ESTIMATES OF REVENUE AND EXPENDITURE

Consideration of Tabled Papers

Resumed from 7 November on the following motion moved by Hon N.D. Griffiths (Minister for Racing and Gaming) -

> That pursuant to Standing Order 49(c), the Council take note of tabled paper No 657 (Consolidated Fund Estimates 2001-02), laid upon the Table of the House on 13 September 2001.

HON J.A. SCOTT (South Metropolitan) [12.26 pm]: I recently listened to a fascinating debate on Radio National about minimising harm to patients in hospitals. Although it is not my area, I thought it such an important discussion that was had with Dr Brent James, who is the Executive Director of Intermountain Health Care in Salt Lake City, Utah, that I must bring it to the attention of the House. I hope that government members will ask the Minister for Health to look at the transcript of the interview. It offers huge potential for large cost savings and health improvements in our hospital system.

I apologise in advance because I will be quoting extensively from the transcript of the interview, which was conducted by Norman Swan. Dr James was in Australia for a conference on preventive health issues. Norman Swan said -

> Over the last few years there's been lots of publicity suggesting how dangerous our hospital system is. Research has found many thousands of preventable deaths and injuries occur each year. Alongside that there are recurring stories of mistakes being made: the wrong thing injected, the wrong operation being done, doctors being disciplined for not doing the right thing.
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> A few days ago, some of the world's experts on how to make hospitals and health care safer came to Australia to help work out ways of doing things better here.
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> A big message was that if you mainly focus on the mistakes that doctors and nurses make, you'll fail to fix 95% of the problems. And sorting out that 95% is a very difficult task, but someone needs to do it.

This is a good example for us, because Utah is a little larger than Perth. It has a population of 2.2 million people. Intermountain Health Care caters for about 1.2 million of those people. As with our hospitals, Dr James pointed out that they did not have sufficient funds to do all the important things that they would like to do. They found that doing it smarter and providing better care was extremely important, as it is here. Dr James responded -

> Now the old belief that quality means spare no expense, just turned out not to be a good model. A better model is to do it right the first time. It looks like that could save as much as 15% to 25% of our total cost of operations . . . It's massive potential savings. . . It's as if we'd increased our budgets, so that we can deliver more services to more people, more conveniently. When we recognise the challenges we face to meet the cost pressures, we found this so much more attractive an approach, nothing else could quite match.

He was then asked -

> . . . worldwide, what are the standards of health care? I mean are they truly appalling? When you hear our quality of health care study which was done a few years ago, I think 14,000 or 18,000 preventable deaths occurring due to human error, or system failure, it sounds massive.

Dr James agreed that the injury rates are massive. However, he pointed out that although there is a lot of criticism of our health system, and it still has a number of failings, it is probably the best that one can point to at any time in history. He said, in talking about those failings -

> We spent three year reviewing the scientific evidence about performance of the system, and found that typically we achieved 60% of theoretic potential. A massive gap between where we are and where we should be.

He said also -

> We focus on injuries. Injuries much more important than just error, and the reason is we've discovered from experience that physicians, researchers were very, very poor at telling upfront what an error was.

He went on to say -

> The single most common source of injury in American hospitals is a medication injury, an adverse drug event . . . we overdose or we give you the wrong drug by the wrong route at the wrong rate. . . We discovered that first we were not detecting them well, we were relying upon nurses and physicians to alert us when they occurred.

That meant that the voluntary reporting was not working as well as it could have been. He said also -

> In parallel with that, we used an electronic medical record to look for treatment of injuries in just the regular flow of hospital data.

The interviewer then asked -

> So it was a passive system, which despite itself, reported automatically when the signs that this person had had an adverse drug event would be something like a change of drug or an extended hospital stay, something like that, which triggered the alert that there might be something going on?

Dr James said -

> Exactly. For example, if we overdose you with an opiate, like morphine, it will cause your breathing to slow and stop. You'll be happy but you will die. But we have a drug that directly counteracts morphine, it's called naloxone so we put a little flag in the system that any time any physician ordered naloxone we automatically reviewed to see if this was to treat morphine overdosing, a drug event.

Therefore, they were able to compare the reports that came through the system to determine whether there had been an adverse drug event that had not been reported as an error. He said also -

> The computer-based system detected 80 times more adverse drug events than the voluntary reporting system.

