PETROLEUM AMENDMENT BILL 2007

Second Reading

Resumed from an earlier stage of the sitting.

HON KIM CHANCE (Agricultural - Leader of the House) [5.45 pm]: I thank all the honourable members who have contributed to this debate for their knowledgeable comments; indeed, this is obviously a proposition that has excited the imagination of a great many members, because I was very impressed by how much trouble people have gone to to find out the fine detail of an issue that, I must concede, I only discovered as a commercial possibility over the past few months. It is indeed an exciting proposition. I sometimes wonder why, when we hear about simple solutions to our energy issues, nobody thought about it before. Perhaps people had; indeed, Hon George Cash pointed to some of the history of this industry. I also thank honourable members for their supportive comments on the proposed geothermal energy amendments to the Petroleum Act 1967.

Some questions were raised. Hon Ken Baston asked how the competitive bid process will work. It is a system unlike the system we have become used to under the Mining Act. The Mining Act has essentially an over-the-counter, first-in-time system. The geothermal energy system for exploration permits will be the same as for petroleum, which is less understood in this state; that is, there will be an advertised release date of specified areas together with a nominated closing date. The advertised areas are made up of graticular blocks, and the applicants will have to provide a six-year minimum work program commitment on a year-by-year basis. The government will be seeking a highly defined work program from those applicants. An application fee of $3 900 applies to each application for an exploration permit.

I think Hon Ken Baston asked what tenderers get if they are successful in the tender. Basically, the answer is access. The proposed work programs together with the technical and financial capacity of the applicants for the same ground area will then be compared to establish the best tender for any given area. It is not enough just to apply; they must prove that their work program is better than anybody else's before they get that access. Hon Ken Baston is quite correct in his belief that a geothermal energy explorer is not entitled to a petroleum discovery whilst drilling for a geothermal energy resource. However, the discovery would have to be reported to the minister either as part of the daily drilling report or under the provisions of clause 30 of the bill, and the ground could subsequently be released for petroleum tender if it was at that time vacant.

Hon Paul Llewellyn moved an amendment that a 20-year royalty holiday should apply to geothermal energy. I make the following comments in response to that: the proposed royalty rate for geothermal energy is 2.5 per cent, which is much lower than the existing royalty for petroleum, which is 10 to 12.5 per cent.

Hon Paul Llewellyn: It is the intensity.

Hon KIM CHANCE: Yes. Post wellhead deductions are allowed to be claimed to reduce the gross value at the wellhead. These deductions would include processing and transport costs. The proposed 2.5 per cent geothermal energy royalty rate is equal to that of South Australia, and is the lowest rate in Australia. New South Wales has set the geothermal energy royalty rate at four per cent. If royalty relief is required to make economic sense of a particular proposition, it will be assessed on a case-by-case basis, and, if appropriate, it will be administered by an ex gratia payment by Treasury to the company after the royalty has been paid, as has occurred before. The example that most quickly comes to mind is the BHP hot briquetted iron project. This is a transparent system that can be seen by all and can be approved. It is certainly fairer than the concept of a royalty holiday, which applies to all operations regardless of the beneficial conditions they may be in.

In the other place, the government also announced that any royalties derived from geothermal energy will be paid into the new low emissions energy development fund, administered by the Office of Climate Change, which I know, on its own, will bring Hon Paul Llewellyn over to the government's side -

Hon Paul Llewellyn: It would have to include clean coal technology and -

Hon KIM CHANCE: Pick, pick, pick!

Hon Paul Llewellyn: Why would you be giving it to -

Hon KIM CHANCE: It is a great idea, Hon Paul Llewellyn. The low emissions energy development fund will provide financial incentives to support technological advances that will cut greenhouse gas emissions. For those reasons, the government will not support Hon Paul Llewellyn's proposed amendment.

Hon Paul Llewellyn also raised the subject of exemptions for small-scale geothermal plants. The bill contains a provision whereby small-scale operations that are not for profit or sale are excluded. This exemption only

covers the upstream aspect of geothermal energy, because downstream energy production, sale and distribution are covered by the Energy Operators (Powers) Act 1979.

Hon Paul Llewellyn also raised the matter of liability for geothermal operations. The bill provides that the geothermal licensee must submit a recovery development plan for ministerial approval. The recovery development plan must address the techniques that the titleholder will use to develop the geothermal energy resource, and will include well design reservoir management, or fracking, if required.

Under the existing petroleum legislation, well insurance for petroleum wells is required prior to drilling. The registered holder of a permit must maintain, as directed by the Minister for Resources from time to time, insurance against expenses or liabilities. This provision is extended to geothermal operations in clause 64 of the bill.

Hon George Cash gave advice gleaned from industry that it believes the Petroleum Act 1967 is a more appropriate vehicle for geothermal legislation than the Mining Act 1978. He took us through some very interesting aspects of geothermal energy, which I enjoyed hearing because it reminded me of an exchange student that I once knew very well when I was involved in the American Field Service exchange program. He was a young exchange student from Iceland, living in Merredin, who subsequently became a devotee of Australian Rules football. He distinguished himself by kicking a goal in his first ever match playing for Nukarni A grade, which does not sound particularly distinguishing, but he was playing in the back pocket! We thought we might do a bit of a recruiting round in Iceland! He vowed to take the game back and make it Iceland's national game.

