



Standing Committee on Crown Corporations

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**STANDING COMMITTEE ON CROWN CORPORATIONS
2002**

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Kim Trew
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The committee met at 13:35.

Saskatchewan Power Corporation

The Chair: — Good afternoon, ladies and gentlemen. I'd like to call the meeting to order. With us today is SaskPower.

Before we get to introductions, a couple of points: do committee members agree that we break at about 3 o'clock for 15 minutes or so? Is that agreed? Rather than trying to hassle through that at that point and break someone in the midst of some rhetorical flight. That's good.

Secondly, Mr. Wright, I believe, has a presentation that he would like to make — a brief one — before we get into SaskPower. Are we agreed that he should proceed to do that? Having said that then, I'd like to ask you, Mr. Wright, to introduce the officials who are here with you today and then take it away.

Mr. Wright: — Thank you very much, Mr. Chair. I think most MLAs (Member of the Legislative Assembly) and committee members know me. I'm John Wright, the president and CEO (chief executive officer) of SaskPower.

With me today is Mr. Rick Patrick, who should be familiar to many of you. Rick is our vice-president of planning, environment, and regulatory affairs. To my left is Mr. Jones — Mr. Bill Jones. Bill is the chief financial officer for SaskPower. To Bill's left is Ms. Pat Youzwa. Pat serves two roles in SaskPower. She's the vice-president of customer services and the present chief executive officer of NorthPoint Energy Solutions.

In the corner, or to Pat's left, is Mr. David Hughes. David is the president and CEO of SaskPower International. In the back, from my left to right, is Mr. Mike Marsh. Mike is the manager of business and financial planning for SaskPower. And beside him is the very handsome Jack Huntington. Jack is the manager, application development and support in our CI&T area or, sorry, corporate information and technology area of the corporation.

Those are the officials with us today, Mr. Chair, and we welcome opportunity to respond to questions. With that in mind, would it be acceptable if I ask Mr. Jones to proceed through the document that we've put together for you?

The Chair: — Great.

Mr. Wright: — Great. Mr. Jones.

Mr. Jones: — Thank you, Chair, and certainly through you to all the committee members, I appreciate the opportunity to speak with you today about SaskPower. I also want to thank at the outset the excellent work and professionalism that we get from both external audit — you know, Bob Watt and Cathy Warner are here — as well the Provincial Auditor's office. So I thank them very much for their excellent co-operation and good work.

We've put together a presentation that I would take you through

relatively briefly. I won't address all of the issues on each of the slides but I'll try and give you a flavour for what's in your document.

On slide 2, really the purpose we want to talk about or profile the 2001 operational financial results. I'll talk briefly about the outlook for the current year, 2002, which has another month or so to go, and then I'll identify some key issues for the future.

Really the message I have for you today — I think the president put it very well in the annual report — in 2001 we faced rapidly rising fuel costs, natural gas pricing volatility, and the impact of the prolonged prairie drought. And as we look to the future, as we move forward, we're going to continue to focus on our key job of delivering safe, reliable, cost-effective power to our customers and we will certainly be looking at environmental issues as well as developing new supply solutions to ensure security for Saskatchewan in the coming years.

So that's briefly what we'll try and do.

On slide 3 I tried to identify a few of the key basics of electricity and at the risk of offending . . . Sorry, Ms. Atkinson.

Ms. Atkinson: — Oh, are we going to be seeing a slide presentation?

Mr. Jones: — No, I'm just going to follow through on this, if that's okay.

Ms. Atkinson: — On this, okay. I was waiting for the . . .

Mr. Jones: — No, I apologize for that . . . (inaudible interjection) . . . Sorry . . . (inaudible interjection) . . . At the risk of being flippant, we're trying to save on electricity but, again, I apologize.

On slide 3 then, some electricity basics. And really in its rawest form, if you turn wires or spin wires in a magnetic field, that's sort of the essence of electrical generation. And how do you get these wires turning? Well a force against a turbine — a fancy name for a fan if you like — spins the wire. The force, predominantly in Saskatchewan we use steam but also hydro or falling water and more recently turning wind turbines.

How do you get the steam? Well the most used here is burning coal. About 60 per cent by volume comes from burning coal; 60 per cent of the electricity generated in Saskatchewan comes from burning coal. Natural gas is certainly an increasing share of electrical distribution or generation in Saskatchewan.

Also direct combustion of a fuel such as gas is used occasionally. We call that for peaking purposes or high demand, at high demand times. You can think of the direct combustion approaches like a jet engine and so forth where there's no steam or indirect turning of the turbine; through the turbine it's done directly.

The point I want to stress though is new technologies are improving efficiency and reducing environmental impact. And the one technological change, I'll just mention for the committee, that has really changed quite a bit the electrical

industry in North America over the last 10 years is the combining of direct combustion generating units with a steam turbine. And that steam turbine would capture the waste heat from the direct combustion unit and when you put those two together . . . and that in a very simple sense, a simple sense is what we call a combined cycle. That has increased the efficiency of gas generation and you will have seen over the last 5 to 10 years most of the new generation in North America has come about from this type of technology and, in particular, gas.

Now I've simplified at the risk of offending some of the engineer colleagues I have here with me but that's sort of an overview or the importance of the fuel, if you like, and the changing technology.

Lines, if you like, transmission lines — big thick lines — carry electricity economically to distribution points and then the distribution lines are smaller lines that carry just enough electricity to your home that can be used safely. I suppose the point there is that when you look at working with electricity, it's inherently dangerous whether it's in direct contact with a line, if you like, or if you work in some of our thermal plants where you have a lot of pressurized vessels and pipes and so forth. It's a very dangerous business and hence, priority number one for us is safety, not only for our workers but also for our customers.

Second — or the fourth slide, second on this page — is just a schematic of a simplified version of the electrical business that we're in. I suppose you could add . . . it's not here but in the upper left-hand corner you could add a wind turbine now that we have that source of generation. But I'll leave it to members to follow through that.

On the next slide, slide 5, I've provided a profile and also a map. And again, I'll leave that for information of committee members.

On slide 6, just finishing up the profile, we have 164,000 kilometres of line. That's about three customers per kilometre on average, and that's significant. The Canadian average is probably double that. So again we have that Saskatchewan situation where we have a wide, dispersed population in a large area. That's our service area, if you like. Skipping down a couple of points, a large service area and 432,000-plus customers.

Our employees — 2,300 permanent employees; \$3.6 billion in assets. We're one of the largest companies in Saskatchewan. I've included some material in the appendix that will give you a comparison with other electrical utilities. We're more or less a medium-sized utility on the Canadian scene.

On slide 7, I've tried to encapsulate or model what our core business is and really what we're all about at SaskPower. So very simplistically our primary job is to provide safe, reliable, cost-effective power to our customers. And in the year 2001 we provided them with 16,899 gigawatt hours of load or energy if you like. It's roughly \$1.1 billion in revenue. We got that, that product if you like, from a number of sources — we generated some plus we bought some electricity from other generators. But we supplied, if you like, the supply was 18,718 gigawatts of supply.

Now the reason I just mention those numbers is you can see the little wire there or the little line between the two boxes. We lose about 10 per cent of what we supply in line losses and so forth. So 10 per cent of what we supply or what we produce doesn't even reach our customers because of the physics, if you like, in transporting electricity through the conductor, through the wire.

We're also — at the bottom of this slide — we're also about earning an appropriate rate of return for our owner; our owner, the province of Saskatchewan. We also use a rate of return to reinvest back into the company to help pay for the infrastructure, the large infrastructure that we have throughout the province.

On slide 8, here I've tried to give you a glimpse of . . . If we broke SaskPower up into the different business lines, if you like — and these are approximations because we're essentially one company, a vertically integrated company. So I've tried to break it up into the different stages of production, if you like.

First power production, about 55 per cent of the costs, roughly about 50 per cent of the assets. We also purchase some power from other generators — 15 per cent of our costs roughly. Another stage of our business, another business line is the wires business — transmission and distribution — roughly 25 per cent of the costs, 45 per cent of the assets. And our retailing if you like, customer services component, 5 per cent of the costs, roughly 5 per cent of the assets.

If you look at that in terms of the discussion surrounding deregulation and competition, really what deregulation and competition is all about is unbundling these different lines of business within that vertically integrated company. And the main one that . . . the one that's been a driver of sort of the move towards deregulation and competition over the last 10 to 15 years has been power production, generation. And you can see that's where the big costs are, and that has been the start and then it has moved to other areas.

Slide 9, 2001 financial overview. Well in summary form our net income was down; it was a disappointing year in terms of net income. Three primary reasons for that: export sales were soft and primarily to Alberta — that slowed revenue growth for SaskPower; the prairie drought and higher gas prices drove up our fuel and purchased power costs; and we had a foreign exchange loss associated with our US (United States) dollar denominated debt, and I will talk more about that in a moment. Those three together drove our net income down in 19 . . . or in 2001 to \$29 million.

If you combine lower earnings with a very high capital investment program — and again we're investing in our infrastructure in terms of wires and so forth to get electricity to our customers in terms of building new sources of supply, so we had a large capital investment program. So earnings down, investment up. That led to . . .

The next bullet is that debt rose in 2001 for SaskPower in order to pay for a portion of those large capital investments. Despite that, despite the disappointing results in 2001, our balance sheet continues to be strong. For example our debt/equity ratio continues to be about 60 per cent, which is the best balance sheet among government-owned utilities and is comparable to

many private sector utilities in Canada. I've also attached some information on the back regarding debt/equity ratios and so forth for members' information.

On slide 10 on the next page, I'll just very briefly try to reconcile 2000 and 2001 net income to give you a flavour for the major variances. In 2000 our net income was \$108 million. Saskatchewan sales were up 42 million so that adds to net income. Export sales were down 19 million; that takes away from net income.

Here's the biggie — and we'll come back to this — fuel and purchased power costs were up 84 million. So that's in a bracket; it takes away from net income. A foreign exchange loss of \$17 million, that takes away or increases our finance charges. And then all other changes added up to \$1 million. So that you can see here the biggie really is the fuel and purchased power costs. That's the major change from 2000 to 2001, and I will come back to that again.

In slide 11 we've indicated here our net income and compared it to our dividends and certainly for 2001 the results were disappointing. As I indicated, really a benchmark, if you like, for SaskPower, for a utility like SaskPower, is about 10 per cent ROE (return on equity) and that's about \$110, \$120 million in net income per year. So if you drew a line across just above the 100 million you can see in some years we just about make our targets. One year we were above, others we were below.

Over the last five years, or 2001 and the preceding last four years, SaskPower has paid about \$300 million in dividends to our holding company, CIC (Crown Investments Corporation of Saskatchewan).

On slide 12 you see the five-year summary of revenues for SaskPower. Two points to make here. Really the largest component of our revenue base is Saskatchewan sales, and if you put your pen or a ruler along the top of the light green boxes, you would see that we have modest growth over the last five years in Saskatchewan sales.

What's caused our revenue to grow a little bit, certainly in the year 2000, is the jump up in exports. And the jump up in exports in that year, again, were primarily to Alberta as we took advantage of very favourable prices and market opportunities to export power to that market. But without exports in those — certainly in '99 and 2000, and then it softened a bit in 2001 — you could see that we would have very sluggish or modest revenue growth for SaskPower.

Slide 17, our expenses. I've broken it down into the four key areas, if you like. Fuel and purchased power, the light green box. And you can see that that essentially over the last couple of years is the main driver for the increase in our cost structure. OM&A (operating, maintenance and administration) — the purple box — fairly steady over the last five years. Finance charges bounces around a little bit, and again I will come back to that when we talk about the foreign exchange gain or loss issue.

The other costs and so forth such as depreciation, capital taxes, and so forth — fairly steady. But again, the point is our cost structure has elevated quite dramatically, largely because of fuel

and purchased power costs.

Now that's shown on slide 14, and you can see in that slide, which summarizes fuel and purchased power costs, something happened in 1999. And the something that happened essentially was we are using now more gas and it costs more. So beginning in 1999 and 2000, the amount of gas generation increased dramatically, not only for our own account or from our own generation fleet — which is the, I guess the sort of the in-between yellow and brown colour there, taupe colour I guess — but also import. The import market is also impacted by the price of gas.