This is a massive increase. He said also -

> For example in an 18 month period, voluntary reporting produced nine confirmed moderate or severe adverse drug events . . . while the computer system detected 731 confirmed adverse drug events.

That is a significant difference. The reason given for that difference was that people were scared to report that they had made a mistake. Dr James said that humans are inherently fallible and even the best doctors, nurses and physicians will make a mistake; and we need to accept that this will occur and try to put in place systems that will reduce it as much as possible. He said also -

> Well, when we knew that we have 731 as opposed to nine serious adverse drug events, we analysed the adverse drug events. For example, 28% of them, the biggest single category, were allergic reactions, or allergic reactions where we discovered the allergy by giving the drug. The patient had no prior history of allergy. Everyone agreed that that was not an error, but it was 28%.

He said also that it turned out that those adverse drug events were preventable. He was then asked -

> Why? If you've never had an allergy before?

He responded -

> Well in most instances when I give a drug to a patient, I have some alternative drugs that I could give that would achieve much the same effect. We programmed the computer so that if a physician ordered a drug that had high potential for allergy, and there was a safer alternative, that the computer would alert the physician about the risk, and that reduced the adverse drug event rate associated with allergic reactions by more than 50%.

This would, of course, be a huge saving for our hospital systems.

Dr James said also -

> Now, in retrospect, it turns out that Dr James Reisen in the United Kingdom, would have called that an error of planning. He's maybe the world's leading authority on the nature of errors, and failures of systems. But you know, we didn't even recognise it as an error until we were beyond the problem, looking back, until we'd realised that they were preventable.

He is saying that there are errors not just in what the doctors and nurses do but also in the system that allows those things to occur. He went on to say -

> For ten consecutive years we tracked every adverse drug event and in parallel with that we tracked classic human errors. In ten years we had 4,155 confirmed human errors. In parallel with that we had 3,996 confirmed moderate or severe adverse drug events.

He said also -

> Those were injuries, those 3,996. The fascinating thing was the overlap. Among 3,996 confirmed injuries, 138 or 3.5% resulted because of a human error.

That is a very small amount. He went on to say that the focus today, certainly in the media, and probably also by politicians, is on getting rid of the errors. He said also -

> There's this huge political temptation to go after the bad guys, those bad physicians, those bad nurses, to punish them, because an injury occurred. Huge political pressure to do that.

Members will recall that a short time ago, there was certainly great pressure to do that at King Edward Memorial Hospital for Women. He continues -

> But the way I ask it when I'm at home with my colleagues, I say, 'Wait a minute, are you going to get right after that 3.5%? Are you just going to devote all of our resources to that and root out that 3.5% while ignoring the 96.5%? Any responsible person in an administrative role would focus on a large category.

I wonder whether that occurs at hospitals such as King Edward Memorial Hospital or whether we will continue down the path of blame and miss a real chance to improve the system.

Hon W.N. Stretch: Is that exacerbated by the legal system?

Hon J.A. SCOTT: Yes. He addresses this further in an interesting way. When he was asked what other injuries were occurring, he stated -

> Well 28% were allergic or idiosyncratic reactions, 23%, so in other words a 51% total on the additional 23%, had to do with kidney function.

He was indicating that as patients spend more time lying in hospitals, their kidneys become less efficient at filtering the drug from the system. If a patient is provided the same amount of drug over a period he will receive an overdose of the drug because too much of the chemical will have remained in his body. He found that 23 per cent of their adverse drug events were caused in that way. To continue -

> . . . as kidney function gradually declined, it pushed an appropriate normal dose of the drug into an over dose range.