Young Willy was from a farming family out on the west coast of Iceland, quite a way from Reykjavik. He showed us some photographs of the farm and the farmhouse area in winter, when it is literally buried in snow. All the heating for the animal house - because all of their animals are obviously housed during winter - the house the family lived in and beyond, were provided by a well drilled down into a live steam geothermal source. I am not too sure how deep it was, but it was not all that deep. It was interesting in that the steam was piped in from their bore, ran through pipes in the concrete of the animal house first to keep that warm, then, as it cooled down a little, it went into both levels of the house, where again the pipes ran through the concrete pad of the two floors of the house, and then the water discharged into an outdoor swimming pool. I saw a photograph of the swimming pool, and there was this beautiful water - and all members are familiar with water -

Hon Paul Llewellyn: Water -

Hon KIM CHANCE: I will not go any further than that, but all members are familiar with the colour of the water in the baths at Reykjavik. I think everybody has probably seen the beautiful water -

Hon Simon O'Brien: Never been there.

Hon KIM CHANCE: No, but we have seen photographs. I have not been there either. Everyone has seen photographs of the pools at Reykjavik, have they not? Several feet deep around his hot water swimming pool is the snow cliff coming down; it is two-metre deep snow, and young Willy and his family are to be seen diving around in the swimming pool in the middle of the snow. It is quite a different way of farming. The resource that access to geothermal energy provided to that farming family, and every other family as far as I could gather, was not such a rare thing. All farmers had that kind of heating system, so it must be relatively easy to tap.

It is notable that Iceland is now regarded as the world leader in hydrogen technology. Hydrogen, as members know, provides difficulties in being adopted as an energy source because it involves quite an inefficient conversion of energy to a portable fuel unit. However, when there is, effectively, unlimited and very, very low cost energy, such as Iceland has from its volcanic energy, there is every reason why it should be looking towards the future of converting that power to a portable fuel such as hydrogen. What is happening in Iceland today and what has been happening for decades prior to this may well provide some of the answers to some of the issues that Western Australia is dealing with.

Hon George Cash: Our alumina, shipped out of Kwinana, goes to Iceland for refining for the very reason you have mentioned - cheap electricity.

Hon KIM CHANCE: For that very reason.

Hon George Cash: It's a long way to send it, isn't it?

Hon KIM CHANCE: Yes.

Several members interjected.

Hon KIM CHANCE: That is the beauty of globalism. Australians now have not only globalism in trade - which in the end will be a good thing, although I know we have endured some pain along the way - but also

globalism in intellectual property and the trade in services, which is a very, very important aspect towards improving the lot of human beings.

Hon George Cash indicated that this question involves an interesting issue of rights to the source of the geothermal energy, and indeed that question is the basis of the need for this legislation.

It is interesting to note that some other jurisdictions are using their mining and resource acts to regulate geothermal energy. New South Wales and Tasmania use their resource legislation to manage it, which makes it even more interesting that petroleum energy interests in Western Australia indicate that the Petroleum Act is the preferred way to go. It certainly seems to me to be a more appropriate way.

Finally, Hon George Cash made the point that the issue of royalties is a subjective question. I could not agree more. Hon Paul Llewellyn's foreshadowed amendment is one which can be better dealt with, particularly in the earlier years, on a case-by-case basis. In a developing technology new to Western Australia, it is necessary to set some basic ground rules that people can live with, but particular events must be dealt with on a case-by-case basis. That is a far more attractive proposition. Parliament will also find it more satisfying that the question of a royalty rebate to individual operations will be dealt with case by case, because then it can have a say in how that is rolled out. If, after some years' experience, something like a royalty holiday seems attractive, at least Parliament can consider it with that knowledge. It is not something that the government is keen to proceed with at this stage. I thank the honourable members for their support and I urge their consideration of this bill.

Question put and passed.

Bill read a second time.

Sitting suspended from 6.00 to 7.30 pm

Committee

The Deputy Chairman of Committees (Hon Graham Giffard) in the chair; Hon Kim Chance in charge of the bill.

Clause 1: Short title -

Hon PAUL LLEWELLYN: As we know, this bill came to this chamber relatively quickly. Since I gave my speech during the second reading debate, I have received a report from one of my intern students, Eliza Wroth, from the University of Notre Dame Fremantle. On my behalf, as the Greens (WA) member for the South West region, she examined the law reform options for the promotion and regulation of geothermal energy, and reported her findings in November. Unfortunately the report came a little too late for my contribution to the second reading debate. However, she has certainly raised a number of interesting questions; in particular, she has provided some interesting insights into the ways in which we could set up these legal structures, and the technical considerations involved. I will not go into detail, but I acknowledge Eliza's work. I also acknowledge the work of another of my research officers, Tonya, who looked into mechanisms for implementing a provision in the Petroleum Amendment Bill that would allow for small-scale users of geothermal energy and protect their right to coexist with very large tenement holders. I put it on record that during our research we consulted a wide variety of people across Australia and in several jurisdictions to examine the model we used to develop geothermal legislation. We spoke to people in New South Wales and South Australia and talked to industry champions who have been promoting geothermal technology and undertaking geothermal investigations. In particular, we looked at the possibility of the co-existence of large and small-scale geothermal tenements and whether a legal framework could be created to enable that.