So very briefly, start at the bottom, coal, which is the main source of generation in Saskatchewan. There was a slight lift as our costs increased in '99, 2000, 2001 but essentially it's fairly flat — so gas, fairly steady as you go. Then you can see natural gas starting to increase. Hydro, the thin blue ribbon there, fairly small and steady; it's essentially water rental fees that we pay to Sask Water. The yellow is imports and again that's sort of jumped up a bit. And the other one, purchase power, the orange colour one, in 2001 — well in 2000 and 2001 — the Meridian cogeneration plant came on stream so that bumped that up.

My point is twofold in this slide. First, dramatic increase in fuel and purchase power costs; second, primarily led by the impact of gas.

Slide 15, again I've just tried to put that a different way. In 2001 about 42 cents of every dollar SaskPower earned in revenue went to pay for fuel and purchase power costs — roughly double what it was five years ago; almost double what it was a couple of years ago.

On slide 16, finance charges, we've indicated there that they've bounced around. Again I'm going to come back to this foreign exchange issue for you but really that's what's been driving that. In 1999 the Canadian dollar actually appreciated against the US dollar and that drove down finance costs. In 2000 and 2001 we had a depreciation that drove it up.

Slide 17, five-year summary of OM&A, if you like, as a per cent of revenue and you can see that in 2001 our OM&A as per cent of revenue has been falling for the last couple of years since 1999.

Slide 18, I indicated earlier about the large capital investment program we had in 2001. You can see that over the last five years it's been sort of roughly around the . . . or less than 200 million and then started to increase in 2000 and 2001; it jumped up to 364 million.

Debt outstanding, again if your income is falling and you're investing more you've got to get the money somewhere, you have to go out and debt finance. You can see here the trend for gross debt and net debt. Net debt is just monies that have been set aside for debt repayment in the future. Sinking funds, we net that off our debt to come to net debt. But the trends are essentially the same. In the year 2001 our debt position started to increase.

On slide 20, this was the first year that we've put out both financial and non-financial indicators. And I'll stress to

committee members that this is a work-in-progress as we expand the number of indicators used to measure performance of SaskPower. But certainly the financial performance indicators, which most companies have used in the past, more or less well-known.

But return on equity, our target, as I indicated earlier, is roughly about 10 per cent in 2001 because of the disappointing year. We came in about 2.6 per cent return on equity; 2000, we were roughly at our target.

Return on capital, which just takes into account that we have different sources of capital, not only equity but debt capital. You combine the two, you get a little less of a rate of return. Essentially follows the same trend as ROE.

Per cent debt and capital structure, that is a very commonly used indicator. Our target is 60 per cent. For 2001, we were bang on our target. We had a little bit below, which is good, in the year 2000.

Interest coverage, I won't go into that.

Some of the non-financial performance indicators, the first two are indicators of reliability. And the first one, safety if you like, is an indicator of the interruption frequency for our customers. So very generally, on average, customers were interrupted 1.61 times and our target was 1.8. So we were below our target in terms of the duration of the interruption for our customers. That's in hours, 3.22 hours. Again, we were below our target.

We tried to shoot for a national standard as much as we can, but as I said earlier, we have a very large distribution system relative to our customers, three customers per kilometre out there of line. And so it's tough for us to make the national average where those utilities have a much more concentrated — I was going to use the word denser — but the customer density is much greater.

Generated energy is down compared to our target and that shows you the impact of the prairie drought where hydro generation was down I believe roughly 800 gigawatt hours, almost a third from the previous year.

The next two indicators are two that I want to stress. These are relatively new indicators that we're working on, but nevertheless are very important and one's that we take seriously. They are indicators of safety if you like. The first, the severity rate, is an indicator of the . . . it's an index that takes into account the number of accidents plus the severity of the accidents. And you will see in the year 2001 that that indicator took a dramatic drop. And that is a reflection of a fatality that we had in 2001 for which we certainly have very much concern about. The other tries to get sort of the frequency rate of, or disabilities if you like, and that was more or less on target.

The last one is Saskatchewan content in SaskPower purchases. We try very much to source goods and services in Saskatchewan. We set a target of 75 per cent to do that and we have met or beat that target in the last couple of years.

Turning now to slide 21, the financial outlook for 2001. We expect at this time the net income to be about \$120 million for

2001. That is our current forecast. We still have a month and a bit to go. That's up 91 million from last year.

What we've seen so far is the softness in the export market continues so exports are going to decline further from what they were in 2001. This however has been more than offset by two factors: first, fuel and purchase power costs are down dramatically. Two factors really causing that one — the price of gas came down a little bit but also hydro generation rebounded dramatically in 2002 compared to 2001. Hydro generation is our cheapest source of generation. So if we're generating more supply from hydro, that means we're spending less on more expensive, relatively more expensive, sources of supply.

We have a small, foreign exchange gain built into the forecast this year. Capital spending is down a little bit compared to last year. And that will mean that our debt at the end of 2002 will come in approximately the same as what it was at the end of 2001.

Slide 22 has again a reconciliation between 2001 and 2002 net income, again to show you the key changes. Saskatchewan sales are up 55 million; roughly 45 million of that is associated with a rate increase that took effect last year. So again in terms of the underlying demand for electricity, it's relatively a sluggish, if you like, or modest growth.

Export sales will be down 65 million compared to last year, and they were down in 2001. Fuel and purchase power costs — again I highlight this — are going to be down 90 million but that adds to net income so it's a positive here. And we have a foreign exchange gain, where we had a large loss this year, a small gain . . . a large loss in 2001 plus a small gain this year gives you the 58 million. Other changes — which is again depreciation, capital taxes, OM&A, and so forth — have jumped up a bit. But again, the biggie I want to stress: fuel and purchase power costs.

On slide 23, really the main issue that has . . . that we've been grappling with at SaskPower, if you like, on a day-to-day basis, has been the volatility of fuel and purchase power costs that essentially drive our financial performance at this point.

What's really behind all of this? Well it's volatile gas prices. It's the fact that we are using more gas generation or generation from gas sources, if you like, Meridian, and also the import markets also are impacted by the price of gas. Secondly as I just indicated, we're using more gas-fired generation. And thirdly what it means, if our cheapest, if you like, sources of generation, if we have problems in hydro like we had in 2001 or if we have problems with our coal fleet — these are two relatively inexpensive sources of supply — if we have problems with those that means we have to go and use more expensive sources of electrical supply for our customers. That drives up our costs.

On slide 24 and 25, I've tried to give you a flavour for the volatility. I won't go through that; I'll leave it for you. They're fairly straightforward, but if hydro comes down 1,000 gigawatt hours, that's roughly a third of annual generation. Or if say one of our units . . . And PR1 is Poplar River 1 at Coronach. There are two units down there, they're 300 megawatt units which is the largest in our fleet — 300 megawatts, the largest in our fleet

— if they go down for three weeks you can see it creates added costs in the millions of dollars for us.

Slide 26, I indicated I'd be back to foreign exchange rate risk. That's another source of volatility for SaskPower today. And that stems from the \$619 million in US-denominated debt that SaskPower has incurred in the past. About 112 million of that is hedged back into Canadian dollars, so roughly a \$500 million open position to the US dollar. Each year we translate the value of that debt using the year-end exchange rate and convert it back to Canadian dollars for financial reporting basis.

The entire difference, if you like, shows up as a foreign exchange gain or loss in our financial statements, pursuant to new CICA (Canadian Institute of Chartered Accountants) standards. This is a new accounting change that was included in our financial statements for the year 2001.

And really what it does — and I've tried to show you on the next two bullets — in 2001, we had a \$44 million difference in the value of that debt when it was translated into Canadian dollars. And so the accountants say you must deduct that from your net income, you have to take it all at once. However in the year 2002, the Canadian dollar rebounded, strengthened a little bit — so far, the year's not over yet. We have built into our forecast a \$14 million gain.

So again, this new accounting standard together with our US dollar debt adds volatility to our net income.

Issues for the future. Again I will just highlight them here but certainly I want to remind committee members that, certainly on a day-to-day operational basis, fuel and purchase power costs are certainly driving our financial performance. Foreign exchange gains and losses are certainly something we watch carefully. We have an aging infrastructure, not only in generation assets but also in transmission and distribution, that requires significant substantial investment.

New supply, we continually look at creating security for our customers and so forth. So we're working on those issues. Again, substantial investment required there but perhaps down the road. Environmental issues is something that we've spent a long time, a lot of time working on including Kyoto and other issues.

Recruitment and retention, we have a fair amount of folks, as do most large organization, that are eligible to retire over the next five to eight years. It is essential that we have appropriate programs and places to retain and recruit skilled workforce or workers, if you like.

Deregulation and competition, I'm sure committee members have read about the ups and downs of that throughout North America.

In summary, Chair, on slide 28, 2001 the financial results were disappointing. Prairie drought, gas prices drove our net income down. Large investment in infrastructure resulted in debt going up. Recall that our balance sheet still remains strong though — debt equity about 60 per cent. For 2002 we are forecasting at this point a rebound, the year is not over yet.

But what I've tried to give you a flavour for at SaskPower, the new reality of the last couple of years, is volatility. We're certainly determined to address these issues and all of the issues for the future head-on, but again I remind you that I guess our first job, our main job is to provide that safe, reliable, cost-effective power to our customers.

I've also included in the appendix a recent report from the Dominion Bond Rating Service on Saskatchewan. I won't take you through that. That's for information but it's there, along with the second part of the appendix, as I indicated, some information on comparative statistics.

So with that, Chair, I will turn it back to the president.

The Chair: — At this point I wonder if we might turn to the Provincial Auditor who also wants to do an overview of the chapter in his report, and at that point throw it open for questions.

Mr. Wendel: — Well thank you, Mr. Chair.

We have several people here from the office today. We have Andrew Martens over here on the side, and Andrew attends all committee meetings and coordinates our work at this committee. And beside me is Ed Montgomery and over there is Leslie Wendel, and they lead our work at SaskPower. And over here is Phil Creaser who leads our work in auditing large computer systems. And also with us today we have Bob Watt and Cathy Warner from Deloitte & Touche, the appointed auditors for SaskPower.

So today we have two presentations for you. First Ed will talk about his work at SaskPower and then Phil is going to talk about how SaskPower is realizing the benefits of the new computer system we've put in. One of our focuses is to make sure that government agencies have good practices to put in new computer systems and then that they realize those benefits once they've put them in.

So with that I'll turn it over to Ed and he'll lead you through that.

Mr. Montgomery: — Good afternoon, Mr. Chair, and members.

I'm just going to make a few opening comments regarding SaskPower and then I'm going to turn it over to Phil Creaser who will do a PowerPoint presentation on our chapter 1 of our 2002 Spring Report.

I'd like to report to the committee that . . . our elected advisory committee that for the 2001 year we consider the financial statements included in SaskPower's annual report to be reliable. In addition the financial statements of SaskPower subsidiaries — SaskPower International, NorthPoint Energy Solutions, and Power Greenhouses, are also reliable for 2001 — as are the financial statements of the Power Corporation Superannuation Plan.

For 2001 Deloitte & Touche was the appointed auditor of SaskPower and its subsidiaries and its pension plan, with the exception of Power Greenhouses. For Power Greenhouses the

appointed auditor was a firm of chartered accountants from Estevan called Matchett Potts & Seipp. And we worked together with both Deloitte & Touche and Matchett Potts & Seipp using the framework recommended in the *Report of the Task Force on the Roles, Responsibilities and Duties of Auditors*.

I'd like to tell the committee that we've received excellent co-operation from both Deloitte & Touche and also from Matchett Potts & Seipp. I'd also like to point out that the . . . to the committee that we received excellent co-operation from the management of SaskPower for all of the work we carried out at SaskPower.

With respect to our other work at SaskPower I'm pleased to report that SaskPower, its subsidiaries, and its pension plan, have good controls to safeguard and control their assets. And also they complied with legislative authorities relating to financial reporting, safeguarding assets, revenue raising, spending, borrowing, and investing.

We're also pleased with SaskPower's processes to obtain the benefit from the implementation of its new integrated computer system and have three recommendations for further improvements to these processes. We congratulate SaskPower on its efforts to achieve the benefits from this new system and we think other government organizations can learn from the work done by SaskPower.

Mr. Chair, that ends my opening comments except to say that we'd be pleased to answer any questions of the committee either now or at the end of Phil's presentation. And with that, I'm just going to jump to the side and Phil's going to take over at this point.

