

## HOUSE OF ASSEMBLY

Friday 18 September 1987

## ESTIMATES COMMITTEE A

**Chairman:**

Mr D.M. Ferguson

**Members:**

Mr H. Becker  
 The Hon. E.R. Goldsworthy  
 Mr R.J. Gregory  
 Mr G.M. Gunn  
 Mr D.J. Robertson  
 The Hon. J.W. Slater

*The Committee met at 9.30 a.m.*

**The CHAIRMAN:** I declare the Committee meeting open. I intend to open up all the lines for Mines and Energy portfolio, and I will put the whole vote before we conclude the hearing.

Mines and Energy, \$21 374 000; Works and Services—  
 Department of Mines and Energy, \$23 700 000

**Witness:**

The Hon. R.G. Payne, Minister of Mines and Energy.

**Departmental Advisers:**

Mr R.K. Johns, Director-General, Department of Mines and Energy.  
 Mr T.R. Watts, Deputy Director-General.  
 Mr A.R. Marrett, Director, Administration and Finance.  
 Mr P.R.H. Hill, Director, Mining Division.  
 Mr R.A. Laws, Director, Oil, Gas and Coal Division.  
 Mr J.D. Noble, Acting Director, Energy Division.  
 Mr R.P. Janssan, Senior Accountant.

**The CHAIRMAN:** I declare the proposed expenditure open for examination. The lead speaker for the Opposition and the Minister are entitled to make an opening address of 15 minutes if they wish. Does the member for Eyre wish to proceed with that?

**Mr GUNN:** I have a number of matters listed that I know the Opposition wishes to raise in relation to proceedings this morning. They relate to what is taking place at Roxby Downs, future open mining activities in the north-west of the State, questions as to the stage of exploration in the north-west Pitjantjatjara and Maralinga areas, and matters related to the future availability of coal in South Australia. I do not think it is necessary for me to make further comment at this stage.

**The CHAIRMAN:** Does the Minister wish to reply?

**The Hon. R.G. Payne:** In keeping with the spirit of the Committee as expressed by the lead speaker on the Opposition side, I will make no opening statement.

**Mr GUNN:** I turn, first, to coal exploration. It is important that suitable supplies of coal be available for electricity generation in this State. Some time ago a most detailed proposal was given to me by the people involved with the Wintinna deposits, Meekathara Minerals Ltd. A number of claims have been made in relation to this proposal. As someone without a great deal of technical knowledge but who is keen to see deposits of useable coal developed for

the benefit of the citizens of this State, I ask the Minister to indicate whether there is any likelihood of these deposits being developed and what is the Government's preferred option in relation to the development of future energy needs based on coal? I fly over the Bowmans mine hole in the ground each week, because it is a good navigation point. I noted the other day when flying over Lochiel that there is a considerable hole there, too, and activity. Will the Minister advise on these matters?

**The Hon. R.G. Payne:** The honourable member asked first what is the position with respect to the very large deposits of coal known to be at Wintinna in the north of the State and situated in the 80 per cent-plus part of the State for which he is the local member. I think that it is fair to say that the submission from the Wintinna proponents, I think called Meekathara Minerals, was received along with information about other possible coal deposits to be developed. They put a submission based on a long, detailed and exhaustive study to the Future Energy Action Committee. The result of a study of all the deposits, including Kingston, Lochiel, Sedan, and so on, was that an order of ranking was arrived at by the committee which was adopted by the Government. That order of ranking listed two possible proponents as being the most likely future coal prospects for additional electricity generation in this State other than at Leigh Creek.

The two deposits selected were Sedan and Lochiel. Wintinna did not get a guernsey higher up the list. However, as a result of advice which the Government received from the committee, and which it adopted, it was decided that, if any additional information could be put forward by a proponent for Wintinna, or any other coal deposit for that matter, both within the study or in any new one that might emerge, the Government would consider that information and refer it to a suitable body for further evaluation.

That is the state of play with respect to Wintinna. There has been no additional information. I am not going to go into the detail of the FEAC report as it is available and I am sure the honourable member has had the opportunity to see it or study it. Clearly the choice was narrowed down and the Government accepted that it was to be Lochiel or Sedan. The report to which I am referring also pointed out that some further work was needed and, in giving them a grading (Lochiel and Sedan), was prepared to say that Sedan was at the budget bid stage, which means it is beyond feasibility and all the other prior stages. In effect that is almost a goer, subject to further work.

In the case of Lochiel, it was agreed that additional hydro-geological work was necessary and/or other geo-technical information that could be done but which at the time of consideration had not been carried out. Some of the work in relation to Lochiel has now been done as observed by the honourable member as he has flown over the very large pit at Lochiel. He is correct: it is a trial pit entered into by ETSA to get additional information on the likely mining parameters for the coal. A lot of drilling has been done and the extent of the reserve can be reasonably accepted because of the amount of drilling. However, this was a mining technique study and took into account the dewatering necessary for working in the pit, as it will be a large mine taking between one million and two million tonnes of coal a year plus overburden.

In my long answer I have tried to put the member in the picture. At this stage the Government has nothing before it to cause it to change from the policy announced after receiving the FEAC report, which is that Sedan and Lochiel are on a par and that subsequently further evaluation will be needed to decide which of the projects should become the

first local lignite generated electricity power station in South Australia.

**Mr GUNN:** Has the Government or the committee made any decision on whether, whichever of the mines is to be developed for future power needs, it will be done by private enterprise, ETSA or a combination of both? I suppose the bottom line will be who can do it most economically and provide the cheapest possible power to the citizens of this State.

**The Hon. R.G. Payne:** I thank the honourable member for correctly understanding the Government's aim in this matter, namely, to provide the lowest cost electricity for South Australian domestic and industrial users in order to further the purposes of the people of this State. At the same time the Government would want to take into account any spin-off employment and other benefits that can come to the State with the possibility of a project being under way.

The question of whether it should be privately developed or ETSA developed, continuing the present system, is one to which the Government gave considerable thought in the years when the FEAC report was received. It was then decided (and that was the practice that was followed) that proponents (in the stage when projects were being put forward) could if they so desired, offer a range of projects that were fully privately operated, a joint operation with ETSA and variations on that—ranging from basically being involved in the construction of a power station together with a mine to a full turnkey operation.

I think all ranges and modes current in this area were available to the proponents. One of the proponents in relation to the Sedan project (CSR) put forward the possibility of a jointly operated project between CSR and ETSA. That offer is still under consideration and is one of those being evaluated as the Sedan project, together with the Lochiel possibility I outlined earlier.

**Mr GUNN:** Can the Minister advise us whether there will be extensive further powerhouse construction at Port Augusta, whether a powerhouse will be built to utilise either power from Sedan or Lochiel in the Wallaroo area, or whether the Government or the Electricity Trust (or a combination of both) has considered allowing private enterprise to develop the next powerhouse, in view of the fact that it has entered into lease-back arrangements for its existing powerhouses, and whether the particular option I mentioned is available? In New South Wales one of the powerhouses has been constructed by private enterprise and has been engaged in a lease-back arrangement with the Government.

**The Hon. R.G. Payne:** The leasing arrangements entered into by ETSA are really a matter for another committee, in so far as they involve financial arrangements. I understand that we are not being probed on that, but I thought it fair to mention that. The aim of those leasing operations was to reduce the cost of obtaining finance and providing finance for capital activities of the trust which could be in progress or were yet to take place. The net result of that, since that is a major factor in the cost of electricity in the future, is that it allows for lower cost electricity.

For example, a saving of between, perhaps, \$8 500 000 and \$10 million per annum in money cost can result in slightly above a 1 per cent increase in actual cost to the consumer in terms of a rise which might otherwise have had to take place. Clearly, it is a worthwhile objective of ETSA, together with Treasury and so on, to arrange those deals. The question of whether or not it is to be a completely private operation does not really enter into it, because the Government has already announced—and I am still speaking of the future project—that future generation in the 1990s

will be from Lochiel or Sedan, and a project devolving onto one of those two projects.

At this stage it could be either ETSA or a joint operation, but I do not have any more to say on this subject because that is the situation which exists and the Government has not given it any consideration other than that. In respect of the Northern Power Station and the future extension, I have referred to the Energy Planning Executive the question of the next increment of power at the Northern Power Station (known as NPS3), and the proposed starting date for that project, based on a forecast by the body to which I have referred the matter as to when that additional power would be needed in South Australia. A few days ago I referred those questions to the energy planning executive, and I expect its advice in due course. I will take that advice to the Government for decision.

**Mr GUNN:** Can the Minister advise the current expected life of the Leigh Creek operation and say whether it is expected that further extensive development will be needed there? In the last couple of days I have noted reports in the media that there appears to be a need at the Northern Power Station at Port Augusta to increase bin storage for coal from the large trains from Leigh Creek.

**The Hon. R.G. Payne:** In terms of the reserves at Leigh Creek, when the Government announced the possibility of the third unit at the time of the construction of the second unit, certain forecasts were made including that sufficient coal existed that could be mined economically to provide for the lifetime of a third unit. Some interesting and detailed information is available on coal reserves that will be of use to the Committee and to the member for Eyre; this relates to some of the queries that he raised earlier. With your permission, Mr Chairman, I ask the Director-General to provide that information to the Committee.

**Mr Johns:** Leigh Creek has proven reserves of 150 million tonnes. The present rate of production—approaching 3 million tonnes—suggests that there are long-term reserves of coal. Those tonnages quoted relate to coal that is recoverable by conventional methods. The reserves outlined at other fields elsewhere in the State make a useful comparison. At Wintinna, the reserves measured indicated and inferred in all categories exceed 4 000 million tonnes. At Weedina, the reserves have not been measured to the same degree of accuracy, but it is estimated that they approximate several thousand million tonnes. At Lake Phillipson there are 4 700 million tonnes, Bowmans 1 600 million tonnes, Lochiel 550 million tonnes, Kingston 980 million tonnes, and Sedan 230 million tonnes. So, some large deposits of coal are known to exist over a wide area of the State.

**Mr GUNN:** The Director-General touched on the fairly controversial issue of the Kingston deposits. Can the Minister advise whether there are any plans for further development in view of the offer by the Western Mining Corporation to make available to the Government those particular leases, bearing in mind that there is considerable local opposition to any proposal that will lead to extensive pumping of the underground basin, which is perhaps the best supply of water in the State? Can the Minister comment on that, bearing in mind that the grazing community and other people in the South-East would be most concerned if this proposal went forward? I am concerned that nothing has been said about this proposal for some time.

**The Hon. R.G. Payne:** One reason why nothing has been said about this project for some time is that it is not among the preferred projects that have been announced and adopted as policy by the Government. I go back to Lochiel and Sedan as the two contenders from which ultimately one will

be chosen. The position regarding water in the Kingston deposit area has been accurately stated by the member.

As Minister, I received the most correspondence that I would have received on a topic when the Kingston project was getting an airing, this was somewhat regenerated when the changed approach, which would have involved virtually no dewatering, was announced. The correspondence abated a good deal but did not entirely cease. I refer to the fact that there is a proposed dredging operation as distinct from the previous proposal to dewater and mine the coal by somewhat more conventional methods. I am reminded that in an earlier Committee that the member for Murray-Mallee, when asking me a question on this matter, said that anyone would know that the dredges would sink. I had to point out that the mooted dredges were floating dredges and not land-based dredges, as the honourable member had in mind. I suppose that that would have been correct that that type of dredge might have had some difficulty.

However, the proposal involved conventional floating dredges with certain novel mining methods being pursued. There is no profit in my saying anything further about the proposal, except that the offer of the leases from Western Mining Corporation, on the face of it, sounded perhaps not unreasonable. However, it would have involved the Government in the additional expenditure of well over \$10 million if the Government decided to proceed in any way and, as I just explained, it did not.

**Mr GREGORY:** Can the Minister advise the Committee how many inspections have been carried out under the terms of the Mines, Works and Inspection Act? How many employers have been prosecuted for breaches of that Act and how many persons have been injured?

**The Hon. R.G. Payne:** Although I believe that I have the information, I cannot locate it right now and I will ask Mr Peter Hill, Director of Mining, to provide that information.

**Mr Hill:** Last year there were 1 527 inspections. Further information on this matter is contained in the annual report.

**Mr GREGORY:** Mining equipment used in the underground areas of Olympic Dam is powered by diesel engines. Can the Minister say what steps are being undertaken by the department to ensure that employees suffer no health risk from exhaust fumes, particularly in view of some problems that are associated with exhaust gases from LPG powered fork trucks in enclosed areas?

**The Hon. R.G. Payne:** Visits have been made by members of the department to Roxby Downs, some of whom were below ground at the time of the breakthrough on the decline. The number of diesel powered pieces of equipment that are used below ground was notable. The use of equipment of that nature which might introduce fumes below ground requires the permission of departmental inspection officers, and I think Mr Hill would confirm that. All engines are pretested before approval is granted to ensure that exhaust emissions are within the limits prescribed by the regulations under the Mines and Works Inspection Act. It might be of interest to members to know that the sizes of some of the engines used at Olympic Dam ranges from 6 kilowatt chain saws to 368 kilowatts for some of the larger trucks.

The mines and works inspection regulations prescribe a minimum airflow whenever and wherever a diesel engine is operated underground. The regulations also provide for air quality specifications for mine ventilation. Routine surveys by inspectors of mines and personnel from the occupational health and environmental monitoring section of the department check airflows and air quality in working places. To date monitoring has shown that, with approximately 72 diesel engines in the mine, the air quality requirements for the oxides of nitrogen, carbon dioxide and carbon

monoxide are being met with an adequate margin for safety. In addition, the department, together with Roxby Management Services, has financed and supported an initial investigation into the identification and quantification of possible carcinogenic polyaromatic hydrocarbons in diesel exhaust emissions. Amdel has arranged private sponsorship to pursue this investigation because it is clear that when the operations at Roxby grow there will be an ongoing need to ensure that safety standards are continually met.

**Mr GREGORY:** Can the Minister describe the steps that are being undertaken to ensure that all mines and quarries operated in South Australia provide development programs for approval by the Department of Mines and Energy?

**The Hon. R.G. Payne:** The department has a policy in this matter which is achieved by requiring developmental programs as a condition of leasing on all newly granted leases and lease renewals. In addition, all operators of mines and quarries not covered by mineral leases are required to supply programs for approval in accordance with the mines and works inspection regulations. During the past 10 years, 374 programs have been approved, including 128 during the past two years.

**Mr GUNN:** What further exploration is taking place on coal deposits in South Australia? Have exploration licences been issued to further examine areas that may supply suitable deposits of coal? What work has been done on coal deposits in the Lock area of Eyre Peninsula? I understand that there were problems in the Poldra Basin and that that is why other work had perhaps not taken place. As this area was in my electorate prior to 1977 I have some considerable knowledge of it.

**The Hon. R.G. Payne:** I will ask Mr Laws, the Director of the Coal and Gas Division, to provide that information.

**Mr Laws:** In regard to coal exploration at present in South Australia, work has continued this year on the Lochiel deposit with the excavation of the trial pit. Further drilling has been carried out on the Sedan deposit by CSR to obtain samples, mostly for geotechnical purposes and for coal quality. In addition, work has been carried out on the Weedina deposit by Cyprus Australia Limited. This is a very large deposit in the Arckaringa Basin south of Meekatharra Minerals' Wintinna deposit. It was discovered after the FEAC work commenced and it was not included amongst the FEAC studies. Those people have been doing more drilling this year and they are shortly to meet again with officers of the department to discuss further work that they may be willing to take up on that deposit.

No further work has been carried out on the deposit in the Poldra Basin at Lock. That is held under a reserve by the department at present. It is not regarded particularly favourably for further development because of its high mining costs, its relatively remote location, and the fact that the potential for mining could adversely affect the freshwater basin which lies in that area. There are some problems with the physical mining of the coal there as well, and probably flotation would be required to beneficiate the coal.

The Department of Mines has been undertaking some work on the potential for additional coal deposits in the State. We have been undertaking a study of geophysical data in the Arckaringa Basin in an attempt to find locations where coal may be developed at a shallower level than the areas known at Wintinna and Weedina. Although those coals are reasonable quality coals, the depth to the top of the coals is very high and there is an enormous capital cost in developing mines. We have been made aware in recent years that there would be some salt intrusion features in this area which have brought sediments closer to the ground surface than would normally be the case. We have been

doing some research to find if we can locate some areas where coal has been brought to a much more economic depth.

In addition, ETSA has been carrying on work for coal hoping to find a repetition of the Leigh Creek deposit in the area closer to the edge of the Flinders Ranges (on either side of the Flinders Ranges). ETSA has been doing some geophysical investigation that has been contracted by the Department of Mines, and doing some drilling in this area. However, the results are at a very preliminary stage at this time.

My last visit to Mintabie revealed that about 1 500 people are operating in those fields. On a number of occasions it was mentioned that the field will soon be completely mined out and that there will be an urgent need to extend the Mintabie field into what is now the Pitjantjatjara lands. I think it was a terrible mistake when those lands were proclaimed: I do not think that the Mintabie land should have been included in the area and that the area of Mintabie should have been far larger. I think it was a lack of understanding on the part of well-meaning people who did not really understand the full significance of the situation.

Mintabie is important to the economy of South Australia. As I understand it, Mintabie is the single largest outlet for diesel in South Australia. Over 50 bulldozers and in excess of 50 exploration drills, together with a range of other operating equipment, were located there providing a significant income to the State and employing a lot of people. Because of the downturn in the construction industry, many road construction and earthmoving contractors shifted to the Mintabie area to attempt to make a living, and it would appear that this matter needed fairly urgent consideration.

**The Hon. R.G. Payne:** The question of extending the area concerned involves the Pitjantjatjara Land Rights Act and, really, I do not think I want to comment on the honourable member's statements about who was involved at the time and so on because, if I recall correctly, we were both members of the select committee that dealt with this matter. I think that evidence was taken and submissions were received from Pitjantjatjara people and all sorts of other interested parties and the resultant report from the select committee was adopted by Parliament, I would submit, as being the best solution to that matter. If the honourable member suggests that we should have been smarter then, perhaps he is correct, but I do not know. All I can say is that this matter is of considerable significance to the Pitjantjatjara people and, if the honourable member casts his mind back, there was a major stumbling block in relation to not only the area concerned but also to tenure, involving who would hold the title in respect of that area referred to as the Mintabie opal fields, and so on.

I think it would be fair to say that over the years the department and other authorities have been cooperative insofar as arrangements have been concerned. I think I would be correct in saying that arrangements were made with respect to the airstrip. When some better ground turned out to be located in the vicinity of the airstrip as it then was, arrangements were entered into to redelinate the airstrip and to allow access to additional ground. I have not received any information from my officers recently other than to say that there is a lot of activity there and I think that a fair amount of success is being achieved by the individual miners concerned. One does not usually find a large mining activity unless some success is associated with the efforts taking place. I am pleased for the people at Mintabie and for the State that it is a successful activity and that the miners are actually winning opal.

**Mr GUNN:** I am happy to accept any blame in relation to this matter, even though, unfortunately, my views were not taken into consideration when this matter was debated prior to and during the select committee. I point out that there are two questions involved. First, in relation to the 21-year lease, anyone with any commonsense or understanding knows that there is no way that any of those people can or should be evicted at the expiry of that 21-year period. Has consideration been given to extending that lease? Secondly, in view of the importance of this area and the fact those people will need to extend their operation in the interests of all concerned (including the Aborigines who come down in large numbers and noodle on these dumps), is the Minister prepared to urgently consider the matters that I have put forward? It would be not only unfortunate but also quite controversial if that field had to be closed because of a lack of new mining area. It has been put to me that the opal country extends well out into the Aboriginal lands.

**The Hon. R.G. Payne:** I hasten to advise the Committee that I was not attempting to apportion any blame. I would not consider any action by Parliament to be blameworthy because, as I understand it, it is the supreme body in the State for taking decisions and arriving at conclusions. I was simply pointing out that the honourable member was a member of the committee which arrived at the decision that was later confirmed by Parliament as a whole. The lease came into effect in 1981 or thereabouts, so it still has about 15 years to run, which gives some time to perhaps consider the question of relocation or otherwise. However, I believe that the undertaking made at the time and as viewed by the Pitjantjatjara people (who, of course, can speak for themselves) was for 21 years.

The honourable member has certainly raised an important question and, now that he has mentioned the possibility of widening the area set aside, I will make sure that I become better informed. As I pointed out, I have received no direct approaches along the lines mentioned by the honourable member, but I will take what he said into account and certainly consider it. I stress that I would see it not as a unilateral matter for the Government to decide on its own, because the Pitjantjatjara people have a major and important stake in the whole area.

**Mr ROBERTSON:** At times in the past I have not been entirely uncritical of the Department of Mines and Energy in what it has attempted to do and about the philosophy of exploitation that it has adopted. However, the preamble on page 408 of the yellow book, particularly in the area of energy production, describes a number of things that I find attractive. In a sense, if I had any ideological differences with the department at any time in the past, we have now probably turned that corner. In particular, I note the reference to ensuring the future supply of natural gas in this State, as well as development of local coal resources and alternative energy sources; and reference to concern for low income earners and concern ensuring that energy prices are competitive, something I find very appealing.

I note also that in the 1986-87 financial year work progressed on energy modelling; the South Australian energy system analysis program was initiated; energy demand forecasting was undertaken; a power station selection task force was established; a natural gas task force to develop new gas supply options continued; planning for an energy demand management strategy was initiated, and so on. All of those things deserve a degree of credit. As someone who has been primarily concerned with conservation aspects of energy use, having had a less exploitative view of the search for energy alternatives, I think we have come a long way and

I record my admiration and approval of the sort of things that the department is now doing. In particular, I welcome the wind energy program report which is being developed in two phases (and I propose to return to that later in the day). Areas such as the Government energy management program really deserve—

**The CHAIRMAN:** Order!

**Mr ROBERTSON:** It is a preamble, although it is a long one.

**The CHAIRMAN:** I do not want to cut the honourable member short. I just want to say that we are not into a second reading speech.

**Mr ROBERTSON:** I understand that. You have given a fair degree of latitude to the member for Eyre and I thought you would have given the same to me.

**The CHAIRMAN:** The member for Eyre did refer to a budget line. Without wanting to cut him too short, I ask the honourable member to come back to the budget lines in front of us.

*Members interjecting:*

**The CHAIRMAN:** I do not need a cheer squad, either.

**Mr ROBERTSON:** I welcome the mention of such things, as I have said, as the Government energy management program and the solar axis guidelines which are now part of the supplementary development plans of almost all metropolitan councils, and I note that they have made their way into mainstream thinking in local government. The small disagreement that I guess I would have with the department over the past couple of months relates to a statement on the subject of the next power station and the need to provide some sort of control over the effluent gases. I understand that to provide electrostatic precipitators or filters on power station stacks adds about 5 per cent to 8 per cent to the cost of producing electricity.

I understand that we have a task of producing energy at the lowest possible price, but I wonder whether, in view of the current greenhouse effect and the problems arising from, particularly, carbon dioxide emissions, that 5 per cent to 8 per cent is not justified or whether the department feels that, by the use of such technology as the fluorodised bed combustion and the use of limestone and other calcium minerals in relation to the coal to reduce sulphur dioxide emissions, there are other ways to contain the emission of what are known as the nox, cox and sox gases from combustion, and whether there are ways to achieve that without putting expensive precipitators on power station stacks?

**The Hon. R.G. Payne:** I trust that the member for Bright was not being accurate about himself when he said he was a former conservationist. I think he was probably describing his transition from being a conservationist to being a conservationist member of Parliament.

*Members interjecting:*

**The CHAIRMAN:** Order!

**The Hon. R.G. Payne:** The question of emissions is being addressed by coal generating authorities and Governments all over the world. There has been a good deal of improvement in this area in the technology as well as a greater acceptance by Governments and energy authorities that they have a responsibility in this matter. In that respect, of course, one could look at the Northern Power Station in South Australia and say that ETSA has had quite a responsible attitude in this area in relation to the height of a stack and so on, which is all part of the technological way in which these matters are handled by causing a diffusion or a distribution rather than a concentration of some of the possible emissions from power stations.

