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CITY OF **VANCOUVER**

ADMINISTRATIVE REPORT

Report Date: September 16, 2008
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VanRIMS No.: 08-2000-20
Meeting Date: September 30, 2008

TO: Vancouver City Council

FROM: General Manager of Engineering Services

SUBJECT: Neighbourhood Zero Emission Vehicles / Low-Speed Vehicles

RECOMMENDATION

A. THAT the Street and Traffic By-Law be amended to allow Neighbourhood Zero Emission Vehicles to travel on streets with speed limits of 50 km/hr or less;

B. THAT the Street and Traffic By-Law be amended to restrict Neighbourhood Zero Emission Vehicles to the lane on the street that is closest to the right hand edge or curb of the street, except when a left hand turn is necessary or when passing another vehicle;

C. THAT Council instruct the Director of Legal Services to prepare an amendment to the Street and Traffic By-Law, generally as set out in Appendix A, for consideration by Council; and

D. THAT Staff work together with the Insurance Corporation of British Columbia and the Vancouver Police Department to monitor the use of Neighbourhood Zero Emission Vehicles and report back to Council in 36 months.

COUNCIL POLICY

This subject deals directly with the City of Vancouver's policies on promoting sustainability and reducing greenhouse gas (GHG) emissions.

PURPOSE

On June 6, 2008, the British Columbia Motor Vehicle Act Regulations were amended to include the definition for a neighbourhood zero emission vehicle (NZEV). Prior to this, the Provincial regulations restricted NZEVs to streets with speed limits of 40 km/hr or less, and the Federal

regulations prohibited them from travelling at speeds over 40 km/hr. As part of the amendment, the Ministry of Transportation (MoT) is giving Municipalities the authority to create a by-law which would allow NZEVs on streets with speed limits above 40 km/hr, but no greater than 50 km/hr.

BACKGROUND

Neighbourhood Zero Emission Vehicles (NZEVs) are a defined class of slow moving electric vehicles which are new to the province of British Columbia. The safety requirements for these NZEVs are regulated by the same standards as outlined by Transport Canada for low speed vehicles (LSVs). They are low weight (less than 1 361 kg), powered by an electric power train, and do not use fuel as an on-board source of energy. These low speed electric vehicles are federally regulated to travel at a max speed of 40 km/hr because of crash testing performed by Transport Canada. Typically these low speed electric vehicles have a range of approximately 60 km. More detailed definitions for LSV and NZEV can be found in Appendix B and C respectively.

Currently, British Columbia, Ontario and Quebec are the only 3 provinces that allow the use of LSV on streets, but the three provinces have unique regulations. The Ontario government pilot program was established to consider allowing LSV in public parks by employees of the park and the Ministry of Natural Resources. This pilot program is scheduled to end in September 2011. Quebec recently commenced a three-year pilot program to monitor the use of these vehicles on city streets with 40 km/hr speed limits. They will be allowed to use the right-hand lane (except to pass) and have to be equipped with a slow moving vehicle emblem and keep their lights on.

In regards to other local jurisdictions, including New Westminster and Burnaby, they have not made a decision on whether they will amend/create any municipal by-laws to authorize the use of these newly defined NZEV on their 50 km/hr streets, at this time. A holistic approach within Metro Vancouver would further expand the value of these zero emission vehicles as a transportation alternative.

DISCUSSION

Gasoline powered vehicles make up a very large portion of the passenger vehicles on the road today and are responsible for a significant percentage of GHG emissions. Alternatives such as NZEVs give citizens the opportunity to be a part of the solution to become a more sustainable city. The City of Vancouver already has designed and adopted several sustainability initiatives, one of which is the inclusion of plug-in facilities for new developments that will allow for more convenient and practical use of these electric vehicles. Despite NZEVs inability to travel long distances or carry large loads, they are particularly economical for shorter trips to work or shopping facilities. As well, additional benefits which include zero emission at source and little to no noise output make them a very attractive choice.

Since NZEVs have a max speed of 40 km/hr, the operators of these vehicles are required to display the slow moving vehicle emblem which would inform other drivers to take precautions when manoeuvring around them. It should also be noted that bicycles, motor-assisted bicycles and scooters are permitted on our streets and in most cases travel slower than 40 km/hr. As well, skateboards are permitted to travel on minor streets.

