

An Overview of Brown Coal Mining and Electricity Generation in the Latrobe Valley, from the Establishment of the State Electricity Commission of Victoria to Privatisation

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At the turn of the twentieth century, Victoria's main fuel and energy source was black coal imported from New South Wales. Electricity was generated by steam raised from black coal, trains were powered by black coal, and black coal was used in factory furnaces. Supply was always uncertain, interrupted by strikes on the coal fields and in the transport industry. At the time, Victoria's electricity supply was also haphazard, provided by private companies or local councils. To help boost the state's fuel independence, the government began developing Victoria's limited black coal resources, by establishing a state coal mine at Wonthaggi in 1909.

But Victoria had another energy resource to exploit: massive deposits of brown coal lying along the Latrobe River in Gippsland. In the 1870s, Henry Godridge, out prospecting for gold on the north side of the Latrobe River, found coal instead. His discovery led to the formation of the Great Morwell Coal Mining Company, which established an open cut mine and also investigated manufacturing briquettes - blocks of pulverised dried coal. The company found it difficult to market the brown coal because of its high moisture content and went into liquidation in 1899. Nearly ten years later, the Victorian government sought advice from English expert Charles Merz on its plans to electrify the railways. Merz suggested a power station on the Morwell brown coal fields on the Latrobe River could provide the power for a suburban electric rail system and also provide Melbourne with an electricity supply. According to Cecil Edwards in his jubilee history of the State Electricity Commission of Victoria, *Brown Power*, this was the first proposal to use Victoria's brown coal deposits for generating electricity.¹ Brown coal was used extensively in Germany for power generation and briquetting. Following Merz's advice, a German expert recommended a suitable site for an open cut mine and power station on the south (or opposite) side of the Latrobe River from the Great Morwell Coal Mining Company's abandoned site.

World War One disrupted plans to develop these recommendations further. With increased energy demands, Victoria's war effort placed more strain on the state's fuel supplies. During a strike on the New South Wales coalfields that halted black coal supplies in 1916, the Mines Department re-opened the abandoned Great Morwell Coal Mining Company's mine and sent brown coal to Melbourne as an emergency fuel. In 1917, a Brown Coal Mine Advisory Committee that had been formed to consider electricity production, acted swiftly to recommend building a power station on the south side of the Latrobe River. The site had vast deposits of coal, a thin layer of overburden and a water supply. Soon after the war ended in November 1918, legislation was passed in Parliament to enact these plans. The legislation also determined that electricity generation would be provided by a public corporation, and not by private enterprise. This was the genesis of the State Electricity Commission of Victoria (SEC, SECV), which would have a mandate to electrify Victoria with a state-wide supply.²

The man chosen to head the SEC was Melbourne engineer Sir John Monash, one of the most gifted of the Allied generals in World War One. The task ahead of him was immense:

overseeing the development of an open cut mine, power station and briquette factory on a swampy river flat ten kilometres to the north of Morwell. No longer known as the Morwell Project, the new development was now called Yallourn, a name derived from Aboriginal words meaning brown fire. Also proposed for the site was a model town to be built on garden city principles to house the new workforce. The SEC hoped that providing ideal conditions for its workers would lead to an ideal workforce. The new town would essentially be a company town with no free enterprise or private ownership of houses so that the SEC could maintain control over the town and its workforce. 'Situated on a hillside in full view of an amphitheatre of beautiful hills, residence in Yallourn should be as ideal as it is possible to make', Monash wrote to the Victorian premier in 1920.³

The undertaking at Yallourn was significant in ways that were both material and symbolic. The electricity generated at Yallourn and transmitted throughout the state would eventually power city, factory, home and farm. It provided the capacity to re-organise production, stimulate new industries, transform the design of cities, mechanise farms and usher in mass communications. The Yallourn works were also symbolic, becoming a national icon, a focus for national pride. With its scale and technology, Yallourn was hailed as the only undertaking of its kind in the British Empire. It signified modernity and the pre-eminence of the engineer.⁴

