is well worth taking a look at these figures. Energy consumption directly from oil accounts for 52 per cent of our energy. With respect to natural gas, the figure is 23.5 per cent; coal is 3.9 per cent; and wood pulp 4.1 per cent. The total with respect to electricity is 16.5 per cent. Hydro is 11.4 per cent and coal-fired is 2.4 per cent. Nuclear power accounts for 1.3 per cent while oil-fired accounts for 0.7 per cent. Gas-fired accounts for 0.6 per cent and wood and others account for 0.1 per cent. Nationally, it is interesting to note how small is the amount of energy provided by nuclear power. Yet there are tens of billions of dollars which go into directly subsidizing this particular industry.

Under the section on energy in *The Canadian Business Review* article Mr. Edwards points out a number of key points, around which I think the debate should revolve, as to why there should be a full public inquiry. I refer to reactor safety studies. I think we must learn from Chernobyl and Three Mile Island that although many people for many years have told us that CANDU is the safest and best protected nuclear fission technology in the world, it is an area about which we need to study more closely. This should be done in a public inquiry where witnesses can be protected in giving evidence.

With regard to radioactive waste disposal, I recently had a chance to listen to Morris Udall, as did you, Mr. Speaker, who is now putting together what he himself describes as probably the largest, grandest scale project in the history of the United States. This project is the movement of nuclear waste from their sites to storage areas perhaps immediately below your own constituency, Mr. Speaker.

Mr. McDermid: That has been ruled out.

• (1120)

Mr. Fulton: The issue of radioactive waste disposal is very important. It is a crucial issue in the United States. The Americans are trying to deal with it by the year 2000. We have no plans like that and there is certainly nothing before Parliament to deal in a parallel way with what is going on in the United States.

Regarding the issue of the highly radioactive wastes produced by the reactors, there exists in excess of 100 million tonnes of highly toxic low level radioactive waste called tailings. The amount of tailings at Elliot Lake alone would cover the Trans-Canada Highway three feet deep from Vancouver to Halifax. Those tailings are sitting there waiting for Canadians to come up with a way of dealing effectively with radioactive waste.

Regarding the decommissioning of nuclear facilities, there is a requirement to develop techniques and tools for the dismantling of the highly radioactive structures left at the end of the useful lifetime of a reactor. We know, for example, that Gentilly I is awaiting that kind of proper decommissioning. The argument about workers being thrown out of work if we were to have a moratorium on nuclear power and start decommissioning our nuclear industry simply does not stand up under the scrutiny of economists and scientists who have looked at the amount of work required in the decommissioning of the existing sites. Similarly, specialized tools and skills would be needed to simply retube reactors during the period of a moratorium in order to keep the operations going as safely as possible.

Regarding energy self-sufficiency, Dr. Edwards made an important comment about evidence given by Sir Brian Flowers. He said the following:

> Canadians should carefully weigh the advice of Sir Brian Flowers, a prominent British nuclear physicist, who warned in 1976 that "a major commitment to fission power and a plutonium economy should be postponed as long as possible." The reason for this is fundamental.
>
> Plutonium appears to offer unique potential for threat and blackmail against society because of its great radiotoxicity and its fissile properties.
>
> The construction of a crude nuclear weapon by an illicit group is credible. We are not convinced that the Government has fully appreciated the implications of this possibility.

That evidence was given in Great Britain before a royal commission. Many years ago, the Britons took this issue much more seriously than we do.

The Select Committee on Ontario Hydro Affairs took a look at the issue of accidents recently and had the following to say about the devastating and irreversible consequences of a major accident in a CANDU reactor:

> It is not right to say that a catastrophic accident is impossible.
>
> —The worst possible accident would involve the spread of radioactive poisons over large land areas, killing thousands immediately, killing others through increasing susceptibility to cancer, risking genetic defects that could affect future generations, and possibly contaminating large land areas for future habitation or cultivation.

Dr. Edwards goes on:

> According to the Ontario Royal Commission on Electric Power Planning, the most realistic probability for a complete core meltdown in a CANDU reactor is about 1 in 10,000 per reactor per year.

It is interesting that that is precisely the same figure used by the Soviets in relation to Chernobyl, a state of the art graphite reactor built only a few years ago. The quote goes on:

> With 23 reactors now committed in Canada, each expected to operate for 30 years or more, the over-all probability that a catastrophic meltdown will occur at one of these plants in the future is greater than 1 in 15—more than twice the probability of rolling a twelve with two dice—
>
> Even non-catastrophic accidents can have a crippling impact. The cleanup following the Three Mile Island TMI accident in Pennsylvania is expected to take about ten years and cost $1 billion to $2 billion, but there is no assurance that cleanup efforts will be successful.

It is also interesting to look at the calculated probabilities for accidents in CANDU reactors. This information comes from the Atomic Energy Control Board itself as given to the Royal Commission on Electric Power Planning. The calculated probabilities for accidents are as follows: for loss of coolant, with one reactor it is one in 100 annually; with one reactor it is one in four over the reactor's lifetime; with 20 reactors, it is one in five annually, and with 20 reactors it is 99.7 per cent over their lifetimes. On core meltdown, something which has already occurred here in Canada, the probability is one in 10,000 for one reactor annually; one in 300 for one reactor's