In summary, I am not attached to that concept but, in reviewing the Petroleum Amendment Bill and the geothermal technology legal arrangement, it is essential that we give real consideration to the fact that geothermal technology is a renewable resource. This bill will use the same statutory framework to co-locate a renewable resource next to a non-renewable resource. Not least of the characteristics of the geothermal renewable resource is the time for recovery of its capacity to generate power rather than deplete the resource. Its renewability is qualitatively different from the consumptive use of petroleum. It is the co-location of those two separate kinds of energy sources that rang alarm bells for me about why geothermal legislation would be included in the Petroleum Amendment Bill, even though I understand that the technologies for drilling are very similar. I also acknowledge that the Western Australian Sustainable Energy Association made a submission about the Petroleum Amendment Bill concerning geothermal energy, and that has informed my thinking quite a lot. The WA Sustainable Energy Association, particularly Mr Matthew Rosser, who wrote that report, is very knowledgeable about renewable energy and the regulations attached to it. I am not convinced that the issues raised by the WA Sustainable Energy Association have been adequately incorporated into the Petroleum Amendment Bill. I wonder why that is the case, particularly in relation to the way in which geothermal tenements are released, and the competitive tendering process. We must remember that this bill establishes a

legislative framework for a technology - the hot dry rocks technology - that has not been proved and, in effect, has not been demonstrated on a commercial scale anywhere in the world.

The Greens (WA) support the principle of this bill and acknowledge the people who gave us information about setting up this process.

Clause put and passed.

Clauses 2 to 5 put and passed.

Clause 6: Section 5 amended -

Hon PAUL LLEWELLYN: I have concerns with some of the definitions in this clause. I was looking for a definition of "geothermal reservoir", which was in an earlier version of the bill and which appears to have been dropped from this version. It was in the submission of the Western Australian Sustainable Energy Association. Can the Leader of the House tell me whether "geothermal reservoir" is defined anywhere in the bill, if it is not defined in clause 6?

Hon KIM CHANCE: If Hon Paul Llewellyn looks at the top of page 5, he will see that geothermal reservoir is classified as "geothermal resources area".

Hon PAUL LLEWELLYN: Briefly, "geothermal resources area" means a discrete area that contains geothermal energy resources. I think that is fairly obvious. I am satisfied that that has been covered and that it is adequate.

Clause put and passed.

Clause 7: Section 7 amended -

Hon KEN BASTON: Proposed section 7(4)(b) relates to not charging a royalty on operations that involve the small-scale geothermal recovery of energy not for a commercial purpose. Is the key word "commercial"? Could the Leader of the House give me some examples of that?

Hon KIM CHANCE: I covered this matter in my response to the second reading debate because it was raised by Hon Paul Llewellyn. This provision excludes small-scale operations and specifically those that are not for profit or for sale. However, the important distinction I made was that the exemption covers only the upstream aspect of geothermal energy; it does not cover the downstream aspect because the downstream aspect is picked up by other legislation, specifically the Energy Operators (Powers) Act 1979.

Hon Paul Llewellyn: It covers only exploration, drilling and so on.

Hon KIM CHANCE: Yes, to the point of sale and distribution.

Hon Paul Llewellyn interjected.

Hon KIM CHANCE: Yes, but they are exempt from the provisions of the act.

Hon KEN BASTON: Proposed subsection (4)(b) refers to operations that involve the small-scale recovery of geothermal energy. I thought it might have been a small operation rather than whether it is up or down, which the Leader of the House tried to explain. If it is not a commercial operation, it will not be exempt, particularly with hydrothermal rather than geothermal energy.

Hon KIM CHANCE: I took a bit of time getting advice on that matter because I wanted to get it clear in my own mind. The classical example of a non-commercial use would be an Aboriginal community that was tapping a geothermal source of power for the community. I then asked about a mine tapping geothermal energy for its processing use. We are aware that some proposed magnetite operations are quite energy intensive as they process magnetite to the next stage. The answer I got was somewhat cautious because if a power company is developing power for sale to a mine, then that is clearly commercial. However, if it is for the internal operations of the mine - that is, instead of the company running its own gensets, it is tapping a geothermal source - it may well be that that would be deemed not a commercial source; in other words, it is not accessing any downstream market. However, I draw Hon Ken Baston's attention to proposed new subsection (5) of that clause, which is immediately below proposed new subsection (4)(b) that he indicated, which reads -

> Without limiting subsection (4)(b), the regulations may specify whether the small scale recovery of geothermal energy in prescribed circumstances or for a prescribed reason is or is not for a commercial purpose.

I hope that some thought would be given to how a mine might qualify, because the indicated energy use on one of the mid-west magnetite operations is 100 megawatts; therefore, a very significant amount of power will be generated because of the nature of the beneficiation of the ore.