The SEC promised that it would begin supplying Melbourne with electricity in 1924, but not long after construction started on the power station, a massive problem arose. Twenty tons of coal from the new open cut were placed in a boiler modelled on the power station boilers being constructed for the SEC in England. Alarming, the coal wouldn't burn. Coal from Brown Coal Mine, as the Great Morwell Coal Mining Company's site was now called, had a moisture content of 45%, and the boiler design had been based on this. But coal from the Yallourn open cut, which was a younger coal seam, was found to have a moisture content of 66%. Instead of burning coal with some moisture in it, the SEC was faced with burning water that contained coal. At the time this was discovered, the enormous expenditure of developing the coalfield and power industry had come under scrutiny so the problem was tackled under a veil of secrecy.⁵ The high moisture content was solved through pre-drying the coal. As promised, electricity began flowing to Melbourne in winter 1924. The wet coal saga, now solved, was cautiously revealed in the SEC's 1926 Annual Report.⁶

Increasingly, the Yallourn works became a showpiece and destination for streams of visitors, from school children to VIPs. They found it awe-inspiring. Powered by engine houses 'as big as city warehouses', they saw steam shovels dig into the new open cut, dredging tons of coal with each scoop and empty them into rail trucks that shuttled in constant motion between the power station, briquette factory and open cut. 'I shall carry away with me from Victoria the memory of one of the greatest undertakings I have ever seen', said one distinguished visitor from England in 1926.⁷ The model town was also a showpiece, as it developed into a place of beauty. The model houses, connected to electricity and with a water supply, were pleasantly sited on avenues planted with deciduous trees. There were abundant parks, gardens and recreational facilities. However, visitors to the model town may not have been aware of the settlements springing up nearby at Brown Coal Mine and the Haunted Hills where SEC employees and their families were living in huts made from flattened kerosene tins, packing cases and bags stiffened with cement and lime wash.⁸ They could not afford to live in Yallourn where the model houses were too expensive for lower paid employees to rent.

A significant disadvantage for residents living in Yallourn was the rain of coal dust from the briquette factory that blanketed the town. Coal dust settled on food and chairs in houses, blackened the washing and forced residents to develop 'the Yallourn squint' to keep coal dust out of their eyes. The houses' roof spaces had to be vacuumed regularly to minimise fire risk. The reservoir – often coated with a thick layer of coal dust sludge - was regularly declared out of bounds for visitors viewing the town.⁹

While residents were adjusting to living with coal dust, the Yallourn administration received a disturbing report in 1928. Recent boring revealed that an area of land reserved for more housing was lying over easily-winnable coal – even though the town's site had been carefully selected to avoid building on coal deposits. This had serious implications for the town and its future development.¹⁰ Housing now had to be built on steeper sites, adding to the SEC's expense of creating and administering the model town.

Floods

Flood and fire at Yallourn threatened the state's power supply and tested SEC resources. In November 1934 – towards the end of the Great Depression - flooding rains had deluged Victoria. Throughout the state, eighteen people drowned. Houses were flooded, stock and crops were lost, bridges and rail lines were washed away. On 30 November, floodwaters in the Latrobe River surged into the open cut when the protective levee bank gave way. The next day, five million gallons of water per minute poured into the open cut, transforming it into a gigantic lake, flooded to the top coal face. The SEC's urgent priority was to get the Yallourn power station back into operation as soon as possible. When the call for extra workers was broadcast on Gippsland radio, nearly 1,000 men responded, and most were employed. The old mine at Brown Coal Mine came to the rescue, as men toiled to get it into working condition and to bring coal over the river to the Yallourn power station. They worked in three shifts. The huge job of pumping out the open cut and cleaning out the sludge had also started. Nearly six months later, the power station was again supplied with coal from the Yallourn open cut. SEC employees and the army of extra workers had managed to maintain electricity supplies from Yallourn to Victoria through innovation and incredibly hard work.¹¹

World War Two

The demands placed on the SEC during World War Two were immense. It was supplying munitions factories and other industries involved in the war effort, connecting country areas to the grid to increase food production, and using its own workshops to assist with manufacturing and assembling vitally-needed war equipment. At Yallourn, generating capacity was greatly increased. In 1941-2, 67% of Victoria's electrical energy came from the Yallourn power station, while the briquette factory worked 24 hours a day. This was achieved with a reduced work force. With no possibility of continuing its expansion program due to wartime contingencies, the SEC was able to pay off its accumulated losses of the early developing years and there was also a significant reduction in the domestic tariff.¹² Because of its significant role in Victoria's war effort, Yallourn was recognised as a prime target for enemy air raids. Defensive measures were installed, such as an anti-aircraft battery and stationing gun crews there. But during the war years, a greater threat to the state's electricity supply and war effort came from another source.

