

of figures, but the fact still remains that, so far as the inner area is concerned, high school education is in an appalling condition and the fault lies directly in the lap of this Government.

We have an economic shambles in this State—pay pauses, freezes and squeezes. That is what the Government is guilty of, and the sooner it wakes up to itself and realizes that it is in office to govern for the people and not to put forward out-dated political ideologies the better it will be. At the moment, we can say that the Government of this State is very poor and at an appallingly low level.

The Hon. A. W. KNIGHT (Melbourne West Province).—Mr. President, record has it that in 1873 the first public display of transmission of electrical energy took place, and it was in 1880 that the electric motor was placed into use—this was another inroad of mechanization and technological advancement. This took place more than 100 years after Captain Cook first sighted the land which is now known as the coast of Victoria. His watchkeepers recorded that they saw a coastline extending from the north-east to the west, but at the time they did not realize the wealth that was in the Latrobe Valley brown coalfields, as we know them to-day. Having seen these brown coalfields and having put out some fires—which I will refer to later—one can understand the future destined for the State Electricity Commission of Victoria.

In 1791, an escaped prisoner by the name of William Bryant made the first finding of coal in Australia in what is now known as the Newcastle area. It is interesting to note that the Australian Broadcasting Commission recently portrayed Bryant as one of the central characters in a series entitled "The Hungry Ones." It was one of the best films ever shown in this country. Bryant eventually escaped to Timor.

In 1887, the Great Morwell Coal Mining Company was formed, and exploratory works were carried out

in the Morwell area. Brown coal was mined at what is now known as the North Yallourn open cut. That coal was of a greater calorific value than some of the other deposits being used to-day by the State Electricity Commission. It was estimated in 1948 that there were 37,151,000 tons of coal in the Latrobe Valley. As a result of the extensive drilling undertaken by the Commission in recent years, it would be interesting to know now the estimate of the total deposits.

Mr. Newbery, who was the Victorian Government Analyst, was sent to Germany in 1891 to inquire into briquetting. A plant was erected, but because of the strong competition from the importers of New South Wales black coal the briquetting factory was not able to function properly. Eventually it was closed down.

The first demonstration of street lighting in this great city of ours took place in Elizabeth-street in 1880. With the advent of electricity, the State commenced to advance. During the history of this country various undertakings commenced to produce electricity. People started to use electricity and get away from the use of gas and candles. In 1903, electricity was used for traction in Bendigo, and then in 1906 it was utilized for this purpose in Ballarat. This was later carried into the metropolitan area. In 1919, electricity produced at the Newport "A" station—it is now owned by the State Electricity Commission which acquired it in 1951 by Act of Parliament—was put to use in the railways system. In 1892 the railways had a power station in Spencer-street to supply electricity to electric trams and for the lighting of the Spencer-street railway yards. In 1894, the Melbourne City Council power station was erected where it now stands, although modifications have taken place in the intervening years. It was used to supply electricity for the City of Melbourne, and the cities of Footscray,

Williamstown, Port Melbourne and Brunswick. Further development of our electricity supplies took place both in metropolitan and country areas, and the demand for electricity has proved outstanding.

Finally, it was decided to develop the brown coal resources which were known to exist at Yallourn. In 1917, a report was received from an advisory committee which was appointed by the Government of the day. It recommended the establishment of the project which we now know as the State Electricity Commission of Victoria. It was first known as the Electricity Commissioners. Legislation was enacted in 1918 for the formation of the Commission, and in February, 1921, the first sod was turned for the Yallourn power house. What a magnificent job was done by these legislators and other pioneers. One must pay a tribute to Sir John Monash, who was a brilliant soldier and a brilliant engineer, and he deserves great credit for the development at Yallourn. With due respect to the present engineers of the State Electricity Commission, one can say that his fine planning and work in the development of the State Electricity Commission is clearly evident to-day.

It was estimated that in 1923 50,000 kilowatts would be needed to supply the metropolitan area, and that from then on further increases would be needed. In the financial year ended 30th June, 1962, 6,853.1 million kilowatts were produced by the State Electricity Commission. We have come a long way from the estimated requirements of 50,000 kilowatts in 1923. This State and parts of the neighbouring States of New South Wales and South Australia have benefited from this great industry—what a magnificent achievement for any authority. The name of Yallourn is derived from two aboriginal words—Yalleen, meaning brown, and Lourn, meaning fire.

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In 1944, I learned to understand why the aboriginal tribes in this area used the name. The section of the armed forces of which I was a member was resting in an area remote from Yallourn when we were called out at night to help put out bush fires which had burned into the open cut. Early next morning the entire open cut was on fire. A tribute must be paid to those gallant servicemen who put out the fire so that the Commission could continue to operate. The whole fire was extinguished in a matter of three days. The troops served faithfully in engineering feats as well as in war. They had just returned from active service for a resting period. I witnessed this fire and I can appreciate why the aborigines called it "the brown fire."