Staff have had preliminary discussions and shared a draft with: Electric Mobility Canada, Vancouver Police Department, Downtown Vancouver Business Improvement Association, Community Visions, British Columbia Trucking Association, Translink, Coast Mountain Bus Company, and the Bicycle Network Subcommittee of the Bicycle Advisory Committee.

The Vancouver Police Department (VPD) has raised concerns over the use of NZEVs in the City of Vancouver. The first of two primary concerns is the issue created by the difference in speed of the 40 km/hr NZEV and regular traffic which can travel at 50 km/hr. This situation potentially puts NZEVs at a greater risk of being involved in a collision. The second concern is associated with the crash test data for these NZEVs and the ability for an NZEV to provide adequate protection in the event of a collision, especially with a full size vehicle or truck. NZEVs are not built with the safety engineering features such as airbags, impact absorbing bumper and intrusion protection found in the typical modern motor vehicle. Staff will work together with the Insurance Corporation of British Columbia (ICBC) and the VPD to monitor the use of these NZEVs and evaluate their implementation, then report back to Council in 36 months.

FINANCIAL IMPLICATIONS

There are no financial implications.

CONCLUSION

The recent amendments by senior levels of government have given the City of Vancouver an opportunity to demonstrate a commitment to sustainable initiatives, and further strengthen its role as a progressive, forward-thinking City. Although these vehicles may possess apparent drawbacks when compared to conventional gasoline powered vehicles, they are a step towards more sustainable transportation technology and their adoption will help accelerate future development. Creating a by-law to permit these vehicles on 50 km/hr streets is integral to the success of NZEVs in the City of Vancouver, because the majority of our road network is designated at 50 km/hr.

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APPENDIX A

BY-LAW NO. _____

A By-law to amend Street and Traffic By-law No. 2849 regarding neighbourhood zero emission vehicles

THE COUNCIL OF THE CITY OF VANCOUVER, in public meeting, enacts as follows:

1. This By-law amends the indicated provisions of the Street and Traffic By-law.

2. To section 3, after the definition of "Motor Vehicle", Council adds:

‘ "**Neighbourhood Zero Emission Vehicle**" means a vehicle that travels on four wheels and is powered by an electric motor that is designed to allow the vehicle to attain a speed of 32 kilometres per hour but not more than 40 kilometres per hour in a distance of 1.6 km on a paved level surface, and

(a) meets or exceeds standards of the Motor Vehicle Safety Act (Canada) for a low-speed vehicle and bears a compliance label for a low-speed vehicle in accordance with that Act, or

(b) if imported to Canada, has been imported as an admissible low-speed vehicle in accordance with the Motor Vehicle Safety Act (Canada) requirements and

(i) bears a compliance label for a low-speed vehicle in accordance with that Act, or

(ii) meets applicable federal United States laws in accordance with the Motor Vehicle Safety Act (Canada).’

3. After section 59, Council adds:

"59A. A person may drive or operate a neighbourhood zero emission vehicle only:

(a) on a street that has a speed limit of 50 kilometres per hour or less; and

(b) in the lane on the street that is closest to the right hand edge or curb of the street, except when a left hand turn is necessary or when passing another vehicle.

4. A decision by a court that any part of this By-law is illegal, void, or unenforceable severs that part from this By-law, and is not to affect the balance of this By-law.

5. This By-law is to come into force and take effect on the date of its enactment.

ENACTED by Council this day of , 2008

Mayor

City Clerk

APPENDIX B

Vol. 142, No. 16 — August 6, 2008

Registration

SOR/2008-229 July 28, 2008

MOTOR VEHICLE SAFETY ACT

Regulations Amending the Motor Vehicle Safety Regulations (Low-speed Vehicles)

P.C. 2008-1336 July 28, 2008

Whereas, pursuant to subsection 11(3) of the *Motor Vehicle Safety Act* (see footnote a), a copy of the proposed *Regulations Amending the Motor Vehicle Safety Regulations (Low-speed Vehicles)*, substantially in the annexed form, was published in the *Canada Gazette*, Part I, on December 22, 2007 and a reasonable opportunity was afforded to interested persons to make representations to the Minister of Transport, Infrastructure and Communities with respect to the proposed Regulations;

Therefore, Her Excellency the Governor General in Council, on the recommendation of the Minister of Transport, Infrastructure and Communities, pursuant to subsection 11(1) of the *Motor Vehicle Safety Act*[a], hereby makes the annexed *Regulations Amending the Motor Vehicle Safety Regulations (Low-speed Vehicles)*.