That was dealt with by alerting doctors and nurses to the need to continually check the kidney function. The hospital computers were set to calculate the ideal dosage of every drug that is delivered, based on kidney function. To continue -

> For some drugs on estimated liver function, on your age, on your gender, on your body mass, on other blood chemistries that we have available.
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> . . . We try to create an environment where our systems manage that complexity, to make it easy for physicians and nurses to do it right. If we know the right thing to do, why would we ever leave it up to human memory or recall? We ought to just build it into the system.
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> Another classic example: we have good scientific evidence that for patients with congestive heart failure, ischaemic heart disease, two drugs have potentially great benefit, they're called betablockers and ACE inhibitors. A recent study in the United States suggested that the very best hospitals among patients who would clearly benefit from betablockers, less than half received them. Well we put in place a simple protocol: the evidence was overwhelming. The nurses do it, it's part of a discharge packet. They have a series of sheets they fill out on hospital discharge for each patient. One of those sheets now in our hospitals is a little check sheet, and you just check off indications for betablockers or ACE inhibitors. Well at the end of the sheet, if a patient meets indications, it automatically generates some order. . . . appropriate use of betablockers went from 57% to 98%, appropriate use of ACE inhibitors went from 63% to about 97%.

That meant that not only did patients feel better but also they did not bounce back to hospital quite so quickly. He also states -

> . . . our one-year mortality rates for patients with congestive heart failure, a deadly disease, fell from 22% to 17%.

That is a five per cent difference, which represents about 310 lives a year. Those 310 people would have died under the other system. To continue -

> While hospitalisation rate for congestive failure fell by about 55 admissions per month. Think of it as another 200 or 300 patients that potentially could come in. The lines go down, the care goes up . . .

That is a large number. The reality is that our systems are made to operate at their optimum and we can generate huge savings in the hospital system. On the error versus the better system management, he states -

> Taking all of those together, what I can tell you is that one bad day in my home system, of adverse drug events does more damage to patients than ten full years of wrong side surgery.

Another example is the 3 400 new bed sores a year. He pointed out that many of the hospitals think that bed sores are a naturally occurring problem - the longer a patient is in hospital, the more likely he is to get them. However, people are not recognising the onset soon enough. In addition, people think they occur mainly among elderly patients, but that is not the case. He states further -

> . . . the early changes are fairly subtle. You use capillary filling, blood flow to the skin, which means that you're going to have skin breakdown. The initial skin breakdown is reddening, and then just erosion of the top surfaces of the skin.

That results in disability and pain for the person and increased costs for the hospital. He says also that the costs become much higher as we treat these things. He continues -

> but realise too that's a primary source of infection, and if the infection goes into bone, osteomyelitis, it's a common source of amputation and death. So there's a hierarchy here, a kind of slippery slope you start to slide down.

When asked why people were not aware of that problem, he states -

> For the very common injuries, health care professionals seem to regard them as an inevitable part of care delivery. They don't understand that they're avoidable, that if we treated people differently that it just wouldn't happen. . . .

More than that they simply don't recognise them. He said -

> To recognise an adverse drug event requires some specialised training outside of the normal type of training that we give to physicians and nurses. Dr John Nebecker back in Utah at the Veterans' Administration Hospital, has documented that about 45% per cent of all hospitalised patients on careful retrospective review. So reviewing charts at discharge, about 45% of patients had a significant adverse drug event. Even more important than that though, it just went unrecognised, even by a good database trigger system as I described earlier. John examined those patients who suffered sever ADEs, which means that the patient's life was at risk. Physicians and nurses recognised those less than half the time. They just didn't recognise the patient was at that significant risk, and on review, many of them argued that it really wasn't a risk, where the true experts, pharmacists and physicians who are trained in adverse drug events, clearly saw significant risk to the patient clinical team . .

That is another important area. Norman Swan states -

> . . . if you say Look, let's deal with bedsores, they say Well that's not my problem. It's not a big problem in my hospital.

Brent James also says -

> . . . the average length of stay in an American hospital is about 4-1/2 days, and nurses believe that 4-1/2 days is not enough time to develop a bedsore. On the other hand, Dr Jane Wallace, a nurse actually with a doctorate in nursing, . . . completed a careful scientific investigation of the prevalence and the incidence of pressure sores. She discovered that 23% of all patients in LDS Hospital had pressure sores.

There are various stages of pressure sores. Brent James further states -

> I think about 25% of them were Stage 3s and 4s where you have an active ulcer, a necrotic ulcer, where it's really getting to be dangerous.

He outlined the systems that could be implemented to prevent that happening.

He commented on litigation - Hon Bill Stretch raised this matter by interjection and said that one problem is the fear of reporting because of litigation. Norman Swan states further -

> . . . even now in the civil courts there's a consultant surgeon in Wales who's up for manslaughter charges not because he took out the wrong kidney but because his registrar took out the wrong kidney.

