

**Canadian Nuclear Society  
Alberta Branch  
Alberta Royalty Review Presentation**

**June 20, 2007, 2:00 PM  
Medicine Hat College (Crowfoot Room)  
99 College Drive SE, Medicine Hat, AB, T1A 3Y6**

**Speaking Notes**

**Slide 1: Title** – Thank you Panel, for letting us present our thoughts on nuclear energy and royalties.

**Slide 2: Who are we?** – My name is Duane Pendergast. I'm a member of the Canadian Nuclear Society, and interim Chair of the Alberta Branch. With me are fellow members Laurence Hoye and Cosmos Voutsinos, our Vice-Chair. Laurence is a mathematician. He was a professor and Associate Vice President at University of Lethbridge. Cosmos and I are both mechanical engineers with extensive experience in the nuclear industry. We are all retired.

**Slide 3: Why are we here?** – We believe Albertans can benefit more from energy wealth if nuclear energy used. We want to plant some ideas as to how that might be accomplished. We suspect royalty policy has developed on a piecemeal basis. Laurence Hoye has thought about that. He wonders if the policy could take into account all resources and their changing roles over time. Laurence will now present his ideas for an integrating plan.

**Slide 4: Fundamental royalty basis** – May I first of all say that I am not a nuclear expert but certainly support my colleagues in this presentation.

My concerns are about the applicability of the royalties and their subsequent disposition. Over the years there has been very little of these royalty funds put aside except for the heritage trust fund and several other research funds. The royalty scheme should be applied to all sectors of Alberta resources as indicated in slide 4 and in the brief.

A substantial portion of these funds should be set into an Alberta sustainability fund. After inflation-proofing, the earnings could be used for many purposes, or portions of the principal could be lent at competitive rates to federal or provincial governments. The fund would be a national resource but benefiting all Albertans. We could not do all this instantaneously but over time, say in ten years, after all, the original resource did not develop overnight and time is on our side.

**Slide 5: A royalty plan for the long term** – Commissions could be established in significant areas to develop the fee structure. A commission for a given resource area would consist of a senior retired Alberta judge as chair, an academic and an engineer. The fee scheme would be examined every five years.

Since there may be several of these commissions, there would have to be some over-arching agency to coordinate all these activities. The important principle is to maintain a revenue stream for Alberta to replace the depleting resource, which, when gone, will generate no more financial or harvesting activity.

Cosmos Voutsinos will continue with the presentation. His engineering economics experience provides insight on how to make the most of Alberta's resources.

**Slide 6: Moving toward the plan** – The benefit to all stakeholders can be maximized by achieving a synergy that will benefit: a) the society - that owns the resources, b) our government - that manages them on behalf of society and c) the oil companies - that extract them and bring them to the markets on behalf of the people for a profit. The tar sands represent a large enough resource that there is no incentive to look back. Looking ahead we then one sees the need to establish long term stability (low risk) to foster investment in a solid robust industry.

Royalties might not be high enough right now and they could be increased for future leases. However, our Government rightly or wrongly has signed past licensing agreements based on which the oil companies have begun to spend their capital. How can we expect to have lifetime loyal partners while we are changing arbitrarily our agreements without our partners consent? I propose to present to you another area to examine that will help us keep our agreements

and at the same time improve on the status quo. Adjustments made in this area can be phased in over a time period of say 5 to 10 years and will be intended to focus our oil companies towards our mutual long term benefit.

**Slide 7: Current Processes to Question** – Fair pricing, royalties and taxes for the commodities consumed in situ by the oil companies is essential. Effective subsidies in this area have provided a disincentive to the oil companies to be efficient, conserve our resources, and to use alternative energies and reduce emissions of greenhouse gases. It also has caused a significant amount of lost revenues for the people of Alberta.

Policies and processes for the following seem questionable:

A) PRICE FOR UTILITY GAS

B) PRICE FOR COKE

C) PRICE FOR SYNGAS

D) BURNING OF BITUMEN

E) EXPORTING BITUMEN

F) CAPITAL COST RECOVERY

G) CARBON TAX

**Slide 8: Stretching depleting resources** – In conclusion I suggest that instead of focusing on increasing the royalties Alberta and the oil companies will be better off if we announce today and phase in a 10 year reduction in the subsidies that we provide for the consumables. This not only will not violate existing contracts, not only will provide a significant amount of royalties lost in the past, not only will increase the oil production and royalties not only will conserve our resources to the maximum possible, but most importantly will cause the oil companies to focus towards a more efficient exploitation of our resources, by using alternate energies. It will also place the foundations for a long term balanced relationship and sustainable production of energy, without

conflicts with our environment. You cannot blame the oil companies for taking what we are giving them. If you change the tune they will change the dance. ... Thank you.

Duane will conclude with a few remarks on the future role of uranium as an Alberta resource.

**Slide 9: Canada's energy flow's** – This energy flow diagram from NRCan provides interesting insights. Energy associated with Canada's export of uranium is already about equal to that from fossil fuels. Current reactors use uranium inefficiently. Advanced reactor systems could extract about 100 times as much. There is a basis for an energy "superpower".

**Slide 10: Mineral Potential** –Canada's uranium producers pay about fifty million dollars in royalties. Alberta's fossil fuel producers pay about ten billion dollars. There seems to be a disconnect based on energy potential. Alberta has uranium. A royalty is already set which ignores its energy potential. I wonder if the royalty structure could somehow take that into account.

**Slide 11: Athabaska Region – 2007** – To sum up, we are here today.

**Slide 12: Athabaska Region – 2100** – We anticipate seeing something like this a century ahead. How will we get there while ensuring Albertans realize maximum benefits from their resources? We are looking forward to your questions and insights. Thank you.

**Slide 13: Supplementary – Bibliography** - Should any of you wish more information on uranium and nuclear energy we would be pleased to help in any way we can. I published a paper which explores the role of nuclear in the oilsands. Cosmos has submitted a book for publication and he would like to provide you a copy when it's completed. In the meantime this slide provides WWW links to my paper, a CERI study of the economics, and to a preliminary version of Cosmos's book.

**Slide 14: Short Resumes of presenters**