REGULATIONS AMENDING THE MOTOR VEHICLE SAFETY REGULATIONS (LOW-SPEED VEHICLES)

AMENDMENTS

1. The definitions "low-speed vehicle", "motorcycle", "three-wheeled vehicle" and "truck" in subsection 2(1) of the *Motor Vehicle Safety Regulations* (see footnote 1) are replaced by the following:

"low-speed vehicle" means a vehicle, other than a restricted-use motorcycle or a vehicle imported temporarily for special purposes, that

(*a*) is designed for use primarily on streets and roads where access and the use of other classes of vehicles are controlled by law or agreement,

(*b*) travels on four wheels,

(*c*) is powered by an electric power train (an electric motor and, if present, a transmission) that is designed to allow the vehicle to attain a speed of 32 km/h but not more than 40 km/h in a distance of 1.6 km on a paved level surface,

(*d*) does not use fuel as an on-board source of energy, and

(*e*) has a GVWR of less than 1 361 kg; (*véhicule à basse vitesse*)

"motorcycle" means a vehicle that is of the subclasses enclosed motorcycle, open motorcycle, limited-speed motorcycle or motor tricycle, and

(*a*) is designed to travel on not more than three wheels in contact with the ground,

(*b*) has a minimum wheel rim diameter of 250 mm, and

(*c*) has a minimum wheelbase of 1 016 mm,

but does not include a power-assisted bicycle, a restricted-use motorcycle, a passenger car, a truck, a multi-purpose passenger vehicle, a competition vehicle, a vehicle imported temporarily for special purposes or a three-wheeled vehicle; (*motocyclette*)

"three-wheeled vehicle" means a vehicle, other than a competition vehicle, an antique reproduction vehicle, a motorcycle, a restricted-use motorcycle, a trailer or a vehicle imported temporarily for special purposes, that

(*a*) is designed to travel on three wheels in contact with the ground,

(*b*) has no more than four designated seating positions, and

(*c*) has a GVWR of 1 000 kg or less; (*véhicule à trois roues*)

"truck" means a vehicle designed primarily for the transportation of property or special-purpose equipment, but does not include a competition vehicle, a crawler-mounted vehicle, a three-wheeled vehicle, a trailer, a work vehicle, a vehicle imported temporarily for special purposes, a vehicle designed for operation exclusively off-road or a low-speed vehicle; (*camion*)

2. Item 205 of Schedule III to the Regulations is replaced by the following:

Column I	**Column II**	**Column III Classes of Vehicles**				
			Motorcycle			
Item (CMVSS)	**Description**	**Bus**	**Enclosed Motorcycle**	**Open Motor-cycle**	**Limited-speed Motorcycle**	**Motor Tricycle**
205	Glazing Materials	X	X	X	X	X

Column I	**Column II**	**Column III Classes of Vehicles**				
Item (CMVSS)	**Description**	**Restricted-use Motorcycle**	**Multi-purpose Passenger Vehicle**	**Passenger Car**	**Snow-mobile**	**Snow-mobile Cutter**
205	Glazing Materials		X	X		

Column I	Column II	Column III Classes of Vehicles					
Item (CMVSS)	Descrip-tion	Trailer	Trailer Conver-ter Dolly	Truck	Vehicle Imported Tempo-rarily for Special Purposes	Low-speed Vehicle	Three-wheeled Vehicle
205	Glazing Materials	X		X		X	X

3. Section 500 of Schedule IV to the Regulations is replaced by the following:

(1) Every low-speed vehicle shall conform to the requirements of *Technical Standards Document No. 500, Low-speed Vehicles* (TSD 500), as amended from time to time.

