOMFIELD
University of Guelph

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DOUGLAS

DOUGLAS only received a public electricity supply in 1923 when the Borough council opened a small diesel power station on North Quay. A larger steam turbine station entered service at Pulrose on the southwestern edge of the town in 1929. The site is now used by a diesel station (48MW) and a CCGT plant (87MW) completed in 2003. Natural gas is supplied by a spur from the Scotland-Ireland pipeline of Gas Networks Ireland.

Ordnance Survey, One Inch Seventh Series, Sheet 87, Isle of Man, 1957 (Author's Collection).

Electricity in the Isle of Man

The Isle of Man (area 227 square miles) is the largest of the Crown Dependencies of the British Isles. Administered in accordance with its own laws by the Court of Tynwald, the island is independent from control by London. This administrative independence outside the United Kingdom has been a major factor in the creation of a distinctive economy.

Until the 1860s the island economy was dominated by traditional agriculture, often supplemented by seasonal employment in fishing. Mining, especially for lead, was important at Laxey and later at Foxdale.¹ The Big Wheel at Laxey (1854), built for pumping the mine, was a notable landmark of this industry. The population grew from 40,000 in 1821 to 52,000 in 1861 and then stabilised around 50,000 and remained at this level for another one hundred years.²

The appointment of Henry Brougham Loch as Lieutenant-Governor in 1863 marked the beginning of several major changes. Government was reformed in 1866 with elections to the House of Keys; some constitutional issues with Great Britain especially about revenues were also settled.³ Improvements in the island's infrastructure followed these reforms. The Isle of Man Railway built a narrow-gauge line from Douglas to Peel (1873) followed by a southern line to Point Erin (1874). A line from St Johns to Ramsey was completed by the Manx Northern Railway in 1878/79. **(Figure 1)** The two railway companies merged in 1904. Island harbours were improved by new quays and breakwaters. The completion of the Victoria Pier at Douglas allowed passengers to board vessels at all stages of the tide.

Douglas, already the largest town with a population of 6,772 in 1831, was modernised from 1860 when the first Town Commissioners were elected. It became the capital in 1869 when the Tynwald was moved from Castletown. Substantial urban development from the early 1870s expanded the town from the congested area around the River Glass and harbour with new streets and a long promenade around the bay. Horse trams were introduced on the sea front in 1876 and a cable tramway (1899) gave access to the new areas of the Upper Town. By 1900 Douglas had a population of 19,273.⁴

These improvements together with the island ambience, the large urban holiday potential in Lancashire, and the enterprise of the Isle of Man Steam Packet Co. brought in the visitors. Numbers of visitors annually rose from about 70,000 in 1870 to 182,000 in 1884 and 310,316 in 1887. A peak of 634,512 was reached in 1913.⁵ More hotels and boarding houses had been built in the 1890s when the electric railways added a new element of scenic excursions for the visitors.

¹ Derek Winterbottom, "Economic history 1830-1996", in John Balchem, ed. *A New History of the Isle of Man*, Volume 5 (Liverpool: Liverpool University Press, 2000), pp.207-278.

² Isle of Man Census 1911, *Report*, p.1.

³ T.E. Kermeen, *Centenary of the Popularly Elected House of Keys 1866-1966* (Douglas: Island Development Company, 1966).

⁴ Douglas N. Kniveton, *Douglas Centenary 1896-1996* (Douglas: The Manx Experience, 2001).

⁵ J.W. Birch, "Economic geography of the Isle of Man", *Geographical Journal*, Vol.124(4), 1958, pp.494-510.



Figure 1 ISLE OF MAN RAILWAY SYSTEMS 1912.

During World War I some of the tourist accommodation was used to house enemy aliens from the mainland. The large ballrooms at the Palace and Derby Castle were leased by Vickers in 1916 to augment the production of airship fabric and gas bags used in the Barrow-in-Furness airship works.⁶

As part of the effort to restore the tourist trade, Douglas Corporation took the first steps to develop a public electricity supply. As in other parts of the British Isles, local initiatives were followed by state intervention and eventually by full state control.

⁶ Peter Connon, *An aeronautical history of the Cumbria, Dumfries and Galloway Region, Part 2, 1915 to 1930* (Penrith: St Patrick Press, 1983), p.55.

ELECTRIC RAILWAY AND TRAMWAY SYSTEMS IN THE ISLE OF MAN¹

	YEARS OPERATING	ROUTE MILES	MAX. NO. OF CARS
MANX ELECTRIC RAILWAY	1893-	17.75	64
SNAEFELL MOUNTAIN RAILWAY	1895-	4.62	6
DOUGLAS SOUTHERN ELECTRIC TRAMWAYS	1896-1939	3.25	16

The three electric railway and tramway systems built in the Isle of Man in the 1890s were among the earliest systems developed in the British Isles. Each system was part of the expanding infrastructure for tourism that was becoming a substantial part of the island's economy.

