

### *Use of Solar Energy*

units and other equipment using renewable energy, they could have refined the product and made it less costly so that the consumer would have been able to benefit from it. That would have been better than standing back and saying that we cannot proceed with the project because adequate research does not exist at present. I say that the government could start providing real incentives immediately not only for research but to individuals so that they could place equipment using renewable energy within their structures.

Recently a booklet of the Department of Energy, Mines and Resources outlined how we could put solar energy technology in Canada to use. It suggested that two benefits would flow from it. One would be the savings to society in terms of the prevention of pollution resulting from conventional heating methods. We all know that certain harmful emissions result from heating our homes with diesel fuel or oil, not so much from natural gas. We also know that renewable sources of heat, such as heat pumps, do not produce emissions and are perfectly safe.

It was also stated in the booklet that savings to society would result from the use of renewable sources of energy in the heating of homes. I believe that some 35 per cent of all the oil and natural gas in this country is used to heat our homes. If renewable sources of energy were used instead, that much oil or gas would be saved, and that much less would have to be imported or would be saved for other needs.

The hon. member for Davenport mentioned that we were running out of non-renewable resources. Surely now is the time to provide all sorts of incentives to save our oil and gas for future needs. I believe that a substantial program of financial incentives should be set up to encourage people to employ renewable sources of energy for heating. The suggestion which was put forward by the hon. member for Qu'Appelle-Moose Mountain (Mr. Hamilton), and which I support, is that the federal government, which will be bringing down its budget in the next month or so, should provide 150 per cent tax exemptions on the use of a source of renewable energy in existing or new structures. A heat pump, for example, would cost \$3,000. A person placing one in his house would enjoy a tax exemption of \$4,500. Solar heating is slightly more expensive. It is suggested that it would cost about \$10,000 to put that system into the average sized house. A developer or an individual who installed that equipment would enjoy a tax exemption of \$15,000.

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If this type of incentive was provided, we would see in businesses and homes a 20 per cent reduction in the amount of oil, gas and electricity which would otherwise be used to heat them over the next few years. We use in the neighbourhood of one billion barrels of oil each year. If that oil costs \$12 a barrel, we spend about \$12 billion per year on oil and gas. If we save 20 per cent of that, we save \$2.4 billion. That may well be an exaggeration because much of that oil and gas is used in cars, but surely hon. members can see that that kind of

[Mr. Schellenberger.]

saving would more than pay for the tax credit or tax exemption, and the results and benefits would be everlasting.

I said I was going to quote the hon. member for Qu'Appelle-Moose Mountain (Mr. Hamilton). He has made two previous speeches about this, and I would like to quote from one speech in which he suggested that 150 per cent and 100 per cent tax write-offs should be allowed Canadians who use renewable energies within their homes. The hon. member stated, and I quote:

Following up my budget proposals in my speech of November 17, 1977, I submit the following paper at the request of your Parliamentary Secretary.

At this particular moment Canada's interests require a dramatic incentive for individuals to move towards some form of solar assisted energy savings. This need fits in with the opportunity for potential budgeting.

In almost every case solar hardware is capital intensive. In other words, one large capital investment now versus the usual 20 years of annual energy bills.

My proposal is that any type of capital expenditure to reduce utilization by the individual of traditional energy sources should be given the same tax treatment that business gets, namely:

- (a) 100 per cent write-off for proven hardware
- (b) 150 per cent write-off for hardware still in experimental stages

This write-off was in place in tax provisions from 1959 to 1971, but it was removed by a budget of the Liberal government of that time. Our suggestion is that that write-off be put back in place for individuals who are prepared to use renewable energy sources.

Solar energy is not the only renewable energy source available. There are eleven forms of renewable energy which can be placed within various structures. I will state them quickly. Heat pump technology has been available for decades and is widely used in the United States today. With simple modifications it could be used here in Canada. The others are heat storage facilities, methane production, vertical axis windmills, solar absorption air conditioning, residential photovoltaics, individual water recycling, conversion of waste to energy, conversion of cow manure to protein, energy plantation and the production of hydrogen. All these are available in various technological forms today. In individual cases many could be placed economically within the businesses of homes of Canadians, if Canadians were provided the incentive.

At the present time, even with increases in the price of natural gas and oil heating, this is still within the bounds of most Canadians. However, as costs increase and as that resource becomes less and less available, it becomes more and more evident that we should be providing incentives to Canadians.

I was speaking previously about a report produced by the Department of Energy, Mines and Resources. The study took place in 1977. The report states that the lifetime costs of three space-heating energy systems have been calculated. Exempting solar equipment from property taxes resulted in the following cost comparisons: Solar, \$7,960; oil, \$6,600; and electricity, \$11,280. This study showed that solar is still not competitive with oil. The figures I have given are 1977 figures, and since that time there has been an increase in the price of oil and natural gas. Even so, solar heating is and can be competitive