Mr. Creaser: — Thanks, Ed. Mr. Chair, members, guests, thank you very much for this opportunity to talk to you today.

In response to John's comment, we are using a little bit of electricity here, but we couldn't afford colour slides. And also I don't own an SUV (sports utility vehicle) as well.

Okay. I'd like to start off by thanking SaskPower's officials and staff for helping us with this particular project. John and his executive were very co-operative in our work; also the process team, including Jack Huntington in the back there, and Helen Niedzielski, and Howard Matthews who is the engineer responsible for a lot of the work that was going on. He took us out to SaskPower in a blinding snowstorm, showed us the power plants, and introduced us to key officials out there and it really helped us get a real good appreciation of how they burn coal and actually create electricity. Bill's presentations to lead off really helps us because it reinforces some of the things that I was going to talk about.

So why do we do this project? Well in 1999 we did a review of SaskPower as they were implementing this new Delta Project which was a new information system across the whole corporation. And at that time we made a recommendation that they measure and report on the benefits of this particular project. As we've said in the past, if you can't measure, you can't manage; and so we were hoping that we would get some reaction to that.

Identifying and reporting on the attainment of the benefits helps ensure our new systems meet user needs. Also, we think that this was necessary to maximize return on investment and to be accountable for the future spending of public money. This is the key focus of our work, as Fred has said.

We also performed this work because we felt it was a high risk that the benefits may not be realized, and at the same time were extremely important that every effort be made to realize the benefits. We reviewed work done by SaskPower and it shows that there is a strong correlation between implementation of the new processes and the potential to realize these benefits.

We picked the power production where a most significant process change was needed and where the potential benefit realization was the most, and also it would provide us with a better understanding of their operations as well.

And as you heard this morning, the cost of coal-produced power is much less than most of the other alternatives available to SaskPower except hydro.

Okay, before we discuss the recommendations, I thought it would be important to put our work into context. First thing, we recognized the complexity of this new computer system when we were doing our work, was the putting in place to improve the processes in the corporation all across the business. Also, SaskPower's approach was to implement all modules or parts of the system at once. This also added to the difficulty and complexity of that task. So a huge number of people had to change the way they work, all at the same time.

Next we need to recognize how hard it is to meet employee needs with an enterprise system. Most employees we talked to in SaskPower concluded that the new system may not have been their first choice to replace their old system. SaskPower made the strategic move to put an enterprise-wide system in place. That meant that the corporate need for an integrated system was more important than each individual divisions having . . . is it the best of breed, for their own particular work. This also added to the complexity of the change.

Finally, change is really hard. Studies show that people change only after systems are well established. And other studies show that people are afraid of learning and people must be convinced that change is permanent. And learning can be facilitated by training, coaching, and strong support.

Okay, the objective of our work was to assess the adequacy of SaskPower's processes to realize the measure and report on the benefits. We did our work in the spring of 2002 and focused on the corporate processes around the benefit realization and the processes to achieve the \$74 million benefit anticipated with improved power production maintenance practices.

Improved maintenance increases the capacity of the coal-fired plants to replace higher priced replacement power, as Bill has pointed out this morning. We concentrated on how SaskPower used its corporate process improvement program and its team to facilitate the change the corporation needed to realize the benefits of the new computer system and its related systems or processes.

We examined how the team received management commitment to improve practices and how the team facilitated change. The third criteria focused on how the team facilitated changes needed in SaskPower's power production division to ensure that plant benefits were realized in the maintenance management.

Overall, as Ed has pointed out, we felt that SaskPower has taken bold, innovative steps to realize the benefits from the Delta Project, using this corporate process improvement program. They identified processes that needed improvement and it is helping the employees develop and learn the processes needed to move ahead. We think the rest of the government can benefit from their work. More work needs still to be done.

We met with 36 employees in SaskPower, most supporting the efforts to improve processes but they felt that improvements to the system were still needed. They also were looking for more training, guidance, and support. We felt that without continuous support and scrutiny the employees may revert back to their old ways. A big mistake would be to declare victory too soon.

Our report recommends . . . Our report recommendations follow. Management of SaskPower supported our recommendations.

First of all, we looked at management commitment. Here we were concerned about ensuring that there was good governance processes, strong accountability practices, and a strong leadership from the board and SaskPower's executive for this project and to realize the benefits. Here we felt that SaskPower management can show commitment by setting out the benefit targets and measures for the system in its business plan and report the results achieved in its annual report.

SaskPower needs to plan and report on enough measures to ensure management remains committed to realizing the benefits. Also big IT (information technology) projects like this are unpopular. Showing real benefits from this project will improve employee and public confidence that money was well spent. And so we recommended that SaskPower should set out the benefit targets, measures for the system in its business plan and report the results in its annual report.

The secondary we looked at was change management. Here we felt that change in management starts with creating a sense of urgency within the corporation that change must be made. The development of strong teams is needed to help make the change and to help the employees and the people in the corporation learn during this change period.

Senior management and the board need to develop a clear vision of the targets to help facilitate change. Employees must be convinced that change is the right thing to do and there's no going back. The corporation must support and empower the employees and the teams to achieve the vision.

One of the most challenging of these criteria is developing a culture to sustain change into the future. Everyone tires of change. There is a lot of anxiety around learning and change creates stress in the workforce. Employees have invested years learning and working under the old systems and the old ways, and their promotions and their competency is all based on those old systems so it's hard for them to come to learn new

processes. So we examine how SaskPower plans to sustain change two to three years from now with policies, training, and support.

Currently the change management process is working well. There is a sense of urgency, strong teams were established, and SaskPower set visions for the programs. Now SaskPower needs the capacity in the future to maintain change, and to keep people learning and improving. Our observation is that the process improvement program has been very successful in the power production, because they have provided support to the power plants to help improve their use of the new system, and processes to manage their maintenance, help the power plants gain some short-term wins, and provided strong leadership to facilitate in change and learning. This program should continue.

SaskPower needs to also ensure that its HR (human resources) plans take into account the new knowledge, skills, and abilities needed to manage the new systems, including maintenance, with job descriptions, evaluations, transfers, promotions, and training.

Finally, work is commencing to improve system support. We encourage SaskPower to continue to work to improve system support, and ensure that it has the capacity to make improvements that gain real benefits.

We recommend that SaskPower should establish policies to support a long-term continuous process improvement plan that includes training and support for its employees.

Finally we talked about project management. As mentioned earlier, we looked at SaskPower's project to improve its maintenance planning and processes at the coal-fired power plants, using a new maintenance planning tool which is part of the integrated system. Having a good tool to aid in maintenance planning will increase the time maintenance teams do maintenance versus the time they use to prepare to do maintenance. This is a . . . they refer to it sometimes as tool time. This will free resources to do more preventative maintenance. Better maintenance will increase the capacity of the coal-fired plants. This will reduce the need to use high-priced replacement power.

We looked at how the project was managed through the planning, implementation and delivery, and support stages. We also looked at how SaskPower will monitor the new processes, and measure and report benefits from the Delta Project.

I think it was Rick Patrick that told us that the coal plants are in a constant state of being worn out which is kind of a interesting term.

SaskPower is improving its maintenance practices to realize its benefits. We also think our work had a positive impact on the processes. SaskPower will benefit from quality assurance reviews on these new processes, and independent assurance on the measures reported. This helps maintain regular, improved processes, and to keep the benefit realization process moving ahead.

We recommend that SaskPower should provide the board of directors with independent advice on benefit targets and

measures, and the effectiveness of the new work processes on the reliability of key reports.

So that was our report. We think that it was a very important first step and something that other government agencies should use as a guide. We think the importance of . . . We didn't spend much time talking how this maintenance planning process improved or gained these significant benefits, but I think it's clear enough to say that if you measure your benefits you will encourage people to work to ensure the systems are working properly. And the benefits are really an indication of how well the system is being used and been implemented in your organization.

So we'll be looking to these recommendations and hope the committee will consider them and recommend agreement with them. And then we will also be planning to do follow-up work in this area in next year as they continue. At that I leave it open to questions. Thank you.

Mr. Wall: — It may be — I thank you, Mr. Chair. It may be more of a question for SaskPower officials, but in that . . . in the background there they review the costs of the project. And I think they indicate here that the cost over five years was \$86 million, that was the estimate. Is that still the case? Is that estimate still valid?

Mr. Wright: — Yes, Mr. Chair.

Mr. Wall: — And the benefits then that had been valued, I guess, were revised down to 130 million over that same period. Are those also the same?

Mr. Wright: — That is correct, Mr. Chair, \$130 million in anticipated benefits over a five-year period.

Mr. Wall: — Thank you. With respect to the very last recommendation, what is the . . . the recommendation regarding, that indicates that SaskPower should provide its board of directors with independent advice on benefit targets and measures — a couple of questions, maybe the first one for the auditors. What kind of advice is out there? What kind of firms . . . Are there firms that specialize in this sort of thing, first of all? And if so, is that what you're recommending there? It's a fairly general recommendation so I wonder if you could be more specific, please.

Mr. Creaser: — Yes. I guess two things. One is that, yes, I think there are organizations out there that evaluate management processes and ensure that they're working effectively, that they're following the policies that are in place. It gives management some assurance that that's the case. Also they've got an internal audit in their shop at the corporation that could also do some of this work as well.

Mr. Wall: — Then the summary right after that in the report says:

. . . except for the above . . .

Referencing no. 3:

. . . except for the above recommendation, we concluded

that the monitoring processes for the . . . project adequately ensure that the System's maintenance processes are effective and the benefits are realized.

And yet there is a SaskPower response to that recommendation. So I wonder if you could just explain why you mean, what it means — it's on page 17 — what it means when it says:

In summary, except for the above recommendation . . .

Is that referencing SaskPower's response to that recommendation or lack thereof or . . .

Mr. Creaser: — No. No, we just . . . we wanted to . . . I guess what we're saying is that the monitoring process that's in place is working effectively except for the need to . . .

Mr. Wall: — Seek this independent . . .

Mr. Creaser: — Seek this independent advice.

Mr. Wall: — Fair enough. And what would SaskPower's response be now to that? Has the corporation made some effort to find that sort of advice per the auditor's recommendation?

Mr. Wright: — No, Mr. Chair, at this point in time our expectation is to have this in play later in 2003. We discussed this quite extensively with the Provincial Auditor. Should we use internal audit, should you go external, who's most capable, who can handle this for us, and we want to consider that issue over the course of 2003. And I believe by later in 2003, Mr. Huntington, we'll have that in place.

A Member: — That is correct.

Mr. Wall: — Would that be a sort of a request for a proposal thing that you would do, based on the fact that there might be a number of firms or would you proceed there like you . . . I mean, I'm not even sure how . . .

Mr. Wright: — There's a range of . . . I'm sorry. Mr. Chair, there's a range of alternatives available to us. The most immediate one, and one that I'm sure the Provincial Auditor would be comfortable with, is turning to our internal audit and asking our internal audit to review that.

There are however some various accounting firms and other firms out there that then too, perhaps, may bring a broader perspective to this in experience with systems implementation in other companies. So to say that we're going to do this with an RFP or a request for proposals at this point in time is just a little premature. We want to sit back, stop and think about it, and hopefully Mr. Creaser and Mr. Huntington will have a little discussion about that, make sure that the Provincial Auditor's comfortable with the approach that we've chosen at the end of the day.

Mr. Wall: — Mr. Chairman, through you to SaskPower, and not maybe specifically related to the auditor's report, but when SAP (systems application and products) was chosen, what sort of a process was involved there? What process did the corporation use to undertake this major IT (information technology) project?

Mr. Huntington: — There were a number of meetings held across the corporation in an effort to find out what the requirements that were needed for each of the particular business units. We then made those requirements available to a number of firms that specialized in the work of implementing enterprise systems and that all resulted in a RFP that went out. And those firms not only made presentations in the way of material but also made presentations in terms of coming in and spending time with some of the key stakeholders in the corporation. And a number of the business units came together in terms of picking out what we thought was the best recommendation coming forward from that.

Mr. Wall: — Well, Mr. Chairman, that certainly seems reasonable.

Did the corporation ever consider sole sourcing it to any particular firm and if they did consider it, why did they reject . . . why did the corporation reject it in favour of this more open request for proposal process?