Manx Electric Railway began as a short line from Derby Castle, Douglas to Groudle Glen two miles to the north. Under new management it was extended to Laxey by 1894. The Isle of Man Tramways & Electric Power Co. also acquired the Douglas horse tramways and the Snaefell Mountain Railway in 1896. By 1899 the line had been extended to Ramsey. Financial scandals involving the company and a local bank resulted in the sale of the Douglas assets to the Corporation in 1901 and the formation of a new company, the Manx Electric Railway, in 1902. From this time outside interests controlled the company.²

The Douglas Southern Electric Tramways Co. was as developed by the New General Traction Co. based in London, a business that also controlled the electric tramways in Coventry and Norwich. With a 30-year concession from the Douglas Head Marine Drive Co., the tramway followed the toll road and the scenic coastline to Port Soderick. The full line of 3.25 miles was completed in 1897. Local interests took over the management when the concession expired in 1926.

Each company built an independent power station. The first generating plant of the Manx Electric Railway was built at Castle Douglas in 1893. This was replaced by a larger plant at Laxey in 1904. By 1910/11 the Laxey station had a capacity of 1,300kW.³ AC (25Hz) was distributed to substations along the line. The Snaefell Mountain Railway had a small hydro station about halfway up,⁴ later replaced by power from Laxey. Douglas Southern's steam power station at Pigeon Cove had a capacity of 200kW in 1910/11.⁵ All the tramway power stations were closed in 1934/35.

Although most of the traffic was in the summer tourist season, the Manx lines remained viable when many of the urban systems elsewhere had closed. The Manx Electric Railway was acquired by the Manx government in 1957 as part of a move to secure the future of this tourism asset.

Notes:

¹ Compiled from Keith Turner, *Directory of British Tramways*, Vol.3 (Stroud: The History Press, 2010).

² See "Manx Electric Railway Online" www.manxelectricrailway.co.uk The website has extensive detail on the history of the system and most of the buildings and structures. Other details may be found on the main website of the Manx Electric Railway Society at www.mers.org.iom

³ *Garcke's Manual of Electrical Undertakings* 1910/11. The Laxey plant also included a small hydro-electric turbine. See D.G. Tucker, "Nineteenth-century hydro-electric railways in the UK", *Journal of the Railway and Canal Historical Society*, Vol.24, 1978, pp.16-21.

⁴ Ward, Lock Co.'s Illustrated Guide Books, *Isle of Man* (London: Ward, Lock, 3rd edition, c.1904), p.91.

⁵ *Garcke's Manual of Electrical Undertakings* 1910/11.

I Local Initiatives

Although Manx promoters were active with early electric railway development, their efforts to persuade Douglas Town Council to accept a lighting supply were resisted. The Isle of Man Tramways and Electric Power Co. had introduced electric lighting in part of Onchan village by 1897.⁷ At this time, “the Corporation has appointed a committee to consider the question of electric lighting”.⁸ No action resulted from the committee’s deliberations, and it would be another quarter-century before any public supply became available in Douglas. This lack of action is somewhat surprising, for other go-ahead resorts such as Blackpool were already actively electrifying the public face of their towns.

The role of private generation still awaits detailed exploration, but it is likely that some of the larger hotels may have installed a generator in the 1890s. By 1904 the Palace entertainment complex on the Promenade had electric lights to illuminate the gardens.⁹

With a resident population of about 20,000 in 1920, Douglas was one of the larger places in the British Isles still without a public electricity supply. The Douglas Corporation Electric Light & Power Act 1921 reflected a new activity by the Corporation. Bertram Kelly was appointed as electrical engineer and the system began operation on 18 May 1923.¹⁰ A small power station (410kW) was built on North Quay, initially serving only the town centre. In 1928 a larger steam-turbine plant was completed at Pulrose.

II State Intervention

J.M. Kennedy’s report to the Manx government prompted the Isle of Man Light and Power Act 1932 which established the Isle of Man Electricity Board. With the financial backing of the state the Board had powers like those of the Electricity Board for Northern Ireland.¹¹ Taking its current from the Douglas Corporation station at Pulrose, the Board built a 33kv grid to serve all the main places on the island (**Figure 2**). By 1934/5 the electric railways and tramways closed their power stations and obtained their supply from the Board.

The two electricity undertakings grew steadily, the Board gradually reaching parity with the Douglas Corporation system. In 1957 sales of electricity by the Corporation reached 24.3million kWh while the Board sales were 20.4m kWh.¹²

Generation was concentrated at two power stations: Pulrose, Douglas owned by the Corporation, and Peel (opened in 1950) owned by the Board. At Pulrose the older steam plant was gradually replaced by diesel engines.

⁷ *The Gasworks Directory and Statistics 1897*, p.334. (Google Books)

⁸ *The Gasworks Directory 1897*, p.323.