(2) Every low-speed vehicle shall be permanently marked with a slow-moving vehicle identification emblem (SMV emblem) that conforms to section 6 of American National Standard *Slow Moving Vehicle Identification Emblem (SMV Emblem)*, ANSI/ASAE S276.6, published in January 2005 by the American Society of Agricultural Engineers.

(3) However, section 6 of ANSI/ASAE S276.6 is modified as follows:

(*a*) the dimensions of the SMV emblem may be greater than those specified in Figure 1 as long as each dimension is increased so that it has the same relation to the other dimensions as the dimensions specified in the Figure have to each other; and

(*b*) the recommendation in paragraph 6.2.6 is mandatory.

(4) The SMV emblem shall be mounted in accordance with paragraphs 7.1.1 and 7.1.2 of ANSI/ASAE S276.6. It shall be mounted on the centreline or as near to the left of the centreline of the vehicle as practicable, not less than 500 mm but not more than 1 500 mm above the surface of the roadway.

(5) The SMV emblem shall be affixed so that the view of the emblem is not obscured or obstructed by any part of the vehicle or any attachment designed for the vehicle.

(6) This section expires on June 1, 2013.

COMING INTO FORCE

4. (1) These Regulations, except subsections 3(2) to (5), come into force on the day on which they are published in the *Canada Gazette*, Part II.

(2) Subsections 3(2) to (5) come into force one year after the day on which these Regulations are published in the *Canada Gazette*, Part II.

REGULATORY IMPACT ANALYSIS STATEMENT

(*This statement is not part of the Regulations.*)

Description

This amendment to the *Motor Vehicle Safety Regulations* (MVSR) updates the requirements for the Low-speed Vehicles (LSV) class by: introducing requirements for a slow-moving vehicle emblem to be permanently marked on LSV; clarifying the original reason for establishing the LSV class, which was to allow the use of such vehicles for short trips such as shopping, social and recreational purposes, in limited, planned and controlled environments; introducing new wording that, for the first time, allows small trucks to be classified as LSV; including a maximum limit for the mass of LSV to ensure that large trucks and passenger vehicles cannot be improperly classified as LSV; and, introducing a requirement that the propulsion systems of LSV must be designed for their top speed of 40 km/h.

A minor revision to the definition of LSV is also introduced to clarify the current no emission requirement, to state that LSV do not use fuel as an on-board source of energy. This is in keeping with the original intent that LSV are environmentally friendly electric vehicles. Also, to remain aligned with the United States, this amendment specifies the type of safety glazing acceptable for LSV windshields.

Finally, the expiration date of the safety standard has been extended to June 1, 2013, to be in line with the date of similar requirements in other Canadian regulations. This has resulted in the requirement to re-enact the entire section 500 of the MVSR.

This amendment better defines LSV and increases other road users' awareness of them. More importantly, it further aligns the Canadian requirements with recent changes made in the United States to their corresponding Federal Motor Vehicle Safety Standard (FMVSS) 500.

Background

In July 2000, LSV were introduced as a new class of vehicle and minimum safety requirements were established in section 500 of Schedule IV to the MVSR, (see footnote 2) hereafter referred to as Canadian safety standard. The introduction of this vehicle class was a result of several industry requests for Canada to harmonize with the requirements developed in the United States under FMVSS 500 introduced by their Final Rule in 1998 (see footnote 3).

Since the introduction of the LSV class in the United States, several amendments to the requirements have been made. The Final Rule of July 25, 2003 (see footnote 4) clarified that windshields would meet the requirements of FMVSS 205; the Final Rule of August 17, 2005 allowed trucks with a maximum gross vehicle weight rating of 1134 kg to be classified as LSV; (see footnote 5) while the Final Rule of April 19, 2006 increased the maximum gross vehicle weight rating for LSV to 1,361 kg. (see footnote 6) The amended Canadian safety standard again ensures that Canada and the United States remain closely aligned**.** Although the goal is to maintain harmonization between the Canadian and United States LSV safety standards, some minor variances are being implemented or retained from the existing Regulations.

The LSV class was created to allow for the manufacture, importation and nation-wide distribution of small, lightweight vehicles that could not meet safety standards appropriate for larger and heavier vehicles. These electrically driven vehicles were intended for use on short trips for shopping, social and recreational purposes, primarily within retirement or other planned, self-contained communities.