I would also point out to the honourable member in relation to the Northern Power Station installation that I

have never had one letter complaining about emissions from the new stack which, when one considers that we are talking about up to 500 megawatts of generation, I think speaks for itself. I am not suggesting that there were no complaints in relation to the old Playford station and so on, because there were many, and often this was simply the visible emission as distinct from the invisible. I am not all that armed with information with respect to carbon dioxide emission and any relationship it may have to the so-called greenhouse effect. I would suggest there are a lot of other people in the world who are not absolutely dogmatic on any causal connection at the present time, although current evidence suggests there is likely to be a link.

I note only last week that there was a reference, for example, to a joint scientific effort in relation to the northern polar regions where there appears to be a cyclical effect annually where the greenhouse effect and penetration of the upper atmosphere—a thinning of the cover band that we all apparently need to survive on this planet—takes place without any power generating station effect being attributed as a cause whatsoever, and further scientific effort is to take place there.

In respect of sulphur dioxide, which is alleged to be a harmful emission from power stations, I point out to the honourable member that the harmful effects can be alleviated by technology. For example, it has been worked out that in relation to the proposed Sedan plant a judicious admixture of limestone to the crushed coal burning process can have the effect of reducing the sulphur dioxide emission. I would also point out that since 1978 a very large amount of world-wide research has been undertaken as to whether the emission of sulphur dioxide from coal-fired power stations is a benefit in ways not originally perceived. I undertake to provide the honourable member with the names of the bibliographies concerned, as I have done quite a bit of reading on this matter.

On a world listing, Australia is one of those countries which is considered to have sulphur deficient soils. Beneficial effects have been observed in the United States where power plants operate; where soils were previously sulphur deficient, they are no longer sulphur deficient and considerably more growth and crop yield has been achieved as an indirect effect of what has been considered to be a defect of the fossil-fired power station era. I am not suggesting that the simplistic information that I am putting forward is the be-all and end-all of the matter, but I can say that there is information in respect of land in Australia which has been considerably improved with the addition of sulphur. In fact, many States in America now require sulphur to be an ingredient in any fertiliser that is manufactured and sold. So, I suggest that there might be something in this matter after all.

I conclude my answer to the honourable member by saying that I am very glad that he has perceived that the department is very up to date and not simply an exploiter of the State's resources. It approaches the matter with balance and reason and with a conservationist attitude.

**Mr ROBERTSON:** Supplementary to that, I might just add that the stack height on the Northern Power Station certainly diminishes the localised effects; it does not necessarily abrogate the global responsibility that power generating authorities have to control the total gross load of effluent gases—and I think that also has to be considered. My second question relates to oil search. I am wondering about the prospects for offshore exploration off the South Australian coast, particularly in the South-East and the Otway Basin. Going a little farther afield, I wonder whether the department regards the continental slope, as opposed to

the continental shelf, as being prospective at this stage and whether any companies have any proposals currently before the department to conduct oil search in the area of the continental rise—as opposed to the continental slope.

**The Hon. R.G. Payne:** To which area is the honourable member referring?

**Mr ROBERTSON:** The South-East, in particular, the Otway Basin, and also going farther afield offshore, right off the edge of the shelf, and I wonder whether in fact the continental rise is regarded as being prospective from an oil search point of view and whether any companies have any plans to exploit or explore in the area of the continental rise.

**The Hon. R.G. Payne:** I shall ask Mr Laws to provide any information that he has in respect of offshore activities and, in particular, to refer to where the continental shelf ends, extends, or whatever. I do not have any knowledge in respect of the Otway area; I have been able to do some personal research in relation to the likely offshore geological scene, much farther to the west, which is not promising in respect of the possibility for oil search success. I now ask Mr Laws to comment.

**Mr Laws:** Besides the Cooper Basin, the Otway Basin is certainly regarded as being the next most prospective area in South Australia for new deposits of petroleum. In relation to offshore work, the current permit that is issued goes out only to approximately the 200 metre limit. It does not extend very far onto the continental slope. Chevron, which currently holds that licence, has recently given notice that it wishes to surrender that area. However, that will be readvertised to industry early in the new year. There is an area to the south where Ultramar drilled a well two years ago, and an offer is currently being made to a company to pick up that area—which is off the Port MacDonnell region. Some interest has been expressed by one company about whether some areas extending into the continental shelf in that area will be offered. We have not made any movement to offer those yet. This was just referred to in a recent conversation with that company.

Certainly, some recent activity in the Otway Basin has given encouragement to further exploration. Last December over 1 000 tonnes of oil was washed up on the beaches on the south coast of Kangaroo Island. Analysis of that oil demonstrated that it was naturally occurring oil from an offshore seep, similar to the type of oil from the Otway Basin that has been washed up on the south-east coast of South Australia for many years. We looked very carefully at our earthquake records in the department—the department now being responsible for monitoring earthquakes in South Australia—and we discovered in fact that an earthquake occurred a few weeks before that stranding of oil about 70 kilometres south-west of Beachport, in about 1½ kilometres of water. So, the Otway Basin is a highly faulted basin and a number of minor earthquakes do occur there. We believe that the earthquake triggered the oil seep, again indicating the potential of the basin to contain oil.

Also, in the onshore part of the basin it has been brought to our attention recently that water bores in the Robe area have been producing gas. They are very shallow water bores and this gas is obviously seeping from some deeper sediments. But certainly oil and gas is being generated in the basin. In addition, the Bureau of Mineral Resources had an offshore boat operating in the area in January and some deep samples were taken, also on the continental slope, and those samples contained a considerable amount of gas, which was obviously progressing through the sediments, having come from deeper levels. So, the evidence is stacking up to show that the Otway Basin has generated oil and, hopefully,

some of that oil and gas has reservoired in large traps. Exploration in the onshore part of the basin is quite vigorous at the moment, and another two wells are due to be drilled later this year. Because of the downturn in oil prices and the general downturn in exploration, there is not as much enthusiasm offshore, where the costs are very high.

**Mr ROBERTSON:** I do not wish to cover the whole gamut of the mines and energy portfolio in just three questions, but I now turn to the matter of opal search. I have heard allegations from several sources that on the Mintabie field there are in fact 59 separate leases (these are the traditional 50 metre leases) held by one person or one syndicate of people. I do not know whether or not that allegation is true. I understand that it is based on the fact that on the Mintabie field 59 leases are pegged out with rather distinctive coloured pegs, which local inspectors may recognise.

This has led some people to assume that they are held by one person, or one syndicate. The problem of 50 metre leases is that they are a rather antiquated idea and are too small for a viable operation using a backhoe or the like, and given the amount of equipment that most opal miners now use. I understand that there is a move to establish 200 x 200 metre leases, which it seems would be a more adequate size. What is the timetable for the introduction of these new leases, and is it the department's view that it will overcome the problem that appears to occur occasionally when people cheat on the old system and peg multiple leases?

**The Hon. R.G. Payne:** The administrative arrangement is 'one person one claim'. I suppose that there are ways in which people will seek to thwart requirements in this area, just as they do about almost every activity that takes place. The 53 or 83 leases mentioned by the member certainly indicate a pretty extended family. It is proposed to provide a larger claim measuring 50 x 100 metres as an option to the present 50 x 50 metre claim. This initiative, which was proposed by the Government, at this stage recognises the increased mechanisation that is taking place in opal mining and the 50 x 50 metre claim being rather a small area in which to dispose of spoil or successfully mine with machinery.

It is worth outlining the position to explain the difficulties in this area. Over the past three years I have received approaches from miners at Andamooka, Coober Pedy and Mintabie that claims ought to be larger. I have received other approaches saying that they ought not to change. I took the view that this matter ought to be settled in the mining area first, so I asked the associations concerned to consider the matter and make a recommendation to me. About 18 months ago I received a recommendation, which came about as a result of a large meeting, that claims be increased to the size I am pointing out. Less than a month later I received another recommendation from another meeting rescinding the resolution of the first meeting and asking that claim sizes not be changed. That is the history of this matter.

I insisted that the matter be reconsidered and that a considered resolution be put to me as Minister. That has been done and the request is for larger claims along the lines that I have outlined, so I will be suggesting to Cabinet that that is the way we go.

**The Hon. E.R. GOLDSWORTHY:** I turn to the matter of gas supplies. The Minister wrote a letter to the producers a couple of months ago which was interesting and in which he made a couple of points—I would like the Minister to comment on both of them. One point was that the producers could not guarantee supplies of gas until 1992; the second

point related to the availability of ethane. What is the position in relation to gas supplies after 1992? Page 409 of the yellow book states that arrangements for the supply of natural gas until 1992 have been finalised, but that is not what the Minister's letter says.

The Government obviously still has a policy of locking up ethane with a view to using it in some future petrochemical plant. The letter in essence talks about that. Will the Minister comment on the Government's thinking about a petrochemical plant? I make the observation that the world scene does not seem to have improved, and does not seem likely to improve in terms of the viability of a petrochemical plant. Will the Minister comment on the requirement for further storage of ethane with a view to the establishment of a petrochemical plant in view of the long-term prognosis for that plant and the world scene. What is the reference to ethane in that letter all about?

**The Hon. R.G. Payne:** The situation in 1985 following the passage of the Natural Gas (Interim Supply) Act is well known to the honourable member, who was a member of the select committee involved. I do not believe that he is contesting that, because of the reservation of certain amounts of gas, there is a supply until 1992. That was not the case before the passage of the legislation. I remind the Committee that in theory we are now operating on gas which was supposed to run out on the first day of this year, so we must have achieved something—I had the gas stove on this morning, and it is still flowing. The amount of sales gas found and reported in 1986 was 180 BCF; that is gas not mentioned in the legislation. I will not mention oil discovered, because that is not relevant. I understand that the producers would support a further 100 BCF of sales gas as at 1 September this year has also been added to our reserves. I think it is fair to say that total exploration this year has involved a large effort in terms of the numbers of wells (69 all told this year). It is proposed to find 275 BCF of gas. We have a report from Santos that 100 BCF is added to the reserve, so there is a further 175 to go, if they are successful in the remaining quarter. That clearly is gas for continued use after 1992.

I do not dispute the honourable member's figure of a couple of years supply on the figures I have mentioned. I point out that a reduced amount is now being taken. Whereas some 82 per cent of our electricity generation was using natural gas as a base fuel only a couple of years ago, that figure is now down to just over 60 per cent. This means that there is some extension of the supply we already have in terms of time. That figure probably will not change markedly. It seems to me, and to the Government, that it is better to have our electricity supplies operating, by using a mixture of coal firing and gas firing, that being in the best interests of the State as a customer in order to keep electricity prices down.

It is quite possible for the ethane to be used in a shandy, and the honourable member knows that, so that it becomes a gas extender to provide even further time during which natural gas can be used. It is not possible to burn ethane without a great degree of shandying, or without alterations to burners, and so on, but it could be used usefully.

With respect to a petrochemical plant, on Wednesday I met with the Japanese Consul (although not strictly in that connection). At his request it was a visit of an hour or so, and during the discussion the question of a petrochemical plant was canvassed. It was a verbal exchange but by no means is it impossible that a petrochemical plant will get up. I use that term in a frank way because both the previous Liberal Government and this Government have laboured mightily over a very long period to try to ensure

that, if at all economically possible, a petrochemical plant will be brought in and set up in South Australia. We have not been successful as a Labor Government, nor was the previous Liberal Government, but that does not mean that we ought to squander, without a great deal of thought and care, the ethane reserves which is the feedstock that would be needed for a petrochemical plant, unless it is absolutely necessary and the priority of use is such that it should go to other users: that is my current view.

**The Hon. E.R. GOLDSWORTHY:** I could comment, but I will not. What are the prospects for the minirefinery for use of feedstock from the Cooper Basin? The Industries Development Committee gave approval for the minirefinery, and my understanding is that the Department of State Development was keen as it was something it could say it had achieved. The Department of Mines and Energy had many reservations about it, and when one looks at the bottom line economically one would have to have reservations about it. An over-refining capacity exists around Australia, as does an excess of petrol. IDC gave approval for the establishment of this minirefinery with conditions attached. The deliberations of that committee are confidential—why, I do not know. I suppose it is the 'commercial confidentiality' business we get rammed down our throats *ad nauseam*. What is the Minister's judgment and what is the Government's view on the chances of this minirefinery getting up near Stony Point?

**The Hon. R.G. Payne:** The question of Stony Point is due to come before Cabinet this week or next. After that Cabinet meeting I will be in a better position to give a more definitive answer on that question.

**The Hon. E.R. GOLDSWORTHY:** A section of the budget papers deals with energy planning, but the ETSA report contains a 10 year statistical summary of the financial revenue and expenditure statement for ETSA. The thing that stands out as being of interest to the taxpayers of South Australia is the enormous contribution the taxpayers now make to State Treasury *via* ETSA. The figure is over \$44 million this year. Last year it was \$31.5 million, and there was a special one-off rebate to ETSA to get over the hump of the election when there was a one year remission of tax. Will the Minister give a breakdown of the \$44 million? We know that the interest arrangements have changed for ETSA loans and that SAFA subsumed all such loans and charged the going rate of interest. There was no need to turn over the loans, but that is how the Government decided to operate. Can we have a detailed breakdown of the \$44 048 000 that ETSA now pays to the Government? It is a significant slug.

**The Hon. R.G. Payne:** I do not know how many pages of the ETSA annual report the honourable member has photocopied, but if he photocopies another couple of pages he will find note 10. It is on an unnumbered page headed 'Statement of revenue and expenditure'.

**The Hon. E.R. GOLDSWORTHY:** I have quoted the 10 years summary—is it after that?

**The Hon. R.G. Payne:** The numbered pages end at page 21 followed by a heading 'Finance and statistics'. The honourable member then needs to turn up five pages to find the table showing contributions to the State Government of \$44 048 000. It refers to 'Note 10', which appears several pages later in finer print and states:

Five per cent on revenue from sales of electricity less a special rebate from the State Government in 1985-86 shows that to be \$29 405 000 charged by the State Government—

and this is the breakdown the honourable member is looking for—

on a non-repayable capital contribution of \$110 million at the common public sector interest rate which averaged 13.3 per cent for the year compared with 12.9 per cent for 1985-86.

That is an additional \$14 643 000 and adds up to \$44 048 000.

**The Hon. E.R. GOLDSWORTHY:** So, those two are the only factors involved in the Government take of \$44 million?

**The Hon. R.G. Payne:** That is my understanding of the matter. If a further breakdown is desired, I will try to obtain it.

**The Hon. E.R. GOLDSWORTHY:** It adds up to the figure, so I take it as definitive.

**The Hon. J.W. SLATER:** I refer to page 406 of the Program Estimates concerning rehabilitation of bores in the Great Artesian Basin. Will the Minister inform me on the proposed capping of Purni Bore? I note that there has been stated opposition in the media in relation to the bore. Has the Purni Bore been successfully capped and what is the current position?

**The Hon. R.G. Payne:** I thought that that might engender some interest from the member for Eyre, who has promptly resumed his seat. I am happy that he is interested, as he saw me earlier this year and we had some discussions on the capping of Purni Bore. It is fair to put the matter into context. My department is the operative department with respect to the program of rehabilitation of the Great Artesian Basin. That ongoing program has been in progress for a number of years and is fully supported by Labor Governments and the previous Liberal Government because of its value to the Australian people and to South Australia. The question of the capping of Purni Bore was put to my department, as an operative body, by the Department of Environment and Planning. In this instance we are operating on a request or requirement of the Department of Environment and Planning. I am not suggesting that we do not support such a program when we do, as evidenced by the fact that we put forward funds for this purpose each year.

In that context, we can possibly look forward to further funding, because I noticed from this morning's paper that the Federal Minister has announced that there will be additional support for rehabilitation and conservation in the Great Artesian Basin. Presumably, South Australia will be able to get some more funding and step up our effort in that area. Purni Bore was examined as recently as May 1987, and it was found to be in reasonable condition apart from a badly corroded valve. Sometimes we are involved in rehabilitating bores which are in much worse condition than that. It is hoped that a new valve will be fitted in the near future which will enable the flow to be controlled so that pressure recovery can be monitored and, if necessary, a controlled flow can be established to maintain a watering point in the desert.

The last piece of information which I have given to the Committee is, I think it is fair to say, as a result of representations I received generally, or personally from the member for Eyre, and from my own thoughts on the matter: many megalitres are going to waste, and that ought to be curtailed, as it is a very large quantity of what is essentially a mineral resource, namely the underground water in the Artesian Basin.

It seemed to me that there were a number of reasons for maintaining some sort of flow in the area, which could be controlled and which would continue to provide the 'oasis in the desert' which Purni Bore has been represented to be by everyone from the Four Wheel Drive Club to the Desert Nomad Society and other interested bodies in between. In passing, I point out that it is possible to set up an entire ecological system within only 20 years—two decades. I did

not know that until recently, but this bore has been operative only since about 1967, and in that time, I have been told, a vast number of everything from waterfowl to crustaceans and heaven knows what have established a complete ecosystem in the area, and we ought not to destroy that.

I am not being entirely facetious: I understand that there can be concern, and I believe that the water is not all that potable, although it could be lifesaving in a certain circumstance. I think it is fair that some compromise arrangement can be reached, and I put that to the Minister for Environment and Planning, who I understand is adopting that stance.

**The Hon. J.W. SLATER:** My next question also relates to the water supply for Roxby Downs. I understand that the new bores have been completed at well field A. Have they been tested, and what effect will these bores have or are they having on springs in that area?

**The Hon. R.G. Payne:** Five new production bores have been drilled, bringing the total to six. Only two are currently connected to the pipeline and, as the member for Eyre has said, they are flowing at a maximum of three megalitres a day to supply water to Olympic Dam township, the mine and new construction sites. The anticipated water requirement for the present stage of mine development is nine megalitres a day, which the six production wells will be able to supply with almost 50 per cent surplus as a standby capacity.

The testing carried out to date shows similar responses to the three megalitre per day production, as would be expected from the results of the 1.4 megalitre a day test. That would be in relation to the hydraulic gradient of the springs and so on, but it is not having any major effect. The monitoring program shows that the springs near the well field have not to date been affected. Such springs are not regarded as being environmentally significant and, if their water supply function becomes threatened, the provisions of the indenture would apply and there would be a requirement for Roxby Management Services to provide alternative water supplies to those people who might be deprived in the event of anything untoward happening.

**The Hon. E.R. GOLDSWORTHY:** The Auditor-General's Report states that ETSA had an operating loss of \$13.6 million for the year just ended. The ETSA report itself, in the Chairman's remarks, put the figure at \$8.2 million. What is the correct figure?

**The Hon. R.G. Payne:** I assume that the correct figure is that which is stated in the Auditor-General's Report.

**The Hon. E.R. GOLDSWORTHY:** The Auditor-General says that ETSA lost \$13.6 million last year as against \$2.8 million in the previous year, but Mr Hayes states in his remarks that they lost \$8.2 million. It is quite obvious that ETSA cannot keep on sustaining these sorts of losses. ETSA has prided itself over the years in running a tight ship and not accumulating losses. I want to link this to the statement in the Auditor-General's Report that no provision has been made for liability for bushfire claims relating to Ash Wednesday and one other fire. That could have a very significant impact on ETSA's financial status.

Will the Minister comment on strategy that ETSA will adopt in terms of this \$13.6 million loss—obviously, ETSA cannot keep on sustaining such losses and the impact that these unfunded bushfire claims will have in the next year or two? Both those matters have to be related to levels of tariff, finally, and to suggest that ETSA tariffs will not go up would be quite unrealistic. The Government made a commitment that the tariffs would not rise above a certain rate, and I hope that that will not be another of the promises that the Government has to break. Both those factors seem



fairly significant in coming to terms with where ETSA is going in the fairly near future in relation to tariffs.

**The Hon. R.G. Payne:** There was a rise in ETSA tariffs only recently, and I do not anticipate—and I do not think it is fair for anyone else to postulate—that tariffs would need to be reviewed in an upward direction prior to approximately one year from the last adjustment. The honourable member is quite correct in saying that ETSA has always prided itself on rather conservative financing practices, and over quite a long period of time it has managed to finance capital activities from something in the order of 50 per cent internal funding, by way of providing reserves ahead of time, and so on. However, the increasing cost of the construction of new capital equipment, I think it would be fair to say, has resulted in its not being likely that ETSA will be able to continue to adhere to that very conservative policy in the future.

I point out that a loss figure of the order put forward by the Deputy Leader is not all that large if one takes into account the turnover figure, which is of the order of \$600 million a year. I hasten to add that I agree with him: it cannot continue to incur losses without taking some action. The Government does not intend to break any promise that it has made with respect to the containing of energy tariffs, let alone electricity tariffs, to be met by industry and domestic consumers in South Australia, because it is becoming an increasing concern in most households.

The honourable member will find that some of the innovative financing arrangements to which he has referred in the past and which reduce the cost of obtaining money for the trust and meet the requirements of Federal financing authorities will be continued. However, it is an ongoing struggle. All power utilities in Australia are finding the same difficulties at the moment, and it is interesting to note that ETSA is the one power utility with an AAA credit rating, and I am sure that the honourable member understands the significance of that. The rating states that the trust has good financial standing. The Auditor-General is not constrained from bringing to the attention of Parliament any concerns that he has in this area. My understanding is that he has recorded the loss and has not made any specific reference to it. The bushfire claims are a different scene altogether. ETSA is being very prudent, but ultimately somebody will have to meet the costs of the compensation that is being paid to the many property owners who were affected.

**The Hon. E.R. GOLDSWORTHY:** Not many payments have been made yet. There are a lot still in the pipeline.

**The Hon. R.G. Payne:** The honourable member's information is not accurate because, of the 83 claims that have been submitted concerning the McLaren Flat fires, more than half have been settled and paid. A considerably larger number are in the process. I have had innumerable meetings with the General Manager of ETSA (Mr Sykes) in an endeavour to speed up this matter.

**The Hon. E.R. GOLDSWORTHY:** I am talking not about the speed of settlement but about those claims from the South-East and Clare that are still in the pipeline.

**The Hon. R.G. Payne:** I understand that the first Clare claim has been agreed as a result of the court action. The figures involved could be very large, and it hinges on the question of what the wording in the insurance contract that existed at the time of the fires means. I understand that ETSA's coverage was \$50 million for one event. I presume that an insurance group might argue that the whole day was one event. If the claims amounted to \$200 million or \$300 million it would leave—

**The Hon. E.R. GOLDSWORTHY:** There will be.

**The Hon. R.G. Payne:** The honourable member seems to be able to determine the outcome of the court actions before they take place. The trust would argue that one event is fire in a locality. That puts a totally different connotation on a possible payout. In the final analysis, it will be adjudicated elsewhere than between the insurance companies and ETSA. That is not any special information that anyone could not have worked out for himself.

**The Hon. E.R. GOLDSWORTHY:** What about Victoria?

**The Hon. R.G. Payne:** The Victorian utility was found to be in a different position because liability was more clearly defined.

**The Hon. E.R. GOLDSWORTHY:** It finished up in court in England.

**The Hon. R.G. Payne:** I am almost tempted to wonder why the honourable member asked me this question because he seems to have other information. It will finish up somewhere, but I do not think that it will be in England, because South Australia does not go to the Privy Council anymore; that is one small blessing. ETSA has been prudent and fair. The time taken to get to settlement and payout of the claims has largely been dictated by a number of factors: by some people not even putting in claims; some legal firms not understanding the need for expedition in the matter; and the requirements of the insurers. Without admitting any liability, they want to be involved in the way in which claims are settled and what compensation is paid.

A workable scheme is now in place which results in minimum delay. Of interest to the Committee would be the fact that, at my behest, the General Manager of ETSA (Mr Sykes) has required that settlement teams be set up and that regular progress reports be made to him on the settlement and the organisation that takes place with respect to claims being submitted, assessment, settlement and so on. That has been of some help in the matter. I have taken the opportunity to outline more than the honourable member asked to show that the Government has been concerned. However, it is not really a question of the Government stepping in and operating the judicial system. If it did so, there would be no bulwark against tyranny, and that is the difference in a democracy where the judicial system is entirely separate from the Government and its actions.

**The Hon. E.R. GOLDSWORTHY:** The Minister did not really comment on the possible impact of tariffs of adverse decisions in the courts on bushfire claims. A large number of claims are outstanding in the South-East, where ETSA will face an enormous payout if it is found to be liable. Does the Minister believe that it will have a considerable impact on tariffs if that is the only method of funding the payouts?

**The Hon. R.G. Payne:** It could have a considerable impact on tariffs, but at this stage it is by no means clear whether that will happen.