Hon PAUL LLEWELLYN: Mr Deputy Chairman, as you know, this is the very clause of this bill that I had most difficulty with, because it refers to operations that involve small-scale recovery and are not for a commercial purpose. The example that the minister just gave, which was of a self-supplying mining operation that might use megawatts of power, cannot be construed to be non-commercial. Surely an operation that had to acquire that amount of energy, and might be using it not in the form of electricity but in the form of process steam, simply could not be construed to be non-commercial, because in any other language a large-scale, self-supplying operation would have to be part of the tenement. This is almost arguing that there could be in the same tenement area a large mining operation, not small scale but arguably non-commercial, which I cannot believe is true, co-existing with a geothermal tenement and somebody trying to make a genuine quid out of geothermal energy. I am, therefore, not at all satisfied with that particular arrangement.

However, I have a question for the minister. If there is a geothermal tenement over the whole of the Swan coastal plain, there is a large commercial building in the centre of Perth and someone drills down and finds the energy or the thermal resources needed to heat the building, and some electricity is co-generated and reticulated through the building, is that operation large scale, small scale, commercial or non-commercial?

Hon KIM CHANCE: In that example, the answer is to be found in proposed section 7(4)(a). Proposed section 7(4) reads, in part -

> This Act does not apply to operations for the recovery of geothermal energy -
>
> (a) that are carried out for the purposes of a small scale ground source heat pump used at or near the source of the geothermal energy; or

The example of a building in the metropolitan area sourcing geothermal energy for its own purposes is small scale and local, so it is picked up by proposed subsection (4)(a).

Hon GEORGE CASH: I am interested in the line Hon Paul Llewellyn is taking, because I am a little confused by the possibility of a mining company being able to take from a geothermal source energy that would supply, say, 100 megawatts of electricity. I think the Leader of the House was talking in very general terms, because that is clearly not a small-scale operation. In due course we will need to develop criteria to determine what is considered to be a small-scale operation, be it commercial or non-commercial. I am sure that that will come in due course, but I am also interested in the coexistence argument. If a titleholder has geothermal rights over a particular area, and there is a mining operation in that area, which then decides to tap into a geothermal source adjacent to or below its own mine, what is the position? Will the mining operation be excised? I accept the coexistence argument and the stratifying of minerals, petroleum and geothermal, so to speak, but what would occur there? Could a geothermal titleholder prevent anyone else in his area from utilising the geothermal resource if, for instance, a mining operation was there first? I am drawing a very long bow here. I have already acknowledged that amendments may be required in due course to cover practical issues that come up from time to time. Hon Paul Llewellyn raised the issue of coexistence, and I am interested in furthering that argument.

Hon KIM CHANCE: In the example given by Hon George Cash, if there was already a titleholder on that particular graticular block where the iron ore mine was located, in the event that the iron ore miner was deemed not to be a small-scale operator, under the rules to be set by proposed section 7(5), the iron ore miner would not have a right in that block. However, if the block was vacant, the obvious thing would be for the iron ore miner to seek to take up that block.

Hon George Cash: It will present some very interesting issues in due course.

Hon KIM CHANCE: I hope it does.

Hon George Cash: If it does, it will mean we are winning the argument for getting geothermal energy out there.

Hon KIM CHANCE: Yes, it will.

Hon PAUL LLEWELLYN: I have another hypothetical. Could a person who has an existing licence and a small-scale non-commercial operation that falls within this clause, go ahead without the permission of the principal licence holder? In other words, does that person need to have an agreement with the principal licence holder to operate a small-scale venture within a larger tenement? What arrangements would be in place in that circumstance?

Hon KIM CHANCE: The answer is yes.

Hon Paul Llewellyn: They would need permission?

Hon KIM CHANCE: No. The answer is yes, that person can go ahead because the provisions of this clause separate him from the obligations of the act. If an operation is deemed to be small scale - for example, an Aboriginal community - and is deemed to be using the power for non-commercial purposes, another person may hold the title on the graticular block on which the operation is sited. Therefore, the permission of the titleholder to that block would not be needed, because the operation is small scale and is producing for non-commercial purposes.

Hon PAUL LLEWELLYN: I am conscious of the time, but this clause is at the heart of this bill. Proposed subsection (4)(a) states -

> that are carried out for the purposes of a small scale -

That is one criterion.

> - ground source heat pump . . . .

Does that mean that "small scale" does not apply to deep wells? I know it is very expensive to go deep and that it is almost precluded by definition. Is a physical limitation applied by this ground source heat pump parameter?

Hon KIM CHANCE: Hon Paul Llewellyn has almost answered his own question. The ground source, by definition, is always shallow. That is what "ground source" means. If it were a larger operation that was not a ground source, but were deep, it would be covered by proposed subparagraph (b), not proposed subparagraph (a). If it were deep, it would fall into the category that needed to be covered by proposed subparagraph (b) and be qualified by the requirements of proposed subparagraph (b) and the requirements of proposed subsection (5).

Hon PAUL LLEWELLYN: I have another point to put on the record. While these tenements are not enormous - are they 80 square kilometres?

Hon Kim Chance: Each block is 80 square kilometres and there can be up to 160 of them.