Hon Derrick Tomlinson: He is facing a charge of manslaughter because his registrar took out the wrong kidney?

Hon J.A. SCOTT: Yes. The registrar took out the wrong kidney. Brent James went on to say -

> One of the first things you have to do is you have to prioritise. It turns out that some sources of injury are much, much more common than other sources of injury.

He went through the "Big Six". Top of the list is adverse drug events; second is hospital acquired infection; third is pressure sores; and the fourth is something called venous thromboembolism, which happens when blood in the body spontaneously clots. The fifth is patient falls and injuries, usually associated with the use of restraints, including tying a patient to a bed or using chemical restraints when patients are sedated. Looking after

people who have been administered chemical restraints is very important. Number six on the list is inappropriate blood product transfusions. He went on to say that the best way to find out about these things is to have a voluntary reporting system -

> One of the best things we found for those voluntary reporting systems is something we call the culture of safety, and it seems to consist of four main elements: The first, you re-emphasise to physicians and nurses their ethical commitment to their patients required by their professions. And that injury reporting is right at the top of that list, and you have to continually reinforce that concept and remind them of their ethical commitments. Second, you make it safe.

By that he means, make it safe to report. He continues -

> You put the institution between the physicians and nurses and the litigants. It's fairly easy, for I see as a big system, to take those hits, to withstand the legal attacks, as compared to an individual physician or individual nurse. It's appropriate too that we should because most of the failures are systems based.

Norman Swan asked him -

> So if somebody reports an event to you, you acquire the liability?

He replied -

> That is basically correct, or we agree that we will protect them. Now we have to work with the government in Utah to help with that, but we think it's an absolutely critical element. What we do is reward reporting. You're considered to be better if you're reporting more events, instead of worse. We know they're happening, the only question is, are you hiding them, or are you unable to recognise them, I guess.
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> We give people active protection if they report within 48 hours. Now if you fail to report you might be punished and you lose all of the protections, and so you shift the whole paradigm.

By reporting an issue, the hospital takes responsibility for the issue. If an issue is not reported, the hospital does not take any responsibility. He went on to say that this has a rather interesting effect. I would like to continue using their own words as they are very important, but I do not have enough time and other members of the House wish to speak. Opening up the system and allowing reporting to occur - under circumstances in which people were not afraid to report - not only meant that more could be done to fix the system, but also showed up the bad practitioners, both doctors and nurses. As such, they were able to take appropriate action with rogue physicians. By removing the culture of blame, they were not only able to reduce the amount of injury caused by faults, but also they were able to move the bad physicians out of the system.

It is a very important interview. I hope the Minister for Health will look seriously at this sort of system reporting. Our hospitals are working towards this, but one can see from the reactions associated with the deaths of babies at King Edward Memorial Hospital for Women that there was a tendency to play the blame game. The hospital blamed the doctors and the doctors blamed the hospital. We are no better off at the end of all that. We should do as Dr James suggests and focus on the 97 per cent of the problem rather than the three per cent. We should address system failures and make vast savings in our hospitals. We can make the stay of patients safer; fewer deaths and injuries will occur through error. We will all be winners. The Government will be able to reduce the waiting lists and provide the community with a much better hospital system.

HON ROBIN CHAPPLE (Mining and Pastoral) [12.56 pm]: I have always considered long distance commuting to be an important issue in the Pilbara. I have done so from 1986 when I was a councillor at Port Hedland. Long distance commuting is often referred to as fly in, fly out. When standing for the state election in February, my platform was that I would do whatever I could to reduce the impact of fly in, fly out. It is a simple position and one that I have followed up. I have recently had an intern, David Lambert, working for me. He has produced a report on the issue of long distance commuting. I seek leave of the House to table the report.

Leave granted. [See paper No 873.]