**The Hon. E.R. GOLDSWORTHY:** I want to ask questions about the Energy Division. In this morning's newspaper I note that one of the unions has said that it will not build the new tropical conservatory. It has been put to me by someone who is close to the world scene in terms of tropical conservatories but whom I will not name in this forum that the conservatory is to be air heated and have a resultant large annual bill. Based on his calculations, he believes the technology for heating is wrong and that soil heating should warm up the conservatory, but the project provides for air heating. He believes the bill for heating the conservatory will be about \$130 000 to \$140 000 a year.

Has the Energy Division been invited to do any sort of audit? Everyone is on about saving energy at the moment. If the division has not, if I was to put this person in contact

with the division, would it be willing to do an energy audit on the cost of running a conservatory? My contact also spoke of getting the moisture level up by spraying water vapour in the air to achieve the tropical environment, but that would require more heat over and above his calculation. This is another problem in addition to the Builders Labourers Union saying that there is no way that it will build the conservatory when houses are needed. Will the Minister look at the cost of heating the conservatory?

**The Hon. R.G. Payne:** I do not have any knowledge as to what the likely running cost would be in regard to the energy needs of the conservatory. I recall having heard that there will be some changes to the design and specifications, anyway, relating to energy usage in regard to the glass cleaning method to be adopted.

**The Hon. E.R. GOLDSWORTHY:** That is just a cutting of costs.

**The Hon. R.G. Payne:** The original proposal was going to be more expensive than what has subsequently been adopted in regard to glass cleaning requirements in the building. In terms of heating and achieving the correct humidity for the conservatory, I do not have information. I would certainly be willing for the Energy Division to be involved. I point out that there would be more than one Minister involved and some niceties are also involved. I undertake to raise the matter with the relevant Minister and see whether any information can be obtained for the Committee. I understand that there is a closing date.

**The CHAIRMAN:** It is 2 October.

**The Hon. R.G. Payne:** There would be time to try to pursue that and I undertake to do so.

**The Hon. E.R. GOLDSWORTHY:** While we are on this subject, reference is made to solar access in planning. The department has been involved in that and I would be interested in the proposed details. 'Solar access' means letting sunlight down on people who want it. I think that is what it is all about, as well as building heights. Can the Minister give us a report on how the department has been involved and what have been the result?

**The Hon. R.G. Payne:** That matter involves the rights of people. I think the Attorney-General is involved with regard to laws or regulations that may be brought into being. I ask Mr Noble, who has been involved in the ongoing saga of solar access and solar rights, whether he has any information that he can make available to the Committee.

**Mr Noble:** The question of solar access has been under review for five or six years at least, as I recall. More recently, as a result of the efforts of the dept, there are now solar access guidelines that are being incorporated in the SDP for metropolitan Adelaide and they are being suggested for incorporation in other local council areas. The principle, to which the Minister alluded, is that there ought to be certain rights for people in terms of protection against shading in regard to solar devices or the shading of northern windows of buildings. While it is a relatively small step at this stage, it does indicate that the question of solar access has now been properly incorporated in the overall building and planning process.

**The Hon. E.R. GOLDSWORTHY:** I thank the officer for that answer. Obviously, it has a long way to go in terms of regulations and is just a thought at the moment. People are thinking about it but, in terms of promulgating planning regulations, they have not seen the light of day. If they have, I have not heard of them.

**The Hon. R.G. Payne:** The principles are incorporated in SDPs, as pointed out. That is where we are. It is not an easy area in which to operate. Where it has been tried, I believe there have been a few hurdles crop up. That is why

we are proceeding with caution, although trying to establish the basic principle that people have rights in this area that should not be infringed.

**The Hon. E.R. GOLDSWORTHY:** Another reference in the budget papers is to the ongoing activities of the committee looking into energy pricing. That has been a long haul, and I have asked questions on that for the last three years. We have had a second report. I read a report during the last 12 months that contained what appeared to be some useful suggestions, but it appeared to hedge its bets and nothing appeared to lead to a conclusion involving definite proposals on energy pricing. I understand that a report will see the light of day sometime in the next 12 months. ETSA appeared to take up certain points but claimed that its action was off its own bat. It changed the pricing structure for rural producers on weekend pumping by extending the night rate over the whole weekend, and this was a suggestion in the report. ETSA claimed that it had nothing to do with the report, that it dreamed up the change itself. I believe that that was a useful suggestion that was implemented.

**The Hon. R.G. Payne:** Perhaps the Minister had something to do with it.

**The Hon. E.R. GOLDSWORTHY:** ETSA claims that it acted on its own initiative, yet this is one idea contained in the report. Mention has been made about extending the night rate into the domestic field, which would be of great interest to a lot of people. When will the official report in relation to energy pricing be made available and what impact, if any, does the Minister believe it will have on the bulk of consumers, which, of course, is the hard pressed domestic sector?

**The Hon. R.G. Payne:** I would like to make one minor correction that I would ask the Deputy Leader to accept. He may have asked me this question three years ago, but the tariff inquiry has only been in progress for just under two years. I have now received the report from the Tariff Review Committee, chaired by Dr Malcolm Messenger, and I am currently studying it. I expect to put the proposals before Cabinet shortly.

**The Hon. E.R. GOLDSWORTHY:** Is that the final one?

**The Hon. R.G. Payne:** Yes, it is. I have only skimmed through the report, but I think it will be seen to be the most comprehensive and sensible approach to the question of energy tariffs—it is not just electricity tariffs—that has been prepared for some years, at least in this country. I point out to the honourable member that someone has to pay the cost of providing electrical power and if changes occur in one sector by way of customer relief then someone else will have to pick up the tab to compensate, because ETSA has certain overheads and the only way of recouping those operating costs is by the operations. I think the proposals in the report recognise this situation and point out that any changes will have to be of a gradual nature. I will be recommending to Cabinet that the report be released for public comment before any further action takes place. I anticipate that the report will be received with the same enthusiasm by the public as was the earlier report.

**Mr ROBERTSON:** I wish to ask a question relating to the quarry practices and the enforcement of the Mines and Works Inspection Act. It is my understanding that the Linwood quarry, which is in the middle of the Bright electorate, and other quarries in that district comply relatively well with the Mines and Works Inspection Act. I have very little evidence of anything but complete adherence to the Act. When apparent breaches have been drawn to the attention of the departmental inspectors they have arrived on the spot almost within minutes. So I have no complaint about that. I realise that new techniques of multiple explosions in

quarries have solved many of the problems that used to result from ground vibration and air blast. What steps have been taken by the Department of Mines and Energy to ensure that ground vibration and air blast have been contained and what action has been taken to ensure that residents, such as those in Marino who abut the Linwood quarry, can in the future be reasonably assured that they will not be worried by air blast and ground vibration?

**The Hon. R.G. Payne:** I do not think you could ever prevent people from being worried by air blast and ground vibration. I do not say that facetiously, because what might be a minor occurrence to one person might be of more concern to another. The department has expended approximately \$30 000 on state of the art blast monitoring equipment during the last few years. That equipment is now in use. It is used to conduct equipment monitoring aimed at checking compliance with the appropriate standard, and at the same time accumulating a data base for complaint investigation and for assisting quarry management to design blasts. Monitoring is also carried out on specific residences in response to complaints of quarry blasting. In the last 12 months a total of 66 blasts were monitored for air overpressure and ground vibration.

The department is very responsive in this area and on occasion I have received proof of that by way of letters to me as the Minister asking for my intervention in problems relating to quarries. In that correspondence it has been pointed out that the department has been very helpful in respect of the problem that the resident has experienced relating to blasting. I can recall statements in the letters about other problems with quarries, such as dust and noise, and the writers have pointed out to me in their requests for further help that the department has been very helpful in these other areas.

In response to the final part of the member for Bright's question about whether the residents can look forward to continual assistance in this area, clearly that would be the position.

**Mr ROBERTSON:** My last question relates to the UHDE study on coal gasification which has been conducted over the past couple of years. What have been the results of that study, particularly in relation to the Bowmans coal deposit, and how close is the project to being finished?

**The Hon. R.G. Payne:** I remember the Deputy Leader asking during normal proceedings of the House whether the result of a trial in Wachtberg was a fizzer and I pointed out at that time that it had not been a fizzer, but that some problems had been encountered which related more to the pilot equipment being used than to the process that was being evaluated. My understanding in general terms is that carbon conversion has been very good and that the process as a whole is capable of being further improved to the stage where it might well prove to be a viable and economical proposition. However, further study needs to be done in relation to this matter. A study is currently taking place and I expect to get the final report during this month.

**The Hon. E.R. GOLDSWORTHY:** I refer to the statement in the yellow book that the LPG program has been reviewed, with new emphasis on LPG bus engine development. What is the proposal for the use of LPG? There was a thrust for the increased use of LPG, for motor vehicles in particular, but the only real impact has been on taxis; most of the taxis that I use are driven by LPG. A couple of ministerial cars were converted—it looked good for the Minister of Mines and Energy to be seen driving around in a car propelled by LPG—but we have not heard much about this in the last year or so. Is that strategy still in vogue, bearing in mind our self-sufficiency in relation to oil and

the availability of petrol locally? There is plenty of petrol available at the moment, but is the LPG program still a matter of priority or is it on the back burner, and I refer particularly to the bus program?

**The Hon. R.G. Payne:** The question of promoting the use of LPG in the national interest (as has been suggested by the honourable member) with the dwindling liquid fuel supplies of Australian origin is such that the Government was earlier actively involved (and this included funding) in a liaison group with the industry, and direct promotion, if that is the correct term, was taking place with respect to the use of LPG in motor vehicles generally. In the initial stages the need was seen to get some penetration of the market and from then onwards it could be more of a self-starter—it could start to carry itself.

We had more than one approach to the matter. In fact, that liaison group is meeting no longer regularly but on an *ad hoc* basis. The initial need is perceived as having been met, because I think that over 60 to 70 outlets are now available throughout the State where motorists who convert solely to LPG or have the alternative use can now obtain LPG. Secondly, the need to promote it was related to Port Bonython (as the honourable member would know), and as quite a large production takes place it is sensible that that which can be used in South Australia is so used, as well as exporting that valuable resource overseas.

We had a second prong to our approach in that we had a bus pilot scheme in conjunction with the STA where six MAN buses were used as trial vehicles. There were some teething problems but the result of the trial was that it was considered to be worth while. Some of the drawbacks were that, as the vehicles were designed for diesel rather than LPG, in future vehicles of that kind would need to be modified or perhaps designed more appropriately for LPG, and this would be even more successful, particularly in Hills operations, and so on, which apparently does not always apply in Germany and other places where they have been used as LPG buses. That was a qualified success, and it is still being further evaluated.

With respect to the overall use of LPG, only recently there has been some lessening of the intent of motorists to expend the capital involved in converting or providing for alternate use in their vehicles. This has been brought about by two or three accidental occurrences, including the LPG explosion in the Queensland conversion installation which perhaps caused people to slow down in considering the change. It is curious that a load of petrol which explodes seems to be quite acceptable to the public whereas if there is a mishap or accident with LPG it seems to put back usage, except perhaps in one area which I understand is continuing to expand, and that is the small 2.5 kilogram and the 5 kilogram bottles.

I know that in South Australia a couple of local firms have been achieving increases in sales of LPG to all sources, including motor vehicles. One firm told me only recently that over the past 12 months it had achieved a 30 per cent increase. Depending on which basis it was working from, that is a substantial increase. I believe it is not going as fast as one would hope, but there is an increasing use of LPG.

**The Hon. E.R. GOLDSWORTHY:** Given the fact that we have these very large supplies of LPG, and that from memory the biggest contract ever written for any commodity was the Japanese contract for the sale of LPG from the Cooper Basin—

**The Hon. R.G. Payne:** One and a quarter million tonnes over five years.

**The Hon. E.R. GOLDSWORTHY:** I forget the amount now, but we are selling a lot of this prime fuel overseas. If

this is a real alternative to petroleum surely we get to the stage where car manufacturers will build new cars with tanks for using LPG rather than petrol. If we are fair dinkum about this becoming a transport fuel, we should look at that, so that one can have a choice when buying a new car of either running it on LPG at about 15c a litre or buying a petrol driven car. Has the Government given any thought to that planning?

**The Hon. R.G. Payne:** I would not quarrel with the ideas put forward by the Deputy Leader but I suggest that he is really thinking on a national basis. I do not quarrel with that; I think that we have to all think more on an Australia basis than perhaps we tend to do as South Australians in a State parliamentary scene. To do anything on a State basis would be somewhat limited. I am suggesting not that we ought not to do anything but that we are already doing what we see as useful in this area. In support of what I was saying earlier, I understand from State Supply that, where vehicles fitted for LPG, either exclusively or with alternate use available, go to auction, they do not bring any more than standard vehicles, which certainly seems surprising when one takes into account the capital value of the equipment alone.

**The Hon. E.R. GOLDSWORTHY:** That's a matter of education though, isn't it?

**The Hon. R.G. Payne:** Yes. Certainly, we have done our best on a limited budget with that liaison group to try to educate the public. However, I think it will be by word of mouth. I remember a person approaching me about 12 months ago saying that he had three utilities and three concrete mixers. This small subcontracting builder told me that he put them all on LPG—not only the utilities but also the mixers—and that he was saving a lot. I hasten to add that I think that the Commonwealth has a role to play here, too, because one of the questions that has been raised with me from time to time by people who have either contemplated making the switch to LPG or who have made it is how long will the Commonwealth Government continue not to apply a surcharge on LPG as applies on petrol. That is what is making some people cautious about making the \$1 100 to \$1 200 investment.

**The Hon. E.R. GOLDSWORTHY:** What is the outlook for energy demand forecasts mentioned in the budget papers? What is the anticipated growth in energy usage, with particular reference to electricity and gas, into the future? It seems to me that there is conflict in relation to ETSA's philosophy. Its balance sheet is affected by increased electricity sales and it has people in the field trying to sell electricity and increase consumption. On the other hand, we have this view that we ought to be conserving electricity and reducing consumption. ETSA's profitability is predicated on a movement in one direction, whereas we argue that we ought to be saving electricity. The cost has got to the stage where domestic users are certainly interested in saving electricity. What are the demand forecasts for electricity and Sagasco gas?

**The Hon. R.G. Payne:** We do have figures, and I will ask Mr Noble to provide those in a moment, because we have a reasonably up-to-date forecast which can be compared with the forecast made a year ago. I point out to the Deputy Leader that ETSA's viability depends on its maintaining the correct balance between provision of equipment to generate and supply electricity and sales and that does not necessarily preclude a reasonably conservative approach to the use of electricity. That is my view and, I believe, the view of the Government. It is most important to make the right decisions about additions to plant at the right time and that will have a great effect overall on the cost structure. Further, it will ensure that ETSA is not in a similar position

to its counterparts in New South Wales and Victoria where, in simple terms, they have power running out of their ears and they have to find some way of getting a return on it. ETSA is not in that position.

I am about to give the Labor Government a pat on the back (and I believe that the Liberal Government also is entitled to one), because over the past 10 or 15 years with all decisions in South Australia in respect of additional power generating capacity taken by the Governments concerned, so far they have got it right: ETSA has not been in a position where it has been short; we have not had black-outs, breakdowns, an inability to supply or a major excess of power, and I expect that ETSA will continue to exercise the necessary judgment to remain in this favourable position.

**Mr Noble:** The forecasts that we produced for the various energy sectors range over the next 10 years. We have not attempted to forecast beyond that time. As the Minister said, a year ago we produced some figures and recently they have been updated. I will give the updated figures as to the average annual rate of increase (and these relate to the next 10 years) for each sector: electricity, 2.6 per cent; natural gas, 0.8 per cent; petroleum products, 1.4 per cent; and solid fuels, 0.6 per cent. In relation to the total energy delivered to the State, that results in an overall increase of 1.4 per cent. There are some slight variations from the previous year, but mainly they are brought about by the fact that the base for 1987 is a little lower in the case of electricity and slightly higher in the case of gas than we anticipated.

**The Hon. E.R. GOLDSWORTHY:** In the past two or three years energy demand forecasts have tended to be revised downwards. A few years ago we talked about 6 per cent.

**Mr Noble:** Yes.

**The Hon. R.G. Payne:** In relation to electricity users, the committee found there was a high and low forecast somewhere between 2.5 per cent and 3.6 per cent, but they have been wound back since then.

**Mr ROBERTSON:** Members of the Committee and officers of the department would all be aware of the sad story of grandpa's knob and how it collapsed, not altogether inappropriately in Virginia. Of course, grandpa's knob was the site of the first large wind generator in the Appalachians built some time in the 1930s and it had a chequered history to the early 1940s or 1950s, when it fell over. Since that time research in relation to wind generators has taken place at a place called Trind, in Jutland, in Denmark where they have got to the point of now seeing fairly efficient designs such as the monopterous blades that are now beginning to be developed in wind machines, and variations of the vertical axis Darrieus turbine have resulted in fairly efficient power generation by windmills. I make the comment, because I note in ETSA's annual report a reference to the cable failure from the mainland to Kangaroo Island on 14 June when there was considerable disquiet for about 36 hours until the break was located. In fact, the emergency resulted in a fairly quick operation whereby diesel generating plant was en route to the island at the time that the break was remedied.

I make the point because it seems that the cost of fixing breaks in submarine cables particularly could be expected to be quite high and, in light of recent technology in wind generation, has any consideration been given to producing the eight or 10 megawatts I suppose Kangaroo Island requires at its peak, generating that by wind power? In the case of Kangaroo Island, would that be an economical proposition, in view of the high cost of repairing and replacing that cable should it need to be done, together with the high cost of

providing emergency diesel generating plant should the cable break down?

It may be that Kangaroo Island could be made self-sufficient on wind, given the large proportion of the south coast that is in a fairly strong wind stream for much of the year and that Kangaroo Island might even be expected to become a net exporter of power if sufficient wind farms are set up. What research has been done, particularly on Kangaroo Island, bearing in mind its peculiar circumstances and the fact that it is connected to the mainland by cable?

**The Hon. R.G. Payne:** I thank the honourable member for his interesting question and, on a quick appraisal, it would seem to be a good idea: Kangaroo Island is considered to be windy, and therefore you erect a few wind-driven generators. When I say that, I am not being disparaging to the honourable member but, rather, that is one view that could be adopted. However, that is not the view that the Government took in this matter. In fact, the Government set out, as far as possible, to approach this whole area scientifically and, to that extent, a number of sites throughout South Australia were selected from which wind data was collected for well over a year. That process has been continuing for quite some time with the aid of monitoring equipment. Stage 2 of that program is then to marry, through the computer, the information gained from the wind studies with the available technology. Such a marriage would ascertain the costs and a reasonable operating life, and so on. Some of that work has been done on an experimental basis and, perhaps with the Chairman's indulgence, I will ask Mr Noble to give us some information on that.

I think that the honourable member has the right figure of a 10 or 12 megawatt loading for Kangaroo Island (I do not know the exact figure) but, if a backup were to be provided by way of both wind generation and/or diesel in the event of a submarine cable failure, if it were diesel the largest units maintained by ETSA in that area are 25 kVa and 40 of those would be needed for one megawatt. If it involves 10 megawatts, 400 machines would be required. I am not suggesting that it would be done with diesel, but I am addressing the issue of backup. Similarly, in order to provide wind-driven backup, that would require fairly major installations and it is not uncommon to have 200 kW machines, so we would need quite a number of them. It would involve an extensive installation at considerable cost.

The thing to note is that technology has advanced rapidly over the past 10 years and in the field there has been a real sorting out of those who are really making worthwhile machines and those who are trying to cash in on tax advantages in California, or wherever it has occurred in some other countries. This has led to more accurate information being available and the cost of machines has been decreasing in relation to generated kilowatt per hour possibilities. It is my hope (and I have always addressed the matter in this way) not just that we can get the actual demonstration projects in South Australia that will be for demonstration in the sense of looking at them, but, rather, we will deliver power either to load or into the grid in the not too distant future.

That is not a parliamentary phrase: in this case we are working towards it happening in the next 12 months or so. We are at that stage with our computer marriage between the figures for technology and wind performance. Mr Noble can provide details as to the likely generated kilowatt hour costs, and so on, which have more validity now than they would have had even five years ago.

**Mr Noble:** As the Minister mentioned, the department has conducted a major wind study, which we are about to conclude, and which involved two distinct phases: first, we

looked at the possibility of wind farms for connection to the ETSA grid, which I suppose is the most relevant phase to the question; and, secondly, we tried to supply remote areas not connected to the grid. At this stage the preliminary figures in terms of the costs per kilowatt hour for those areas which might be connected to the ETSA grid, such as Kangaroo Island, range from about 8c to about 12c per kilowatt hour (and I point out that ETSA's average generating cost is something in the order of 4c to 5c per kilowatt hour). So it is reaching the order of magnitude where it is not out of the question, but it is still a bit uncompetitive compared with current supply costs.

The other part of the honourable member's question related to the cost of maintaining diesel generators on standby. The cost of diesel generation is higher than the figures I have quoted but, if we use only diesel (and I think that that was our first break in 20 years), it makes the standby cost quite low. So at this stage we think that the cost of wind farms is becoming more competitive, but on strict economic valuation at this time it is cheaper to supply from the grid.

**Mr ROBERTSON:** The development of cadmium batteries and such would probably further reduce the cost, moving away from traditional lead acid batteries. Was your research based on lead acid storage?

**Mr Noble:** That relates to the second half of my comments in terms of the possibility of wind farms being used to supply remote areas not connected to the grid. Certainly developments in relation to the cost of energy storage are such that it makes it look fairly attractive even now, because you rely on diesel generators principally as the only other option. So we think that wind power, in areas where wind speeds are sufficient, can be attractive.

**Mr ROBERTSON:** Still on ETSA, I turn to load management and note in ETSA's annual report reference to a trial installation at Woodforde whereby the traditional mechanical time clocks have been abandoned and replaced by a pulsing system which regulates the power flow. How effective has the Woodforde trial been, and can we expect ETSA to adopt that method of load management more widely in the near future? If that occurs, what savings can be expected to accrue?

**The Hon. R.G. Payne:** It is an interesting aspect of the development in control of load by electrical systems. The system is known as sequential wave distortion signalling and, as a person who has been interested in electronics for some time, I find it a fascinating method of achieving control at a consumer's premises by using the delivery line (that is, the power line to premises), which must be there anyway, to obtain a control effect. The possibilities are quite exciting—and they are not only possibilities but probabilities—in that they could lead to much more flexible tariff arrangements relating to time of use, because metering commands could be sent over the existing network using sequential wave distortion signalling. The work has been done within ETSA, and with full support, over a period of time by an engineer whom I will not name for reasons relating to patency and so on.

It is an important breakthrough in this area on a world-wide basis, and there is no doubt that it will have a significant effect on the way in which tariffs can be related in the future to load requirement, because load requirement can be controlled on a flexible basis by pulse signalling, sequential wave pulse, from units which can be successfully organised to handle 5 000 or 6 000 consumers (without using actual figures) in a relatively small installation. It is simply a matter of adding to those installations.

My own view, not necessarily ETSA's, is that the biggest hurdle relates almost to the ID card or the big brother syndrome in that people might be suspicious about their final bill because their meter is set as to what rates are charged at a given time during a 24-hour cycle. So I guess an educational program would be required to show people that they are not being diddled. I do not suggest that ETSA would do that, but people might take that view. ETSA recently conducted an exercise on the J tariff system whereby a large number of clocks which switch on water heating were adjusted so that they did not all switch on from no load to high load over a short period, but had more phased or staged load gaining and load dropoff.

With a suitable meter—and they are not too costly and could replace existing meters quite easily—a sort of computer controlled 'load-in' and 'load-out' arrangement could take place each day during the 24-hour cycle and could be geared back to the machinery providing the power, and so on. The possibilities are literally endless and are very exciting. It will not happen tomorrow, but in a few years it will be the norm in the power industry. The trials at Woodforde have been quite successful.

**The Hon. E.R. GOLDSWORTHY:** What progress has been made in relation to energy labelling of appliances?

**The Hon. R.G. Payne:** I have received Cabinet approval to prepare the necessary regulations to require energy labelling of refrigerators and freezers in South Australia, and they are currently being prepared.