Mr. Wright: — We, as part of our operations, follow an RFP process — again, a request for proposal process — on the bulk of our IT and in purchasing and everything else. We have set policies and procedures on this so we took a consistent view and went about it in an RFP way.

Mr. Wall: — Thank you.

The Chair: — The committee wants to move on to other issues. Is it appropriate to ask the committee at this point if the committee wants to concur in the recommendations of the Provincial Auditor or do you want to leave that for . . .

Mr. Wall: — Dispose of it now if you want to get it off the committee's agenda.

The Chair: — Would someone then move that the Standing Committee on Crown Corporations concur with the recommendations 1, 2, and 3 of chapter 1 of the 2002 Spring Report of the Provincial Auditor?

Ms. Atkinson: — So moved.

The Chair: — Moved by Ms. Atkinson. Is there a . . . No, I don't need a seconder.

That agreed? Then that's agreed.

Are there any other questions for SaskPower? There are? Okay.

Mr. Wall: — Thank you, Mr. Chairman. Well today's been a busy day for officials. If anybody watched the noon news, they'd know that . . . maybe not today but on the noon news reporting the announcement by . . . that the, quote, "green power is flowing" I think is the slug line on the Executive Council press release at Cypress Hills. And that's dated today. And I have some questions regarding that.

I have a general question as well regarding the corporation's plans for wind power and it was highlighted in the presentation today by Mr. Jones — not the specific question but certainly this general thrust of the corporation and of the government.

Is the corporation currently negotiating for a much larger wind farm, up to 500 megawatts, involving Algorithm Media Incorporated, a company listed on the TSX (TSX Group Inc.), and Siemens corporation?

Mr. Wright: — No.

Mr. Wall: — Mr. Chairman, has the corporation ever negotiated with these companies with a view to generating more wind power?

Mr. Wright: — With respect to the first name, no. With respect to Siemens, Siemens is an international engineering firm and we have had ongoing consultations about transmission issues associated with hooking up wind power.

Mr. Wall: — Thank you.

Mr. Wright: — Mr. Chair, I don't even know who the first company is.

Mr. Wall: — Okay. Thank you, Mr. Chairman.

Well this is just a very general, one of those sort of I guess an investor bulletin thing that highlights the Government of Saskatchewan and that's why we raise the question. Are you aware that these rumours were . . . are . . . that these rumours were out there then with respect to this company?

Mr. Wright: — Yes, we were. We received a copy of that bulletin quite some time ago from one of our employees who brought it to our attention. Mr. Chair, this doesn't really relate to 2001. But we very quickly moved to find out who these people were and we still can't find out who they were and who they are.

Mr. Wall: — Who this company is.

Mr. Wright: — That's correct. There is no basis to some of the claims and statements made in there and it may be the case that the Alberta Stock Exchange may choose to have discussions with that firm if they find them.

Mr. Wall: — Yes, I would think so.

Mr. Wright: — I would hope so.

Mr. Wall: — Because they speak to the scope of the project in terms of cost and their particular share . . . this company's particular share in it. And I would think that SaskPower would be taking some . . . would be drawing it to the attention of the exchange then in case this . . . I mean to be truthful, has anybody checked to see if this company is even listed on the exchange as far as you know?

Mr. Wright: — I can't remember all the details, Mr. Chair. We did do a search as to who they were; we couldn't clearly establish that. It was brought to the attention of either the Alberta Stock Exchange or the BC (British Columbia) stock exchange and we asked them to deal with that as appropriate.

Mr. Wall: — I wonder, could committee members get an update then when you find that out? Because it has the symbol

on the TSX, it has the shares issued and outstanding on a fully diluted basis. And certainly if they are out there spreading . . . or some or one of their agents spreading information about a multi-hundreds of millions of dollars wind farm in Saskatchewan with the Government of Saskatchewan and Siemens, both Siemens and SaskPower, I am sure, would want to know that. I think I'd make that informal request if you . . .

Mr. Wright: — We have, Mr. Chair, left it in the hands of the stock exchange. I wasn't quite . . . couldn't recollect, Mr. Chair, whether or not it was BC, Alberta, or Toronto. But my understanding, it has been brought to their attention, and we would leave it up to them to deal with this appropriately. This is not appropriate — what that company has said.

Mr. Wall: — With respect to the wind project in southwest Saskatchewan that was highlighted again during the noon news — and it looks like one of the members of this committee will be doing . . . highlighting it again at an event in Gull Lake later this week — and forgive me here, because I'm certainly . . . I'm not an electrical engineer by any standpoint so you'll have to bear with me if . . . with some of these questions. But they relate to the ability of SaskPower to receive the electricity that's being generated by the turbines. And let's stick with SunBridge. So the basic question is, for now, is there capacity right now — does SaskPower have sufficient capacity to receive, to accept, all of the electricity that these windmills can generate?

Mr. Wright: — The simple answer to that is yes. For example, the SunBridge project which came into, came on line in December of last year, 2001 — 11.3 megawatts. The Cypress project also which is on line, 5.9. There is sufficient control and characteristics to bring it on line. For example, this morning, Mr. Chair, at . . . the last time I checked which was at 8:45 this morning, the Cypress project which has 5.9 megawatt capacity, was generating 5.7 megawatts, and the SunBridge project, which I indicated as about 11.3 megawatts, was generating close to 11.

But for technical considerations perhaps Mr. Patrick could fill us in a little bit more on some of the challenges and trials and tribulations associated with wind power.

Mr. Patrick: — Thank you, Chair. Both those projects are small compared to the size of the Saskatchewan Power system. And in very round figures our maximal load is in the order of 3,000 megawatts, something less than that. So at 5 and 9 megawatts these are not significant power-producing projects. They're important because they really perhaps point the way to the future, but in themselves they're not physically large. They don't in any way, if you like, stress our transmission or distribution system. On the other hand, on a more local basis, where they're installed, there was need for some local line reinforcement to integrate them in with the existing wire that's in the vicinity. But there's no problem absorbing the output of those machines.

Mr. Wall: — So if there's any concern down in my home area there and in Mr. Huyghebaert's, for that matter, that the substation or the infrastructure that's there can only handle the output of three to four towers at a time, that's just not . . . it's just sort of speculation. Or would there be any basis in fact for those kinds of concerns about that particular . . . about the first

wind farm?

Mr. Patrick: — Okay. The distribution infrastructure in the Southwest was designed, if you like, to serve the load of those various communities that are down there. When we add, if you like, generation on to that, we have to make sure that there's an ability to integrate that generation into the lines which may mean adding a substation or some such because you just don't sort of hook the wind tower wires, if you like, to an existing wire running by a nearby pole. You have to have a transform and you have to have some control system to operate that.

So you'll always have to have a little bit of infrastructure to connect even the smallest wind turbine. Whether it was one tower or some multiple of that, you have to have some additional infrastructure.

If you get enough wind generation in a particular locale, you may exceed the capacity of the existing infrastructure which could manifest itself as meaning perhaps a larger transformer or perhaps a larger line, if you like, a heavier conductor or whatnot.

There was some additional infrastructure added when the SunBridge project was added. There was a new substation added and some reinforcement of the line. The Cypress project required, if you like, some small transformers and whatnot additionally, but it's relatively minor at those kinds of project sizes.

If you were to add more, even another wind turbine somewhere, there always be some infrastructure that goes with it. There's always a transformer and always a piece of wire. The question is when you get enough of them do you have to perhaps raise the entire capacity of a line in a particular vicinity. And that's possible depending on where these things would go.

It's a bit of a euphemism but it's generally a truism in the Southwest, where there's not a lot of people. It's goes to Mr. Jones's comment about a very thin population of the province, particularly so in the Southwest, that the wind generally is where the wire isn't. And if you start adding a lot of wind, you're going to have to add some infrastructure to connect it to the grid.

Mr. Wall: — If the wind is blowing at both of these locations — and I mean the chances of that are pretty good on any given day, especially if I have booked a tee time somewhere in the area it seems — but if the wind is blowing then on any given day, the infrastructure that is currently there that may have been added when the SunBridge farm came on and the new Cypress one, the infrastructure that SaskPower has in place can handle all and can transform and put on to the provincial grid all of the electricity that these windmills could possibly generate. Is that correct?

Mr. Patrick: — Yes.

Mr. Wall: — The need for some future investment potentially, you just touched on that in your answer. Is that perhaps if SaskPower decides to add more turbines, you know, in the Southwest?

Mr. Patrick: — If we were to add more wind, really at any location the very first thing we would look at is what's the ability of the existing infrastructure to handle that.

There is always some interconnection requirement, always. Like there is no such thing as hooking these things up without having to add any infrastructure. You always need something more than is there. The question is whether it's added, if you like, at some very minimal cost or whether something more than the minimum is required.

So if we were to add more wind, we ask ourselves two questions. Is it possible to add at the minimum cost however many additional wind towers might be available within the region? And then beyond that, what would be the most economical, additional infrastructure addition which would then support some larger number of wind turbines?

Mr. Wall: — Obviously that would go into the decision-making process, I'm sure, in terms of cost/benefit and return ratio.

Mr. Patrick: — When you're working out the cost of electricity, you include all the infrastructural costs.

Mr. Wall: — Is SaskPower pleased with their relationship and how the project proceeded with SunBridge?

Mr. Wright: — Yes. Very positive, very encouraging. We learned an awful lot from them which enabled us to complete our project. We've very pleased with the relationship, very excellent.

Mr. Wall: — And why did the corporation then decide to go ahead with the Cypress project on their own?

Mr. Wright: — Well, Mr. Chair, on any project — and again I realize Cypress doesn't really deal so much with 2001 — but on any project there are three basic ways of going.

One, SaskPower can build it themselves. And traditionally that's the way in which SaskPower has gone about generation — we build it ourselves. We have extremely qualified individuals here in this province and within SaskPower.

The second option is to do an RFP or a request for proposal. And we have done RFPs, for example on the Meridian project. That was chosen through an RFP process, or on the SunBridge approach.

The third is of course with partnerships. And we've had a partnership approach on the Cory. I believe that the combination of the three is just excellent.

What we didn't know when it comes down to the Cypress project is we didn't know enough about it. And one way of learning about anything is get engaged, get involved, take a look at the project and build it yourself. It's a relatively small project.

As a consequence to that though, we've learned an incredible amount. Our engineers are extremely pleased with the project and we now know so much more that if we choose into the

future, Mr. Chair, to do more projects, we've got a good solid base of knowledge at this point in time.

Mr. Wall: — And so how would you characterize your current relationship with SunBridge and its parents, I guess.

Mr. Wright: — Excellent.

Mr. Wall: — Unchanged?

Mr. Wright: — Unchanged. No, absolutely excellent. We're very, very pleased with Suncor and particularly Enbridge.

Mr. Wall: — Are you aware at all as to whether, I guess if you heard the rumours that we have heard, that SunBridge is looking at . . . that same partnership is looking at significant additional investment in the southeast corner very near their existing farm but in the southeast corner of Alberta.

Mr. Wright: — I'm not aware of them looking at any additions in the southeast corner of Alberta.

Mr. Wall: — Mr. Chairman, the issue of taxes is raised with us from time to time regarding the two projects, specifically by the RMs (rural municipality) where they're located. And you know it's certainly . . . there's precedent in terms of all the Crowns paying grants in lieu of taxes in municipalities where they have assets and where they have improvements.

Our understanding — and please correct this if it's wrong — our understanding is that that is occurring in 2000 . . . I beg your pardon, in the SunBridge project. That is occurring, I guess it's not a grant in lieu, it's taxes and it's coming from SunBridge, right? But it's not to occur in the Cypress Hills . . . in the Cypress project? Is that the case or no?

Mr. Wright: — Mr. Chair, I could probably entertain this committee for a couple of hours on property taxation and Crowns and the constitution and a variety of other things. In the case of the SunBridge project because it is privately developed they'll be paying, we estimate at SaskPower, about \$70,000 per year in property taxes.

On our project if we were to pay property taxes, which we don't on any of our facilities here in the province for constitutional reasons — the Crown shall not tax the Crown — through to legislative reasons and other things, it would be about 30 to \$35,000. We don't pay, like virtually all other Crown utility in this country, grants in lieu or property taxes on generating assets. Some other Crown utilities in the country pay it on real property but generally not on generating assets.