The development of this area has been very great. I have witnessed some of the growth of the State Electricity Commission as an employee and as a union officer prior to my entry into this Chamber a short time ago. Credit must be given to the magnificent organization of the State Electricity Commission. I have seen the growth of the power stations—both thermal and hydro stations. However, things have been happening in the State Electricity Commission which are causing me grave concern.

My colleague, Mr. Elliot, mentioned automation recently. Automation is having great effects on the personnel of the State Electricity Commission. The Government must examine this problem and take action. One must expect technological changes and advances in mechanization. To-day, by means of a telescope, one can see satellites in orbit around the world. Man's mind must turn to advancement in industry, and this advancement is evident in the stations at Yallourn and also in the building of Hazelwood. The turbine generators at Yallourn are only 3 feet bigger than the old conventional generators in "C" and "D" stations, yet their output is greater. I am informed that the generators at Hazelwood will not be much larger but that their output

will be 200 megawatts. Although it is a large increase from 50 to 200 megawatts, fewer men are needed to operate the new generators.

I am concerned at what is to become of employees who will become redundant in the production of electricity. Some power stations have been closed down and others are on a restrictive loading. Some of those which have been affected are Newport "A," and those at Shepparton, Richmond, Geelong, Ballarat and Red Cliffs. A total of 272 employees have been affected. The State Electricity Commission has attempted to place these men in other employment, but it is a difficult situation for a man who has been engaged all his working life in steam generation. Most of these men were previously employed at sea and were trained in steam raising and power generation. It is hard to say to such a man "You have had it, old fellow" when he has reached the age of 43 with a useful life ahead of him. This is what is happening in the State Electricity Commission to-day. It will occur shortly at Newport and later this year at Richmond, when the men will be put off and "laid on the grass" as the saying is. The Government should take some action to overcome this difficulty and to re-train these men.

Another problem which concerns me is what is to become of the township of Yallourn. It has been said that at the turn of this century the coal which lies beneath the township of Yallourn will be needed for the production of electricity and briquettes. Are we going to sit idly by without planning and wait until this situation eventuates? I believe a start should be made now on a plan for a satellite town to house the employees who work at Yallourn. Earlier this evening I questioned the Minister of Housing in relation to the release which he made last week about the satellite town of Hazelwood. I asked the honorable gentleman whether this would have any effect on the township of Yallourn,

but he was unable to inform me. A number of employees in Yallourn will have to move out when it is decided to utilize the coal which lies under the township. I believe the Housing Commission, in conjunction with the State Electricity Commission, should make an immediate investigation and go ahead with the construction of a satellite town to the north of the present township of Yallourn.

One must pay tribute to the planners who were responsible for planning Yallourn and its surroundings. The gardens and houses are kept in a magnificent manner. The municipal administration under the Local Government Act and the advisory councillors keep the township in a beautiful condition, although I admit that some grit is evident at times. A new town must be planned somewhere in the Latrobe Valley to replace Yallourn if, as the experts say, the brown coal under the township will be required by the turn of the century.

I can recall the days when only a few staff men were required to run a power house. I believe that the number of staff men is getting out of proportion to the number of workers in the State Electricity Commission. In other words, there are too many chiefs and not enough Indians. When I first started work at the power house at Newport there was one shift engineer and one boiler-house engineer to a total of 34 men. Now there are four staff men to about 20 workers. This situation should be examined because, although I do not wish to put staff men out of employment, I believe they should be proportionate to workers.

I turn now to discuss automation. As early as 1936, the term automation was coined. It was first used in 1936 by Mr. D. S. Harder, who was then with the General Motors Corporation in America. Mr. Harder is now vice-president of the Ford company in America. He defined automation as meaning the automatic

handling of parts between progressive production processes. The word was an original term used to describe the linking of machine tools with automatic material transfer and handling equipment. Very little had been heard of the word until 1954. There is no definite standard or accepted definition of the word. Its use has caused some confused and serious thinking in all spheres amongst employees and employers, as well as Governments. To-day automation is defined as follows:—

The technology of automatic working in which the handling methods, the processes and the design of the processed material are integrated to utilize as fully as is economically justifiable the mechanization of thought and effort in order to achieve an automatic, and in some cases, a self-regulating chain of process.

It is also called mechanization and technological changes in industry. Mechanization has a long history, as I said earlier in my speech. The first demonstration of the electric motor was another inroad by mechanization or automation as it has come to be known to-day. Since the advent of the spinning wheel, which caused the Industrial Revolution in the cotton spinning mills of England—where people sometimes wanted to wreck and at times did wreck the spinning wheels—we have been faced with this problem of automation. The steam safety valve, which was invented in the middle of the 17th century, was also a form of automation. As one looks back and reads from the pages of history and engineering books, one can appreciate the great inroads into all types of industry and commerce which mechanization has made.