Hon PAUL LLEWELLYN: Exactly. Therefore, a mining company might have a series of tenements over a large area. Over this large tenement there could be barely any transmission. In order to have a commercial geothermal operation it would need either a co-located demand source - near a mine, a town or a processing plant - or transmission, but it would cover a very large area. For example, the Wongan Hills community happens to be on a distribution line that can take only five or 10 megawatts. However, with a technology change, it finds it can drill down and tap into this source and produce five or 10 megawatts commercially on a small scale. How would that play out when the tenement is held across the region and tied up in large-scale exploration?

Hon KIM CHANCE: I think I understand the question. If the Wongan Hills community sells power down the line, it ceases to be non-commercial, because that is a commercial operation. Because the community is a downstream market player, it is also covered by the Energy Operators (Powers) Act 1979. I do not think the essence of Hon Paul Llewellyn's question related to that. The essence of his question was whether, if the Wongan Hills community used a small amount of power out of that given area, that would sterilise the ground for everybody else within the 80 kilometres. Was that the member's question?

Hon Paul Llewellyn: Yes.

Hon KIM CHANCE: Eighty square kilometres is a very small area.

Hon Paul Llewellyn: Eighty square kilometres and 160 tenements is a big area. Can 160 tenements be held in any one -

Hon KIM CHANCE: Yes, but they are unlikely to want to hold more than one block. If I recall the explanatory memorandum correctly, each licence costs $3 900. A party will not hold more than one block if all they want to do is put a bore down and take five or six megawatts worth of steam out of that bore. Why would they want to sterilise more ground? Eighty square kilometres is not a large patch of ground.

Hon Paul Llewellyn: But what if someone has got the ground covered and Wongan Hills wants to put it, because they can -

Hon KIM CHANCE: They want to use somebody else's -

Hon Paul Llewellyn: They live there and -

Hon KIM CHANCE: But they want to use ground on which somebody else has a title.

Hon Paul Llewellyn: Yes, exactly.

Hon KIM CHANCE: They would be in no different situation from any other person who wants to access a resource on ground to which somebody else already has a title. They would have to negotiate with the title holder.

Hon PAUL LLEWELLYN: This is at the heart of the notion of renewable energy which, by its definition, is generally not as intense. In spite of the dream that we will be able to somehow tap into very large thermal resources and produce hundreds and hundreds of megawatts of power and save the world, that technology is unproven and a long way off. I would love for that to happen from the point of view of resolving the climate change problem, of saving the world as we know it and of being able to consume as much energy as we like. However, renewable resources are inherently distributed so that the capacity to tap into them is very often related to the capacity to pick them up where they are and connect them to a grid in a distributed way. We have transmission-sized projects, which are the 100 and 300 megawatt type projects. Then we have the distribution-scale projects, which can tap into the far more ubiquitous distribution network. That inherently democratises the power and energy, but it also makes it accessible. One of the failings of the bill is that it does not acknowledge some kind of threshold for small scale. I would like to know whether proposed section 7(5) will provide the capacity to nominate projects that are five or 10 megawatts to coexist on any tenement and to provide for distributed renewable power generation, because that is the future across regional areas, especially if the technology changes and it becomes technological feasible to operate at five megawatts - small scale. That is where the future lies. I do not see that capacity in the bill. I would like to be assured that we can set a threshold of five or 10 megawatts to coexist on one of these large tenements.

Hon KIM CHANCE: The regulation-making power, which is established in the act and is included in proposed section 7(5) of the bill, can enable that to happen. However, Hon Paul Llewellyn was going into a level of detail that we have not yet reached anywhere in Australia.

Hon Paul Llewellyn interjected.

Hon KIM CHANCE: I acknowledge that and am sure that Hon Paul Llewellyn is a similar quantum leap ahead of his peers. However, setting that aside, 80 square kilometres is not a big area; it is eight kilometres by 10 kilometres. That is about the size of a wheat farm. It is not a big place. I do not see any difficulty in the Shire of Wongan-Ballidu being able to establish title in an area of that size and to fulfil all of its ambitions for many years into the future.

Hon Paul Llewellyn: I just want to look after your constituents!

Hon KIM CHANCE: I thank the member very much, and I do appreciate it.

Clause put and passed.

Clauses 8 to 11 put and passed.

Clause 12: Section 11A inserted and consequential repeal of section 120 -

Hon PAUL LLEWELLYN: This matter may be covered in other parts of the bill. I am looking at the property rights in recovered petroleum and geothermal energy. I think this clause pertains to a person who sinks a geothermal well and strikes some petroleum, and the way in which the property rights are played out. Is compensation provided to a person who drills a geothermal well and happens to strike either oil or a nearby gas reserve? How is the cost of the drilling resolved? Is there a mechanism in the Petroleum Amendment Bill or anywhere else to resolve compensation arrangements if someone's assets get sterilised or stranded as a result of finding someone else's resources?

Hon KIM CHANCE: No compensation would be paid because this is not Oklahoma.

Hon Paul Llewellyn: It is not? Is it Texas?

Hon KIM CHANCE: Nor is it Texas. A geothermal explorer has no rights to the petroleum that he may accidentally or, in a parallel fashion, intersect. Indeed, in the event that this does happen - it is highly unlikely -

Hon Paul Llewellyn: If it strands a person's assets.