Mr. Chair, not to go on about this, we appreciate the viewpoints of the two RMs that are involved with our project which is the RM of Gull Lake and more importantly the RM of Carmichael. We're trying to work with them in a number of ways. For example, we've made a major donation to the town of Gull Lake to improve some of its infrastructure for kids such as parks, ball diamonds, and others. We have assisted and will continue to assist on gravelling of particular roads. We want to be part of their community. We want to be involved and engaged, as we are in Nipawin, or as we are Estevan, or as we are in other places in this province. But we don't pay property

taxes and we don't pay grants in lieu of property taxes. We pay a different form of grant in lieu.

Mr. Wall: — There are other forms of payment that utilities make, as you know though, whether that's a 5 per cent levy that's paid to municipalities for I guess the opportunity or the right, however you want to word it, to sell electricity into municipalities. I think SaskEnergy and SaskPower have paid that for some time. So certainly there are all . . . there's all manner of options for the Crown to pursue.

And I don't think you'd blame municipalities and people in that area who compare the two; who look at a 100 per cent publicly owned electrical utility, government-owned electrical utility — I'm not talking about changing that structure — who engaged to, you know quite rightly we would say, in a public-private partnership and per the presentation today and with SunBridge, and it certainly accrues certain benefits to the area where it's located. And seemingly then takes what it can — as you've admitted — takes what it can from the project, learns what it can from this private sector company, decides it can go it alone despite the fact that the debt, as Mr. Jones rightly pointed out, of the company has gone up in large measure due to additional infrastructure investments. Still make the decision that we don't need the public-private partnership any more and these people have a concern because they look at them, they're right side by side, and they understand very clearly what it means to each of their municipalities. One approach by the government, by the Crown, and another approach.

So when you're discussing these things with the municipalities are you looking at all of the options, not a one-time grant necessarily, not limited to one-time grants but also similar to what the Crown does with respect to municipalities in terms of fees that it pays as a percentage of . . . in sales, in those cases?

Mr. Wright: — Mr. Chair, we look at all options — all options from a legal perspective and options so that we're not setting precedent, but options based on precedent. For example, our dealings with Nipawin when the hydroelectric facility is being put up there.

We have just received this morning a very innovative proposal from the RM of Gull Lake on behalf I believe of several of the RMs around there. And I will be down later this week at a community function in Gull Lake to be able to talk about these issues. We again want to be part of the community.

One thing that we've considered in that perhaps if we could tap into some federal funding, would be a major tourism facility down in that area. This would certainly highlight the importance from a tourism, from an economic development, and other aspects. Again, we really want to be part of the community, we want to work with the communities but we don't pay property taxes. But we are open to other suggestions and considerations, Mr. Chair.

Mr. Wall: — Mr. Chairman, what are the capital costs of the Cypress project?

Mr. Wright: — Again not relating directly to 2001, Mr. Chair, but it was announced in 2000 we did — or 2001 — we did a fair amount of work on it at that point in time. We had budgeted

it at \$12 million all in cost and I'm pleased to advise that it is my full expectation when all bills are in that it will come in less than \$12 million.

Mr. Wall: — So in light of what was happening . . . what did happen in 2001 with respect to the corporation's debt, did the corporation have any concerns?

Here's where I'm going: in 2001, it had a great example of how it could go ahead and get into the wind generation business without the capital cost exposure through a public-private partnership. And in that same year, when the corporation knew it was having some challenges on the debt side for a whole bunch of reasons — part of it's cash flow understandably but part of it's the investment and infrastructure — did the corporation have a look at that? It's just difficult to understand why, as a layman, why a company that's having some debt challenges, why they would abandoned . . . abandon a process whereby they could generate the green power, wind power, without adding to the problem, without adding to the corporation's debt.

Mr. Wright: — Well, Mr. Chair, the corporation really isn't having a debt problem. What we had in the year 2001 was a net income problem which does in fact reflect upon debt at the end of the day because debt would be higher than it otherwise would be. We are also in the business and have been in the business for seven years; hopefully we'll be in business for another seven years. As Mr. Jones mentioned earlier, we also have a very excellent debt/equity ratio — roughly around 60 per cent debt, 40 per cent equity, which is the best of all Crown utilities in Canada and certainly rivals that of many private sector companies.

As a consequence, Mr. Chair, the \$12 million — every penny concerns us — the \$12 million was something that we do and did scrutinize as we moved forward. But certainly as we go into the future perhaps if we do another project, perhaps it's not necessary for SaskPower to build it themselves, perhaps a partnership approach would bear fruit. And indeed we certainly like that.

I do remind members that the one advantage of being a Crown corporation — one of the many advantages I should say, of being a Crown corporation — is we don't pay income tax, particularly to the federal government. We don't and aren't liable for corporate income taxes. As a consequence there's no, what we call, dead-weight loss on any income to Ottawa and it provides us with a cost advantage relative to private sector companies.

If we were, for example, to pay property taxes — along with the grants in lieu that we pay — this would simply mean at the end of the day higher energy prices, because we are regulated, than would otherwise be the case. Now I'm not quibbling about \$35,000 in property taxes, but there are some unique advantages to being a Crown.

Long and short, Mr. Chair, is that it did concern us. We feel though that on balance, we have a strong balance sheet. But as we look forward I want to assure all members here that we want to be innovative; we want to be creative; we want to be imaginative; and we want to bring the best value to the people

of this province — and that may involve partnerships.

Mr. Wall: — Thank you. Well, Mr. Chairman, the structure of SaskPower didn't change. The RM that is home to SunBridge is getting property taxes. It's a public utility. I mean SaskPower isn't . . . didn't change to do that particular project. So I mean that's a fair enough comment. On one hand, you're saying that in the future SaskPower should look to more private-public partnerships. And then on the other hand, you indicate that . . . all the reasons why it wouldn't do that. So I'm not sure where the corporation's at on that.

I'm not sure why you made the decision you made when . . . on the property tax. But anyway, municipalities can certainly get their property tax without the structure of . . . the ownership structure of the corporation changing.

I would then ask you a bit more questions and maybe Mr. Jones wants to jump in, I'm not sure. He's certainly welcome to. On page 19, the second slide, where it does highlight, at least in bar graph form, the outstanding debt. And Mr. Wright made a comment that certainly it would point the committee members in the direction of most of the increase in debt over 2000 and 1999. I'm looking at net debt, I guess the purple bar. Most of that would be attributable to reduced income. That's certainly the direction I got from you in your answer previous.

Mr. Wright: — No, Mr. Chair, a lot of that . . . if you reflect on some of the capital dollars, we had a very capital intensive year at SaskPower and the large bulk of the increase is attributable to our investment in our aging infrastructure — on the wire business, transmission, and distribution. Mr. Jones did make reference to the repowering of the Queen Elizabeth station. In fact, Mr. Chair, just to be clear, the debt associated with the Cypress project was not incurred in 2001; it was in fact incurred in 2002.

The Chair: — It's about 3 o'clock. I suggest we take a break, come back at 3:15.

The committee recessed for a period of time.

The Chair: — . . . meeting back to order. Now Mr. Wall was dealing with some issues related to SaskPower's finances and debt questions. Ms. Atkinson had her hand up and I don't know if that was particularly dealing with the question of wind power that Mr. Wall was dealing with earlier.

Ms. Atkinson: — Does it matter?

The Chair: — Oh, yes.

Ms. Atkinson: — I have a series of questions. I can wait for the appropriate time.

The Chair: — Okay. That's good. Then we'll wait.

Mr. Wall: — Well I was going to use the opportunity to change subjects so if, you know, I'd defer to Ms. Atkinson. Okay.

Slide 27 of the presentation today highlighted issues for the future and the third bullet from the bottom is environment. And I guess I'd like to talk a little bit about that and ask some

questions of officials that are here with us, specifically Kyoto, the Kyoto Protocol, if I can. And I'm assuming that that's what that refers to, at least in part. And I know that — although it was earlier this year — I know that the corporation had made some statements about the potential impact of the protocol on the utility and also on rates, on utility rates for its customers across the province.

So I wonder if it would be . . . I think it's very timely for us maybe to ask officials to walk us through in a very basic way, if they would, on the impact that . . . the potential impact of the protocol, if it's ratified and implemented, and follow through with a discussion on its impact potentially on rates then.

The Chair: — Just before you get started, Mr. Wright, I have to, just from the viewpoint of process, remind the committee that the matters which are referred to us by the Legislative Assembly are the 2001 annual report of SaskPower and a number of related reports, as well as a specific chapter of the Provincial Auditor's report, which we have dealt with. And so when there are substantial questions which arise, I guess I would appreciate it if we could relate those to the 2001 report that's before us and then if there are additional comments you wish to make, you can do so. But again let's, to the extent we can, relate these to the reports that's before us.

Mr. Wall: — Mr. Chairman, you know, I think that's fair and that's why I raised it today in the context of Mr. Jones's presentation and the slide that . . . slide 27 because I think that in any year — 2001, 2002, whatever the year might be — the corporation will be looking to the future and making its plans accordingly. So I think the question's germane on that basis but I appreciate your comments.

Mr. Wright: — Sure, thank you very much, Mr. Chair. I'm going to turn it over to Mr. Patrick and we'll keep it in the context of 2001 because there are a lot of exciting things that went on in 2001, as simple as our solar demonstration project at the Science Centre, which is environmentally friendly and related to Kyoto, through to early and very preliminary work on flared gas projects and others. But we are members of something called the Canadian Clean Power Coalition that we funded in 2001, and ZECA, the Zero Emission Coal Alliance, and perhaps Mr. Patrick can speak to those in the Kyoto context as activities we undertook in 2001.

Mr. Patrick: — Thank you. The issue of not so much Kyoto but, if you like, greenhouse gas management is something that SaskPower has been dealing with for quite a number of years. I, about a year ago, took over the role of the planning and environment person for SaskPower, and in digging through some previous documentation saw a report that one of my predecessors had written in the late 1980s, in fact early 1990s, which talked about the growing body of evidence for global warming and the probably ultimate need for greenhouse gas management. And that document actually preceded the original meeting that took place in Rio de Janeiro in '92. And the document was remarkably timely in that if you took the data off it and put 2002 or 2003 on it, it would still be a very contemporary document in terms of its sort of analysis of the situation and the need for SaskPower as a utility to, if you like, deal with in a very substantive way.

That having been said, probably three or four years ago on our production side we began working rather in earnest to have an understanding of what mitigation strategies might be available to us over time. Because the greenhouse gas issue is rather unique in our industry and in most fossil fuel industries in that there is essentially no currently available commercializable technology which allows you to sort of easily add apparatus, or even not easily add apparatus at any cost, to existing equipment and just sort of clean the problem up.

And this makes it different than things like nitrous oxides or sulphur dioxides or particulates where there is an available inventory of apparatus that you can buy and at the end of the day it's really just an economic selection of which apparatus will do the job best for you. But at least you have things to choose from.

In the case of carbon dioxide or other greenhouse gas emissions there is essentially no such technology readily available. So we began working on what would our options in fact be and we've got a rather lengthy list of initiatives that we've engaged in, some that we initiated and others that we've simply partnered with other like-minded people because we're certainly not the only people dealing with this problem.

And in no particular order they deal with things like managing the production of carbon dioxide at point of combustion. So we've had some research projects ongoing for a number of years on a number of different fronts which would allow us to have, if you like, advance cycle technologies dealing with our combustion so that we can manage carbon dioxide and eliminate it, if you like, before it goes up the smokestack; in some cases combustion technologies that make it easier to manage if in fact it does get as far as the smokestack.

We've been looking at the issue of capturing carbon dioxide in the smokestack. The international test centre here which has its home at the University of Regina has a pilot demonstration project down at one of our units at Boundary dam power station which we have had in service now for a couple of years. And it basically extracts on a small scale carbon dioxide from the exhaust of one of the units there.

And that experiment is about finding more economical ways of doing that. The process of removing carbon dioxide in itself is not a new science but the apparatus to remove it on the large scale that's applicable to a thermal power station is generally not available. So this work is to support, if you like, the scaling up of much smaller technologies that already exist and making them commercially viable.

We're also participating in a geotechnical study down in the Weyburn oilfields, along with many other people. It's a project that's been underway for a couple of years and will pay its dividends a couple of years from now in which geoscience people are looking at whether the oil formations are a long-term sink for carbon dioxide.