Fire

The morning of Monday 14 February 1944 was cool and cloudy, and didn't threaten as a bushfire day. But around lunchtime the wind changed to a north-westerly and temperatures soared. A smouldering burn-off on a farm to the north of Yallourn was whipped into flames by the wind change. Fanned by the northerlies, the fire raced to Yallourn. Homes were burnt in the Haunted Hills near the outskirts of the town and patients were evacuated from the Yallourn Hospital when fire scorched the walls. Hedges caught alight in the town. At the railway station, trucks filled with briquettes started to burn fiercely, the loads ignited by flying embers. The fire continued on a terrible path of destruction south through the Strzeleckis where thirteen people were killed.

It seemed the open cut was safe when the fires first reached Yallourn but embers landed on the exposed coal and fires simultaneously broke out over a wide area. Army and air force personnel came to the aid of SEC workers, firefighters and volunteers trying to control the fires but the open cut continued to burn for several days. Under surface fires took weeks to extinguish. There was much damage to plant and equipment in the open cut. Once again, coal from the Brown Coal Mine came to the rescue and was used to supply the Yallourn power station. Coal supply from the Yallourn open cut was not restored until May. Severe electricity restrictions for industry and domestic use were introduced immediately after the fires, but they only lasted for eight working days.¹³

Within days of the fire, Judge Leonard Stretton, who had conducted a previous royal commission into the catastrophic 1939 fires, was appointed to inquire into the causes of the 1944 fires, assess the measures taken by the SEC for fire protection and to decide what further precautions should be taken to prevent future bushfire damage to the town and the works. Unexpectedly, his report began with a hard-hitting denunciation of the SEC's administration of the town of Yallourn. 'Here indeed, the townsman enjoys all that the heart of man may desire – except freedom, fresh air and independence'.¹⁴ He wrote of 'suffocating paternalism' of the SEC, and asserted there was 'legitimate dissatisfaction' in Yallourn. Stretton defended discussing conditions in the town in his report because he considered protecting an undertaking such as Yallourn relied on the goodwill of the people to respond in a time of crisis. He had certainly found that spirit of goodwill in the bushfire crisis, but, he cautioned, it could not be relied on in the future because of the dissatisfaction - and justifiable dissatisfaction – that he found at Yallourn. It seems that while there was widespread dissatisfaction at the way Yallourn was administered, Judge Stretton may have under-estimated the immense loyalty that many employees felt for the SEC.

Stretton then addressed the terms of reference for the royal commission and made some sharp criticisms of the bureaucracy at Yallourn and the short-comings of the rule of engineers that prevailed at the town and works. Yallourn's vulnerability to fire stemmed from its proximity to the bush that was outside SEC territory. One of his main recommendations was the appointment of a fire forestry expert to devise a protection and fire suppression plan. He argued that this officer should have considerable authority and independence, with direct access to the Commissioners of the SEC, by-passing the engineering hierarchy at Yallourn. Stretton's report led to detailed forestry management practices and the establishing of the Yallourn Forestry Group. According to SEC power station superintendent and historian of the Yallourn power station, Colin Harvey, Stretton's report 'established principles and organisational practices which have enabled the SEC to deal very effectively with fires on its territories'. The SEC gathered the expertise and equipment to cope with several serious open

cut fires at both Yallourn and Morwell open cuts, and without any electricity restrictions imposed on consumers.¹⁵

Postwar Development: the Latrobe Valley

During the war years, the SEC was already formulating postwar plans for increasing Victoria's fuel and energy supplies. The state was still reliant on New South Wales coal for about half of its energy needs, in spite of the Yallourn works and the SEC's hydro-electric scheme. The SEC now had to prepare for a postwar society that would have dramatic increases in population, industry and energy demands.

Electricity rationing had been avoided during the war years, except for a short time after the 1944 fires, but rationing became part of postwar life. Instructed by an electorally-vulnerable government to produce a plan on how to meet Victoria's future energy requirements and end reliance on imported coal, the SEC revealed plans for massive developments in its 1947 annual report. A new industrial region stretching from Moe in the west to Traralgon in the east, the Latrobe Valley, was about to be developed. Coal winning, briquetting and power generation would no longer be restricted to Yallourn. A new open cut would be developed south of Morwell, supplying brown coal to two briquette factories and a power station.¹⁶ The Yallourn power station would also be greatly extended, with three new power stations, C, D and E stations being built there. Moe, which did not lie over coal, was poised to become a dormitory town for the SEC. To the east, preliminary investigations and boring were also underway south of Traralgon where there were extensive coal deposits.

