



ENGINEERING HERITAGE RECOGNITION

The East Perth coal fired power station(EPPS) was Australia's first power station built on the Independent Unit Principle. This principle was developed by Mr Charles Merz, a world-renowned electrical engineering expert of the early 20th century. It greatly improved the reliability and efficiency of electric power generation. It was to become the pattern of power station design and layout applied throughout Australia.

EPPS was also the nation's first power station exclusively employing turboalternators for production of electric power. Most of these machines remain in their original locations.

The first two phases of the power station consisted of 40 Hz machinery. By 1943 this frequency was out of step with the rest of Australia so the WA Government sought advice from the NSW Public Works Department. They recommended an urgent conversion from 40 Hz to 50 Hz. To facilitate the conversion, a 40/50 Hz frequency changer was installed at EPPS. When it entered service its 25 MW electric motors were reputed to be the largest in the southern hemisphere. The frequency conversion required widespread modifications to consumers' electrical equipment. The State Electricity Commission carried out this work between 1951 and 1958.



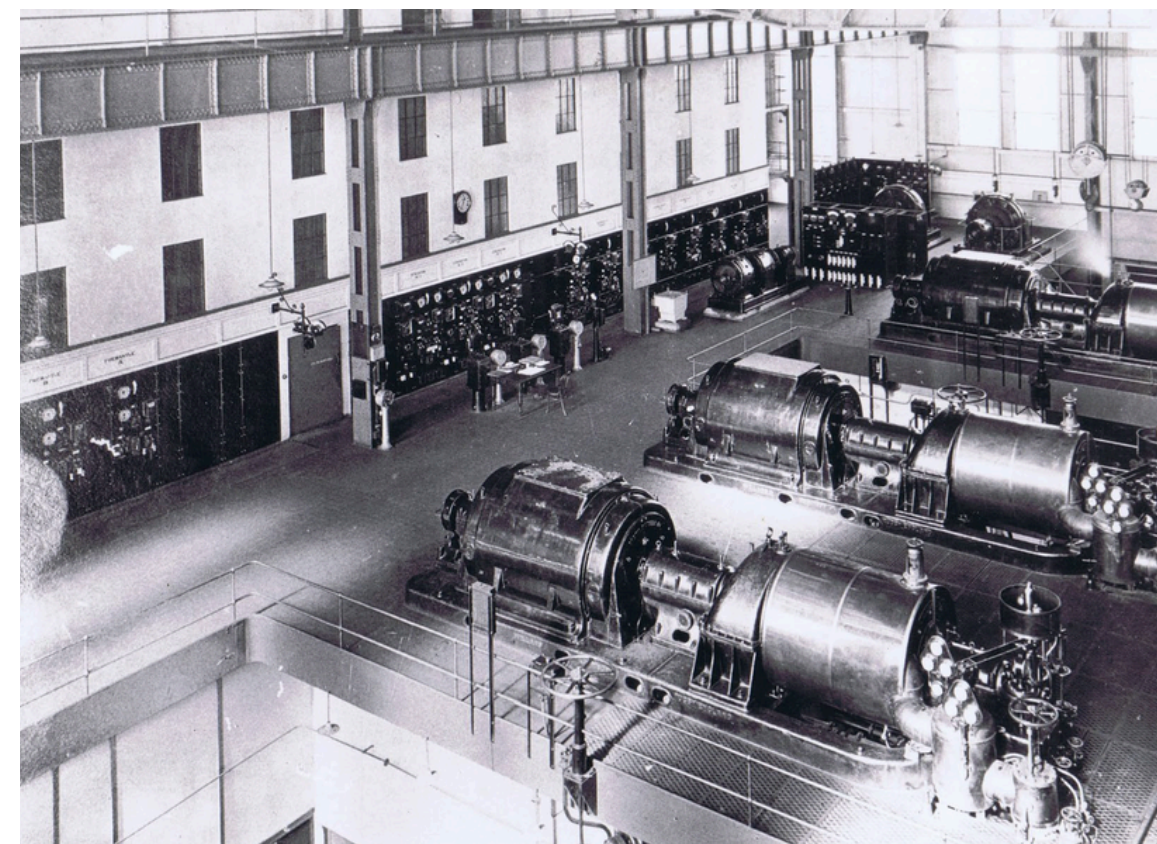
EAST PERTH POWER STATION

A herald of 'modern' power station practice



William Henry Taylor ĩ MIEE, MIE Aust, Fellow Institute of Fuel, London.

From the time of his arrival in 1914 until his retirement in 1948, the name William Henry Taylor was synonymous with EPPS. He left the Walthamstow Electric Supply and Tramways company in England and was employed by the Western Australian Government Railways as General Manager, Western Australian Government Electricity Supply and Tramways. He ably managed the new power station, the electric tramways and many other aspects of electricity supply and transport.



ĀJackōScaddan ĩ Premier of Western Australia 1911-1916

In late 1912, after seeking advice from Mr Charles Merz, Premier Scaddan decided to build a central power station in Perth to supply general consumers and the State's soon to be acquired electric tramways network. In keeping with the latest trend in electric power engineering, the station frequency was to be 50 Hz.

In January of 1913 Premier Scaddan departed on a world tour to view the latest developments in power station and electric traction technology. Whilst on tour, he struck an undocumented deal with Merz whereby the power station's frequency was altered from 50 Hz to 40 Hz.

Not until 1914, well after construction had commenced, was the change of frequency publicly questioned. With no answers forthcoming, it became one of the State's most controversial engineering decisions.



CITY OF VINCENT



ENGINEERS
AUSTRALIA

TIMELINE

Construction of EPPS commenced in 1913 with more than 1,300 hardwood piles cut from the Jarrah forests of south western Australia being driven on the site. On top of them was poured a concrete raft to support the power station buildings. The first recorded power export was on 3rd December 1916. From then, until South Fremantle Power Station began operation in 1951, it was the largest power station in the State. In 1981, after 65 years of operation it ceased generating power but remained on power factor correction duty until December 1982.

Other dates of interest are listed below.

'A' Station (40 Hz): Starting dates:-

Unit 1 (4 MW): 1916

Units 2 & 3 (2 x 4 MW): 1917

Unit 4 (7.5 MW): 1922

Unit 5 (12.5 MW): 1927.

Combined 'A' Station capacity 32 Megawatt (MW); Last unit retired 1955.

'B' Station (40 Hz): Construction 1935-1938; Unit 6 capacity 25 MW; Retired 1981.

40/50 Hz frequency changer: Construction 1949-1951; Capacity 25 MW; Retired 1982.

'C' Station (50 Hz): Construction 1954 - 1956; Unit 7 capacity 30 MW; Retired 1981.



TAYLOR, William Henry,
HonMIEE MIEAust (1883-1963)



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Power Station