

*Automatic Headlight System*

We support this motion, even with its slight error of omission. I am sure that the House will pass this motion. Perhaps we can let this motion carry and call it six o'clock.

**Mr. Joe Reid (St. Catharines):** Mr. Speaker, I, too, support the motion of the Hon. Member for Crowfoot (Mr. Malone). I hope it will be given passage. However, I have a rather dry and technical comment to make in connection with the requirement of the Treasury Board to make a cost-benefit analysis of such a regulation.

A lot of people question the cost and apparent waste in relation to the apparent benefits of daytime running lights. I would like to present a summary of the likely costs that will be incurred by the introduction of a regulation requiring daytime running lights on all new passenger cars from, for example, the model year 1990 onward. I will then make a comparison of those costs with the anticipated benefits accruing from daytime running lights. In so doing, I hope to give some of the answers to the questions raised by the Hon. Member for Papineau (Mr. Ouellet) in his comments earlier this evening.

Federal government Departments are required, in accordance with Treasury Board guidelines, to undertake such an analysis of cost-benefit. Cost-benefit analyses are, at best, approximate due to the assumptions necessary. In addition, because the manufacturers' response to a performance standard may vary from company to company, it is not always possible to forecast accurately the costs. In this case estimates have been made of the costs that would be incurred in vehicle equipment modifications and operating expenses for several possible systems that are most likely to be introduced in response to the regulation. These have been compared to the social benefits, expressed in dollar terms, which would accrue from the reduced accidents which we anticipate, using estimates of the minimum social value of accident losses.

In making these comparisons a suitable timeframe has to be selected. In this case the suitable timeframe selected was the average life of an automobile. In developing the cost-benefit comparison, a number of options were considered. Cars and light trucks might use reduced intensity headlamps, regular intensity low-beam headlamps, increased intensity parking lamps, modified turn signals, or separate special purpose running lamps. The regulation requiring daytime running lamps emphasizes that only the daytime running lamps need be turned on automatically. The options for heavy trucks and buses are generally similar to those for cars.

It is generally easier in road safety cost-benefit comparisons to establish costs. The cost to manufacturers of the vehicle modifications were based on analyses of production vehicle component costs. These estimates have been amended accordingly. The additional maintenance costs were based on the manufacturers' minimum specification for lamp bulb lights and surveys of market prices for replacement bulbs. The extra fuel required to run these systems over the life of a vehicle was estimated from projections of the additional electrical load combined with the engine operating efficiency. The cost of the

extra fuel was based on estimates of market price. These factors were all combined to produce a lifetime cost for vehicles. The modifications imposed by the regulation for small motorcycles and snowmobiles are expected to be so small that they were not included in the cost-benefit analysis.

With regard then to the passenger motor vehicle, the lifetime estimated costs of the most likely systems for a passenger vehicle are as follows: reduced intensity high beams, \$40; reduced intensity low beams, \$150; higher intensity parking lamps, \$80; modified turn signal lamps, \$60; and special purpose lamps, \$70.

In comparison to the present habit of using the existing headlights, which is estimated to cost \$350 over the lifetime of a vehicle, these costs are reasonable. The higher cost of this option, which the regulation will not exclude by reason of its safety factors, mainly results from the fact that using headlamps at normal intensity wears them out much more frequently than would the reduced intensity lamps permitted in the regulation. It is anticipated that vehicle manufacturers will normally choose one of the options using only front lights to minimize the extra electrical load and bulb replacement. Lifetime daytime running light costs for trucks and buses of the front light options are estimated to range from \$40 to \$370. These costs compare to those of the passenger cars.

Let us go back and look at the benefit side. The effectiveness of daytime running lights in avoiding accidents has been the subject of several major studies. The best evidence comes from Sweden, as the Hon. Member for Crowfoot has already mentioned. Several other shorter term studies have already been made in the North American market. That increase in light use was accompanied by reductions in multi-vehicle daytime accidents of between 11 per cent and 13 per cent. The reductions took place on all types of roads, in all seasons, and involved all road-user types. Based on this Swedish experience and other smaller-scale studies, it appears evident that we should be moving in a direction suggested by the motion.

● (1750)

Based on these estimates, total fatal accidents may be reduced by 1.8 per cent to 4.2 per cent, and accidents involving personal injury by 3.8 per cent to 6.2 per cent, and accidents involving only property damage by 3.1 per cent to 5.6 per cent. By applying minimum dollar values to these accident reductions over the lifetime of the total Canadian vehicle fleet, lifetime savings estimates can be developed, which can then be compared with the costs. On a per vehicle basis, it is estimated that the lifetime savings can range from \$65 to \$430, depending on the scenario adopted. Of course, the estimated savings with respect to buses and heavier motor vehicles are equally comparable.

Of these savings, health care cost savings make up about 5 per cent, 30 per cent are from losses of productive work, and the remaining 65 per cent in savings is from property damage costs. When one develops the average lifetime motor vehicle