In this new region, Morwell, Moe and Traralgon would expand as urban centres with large increases in population. Many migrants arriving from Britain and Europe would make their homes there.¹⁷

Morwell would be transformed by the new open cut and briquette factories planned close to the town. It would become a component of the SEC's new industrial Latrobe Valley, instead of a railway town servicing its agricultural and forestry hinterland. Farms on its outskirts would disappear and the town would experience rapid population growth. Morwell also lay over coal. The SEC had no intention of providing a new Yallourn for workers and their families. In the twenty five years since the SEC started operations at Yallourn, there were now other state authorities to oversee such important areas as housing and planning: the Housing Commission of Victoria and the Town and Country Planning Board. But in 1947, with the new industrial development at Morwell waiting to be ratified by the government, the SEC dipped into regional planning and organised for crusading architect Frank Heath along with its chief architect, W.E. Gower, to prepare a report that addressed 'developing the region on a planned basis'.¹⁸ Of particular concern to Morwell residents in the far-ranging Heath and Gower report, were the vague but disturbing references to a 'New Morwell', which would accommodate 15 000 people and be close to the works, but would also be removed from 'industrial nuisances'.¹⁹ Implied in the report, but not clearly stated, was that 'New Morwell' would eventually replace the existing town of Morwell, which was almost surrounded by land overlying coal deposits.²⁰ The Victorian premier John Cain stepped in and made it clear that Morwell was not in danger of being demolished. Instead, he declared that a model township to cater for the increasing population would be developed as an extension to the existing town. Yet with coal deposits and Australian Paper Mill's operations restricting Morwell's expansion to the north, south or west, any 'model' planning would be difficult. As David Langmore has written in his planning history of the Latrobe Valley, the

plans would have almost as much to do with ‘town squeezing’ as town planning. From his close reading of the documents, Langmore argues that the SEC would have preferred the demolition of Morwell, but it was the premier’s intervention that saved the town.²¹

Significantly, Langmore also notes that little debate or attention was paid to an acceptable buffer zone between Morwell and the proposed open cut. At Yallourn, the SEC had left a buffer of 1.6 kilometres between the town and the open cut, but plans that were being prepared for Morwell left only 400 metres between the town and the mine.²²

The Town and Country Planning Board began preparing a planning scheme for the Latrobe Valley, the first statutory subregional plan completed in Victoria. Its main aims were to protect the brown coal resources, determine appropriate land use in the region and facilitate co-ordinated development for a region whose population was predicted to increase from 19 000 in 1949 to 100 000 by the end of the century.²³ While the SEC had handed over planning responsibilities and left other government authorities and municipalities to provide most of the housing, water supply and community facilities, it was still the State Electricity Commission of Victoria that defined the new landscape as it responded to meeting the escalating power demands of postwar Victoria.²⁴

Work began on the Morwell open cut and briquette factories in 1949. With Morwell’s population expected to increase from 3 000 to 14 500, hostel and camp accommodation were under construction and Housing Commission estates were being built to the north east of the town. The briquetting project, however, didn’t go to plan.

As well as Victoria’s pressing energy needs, Morwell’s expansion was being hastened by the deteriorating politics of the Cold War. The SEC chief engineer, Ernest Bate, had ordered two complete briquette factories from Germany in 1949. But on a second trip to Europe in 1950, he urged the SEC to buy more factories from European suppliers as it seemed that another war was imminent. His advice coincided with the prime minister’s warning to state governments that war was possible, making electricity production and fuel production more vital than the current task of fulfilling local demand. Orders were placed for two more factories, as well as dredgers and coal winning plant from Britain. There was added confidence in the project because brown coal in the Morwell open cut had a lower moisture content than that at Yallourn – 61%, instead of 66%. The Morwell operation would require less coal to produce the same amount of briquettes. The SEC expected the first factory to start operating in 1953. But by 1952, the whole project had come to a halt. The recession of 1951 with its credit restrictions had resulted in dismissal of half of the workforce, while equipment for the first two factories lay in limbo at the site. Delivery of the further two factories had been deferred. A project that had so far cost 24 million pounds lay idle. Four years later, though, it was all action, as an article in the in-house *SEC Magazine* revealed with an enthusiastic description of the re-activated project: ‘Yes, a mighty scene is well under way... Morwell is a tribute to SEC team work, to the men who started it, to those carrying it on. They have shared many headaches, but can now signal proudly: “Morwell is advancing according to plan.”’²⁵