**The Hon. E.R. GOLDSWORTHY:** That is some progress. Will it apply to all white goods manufactured in South Australia?

**The Hon. R.G. Payne:** White goods manufacturers have been consulted.

**The Hon. E.R. GOLDSWORTHY:** I think the original proposal was that all electrical goods would have some form of energy labelling to educate the public as to the energy consumed by the appliance that they were buying. Is that seen as a first step or the end of the shooting match? What is the long-term strategy?

**The Hon. R.G. Payne:** The proposal at the moment is for all States to act in concert. These matters are considered at the annual conference of Ministers of Mines and Energy. In fact, New South Wales and Victoria are already energy labelling the two types of appliances that I mentioned. It seems that South Australia has lagged a bit, and that may be because I have not been pushy enough in this area. I have remedied that and we are now virtually in step with the other States. I understand that the next item to be considered is refrigerated air conditioners. It will be an ongoing process in conjunction with agreement between the States, which makes some sense because these products cross State borders.

**The Hon. E.R. GOLDSWORTHY:** What will be on the label to be standardised around Australia? I have never seen one, except that on the back of a radiator it is shown as 2 400 watts, but a 2 400 watt light globe uses a lot of power.

**The Hon. R.G. Payne:** I have not had the honour of seeing one, but Mr Noble has, and he assures me that he can describe it.

**Mr Noble:** Basically the label simply states under a certain prescribed operating condition the annual consumption of the particular appliance in kilowatt hour terms. So, if people are comparing one refrigerator with another, they will see that one uses X kilowatt hours and the other Y kilowatt hours. The number is printed in bold print and there is a rating scale indicating what would be a large consumption for that size appliance and what would be a small consumption.

**The Hon. E.R. GOLDSWORTHY:** So, the public can make some realistic judgments. The basis of judgment at the moment is the wattage, be it a 100 watt globe or a 25 watt globe—the public understands that. If anyone likes to think about a 2 400 watt radiator, they can understand that also. When you say there will be a number rating, will the public know what that number means? Supplementary to that, what tests will be applied to show that the manufacturers do not just think up a number and whack it on? In terms of annual usage, you are getting into an area where there will be some overs and unders.

**Mr Noble:** The first point is that the test applied is a standard test and, certainly in terms of New South Wales and Victoria the Governments are on a limited selective basis checking the figure that is on the label. In terms of comparison for the consumer, I think it will be relatively easy, because they will simply see that one appliance uses 300 kilowatt hours per year and the other uses 200, and they will be able to make their judgment on the annual cost.

**The Hon. E.R. GOLDSWORTHY:** They could have confidence in the fact that they will be realistic numbers?

**Mr Noble:** Yes, because both numbers were derived under the standard test where the operating condition is simulated over a year.

**The Hon. R.G. Payne:** Refrigerators with the New South Wales and Victorian plates are already available for sale in South Australia, and I am assured by at least two members of the two Houses of Parliament who have spoken to me about this matter and subsequently made purchases that they found it an aid to selecting the right brand. I assume that is a practical commendation of the use of these labels.

**The Hon. E.R. GOLDSWORTHY:** There is a reference to upgrading the information from the Energy Information Centre. Can the Minister report on what is happening there and on the sort of judgment that the Government can make on what appliance is best installed, particularly in relation to heating?

**The Hon. R.G. Payne:** The Energy Information Centre, from the time of the previous Minister, who is now the Deputy Leader of the Opposition, has always provided a range of information on the capabilities and operating mode of equipment which prospective purchasers are considering. It has always tried to do that in an objective way, without necessarily taking sides as to one brand or another. That is my understanding of how the Energy Information Centre works. Continued and ongoing usage at very extensive rates has occurred, and the number of visitors, school children and other inquiries has been very large.

**The Hon. E.R. GOLDSWORTHY:** What changes have been made?

**The Hon. R.G. Payne:** The changes under way would best be outlined by Mr Noble. I point out that the Government, through me, has also considered the total expenditure on the provision of energy information and whether, on a cost efficiency basis, the best effort is under way. I am trying to let the Deputy Leader know that I am looking at this question at the moment because, in some cases, not dissimilar information is available from the Gas Centre and also from an ETSA information centre.

**The Hon. E.R. GOLDSWORTHY:** They all think that they have got the best.

**The Hon. R.G. Payne:** That is the point. Ultimately, as the honourable member said earlier, the consumer pays the cost of the overheads which eventually become part of any tariffs. I am anxious to see—not to curtail for curtailment's sake—that the best value for money is obtained in the interest of the consumers. I put in that qualification and

ask Mr Noble if he would detail some of the information that the Deputy Leader desires.

**Mr Noble:** First, just to touch on the point that the Minister mentioned, over the past three months there has been a coordinated effort involving the department, ETSA and Sagasco to try to bring some coordination to the information activities that each provides. We meet on a regular basis now to attempt to put that into place. I think that is starting to work in terms of avoiding overlap and duplication. The major change being planned for the information centre this year is that we are trying to get out into the workplace, and this involves a program where we are providing a range of information to small to medium size businesses on how they might reduce their energy use, and also to the employees of those businesses on how they might reduce their own personal energy use at home.

In addition, we are updating the energy resource fact sheets which have become extremely popular, particularly with school children. New brochures are being printed in terms of energy education. We are using the Energy Information Centre caravan more extensively to bring the facilities of the centre to country and outer suburban people. We are continuing and upgrading a system, known as the five star design rating system, whereby new homes are rated according to their energy use. A new brochure will outline the various options for remote area power use—touching on a question that was raised earlier. They are the basic areas on which the information centre is focussing this year.

**The Hon. E.R. GOLDSWORTHY:** Does the Energy Information Centre now have an advertising budget? I understand that, when it was doing its radio scatters, the number of people coming to the Energy Information Centre was quite considerable, but last year the advertising was cut back and attendance at the centre dropped proportionately. What is the position now in terms of the advertising budget for the Energy Information Centre? I have no recent figures for that and I could not find anything in the budget papers on its advertising budget. Does it still have an advertising budget? There is a happy balance I suppose in what the Government believes it is justified in spending to inform the public, but what is happening now?

**Mr Noble:** In terms of advertising plans for this year, no specific item has been included in the budget estimates; it has been incorporated in the total expenditure for the centre. However, advertising expenditure for the centre this year will be of the order of about \$15 000. It is true that that is a little less than for the previous year. One comment that I should make about numbers of people going through the centre is that, while advertising can have an impact in the immediate term, in terms of getting more people through the door, we have found in fact that the number of people going through the centre has very much stabilised over the past two or three years. A major advertising burst seems to have only a reasonably temporary impact. A fair amount of advertising of the centre is now done by word of mouth, from people who have enjoyed the benefits and the advice that they have received, and they pass that on. The numbers through the door are not declining but are reasonably static.

**The Hon. E.R. GOLDSWORTHY:** On the matter of the energy rating for homes, relating to the five star concept—and I have been to some of those—does the centre provide advice to people who want to build a house of another design? For those people who get a house plan drawn up and want to know how it will go in terms of energy use and energy conservation, does the centre provide appropriate advice? For example, a young couple might turn up with a plan of their house and ask whether it will work: is any facility available to cater for that? The vast majority of

people simply get a house designed and away they go, without the faintest idea of how it will go in terms of energy conservation.

**The Hon. R.G. Payne:** That kind of advice is available. I will leave it to Mr Noble to outline the various ways in which that takes place.

**Mr Noble:** That type of question is probably the most common that is asked at the centre. Certainly, the example referred to of a young couple coming in with some concept of a house plan and wanting some advice on (a) how much it is likely to cost to heat and cool that home and (b) how they might improve the design in order to reduce the anticipated cost of heating and cooling the home would be the most common everyday occurrence at the centre. Right from the start we have seen that as being a fundamental issue that the centre must address.

**The Hon. J.W. SLATER:** I note the comment made at page 408 of the Program Estimates booklet that the LPG program will be reviewed. In addition, there is the comment that a new emphasis will be placed on LPG bus engine development. Will the Minister tell the Committee what is the new emphasis on LPG bus engine development? I do not think that the LPG program for private cars has been a very outstanding success, apart from perhaps those who use vehicles over a lot of kilometres, such as taxi drivers, and so on. Is there any information on the number of vehicles that are currently using LPG? How many private vehicles are using LPG? Further, are commercial vehicles now aligned to changing over to LPG?

**The Hon. R.G. Payne:** I am glad that the honourable member has asked this question as it is different from the question asked earlier. He dealt with buses and different aspects in relation to private vehicles. I think that the member for Gilles is arguing that it is understandable that the rate of penetration of conversion of petrol fuelled vehicles to LPG has not been great because it takes a fair while, unless an owner does many kilometres a year, to get one's investment back. I can tell him that that used to be the situation, but about 12 or 18 months ago it was established that after travelling 25 000 to 35 000 kilometres in a private vehicle the investment would be returned. That figure was based on the cost of having a six cylinder vehicle fitted out to run on LPG. The proposition would be reasonably attractive to quite a lot of users now because that is not a high number of kilometres to travel to get one's money back before starting to make real savings.

I cannot provide the member with figures relating to the number of private vehicles that have been converted to run on LPG. I am sure he is aware that in excess of 90 per cent of the taxis in Adelaide are running on LPG. That speaks volumes for the use of this fuel and for the durability of engines which are designed to run on petrol but which are now run on LPG. I have ridden home with a taxi driver who told me that his vehicle had done 400 000 kilometres on LPG. That is a long life for an engine. In the early days it was said that running cars on LPG was not good for engine parts. There were other furrphies around at that time, as there always are when change occurs.

**The Hon. J.W. SLATER:** A safety factor was also involved.

**The Hon. R.G. Payne:** I point out to the honourable member that vehicle petrol tanks are manufactured to an Australian non-pressure vessel standard whereas LPG tanks that are fitted to motor vehicles are subject to strict regulatory requirements in South Australia and are manufactured to pressure vessel specifications. I think most people would understand that they are superior specifications to those applying to petrol tanks for motor vehicles. In fact,

the history of LPG tanks in vehicles has been excellent; that includes tanks in cars that were subjected to fire on Ash Wednesday, and storage tanks in the same situation, which have vented controls, without fail. There is now an arrangement that private cars fitted with LPG tanks must have venting fitted to the boot and a relief valve fitted to the tank so that no problems arise.

Reference was made earlier to the six bus trial program. I did not mention that the National Energy Research Development and Demonstration Council was involved in funding our pilot scheme and put up \$241 030. There was also input from my department, the STA and the Department of Transport, which worked together on that trial. The six LPG powered MAN buses to which I referred earlier continue to be operated by the STA, which plans to monitor their mechanical reliability and to develop improvements to engines as the need arises. This is being done so that in future consideration can be given to making a fleet purchase of LPG fuelled vehicles, which would be a step in the right direction in view of all the things that were said earlier about Australia's dwindling liquid fuel resources, and so on.

**The Hon. J.W. SLATER:** At page 410 the yellow book refers to a report on Golden Grove drilling results. For what are we drilling at Golden Grove, which is a high level suburban housing development?

**The Hon. R.G. Payne:** My understanding is that it could relate to clay and/or sand resources. It could also relate to information requested on footings for buildings, and so on, but I will ask the Director of Mining to enlighten us further.

**Mr Hill:** There is a big reserve of building sand at Golden Grove. Presently we are heading farther and farther out from Adelaide to get building sand. This will eventually add to the cost of building a house, making concrete, and so on, inside the metropolitan area. The drilling work referred to was to try to find out how much was still available at Golden Grove.

**Mr GUNN:** The member for Bright touched on the problem that people on Kangaroo Island face with the unfortunate severing of the cable taking electricity to Kangaroo Island. The whole problem of blackouts and breakdowns in the power reticulation system throughout South Australia results from the fact that it is a centralised system. People on the Upper Eyre Peninsula have also faced such problems. I understand that Kingcote on Kangaroo Island has a small generating capacity, similar to the one at Port Lincoln. One or two of the mobile generators available from ETSA ought to be permanently placed on Kangaroo Island, with others strategically installed around the State. How many does the trust have and what plans exist to purchase more?

The matter ought to be given close attention because a community becomes more and more dependent on reticulated electricity (and I have supplied my own for a number of years), and households or businesses fail without it, even to the point of being unable to get a cup of water out of the tap. Therefore, one takes alternative courses of action with portable electricity. That presents problems as people often do not have isolation switches on their power. The unfortunate incident on Kangaroo Island highlights the need for a solution. Power stations were closed down recently, as they appeared to be no longer serviceable. Will the Minister address the matter?

**The Hon. R.G. Payne:** So that we get the whole matter into its proper context, I point out that the submarine cable to Kangaroo Island was not severed. It was a three phase supply for which there are three main conductors. One of the conductors within the cable assembly failed to ground. It was not a severing—that would have been catastrophic.

One of the possibilities considered by ETSA in the case of a failure of one phase was to provide limited power to the island over the same cable, which it could not have done had it been severed, utilising (once the testing established that it was in one phase) the other two conductors normally tied up in the other two phases. In the event, it did not prove necessary to have that sort of jury-rigged arrangement but it was a possibility that could well have applied in a case of electrical failure rather than severing.

What the honourable member was putting forward in relation to the problems of people in remote areas is interesting. The situation is irksome and can be costly to any consumer of electricity who is connected to the grid. The main grid covers an area of only about 15 per cent of the State, as that is where all the people live, but it is not helpful when people living in what we might call suburbia have failures of any duration, because people these days often have fairly large investments in freezers, where they are storing food and other items which they do not want to go bad.

The trust is conscious of this, and wishes to be as helpful as it can be in the matter. However, to have a number of units on standby scattered throughout the State would be costly. The honourable member, having provided his own power for a number of years, knows that there is capital investment involved in a unit, but there is some chance of getting a return on one's money if one is able to use the unit. It does not earn anything if it is sitting there, and the investment has taken place, and the same thing applies to ETSA. The units ETSA could obtain reasonably easily are in the 25 kVa size, and we would need quite a lot of them to provide for, say, a 1 megawatt loading. One would not have 1 megawatt for a farm property, but would need that loading in relation to a larger area.

I am sympathetic to these situations. It might be of interest to the honourable member that I have asked ETSA to advise me of any contingency plan it will put into effect in relation to Kangaroo Island, where there is that isolation problem. If there is a severing of the cable, it could be quite awkward. I expect ETSA to bring forward that plan soon.

**Mr GUNN:** I think that the only council operated powerhouse left in South Australia is that at Peterborough. Can the Minister indicate whether the Electricity Trust intends to allow that operation to continue, as it has a considerable employment benefit to a town which has seen its employment base drastically reduced? Because of the actions of this Government, consumers, remote power supply areas pay 10 per cent less than they used to do for their electricity, having been connected to ETSA.

**The Hon. R.G. Payne:** The situation at Peterborough is as the honourable member described. The Peterborough fuelling for the power supply is a special arrangement in relation to natural gas, and contractual arrangements in force there need to be considered. The value of the enterprise in terms of employment is fully recognised by the Government.

It is also fair to say that I do not get too many complaints about how well or otherwise the undertaking is operating. I do not think that I can say more than that I am aware of these things and that, when this matter comes up for consideration, I will give full attention to all the factors the honourable member has outlined, and any others which may emerge.

**Mr GUNN:** The Minister indicated that about 15 per cent of the area of the State is in receipt of reticulated power. The Wilpena, Blinman and Parachiina area, which is a significant part of the tourist industry, is in urgent need of an extension of power from Hawker. For some unknown



reason, commonsense has not applied. In the early discussions, irresponsible people claiming to be environmentalists and others from the lunatic fringe of the community got themselves involved in something that they knew nothing about. Wilpena is one of the most popular tourist areas in the State and has an excellent caravan park. Unfortunately, it has no power, and that annoys many people who are not aware of that until they get there.

Blinman has great potential, and the hotel and other facilities have been redeveloped. The provision of power would enhance the living conditions of the local community and tourists and would allow responsible development to take place without great cost to all concerned. It defies commonsense that power lines have not been extended up that way because there is a demand for it. In view of the great importance that the State places on increasing its tourist potential to attract people here, will some action be taken to extend the power service to that area? No environmental hazard will be created and the Government will save a considerable sum of money compared with the cost of running those great generators at Blinman. The actual cost of putting the power lines through would be recouped in four or five years, which seems to me to be a patently sensible exercise.

**The Hon. R.G. Payne:** One thing I am always ready to say on behalf of the honourable member for Eyre is that he is most assiduous and consistent in respect of problems affecting his area. He has raised this matter with me on many occasions and by way of resolution in the House. He has always done so honestly and fairly and puts the viewpoint of his constituents. I speak from recollection when I say that to extend the grid as he has suggested is not quite as low cost as he assumes. I will not try to give an exact figure, but I do recall figures which show that it would be a very costly exercise if consumer numbers and other returns to the Government did not increase consistently.

That leads to the next aspect, which does not strictly concern this Committee. It is a moot point whether an increase in tourist visitation to the area will be in the best interests of all concerned. Areas such as Wilpena need careful regulation and policing to ensure that they are not destroyed by excessive visitation. It is a bit more complex than just taking care of the needs of some people and saying, 'Beauty, we will boost the tourist trade.'

Although I am sympathetic to that line and I understand what the honourable member is on about, I do not think that it can be disposed of so simply. However, I advise him that we are endeavouring to get supply to the area on a more modern alternative energy basis with the help of financial support from the Commonwealth through the National Energy Research Development and Demonstration Council (NERDDC). Something is in the offing, and I undertake to try to obtain that information for the Committee.

The question of a reliable power supply to remote areas has exercised the minds of a lot of people in this country and in the United States for some time. It has particular application in Western Australia, where some places are even more remote than they are in this State, if that is possible. It is my recollection, as I said earlier, that the Commonwealth Department and NERDDC have done their best. I know that a survey has been conducted of the needs of people and I think that this will lead to a project. I will get the exact information for the honourable member.

**The Hon. J.W. SLATER:** The Minister said this morning that one of the department's roles involved assessing earthquake risk. Can he explain the department's role in assessing the risks of earthquakes in South Australia? From time to

time we do have some minor problems, and he will realise that we have a fault line running from the Mid-North to the Adelaide Hills. What sort of assessment does the department do? Does it work in association with any other Commonwealth or State Government departments?

**The Hon. R.G. Payne:** The earthquake that registered in most minds in South Australia took place in 1954. The information before me indicates that it was near Darlington, but I can correct that information because I live in Clovelly Park. Indeed, I believe it started in our street: we are not far from the fault line. It is a credit to the War Service Homes Division and its requirement for strong foundations that our house received only one crack and that it has not moved since.

The department is involved, and through Cabinet's approval it has accepted the responsibility, and the Sutton Institute of Earthquake Physics is now part and parcel of the Mines and Energy Department. It is an important role for the Government because, as members will understand, the information collected will not prevent earthquakes, but we need to know and be able to forecast as best we can the possibility or otherwise of earthquakes and likely damage occurring, as well as possible injury to people, so that our emergency service organisation can take account of this. Adelaide is one of the most earthquake prone areas in Australia, which is not generally appreciated.

Last year or the year before that a fairly large earthquake occurred in the northern Flinders area, or even further north, and the ground moved more than one metre. I have seen photographs of that. Perhaps the member for Eyre is aware of it. It was in a remote area, but if it had been in a populated area there would have been great concern. That indicates our proximity to such an area. It is difficult to assess, and that difficulty is compounded in the case of Adelaide by insufficient instrumental data and also because of a lack of excess funds. We do intend to purchase equipment for four new digital seismograph stations, and they would be pretty well up to date to monitor activity around Adelaide in more detail. One of the new stations will record acceleration data which will be useful for engineers evaluating the response of large structures to earthquakes.

#### Membership:

Mr S.J. Baker substituted for Mr H. Becker.

**The Hon. E.R. GOLDSWORTHY:** The member for Gilles asked some questions about the Golden Grove drilling program. What is the up-to-date situation on the remedial program for that large area of marshy land, which does not drain and is unsuitable to build on? What is the environmental problem in relation to Golden Grove? Is there a problem in relation to the new housing development extending into that area?

**The Hon. R.G. Payne:** I do not think that the Deputy Premier and Minister for Environment and Planning would like me to usurp his function in relation to environmental problems. In relation to the marshy swampland that will not drain, Mr Hill, the Director, Mining Division, may have some information which would be of use to the Committee.

**Mr Hill:** The swampy ground mentioned tends to be the slimes dam for each individual mine or sand pit. The department is endeavouring to ascertain the total resource, but needs more information to develop an overall plan. The department has been working on this problem for a couple of years but is not yet in a position to produce a final plan.

**The Hon. R.G. Payne:** The extractive industries fund might be used to address the problem—to improve the environment in the areas raised by the honourable member.

**The Hon. E.R. GOLDSWORTHY:** In the near future?

**The Hon. R.G. Payne:** Yes.

**The Hon. E.R. GOLDSWORTHY:** There is a note in the budget papers about increased production of oil and LPG from the Cooper Basin. Can the Minister explain?

**The Hon. R.G. Payne:** I could give an explanation, but I think it would be better to ask Mr Laws to speak on this topic because it is reasonably wide ranging taking into account such things as the success or otherwise of the enhanced oil recovery project at Tirrawarra.

**Mr Laws:** For some years research has been conducted to improve the recovery of oil from the Tirrawarra oil field. This has been done by injecting gas into the field to keep the reservoir pressure high and to assist in sweeping the oil from the reservoir. Until May this year natural gas was being used. Since then, ethane has been substituted for natural gas. It is hoped to increase the recovery of oil from the Tirrawarra oil field from the present 20 million barrels of recoverable oil up to 40 million barrels, that is, to double the recovery of oil from the field by the injection of gas.

That field is also a good location to store the ethane that is currently not required. In addition, the Cooper Basin producers recently increased their investment in oil exploration. The maximum rate of recovery of oil occurred last year and this year, and in the future the amount of oil recovered will decline because the fields have reached their maximum rate. The producers are investing more in exploration to try to replace the oil that is being produced today. Their aim every year is to find at least as much oil as they are producing. That has not proved to be possible yet, but they are optimistic for the future.

**The Hon. E.R. GOLDSWORTHY:** Page 409 of the yellow book states:

The need to assess and maximise the utilisation of Cooper Basin oil and LPG through policies which will accelerate such development and maximise returns to the State.

This indicates that you want the producers to produce and sell more oil so that you can get more royalties.

**The Hon. R.G. Payne:** That is a true comment. I will ask Mr Laws to comment on the technical aspects. I do not believe the Deputy Leader would be opposed to the State lawfully gaining more royalties through its impost on resources that are produced in the State.

**The Hon. E.R. GOLDSWORTHY:** In a period when we are talking about conservation and the efficient use of resources, a note like that bobs up.

**The Hon. R.G. Payne:** I will have another go, if the Deputy Leader will allow me. The conservative practices that are employed mean a greater recovery of oil than otherwise would have been possible, and that is argued to be to the benefit of the State. Without the use of the gas assisted recovery of the additional 20 million or so barrels that may be obtained, that oil would not have been obtainable. It would be correct of me to say that. It is a conservative practice, rather than to destroy a field or reservoir so no more is recoverable, to practice recovery in a way that gives the maximum return.

**The Hon. E.R. GOLDSWORTHY:** That has reverted to Mr Laws' story.

**Mr Laws:** Perhaps I gave the wrong impression, but the purpose of that statement is to emphasise the job of monitoring production practices very closely in the Cooper Basin to ensure that all fields are produced at their maximum efficient rate; that the production rate from fields is not too high such that perhaps short-term production rates and short-term profits are increased, but the long-term viability

of that field to continue producing is reduced. The idea is to control the recovery of petroleum and oil from a field to a level that will result in a maximum quantity of that oil being produced economically over the entire life of the field.

**The Hon. E.R. GOLDSWORTHY:** That is fine; but it does not read that way. The receipts document states that there was a one-off recovery from PASA of \$1 million. Could the Minister explain what that was?

**The Hon. R.G. Payne:** That amount has been paid to the Government by Treasury from accumulated profit that was being held in PASA. That is a perfectly normal transfer of excess funds that it needs. The actual overall figure is of the order of \$1.7 million or \$1.8 million, and that \$1 million has been transferred to Treasury funds.

**The Hon. E.R. GOLDSWORTHY:** Could the Minister obtain a list of the transfers, say in the past five years, from the Pipelines Authority to the State? In the papers provided, it is a little hard to trace this, but no transfers seem to be budgeted for last year.