Hon KIM CHANCE: No, he is required to report that he had struck oil and to not damage the resource. He may be required to sleeve the bore at the point of interception so that the bore ceased to intercept the flow of oil from the drill. We are talking about something that is highly unlikely to happen. In the unlikely event that it does occur, there are means to deal with the matter.

Clause put and passed.

Clauses 13 to 18 put and passed.

Clause 19: Section 29 amended -

Hon KEN BASTON: Line 4 of clause 19(3) on page 15 deals with geophysical surveys. A geophysical survey can be carried out from an aircraft. Does the same geophysical survey data also show up oil when looking for data intended for use in the search for geothermal energy resources? Is the permit to search for geothermal energy resources totally confidential?

Hon KIM CHANCE: My limited knowledge of a geophysical survey is that it produces a bulk pack of data. To analyse that data for a specific resource, it is run through a specific filter and that gives an outcome. In the area where I live, we had an enormous amount of geophysical survey for uranium in the 1970s. Nobody ever looked at that survey data for anything other than uranium but when people wanted to look for other minerals, it was only a matter of grabbing hold of that data and refiltering it. What filter is used determines the outcomes. There may be some changes in the way the data is collected relative to individual resource types, but that is my broad understanding of how that would be done. Can the search for one resource - that is, geothermal prospectivity - throw up a potential oil resource? Yes, of course it can but only if the correct data filters are applied to actually look for petroleum. In any case, that data information is provided to the Geological Survey of Western Australia and becomes available to other people after a period of time.

Hon PAUL LLEWELLYN: My question relates to our discussion on clause 12 about property rights. I notice that in clause 30, which amends section 44, there is a requirement to disclose and notify the minister of a discovery. I am not quite sure if it is an offence to look for geothermal resources without a permit. If something is accidentally discovered, that is okay. For example, if the petroleum industry is drilling in the normal course of events and it accidentally discovers something, there is a reporting mechanism. This is an industry that has no history and no record of implementing anything in a commercial way, although South Australia is getting there. We want people out there doing it, but this is a disincentive.

Hon KIM CHANCE: If people accidentally find it, they will have to report it. However, if people are deliberately searching ground that they do not have a right to search, that is illegal.

Hon Paul Llewellyn interjected.

Hon KIM CHANCE: That is the $3 900 a licence. I explained the process of how people get right of access to land. People go to tender, and they submit their programs of works over the six years. As such, there is that cost. The licence cost is $3 900.

Clause put and passed.

Clauses 20 to 29 put and passed.

Clause 30: Section 44 amended -

Hon KEN BASTON: The Leader of the House has partly touched on this clause in solving other problems. I refer to proposed section 44(1b), which states -

> If -
>
> (a) petroleum is discovered in a geothermal permit area or geothermal drilling reservation . . .

The Leader of the House was saying that a person would have a permit for petroleum exploration or geothermal exploration. He also alluded to the fact that if oil were found, it would be cased off. Is there any opportunity to do a joint search? In other words, could a geothermal operator with a licence undertake a joint search with a petroleum company so that if something were found, the company could be rewarded or does it have to be reported to the minister within three days that another product was found?

Hon KIM CHANCE: It was mentioned in the early stages of the debate on the second reading. I need to refresh my memory but, in point of fact, if the block were covered by both geothermal and petroleum licences and the event occurred that the member has described such that the geothermal driller discovered oil or the oil driller discovered a geothermal resource and the licences were held by different parties, the government would encourage the parties to jointly develop the resource. We would encourage them to talk to each other because it would make sense to jointly develop.

Clause put and passed.

Clauses 31 to 57 put and passed.

Clause 58: Part III Division 3A inserted -

Hon KEN BASTON: The Leader of the House has just touched on this with regard to that crossover. Proposed section 69A(4) states -

> The Minister is not to -
>
> (a) grant a geothermal title . . .

As such, there would be either a geothermal title or a petroleum title. One would not exist over the other. Is that correct?

Hon KIM CHANCE: I am not too sure about that. Hon Ken Baston might look at the heading of division 3A, where it refers to "may subsist". May I help him out a bit, because I had to get some help. On page 44 at about line 22 it seems to state that a licence cannot be issued if a petroleum title exists. The bottom line of that page says that none of those things can be done unless the minister has complied with proposed subsection (3). One then refers to proposed subsection (3). Therefore, all those things are made dependent upon the provisions of subsection (3). Subsection (3) then outlines the things that the minister must do to make those titles subsist. It can be confusing, because one reads through it and thinks that it cannot be done, but it cannot be done unless those things have happened.

Clause put and passed.

Clauses 59 to 74 put and passed.

Clause 75: Section 142 amended -

Hon PAUL LLEWELLYN: I move -

> Page 56, lines 21 and 22 - To delete the lines and insert instead -
>
> (1) Section 142(1) is amended as follows:
>
> (a) before "The" by inserting -
>
> " Subject to section (1a), ";
>
> (b) after "petroleum" by inserting -
>
> " or all geothermal energy, as the case requires, ".
>
> (2) After section 142(1) the following subsection is inserted -
>
> "
>
> (1a) In respect of geothermal energy, no royalty is payable in respect of the period up to and inclusive of 30 June 2020.
>
> ".

