

*Energy Conservation*

may cause some difficulty. At present we do not know how much our electrical power needs will increase and be met with the use of nuclear reactors. That being so, we should conserve our nuclear resources and not sell reactors.

Let the government husband our uranium, a resource which will play an ever increasing role during the next 20 years. If we sell CANDU reactors and the material to power them, we may find that history will repeat itself. We shall be unable to meet our own needs because we shall have sold our resource foolishly, without knowing how much is left for our own use.

**Mr. Ross Milne (Peel-Dufferin-Simcoe):** Madam Speaker, it gives me great pleasure to participate in the debate on this important motion dealing with a subject which is of great importance at this time. Surely nothing is more important for the future of Canada than our being self-sufficient in energy and agricultural production. The government's recently tabled white paper on the restraint program dealt with future spending priorities and underlined energy production, agricultural production, and housing. The question of energy is given the high priority it rightly deserves. If we are to be self-sufficient in energy we must embark on a successful exploration and conservation program. Self-sufficiency will only come about if we are successful in both these areas in the years ahead.

To me conservation means the elimination of waste and increased efficiency of energy utilization. This is important because, as previous speakers suggested, a good 50 per cent of all energy we use is wasted. In other words, we effectively utilize only about 50 per cent of the energy we produce. This figure should be of fundamental concern. We shall use more energy, much of it electrical, generated by the use of oil, gas and coal, but the efficiency figure will continue to decrease as we use more and more highly refined energy. Therefore conservation measures are in the best interests of Canada and economically important.

Let me dwell for a moment on the economic aspects of energy production. First, not only will development of new types of energy be very expensive, delivery will also be a problem. For instance, it takes increasing amounts of energy merely to develop new energy resources. About 25 per cent of the Syncrude output will be absorbed by energy extraction processes. The Mackenzie Valley pipeline, if and when it is built, will use a considerable amount of energy merely for the movement of the gas throughput. Clearly, new energy resources will be less efficient than previously.

What can we do to meet the challenge? It is possible to reduce demand, perhaps between 15 per cent and 20 per cent below projections for the year 2000. If we do this we shall be able to reduce the size of the delivery system by two thirds of the size of the present delivery system. This, in turn, can have an important bearing on the investment the industry will need to make in the years ahead. If we can reduce projected demand increases each year even by 1 per cent, the savings will be substantial, in the order of \$2 billion. This represents a large amount of capital investment saved.

We should consider the question of energy under two headings. First, we ought to establish the conservation ethic with the Canadian people. We must ask people to reduce their use of energy even though this may have some

impact on their standard of living. We must convince them to reduce waste, perhaps to reduce the discretionary use of energy. Second, we must emphasize the more efficient utilization of energy. This will entail superior designs for buildings, cars, appliances, and better industrial processes. Conservation of this kind will be dependant on better engineering and technology, as designers will design products which will use energy more efficiently without interfering with the life style of people. Perhaps in this area the biggest savings are possible.

I think we ought to be concerned about use of non-renewable resources. Perhaps in the final analysis we need not be overly concerned about amounts of energy still available, as a great many energy resources are yet to be developed and delivered. But this is not the case with respect to many other non-renewable resources. About half the world's population lives in undeveloped countries containing many non-renewable resources which contribute greatly to our present high standard of living. We have seen a significant transfer of those non-renewable resources from the underdeveloped countries to that one fifth of the world's population living in industrialized countries.

We must consider two questions concerning use of energy. If we continue to use vast amounts at present rates, if we consume so much more per capita than others do in the world, for how long can we be assured of security of supply? The population of the world will increase. It is predicted that the populations of underdeveloped countries will increase significantly. These people entertain expectations of higher standards of living. To accomplish their ends they will need to use much more energy, and many more renewable resources than ever before. So as time goes on the problem, and its urgency of solution, will be compounded.

May I mention some specific areas of concern? I suppose most people are concerned about large increases in natural gas use, and I am speaking of natural gas as a highly refined form of energy. Many realize that natural gas for long been underpriced relative to the price of other forms of energy. Natural gas has been environmentally acceptable; indeed, a good percentage of industries have switched to natural gas, after using coal, bunker C oil or some other residual oil, in answer to environmental pressures put on them. Consequently there have been a pronounced shift in the last few years in the energy business. The question is, should we allow highly refined forms of energy like natural gas to be used in the generating of electricity, or under heavy boilers?

It seems to me that if we are concerned about the future of our economy and energy supplies, and want to maintain our competitive advantage in the world, we should consider the use of natural gas in the chemical industry, paint industry, or in connection with plastics. I think we ought to give this matter serious consideration. I have often wondered what really is the best approach. Should we be working toward an equalized pricing structure with other forms of energy, or some type of program that designates the use of natural gas, reserving it for certain types of industry where a lot of jobs are associated?