Consultations with the provinces and territories with regard to the introduction of LSV into Canada were conducted concurrently with the development of this new class because the provinces and territories are responsible for setting out the requirements for LSV licensing and use. Provinces and territories may designate areas for use of LSV or may otherwise regulate the use of LSV on public roads. The safety risk of introducing this new class of vehicle was foreseen to be low if LSV were operated in appropriate environments.

Since there are virtually no safety or other performance requirements related to the LSV class, it is important that the vulnerable character of LSV is clearly stated in the vehicle class definition. A clear definition helps the provinces and territories select appropriate requirements for operation of LSV to protect their drivers and occupants.

The amended definition of LSV, as specified in subsection 2(1) of the Regulations, clearly describes LSV as a vehicle designed primarily for operation on streets and roads where law or an agreement controls access and operation of other classes of vehicles. Such a definition expresses the character of the LSV design without imposing restrictions on decisions taken by jurisdictions regarding vehicle use.

Initial consultations with the provinces and territories regarding the new definition brought to light a concern that it is important for a LSV to be identified as a slow-moving vehicle. To accomplish this, the Canadian safety standard is amended to require LSV to be permanently marked with a slow-moving vehicle emblem. Such identification will raise other road users' awareness of the vulnerable character of low-speed vehicles, their comparatively inferior acceleration, and limited top speed of LSV. This requirement is in keeping with other vehicles that travel at speeds of less than 40 km/h such as farm tractors.

As the amended Regulations regarding the mandatory marking of the slow-moving vehicle emblem will require some time for manufacturers to accommodate, this specific requirement will come into force one year after the day on which the amended Regulations come into force.

The amended Regulations reinforce the requirement that LSV not be modifiable for operation at higher speeds. This objective is addressed by identifying the power train for the LSV as a device originally designed to power this kind of vehicle. A vehicle equipped with a device that temporarily limits the vehicle's top speed is not regarded as a LSV.

The amended Regulations replace the current requirement "produces no emissions" with a new requirement: "does not use fuel as an on-board source of energy." The previous requirement may have been interpreted too narrowly and a vehicle could have been disqualified as a LSV because of emissions from the tires or vapours escaping from the on-board batteries.

Alternatives

Consideration was given to the options of maintaining the status quo, as well as to harmonize further with the United States.

Maintaining the status quo would have broadened the difference between Canada and the United States in defining a LSV. Operating LSV without restrictions amongst larger and faster vehicles could put users of LSV at risk. Also, the previous definition under the MVSR did not allow small trucks to be recognized as LSV.

The option which has been chosen is to harmonize with the United States safety standard, with the following exceptions. First, the amended Regulations support provincial and territorial regulations, which, for the most part, currently require a slow moving vehicle emblem, thus identifying slow-moving vehicles and improving road safety. It also helps new LSV purchasers reach compliance with provincial and territorial regulations. Secondly, a device temporarily limiting the vehicle's top speed is not allowed, as it could be de-activated and thus increase risk to LSV occupants. Finally, the distinct principle that LSV produce no emissions is being maintained, and is re-enforced by a requirement to ensure that LSV do not use fuel as an on-board source of energy.

Benefits and costs

Aligning the Canadian and United States safety standards allows any particular manufacturer to build one vehicle to be sold in both jurisdictions. It also allows manufacturers of small low-speed trucks (e.g. for municipal work crews, airport operators and small goods delivery companies) to begin

selling them in Canada. This benefits LSV manufacturers by allowing them to increase the scope of their production for both Canadian and United States markets and benefits Canadians by allowing them a choice of small and efficient trucks for use in places such as military bases, university campuses, parks, retirement communities and airports.

It is anticipated that the Canadian slow-moving vehicle emblem, which is based on a standard design and uses an inexpensive reflector, will not have any negative implications on the cost of LSV imported into Canada or manufactured in Canada for sale here. There is also no anticipated cost increase to the government arising from the implementation and enforcement of the amended Regulations.