My amendment pertains to the setting of a royalty for geothermal energy. I will give a quick overview. I heard the debate that suggested that one can retrospectively provide a royalty exemption. However, we are starting this whole geothermal legislation from scratch and we are talking about a fledgling, almost undeveloped industry but an industry that nevertheless we wish to promote. Our amendment provides that no royalty would be payable on geothermal energy for the period up to and including 30 June 2020. South Australia has a slightly different regime. Its first commercial production is expected at best by 2016; between now and 2016 it will have no production, so there will be no royalty stream. The Western Australian Sustainable Energy Association has said that there should be no royalty whatsoever and that because there is no royalty on wind, solar or any other renewable resource, why would a royalty be placed on a resource that we are trying to encourage people to develop.

Compared with the 10 to 15 per cent royalty for petroleum, 2.5 per cent is a low royalty. South Australia has set a 2.5 per cent royalty on its geothermal energy and New South Wales has set a 4 per cent royalty on its geothermal energy. However, coal, on an energy equivalent, has about a 1.8 per cent royalty rate, which is calculated on the basis of energy equivalent produced per tonne of coal and some assumptions being made about the energy output on a gigawatt hour basis. Clearly, coal has a very low royalty because Western Australia really wanted that industry to develop and go ahead. Geothermal energy, by all accounts, is an industry which is a technological panacea for climate change and one which the state government has stated that WA just absolutely must have. The state government is prepared to put government money in, and yet it is going to charge a royalty. Quite frankly, even if that 2.5 per cent royalty is hypothecated to a low emissions technology fund, I do not believe it to be good policy if this industry is to be encouraged.

The DEPUTY CHAIRMAN: I did not quite hear Hon Paul Llewellyn move the amendment standing in his name. Has he done that?

Hon PAUL LLEWELLYN: I did move the amendment standing in my name -

The DEPUTY CHAIRMAN: Very good. I did hear you say that.

Hon PAUL LLEWELLYN: I want to get some comment in support of the concept of providing a royalty break for an industry that we genuinely wish to get off the ground as soon as possible, in the context that Western Australia must provide a secure investment environment for people who take up this new technology and run with it.

Hon KIM CHANCE: I do not know that I have much to add, as I substantially addressed this issue in my second reading response. Hon Paul Llewellyn has raised these matters again. The state government is keen to develop a new sustainable resource industry. Hon Paul Llewellyn made the point that it would be some time before the commercial returns came on-stream for an operation of this kind, and to achieve that there are some very considerable costs, particularly with ultra deep well-type operations. It is important to understand that a royalty holiday would provide no assistance to that industry at all. A royalty holiday clicks in as an advantage only once royalties start becoming eligible to be paid, which is not until after all the expending has been done.

Hon Paul Llewellyn: The proposition is that when you are trying to attract venture capital, if you can say -

Hon KIM CHANCE: It might be easier to attract venture capital if there was the promise of a royalty holiday. All right, I accept then that -

Hon Paul Llewellyn: This is all about venture capital because there is nobody else playing the game.

Hon KIM CHANCE: Even so, the venture capital investor must still understand that the benefit from the royalty holiday is not going to occur until the year whatever, when the operation comes into production. It is just a different person making the same logical stream and connections. As I have already indicated, the government is prepared to deal with this issue on a case-by-case basis. I believe that dealing with the matter on a case-by-case basis is far more likely to give the government and the Parliament a degree of control over this industry that we otherwise would not have.

Hon KEN BASTON: I find this royalty issue quite interesting. I appreciate that the royalty rate for geothermal energy, set at 2.5 per cent, is lower than that in the eastern states. Since I made my contribution to the second reading debate, I have had an opportunity to speak with a director from the energy sector. I discussed with him the issue of royalties for renewable energy, and asked why there was a royalty for geothermal energy but not for wind or solar energy. The reply was that perhaps we should actually have a royalty for wind and solar production, which would go into a similar fund to the fund these royalties go into; that is, a special fund used for research into renewable energies. That is my reading of the intent. I appreciate the minister's right to waive royalties as an incentive. I would like to hear the minister reiterate that that is the intent before I decide whether to support that incentive to invest. I know that clause 76 covers that issue, and one of my questions was to be whether there is a provision for zero royalty. I would like to hear the minister's comments on that.

Hon KIM CHANCE: I hope I did not create the impression that we were talking about a waiver of royalties; I probably did because I was trying to shortcut my comments. I want to make it very clear that it is not the government's preference to waive royalties. In such circumstances the government will make an ex gratia payment, which may be equal to 100 per cent of the royalty that was made, but we will first collect the royalty and a decision will then be made on repayment of the royalty. Waivers on royalties would be unusual and certainly not something a government would want to do these days. I indicated in my response to the second reading debate that a recent example was BHP Billiton Iron Ore's hot briquetted iron plant in South Hedland. The rebate of royalties was made to BHP Billiton to enable the establishment of the HBI plant. I sincerely hope that what we are doing here will be more successful.

Hon KEN BASTON: One simple question: why have a royalty at all, given that it is renewable energy?

Hon KIM CHANCE: It is because we administer the state on behalf of the citizens of Western Australia. These are not the government's resources; they belong to the people of the state of Western Australia. The Parliament of the state of Western Australia has a duty to protect the interests of the people of this state.