**The Hon. R.G. Payne:** I am not aware of any other earlier transfers, because obviously, to some extent, it depended on any surplus that may have been held by the Pipelines Authority, but I will certainly obtain that information for the honourable member.

**Mr ROBERTSON:** In relation to quarries, what are the projected reserves for the Reynella quarry and what is the expected life span of that quarry, bearing in mind that at least two kinds of stone are quarried in large amounts? Further, what proportion of those reserves actually lies on the north side of the Field River? As I understand it, the development plans for that quarry involve extending the present cut in a north-easterly direction and exploiting reserves on the east side of the Field River at a later date. Really, I am looking at some kind of time frame for that operation.

**The Hon. R.G. Payne:** I think that the honourable member raised this question in relation to what is referred to as the former Worthing mine site. In relation to the projected reserves, I have heard that figure mentioned, but I would rather call on Mr Hill, as Director of Mining, who may have more exact figures.

**Mr Hill:** I do not have those figures immediately available, but we can provide them. It is reasonable to expect that that mine will be in operation for at least 15 years.

**Mr ROBERTSON:** Is it a fair expectation that the lode of ore on the southern and eastern sides of the Field River will be exploited to the full before they begin quarrying the other side of the river? Presumably, the economics of the operation would dictate that course, in any event.

**Mr Hill:** The company submits a mine plan and this is done at fairly frequent intervals. If there is any change in the mine plan, it normally discusses that with the Chief Inspector of Mines. I know that the Chief Inspector of Mines and the Chief Geologist for Resource Management in the Mining Division have discussed this matter with mine management, but I have not seen the final plan.

**The Hon. R.G. Payne:** I will undertake to provide that information to the Committee and, also, I undertake to involve the member for Bright, in whose area this project is located, in order that he may have a closer involvement with the mine planning side of things.

**Mr ROBERTSON:** Turning to page 410 of the yellow book and the question of lead zinc reserves and the review being undertaken in the next financial year, where do any prospective lead zinc reserves lie in this State, particularly with a view to maintaining some sort of feedstock for the Port Pirie facilities? Further, in current geological thought,

with the various lineaments in South Australia underneath the post-protzoic sediment, are any of those older lineaments thought to hold any prospect so far as lead zinc reserves are concerned, what other reserves are already known about and what is the prospect of those reserves being able to provide adequate feedstock for Port Pirie after the Broken Hill reserves are worked out?

**The Hon. R.G. Payne:** The location of any prospective lead zinc reserves in South Australia and where they might lie is a question that has exercised not only the mind of the member for Bright but quite a few other people, including exploration companies and the department, over a number of years, in view of the position of the Port Pirie smelter (as the honourable member points out) and the need for further feedstock. Recognising this, last year the Government set up a task force to in effect go over the in-house stock of information, to bring it up to date and see whether there was any emerging trend or clue as to how future exploration efforts should be organised. I think the task force has been in progress now for some months and I am not absolutely sure whether it has completed its initial finding. However, I will ask the Director-General to address the Committee.

**Mr Johns:** The work of the task force is well advanced and we would expect to prepare and have available for eventual distribution a package summarising our knowledge of the occurrence of exploration activity in the past with direction towards either new environments or extensions to previous environments that have been disclosed as a result of previous efforts. This is really an outcome or extension of work undertaken by the department in the national park at Oraparinna. I suppose it will be not until the first quarter of next year before the next phase of the task is completed.

One problem in encouraging private sector exploration for lead at the present time, recognising that last year something less than \$2 million was spent by the private sector in the search for base metals, relates to the current price of lead and zinc. The lead price, historically in real terms, is the lowest it has ever been; and zinc is at the lowest price it has been for 10 years. In that sense one can understand the reluctance of private sector companies to undertake exploration for those commodities. Nevertheless, we are hoping that, by virtue of the recommendations, and so on, that will come out of this review of base metal occurrence, something will arise to stimulate renewed interest. As to the mineable reserves of those commodities, they are zero: there are no known reserves of economically recoverable lead and zinc ores that would be fit for feed for the Port Pirie smelter.

**Mr ROBERTSON:** I seek comment by the department on a view held in some quarters of the petroleum industry that it might be viable to begin production of artificial or synthetic liquid fuels from such sources as coal, natural gas and perhaps even oil shales. There is a feeling that it could be in the best interests of the Australian economy at large that we should foster a synthetic fuel industry to be phased in slowly over the next 30 or 40 years as the real cost of local and imported crude increases.

In fact, rather than going to the point where we suddenly come up against the 1973 style price hike, and finding that we can no longer afford to import vast quantities of overseas crude at increased prices, there may be some wisdom in the meantime in subsidising synthetic fuels and developing the technology which, in 50 years time, will surely be a very saleable technology in the rest of the world. The view has been put about in some parts of the research fraternity at least that Australia ought to look at subsidising the production of those fuels and developing appropriate technologies for use in the 21st century.

**The Hon. R.G. Payne:** I am not unsympathetic to the viewpoint put forward by the member for Bright, but I would refer him to the matter raised earlier today by the Deputy Leader, namely, that we have already a very good alternative fuel source in LPG, for example, and that we are only using 10 per cent of that which we produce in our own area in the State. So, it would seem that if one wants to think as a South Australian we would perhaps best address our efforts, whilst not forgetting the other technologies and the evolution there, to a greater use of LPG where it can be a substitute fuel.

That is not to say we do not take into account other possible fuels produced from our coal or other resources. As well as considering gasification for the Bowmans coal, for example—that is above ground retort gasification—liquefaction is also a technology addition that is being considered. I do not think it would be fair to say that it goes any further than that, but it is being considered. So, I would suggest that the department has about the right viewpoint at the moment in this area.

The question of the use of shale died a dramatic death in the time of Senator Carrick. It might be of interest to the Committee that I can well remember the day we were having lunch in the Festival Plaza and Senator Carrick was the guest speaker. As his guest, I was seated next to him when his offside handed him a note (as is often the case) which said that Rundle in Queensland had decided not to continue. That was at the time when the whole oil scene suddenly became fluid in a downward direction, shall I say.

Considering the use of shale (and I will venture a little because I can be corrected by various technically qualified people assembled with me), I understand that large amounts of water are needed and that incredibly large amounts of material must have to be treated to get whatever energy carrier is locked up in it in the form of hydrocarbons; that, in itself, upsets environmentalists and others, and quite rightly so, if it will desecrate an area. The water problem might not be a disadvantage if dealing with the North of our State because of the high evaporation rate, but that was not the case in the Queensland deposit that I was talking about. I do not think I can usefully take up the time of the Committee any longer other than to say that the department does consider this, and I will wait and see if the member has any supplementary questions.

**Mr ROBERTSON:** I wish to clarify what I said. My view is not that which has been ascribed to me but that it is a bit premature to think about seeding synthetic fuels into the market at this point. That is my view from reading the situation. The question basically revolved around what was the view of the department and people who are far more qualified than I to make these decisions about the whole idea. An article in the *Australian Engineer* of November 1986 states:

To 'seed' the development of synfuel production, the Government would need to guarantee a market at an adequate price. For ease of marketing, it would be best to produce liquid fuel blendstocks.

The whole thesis of that article is that now is possibly the time for Australia to get into the synthetic fuel business to begin to subsidise the production of synthetic fuel and to have a blendstock of the kind which the New Zealanders and the South Africans have, and which the Brazilians have with their sugar cane fuel. So, the question I am asking really involves a professional judgment on the part of the departmental officers as to whether now is the time to do that or whether the time is not yet right.

**The Hon. R.G. Payne:** I think that I would put forward the New Zealand experience not as the way to go but perhaps more as an example of the way not to go, except

that they are faced with a scene which is somewhat different from ours at present; we could be there 20 years hence—who knows. The New Zealanders took a decision which I believe is proving difficult for them now, although the process works.

I do not have much knowledge of the Brazilian scene, so I would not like to comment on that. I think it is fair to ask for the professional opinion of my officers; possibly this is an area in relation to which Mr Laws might like to give his professional opinion. I point out that, although I do not see this as a new departure for the Committee, I understand that it is really the Minister's and the Government's policies, rather than the professional viewpoints of departmental officers, that are really under examination. However, I do not wish to hold up the Committee unduly, and I now call on Mr Laws to comment.

**Mr Laws:** We have not done a great deal of work on synfuels in the department. South Australia is not richly endowed with oil shales such as those that occur in Queensland. The cost, of course, of producing oil from oil shale is quite high. The estimate back in 1980 when the Julia Creek oil shale was being considered for development was that it would cost about \$A40 a barrel to produce that oil. After allowing for normal inflation, today it would cost more than \$70 a barrel to produce that oil, compared to an oil price of \$30 a barrel. Of course, there are predictions that the oil price will increase in the 1990s when the Middle East again gets control of oil production and when Middle East exports are more vital to the rest of the world than they are now. But people do consider that for many years the Arabs will make sure that their oil price sits somewhere a little below the cost of the alternative production from either oil shale or coal.

Of course, we do have in this State some coals which could be suitable for production of synfuels. For instance, the Bowmans lignites could produce 70 to 80 litres per tonne of lignite. As the Minister mentioned, as far as synfuel of gas is concerned, research has been done into the gasification of Bowmans coal, with considerable money spent on that, in Germany. Also some research has been done into *in situ* gasification of coal seams at Leigh Creek. We drilled a well there a couple of years ago to look at the geotechnical parameters surrounding the coal seams at Leigh Creek to see whether they could stand up to the strains of *in situ* gasification.

Of course, in South Australia we have a truly enormous reserve of coal under the Cooper Basin which is buried to depths and is at temperatures that would almost certainly prevent its ever being mined by conventional techniques. In relation to this enormous reserve of energy, which dwarfs all other reserves of energy in this State, including uranium from Olympic Dam deposits and all the other coals in the Arckaringa Basin, we are keeping an eye on developments to see how perhaps in the 21st century this enormous reserve could be profitably used.

**The Hon. E.R. GOLDSWORTHY:** It would appear that the best prospect for a decent supply of gas is the Queensland part of the Cooper Basin. From my inquiries, I believe that all the best structures have been drilled in South Australia. There is no apparent market in Queensland for any large quantity of gas, although I am told that there could be a trillion cubic feet of gas in Queensland—which is a lot of gas. How is the Government going on this matter and what is its involvement in trying to get that Queensland gas? It would be the shortest link into the New South Wales-South Australian system. How are negotiations proceeding, as the producers are keen to sell?

**The Hon. R.G. Payne:** Which producers? Who is keen to sell?

**The Hon. E.R. GOLDSWORTHY:** The producers who are drilling in the Queensland section of the basin, who have the reserves and who want to sell their gas.

**The Hon. R.G. Payne:** Do you say that AGL wants to sell us gas?

**The Hon. E.R. GOLDSWORTHY:** AGL has an interest there, but does not control the deposit. There is a drilling program proceeding to prove up reserves. The only places to which they can make decent sales in the short haul are South Australia and New South Wales. The Minister's letter was designed to put pressure on the producers and it mentioned that negotiations were proceeding with the Northern Territory and Queensland. I would think that blind Freddy could see that Queensland is the best bet, so how are we going?

**The Hon. R.G. Payne:** I will be careful in what I say because we are presently having discussions in relation to possible contractual arrangements, prices and so on. However, I am not privy to those, so I cannot divulge things that I do not know. This matter is being handled by the gas negotiating group. At this stage, the producers in the Northern Territory seem to have a better understanding of prices than the producers in south-west Queensland. I am inclined to agree with the Deputy Leader that a larger quantity of gas might become available from south-west Queensland. Negotiations are well in hand and I expect that arrangements will be put in place in coming months that will ensure a supply of gas to South Australia into the next century. I cannot go further because that is the extent of my knowledge about the negotiations.

**The Hon. E.R. GOLDSWORTHY:** Are those negotiations being handled for the Government by the gas supply committee?

**The Hon. R.G. Payne:** They are being handled by a gas negotiation group headed by Bruce Guerin.

**The Hon. E.R. GOLDSWORTHY:** How often does the committee report to the Minister?

**The Hon. R.G. Payne:** To date, at intervals not exceeding one month, although they are over a month at present. I met yesterday with Mr Gary O'Meally from AGL in relation to this matter. I can say no more than that.

**The Hon. E.R. GOLDSWORTHY:** How is oil exploration proceeding on the Pitjantjatjara lands? I think an arrangement has been made for an exploration licence to be granted to Comalco. Do we have a report on what it is up to and what it has found? What inquiries have been made relating to mineral exploration on those lands? I think that Haematite was frightened off by Aboriginal demands.

**The Hon. R.G. Payne:** That was a long time ago.

**The Hon. E.R. GOLDSWORTHY:** Yes. The only licence of which I am aware relates to oil or hydrocarbons and has caused the industry concern because it gives the Aboriginal people equity in any scheme that gets up and running, although that is beside the point. How is this program going? Has interest been expressed in any other exploration on the Pitjantjatjara lands?

**The Hon. R.G. Payne:** There was interest expressed in exploration on the Pitjantjatjara lands. Some time ago, in accordance with the Act, I referred to the Pitjantjatjara people an approach to explore made by Plagolmin. The main mineral for which it is searching is platinum, based on geological evidence. Negotiations are proceeding satisfactorily and it will be a two-stage arrangement. It so happens that the areas of the Pitjantjatjara land in which the company is interested are very sensitive areas. From what I have heard from the Pitjantjatjara people direct it has

been approached with sensitivity by the people in Plagolmin, and I hope that it will be a successful arrangement with the Pitjantjatjara people for this second entry to the lands.

In relation to oil and gas, there have been some problems (more than a hiccup) with the Amoco major interest entry to the lands and the oil and gas exploration proposed. The Government is on three months notice of likely surrender, some of that three months having elapsed. It has not expired as yet and might be still alive, but I am not holding out any more hope than that. I do not know whether the Director-General has more reasons, but the only reasons I have relate to the cost of exploration and the lack of success to date. Mr Laws has reminded me that technical matters are involved and I invite him to elaborate.

**Mr Laws:** The licence to which the Minister refers (PEL29) was issued to Amoco as operator. Crusader and the Pitjantjatjara people have a 20 per cent carried interest. The initial exploration in the licence showed that the main target Amoco was seeking was not as prospective as it had thought. Due to the oil price decrease in 1986, the remoteness of the area and high costs some of the partners withdrew from the joint venture. Crusader withdrew because of the high cost of exploration in the area. The other partner withdrew because it could not raise the capital. A seismic survey has been carried out this year. No problems have been brought to our notice regarding relationships between the explorers and the Pitjantjatjara people. The reasons for us being on notice that the joint venturers may possibly surrender the licence are entirely technical and not due to problems in the relationship between the explorers and the Aboriginal people.

**The Hon. R.G. Payne:** I may not have made clear that the second entry was under way while the first operation in the Pitjantjatjara lands was alive and this notice was before the Government. There has been great willingness by the Pitjantjatjara people to be reasonable in this question of entry onto the lands.

**The Hon. E.R. GOLDSWORTHY:** What is the position when you get a company or consortium agreeing to spend quite a deal of money—I think it was \$10 million, from memory, on this program—and down the track it says that it does not want to spend it? Does the Mines Department say, 'Okay, bad luck'? I thought that the granting of a licence carried obligations and, if a company or consortium says that it will spend \$10 million, it will spend it. What arrangements surround the withdrawal that the Minister has described?

**The Hon. R.G. Payne:** I am advised that probably \$5 million to \$6 million has been spent already, which is no mean sum in relation to the projected amount. Of course, the proposed program for any exploration effort is usually predicated on year one being followed by year two and then by year three. Based on seismic and other evidence, and summation by geologists, it will then proceed to the next stage involving further expenditure. That is always taken into account against economic circumstances and, as Mr Laws pointed out, the falling oil price, reconsideration of geological and other factors, and technical data which is gathered make it less prospective in their eyes and cause them to reconsider the expenditure.

It might be argued that there ought to be some kind of penalty or penal clause in the mining legislation. I do not think it is common, but I do not think the situation is different anywhere in the country. It is perhaps lamentable that people do not have to adhere to agreements, but, in their best judgment at the time, they give an undertaking that they intend to do something if points A, B and C fall

into place. When they do not, it is argued that, in Shakespeare's words, 'sweet reason should prevail'—and that is what happens. In discussion with the department, a surrender arrangement or otherwise is reached, and it is not always agreed in these leases that surrender will take place. It seems in the circumstances that what is being put before us is reasonable. I think that we are still within the notice period, so the final outcome has not yet occurred.

**Mr ROBERTSON:** I note a reference on page 407 of the yellow book to a reassessment of ground water supplies in the Willunga basin. I am wondering what the status of those supplies is and what the implications of the hydrological reserve of the Willunga basin will be for any potential industry to be sited in that basin, and for the existing horticulture and almond industry. Is there a degree of irrigation potential? What is the quality of the water? What are the flow rates? What is the position regarding salinity, and is it a basin which could be exploited more than it is at present?

**Mr Johns:** I cannot provide the numbers that have been sought. However, there is a limited amount of use made of the waters of the Willunga basin, and our aim is to establish what the limitations are on withdrawal and replenishment of those resources, to get a handle on capacities and to what extent it may be used. Our knowledge to date would suggest that it is really of limited usage now and for the future. The highest quality ground waters are located in the Happy Valley area adjacent to the ranges. As one moves seawards, as in most of our subcoastal basins the salinity worsens, reflecting replenishment adjacent to the scarp. Certainly, there are pockets of water sufficient for high quality irrigation, but they are limited.

They do not have the same potential for development as in the Adelaide Plains and the northern Adelaide Plains basin, which are essentially the same aquifers or formations, but reflect a paucity of potential or opportunity for recharge.

**Mr S.J. BAKER:** Can the Minister inform the Committee whether the dispute between PASA and elements of the AMWU and the AWU is ongoing?

**The Hon. R.G. Payne:** Yes.

**Mr S.J. BAKER:** Can the Minister confirm to the Committee that when two employees were stood down by PASA he intervened in the dispute?

**The Hon. R.G. Payne:** My understanding was that the two employees were stood down before consultation took place with me. If the honourable member cares to look at the Act, he will see that I have a responsibility to that body wherein consultation would be a minimum requirement at least. In that circumstance, I asked PASA to reinstate the two persons concerned. Subsequently stand-downs have occurred and it would be fair to say that they have followed the normal practice of industrial relations in these matters.

**Mr S.J. BAKER:** I appreciate what the Minister said about the lack of consultation. However, one assumes that before the Minister stepped in and ordered PASA to reinstate those people, albeit temporarily, he would have looked at the ramifications of that action and not be seen as supporting any one party in the dispute. Did the Minister take into account the possible implications of his action in view of the longer-term problems that have arisen? According to my advice, had the Minister not intervened there may well have been a more satisfactory resolution than what is occurring.

**The Hon. R.G. Payne:** I gave full consideration to the fact that I had five minutes notice. I put on record that a Minister is entitled to more notice than that in a matter affecting his responsibility. I ensured that I had time to consider what was proposed and I do not resile from that

one whit. I am sure that my action did not have any effect on the industrial relations that were likely to ensue. The proof of that is that the matter has followed the course that these matters often do: there was offer and counter-offer and finally a stand-down situation was reached. Considering that this is a Federal award anyway, that is about as far as I am prepared to go. I do not consider that I am required to intervene any longer but my action was based on the fact that at the time I believed that I was entitled to be able to consider what was involved. That is all that I sought to do—not to establish any precedent in matters of this nature.

**Mr ROBERTSON:** The question of cogeneration looms large on page 408 and elsewhere. What activity has the department undertaken to examine the use and economics of cogeneration in South Australia and what portents that technology has?

**The Hon. R.G. Payne:** Several committees have been established over the past few years in South Australia and elsewhere to investigate the extent to which cogeneration might be applied in our State. As far back as 1982 a committee of the South Australian Energy Council found that about 5.7 petajoules of electrical energy could technically be generated in South Australia.

That figure was subsequently confirmed by the Future Electricity Generating Option Committee (FEGO) that was subsequently set up. The 5.7 petajoules is about 10 per cent of the electricity generated by ETSA. The SAEC report showed that in 1980-81 electricity production via cogeneration in South Australia was about 4 per cent of the total electricity generated, and this was expected to decline to about 2.5 per cent by 1983-84. Technically, the prospects for increasing cogeneration in the State were good.

The principal impediments to achieving the full potential are economic and include tariff and energy pricing issues. In 1985 the review of energy pricing and tariff structures was set up, and some questions about that were raised earlier today. I would expect that in due course the actual recommendations or otherwise about cogeneration which were part of that report will be considered by Cabinet after I have had time to consider the report. As I mentioned earlier, I have only had it for a day or two.

**Mr S.J. BAKER:** Further to the questions that I asked about the dispute, can the Minister confirm what sabotage was done to compressor station No. 5 by one or more employees?

**The Hon. R.G. Payne:** The answer is simple: I cannot confirm any sabotage because I am not aware of any sabotage having been done to any compressor at this stage.

**Mr S.J. BAKER:** As a supplementary question, I understand that compressor station No. 5 is not working for more than one reason and that compressor station No. 4 is operating at 50 per cent capacity due to non-maintenance.

**The Hon. R.G. Payne:** The question of non-maintenance may well be a function of the present dispute, and I could well understand, if that is the case, that it could not be operated flat out. The question of throughput in the gas line to Adelaide is really a function of the capacity of the compression stages plus the tensile strength of the pipeline. I am sure the honourable member understands that. The heating effect of the compressors has to be taken into account in their vicinity of the pipeline. It has been found that they may or may not be contributing to stress corrosion in the pipeline which needs to be carefully addressed. Compressors in the pipeline is a live question in the minds of the authority and is addressed at all times. It is probably the most common reference in the monthly reports that I require from PASA. The reports contain statements about which compressors are running and about how often they have

been running during the month under review. They are very complex pieces of machinery operating at high levels, and turbine blades, compressor blades and the state of technology, and so on, has not kept up with the state of the design, it seems to me as an outsider, and there are often problems associated with the compressors.

I am sure that I can recall in every report almost a reference to the compressors one way or the other. In fact, it is good when one reads the report and it states that everything has been running satisfactorily. I have no knowledge of sabotage and from my understanding of the work force concerned I would be surprised if that was the case. I can understand allegations about it, but I would be surprised, because I have met most of the work force in PASA over the years and I have been impressed by their dedication and general attitude to the job.

**Mr S.J. BAKER:** Will the Minister report to Parliament, because that will not be possible by the end of this Committee, whether any damage was sustained or parts removed by employees at the stations? That would certainly assist in clarifying whether sabotage has occurred. I take the Minister's point about the possible impact of compressor stations in relation to corrosion, but it was not necessarily relevant to the answer to the question that I asked.

**The Hon. R.G. Payne:** It sure is. That is why they are not always operated at full blast. Stress corrosion has been found to be due to cyclic variation of the temperature in the pipe, together with environmental factors.

**Mr S.J. BAKER:** I understand that the station was deliberately put out of action but not for safety or maintenance reasons. If the Minister is happy to provide a report to Parliament, I am sure the Committee will be satisfied.

**The Hon. R.G. Payne:** If PASA is implementing the safety requirements of the Occupational Health and Welfare Act, together with other bodies throughout the State, it might have been, although I have no direct knowledge, a decision of a safety committee, set up lawfully in accordance with the Act, in relation to this compressor. I will endeavour to ascertain the actual circumstances to which the honourable member refers and bring back a report.

**Mr S.J. BAKER:** What has been the impact of this closure, and of compressor station No. 4 working at 50 per cent capacity, on the gas supply to Adelaide?

**The Hon. R.G. Payne:** I do not know whether the honourable member has access to news that I do not have, but I have had no notice other than that a day or so ago things were working reasonably normally and that the gas company can continue to be fully supplied in the event of less than all compressors operating. The looping arrangement, which is of assistance in this area, has been completed and a section of the pipeline has been duplicated from Wasleys to Torrens Island and that provides a type of buffer storage when full. I understand that there has been some effect on ETSA which can and will require the utilisation of alternative fuel if the problem of less than full throughput through the line continues. If the dispute is to be prolonged it would be better to have days like today where air conditioners and heaters are not needed, and we could probably get by without any severe problems.

**Mr S.J. BAKER:** Can the Minister provide an estimate of the potential shortfall in cubic metres of gas, given the problems at those two stations that I mentioned?