As you know, carbon dioxide is being pumped in the oilfields to enhance oil recovery. The question is does the stuff actually stay in the ground once you put it there. If the geological sinks are proven to be viable over the long haul, then that's a good place to put the stuff. So what you really need is a package of

technologies which allow you to either capture it before or after combustion, gather it up and then put it somewhere. And we've got initiatives working on all of those.

As the president spoke earlier, we belong to a coalition of like-minded coal burning utilities and others who formed together to form a group called a Clean Power Coalition. And we've got a number of engineering studies underway right now to determine the cost and technical feasibility of retrofitting cleanup apparatus to coal-fired power place . . . power stations that already exist, if you like, the retrofit project, or to design from the outset a so-called clean coal technology power plant from scratch, the so-called Greenfield projects.

And again, these are about options because, as we have nine coal-fired units in Saskatchewan totalling 1,800 megawatts, if it should become necessary to physically mitigate the carbon dioxide they produce, then there has to be some way to do that. So we need apparatus that could do the job. So part of the work is to determine that.

In 2001, we were designing engineering studies which were subsequently let in the year 2002 and which will yield the results midway through 2003 as to what the answers to those questions are: what does a retrofit package look like and how much would it cost; what would a brand new Greenfield package look like and what would that cost. And as part of that work, the various utility participants have offered up demonstration sites. And we're using our Shand power station which is our newest generating unit, coal-fired generating unit, as an engineering test site.

So the studies that are being done this year and that were designed, if you like, in 2001, there's a body of work being done around the Shand power station to use it as an example for cleanup technology.

All fuels are different. In Canada, the various fossil fuel utilities that are burning coal are all facing different problems because although coal may sound like a single fuel, in fact, depending on what it is and where it comes from, it has very different properties which mean that it either lends itself more or less well to being cleaned up of things like carbon dioxide as well as other emission products.

So we're doing the work in Saskatchewan around the Shand project, particularly because we're the only lignite-fired utility in Canada. There's a utility in Alberta that has volunteered one of its sub-bituminous-fired units as a demonstration, and there's a utility on the East Coast that's offered up one of its units and it uses a completely different kind of fuel. So this work is going on and at the end of the day it'll yield its results and it'll . . . it really offers us an opportunity to make a choice.

John also mentioned the ZECA project, the zero emission of coal alliance. We're one of the founding members. Again, a group of coal-interested utilities largely. This project had its origin at the Los Alamos research laboratory in New Mexico and it's a very advanced cycle, basically a hydrogen cycle where you would take coal, gasify it, turn the gas into hydrogen, put the hydrogen through a fuel cell, and then sequester the carbon dioxide that's liberated when you gasify the coal into a solid rock-like material. And this is something

that'll yield its results probably 10 or 15 years from now.

So we're, as well as working on sort of near-term mitigation strategies, looking really at the longer term, the reason for that being that (a) it's not clear what the technology pathway is for the physical mitigation, although — and I realize that we're not supposed to speak particularly to the issue of this year — the plans, as we understood them, in 2001 were very indistinct as to whether as a utility we would be required to physically mitigate our emissions immediately or at some future date, or whether as it was even being speculated back then we'd be allowed to use economic instruments to offset our emissions. That's actually a good thing in a way because it buys us time so that the technologies can mature and you can make a proper decision.

The question as to whether you would fix up the existing fleet of equipment at whatever costs, those may be depending on the results of these various studies that are underway or whether at some point you would abandon them and seek other technologies that are just now, if you like, coming on to the drawing boards is an outstanding question. We don't know the answer to that question. But what we need, as a utility, are choices.

And so we've been working on choices that deal with new and old coal. We always have in our inventory a possibility of various hydroelectric projects. We have in our inventory . . . and the wind project that was discussed earlier today is an example of this, sort of, non-polluting renewable technologies. These are relatively small and are just kind of a burgeoning thing, but nonetheless they could play a significant role in the future if you can scale them up enough. There's always natural gas, although there is considerable issues around natural gas because of its price volatility and the long-term concerns over supply and also the fact that natural gas does actually emit a fair amount of carbon dioxide which eventually would have to be mitigated, so it's not really the ultimate long-term fix. There's a number of other technologies that are out there. Nuclear has been discussed by some. It's essentially non-polluting in terms of carbon dioxide but it has its own issues of cost and fuel waste, fuel management, and all the things that go with that.

So as a utility we've been trying to keep as many doors open for as long as possible until eventually we are either able to or are forced to make a decision on what we're going to do. In 2001 we were very much in the position of trying to identify as many options as we could possibly come up with that had a reasonable probability of success and to judiciously fund those, so that as those studies and pilots worked their way through and they yielded the results, we would eventually have some clear choices.

And a comment that I made to our board of directors in 2001 — and frankly I would make it again today if called upon — was that at the time there were no clear winners on the horizon. There were lots of possibilities but, again, none that were obvious choices; that at the end of the day we would probably require a mix, a portfolio approach if you like, of generation sources to solve the problem. And that at the end of the day the decisions would probably be made around a combination of technical doability because a lot of these things are yet to be proven.

So you're going to have to eventually pick the technology path that you think will work and you'll eventually make decisions around your ability to manage risk because all of these packages are fraught with different combinations of risk. In some cases it's technical risk because it's new technology. In other cases it may be a fuel supply risk, which is the issue around natural gas, if you like. In the case of nuclear, it's waste fuel management and capital cost risk. In the case of the renewables, it's the risk associated with whether or not you can scale it up to the point where it makes a really big impact on your portfolio and users.

There's no winners in this thing that are obvious. So it's going to be deciding which one you're most comfortable with and hoping that you've done enough groundwork that when you make a decision, you're comfortable. The problem being that when we make utility decisions, they're very long-lived. Utility assets generally have a lifespan of 25 to 40 years or more in the case of hydro stations. And you do not want to wake up 10 years from now or 15 years from now and realize that you've picked the wrong pathway. And so what we need to do is proceed carefully, make our decisions when we have enough information to do it with some comfort and preferably not before then.

I don't know whether I've answered the question specifically. The issue around cost is still outstanding because based on the work that was initiated and carried on in 2001, those numbers on the technical side haven't come forth yet. They're a work-in-progress.

Mr. Wall: — You highlighted the various options and sort of detailed their attendant risks. And I guess the option of economic instruments, which I'm assuming would be the purchase of credits of some sort, the risk there of course would just be the costs of those instruments. And so in those studies that began in the year under review, have we got to the point where we have . . . I mean I've seen some estimates in print from SaskPower on economic . . . on those instruments and are those . . . could you please confirm those for the members?

Mr. Wright: — Mr. Chair, let me off the top of my head — and I'll stand corrected on the numbers — within the context of 2001, in 2001, we emitted as a company approximately 14.3 million tonnes of CO₂. The Kyoto target, which was 6 per cent — and that was established before 2001 — below the 1990 levels is approximately 9.7 million tonnes, the difference being 4.6 million tonnes. So if that was the implementation plan that we had to reduce it — and I'm not saying that is the implementation plan — but if it was, 4.6 million tonnes would have to be addressed.

One could go out into the international marketplace for example and purchase that relative reduction and the cost of that would be somewhere in the range of \$10 per tonne to an upper limit of \$50 per tonne — so \$46 million or call it \$200 million. But that doesn't necessarily relate to where the federal government is at currently in the Kyoto discussions and there's many, many, many shoes to fall on that as we move along.

Mr. Wall: — What were the costs to the corporation of the studies that began in 2001, these various studies and what is the . . . Any of those studies that was looking at specific mitigating

technologies, what would be the cost? Is there an estimate then of what would it cost for those technologies?

Mr. Patrick: — The Clean Power Coalition is the primary instrument for these costs or for these studies. The Clean Power Coalition is a \$5 million program which is jointly funded by the federal government, the provincial governments, and industry. Our contribution to that is about \$100,000 a year for three years, and it's highly leveraged up because of the money that's been brought in from other places.

Additionally we belong or we fund a number of other research projects which probably add up to — I don't have a list in my head — in the order of probably a few hundred thousand dollars a year, so maybe a half a million dollars a year altogether, if you like, something in that order.

Back in 2001, we had not gotten any capital cost estimates yet. That stuff is only now being done. As I was saying, in 2002 the studies were triggered and the results are coming out in, basically in the spring of 2003. So it's pretty speculative. We don't know what it would cost to clean up our existing units based on that work.

There's been stuff in the press, if you like, in the utility press that has speculated on it. And there was an article not long ago about a project in the United States that was based on coal gasification which is quite a likely technology path that we might pursue. And the comment around it is that . . . And then you have to understand something. In the United States they're not interested in collecting carbon dioxide at this time. The federal government's position is that they're not signing on to Kyoto and they're not telling people in the United States that they're going to have to remove this from their plumes. Some states in the United States have taken a contrary position and they're advocating it on their own that this should be done.

But at the . . . this particular article around a new gasification plant in Illinois made the point that that unit would probably come on line at costs that were similar to a natural gas plant but it was exclusive of the carbon dioxide cleanup cost which they are not concerning themselves with.

So the answer is, in terms of that technical package which looks rather intriguing to us, we don't know what those numbers would be from that. Like I say, we're probably six months away from having that based on our own separate research.

The Americans have been steadfastly not interested in collecting carbon dioxide and so they're not a very good source of information on what those numbers might be. There's been speculation over the years on what it might be, but I'd almost hesitate to throw the numbers out because they're based on such — I'm not going to say poor science — but on really such a thin amount of engineering done that I think it's just wildly speculative.

They quote it usually in dollars per tonne and some people say you can remove carbon dioxide for \$20 a tonne and some people say it's \$100 a tonne. And the answer is, we don't know what that answer is. That's why we're doing the work we're doing. I wouldn't want to make a decision based on the stuff I read in trade magazines.

Mr. Wall: — Thank you. From what I read, many scientists — well I shouldn't say many — some of the scientists on the global warming issue are obviously highlighting not just CO₂. In fact some seem to be not downplaying it, but certainly in the list of greenhouse gases I think it's fair to say they're at least moving it down. And these would be global warming scientists, at least from what I've read.

They highlight some other by-products of various processes. I think nitrous oxide you touched on, and soot is another one that I don't think I . . . from what I understand is not contemplated in the protocol. What are the other by-products that might be contributing to greenhouse gases that SaskPower emits?

Mr. Patrick: — As far as our units are concerned, that's about it because the other big one is methane and our plants don't produce methane.

Nitrous oxide, you had mentioned it, it does have . . . it's one of the . . . there are many greenhouse gases and they're always converted to a carbon dioxide equivalent just so that everything is on a kind of a constant basis.

The amount of nitrous oxides that we emit compared to the amount of carbon dioxide that we directly produce is small so that even when you convert our nitrous oxide into CO₂, it's far the smaller percentage of our emissions compared to just straight carbon dioxide. So although it is, you're correct it is an issue, it would simply be managed as part of the overall carbon dioxide strategy.

Mr. Wall: — And what about soot which isn't part of the protocol per se, what's the corporation's take on that? The studies that it did in 2001, were you contemplating mitigating that?

Mr. Patrick: — The power plants don't actually produce soot, per se. The study, the work that was initiated in 2001, which is carrying on now, talks about clean coal technology power plants. And when we say clean, our target that we gave the consulting engineers that are working on this, is that they would come up with technology packages if they could that would make the exhaust stream from a coal-fired plant, either an existing one or a brand new one, be at least as clean if not cleaner than the most modern combined-cycle gas turbine that's currently available.

And in doing that, that would also mean that in addition to removing carbon dioxide you would also remove the nitrous oxides, the sulphur dioxides, the particulates, mercury — anything else that is in the plume from a coal-fired plant would be similarly removed along with the carbon dioxide.

And so, although the work has largely been characterized as a Kyoto response, it's really broader than that because it's clear from the messages we're getting from the federal government that over time the federal regulators particularly — and the provincial regulators as well, but particularly the federal ones — are expecting that over time power will be produced essentially with zero emissions. And that's everything, carbon dioxide only being one of the items.

Carbon dioxide happens to be the issue that's covered by the

Kyoto discussions, but there is a whole range of other emissions which are being pursued separately and in parallel. And when you are making your asset decisions over time to deal with Kyoto, if you like, you would do that at the same time as recognizing that you're also going to have to deal with particulates, sulphur dioxides, nitrous oxides, mercury, and everything else.