Strategic environmental assessment

Under the government's Strategic Environmental Assessment Policy, a preliminary evaluation of the possible effects of this amendment was carried out. It was determined that the amendments to the Regulations by themselves would have no significant net impact on the environment. The replacement of smaller fossil fuel powered trucks with LSV trucks is expected to improve local air quality, but overall environmental impacts depend on the extent to which LSV displace conventional fossil-fuelled vehicles and the energy sources used to generate the electricity to recharge the LSV power pack. LSV have had limited sales in Canada since this class was created in 2000 and the adoption of LSV will depend on various market forces rather than on the current amendment.

Consultation

In the process of preparing the amendment to the Regulations, consultations were conducted with the Audit and Inspection Group of Transport Canada, the Canadian Council of Motor Transport Administrators (CCMTA), the Transportation Development Centre (TDC) of Transport Canada, Canadian Electric Vehicles LTD (CANEV), Centre d'expérimentation des véhicules électriques du Québec (CEVEQ), Institut du transport avancé du Québec (ITAQ) and directly with two manufacturers of LSV ("Dynasty" and "ZENN Motor Company").

As members of the CCMTA, provincial and territorial representatives requested that safety-related performance requirements be added for the LSV class so that occupants would be better protected. This proposition was not retained because adding performance requirements to the Canadian safety standard would result in significantly different requirements than those of the United States, such that the same vehicles could not be sold in both Canada and the United States. In addition, the Department of Transport notes that manufacturers are free to design and produce fully electric vehicles in any of the prescribed classes defined in the MVSR (such as passenger cars, trucks, etc.), which meet all the safety standards stipulated for that class. Given this attractive commercial prospect, several companies have developed mainstream electric vehicles or have announced their intent to market such vehicles in the near future. Under the ecoTechnology for Vehicles Program, the Department evaluates various environmentally promising propulsion systems including electric drivetrains.

Further comments provided by the CCMTA resulted in amendments to the proposal to clarify the use of LSV to be in areas where the access and operation of other classes of vehicles is controlled. Also, at the request of the provinces and territories, the permanent marking of a slow-moving vehicle emblem on LSV was included in the proposed Regulations. This requirement would help operators of LSV to conform to provincial and territorial requirements, which increase the conspicuity and awareness of slower moving vehicles among other vehicle drivers.

During initial consultations, some companies and associations promoting LSV noted concern with the portion of the proposed definition that clarifies the intended use of LSV. These companies and associations suggest that they would like to see LSV available as commuter vehicles sharing the roads with other classes of vehicles. Neither the Government of Canada nor the provinces and territories that commented shared this concern. Given the fact that LSV have almost no safety performance requirements, occupant safety could be compromised if they were to travel in traffic with

conventional, mainstream motor vehicles that must meet up to 40 standards depending on the specific class.

Notice of the Department of Transport's intention to make this amendment was published in Part I of the *Canada Gazette*, on December 22, 2007, and a 60-day consultation period was allotted. The Department received comments from various stakeholders including provinces and territories, associations, manufacturers and the general public, as summarized below.

Pre-publication Comments

During the pre-publication period of 60 days, the government received a total of over 550 comments regarding this amendment. Comments were received from the provinces of British Columbia, Ontario and Quebec, la Société de l'assurance automobile du Québec (SAAQ), LSV manufacturers Zenn and GEM, and several associations including the Association of International Automobile Manufacturers of Canada (AIAMC); the Canadian Vehicle Manufacturers Association (CVMA); Vancouver Electric Vehicle Association; Electric Vehicle Council of Ottawa; and Electric Mobility Canada. Approximately 540 of the comments were received from members of the public from which over 50% came from British Columbia residents, while approximately 25% were from Ontario residents, and 10% were from Quebec residents.

Most of the comments received addressed the clause that describes the intended use of LSV. Written comments were received from the provinces of British Columbia, Ontario and Quebec, SAAQ, all of which were supportive of the government's amendment. British Columbia specifically noted support for the government's position that provinces and territories will be able to select the appropriate environments for operating LSV within their own jurisdiction and indicated that it would be amending its legislation to facilitate broader use of LSV within their province.