The plan, however, was a very different one from that of the late 1940s. Although the SEC decided to persevere with the first two briquette factories, it cancelled the orders for the third and fourth, and tried to sell plant that was languishing in costly storage. The Morwell project’s priorities were now changed from briquetting to power generation. In 1956, the SEC announced that a gigantic new power station, the Hazelwood power station, with a capacity

for 1 000 megawatts, would be built to the south of the open cut. And in 1959, it became clear that the original plan of briquettes made with coal from the Morwell open cut could never be realised. The first briquette factory finally started operating in December 1959. But production stopped a week later. The coal from the Morwell open cut with its high alkali and sulphur content was not suitable for briquetting. The briquettes deteriorated quickly and fouled the boilers. Yallourn coal was brought over to supply the first briquette factory, as well as its counterpart when it started production in 1960. Except for that brief period in December 1959, Morwell coal has never again been used for briquette manufacture. A decline in demand for briquettes was also becoming evident, due to competition from oil, cheap black coal and, several years later, the discovery of natural gas in Bass Strait.²⁶

Whatever the false starts and changes in plan, by the early 1960s, Morwell had been remade as an industrial town. The open cut was operating and power was being generated from the modified power house associated with the briquetting project. Briquettes were being produced at the two briquette factories, although not with Morwell coal. Construction had begun on the mammoth new Hazelwood power station that would eventually have a 1 600 megawatt capacity. Although it would be short-lived, the Gas and Fuel Corporation's Lurgi plant was converting brown coal from the open cut to gas.²⁷ Morwell, not Yallourn, had become the nerve centre of the new industrial valley.

Yallourn's Demise

By the postwar years, the model town had developed into a beautiful urban space that showcased its comprehensive planning. Its avenues were shady in summer and vibrant in autumn; its sporting facilities were the best in Gippsland. Outstanding new amenities were provided in the 1950s, including an Olympic-sized swimming pool, large public hall and excellent library. Yallourn had evolved as the medical centre for the new region, as well as the education centre. Tertiary qualifications were offered at the Yallourn Technical School. SEC control of the town had loosened. Following Judge Stretton's report, Yallourn residents gained more say in civic affairs when a town advisory council was formed. The SEC also relinquished its ownership of shops in Yallourn and also gave up ownership of the town's newspaper. Yallourn had developed an identity and grown into a tight-knit community, something the SEC had nurtured. Work and family history were intertwined with adult sons following their fathers into jobs with the SEC. Yallourn girls married Yallourn boys. Their parents were still living in the same houses they had moved to in the 1920s.

In the postwar years, Yallourn reached a population of over 5 000, soon to be overtaken by Moe and Morwell. But a tightly controlled company town was no longer relevant in the new region of the Latrobe Valley. Owning and controlling Yallourn houses was no longer a means of creating a 'contented' workforce, especially when the majority of employees at the Yallourn works lived outside of the town. The town was extremely expensive to run, with its high standards of facilities and maintenance and loss on house rentals. Brigadier Field, general superintendent at Yallourn, recommended to the SEC that all houses and commercial properties be sold. Although this meant losing control over the coal that the SEC knew lay under the town, Field considered the enormous reserves in coal fields stretching from Loy Yang near Traralgon to the Yallourn fields would compensate for this. In February 1961, he received confidential confirmation that the SEC was prepared to consider the recommendations he had been making since 1952 of selling the houses and making the town a local government area.

Several months later, Field's position changed and it seems that events at Morwell were influential. The coal lying under Yallourn was an estimated 237 million tons but Field now considered that although this was only a fraction of the total in the Latrobe Valley, 'the experience of recent years indicates the need to consider the quality of the deposits much more than the quantity'. The composition of Yallourn coal, including that lying under the town, was more valuable. The decision-makers at the SEC agreed: 'future Commission planning should aim at the gradual attrition of the town for the next forty years', they informed Field. A suitable statement was prepared for the Yallourn Town Advisory Council, Yallourn residents and local newspapers. 'Yallourn stunned by "Death Knell"', was the headline in the *Morwell Advertiser* in early October. 'Shock and horror is the reaction of Yallourn at the death sentence pronounced by the SEC on Friday night'.²⁸