Most of those other issues are really driven by the smog problems in industrial air sheds, like southern Ontario or the lower Fraser Valley or almost anywhere you've got a high industrial concentration.

Saskatchewan doesn't have that air shed problem. You know, as much industry as we have, it's widely distributed and it's in a big air space and the wind blows. And you know, we do not have an ambient air issue in Saskatchewan at this point and perhaps never will.

But in places where there is a lot of smog, there is a lot of near-term concern about that. It is definitely a public health issue. The federal government for a number of years has been working steadfastly on an agenda to wrestle under control those various emissions.

And although they're not linked directly to Kyoto, from our perspective, SaskPower's perspective, when we were designing the engineering studies around the Clean Power Coalition's work and we were co-authors, if you like, of the techno specification of those works along with the other participants in the project, our objective was a clean stack, not just carbon dioxide but everything. It simply has to be done.

So insofar as there are nitrous oxides produced, they would be cleaned up not so much because of Kyoto but because of the need to have a clean stack for other reasons, largely driven by federal initiatives around smog.

Mr. Wall: — Thank you. So the work that's began back in 2001 and continues then, as you indicated, is looking at . . . began to look at a number of options, technical and the economic instruments as we've defined them here.

And those instruments and at least the estimates as best that they can be made — and I understand the range that the president gave, I understand that — but as best as they can be made, those economic instruments would have formed the basis for an estimate that I saw in a daily paper in Saskatchewan from SaskPower as to the potential impact on rates. I think a 25 per cent increase is what was . . . up to a 25 per cent increase was referenced, I think.

Mr. Wright: — Using the 2001 numbers and if you make certain assumptions around the price of international credits, it translates — and let's use the \$10 — that would be \$46 million which is equivalent to a little over a 4 per cent lift.

That being said and as I mentioned previously, there's a lot of discussion that has yet to go on before we actually determine what the federal government . . . what the implementation plan is. So that could be one scenario of many.

Mr. Wall: — And I understand, actually today, I understand

today that the provinces aren't going to be participating with the federal government. I think we just got the news at the break in terms of a meeting before a ratification. And I think there's been some reference that the implementation is the thing that I think provinces will be watching closely.

Is there, based on the studies that began . . . Does the corporation, you know — notwithstanding the rate issue which is difficult to nail down I understand at this time — does the corporation have a preference stemming from 2001 in terms of mitigation strategies for this on either . . . onside? I think you talked a little bit about, generally speaking, about a mix of these, but does the corporation have a preference from the point of view of the health of the corporation?

Mr. Patrick: — When we were thinking about this problem and trying to characterize, if you like, not so much a response but rather simply the way that we would be able to make decisions over time, we plotted out sort of the availability of emerging technology information and other information including the federal plan and the availability of the rules, if you like, around Kyoto, which in 2001 we knew very little about because although we knew what the target was likely to be because that had been announced well in advance, there really had been nothing indicated to us at all about what the operational rules of this thing . . . we had no idea what the administration would look like.

And so we assumed two things. One was that over the long haul you would physically mitigate this stuff, that sooner or later you would install or retrofit technologies which would actually eliminate the problem at source. And so we, as I explained earlier, we started down a pathway to try and investigate as many of those elements as we could so that when the time came we'd actually be able to make some kind of a decision without really pre-picking the winners and the losers.

It's such a technically difficult problem that to write off anything in advance, or for that matter to hitch your star in advance to any particular technology, seemed a little foolish. Because the one thing we've been finding even in the work we've done to date is that there have been some surprises, technical surprises as people do their work. And certain technologies that we thought might not have been promising are looking better and better. And other ones that we thought might have been pretty good from the outset are starting to look not so good. So clearly we have to let that work sort of run its course.

We also felt though that there probably would be room for economic mitigation. And the reason we felt that was because quite separate from the issue of greenhouse gas management there are other emissions in the world today that are currently being managed by economic means.

And the most successful one by far is sulphur dioxide. In Europe and in North America — and in the United States particularly — and in Eastern Canada you can buy sulphur dioxide emission credits. And the way it works basically, if an industry has been emitting sulphur dioxide at some particular level and then they modify their process in some way to cause that to be reduced, they can sell the difference from where they were to where they now are and they can market that.

And a very active and rather aggressive marketplace for sulphur dioxide emission credits has opened up in the States and in Eastern Canada and it's been very successful. The rate of achievement of sulphur dioxide reduction targets has been far exceeded by the use of these instruments than anything that had ever been contemplated. It's been much more successful than any regulatory attempt to sort of drive those emission levels down.

So without exactly knowing how a carbon dioxide trading system would work, there was certainly precedent that we were aware of, because this has been operating for a number of years, that such a thing probably would come into creation. And so the only issue really was how would that be allowed to be part of the Kyoto thing because we really didn't have an idea, and there was nothing really in the publications at that point which gave us a clear answer about how it would work, but we suspected that it might be available.

So we've been doing, you know, work back in '91 and before that with some experimental emissions trading. We belong to a group called GEMCO (Greenhouse Emissions Management Consortium), which is the greenhouse gas emission trading coalition; it's a group of folks that have been dabbling in greenhouse gas credits. And also as was announced recently, back a couple of years ago, we started working with Sask Environment and Resource Management on the use of forestry carbon sinks. And again, although that's a physical mitigation in the sense that it is wood and trees, for us it's really an economic instrument because what we're doing if we're buying an offset, we're not physically fixing our plants. We're spending money on, if you like, mitigating carbon dioxide in another place, and that was recently proven to be scientifically valid by the adjudication committee that looked at us. We're very pleased that that has been successful.

So we've been pursuing the two pathways not knowing what the mix would be. But if you allow me to sort of characterize the future, roughly 20 years, in three phases. Between now— or if you go back to 2001 — and about the year 2008, which is the beginning of the first period of implementation of Kyoto if in fact it's implemented as proposed, we felt that as a utility what we needed to do was explore the options, and towards the end of that period start to make choices around the technology pathways for the purposes of putting into place larger scale demonstration projects.

And by about the year 2004 or 2005, the various works that are underway will yield enough information that we will start to decide on whether we want to experiment, if you like, on a larger scale with demonstration projects. This may be done you know, by SaskPower alone, or in conjunction with our coalition partners in these various other technical endeavours we've been working on. Because the way that this thing generally works is you study it on a theoretical basis, on paper if you like; there's some research work done in laboratories to sort of prove the basic science; it's then scaled up in the field on some kind of a part-size and not full-size power plant, but big enough that you can significantly debug it; and then eventually you commercialize the thing on a very large scale.

Those steps will have to be gone through, and whether we do it or somebody else does it, it will be done — I mean, that's just

the way technology evolves.

But it's important for us as a utility to know whether or not we want to participate in these projects because we have load growth to manage; we have existing hardware which will be at the end of its life and will be due for retirement and we're going to have to decide whether we want this stuff to retire and if so what are we going to replace it with. So it could be replaced with, if you like, new technologies that become available.

So over the next four or five years, we're going to make choices based on the R&D (research and development) and the piloting work we've done in the period of Kyoto, but very little physically will change. You're not going to see a wholesale change of the mix of generation in this province for two reasons. One is there isn't enough time because it takes time to shut plants down and build new ones. But more importantly we don't know what the right answer is yet, but over the next couple of years we will.

When we get . . . In the meantime however though when we add new supply, and whether it's the wind projects with — there was one announced today — or other things, we're going to be very prudent about adding new generation because the load is growing slowly but steadily and has to be managed somehow. And ideally we would do that in such a way as to prevent the increase of our pollution obligation, if you like.

It wouldn't make sense today, just for example, to go out and build another conventional coal-fired plant knowing that the emissions from it, both carbon dioxide and the sulphur dioxide and the nitrous oxides and the particulates and the murk, and all the stuff that comes out is simply adding to the known burden that we already have — difficult enough to solve as it is, no point making it worse. So anything we add we want to do it very prudently so it will not add, or increase it as least it possibly can under the circumstance.

In the period of Kyoto itself, assuming that it goes into effect as proposed, we see that as being an era in which we'll probably use economic instruments in large part to mitigate our emissions, for two reasons. One is that again we will not be in a position to execute a large change out of our physical assets. There'll be large-scale experiments coming on stream. The schedule of the Clean Power Coalition is that we would like to have a demonstration plant in service by about 2007 or '08 based on retrofit technology of an existing coal-fired plant, and a Greenfield plant, i.e., a brand new plant built from scratch, by about 2010 or 11. Those are experiments — large-scale experiments.

And so even though one of those might be in Saskatchewan, or maybe even both, that doesn't replace the whole fleet. It's one unit demonstrating a technology base, and assuming it works out and you would debug it and you would get it commercialized, you would roll that out over time and commercialize it.

So in the period of Kyoto, you'd probably have to use economic instruments because there's really not much else you can work with and we've always kind of known that that would be the case. There'd be an identification of the technical winners but on a small scale. And towards the end of the period, by 2011 or

'12, you might start to see a proliferation of some new technologies. But again, they'd just be starting to creep in.

Our pathway analysis indicates that you probably won't see a wholesale change out of technology based on the evolution of technology as we understand them to be. And so probably about 2015 or '16, that's probably when you're going to see the mass availability of radically new technologies compared to what we have today and in a commercially comfortable way, i.e., you could go to the store and buy one of these things and have reasonable assurance that it would work at the cost and with the performance that you need.

So if you look at it in three phases, the second being the Kyoto period, it's a period of confirmation of technology and the selection of what your future is going to be. And in the period post-Kyoto, you'd roll this stuff out.

The issue again for us is that we're concerned about not picking solutions that have short-term appeal but maybe not long-term staying power, natural gas perhaps being one of those. And the reason I say that is that it's almost assured that Kyoto first phase will be followed by Kyoto second phase because it's been, you know, understood right from the very outset of the Kyoto discussions that this was just a beginning of a process to eventually virtually eliminate greenhouse gas emissions.

The first phase is barely scratching the surface. I mean in terms of Canada's contribution and even the world's contribution, it's barely a start. But it is, in fact, a start with presumably an end in sight of eventually getting to zero. And it's going to take a long time to get there.

So we've always assumed that Kyoto one would be followed by Kyoto two. And you have to be cognizant of that because certainly within the 25 or 30 or 40 or life of an asset that we might build, whatever the thing is, whatever the new technology is, that asset within its life will see the second and third and fourth and however many phases of Kyoto there are. So you don't want to build something that looks like a winner for Kyoto one and then wake up in Kyoto two and realize it's not good enough, so again, wanting to pick your pathways.

Really, our ultimate objective as an industry is zero emission. And the question really for SaskPower is, is there a way to get to zero emission sort of relatively quickly and cost effectively.

Mr. Wall: — So as a result of much of this work that began in 2001 in terms of the R&D and the piloting, at least that began in 2001, since that time has the corporation been . . . is there some contingency planning on the financing side, based on all of the options that are available, in terms of helping either to pay for the technology or to purchase the instruments if that's the route that the corporation decides to go? And if Kyoto is implemented, is that planning underway? Because even at the lower level on the annual basis for the instruments it's not insignificant at \$40 million, just if that's a low-level estimate.

Mr. Wright: — We, on a business planning basis, Mr. Chair, plan on a five-year basis. Hence for 2001 the business plan would encompass that up to 2004. We do however in terms of generation and many other things look well beyond transmission and distribution, 10-year projects, programs and

same with generation as best we can, out 20, 25 years.

We put in bookmarks within existing plans for potential environmental mitigation and so on and so on. Hence the plan or the outlook for the business plan that was produced for 2001 did include dollars and cents for environmental mitigation down the road within the context of that five-year plan. But do we have something sketched out for the year 2008? No.

Mr. Wall: — When, if this protocol is implemented, and when for example the economic instruments that were first looked at in 2001 are known in . . . their cost is known, that you'll be able to . . . you'll know how much per tonne it's going to cost, I guess the question would be then: does the planning start anew in a lot of ways?

For example, the cost-benefit analysis — does that start anew? For example, if the carry . . . if the cost of the instruments equally carrying cost of some other heretofore too expensive type of generation that would in fact allow you to decommission some of the more . . . you know, like the coal-fired generation capacity that you have or plants that you have, can you foresee that planning would then begin anew?