Hon ROBIN CHAPPLE: Fly in, fly out is one of the most widely used methods of employment throughout the goldfields and the Pilbara. It is even used in the Kimberley. It has been cited as a major reason for regional decline. It has had an immense impact. We must understand what the impacts have been, where they could have been ameliorated, and whether there are ways forward. Under state agreement Acts established in the early days, mining companies were required to establish townships. Newman, Tom Price, Paraburdoo, Karratha and Port Hedland were established as a result of those early agreements, which were initiated by Sir Charles Court. It is now apparent that the establishment of regional towns and communities is uneconomic for many of the smaller mining developments. It is particularly true of the gold sector. It also applies to the nickel sector and areas around Laverton and Leonora. During the 1980s, when I was a councillor in Port Hedland, there was a strong

movement by the Pilbara councils, the Western Australian Municipal Association and the Country Shire Councils Association to fight the notion of fly in, fly out. We saw the closure of Shay Gap and Goldsworthy. We have recently witnessed consideration of the closure of Leinster by WMC Resources Ltd. I commend the company for not closing the town. I said as much to Peter Clough, who represents WMC, when I met him recently.

Hon N.F. Moore: Leinster was probably the last company town built.

Hon ROBIN CHAPPLE: It conducted a detailed evaluation. This report does that. It looks at the economics of such towns; their size, when they become viable and when they are no longer viable. The report examines how we can deal with the issue of encouraging regional long distance commuting to those local centres when a town is no longer viable.

Sitting suspended from 1.00 to 2.00 pm

Hon ROBIN CHAPPLE: As I was explaining, my involvement with fly in, fly out or long distance commuting was from the mid-1980s to the 1990s when many of the local governments were concerned about the issue. At that time, a lot of literature was damning of the whole fly in, fly out process. We saw it as the death knell of our communities. A lot of evidence appears to indicate that it has had significant impact on regional Western Australia.

At that time, no real empirical surveys were carried out. Although the mining companies were identified as having a position, there was no evidence that the workers had been asked whether they supported the fly in, fly out arrangement. Some good work was done in May 1991 by Kinhill Engineers Pty Ltd, which considered the costs associated with the establishment of towns and regional communities from the perspective of mining companies. There could be no justification economically for the development of town sites by the smaller mines, but mining companies in excess of 300 employees started looking at some of the changes. The fly in, fly out option of basic services for a mine that did not have a town was around a $17 million total investment by the company, whereas the town option was about $37 million. One aspect that was never considered was the actual cost of the fly in, fly out operation for the mining company. When that figure was considered, the town option worked out at $169 million and the fly in, fly out operation came in at $180 million. Therefore, the fly in, fly out option for the larger mines was not economic. This was never pointed out, other than following some of the work done by Kinhill.

The option of flying workers from Perth and regional centres certainly saved some costs but it saved nothing overall. Many of the issues dealt with, which were reasons that the mining companies should not establish towns, included the lack of nearby amenities, the workers would not like it, the site had a harsh climate, and the companies needed to get people back to Perth on a fairly regular basis. Many of the goldmining entities would not even consider it. Basically, capital costs for small goldmines of about five years meant that they would not consider establishing regional towns.

It is also important to note that the impact of the fringe benefits tax was included as an impost on the establishment of towns and communities in the mining industry. Interestingly, although the fringe benefits tax had an impact on the subsidiary industries in the towns that were established, there is no evidence from any of the research that was done by the mining companies to indicate that the fringe benefits tax was a problem for them. Certainly, it became a huge impost on small business following the development of towns.

One of the benefits identified by the mining industry from fly in, fly out was the ability to move to 12-hour shifts. This meant that they could have their work force on site, there was less down time in changeover of equipment, and they could keep the process going in a much more streamlined manner.

The employee perspective on fly in, fly out was never really investigated. The only things that were really identified were that they could go away for a significant time, earn a bucket load of money and go back to Perth for a holiday. The zone tax allowance still applied to those people who participated in fly in, fly out and there were also living away from home allowances and those sorts of things, which made it quite a good economic package for the workers. Interestingly, most of the workers who involved themselves in fly in, fly out were between the ages of 18 and 40 and were predominantly male.