**The Hon. R.G. Payne:** I will endeavour to ascertain that information during the next break.

**Mr ROBERTSON:** In relation to the current interest in gold exploration which is occurring in other States, and bearing in mind South Australia's history as a relatively minor producer of alluvial gold, what is anticipated will be

the future for a resurgence of exploration on the various alluvial goldfields in South Australia, such as Waukaringa and Angepena. Excluding the gold component of Roxby Downs what is South Australia's economic potential in the immediate short term as far as gold production is concerned and does the Minister view the goldfields of South Australia as having a high recreational potential for tourists? People could prospect for a short time, earn a little bit of cash and make their holiday worth while.

**The Hon. R.G. Payne:** The question of South Australia as a prospective gold province would best be addressed by the Director-General. As Minister for the last five years I have been saddened that the resurgence in gold exploration in other States, based on the rising price for gold, resulting in an increase in activity has not been matched in South Australia. There has been an increase in activity, but because of our recent history in gold finding we do not seem to be able to attract the same interest, whether by tourists or by the more economically minded prospecting groups. I am sure that the Director-General has some interesting information on this.

**Mr Johns:** The level of interest in gold exploration over the past 10 years in South Australia has been pretty modest. Ten years ago (1977) one company was engaged in gold exploration and only \$2 300 was expended. That has cranked up very slowly and is reflected by the increase in the price of gold. Last year, which is the last full year of record that we have, 10 companies were engaged in gold exploration and about \$400 000 was expended. As of this month 27 companies are active and, for the year to date, something approaching \$500 000 has been expended.

One has to compare that with the level of gold production in that same period, and this helps to establish why this State is not able to attract the interest of explorers. The production of gold in South Australia in 1977 totalled 1 500 grams and it was valued at \$2 000. Last year we produced 1 600 grams which was valued at \$28 000.

When comparing this with Western Australia one can appreciate the difference. Last year, while we produced 1 600 grams, Western Australia produced 74 tonnes. This year Western Australia's output is projected at 103 tonnes, which will be the highest it has produced since 1906. Western Australia brought in 25 new mines last year and expects to bring in 87 this year. Western Australia is the gold State; South Australia is the poor relation. One should not wonder why we cannot attract exploration interest.

The levels of interest now are as high as they have been for a long time, but they still do not amount to much. Of course, we will be looking to Roxby Downs to turn some of that around, recognising that it is proposed to produce something like 2.5 tonnes of gold annually when it gets into production. We are not without hope of further discoveries of gold in this State. Gold is sufficiently widespread and is known over a sufficiently wide area to encourage the belief that there is gold to be found. This is a gold province. The amount of gold tied up in the Olympic Dam deposit is sizeable. We have had announcements in the last month of encouraging developments in several areas, and I modestly take some credit, from a departmental point of view, as being responsible for encouraging exploration interest in the Tarcoola area.

Several companies have made some interesting announcements about some intersections out there. Western Mining also has announced in recent days the definition of a newly discovered deposit at Poona, just out of Moonta. This is a very small deposit, but at least it points in the direction and perhaps we can get on that slightly more expanded gold trail.

To respond to your comments about recreational interests in gold panning, and so on, several areas close to Adelaide lend themselves well to this. I suppose the best of these would be at Echunga, but I would disillusion the honourable member when he referred to making some money to pay for holidays. That would not be regarded as fossicking but, rather, it would be regarded as a commercial activity, in which case he would be required to be licensed and properly regimented and so on.

**Mr ROBERTSON:** In relation to one of the technologies being tested by the trust, I again refer to the annual report at page 9. Reference is made to circulating fluidised bed combustion techniques, particularly in relation to the investigation of Bowmans and Lochiel coal deposits. I know that it was referred to earlier today, but what were the results of those tests and what hope does ETSA have for the introduction of fluidised bed combustion as a way of optimising the combustion in the various coals and, indeed, a way of burning those coals a little more cleanly?

**The Hon. R.G. Payne:** As I understand it, one of the advantages of circulating fluidised beds is that they are capable of providing successful and accurate flame temperature controlled combustion of poorer quality coals, of which we seem to have very large deposits in South Australia, and which contain locked in them very large amounts of energy. We have to get the technology right to extract that energy, because it is our own resource. The circulating fluidised bed, I believe, is a development of the fluidised bed. The circulating part of the description relates to the fact that there is a cyclone pick-up of the partially burnt material which may pass through the combustion chamber and which still contains unburnt material together with its locked in energy. This is returned to the combustion chamber and thus a more efficient energy transfer is able to take place.

The development work on circulating fluidised beds has been quite rapid in the past several years, and it has gone quickly from being an idea talked about, as it were, to reality. I think I am correct in saying that some suppliers provide 100 megawatt circulating fluidised bed boiler units. In itself, that is the forerunner, from the literature I have been able to peruse, of 200 megawatt units of fluidised beds. We are now talking about the sort of power increments in which South Australia may well be interested. It is a suitable size and we do not want to be in a position where we go too big too soon. For that reason, there is a very good deal of interest in circulating fluidised beds.

Dr Mario Botic from ETSA has retired, but has now been retained on a consultancy basis by ETSA to continue relationships and the necessary involvement in the further development of circulating fluidised beds, so it is not inconceivable—and I can only put it at that level at this stage—that it may well be the technology that applies to the first local lignite power station in South Australia as distinct from Leigh Creek coal.

**The Hon. E.R. GOLDSWORTHY:** According to a line in the yellow book, the expected receipts from exploration and mining licences are down by \$130 000 and, according to the report of the Department of Mines and Energy, the record of mineral exploration during the past 12 months has not been too rosy. If you exclude the effort at Roxby Downs, there has been a decline in mineral exploration in this State and, if this year's budget forecast is any indication, it will decline even further. I ask the Minister to comment on that trend.

**The Hon. R.G. Payne:** I take it that the comment sought relates not to the monetary reduction but to exploration effort in our State.

**The Hon. E.R. GOLDSWORTHY:** The receipts from tenement and exploration fees are down by \$130 000. I interpret from that that it is expected that there will be a further decline in exploration licence applications, which follows a trend in recent years, including the past 12 months where there has been a downturn in exploration interest.

**The Hon. R.G. Payne:** The Director-General will comment on this, although I am almost overwhelmed by my support battery in terms of how they will answer this question. First, I point out to the honourable member that it seems he is suggesting that in some way the Government is responsible for this downturn.

**The Hon. E.R. GOLDSWORTHY:** No, but it is a pessimistic prognosis.

**The Hon. R.G. Payne:** I am pleased that the honourable member is not trying to suggest that, because, if he was, I would refer him to comments made by the President of the South Australian Chamber of Mines and Energy Incorporated during presentation of the chamber's eighth annual report at a luncheon that the honourable member and I attended only a few days ago. I will quote from the report by Mr Fraser Ainsworth, the retiring President (having completed his term). With direct reference to the matter raised, Mr Ainsworth said:

There is clearly little Government can do about minerals prospectively in this or any other State, apart from the excellent survey and review work carried out by the Department of Mines and Energy. Similarly, the State Government can do little to alter the outlook for minerals and metals prices. But the Government can and in fact has publicly recognised and acknowledged the contribution that the mining and petroleum industries have made to the welfare of South Australians and has developed a multiple purpose land use policy which better defines the ground rules for exploration and development. Because of the significance of these issues, the relevant ministerial statement is reproduced in full in this report.

I point out that, although I made that ministerial statement 12 months earlier, it was still of sufficient prominence to be quoted in full a year later. While I am not suggesting that the Government can have no influence or interest in this area, clearly in the words of the President of the chamber not a great deal can be done. I will now ask the Director-General whether he has any additional information with respect to what the honourable member has described as the pessimistic outlook that we have put forward in the yellow book.

**Mr Johns:** There is no denial that the level of company exploration in South Australia last year was significantly below that of the previous year. I have ABS figures which establish that, while the outlook and performance over the past year or so has not been as good as we might like, it compares favourably with the situation in other States.

Considering exploration expenditures on minerals other than petroleum and oil shale, in the past 10 years South Australia's position has improved quite significantly compared to performances in Victoria, Tasmania and the Northern Territory, and for the first time has exceeded that of New South Wales; in fact, last year it matched that performance. The ups and downs of the performance in terms of drilling activity are in sympathy with those in the other States. Again, we have improved our position *vis a vis* Victoria, Tasmania, and the Northern Territory over that period.

We saw a peak of activity, for instance, in Western Australia in 1981-82, when \$215 million was expended in exploration, whereas we in South Australia managed to attract \$65 million worth, and since that time there has been a downturn. The ability of Western Australia and Queensland to attract exploration interests and drilling activity can be directly attributed to the price of gold. When one looks at

the prices for commodities over the past 10 years, one can appreciate why, with the base metals such as coal, diamonds, iron ore and tin (in fact, any commodity that one likes to name, except gold, beach sands and diamonds, none of which we have a great deal of and which Western Australia has in plenty), Western Australia is enjoying a real boom and why Queensland, a secondary gold producer, has managed to sustain interest, whereas South Australia has suffered. I point out that our position, as compared with other States, is no better or worse over the past 10 years. While we seek to do what we can to encourage interest—and we have taken a number of initiatives to try to attract exploration interest—one must accept that the prices of most mineral commodities are at the moment depressed except for those that I have named—gold, beach sands and diamonds.

**The Hon. R.G. Payne:** I am further advised, because the Deputy Leader's question was in two parts both specific to the line and the general scene, that the line of exploration and mining application fees, etc., that he was referring to included in the centre column actual receipts. It was fair of him to quote the figures of \$362 441, and a \$130 000 drop to \$237 000 estimated; these were boosted last year by an amount which was paid from an accumulated surplus in a working account, and it is Treasury's format that we are looking at. Perhaps in the olden days there would have been a footnote that drew attention to that so that the scene was not quite as dire as appeared on the surface. It is fairer if one does a comparison to look at the further line below under the heading 'Territorial' which reads 'rental—exploration and mining leases'; then the figures are not quite so disparate. That is the explanation I have received technically about the two lines that we are considering.

**The Hon. E.R. GOLDSWORTHY:** As a supplementary question, that was a very encouraging quote from the now departed President of the Chamber of Mines who has left the State. He probably wanted to leave with a nice warm inner glow or something or other—

**The Hon. R.G. Payne:** I do not think he wanted to leave. He was quite happy with the Adelaide lifestyle.

**The Hon. E.R. GOLDSWORTHY:** Yes, but he did not want to go away leaving any jarring notes behind—that is what I am saying. I am not reflecting on Mr Ainsworth, who is a first class man who made a first class contribution to the industry in South Australia. But the Chamber of Mines had a fair bit to say in earlier days about the policies of Governments and their effects on exploration licences. I well recall that when Honeymoon and Beverley were shut down—

**The Hon. R.G. Payne:** I knew we would get there sooner or later.

**The Hon. E.R. GOLDSWORTHY:** We will have a cup of tea and get up a head of steam! But the fact is that the Chamber of Mines said at that stage that there would be a downturn in mineral exploration as a result of Government policy. So, Mr Ainsworth and spokesmen for the Chamber have not taken a consistent line, and in fact there was a dramatic downturn in exploration in South Australia when the Government decided to sacrifice those two projects to appease the anti-uranium lobby. My supplementary question is: why then if the Government cannot have any effect on the level of mineral exploration does one read in the budget papers that one of the objectives is to increase the number of applications for mining tenements? That is stated here as an objective.

**The Hon. R.G. Payne:** Yes, it is.

**The Hon. E.R. GOLDSWORTHY:** Obviously, there must be some policies that can be applied to increase exploration



activity in this State. Certainly, in relation to press statements, I think it would be stupid to push Mr Ainsworth's statement to the limit of saying that Government policy has no effect: for example, the declaration of parks and a whole range of things will inhibit exploration—we all know that. What steps are being taken to increase the number of applications for mining tenements? As one has to have an exploration tenement before getting a mining tenement the matter really involves exploration tenements.

**The Hon. R.G. Payne:** The Director-General can enumerate the steps that have been taken. However, I point out that most of what the Deputy Leader said about our not having to accept what Mr Ainsworth said, or whatever, is really a matter to be taken up with Mr Ainsworth rather than with me. I was simply indicating—

**The Hon. E.R. GOLDSWORTHY:** You quoted him.

**The Hon. R.G. Payne:** His comments are on record whenever the Chamber's journal is circulated—which is pretty well throughout the mining world and, no doubt, anyone with objections to what he has said could in due course make a contribution to the journal. I was simply pointing out that I thought that in the words that he used he had shown a good degree of percipience and understanding of the exploration scene.

I point out that, in relation to the uranium matter, it might come as some surprise to the honourable member to know that a number of uranium exploration applications are still alive in this State. It would seem that not everyone was deterred from exploring for uranium in South Australia. I understand that the reason for that might be that people understood the time lag that might occur during exploration before something is found and before an operation gets to the development phase, if ever, and that during such time governments can change. This was a view that I expressed previously.

**The Hon. E.R. GOLDSWORTHY:** Waiting for a Liberal Government to win, is that what you are saying?

**The Hon. R.G. Payne:** I am simply saying that Government attitudes and policies change. If I was waiting for a Liberal Government to win, I think I would have to hope for an extension to my life—which I would be delighted to have—but I do not think that will occur, since I am now 62. However, I am looking forward to a continued long period of Labor Government. I now ask the Director-General to enumerate to the Committee the positive steps that have been taken to increase wherever possible exploration activity in our State.

**Mr Johns:** I referred earlier to the work that we are doing in relation to encouragement of lead-zinc exploration through the establishment of the lead-zinc task force. Likewise, we are pursuing a sustenance of interest in maintaining existing infrastructure and competitiveness of the South Australian mineral industry through iron ore requirements for Whyalla, for instance. I have referred to gold mapping, sampling and assessment, and that has led to increased interest in the Tarcoola, Waukaringa and Teetulpa areas.

We have taken steps to make available the gold tailings at various gold batteries around the State, of which there are five. We have undertaken sampling and invited tender interest as part of the cleaning up of those areas from an environmental point of view while at the same time getting a return for the State. We are attempting to maintain interest on the opal fields by mapping and reviewing any opal occurrence in the area in an attempt to assist that industry.

We are engaged in a systematic regional, geological and geophysical survey and are extending that survey to areas where potentially mineralised rocks are concealed by weathered profiles, particularly on Eyre Peninsula and the Gawler

craton, where there is widespread cover but where we regard there being a potential for the occurrence of base metals, precious metals and other minerals. Work is centred at the moment on Mundroo west of Fowlers Bay on the central Eyre Peninsula and the Kingoonya area.

We are committed to upgrading airborne magnetic surveys in central Eyre Peninsula in conjunction with the Bureau of Mineral Resources. We have undertaken, and are committed to, a program of stratigraphic drilling in the Far West and the Kingoonya area in our determination to establish the subsurface geology and to relate those to identification of anomalies, and so on, in an attempt to stimulate exploration interest. We are shortly to publish a study that is the culmination of many years of work and effort.

**The Hon. R.G. Payne:** It is absolutely monumental.

**Mr Johns:** It details the rocks of the Mount Lofty/Flinders Ranges chain which we regard as being a springboard for renewed exploration interest. This is the so-called Adelaide geosyncline. We expect this to provide a new framework for a generation of stratigraphic concepts in mineral search. We would like to think that at the launch we will be able to say what the interest of explorers are and establish for others something of what it is that that chain provides by way of a hosting of mineral resource discovery and development in the future.

As part of ensuring that we are equipped to do all the things that we have said we are required to do in order to encourage mineral exploration. We have reviewed our publications to establish whether in fact the industry accepts those publications. I am pleased to report that we established recently that there is a high degree of acceptance in the industry with regard to the utilisation, relevant content, presentation and merit of those publications. We have likewise reviewed our geological and geophysical maps to ensure that they are of quality and are of a timely nature. We regard them as being critical in providing a basis for the exploration industry. We have enrolled recently in the CLERS system to help create private sector awareness of the data availability of reports, maps, and so on, as they become available. I regard that as a significant step forward. We have mentioned coal evaluation and what we are doing in relation to oil and gas. We are currently reviewing our systems to ensure that inquiries are handled expeditiously and satisfactorily, that the information provided is relevant, effective, and so on.

**The Hon. E.R. GOLDSWORTHY:** What is the position with diamond exploration? A press statement was made in that connection.

**The Hon. R.G. Payne:** The position is somewhat more rosy than some other areas that we are discussing. A considerable number of licences still exist. Micro diamonds have been found and that is a very good indicator. I expect interest to continue and will ask the Director-General to give exact details.

**Mr Johns:** There has been a sustained interest in exploration for diamonds in this State over the past 10 or so years. The exploration has established that there are kimberlites in South Australia, but they have only proven to date to contain micro diamonds. We have record of diamond occurrence at Echunga and Andjamatana. Widespread indication of so-called indicator minerals reflect the occurrence of undisclosed kimberlite pipes which in the end are the ultimate source of the diamonds. I am sure the explorers when starting here knew that it would be a long process and that they would need to exercise patience. They have been patient and the results have sustained their interest.

Their interest would have been heightened by the discovery of economic pipes in Western Australia at Argyle where production in terms of carats is the greatest in the world. Many of those diamonds are of industrial grades and they are not all of gem quality. I am optimistic that sooner or later their work will be rewarded with the discovery of something that is economically recoverable and we will identify something other than micro diamond occurrence.

**The Hon. R.G. Payne:** I undertook to obtain information from PASA and I now have that information. The member for Mitcham raised questions of industrial sabotage in relation to a compressor in the Moomba-Adelaide pipeline. He referred to compressors 4 and 5 and suggested that No. 5 was involved in industrial sabotage. I said that I had no knowledge of any such sabotage.

I am now in a position to inform the Committee, as a result of inquiries having been made on my behalf, that there is no question whatsoever of industrial sabotage in the No. 5 compressor or any of the others on the line. The General Manager himself categorically refutes any such suggestion. So, that is not only from the worker level, but from the General Manager, Mr Nimmo. The question of the effects of the dispute in relation to throughput on the pipeline was also raised, and I can inform the Committee that ETSA has been required to use other fuels to a slight degree. The dispute has delayed repairs on No. 5, but it is not uncommon for compressors to be taken out and bypass to take place, and the gas is simply fed around the compressor which is run down in the usual way.

The bans to this time have imposed costs on ETSA of about \$75 000, consisting of extra fuel oil (which would be used at Torrens Island, I guess) at \$45 000, and at Playford B some additional capacity of some \$30 000. It turns out that they do not use cubic metres either, but in terms of terajoules (energy delivered through the pipeline, a terajoule is 10 to the 9th joules), a measure of the shortfall as a result of compressor problems and the dispute is about 10 terajoules out of ETSA's recent peak requirement of approximately 165 terajoules, and we are talking on a daily basis. That is about a 6 per cent variation. This is after all other users are supplied, and it has happened on only about five occasions. We are talking here in periods of possibly half an hour or something as short as that—not in days of operation. I particularly want to stress on behalf of the work force that there is no question of industrial sabotage, and that claim is rejected by the General Manager himself.

**Mr ROBERTSON:** My question relates to the ABC (aerial bundled cables) being used as a substitute for low voltage cables, particularly in the Hills area which is prone to bushfires. I gather that a considerable amount of cable has been installed over the past couple of years—five kilometres, it is stated in the annual report—and it is proposed to install 200 kilometres of cable by the middle of next year. How encouraged have officers of ETSA been with the trial installation, and can we be guaranteed that those cables will stand up to the intense heat of bushfires such as the Ash Wednesday disaster if they are going to continue to serve in the long term?

**The Hon. R.G. Payne:** The annual report was to 30 June, and I believe that the installation figure is now greater. From my recollection, the figure is 11 kilometres, which is still a long way from 200, but it indicates that progress is taking place. In relation to whether ETSA officers are satisfied with the capabilities of ABC (aerial bundled conductor), the answer to that is in two categories: first, in my discussions with the General Manager of ETSA, Mr Sykes has told me that erection crews are already finding significant economies and efficiencies in running that type of

cable. Whereas previously one had three wire entry to homes, and so on, we are talking about one single conductor. A number of adaptors have already been produced which fit onto existing pole arrangements (cross-arms and that sort of thing) which simplify the erection and hanging of the line.

With respect to its response to excessive heat from fires, ABC has been in use in France and other countries for some years where it has been subjected to the impact of bushfires. That part of France near the Mediterranean has a climate not dissimilar to our own and bushfires occur in not dissimilar country. It has proven to be singularly successful. I understand that on an overseas visit officers from ETSA saw the French version of ABC installations that had been subjected to bushfires. There was no disconnection of the power, and it was still delivered. In Adelaide, ETSA has conducted tests of its own with the cooperation of the fire brigade. Fires were set underneath temporary installations of wiring in closer proximity than conductors would normally be to bushfire flames. ETSA was more than satisfied with the result.

The insulating material of ABC is a bit different to that used in tough nylax sheath wiring which we see in our own homes and which does not withstand high temperatures. The composition of ABC insulation is obviously very good. I have high hopes for it, not the least of which concerns the point of view of conservationists and others who are offended by the erection of overhead lines with three or four wire arrays and very wide cross-arms distributing electricity in the country. ABC insulation is much less obtrusive and should be less likely to cause fires. For that reason it will be a very useful adjunct to part of our campaign to make sure that the number of bushfires that may be caused by electricity wiring is reduced if not completely eliminated.

**Mr S.J. BAKER:** Can the Minister advise what marketing intelligence has been gathered by the Department of Mines and Energy on the future of metals prices? It has been suggested that there has been a run down of stocks on a number of overseas markets and that some metals other than iron ore will enjoy a bright future by 1990. Has the Minister any further information?

**The Hon. R.G. Payne:** In answering an earlier question the Director-General gave some information about pricing. He pointed out that lead prices were at their lowest for some years and that zinc was not doing well either. I do not recall whether he spoke about copper, but it is on one of its cyclic ascendancies and a week ago was priced at \$2 700 a tonne, which is a better price than it has been showing for some time. To forecast metals prices is fraught with danger and, being somewhat cowardly in nature, I will hand over to the Director-General to see whether he is prepared to take a punt when I am being very cautious.

**Mr Johns:** The Minister is very wise in exercising that caution. The answer to the question is: if we knew, we would not be sitting here. One tries to get a feel for what the experts are predicting. However, we really do not know the answer to the question. The outlook is uncertain with regard to lead and zinc. Silver is similarly depressed. The tin market has collapsed. Gold, beach sands, the platinoids and diamonds are the commodities of the moment and that is where the dominant exploration interest is.

I suppose that the outlook is totally uncertain. One of the favourable outcomes, from an exploration point of view, of a sustained maintenance of market and a buoyant outlook for beach sands is that we have had an upturn in exploration for those commodities in new environments, in the Murray Basin particularly but elsewhere on Eyre Peninsula, marginal to the Eucla Basin, and in those environments where

there was a potential in the past for accumulation of heavy minerals, including such things as rutile, zircon, monozite, leucosine and ilmenite, which range generally from \$200 to \$800 a tonne. There is no question in relation to a sustained interest in those commodities.

The rare earths were reported in the technical international press of recent times as having a potential for expanded production and usage, but I would hesitate to go beyond that. In other commodities, such as phosphate, sulphur and industrial minerals, the outlook is equally uncertain. It really is an uncertain business.

**The Hon. E.R. GOLDSWORTHY:** What is the estimated value of opals per year to this State? The last figure quoted was \$30 million. I read in the press in the past few days that it was \$40 million. Has anyone really got a handle on it? Does the Minister believe that the ID card might increase that amount?

**The Hon. R.G. Payne:** I am unclear as to the relationship between the ID card and the estimated value of opal produced in South Australia. I make no other imputation or inference, other than that the \$40 million figure to which the honourable member referred was cited in an article at the time of the promotion of a new outfit to get more value added production of opal going in South Australia rather than just exporting the basic rough raw material and all the value that can go with it.

Gemstone Corporation's approach is an excellent one, it seems to me, because it is aimed at maximising the cutting, polishing and mounting of raw opal in South Australia so that more of the additional benefits and value that can be obtained stays in the South Australian scene. I guess that that will have an effect on the value of opals produced and ultimately disposed of as distinct from that value which goes to those who dig it out of the ground at Coober Pedy or wherever.