In other words, here's . . . now we know the costs that we're facing and oh, by the way, the costs are about the same as setting up a different kind of generation that allows us to get out of these . . . the more polluting or CO₂ polluting kinds of plants.

Mr. Wright: — There's many facets to this, Mr. Chair. And most importantly of course is determining what our target is under the Kyoto plan. At this point in time we don't exactly know what that is. An emissions trading system has not been established as of yet. As Rick has mentioned, the technology is under review and under development.

We'll also have to consider demand out there because a lot of large industrial users will also have demands put on them to reduce their consumption such that CO₂ is mitigated.

So all these things have to come together. And as I mentioned earlier, Mr. Chair, really a lot of this work is going to take place, according to the federal government, in the year 2003 and 2004. So we'll have to wait and see — very much so.

But we're doing a lot of preparatory work. We did a lot of preparatory work in 2001 and we're continuing that in many, many different ways, from our participation in the clean coal power coalition, ZECA, as we mentioned, in some of the demonstration projects that we're looking at for new technologies.

Mr. Wall: — In terms of those, of the various jurisdictions from which SaskPower purchases electricity, and Mr. Jones highlighted activity that occurred in that area in 2001, does the bulk of that . . . did the bulk of that in 2001, for example, come from Manitoba?

Mr. Wright: — I would have to check, Mr. Chair. Generally it would have come from either Manitoba or it would have come from down south. It certainly wouldn't have come to . . . from Alberta. Some of it, a small amount, probably did come from Alberta, but we were exporting largely into the Alberta

marketplace.

For example, in 2001 we had an exchange agreement, which is during the summer we sell energy down into the United States, but during the winter because the air conditioners aren't running in the US, we purchase at favourable rates from there. But the bulk is, the bulk is from Manitoba, on balance.

Mr. Wall: — Thank you, Mr. Chairman. So in light of that, and I appreciate sort of the glimpse into the future, at least a sketch of what you're anticipating in terms of the three phases, if this thing is . . . if it's implemented one of the options SaskPower has potentially would also be to purchase more electricity from Manitoba that produces of course from hydro for the most part I understand, and therefore wouldn't, you know, wouldn't have . . . doesn't have the attendant worries in terms of CO₂ certainly. Might have other environmental issues surrounding hydro no doubt, but in terms of this protocol not so much so. So is that also an option that was looked at in 2001 or when these studies began, in effect replacing Saskatchewan generation with just buying it from somewhere else?

Mr. Patrick: — Yes.

Mr. Wall: — And is that still an option then that the corporation looks at, or is . . . I mean is . . . I guess is everything still in play?

Mr. Wright: — Everything is in play. Everything is out there; it's in play. So we do take a look at Manitoba; we take a look at the technologies here, and as Rick has been trying to emphasize it's . . . there's no clear winner at this point in time. Perhaps down the road.

Mr. Wall: — Was there . . . because that was an option, were there any cost estimates done on that particular option, decommissioning here some of the capacity and costing out what it might be for SaskPower to just purchase it from Manitoba?

Mr. Wright: — Certainly not in 2001, Mr. Chair. However, what we're looking at — and Rick mentioned this — is if demand continues to grow how do we best service that demand in the future. So we've had discussions with Manitoba Hydro, we've had discussions with many other companies as well.

Mr. Wall: — That's it for Kyoto for now.

Ms. Atkinson: — Just some follow-up questions. As I understand it, individual customers are now able to purchase units of GreenPower. And in the city of Saskatoon, even though the city of Saskatoon electrical company is owned by the city, as a residential customer I am able to purchase green units via my local city electrical department.

I wonder for those other municipalities that have their own electrical utility, have similar arrangements been made with those jurisdictions?

Mr. Wright: — There are only two jurisdictions in the province that have their own electrical utilities. That is the city of Saskatoon, and we have negotiated an agreement with them such that their residents can purchase GreenPower. The other

one is the city of Swift Current, and the city of Swift Current has indicated that it's not prepared to enter into negotiation or an agreement with us on that. Hence their residents are unable to purchase GreenPower from SaskPower.

Ms. Atkinson: — So because of the two wind operations that we have in Cypress and then SunBridge I, as a local customer in Saskatoon, can purchase clean electricity but the people in that region, i.e., the city of Swift Current, aren't able to do that even though that's where the wind towers are located?

Mr. Wright: — Not only can you; we're hoping you have.

Ms. Atkinson: — Yes, I have.

Mr. Wright: — And in Swift Current no, if you were a resident there you would not be able to purchase it.

Ms. Atkinson: — Do we have any explanation as to why they're not interested in entering into an arrangement with SaskPower?

Ms. Youzwa: — We've had discussions with them. It doesn't seem to be something that they're interested in at this time. We certainly keep the door open and the opportunity is there when they're interested to come and talk to us about it.

Ms. Atkinson: — Thank you. In terms of the discussions that Mr. Wall had previously about has there been discussions with Manitoba Hydro, I certainly understand that there have been discussions with Manitoba Hydro for years in terms of buying excess capacity and so on. Have there also been discussions in Saskatchewan about small hydro projects?

Mr. Wright: — Yes, there have been, Mr. Chair. There are two projects that we're very interested in pursuing further. I'd prefer not to name them at this point in time but they're northern projects, small. One is the run of a river and another is where an existing dam is located. And we're pursuing those and taking a look at them.

Rick and his crew, along with the folks in power production, have also undertaken numerous hydrology studies on the Saskatchewan River system and there is some potential for large-scale hydro. However one of the key issues surrounding the Saskatchewan River system is, will the water continue to flow for the next 100 years?

Ms. Atkinson: — Right, which then leads me to another question. I know that at Diefenbaker, for instance, the Queen Elizabeth power station in Saskatoon often relies upon various levels of water. And I'm wondering if you can give us any indication about what impacts that, what seems to be a steady slowdown of water into Saskatoon, has on that particular plant.

I know that people along the Saskatchewan River are extremely concerned about the river and whether or not there is going to be water in the river 100 years from now because of what's happening in the Rockies with the glaciers and so on. Do you have any information you could provide on that?

Mr. Wright: — On the QE station, the Queen Elizabeth station?

Ms. Atkinson: — Just in terms of the Saskatchewan River and impact and so on. Yes, South Saskatchewan.

Mr. Patrick: — It's a very good point. In looking at hydrology of the rivers, historically the way hydrology works is you look at the past and you say, well the future is somehow going to be an extension of that. We are increasingly concerned that may not be a true statement.

Back, it would be in the fall of 2001 in fact, we hosted a seminar on climate change and we had climate change experts from various places come and talk to us about different things. And there were some people there who study Western Canadian climate change issues and there was discussion on the effect of the watershed of the eastern slope of the Rocky Mountains, which is where the South Saskatchewan River rises. And the, I guess the short answer is nobody yet really knows what the long-term effect of climate change will be.

But what is known are a couple of things. First off, the mass of the glaciers that exist on the eastern slope of the Rockies has diminished to the point that it no longer provides, if you like, the baseload of water into the river systems that it once did, which means that on an annual basis you're relying more and more on seasonal participation like snowfall or rain.

The poor finances of SaskPower in the year in question, 2001, were largely driven by the fact that it was a dry year and we just didn't get the water and Lake Diefenbaker was down 20 feet, one of the lowest it had ever been, a scary prospect. It turned out this spring it rained at the right time and it filled right back up again.

So what we're seeing is what the climate change people have been warning us about, is that you're going to see more variation. And it doesn't mean that there's not going to be water, but it's not going to be a steady thing. You're going to have some years that are too wet and some years that are too dry, and some years you're going to have a problem and some years you will not.

In the case of the Queen Elizabeth station, it does in fact take its cooling water from downstream of Lake Diefenbaker. And in years when the river is running low it can, if it gets low enough, cause us to curtail our generation because two things happen: the water temperature of the river rises so that the water that's available doesn't have the same cooling effect as normal — just because it's warmer and we're having to reject heat into an already warm river, if you like — and if the water level were to drop far enough, it actually can drop below the level at which our water intake structures can actually pull it out of the river, in which case you can't get the water.

The other thing that also happens is that when the water's low you get tremendous movement of the sand in the river. That's a very sandy-bottom river, and what it does is it winds up filling our piping systems full of sand and so we spend a lot of time in those kind of years desanding our operation. It's not unheard of, it's not unthought of, but in years when the river is normal it's not a big deal and in years when there's low water and a lot of . . . (inaudible) . . . you can spend an awful lot of time desilting your condensers and that particular year we had to do that.

There was in the year 2001, I think, a growing body of evidence that climate change will be an issue on the South Saskatchewan River. And I'm not sure whether the need for the study was specifically triggered in that year, but subsequent to that a study has been triggered by the federal government on a study of the long-term hydrology of the South Saskatchewan River, which is a good thing, and that's supposed to be a 30-month study which will yield its results basically two years from now.

And I doubt if we'll have the definitive answer because there's a huge unknown body of science around climate change. I mean it's a probabilistic thing at best, and you know you can say that things are going to be wetter or drier but that doesn't mean on any particular day you can reliably predict the weather.

But the availability of information is very important to us because although there are a number of theoretical hydroelectric sites on the South Saskatchewan and main Saskatchewan River which is also co-funded, if you like, by the North Saskatchewan River, they're very expensive sites and if there was any real question about the long-term hydrology, they might be a poor investment. We just don't know that. It cost a lot of money to build hydro projects. They typically are \$1 billion plus and they utterly rely on their economics on a fairly reliable source of water. And if you weren't really comfortable with long-term hydrology, it might not be a good investment.

Mr. Wall: — Thank you, Mr. Chairman. These options that were looked at in 2001 — it's still on the same issue — and the comment that the president made earlier, the answer he gave to a question in terms of where SaskPower sources its imported electricity, some of it from the United States. I would assume that would be precluded then if this protocol or something like it is implemented because the United States is not, will not be a signator or will not ratify, unless of course you're purchasing the credits. I guess then it would still be an option but if you were just trying to mitigate, that would reduce the corporation's options in terms of sourcing the American electricity.

Mr. Wright: — Well with reference to 2001 we did import from the US a fair amount of energy. However, on a go-forward basis we simply don't know at this time. It's speculative at best. It's an issue that certainly has to be addressed in any implementation of plan and we'll just have to see where we go.

Mr. Wall: — With or without, I mean in 2001 well your . . . I think the comment was made that the target was known then but little else would have been known at the time when some of these studies were undertaken. Was there interest in 2001 of the corporation pursuing these things regardless of whether any protocol were to be implemented in the future and specifically the option of potentially shutting down some Saskatchewan capacity in favour of importing Manitoba electricity?

Mr. Wright: — Well we haven't really pursued shutting down Saskatchewan capacity in favour of importing Manitoba. Rather we've looked at, can Manitoba in the future supply possible electricity, as we have looked at all sorts of different sources. That's our job, to make sure that we have a very open and inclusive approach as we move forward.

In 2001 . . . Let me put it to you this way, Mr. Chair. Even in the absence of Kyoto we have a firm belief in SaskPower that

we have a responsibility to the environment. We are polluters, we are major polluters, and that we have got to clean up our act, even in the absence of Kyoto. Hence, we've undertaken a number of initiatives, will continue to undertake them as we move forward. And that's just part of good business, good sense, and good environment, to clean up our act.

Mr. Wall: — Thank you. I'd like to move on to another subject unless somebody else wants to ask some questions about Kyoto or maybe . . . People are looking at their watch; we're getting close to 4:30. If you want to we can continue now or pack it in and meet tomorrow again, Mr. Chairman.

The Chair: — We could do that. Is that agreed that we adjourn?

Ms. Jones: — How long are you going to be, Mr. Wall?

Mr. Wall: — Well we want to start off in a new direction so I don't know. It depends. It depends on the questions and the answers.

Mr. Jones: — Mr. Chair, I apologize to the committee but there is one typographical error in the presentation that if you're going to close for today, it's on slide 22. And it's the very bottom line there, 2001 net income should read 2002 net income. And again, I apologize, Mr. Chair, through you to the committee.

Mr. Wright: — This is very rare for Mr. Jones to make that sort of error, very rare — in fact, unheard of.

The Chair: — It's not an error if you caught it. Okay, we're adjourned until 9:30 a.m. tomorrow.

The committee adjourned at 16:22.

