The development of our electrical resources in the latter part of this century will shape the future of Ontario as surely as did the efforts of Sir Adam Beck and his colleagues at its outset. In the early part of the century, it was hydroelectricity which gave Ontario its industrial strength. That water power, which gave the province abundant electricity, was an indigenous resource. By 1990 Ontario Hydro will be generating more than half of its electricity by nuclear energy, a source which will give us stable, economic energy from another indigenous source, uranium.

Canada, with 10 per cent of the world's uranium, is in a uniquely favourable position to exploit the potential of that resource. Substitution is the key to our way out of the oil dilemma and it will be our ingenuity and perseverance in finding methods of substitution which will determine our energy future. The use of uranium in electrical generating stations is an obvious form of substitution, and the economics of nuclear generation have already been established.

In Ontario, where the competition is imported coal, electricity is being produced by nuclear plants at half the cost of that produced by burning imported coal. I agree with the hon. member for Edmonton East (Mr. Yurko) who said, as reported at page 2055 of *Hansard* for June 12:

> Canadians can be very proud that they have contributed to the development of nuclear energy.

He went on to say:

> I am convinced beyond a shadow of a doubt, as are many experts in this field, that mankind not only needs nuclear energy desperately in the evolving civilization, but knows how and has available at its fingertips the ability to cope with the problems resulting from this industry.

It is a very wise man who said those words. He should be sitting on this side of the House.

In France, a country entirely dependent on imports for its oil supply, a realistic, aggressive campaign is under way by the state electric utility, EDF, to seek ways in which industry can electrify its operations. A team of 100 specially trained young EDF engineers are working out in industry to promote the concept and educate industrial engineers. Fifty per cent of the new homes being built in France are equipped with electric heat. This, it should be appreciated, is taking place in a country where electricity is far more expensive than it is in Ontario where the combination of hydraulic and nuclear generation has kept costs down.

The key to France's bid for both self-sufficiency and a high energy society is the pursuit of a strong and highly advanced nuclear power program which will supply 50 per cent of that country's energy by the end of this century. The nuclear decision in France has meant that a secure and increasing supply of electricity can be made available, an attraction for many major industries. One result has been that the European aluminum industry will concentrate its plants in France, giving that country a new industry with an export market throughout Europe, while we sit and quibble over whether or not to sell our Candu reactors to this country or that one, or whether we are going to be in this market or not, or whether we should have these double standards which the mover of this motion talked about at the beginning of his remarks.

It is not only as an electricity producer that nuclear reactors can provide answers to our energy problems. The *in situ* extraction of oil from the tar sands calls for huge quantities of steam. A 125,000 barrel per day plant requires something like the entire steam output of one of the Pickering reactors. Cheap steam from nuclear reactors is nothing new. At the Bruce nuclear power development near Kincardine, the reactors supply steam to the chemical plant which makes heavy water as well as supplying electricity to the Ontario Hydro network. Last year the amount of heat supplied in this way was equivalent to the heating requirements of about half a million homes, and studies are in progress to see how other industries can be attracted to the area by such economical energy supplies.

The hon. member for Vancouver-Kingsway (Mr. Waddell) asked a question with regard to solving the problem of nuclear waste. I think we do have the technology to solve the problem of nuclear waste, but I will leave that topic to other speakers later on in the debate.

Another kind of waste is also very important, and that is the waste of heat escaping into the atmosphere from these nuclear reactors. In the future surplus heat from the Bruce reactors could be used in greenhouses, which is an idea suggested by one of my constituents, Mr. Czubak. The surplus heat could also be used in a fish farming project built near the plant. The Ontario Energy Corporation and a group of private investors already have a one acre experimental greenhouse in production to demonstrate the feasibility of such a project. This year they will add 14.4 hectares—for the hon. members of the Conservative party, that is 35 acres—of greenhouses in anticipation of the building of a hot water pipeline from Bruce. Eventual plans are for 60.6 hectares or 150 acres of greenhouses, all heated by surplus nuclear heat.

At the other end of the scale is the development of mini-reactors which could replace oil furnaces in factories, shopping complexes and large buildings. The University of Toronto, like a number of other large universities in Canada, operates a small research reactor on campus, a fact perhaps which is not known by hon. members opposite. It operates unattended, is self-regulating and produces only a few kilowatts of heat. It is this type of reactor which we believe can be developed into a replacement for the oil furnace.

This government is showing decisive leadership by encouraging such imaginative projects which are pointing the way to a future in which this country can secure real self-sufficiency in energy without incurring the drastic alterations of a lifestyle which hon. members of the NDP would have us believe are inevitable. The growing evidence around the world is that the economic structure of the advanced nations can survive the ratcheting of oil prices by OPEC and the far more severe disruptions which lie not too far down the road as oil supplies dwindle.