I noted earlier that the member for Eyre pointed to a high level of activity at Mintabie, and so on, so one might assume that the estimated value to this State will be greater this year and perhaps next year also. I have been told—and that is all it is—that planes are full of people from overseas flying to the opal areas with cases bulging with money. I presume that they are buying opal. I stress that that is word of mouth stuff. All I know from departmental sources is that things are booming somewhat, but getting a handle on the actual numbers might need recourse to the Taxation Department or something like that to which the department has no special access, nor should it have in view of the privacy of these arrangements in taxation. I will take note of anything that the Director-General might have to add, because his contacts are perhaps more frequent than mine with people in the department who are in the field.

**Mr Johns:** Historically, we have had great difficulty in achieving reliability with regard to the establishment of opal output. For a long time our records of opal production relied on returns made by buyers, but it became obvious, with the mushroomed expansion of that industry and with the introduction of compressed air and innovative mining equipment, that the figures being reported were not accurate and grossly understated the situation. It was obvious from the amount of equipment and the activity that was going on the production figures were understated.

About six or eight years ago we decided to introduce a little science into the determination of opal outputs by relating them to capital tied up in equipment and machinery on the opalfields. This is only a rough method and has been called into question from time to time. Large numbers of people think that it grossly overstates production while others suggest that the outputs are underrated, but at least

it is a method with some logic attached to it. Production based on this rough arithmetic and formula that we have devised suggested that last year something like \$40 million worth of opal was produced. There is no doubt that currently activity is high, as evidenced by the number of claims that have been pegged and the obvious activity that is going on in all fields, particularly at Mintabie, which our figures would suggest is overtaking Coober Pedy as a production centre.

**The Hon. E.R. GOLDSWORTHY:** Does the Government have any input in this gemstone corporation?

**The Hon. R.G. Payne:** Jeff Olliver, who was formerly a senior officer in the department, and Ian Kimber, who worked in the field side of the operations, have joined the corporation. I think this shows that the department is on the ball and is producing officers who are sought after in the private sector. From what I know of both gentlemen I expect they will do a good job for their new employer.

**The Hon. E.R. GOLDSWORTHY:** I did not mean the Government input into the corporation by supplying people to run it. Has any Government or semi-Government money been put into financing the corporation?

**The Hon. R.G. Payne:** No, Mr Chairman.

**The Hon. E.R. GOLDSWORTHY:** Opalfield supervision is mentioned in the budget papers. Is the department contributing more resources to that?

**The Hon. R.G. Payne:** The department, along with other departments, has been asked to take account of the current paucity of funds, and therefore there has been a cut in the funding available to it. It has been 0.4 per cent less than what might be described as the average. Overall the department had a 2.6 per cent cut in funding this year instead of the 3 per cent that applies. We would be looking to do as much as we can with the limited resources we have. I take this opportunity, since neither party addressed the Chair at the beginning of the Committee, to place on record my commendation of departmental officers.

There has been a recognition that we are in tighter economic times and, instead of officers adopting a hangdog attitude or saying, 'What the hell', it seems to me, as the Minister, that there has been a willingness to examine all our activities and find those which are not cost efficient or in which we ought not be involved, and attempt to reduce effort there. It has not been anything startling. We have not been able to say that we can eliminate that whole division or anything like that, but there has been a tightening of the belt. We will endeavour to do more in areas where activity is up. Obviously Mintabie has been mentioned as a scene of activity. The Director-General might have some detail as to increased effort on the opalfields, by way of inspection or anything else.

**Mr Johns:** The number of area inspectors is unchanged and has been over the past five or six years. I believe that we are maintaining the requirements of safety and compliance with mining requirements. We could always do with more, but I do not think that we are facing particular difficulties or that miners are other than satisfied with the conduct of activities.

**The Hon. R.G. Payne:** As I explained, there was nothing of a startling nature that one could point to, but there have been some minor improvements in the opal area. For example, we have upgraded the office at Mintabie. It is no big deal, but it is a lot better than the makeshift facility that was operating before. We have not been able to put in a full-time person, but we have a clerk for 0.4 of the time.

**The Hon. E.R. GOLDSWORTHY:** Is there any suggestion of overproduction of opal?

**The Hon. R.G. Payne:** In the past there has been a kind of *ad hoc* managed operation at Coober Pedy and other areas where opal is sold to make sure that the price maintains reasonable levels (this is by the sellers). On occasion it has come apart and that has not been to the benefit of the sellers or the industry as a whole. As an observer—I do not know of any details—it seems to me that it is better managed now and we do not seem to be getting those ups and downs. Once again, it fits into the category alluded to by the Director-General a while ago, when he said that it is hard to get accurate information. I suppose that we could canvass that area more closely, but not with the resources available.

**The Hon. E.R. GOLDSWORTHY:** Under the mining line there are two more mining inspectors and it sounds like there are a couple of people who go to Roxby Downs to look after the environment. Is that the true position?

**The Hon. R.G. Payne:** On my understanding, the Deputy Leader is correct; it relates to Roxby Downs. However, I will ask Mr Hill to answer that question, as he might like to further outline any proposed plans we might have for future requirements at Roxby Downs of which he may be aware.

**Mr Hill:** During the past year one additional senior inspector of mines has been based at Roxby Downs. He will be assisted also by a scientist, somebody in the health physics area for radon gas and other air measurements. There has been a change in the emphasis in the opal fields, with Mintabie increasing and one area officer at Mintabie now being barely enough. As a result, we tend to use the Andamooka (which is near Roxby Downs) area officer part-time in other places.

**The Hon. E.R. GOLDSWORTHY:** This indicates also that there is a fair degree of reduction in activity in water drilling. The yellow book mentions that there is a significant downturn in drilling support services.

**The Hon. R.G. Payne:** I would not describe it as a downturn. I suggest that, as part of the tighter management of manpower and because of the specific way that accounting works, workshop support to the drilling services is being addressed in the downturn figures. It is proposed that a suitable redundancy package will be offered on a voluntary basis to some of the persons at the workshop. This was done on an earlier occasion in conjunction with the details worked out in consultation with the Trades and Labor Council. Of course, it will be subject to the approval of the Minister concerned, who is the Minister of Labour.

**The Hon. E.R. GOLDSWORTHY:** Does that activity refer to the sort of work which led to the complaints from private well drillers where they claimed that the department was in competition with them for work as against the survey work that the department undertakes in relation to underground water surveys around the State? I take it from the Minister's answer that he is referring to winding down activity in those areas where complaints were being received frequently from private well drillers.

**The Hon. R.G. Payne:** I do not wish to be disparaging to the work force concerned because many of them have given long service, but it seems that we are in a situation where—and this is the only phrase I can think of—we have more chiefs than Indians, and there is a necessity to do something about that on a cost efficiency basis and the available workload.

It is true that at the time there were some complaints about the department's being in competition with the private sector in relation to drilling and other activities, but I point out that the department has always done that. There has been no change in policy over the years, including the

years when the honourable member's Party was in Government.

**The Hon. E.R. GOLDSWORTHY:** There were complaints that the Government was advertising for work, and so on.

**The Hon. R.G. Payne:** The member for Light referred to some misunderstanding in that area but, subsequently, the matter was addressed and answers supplied to the satisfaction of the member for Light.

**The Hon. E.R. GOLDSWORTHY:** I do not think that he was satisfied.

**The Hon. R.G. Payne:** Well, it has been several years, and he has not sought to pursue the matter. Further, I cannot recall any notation by the Auditor-General following his examination of the accounts that anything untoward in that area was revealed. It appears that I have inadvertently given the Committee some wrong information, which I will now correct. The exercise conducted at the workshops is not a package of voluntary retrenchments, as was my understanding. I apologise because I was wrong. I should have said that it is a redeployment exercise, which is a vastly different proposition. As I understand it, the initial approach in these matters is to seek volunteers for redeployment before any further steps are taken. I confused the voluntary aspect of that scheme with the voluntary retirement package offered earlier, and I apologise for the confusion.

**The Hon. E.R. GOLDSWORTHY:** The yellow book indicates that the workshops lost \$60 000 last year, and I think they lost \$12 000 the year before. How does the Minister account for that?

**The Hon. R.G. Payne:** The Auditor-General requires us to state figures—there were losses and they are stated in the papers.

**The Hon. E.R. GOLDSWORTHY:** The raw figures are stated, but how did the workshops lose \$60 000 last year and \$12 000 the year before?

**The Hon. R.G. Payne:** I will ask Mr Bob Marrett, the Director of Administration and Finance, to add some detail to the bare bones provided in the budget papers.

**Mr Marrett:** The recent history of the workshops from a profit and loss point of view is as the honourable member said: a \$60 000 loss in 1986-87, a \$15 000 loss in 1985-86, and I think a loss of about \$10 000 in 1984-85. The figures show a gradual decline in the availability of productive work and, as the Minister explained, a number of positions have been identified requiring redeployment because of the lack of productive work available. As I said, the figures show a history of downturn because the workshops support the drilling operation, which has seen a decline and a consequent loss of productive work. Also, there has been a decline in the work that the workshops did particularly for other departments and some statutory authorities.

**The Hon. E.R. GOLDSWORTHY:** Do the workshops still make dental caravans for the Health Commission? At one stage the workshops were making things like caravans.

**The Hon. R.G. Payne:** Yes, there has been a continuation of that type of cross departmental/statutory body work. I am not sure whether it is happening this week but I have seen evidence of it recently. Although it is mostly repair work, there has been some minor manufacturing work for the E&WS Department to make spare parts and items that are difficult to obtain.

**The Hon. E.R. GOLDSWORTHY:** Perhaps that should be looked at.

**The Hon. R.G. Payne:** There is not much of it left.

**Mr ROBERTSON:** I note in ETSA's annual report a statement that tariff movements in South Australia for power to ordinary consumers have been significantly below

the rate of inflation for the past two years. I wonder whether the consumers of South Australia can expect that to continue and what the domestic tariff movements for electricity are likely to be in the foreseeable future?

**The Hon. R.G. Payne:** It is the Government's aim—and I would suggest ETSA's aim—to charge the minimum tariff necessary to maintain ETSA as a viable operation. It is true to say that over recent years the increase has been less than CPI, inflation or whatever index one uses. I think it can be shown that over the past three or four years the average has been about half CPI, for example, and I think it would be welcomed by every domestic consumer as well as industry that a brake has been put on and a change in the curve of increase has taken place for the good. I would suggest that, gradually emerging—I am speaking more now on the philosophical level—throughout Australia and the Western world, is an understanding by Governments and utilities that the days of being able to bargain on continued increases *per se* have ended. Increasing economies, greater skill in selection of the times when additional plant must be added and the upgrades of existing installations rather than a complete building of new stations and so on will take place. Clearly this is the trend in the United States of America where, in the nuclear field and other power project proposals now, there are strictures against building into the tariff structure construction and other costs, such as money costs, loan costs and so on, unless prior approval is given by the Federal authority.

In Australia, I would suggest that utilities need to take this into account. All my advice and influence that I can maintain as the Minister, both with ETSA and with the Government through the Cabinet, will be that we should be aiming for and must achieve much less than CPI from now on, whether as buyer or seller. If we are selling electricity, we have to be able to show a better effort than before, and I would ask intending suppliers of fuel sources to the trust to take into account that that is the approach I will be recommending to the Government. We will expect the people who supply the fuels—whether they be coal, gas or whatever—to also readjust their sights as to what will happen to any prices they might like to receive for their commodity. That is a bit philosophical, but I wanted to get over to the honourable member and the Committee the way I view this matter. I think they would support the viewpoint that I am endeavouring to have the Government adopt.

**Mr GUNN:** I note a recent press report about Tarcoola Gold, headed 'Tarcoola strikes big rich patch', in the *News* of 6 May, 1987, which states:

On the eve of its listing on the Australian mining boards, locally-based Tarcoola Gold Mines Limited has struck a rich patch of ore at its Tarcoola prospect near Olympic Dam.

It is a considerable distance from Olympic Dam, but I suppose that is near enough for the media. My concern is that those people who are interested should be given accurate information. I know the area particularly well and I recall a photo in the press some time after of one of the persons involved in it, and there was a lengthy article by Mr Campbell from the *Advertiser*. Could we have the benefit of the expertise of the department in relation to this project?

**The Hon. R.G. Payne:** The first thing that needs to be said is that the question of assay reports, intersection analyses and the contents of prospectuses is a matter for the Minister of Corporate Affairs, not necessarily a matter for me, if there is any query as to the accuracy or otherwise of information published in order to obtain share capital. I am not able to contribute directly about the likelihood of obtaining gold in that area other than to say, as was mentioned earlier by the Director-General, that Tarcoola is one of those gold areas which has sustained, over a long time,

a degree of interest and some small output of latter years. A bit more came out of the Tarcoola area in earlier days. I now ask the Director-General to provide additional comment on this matter.

**Mr Johns:** I can only confirm that there is a renewed interest in gold in the Tarcoola area. We have supported Tarcoola Gold in the establishment and the floating of the venture, and I suppose in the end we will judge those involved on their performance. These are early days and we are in no position to establish their *bona fides*. But, on the surface it appears that they are well intentioned and they have not done anything with regard either to work or to reporting that has caused me any concern. We are pleased with the drilling that has been undertaken by them to date at Tarcoola. One of the big deficiencies of that field in terms of exploration was in the lack of knowledge of extensions of the lode systems underground and laterally. We consider appropriate the approach that they have taken in the first instance to undertake drilling, to establish extensions to the existing lode system and then to extend their work to demonstrate occurrence or otherwise of gold in the enclosing rocks. I do not know whether that answers the question. That is the situation as I see it. I am aware of what some would regard as fairly bullish statements with regard to results, and so on. However, to date I have had no concern about what has been said or released.

**Mr GUNN:** I refer to the floating of a proposal for a gem purchasing, marketing and processing authority. No doubt the Minister has also received correspondence from the Coober Pedy Miners Association, under the hand of the Secretary, Anne Vanajek. The information that was forwarded to me states, in part:

It has only been since the overseas buyers, mainly those from Hong Kong have become interested in Coober Pedy, that miners have been able to sell complete parcels (top grade, second class, etc., potch in colour and chips), at anywhere near acceptable prices. No miner who owes his existence to producing rough opal would agree to export controls on rough opal. It is painfully obvious that our price structure would be considerably lowered to cover the expense incurred by our overseas buyers if export controls were effected. If such controls were to become law then, in effect, the opal miner as a primary producer would be subsidising the Australian processing industry.

Various other information is provided. It concludes as follows:

The Gemstone Working Party Report suggests that statistical information be gathered to give a clearer picture of production. From an opal miner's point of view, statistics are unreliable and relate only to the past. Who can envisage production for the future? What is obvious is that if there is a future for the average miner, it is dependent upon prospecting and finding productive new fields and then being able to mine efficiently and economically. Finally, he must be free to sell his products to a fair and open market.

Also, reference is made to personal liability in relation to people who, unfortunately, stray onto the existing or new mining areas. Will the Minister comment on whether he had any input, or state what views he holds, in relation to the proposals that I have put?

**The Hon. R.G. Payne:** I am delighted to be reminded that I have received a letter from Anne Vanajek, whom I know well and who is an excellent representative of the miners' association at Coober Pedy. She is a charming person, and efficient in her capacity as Secretary of that organisation. I have just received the letter to which the honourable member has referred. I have referred it in turn to the Director-General for any advice he may wish to give me on this topic and have not yet got it back.

I think that the honourable member was suggesting that there might be Federal action to institute export control on opal. In my time, and in the time of the previous Minister (now Deputy Leader of the Opposition), the topic of greater

processing of all naturally occurring minerals and other resources in our country was addressed from time to time at meetings of Ministers of Mining Council. This was done on the basis that the greater the amount of processing done in Australia the greater return to the country and the people concerned. The matter has been treated as a general topic rather than referring to opal specifically. I am not aware of any move to institute control, although I am not saying that that is not so. The honourable member asked me if I have a view on this matter. I would be loath to see interference in this industry, which seems to be enjoying a well merited upturn and recovery at long last from what we have seen in recent times at Mintabie, and so on. I am not unsympathetic to what the member is putting, but would like departmental advice before committing myself.

**Mr GUNN:** Has the Minister's department been engaged in any drilling on what are commonly known as the Maralinga lands, which unfortunately lack an adequate quality water supply for drinking? Have they done, or are they doing, any prospecting in that area?

**The Hon. R.G. Payne:** The department has done some drilling in an attempt to provide water for the indigenous people when they are moving through the area or when outstation living. As I am not up to date with the latest detail, I will ask the Director-General to bring the Committee up to date on this matter.

**Mr Johns:** We have conducted several drilling programs on the Maralinga lands in an attempt to provide water for domestic and other requirements. This was done, I suppose, at the request of the Commonwealth Department of Aboriginal Affairs. We have not had marked success in finding potable water. We did not have high hopes of finding high quality water because of the environment: it is an arid region with internal drainage and it is notorious that such environments lead one to expect poor quality water due to lack of recharge of underground basins. However, we have always entertained a belief that exploration was a worthwhile undertaking. We have found brackish water whose suitability for other than domestic drinking requirements has been assessed. I cannot detail the number of holes that have been drilled or the precise nature of the outcomes, but certainly we have located water suitable for bathing, and so on, but not for drinking purposes.

**Mr GUNN:** In suitable quantities?

**Mr Johns:** Yes.

**The Hon. E.R. GOLDSWORTHY:** In the Roxby Downs development line I note a reduction from 3.5 to 1.5 people: what does that mean? There are two more mining inspectors to whom we referred earlier. The line under staffing indicates a reduction there also. Has there been any change in operation at Roxby Downs as a result of the legislation that went through Parliament to amend the Radiation Protection and Control Act and the changes to the schedule of that Act referring to Roxby? Has there been any change in the day-to-day operations, monitoring, and so on, at Roxby? That legislation came about because some officers in the Health Commission wanted to flex their muscles, and that led to a demarcation dispute with the Mines Department which, unfortunately, the Mines Department lost. Having got the politics out of the way, has it made any difference to what happens at Roxby?

**The Hon. R.G. Payne:** I will deal with the possible downturn, involving the reduction of two people as pointed out by the Deputy Leader. That is simply a transfer from development to the inspectorate line appearing on the subsequent page of the yellow book—page 403—which shows that 14.4 went to 16.4. With respect to the effect of the schedule and/or any regulations resulting from the Radiation Protection

and Control Act, the best person to give a direct answer would be Mr Peter Hill.

**Mr Hill:** We have to look at the activity going on at Roxby currently. Presently the mine is being developed at the same time as the construction work is going on at the metallurgical complex, so most of the development going on in the mine is blocking out all sections and developing the ore-handling system for ore and mullock up through the shaft and into the mill. There really has not been terribly many changes in the activity and the day-to-day monitoring has been undertaken by Mines Department people. The Health Commission comes up for regular checks and to attend a two-monthly meeting with the mine management and the Mines Department. The next stage of the health side of the mining will start before the mine and mill are commissioned. Under the Commonwealth legislation and the codes thereunder there are a number of approvals—approval for operating manuals, approval to operate the mill and the mine—which have to take place. The company has a large team of environmental scientists working on these programs prior to their approval. So, it is really in the planning phase at the moment, seeking approval to operate the mine and mill.

**The Hon. E.R. GOLDSWORTHY:** What Mr Hill is saying is that nothing has changed, but that when the mill is operating the Health Commission may issue a licence it would not otherwise have issued. He did not say that, but it is pretty clear that nothing has changed as a result of that legislation. We went through all this hoo-ha about needing to satisfy the Health Commission, and having to issue a licence, when Roxby had a special mining licence anyway. I did not believe anything would change in relation to the day-to-day operation at Roxby, and it has not changed. Will anything change as a result of that legislation?

**The Hon. R.G. Payne:** I find the question a little strange because, when there was some controversy over this matter, I recall the Deputy Leader suggesting that the Minister of Mines and Energy had been done over! One would assume that, if that were the case, there would have been some changes in the practice concerned. He is now telling this Committee that he never believed there would be any change—which seems surprising in view of the earlier comments that he made at the time of the controversy.

**The Hon. E.R. GOLDSWORTHY:** The whole exercise is pretty strange. Why amend the Bill? The Health Commission has been off side ever since it felt it was left out in the original negotiation, which was a lot of garbage. It was consulted when it was required to be consulted, but it has had its nose out of joint for years, and it felt that it had been left out on a limb. Was this just a cosmetic exercise so that the commission felt it was not left out? I asked the Minister questions prior to that, and I was assured that there would be no change. Why did we go through the business of amending the Act and conditions in relation to Roxby in the schedule if, in fact, there was no change? Was it cosmetic?

**The Hon. R.G. Payne:** I do not think that it was cosmetic. I can only say that the purport of what took place was to clarify the role of mining inspectors in an underground uranium mine in relation to the health aspects. It seems to me that what was done was specify both the separate responsibilities of the inspectors concerned and the joint responsibility. As to how that is working, which is part of what we are talking about now, I point at that on the last occasion I was at the mine (which was at the time of the decline, a couple of months ago or thereabouts) I had occasion to talk to Mark Sonter, who is the senior radiation protection person employed by Western Mining on site. I specifically

asked him how the procedures were working, and so on, and he told me that there had been some hiccups in earlier times but it had settled down and was working well and was, in his opinion, proving to be satisfactory and conducive to the safety required in the whole operation. That is all I can add to the discussion.

**The Hon. E.R. GOLDSWORTHY:** I refer the Minister to page 403 and the lines 'Assistance to the Industry' and 'Resources Use and Environmental Protection'. I notice that there has been a reduction in the number of employees in the assistance program but not in the resources use program. What do those programs involve?

**The Hon. R.G. Payne:** Assistance to industry can take a number of forms. One that comes to mind and one that the honourable member will remember is the opal and gem display that was held in the foyer of the casino. A sum of \$40 000 was put forward as part of funding in that area. The line 'Resources Use and Environmental Protection' involves expenditure on computer software that can be used to assist the industry.

**The Hon. E.R. GOLDSWORTHY:** My next question concerns input into land use plans. A number of places are mentioned, including Mount Lofty Ranges, Golden Grove (about which mention has been made) and Maslins Beach. What concerns the Department of Mines and Energy at Maslins Beach?

**The Hon. R.G. Payne:** I am sorry to have to curb the honourable member's prurience—which I share when I hear the words 'Maslins Beach'. There are other aspects to Maslins Beach that are more in the mines and energy area, and one of them is sand mining. My understanding is that a sand mining operation by companies such as Monier is taking place there. I hope I am talking about the right deposit, but an agreement has been reached for those companies to vacate the site and discontinue mining. As a result the second dune (this does not involve the beach side dune) will be preserved for coast protection. In return, the project companies will operate elsewhere on a new resource that will not have visual and other deleterious effects on the coastline in that vicinity. I am sorry, I think that I have confused that area with another one.

The Director-General informs me that the Maslins Beach case is more a matter of assisting to provide planning and other advice in relation to the mining of sand in an urban area. It shows that one never has enough time to learn everything in the department. I cannot recall having visited that place. I do not know a great deal about it, as I would be the first to admit.

**The Hon. E.R. GOLDSWORTHY:** Earlier the Minister told the Committee that there was some interest in uranium exploration, which surprised me. What is the current status of Honeymoon and Beverley? Are they still on a retention lease? Have they packed up and gone home resigned to their fate? What is the current status of those two mines that were about to crank up when they got the chop?

**The Hon. R.G. Payne:** The Deputy Leader is correct; both mines are still held on retention leases. This was the scheme of arrangement offered by the Government at the time so that the investment, more particularly at Honeymoon than Beverley, but also the deposit at Beverley, could be retained if desired by the proponents. I mention in that connection that I have seen Mr Otto Gilbert, who was associated with the Beverley deposit, and he told me unreservedly that, 'Thank heavens the Government saved us money on the Beverley project.' I put that forward, for what it is worth, to the Deputy Leader.

**The Hon. E.R. GOLDSWORTHY:** I presume that he was not applying for a Government job. I have not seen

Mr Gilbert for a while. He joined the ranks of the unemployed for a time as a result of the closure of the mine. What was the result of the Government's promised efforts to help redeploy people who were thrown out of work when those mines closed?

**The Hon. R.G. Payne:** The Government did not offer to help redeploy those people. That would be quite incorrect of the Government. Those people were not employed in Government and redeployment can take place only inside the Government employment arena. The Government did say that if any of the persons displaced from their employment in that instance would make available their *curriculum vitae* and other information, if we could help we would. That is exactly what was done.