The date for Yallourn's demise, 1995, was brought forward. In 1969, the SEC announced a new power station, Yallourn W, would be built, requiring more coal from the open cut. The town's demolition date was fast-forwarded. The town of Yallourn had served its purpose for the SEC. In much of the material it circulated among residents, the SEC tried to justify its demolition by claiming Yallourn was always meant to be a temporary town.²⁹ The town's demolition was also endorsed by a Parliamentary Public Works Inquiry in 1970. Bulldozers moved in and former residents saw the special places they had cared for and loved reduced to overburden. A major justification for demolishing Yallourn was the argument that mining coal from under the town would be far more cost effective than opening up the Yallourn east field. However in 1992, the SEC started excavating overburden in the east field.³⁰

The Town of Churchill

With Hazelwood power station construction underway, the SEC and the Housing Commission addressed the issue of housing. The SEC produced estimates that the population in the Latrobe Valley could increase to 120 000 by the year 2000 and chose a site south of Morwell – Hazelwood - as suitable for development and recommended purchasing land.³¹ As David Langmore argues in *Planning Power*, the SEC had an 'agenda to physically limit the size of Morwell' to protect coal winning activities. New housing built close to the Hazelwood power station would 'constrain' Morwell's expansion. The new town could be a substitute for the 'New Morwell', whose projected site to the east of Morwell was found to be unsuitable for housing.³² Langmore also claims the SEC deliberately kept Morwell Shire and the Town and Country Planning Board 'in the dark' while the project was being formulated and a site selected, and then hand-balled its preferred site to the Housing Commission to oversee.³³ First called Hazelwood, the town was renamed Churchill when its construction coincided with Winston Churchill's death. The houses were built by the Housing Commission for private ownership. Early advertising promoting the houses included claims that Churchill would have a population of 40 000 in twenty years. The SEC's and the Housing Commission's projections seem exaggerated as after a very slow beginning, Churchill's population peaked at 5 500.³⁴ Churchill has not become a regional city.

Loy Yang Power Station

With Hazelwood power station operating, the proportion of Victoria's electricity supply sourced from brown coal had reached almost 90% by 1970. The strong growth in productivity enabled the SEC to bring in reductions in real prices of electricity and a rise in returns to the government.³⁵ According to economist Malcolm Abbott in his overview of SEC operations, this encouraged the SEC to believe that 'attempting to realise greater levels of

productivity from even larger scale plants was the right strategy to pursue'.³⁶ The SEC began planning its next project in the early 1970s: a new open cut mine and two power stations at Loy Yang, five kilometres south of Traralgon, where the existing land use was mostly grazing and timber plantations. The small township of Traralgon South would have to be relocated. The SEC was now shifting its focus to the east of the Latrobe Valley.

Based on consistent annual power use increases, the SEC predicted it would need to increase supply to meet an annual increase of 6.5% through to 1990.³⁷ The site at Loy Yang was chosen because of its thin overburden and thick coal seam of 200 metres. Scrupulous testing had confirmed the quality of the coal. The new open cut would supply two mammoth power stations with eight generating units that would have a combined generating capacity of 4 000 megawatts. There would be a buffer zone of at least one kilometre between the open cut and Traralgon's southern boundaries.

In the 1970s, increasing awareness of environmental issues meant the SEC could no longer apply for approval from state government for new projects. Under the Hamer government, the Environmental Protection Authority (EPA) had been established in 1971. Now, statutory environmental requirements had to be met that included environmental impact assessments. This was a new experience for the SEC. As David Langmore comments in *Planning Power*, the SEC's documentation for the Loy Yang project was extremely impressive and 'far exceeded' previous power station proposals. There was even a measure for mine rehabilitation included in the proposal: a plan to place overburden in a large external dump before returning it to the open cut in 2000, when the mine would be large enough. [However this has not happened.]³⁸ Landscape impacts were also considered. The EPA was critical of the size of the buffer zone and argued it should be wider.