⁹ Ward, Lock Co.’s Illustrated Guide Books, *Isle of Man* (London: Ward, Lock, c.1904), p.44. The Palace was described as the chief of the monster dancing halls.

¹⁰ Bertram Kelly (1884-1976) was born in the Isle of Man and moved to Southend-on-Sea in 1887 when his father was appointed as manager of the Borough’s Pier, Pavilion and Electric Tramway. He retired from Douglas Corporation in 1947 and was later ordained as an Anglican minister. Details from Wikipedia.

¹¹ “Sir John Kennedy 1879-1954”, *The Engineer*, Vol.198, 1954, pp.364-365.

¹² *Electricity Supply Handbook 1958*, pp.169-170.

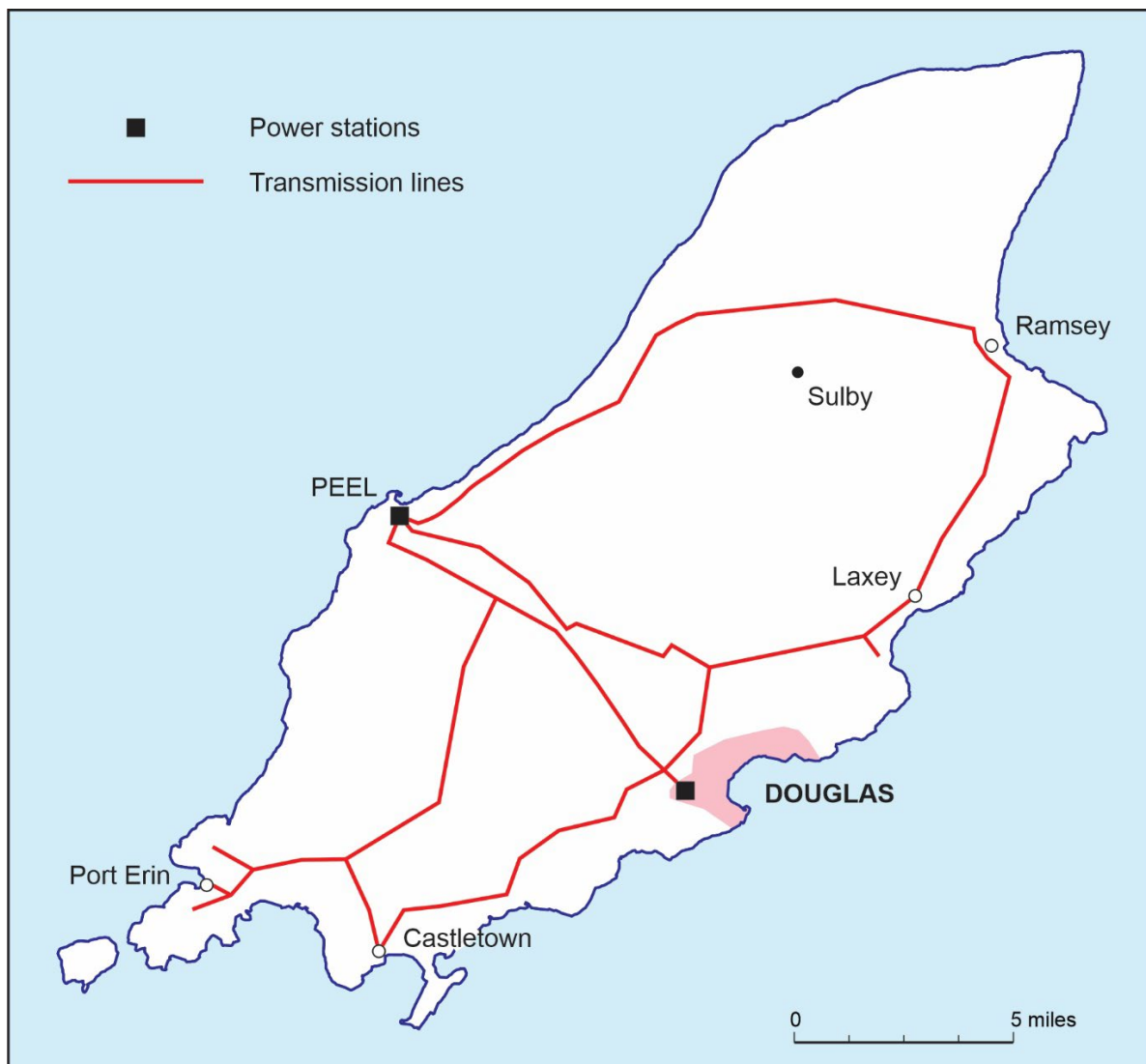


Figure 2 ISLE OF MAN ELECTRICITY SYSTEM 1957.