**The Hon. E.R. GOLDSWORTHY:** Did the Government help Mr Gilbert get another job?

**The Hon. R.G. Payne:** Mr Gilbert did not come to me, representing the Government, to ask for another job. He came to say farewell. That was the last occasion he visited me and it was then that he alluded to what he said—that was some time after what we are talking about—'saved him a deal of money'—I think those were his words—about the Beverley prospect.

**The Hon. E.R. GOLDSWORTHY:** We will not get into an argument about friends like Mr Ainsworth, whose comments do not line up with the comments of the Chamber of Mines. I will not pursue that, other than to say that Honeymoon, particularly, was about to start production when the Government saw fit to close it down. Both mines are now on retention leases, so nothing much is happening there.

I have a couple of specific questions that the Director might be able to answer. What is the position about the argument over the Balhannah quarry and the one at One Tree Hill? The Balhannah project involved a noise problem. I do not know that One Tree Hill was a firm proposal before the department when I last inquired, but there was a fuss locally about a project to open up a rubble quarry at One Tree Hill. It might be a bit unreasonable to expect the Director to know the details on those projects. Perhaps the Chief Inspector of Mines would be the more appropriate person to give a report.

**The Hon. R.G. Payne:** The Director of Mining, Mr Hill, would be able to throw some light on the queries raised by the honourable Deputy Leader.

**Mr Hill:** The Balhannah quarry has been temporarily shut down. A number of residents complained about noise. One Tree Hill is a potential mine and is not as yet a problem.

**The Hon. E.R. GOLDSWORTHY:** There is no firm proposition before the department to open the quarry at One Tree Hill?

**Mr Hill:** The development plan has not been approved by the department.

**The Hon. E.R. GOLDSWORTHY:** Who closed the Balhannah quarry?

**Mr Hill:** The Balhannah quarry was closed by the operator, probably because of market conditions and not for any other reason.

**Mr GUNN:** Last year I asked the Minister whether there was any likelihood that the large gypsum deposits from Sceale Bay south-east of Streaky Bay, would be developed. Can the Minister indicate whether any action is likely to take place in the relatively near future?

**The Hon. R.G. Payne:** I am constantly amazed at the gypsum activity throughout Australia, but I do not have any recent knowledge of the Sceale Bay deposit. I will ask the Director-General to comment.

**Mr Johns:** Nothing has transpired in the past 12 months to change the outlook for possible development of the gypsum deposits referred to near Streaky Bay. In fact, I think they have probably gone backwards in that time. Twelve months ago the proponents were fairly bullish about the prospects of securing markets. I did not necessarily share that optimism. Retention leases had been acquired, but they are now being passed up, suggesting that development has retreated rather than advanced.

**Mr GUNN:** One matter which concerns the average householder is the continuing increase in the cost of electricity. As someone who knows the inconvenience and the cost involved in generating one's own electricity I know some of the problems, and I know that it is a good thing to have that particular facility on tap. However, in view of the fact that the Electricity Trust is a very large organisation which has been operating for a long time, has the Minister or the Government considered asking the trust to look at its management structure or its whole operation to ensure that it is operating in the most effective and efficient manner? In asking this question I am not attacking the confidence of the Electricity Trust or its board, but with any large organisation, whether in the public or private sector, benefit is often gained by getting a completely independent assessment. Quite often considerable savings and improvements result. I think all of us want to see the increase in electricity costs kept to a bare minimum.

**The Hon. R.G. Payne:** I will take the query at face value because clearly over the past three years or so the Government has been doing just that and has caused electricity tariffs to rise at a much lower rate than the CPI overall, because there was a 2 per cent reduction followed by a reduction of less than the CPI; at least that put a kink in the curve that previously applied both in the time of the Liberal Government and, to some extent, in the years of the Labor Government.

With respect to ETSA's cost effective structure or otherwise, there are a number of parameters by which this can be measured. First, I refer to kilowatt hours generated per head of person employed. It is my understanding that ETSA comes out in front Australia-wide on that parameter. Another measure could be the number of vehicles per the number of employees. It is my understanding again that ETSA also scores very well in that test. In addition, ETSA had a going over by an international United States based consultant (sometimes referred to rather rudely by three names that I will not mention here) with a long record of advice and so on in relation to power utilities. Admittedly, CMP (Cresap, McCormack and Paget) was paid for by ETSA. It looked at the viability of ETSA; whether it needed to restructure; whether it was cost effective; and so on. That goes back three years now. I think that the review might have even been in mind at the time of the outgoing previous Liberal Government.

The net result of that was some recommendations about restructuring for more effective operation, and that has all taken place. It did not include any major reductions of staff or whatever, but involved more specific apportioning of responsibility. Of course, when responsibility is clearly defined one gets a more cost effective operation than when it is pretty loose and everyone does not know what they are supposed to be doing. I understand the honourable member's concern, and assure him that we are doing all we can. I am certain that ETSA is not in any doubt about how the Government feels about this and that it must have a cost effective operation. ETSA has been included in the Government's employment freeze and requirements to give and take with redeployment of employees, and so on. So,

that in itself is a further curb on no unnecessary expansion, and so on.

**The Hon. E.R. GOLDSWORTHY:** What is the Government's policy in relation to the ownership of natural resources? Page 409 of the yellow book states:

Promote the petroleum potential of the State to encourage private sector investment.

I then read in the press a statement by the Minister's colleague, the Minister of Labour, that he thinks the public sector ought to own those resources. This led to a retort from the South Australian Chamber of Mines and Energy Incorporated. Copies of a letter, written by Mr Fraser Ainsworth, went to the Minister of Mines and Energy and the Premier.

He said that the Minister's sentiments indicated that in relation to exploration development the Government could not do much to promote private sector investment. Really, that does not line up with Mr Ainsworth's letter when he wrote to the Minister who uttered those sentiments. There are a few quotes from the Hon. Mr Blevins in that letter, one of which states:

After discovering what in some cases has been major sources of energy, governments have virtually handed them over to private enterprise with very little State control.

That does not line up very well with the yellow book, which states:

Promote the petroleum potential of the State to encourage private sector investment.

Mr Ainsworth's letter further indicates that he is worried about sentiments expressed by that same Minister, who stated:

... in order for the entire State to benefit from these major assets, the public sector could or arguably should have been the owner and developer of these resources.

Really, that does not line up very well with the sentiments that seem to be expressed in the Department of Mines and Energy budget papers. Arguably, that could lead to confusion, not only in my mind but also in the minds of the public, as to Government policy in relation to the development and ownership of resources in South Australia. I invite the Minister to comment on the sort of sentiments expressed in the Department of Mines budget papers, *vis-a-vis*, the sentiments expressed by another Minister.

**The Hon. R.G. Payne:** First, I think that if we are going to talk about what was said by another Minister on this topic we should also mention the title of the speech that he gave, namely, 'Towards a more equitable society'. I fully support any reasonable way in which we can work towards a more equitable society than that which now exists. I do not think that any member of the House, let alone of this Committee, would quarrel with that.

**The Hon. E.R. GOLDSWORTHY:** I am not questioning the title: I am questioning the sentiments, as does Mr Ainsworth.

**The Hon. R.G. Payne:** I listened to the honourable member's question and am now trying to provide an answer. When he referred to Mr Ainsworth's letter, in particular page 3, he said that it contained a number of quotes from the Minister's speech. Mr Ainsworth states:

... in order for the entire State to benefit from these major assets, the public sector could or arguably should—

and that is the key phrase, 'could or arguably should'—have been the owner and developer of these resources.

It appears that the Minister is being quoted, so that appears to be his view and his argument on that topic. The Minister does not put it any stronger than that. When he used the phrase 'could or arguably should', I do not think it could be put that that was an absolute statement. When members are developing a theme or line of thought, that device is



quite often used in the House and in this Committee. Evidently, that is the view of the Minister of Labour. My view is that the State Government already has, as has been pointed out by Mr Ainsworth in his letter, a degree of control over the activities where requirements must be met in order that the State provides a licence in respect of the particular resource with which we are concerned. I do not see any need for any change. I do not think that that viewpoint is in conflict with the policy of the Party on this matter.

**The Hon. E.R. GOLDSWORTHY:** Is the Minister saying that he does not see any conflict with what the Hon. Mr Blevins said and what Mr Ainsworth said?

**The Hon. R.G. Payne:** No, I am saying that I, and not the Hon. Mr Blevins, am the Minister of Mines and Energy. It is my job to administer mines and energy policy, and I do not see any conflict between the arrangements that currently apply and the policy of the Party which I am required to administer. I have no problem with that.

**The Hon. E.R. GOLDSWORTHY:** So you do not agree with the Minister of Labour? You agree with Mr Ainsworth instead?

**The Hon. R.G. Payne:** Is that a query through you, Mr Chairman, or an interjection?

**The Hon. E.R. GOLDSWORTHY:** It is the conclusion that I have drawn and, if the Minister wants to comment, well and good; but, if he does not wish to comment, I can only conclude that he is saying that the Minister of Labour is talking nonsense. This morning we discussed coal and briefly mentioned the joint resource and utilisation studies involving CSR, ETSA and the Department of Mines and Energy in relation to Sedan and Lochiel. What is the funding breakdown between the three partners and what point has been reached in the studies?

**The Hon. R.G. Payne:** I will ask Mr Laws, who is involved in this area, to bring the Committee up to date.

**Mr Laws:** The tripartite study of Lochiel and Sedan involves ETSA, CSR and officers of the department's energy planning executive, and funding for each group comes from their own budgets. The money expended on evaluating Lochiel comes from ETSA; the money expended on evaluating Sedan comes from CSR; and any costs expended by the Department of Mines and Energy in following those studies comes from the department's lines.

**The Hon. E.R. GOLDSWORTHY:** Is it a joint study in the sense that CSR has some input into the Lochiel study, because the line states that it is a joint study? Is each of the three groups involved in both studies or is CSR doing its own thing at Sedan quite independently of ETSA's study into Lochiel? Is there some overlap?

**Mr Laws:** The data is shared between the three groups, and each group has input into either proposal in that either ETSA or CSR may decide to follow a certain line of investigation, do some drilling on a deposit or do some laboratory analyses. This is discussed by all three proponents, agreement is reached on the program and the results and conclusions are agreed between the proponents. However, naturally, the major work at Lochiel is being done by ETSA and the major work at Sedan is being done by CSR but, as I say, all the data is shared and all the programs are discussed before they are implemented.

**The Hon. E.R. GOLDSWORTHY:** So when a decision is made in relation to Lochiel or Sedan, the CSR people should not have any real beef if it is in favour of Lochiel because it will have been consulted all the way along the line and would know all the testing results, and so on.

**The Hon. R.G. Payne:** What has been put forward by the honourable member is quite correct and, in fact, I have

received an assurance from Mr David Kerr of CSR on more than one occasion that CSR is satisfied with the arrangements. Of course, there were some hiccups along the line—you do not always get possible joint ventures going smoothly. I am quite happy for Mr Laws to elaborate, but I understand that the current arrangement is working extremely well and will be of benefit to all concerned.

**Mr Laws:** That is correct: the parties are working together and cooperating. Three sub-groups have been set up: one group is evaluating the resource and mining aspects of both deposits; another group is evaluating the combustion characteristics of both coals; and the other group is looking at power station design and costings. The study is programmed to conclude in the middle of next year when the recommendations can be made.

**The Hon. E.R. GOLDSWORTHY:** What allowance is made for the profit margin required by CSR if it is decided to mine its coal, because it will not do it for nothing? If the results show that the two coals are comparable and there is not much difference between them, what allowance is made for the bottom line in terms of the profit that CSR must make when it develops its coalfield, because ETSA as a Government utility under ministerial control will not have that requirement?

**Mr Laws:** Exactly how the development costs will be handled has not yet been resolved. That is due for discussion between the three parties and an agreement will be reached. When that item came up before FEAC, ETSA did receive different treatment from the other proponents because it was recognised that the final cost of electricity to the consumer was the most important consideration and, if ETSA did not need to make a profit, that was a matter of fact. If one of the other proponents had to make a profit, that was also a matter of fact, but they were taking into account what would be the real cost to the South Australian consumer when the FEAC study was done. That issue has not been resolved for the Lochiel and Sedan comparison.

**The Hon. E.R. GOLDSWORTHY:** That would be a fairly significant point of argument when it comes, I would think.

**The Hon. R.G. Payne:** As far as FEAC is concerned, that is something that has to be considered. The Government does not have a view that any venture or joint venture is not entitled to have some return. They are not expected to be in the thing on a loss basis.

**The Hon. E.R. GOLDSWORTHY:** What results so far, if any, have there been of the Amdel restructuring? I note in the budget lines that there was a cutback in the guaranteed work from the Government to Amdel. I cannot recall the figure offhand. It looked to me as if the Government had decided it would not underwrite Amdel to the extent it has in the past. Is there any report on that restructuring and its operations so far, and is it a correct assumption that the Government will reduce the work it sends to Amdel in the coming 12 months?

**The Hon. R.G. Payne:** I will leave some of the specific detail to be addressed in a moment. Information that I have about Amdel since the restructuring is that it is going well and that it expects to be able to take advantage of what it would see as some of the emerging opportunities in occupational health, welfare and safety matters, and so on, as the newly restructured company. I think that the Deputy Leader is correct—it does show some reduction in the lines. The Director-General has an explanation associated with that.

**Mr Johns:** Historically there has been a guaranteed work commitment to Amdel by the South Australian Government through the department, the Commonwealth Government and through AMIRA. As an outcome of (and this is

nothing to do with Amdel's restructuring) a requirement placed on the department to review its activities, we have had to rethink the commitment that we made to Amdel. We made a judgment to reduce the guaranteed level of activity, if you like. It is not a reduction on the guaranteed level but a reduction on last year's commitment—put it that way. We will need to have certain things done and we will continue to have them done at Amdel, including chemical analyses, determinations and service requirements. I am not aware of the precise sum, but we have forgone or propose to forgo what may have been previously regarded as project work.

But I would expect that the work forgone would more or less be made up by work provided to Amdel through our NERDDC commitments. We have in hand a number of research projects that are being funded through NERDDC, through both the Oil, Gas and Coal Division and the Energy Division. There is a requirement for services such as those that Amdel can provide, and that work is being directed to Amdel. On balance, I would think that there will be little or no change in relation to work directed to Amdel from us. However, our lines will indicate a reduction in commitment to what might otherwise be described as project work.

**The Hon. E.R. GOLDSWORTHY:** As has been alluded to today, in real terms there has been a reduction in Federal funding for the Department of Mines and Energy. Initially, it appears that there has been an increase in funding, but included in the figures are some Federal funds which do not normally appear in the department's budget. Will the Minister provide details of the new accounting procedure? When one does the sums it looks as though funding for the department increased, but it is obvious that there has been a cut—and the matter of reductions in certain areas has been referred to today. However, the budget is inflated by the addition of some Federal funds which do not normally appear in the budget lines. Can we have details of what those funds are?

**The Hon. R.G. Payne:** Mr Janssan will be only too pleased to provide that information; it was expected that this matter might be queried, as this involves a new way of accounting in relation to Commonwealth funds.

**Mr Janssan:** Under the new Public Finance and Audit Act, proclaimed on 1 July 1987, all Commonwealth funds must be shown through the State appropriations. Previously, these moneys were shown under another funding area. The Deputy Leader is quite correct in pointing out that this is the first year that those funds have been shown in the new area. In fact, the lines under program 3 'National Energy Research Development and Demonstration Program' and 'Petroleum Products Subsidy', at page 127 of the Estimates, relate to this matter.

**The Hon. E.R. GOLDSWORTHY:** Do those two lines account for all the additions to the budget?

**Mr Janssan:** Basically, yes. There are some other areas which previously were considered as being off-budget and which are included in the Program Estimates as well.

**The Hon. E.R. GOLDSWORTHY:** Where did the petroleum product subsidy appear in previous years?

**Mr Janssan:** In previous years it was included in the department's working account fund, but it was also shown on the Program Estimates as well.

**The Hon. E.R. GOLDSWORTHY:** As I understand these papers this year, the allocation does not appear in the Department of Mines and Energy budget as an addition to funding this year, but had that subsidy appeared in the Mines and Energy budget previously it would have been part of the allocation to the department?

**Mr Janssan:** Perhaps I have misled the honourable member. What I meant to say was that it is actually shown in the Program Estimates under the petroleum transport subsidy sub-program and in previous years it was not shown in the appropriation lines.

**The Hon. E.R. GOLDSWORTHY:** It would have to appear somewhere as income to the Government. Where did it appear? Under which Ministry did it bob up?

**The Hon. R.G. Payne:** In previous years it was in the yellow book in the section relating to the department, but not in the white book in the section relating to the department.

**The Hon. E.R. GOLDSWORTHY:** The accounts have to show somewhere.

**The Hon. R.G. Payne:** That is right: if not, the Auditor-General would have been jumping up and down, but he was not.

**The Hon. E.R. GOLDSWORTHY:** It has to show in a budget line as income for somebody, if it did not show as a credit to the Mines Department.

**The Hon. R.G. Payne:** Presumably that would have shown in Commonwealth payments to the State, or in the overall State budget context.

**The Hon. E.R. GOLDSWORTHY:** In the Treasury budget?

**The Hon. R.G. Payne:** I think so. I cannot say, but I will undertake to get that information.

**The Hon. E.R. GOLDSWORTHY:** I would like to know about this, because the accounts are confusing.

**The Hon. R.G. Payne:** I think that it is straight now.

**The Hon. E.R. GOLDSWORTHY:** Across a whole range of departments funding is bobbing up in a different place from where it was shown in the past.

**The Hon. R.G. Payne:** The point I am making is that next year the same procedure will be adopted and when one looks at the figure voted and the actual figure there will be more of an apples to apples scene than there is now.

**The Hon. E.R. GOLDSWORTHY:** I want to know in whose budget that appeared last year.

**The Hon. R.G. Payne:** I will try to find that out for the honourable member.

**The Hon. E.R. GOLDSWORTHY:** The Minister undertook to get a report on the heating of the conservatory, did he not?

**The Hon. R.G. Payne:** Yes, I will get that for the honourable member.

**The Hon. E.R. GOLDSWORTHY:** Can the Minister tell the Committee what has happened to the silicosis fund?

**The Hon. R.G. Payne:** I think I can provide that information, but I do not know why it is being asked for in this Committee. Does it figure anywhere?

**The Hon. E.R. GOLDSWORTHY:** I have received complaints from people in the industry because the silicosis fund was built up over the years to provide for people who developed silicosis from mining activities. In fact, this money belonged to the industry, yet it was proposed it be used for purposes other than those for which it was set up initially. I cannot find the word silicosis in the budget papers, but what has happened to this fund and the money that was in it.

**The Hon. R.G. Payne:** If the member for Florey were listening he might be able to help, because this is a labour and industry matter. It is my understanding that that fund was to be subsumed under the new WorkCare legislation. Possibly the member for Mitcham can give some information on that matter; whether or not that occurred, I cannot swear. I understand that it was part of the proceedings that were to occur. I was involved with approaches from the

chamber, the industry and the Institute of Technology, for example, in relation to this matter. In the final analysis, the unions were involved, as well. I think, not incorrectly, they took the view that the funds were provided for workers who might develop disabilities related to the industry in which they had been employed. The proposals put to me at that time involved reasonable and laudable education alternatives.

The view of the Trades and Labor Council, if I remember correctly about this matter which is not contained in the budget papers before us, was that since it related to workers and their injuries or possible injuries the proper place for the funding was for it to be subsumed in the WorkCare legislation, which provides the overall approach to work injury in the future, especially in relation to silicosis, which was not proving to be the drain on the funds that had been anticipated up until the time of the introduction of the new legislation. I do not believe that I can add anything further.

**The Hon. E.R. GOLDSWORTHY:** That answers my question. However, there was a complaint that the mining industry had subscribed that \$4.5 million to the fund. When inquiries were made, what had happened is what they had feared would happen. As an illustration, it is the same thing as happened in relation to the Potato Board, where potato growers' funds were subsumed by the Government and the money used for a purpose other than the one for which it was contributed, but that is another question. If the silicosis fund has gone to WorkCare, I do not think the mining industry will be happy about that.

**The Hon. R.G. Payne:** I stress that I understood that it was subsumed in the legislation, but I cannot go further than that.

**The Hon. E.R. GOLDSWORTHY:** Questions were asked earlier today by the member for Florey, I believe, about the work of the earthquake group set up within the department. I had that listed for questions. Is there any way in which we can get warning before the event using technology?

**The Hon. R.G. Payne:** I wish that Mr Reg Nelson, the senior officer in the department concerned, was here today, as he is an enthusiast in this area. With a properly organised and equipped earthquake research group or organisation, the rudiments of which we are now attempting to rescue and set up in the department, it would be possible to get information and build over a period of time reliable indicators of probable earthquake activity. Nobody is prepared to go any further than that, even in California where much money is spent on this activity. One can only produce data that gives a high degree of probability in forecasting. No definite forecasting can be done, as I understand it. It does not help one wit to stop it, as the honourable member would understand: it simply means that we can possibly be prepared in the emergency and disaster services ahead of time. God forbid, if such a disaster did happen, it would make all the difference between the Government being able to help and being helpless when disaster takes place. We can only afford a few dollars to purchase some of the state-of-the-art indicators, but that is the beginning and I hope to improve on it as the years go by.

**The Hon. E.R. GOLDSWORTHY:** Looking at the world scene, the earthquake potential in South Australia and Adelaide is considered to be high by Australian standards, but by Japanese or Californian standards it would be low. Thinking has changed over the years in relation to Adelaide because, when I did geology at the university, we were taught that there was a very stable geological situation on the Adelaide Plains. The Director-General would have done more geology than did I. We were told that the Adelaide

Plains was a low risk earthquake zone. As somebody who has no doubt learnt a lot more about the geology of South Australia, the Director-General might like to comment on that? When we talk of having the highest risk, it is all relative. Will the Director-General comment on the changed thinking, if there has been a change, and what is the position in relation to the rest of the world? We have had only one decent shake in my lifetime and on the world scale it was not very serious.

**The Hon. R.G. Payne:** I will ask the Director-General to explain the change in geological thinking.

**The Hon. E.R. GOLDSWORTHY:** And to put it in the world context.

**Mr Johns:** No question exists that as a continent South Australia is remarkably stable. In the Australian context, South Australia contains the most active seismic zone on the continent. The fact that we have those ranges to the east, and by virtue of the nature of evolution of the continent and present topography no question exists that faulting has happened in the past.

It will happen in the future and it is happening today. We have records of a fault scarp which developed in the Far North of this State on 1 April 1986, which was of a high magnitude, and it has formed a dirt scarp 14 kilometres in length with up to a metre of offset. This is an area which one would have regarded as pretty stable in this State, that is, in the Marryat Creek area just south of our border with the Northern Territory. I can assure you that, if that had happened in the middle of Adelaide, there would not have been much of it left.

**The Hon. E.R. GOLDSWORTHY:** That was quite unexpected?

**Mr Johns:** Quite unexpected, and there is no way known one could predict that, except that one could see that there is faulting, map it and recognise it. It just depends on how active God is at the time, I suppose, as to whether he will shake it or not. Our interest would be in trying to get some fix on intensities and periodicity to try to outline the zones of particular risk such that, if one were constructing a pipeline or power station or something of that sort, one could take steps to provide the appropriate foundations.

One only has to see—for instance, in New Zealand—the lengths to which people go to protect the integrity of their pipelines and things attached to the processing of gas and liquids (which we saw some two or so years ago) in comparison with what we do. That just recognises and establishes the difference in seismic stability of those two land masses. I do not know what you were taught when you went to school, but I suppose I was taught much the same stuff, but this is a very stable part of the globe. However, there is a potential. Earthquakes will recur, there is no question of that, and our task would be to try to get a better handle on some of the things to which I have referred.

**The Hon. E.R. GOLDSWORTHY:** Was that movement of a metre up north reported?

**The Hon. R.G. Payne:** The member for Eyre has actually seen where this upfold took place, I understand, and he can probably provide some first-hand information.

**The CHAIRMAN:** There being no further questions, I declare the examinations completed.

#### ADJOURNMENT

At 5.45 p.m. the Committee adjourned until Tuesday 22 September at 11 a.m.