The huge development at Loy Yang would provide Victoria with base load power requirements, but in the 1970s, the SEC was also extremely concerned about its capacity to meet peak load demands. Its solution was to install a gas turbine station – the plant imported from Germany - between Morwell and Churchill as a safeguard against blackouts and power shortages. Although there were local concerns about increased pollution, the Jeeralang station was approved in 1976. Still concerned about an adequate supply of peak load, the SEC proposed to government that a second turbine station be added to the site. This time the EPA stepped in, expressing concerns about pollution and the suitability of the site for a second station. It indicated the application would likely be refused. Reaction of SEC chairman, Charles Trethowan in a letter to the Minister for Minerals and Energy, showed that the SEC felt its mandate to supply the state with electricity supply was being undermined by the EPA. He argued that SEC's plans should be given prominence. Air quality was secondary.

It appears that all the efforts of the Commission to maintain a reliable supply of electricity to the State are being frustrated by the intransigent and irrational attitude towards environmental control by the EPA, who are unilaterally setting stringent standards with little regard to costs or community needs.³⁹

A Parliamentary Public Works Committee gave permission for installation of a second gas turbine station.

In 1976, the SEC received approval for the Loy Yang project and construction began the following year. The estimated costs for the project in 1976 terms were \$1.2 billion, which demonstrates the enormity and scale of the undertaking. By October 1982, 3 000 construction

workers were employed on the site. Traralgon's population had increased from 15 000 in 1976 to over 18 000 in 1981.⁴⁰ Loy Yang A's four generating units came into operation between 1984 and 1988, while two of Loy Yang B's operating units were completed in 1993 and 1996.

Other Plans

Economist Malcolm Abbott writes that by the late 1970s, the SEC was faced with spiralling costs incurred by its construction program. It became over-extended and could not contain the costs of simultaneously building Loy Yang and redeveloping the Newport power station in Melbourne. Debt rose rapidly, and after more than twenty years of declining prices, real electricity prices started rising.⁴¹ In spite of the SEC's financial position, an article published in the *Age* in June 1980 under the heading 'SEC's Huge Power Plan' announced that the SEC was considering building another ten Loy Yang-sized power stations in the Latrobe Valley. The information came from a report outlining the next fifty years of Victoria's electricity generation. Although the report was described as a discussion paper, the SEC was already seeking reservation of sites that had been pin-pointed in the report. The plan would make living in the Latrobe Valley intolerable. It was out-of-step with growing awareness of environmental protection and regional planning issues, as well as community concerns. The plan was modified to reserving land for seven new power stations, but, as David Langmore argues, the potential environmental, social and economic implications would remain overwhelming.⁴²

Also in mid-1980, the SEC began refining its next major project, one that had been included in the 'huge power plan' report: a new open cut and two Loy Yang-sized power stations at Driffield, south of Morwell. This project would require a massive diverting of the Morwell River, moving it from the west of the town to the east of Morwell. The SEC assumed that the Loy Yang project would be completed by 1991, and that Yallourn's C and D stations and part of the Hazelwood power station would be retired in the mid-1990s.⁴³ A change of government in 1982 ended the Driffield project. There was no further discussion of the seven new power stations plan. Only the first two units of the Loy Yang B power station were completed.

At the end of the 1980s, the SEC began to dramatically reduce staff levels.⁴⁴ In 1988, 9 859 people were employed by the SEC in the Latrobe Valley. This was reduced to 5 657 in 1993.⁴⁵ However, as Malcolm Abbott observes, this drastic reduction in staff led to a corresponding 'surge' in labour productivity levels.⁴⁶ The SEC was also spending a growing proportion of its revenue to service loans incurred by the Loy Yang project. Its annual report for 1989-90 revealed a debt of \$8.1 billion, with 45% of annual earnings being used to pay down debt.⁴⁷ Abbott argues that the rise in debt levels contributed to a fall in public confidence in the SEC and led to greater scrutiny of its structure. The vertically integrated state-owned model for electricity supply was questioned.⁴⁸ After being elected in 1992, the new liberal government began restructuring the electricity industry, dividing it into discrete statutory entities and dismantling the vertically integrated model that John Monash had strenuously supported in his time as chairman of the SEC.

The State Electricity Commission of Victoria was privatised in 1997.