I invite honorable members to examine what fork lifts, mobile cranes and similar machines have done in displacing the work force. This type of equipment was introduced into this country during the 1939-45 war. Honorable members will be aware of the types of cargo which these machines shift from the wharves and also in industry. I do not contend that we should not use

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them—far from it. The effects of automation are also visible on the farms of this great country. Gone are the faithful horses. It is a rare sight to see horses working on farms these days. Tractors and other forms of mechanization have taken their place. If one wishes to see horses these days, one must go to the racecourse. Even some of the milkmen in the suburbs have got rid of them. I am not saying that these changes should not occur, because Australia has built its prosperity on changes, and I trust that it will continue to do so.

What is to happen to the men who are displaced by mechanization? Do we leave them to fend for themselves when it is too late in life to re-educate them? I believe the Government should do something about it, and hastily. Yesterday my colleague, Mr. Elliot, asked what the Government is doing about automation. Governments have a responsibility in this matter. In England, Russia and America—three countries that I know of—Ministries of Automation have been set up to look into this vital problem. Recently the New South Wales Government undertook an inquiry into recent mechanization and other technological changes in industry. The report of Mr. Justice Richards, who presided over the inquiry, is interesting, although I disagree with some of his comments. A few years ago I was sent to New South Wales to examine the electricity supply industry and to report back to the members of the union which I represented. I found that great inroads were being made into this industry. Mr. Justice Richards said that in this type of industry a man knows that certain things will happen and that his life expectancy of work is not great. I disagree with this statement because men who were engaged in the 1914-18 war are now just being retired from the Newport and Yallourn power houses. They have served faithfully for 40 years, which is a useful contribution.

Events are happening at great speed in the field of automation. I believe this problem must be dealt with at once—not in 10 or 20 years' time—and that a solution must be found. It has been said that Governments never realize just how precious time is. Let us realize now how precious it is. Automation has its effects on a person both physically and psychologically. When I was secretary of the union, I visited Yallourn and worked for two shifts. I had to readjust myself and to find out how the power station worked. I found that there was a big strain on the men. Early aircraft had only a few dials, whereas modern ones have many of them, and the trained pilot understands them, but he must be constantly alert. So it is in almost every industry or profession.

Work in a modern industry has a great physical effect on an employee. When he has finished his normal eight-hour shift, he is usually in need of relaxation and relief from the mental strain imposed on him by his duties. Nowadays, television is utilized in the generation of electric current so that the operators of the panels can see what is happening inside the combustion chambers of the boilers and to check the water levels in the boilers. Although science has effected many improvements, physical and psychological effects have made inroads into the health of employees. It is of no use an employer saying to an employee whose health has broken down as a result of the introduction of automation, "Well done, faithful servant, but I regret that I cannot carry you on the staff any longer."

This problem must be seriously considered. Surveys taken in the United States of America and in parts of Australia have revealed that students in secondary and tertiary educational systems are training not for one profession or trade, but for two; this is one of the effects of automation.

Retiring benefits should be paid to people who cannot be fitted into work as the result of the introduction of

automatic processes, and this is a matter which concerns both industry and the Government. A man's employment may have reduced him to a physical wreck. It is considered that the retiring age should be compulsorily lowered for operators engaged in automated industries.

Only recently amendments were made to the Boilers Inspection Act to allow for less frequent inspections of boilers at "E" station, Yallourn, and the Hazelwood power house boilers. It has been said that automation will create more work in this type of industry, but I regret to say that it does not. Fewer men are actually required. Less maintenance work needs to be done and fewer maintenance periods are carried out. Automation is a subject that seriously vexes me and the members of the party I represent. The electricity industry has a high degree of automation, and I suggest that the Government should look into the matter most urgently.

The Hon. I. A. SWINBURNE (North-Eastern Province).—I join with Mr. Dickie and Mr. Thom—the mover and the seconder of the motion for the adoption of an Address-in-Reply to the Speech of His Excellency the Governor—in their expressions of loyalty to Her Majesty the Queen and their good wishes to the present Governor, Sir Rohan Delacombe, and Lady Delacombe, and to our former Governor, Sir Dallas Brooks and Lady Brooks. Victoria is extremely fortunate in having had Governors of such high calibre who have endeared themselves to the people of the State.

I congratulate Mr. Knight on a very forthright maiden speech, backed by wide experience in the industry in which he has been engaged throughout his lifetime. I compliment him upon the manner in which he spoke to the House and illustrated the problems of his particular industry. I consider that the reforms he proposed should be introduced by the Government of the day were put forward in a most moderate manner.