The next item relates to the relocation to regional centres. In 1986 when McCamey's Monster, which became Jimblebar, was established, the state agreement Acts stated that, where possible, the mining companies should employ locally. As a councillor in Port Hedland at the time, I was very concerned. If possible, we wanted employees to come from Port Hedland or from Newman to service that mine. Six months into the establishment of that mine, a report was commissioned which revealed that less than 0.01 per cent of the work force at Jimblebar were local employees, yet the state agreement Act indicated that, where possible, employees would be sourced locally. The agreements that were established did not really benefit the community. The reasons for the

industry not attracting employees to the region included high rents in the Kimberley - the average rent was around 80 per cent that of Perth; high food prices - food prices were around 15 to 18 per cent dearer than Perth; and high rent and food prices in the Pilbara - rents were around 72 or 73 per cent higher than in Perth and food was around five per cent more expensive. Interestingly, in the Gascoyne, rent was cheaper than in Perth; however, the average cost of food was around 15 per cent higher than Perth, which was an issue. In the goldfields, rental properties were again over 70 per cent more expensive than in Perth. Extra costs were the rationale for the mining companies saying that they could not encourage people to the region to live.

One issue that was never dealt with properly was the social problems associated with long-distance commuting - fly in, fly out. There was an unpublished report in 1990 by Pollard, who, over a period, did some work on the impact that employment in the mining industry had on the family structure. Pollard found that many added pressures were placed on family relationships as a result of fly in, fly out employment. First, the spouse, or whoever was left in Perth, had to deal with all household management structures and decision making. Therefore, that person virtually became a sole parent. Pollard found that when the other spouse returned from two or three weeks away at the mine site, it was an inconvenience to the family, because the family had become used to, and was established around, a single-parent entity. If that single parent was in employment, invariably that person would have to take time off work to start rebuilding a relationship with the spouse. The children thought it was like Christmas. They suddenly had somebody new to play with every three or four weeks. It became an abnormal family aspect.

Another issue that has never been fundamentally addressed is that although the mining companies provide telephones to enable loved ones to contact their spouses and children, the telephones are usually in a public place. Therefore, there is no privacy for a person to have an in-depth conversation with his family in Perth. That was considered to be a major failing and a major reason for so many family breakdowns associated with fly in, fly out employment.

Pollard's research also indicated that there were increased incidents of family violence, an increased rate of divorce and family breakdowns, and parenting problems as children struggled to identify the relationship that they should have with their parents. No-one has ever gone on to ascertain how that will affect those people in later life.

Many reports on workplace safety have dealt with the effect of 12-hour shifts under the fly in, fly out process. As the 12-hour shifts continue for more than 14 days, there is a marked reduction in the performance of the work force, and occupational health and safety become a significant issue. In the United Kingdom, Shell identified that reducing the number of working days for fly in, fly out workers from 14 to seven had a marked improvement on occupational health and safety. It is generally accepted that the long working hours associated with the mining industry cause fatigue. In a published paper, Storey indicated that even after seven months of adjusting to the process of 12-hour shiftwork, there was a marked decline in measures of performance, alertness and safety.

It is apparent that long-distance commuting and fly in, fly out arrangements will not disappear. However, we must think about ways in which some normality can return to the regions, and develop strategies with the Government and the mining industry to bring a vibrancy back into regional communities. Given that the State Government is in receipt of about $1 billion from royalties, it is imperative that it take a lead role in trying to re-establish and re-colonise regional Western Australia by way of the mining industry. I suggest that training centres should be established to make local labour much more available to the mining industry. As part of the mining companies' reporting provisions, they should report every six months, in line with environmental and other reports that they must submit to government, what and where their workforce comes from, and how much effort they are making to employ people from the regions. That reporting provision, in its own right, would be the start of an indication of the will and intent of the mining industry and/or the Government to re-establish certain areas of regional Western Australia. The mining industry should also assist the Government in establishing regional service areas in the major towns to enable the development of suitable employee programs for service industries for the mining companies.

Although it would be contentious, I believe that the income tax zone rebate for those workers who cite Perth as their home address should be abolished. In parallel with that, any worker who is in a zone B area and who moves to zone A for work purposes should get only the zone B allowance. Generally decreasing the differential in wages and encouraging regional home porting, if I can call it that, would inevitably help the regions.

Another issue must be addressed. Given the high cost of housing in the remote, regional areas, the Government should subsidise housing for those people who wish to work in the industries in those remote areas, out of the money that it accrues from those industries. Basically, I admit that fly in, fly out employment will remain. However, I urge the Government - I hope it takes heed - and the industry to do more, and better, in encouraging

regional bases or regional hubs for the mining industry in the north east goldfields, the Pilbara and the Kimberley.

Question put and passed.