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- ¹ Cecil Edwards, *Brown Power: a Jubilee History of the State Electricity Commission of Victoria*, State Electricity Commission of Victoria, 1969, pp15-16
- ² Information for these contextual paragraphs is drawn from W.J. Morley, 'The Great Morwell Coal Mining Company: From Confident Beginnings to Failure in Ten Years', *Gippsland Heritage Journal*, no 8, 1990, pp 6-9; Cecil Edwards, *Brown Power: a Jubilee History of the State Electricity Commission of Victoria*, State Electricity Commission of Victoria, 1969; Meredith Fletcher, *Digging People Up for Coal: a History of Yallourn*, Melbourne University Press, 2002, pp 14-19
- ³ *Digging People Up for Coal*, p 8
- ⁴ *Digging People Up for Coal*, pp 16-18
- ⁵ *Digging People Up for Coal*, pp 58-9
- ⁶ See Colin Harvey, *Yallourn Power Station: A History 1919 to 1989*, State Electricity of Victoria, 1993, pp 125-132, for a transcription from the 1926 Annual Report
- ⁷ *Digging People Up for Coal*, p 52
- ⁸ See Kath Ringin, *The Old Brown Coal Mine*, [Moe Historical Society], 1986
- ⁹ See *Digging People Up for Coal*, pp 82-3 and the photograph opposite p. 117
- ¹⁰ See the early planning document: State Electricity Commission of Victoria, *Report on Establishment of Town of Yallourn*, 1921
- ¹¹ For a full account see *Yallourn Power Station, a History*, pp158-196
- ¹² *Yallourn Power Station, a History*, p vii, p 208
- ¹³ For more information on the 1944 fires, see *Yallourn Power Station, a History*.
- ¹⁴ *Digging People Up for Coal*, p 114
- ¹⁵ *Yallourn Power Station, a History*, p 243
- ¹⁶ State Electricity Commission, *Annual Report 1946 – 7*, pp 8-10
- ¹⁷ See Jerzy Zubrzycki, *Settlers of the Latrobe Valley: A Sociological Study of Immigrants in the Brown Coal Industry in Australia*, Australian National University Press, 1964, for discussion of postwar immigration to the Latrobe Valley.
- ¹⁸ Foreword in Frank Heath in association with W.E. Gower, *Latrobe Valley Development: Interim Regional Survey*, State Electricity of Victoria [1947]
- ¹⁹ *Latrobe Valley Development*
- ²⁰ See David Langmore, *Planning Power: the Uses and Abuses of Power in the Planning of the Latrobe Valley*, Australian Scholarly, 2013, p. 69, p. 89
- ²¹ *Planning Power*, p. 89, p. 81
- ²² *Planning Power*, p. 90
- ²³ See *Future Development of the Latrobe Valley Sub-Region: a Report and Planning Prepared by the Town and Country Planning Board*, Town and Country Planning Board, 1949, and see *Digging People Up for Coal*, p 141
- ²⁴ See Carol Flint's memoir of growing up in Morwell, *History in My Hands*, B.C. Flint, Morwell, 1991, and also *Digging People Up for Coal*, p. 141-2
- ²⁵ *Digging People Up for Coal*, p 145.
- ²⁶ For a full account of the Morwell briquetting project see Cecil Edwards, *Brown Power*, pp 214-17; also *Digging People Up for Coal*, pp 143-146
- ²⁷ The Lurgi Plant closed in 1969
- ²⁸ *Digging People Up for Coal*, pp154-163
- ²⁹ *Digging People Up for Coal*, p 167
- ³⁰ *Planning Power*, p. 357. Also see *Digging People Up for Coal* pp 164-194 for more information on the demolition of the town of Yallourn.
- ³¹ *Planning Power*, p 137
- ³² *Planning Power*, pp 124-141
- ³³ *Planning Power*, p 140
- ³⁴ See *Planning Power*, chapters, 17 and 18
- ³⁵ Malcolm Abbott, 'Performance of an Electricity Utility: the State Electricity Commission of Victoria 1925-93', *Australian Economic History Review*, vol. 46 no. 1, March 2006, p. 41
- ³⁶ 'Performance of an Electricity Utility', p. 41
- ³⁷ *Planning Power*, p 186
- ³⁸ *Planning Power*, p 187, p 190, p 365
- ³⁹ *Planning Power*, p 231
- ⁴⁰ See *Planning Power*
- ⁴¹ 'Performance of an Electricity Utility', pp 35-6
- ⁴² *Planning Power*, pp 267-281.

⁴³ *Planning Power*, p 323

⁴⁴ 'Performance of an Electricity Utility', p 37

⁴⁵ *Planning Power*, p 355

⁴⁶ 'Performance of an Electricity Utility', p 37

⁴⁷ *Planning Power*, p 355

⁴⁸ 'Performance of an Electricity Utility', p 41