**ISLE OF MAN POWER STATIONS:
GENERATING CAPACITY (KW)**

	<i>Pulrose, Douglas</i>		<i>Peel</i>
	<i>Steam</i>	<i>Diesel</i>	<i>Diesel</i>
1947	11,541	-	-
1957	15,475	-	10,440
1967	8,800	14,000	16,410
1977	-	36,000	30,150

Source: *Electricity Supply Handbook*. Two small stations were built later by the Board at Sulby (hydro-electric) in 1981 and Ramsey (diesel) in 1983.

III State Control

On 1 April 1984 the two separate electricity undertakings were merged as the Manx Electricity Authority. Douglas Corporation was the last local authority in the British Isles to have retained its own electricity department.

Later developments ended the isolation of the Isle of Man system. The first was the building of a subsea cable connection to Bispham, Blackpool opened in November 2000. This AC interconnector had a capacity of 40MW and allowed for the import and export of power to the mainland.

The second development was natural gas supply that came via an 11km spur line from the Bord Gáis Scotland-Ireland pipeline which passed close to the island. With this new source of energy, a Closed Circuit Gas Turbine (CCGT) plant of 87MW at Pulrose was completed in 2003.

General trends in electricity supply in the Isle of Man since 2005 are illustrated in this table:

ISLE OF MAN ELECTRICITY MILLION KWH				
	<i>Generation</i>	<i>Imports</i>	<i>Exports</i>	<i>Consumption</i>
2005	435	42	49	385
2010	498	45	108	387
2015	435	40	87	367
2019	581	46	192	366

Source: Compiled from United Nations, *Energy Balances and Electricity Profiles*.

Generating capacity has remained stable with the main stations at Pulrose (135,000kW—87,000kW CCGT, 48,000kW diesel), Peel (40,000kW diesel) and Sulby (1,000kW hydro-electric).¹³ A small plant at Richmond Hill (Isle of Man Energy from waste), opened in 2004 with a capacity of 5,500kW, also contributes to the grid system.

Summary

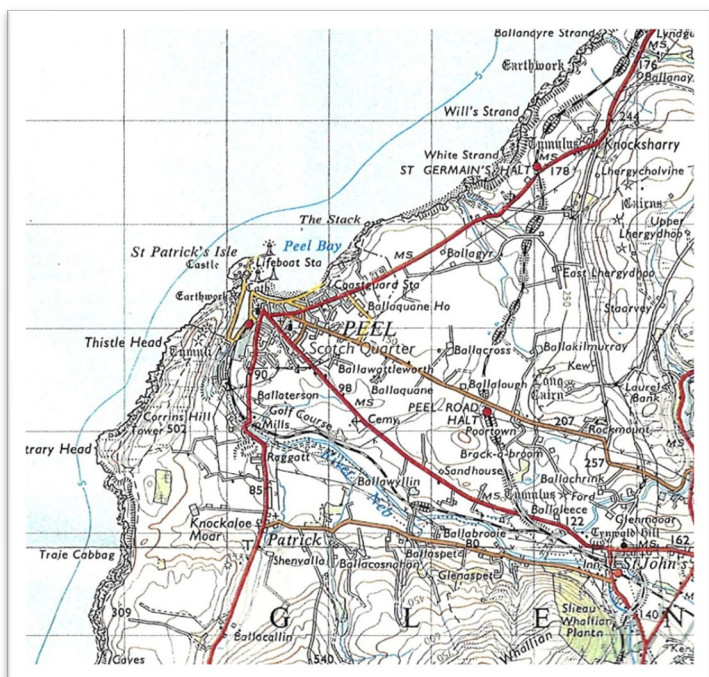
The Isle of Man illustrates some of the connections between the adoption of electricity and the growth of mass tourism and entertainment in the late nineteenth century. This was clear in the early development of electric railways on the island. Although Douglas became a premier holiday resort it was slow in creating public supply system, unlike Brighton and Blackpool. The formation of a state board in the 1930s fostered electrification across the island. With the revival of population growth in recent decades (84,069 in 2021) and the development of financial services, electricity consumption has risen substantially.

¹³ Manx Utilities Authority website (www.manxutilities.iom). The Utilities Authority was created in 2014 when the Manx Electricity Authority was merged with the Isle of Man Water and Sewerage Authority.

Note on Sources

Garcke's Manual of Electrical Undertakings (1896-1960) includes much of interest on the electric railways and other organisations. The Museum of Science and Industry in Manchester offers the most comprehensive collection.

Additional material especially on the early history awaits discovery in the libraries and archives of the Isle of Man.



PEEL

PEEL was the first power station built by the Isle of Man Electricity Board in 1950 to supplement supplies from Douglas Corporation at Pulrose. The diesel station today has a capacity of 40MW.

Ordnance Survey, One Inch Seventh Series, Sheet 87, Isle of Man, 1957 (Author's Collection).