Hon Paul Llewellyn: What about the sunshine?

Hon KIM CHANCE: If Hon Paul Llewellyn thinks about some of the things that have been said about a tax on rainfall he may be able to work out the answer to that one. However, this is a matter dealt with through the Petroleum Act 1967. It is a resource that is owned by the people of Western Australia. Parliament's duty to the people of Western Australia is to ensure that we do not provide private access to the resources that are owned by the people of Western Australia without getting some form of return for them. If, however, it is in the interests

of the people to forgo that direct economic return we call a royalty, then the people of Western Australia, through their Parliament, ought to have a say in forgoing that return, rather than giving up the option carte blanch. In other words, we should do it on a case-by-case basis in a way that Parliament has an opportunity to express a view about it.

Hon PAUL LLEWELLYN: I am compelled to make a very brief comment on our need to tax these resources that are owned by the state. No doubt, based on the same logic, the minister will therefore be taxing surfers for the waves they use and so on. There should be a tax of $10 for every wave. I can see it now.

Hon Robyn McSweeney: It must be the silly season.

Hon PAUL LLEWELLYN: No. Why has the minister set the royalty so low; after all, the petroleum royalty is 10 or 12 per cent? Are we competing with South Australia or New South Wales to get the investment into Western Australia? What is the objective here?

Hon KIM CHANCE: I think I have covered that. This is cutting edge technology; it is an enormously expensive process. We are still learning how to access the resource that is there. It looks promising. The government - and we think the Parliament as a whole - is very keen to be able to provide a legislative framework of some kind that will enable the industry to progress. When we set the royalty, we took into account that this is very new technology in which the commercial sector has a lot of ground to make before it can say it has a saleable proposition. We also looked at the actions of the other states. It is necessary to be competitive with the other states, as we attempt to be on a range of issues, including other taxation issues. We measure our tax effect across a range of issues in our competitiveness with the other states. To that extent, this is no different. The imposition of a lower royalty is an attempt to give this part of the resource sector an opportunity to have a legal framework in which it can work. As has been indicated, we in Western Australia and the Northern Territory are the only two jurisdictions in Australia that, so far, do not have a legal framework.

Hon BRUCE DONALDSON: I was fascinated by the minister's comments. I refer to the minister's philosophy of looking after the resources for all Western Australians in relation to geothermal technology, and, in a limited fashion, compare it to another sustainable or renewable resource. I hope he will be on side, probably next year, when we possibly talk about charging a resource rent for the fishery off the coast of Western Australia. We must manage the fisheries for all Western Australians and, therefore, we cannot charge a fee for one section of the fisheries and ignore the other section. I will read with great interest what the minister said, and I will probably repeat it next year in the house.

Hon KIM CHANCE: I refuse to be drawn, Mr Deputy Chairman! However, I might just add that the fishing industry pays a contribution, which some commercial fishermen argue is in fact a resource rent tax. They do contribute to the state of Western Australia directly, and the operations of the Department of Fisheries are fundamentally funded by that contribution, so there is in fact a resource rent, although it is never called that.

Hon Bruce Donaldson: I was not talking about that section of the fisheries; I was talking about the other side.

The DEPUTY CHAIRMAN (Hon Graham Giffard): The Leader of the House's self-control is noted.

Hon PAUL LLEWELLYN: I have a serious amendment on the supplementary notice paper. I understand that the Leader of the House is telling us that the reason we have a very low royalty rate is that Western Australia should have some sort of competitive edge. I imagine that it can be only that we are too mean-spirited and tight to allow a royalty break to 2020 for an industry which is fledgling and needs assistance and which is highly capital intensive. We all agree that it would be much better to get some traction and momentum in the industry. The government is just too mean-spirited and tight to advantage Western Australian geothermal companies and is unprepared to be flexible in the matter. It seems to me, quite frankly, that this is just inflexible and pig-headed law-making.

Hon KIM CHANCE: I will not accept that, Mr Deputy Chairman.

Hon Norman Moore: Are you being pig-headed?

Hon KIM CHANCE: Me being pig-headed? The Leader of the Opposition should wash his mouth out! Let me just say this: when the government refuses to part with its own money, it is being mean-spirited and tight; when the government refuses to part with the Western Australian community's money, that is good economic management.

Amendment put and negatived.

Clause put and passed.

Clause 76 put and passed.

Clause 77: Section 144 amended -

Hon KEN BASTON: Proposed paragraph (c)(ii) relates to the flare off. I can understand the flare off of gas, but can the Leader of the House explain to me how the flare off will be measured with regard to geothermal energy?

Hon KIM CHANCE: That proposed paragraph does not include the term "flare off"; it uses the word "dissipated". In this context, "dissipated" means any form of loss. It could be leakage through a pipe flange or a range of issues whereby the effective use of the resource is less than 100 per cent. Dissipation could be heat loss through the piping system or it could be lost to the atmosphere in the case of a leaking gas bit or whatever.

Clause put and passed.

Clauses 78 to 108 put and passed.

Title put and passed.

Report

Bill reported, without amendment, and the report adopted.

Third Reading

Bill read a third time, on motion by **Hon Kim Chance (Leader of the House)**, and passed.