A follow-up teleconference was held in which all provinces and territories participated. Several of the provinces and territories indicated safety concerns for LSV and were interested in any test results that would come out of a LSV safety test program being developed by the government. Many provinces and territories were also concerned about public confusion between regular fully compliant electric vehicles and LSV. Several provinces indicated that they had been reviewing their own legislation in reference to LSV usage and that there had been inquiries and interest from the public.

GEM and Zenn noted concern with the clause that describes the intended use of LSV, suggesting that in their opinion it would effectively ban LSV from public roads. Zenn additionally included a petition, with over 6,000 signatures, supporting the use of Zenn's LSV. Zenn also indicated that LSV should be part of the traffic mix, along with pedestrians, motorcycles, bicycles, scooters and buses. Further, they referenced an international study recently commissioned by L'institut du transport avancé du Québec (ITAQ) on the safety of LSV's. GEM further argued that there is no data to support safety concerns for LSV.

The majority of the approximately 540 responses received from members of the public claimed that in their opinion the government was limiting the use of LSV as a result of the inclusion of the clause that describes the intended use of LSV. Many went on to express their desire for LSV to be allowed on roads to reduce pollution. They also raised the issue of relative safety with respect to other forms of transportation, such as motorcycles, scooters and bicycles.

The associations that commented did not support the clause that describes the intended use of LSV. They noted their concern that these requirements could create a barrier to the adoption of LSV. The associations expressed a desire that LSV be allowed on roads where traffic is limited to 50 km/h. Further, they argued that the traffic mix consisting of pedestrians, motorcycles and cyclists would be safer with LSV, rather than the vehicles that they would be replacing.

Contrary to the comments received, this amendment does not prohibit the provinces or territories from determining appropriate operating environments for LSV. In Canada, provincial and territorial

governments are responsible for public road use, vehicle operation and driver licensing. The highway traffic acts in each jurisdiction establishes the legal responsibilities of motor vehicle owners and operators, and set the rules for all types of vehicles that can be operated on public roads as well as for other road users (pedestrians, bicyclists, etc.). Some provinces and territories are currently examining their regulations with respect to LSV usage.

While the United States does not clearly specify the design intent of LSV in their definition, the preamble to their rules is used as part of their legal interpretation for regulations. The United States rules on LSV have included many safety references on the use of LSV. For example, the final rule dated August 17, 2005, noted that LSV are not designed to meet safety standards appropriate for larger and heavier vehicles and encouraged states to be very careful when contemplating the use of LSV on public roads. The Insurance Institute for Highway Safety (IIHS), which represents companies that hold 90% of the United States auto insurance policies, has also indicated serious concerns regarding the safety risk of LSV when operated in areas with larger and fully safety compliant vehicles.

The clause that describes the intended use of LSV has been included in the definition of LSV to clarify that they are not equipped with features to allow them to safely circulate on roads in the presence of larger, heavier and faster vehicles. The proposed definition clarifies that LSV are intended to be used in controlled areas, as defined by provincial and territorial governments. Larger, heavier and faster vehicles could present a significant threat to the occupants of LSV. The clause that describes intended use would not determine compliance with the amended Regulations.

There were no negative comments received with respect to allowing a truck to be classified as a LSV. The LSV manufacturers, Zenn and GEM, as well as the associations noted support for the allowance of trucks as LSV. The public largely ignored this issue.

The associations did not support the no fuel on-board clarification, citing that this would exclude hydrogen-powered LSV, such as fuel cell vehicles, from entering the marketplace. The government notes the intent of the LSV as an environmentally friendly vehicle producing zero greenhouse gas emissions. It is also noted that, while fuel cell power sources represent another possible solution to reducing greenhouse gas emissions, the integration of hydrogen fuel systems into vehicles requires special consideration to ensure the safety of these unique propulsion systems. Transport Canada is currently involved with the development of a global technical regulations for hydrogen and fuel cell vehicles, under the auspices of the United Nations. Once such regulations have been developed, the Department will be in a position to consider the incorporation of applicable sections into other safety standards, such as the LSV standard. Therefore, at this time, the requirement for no fuel as an on-board source of energy will be established.

The provinces that commented noted support for the introduction of the slow-moving vehicle emblem. British Columbia indicated that while it would be amending its legislation to facilitate broader use of LSV, it would at the same time be releasing LSV from their current requirements to display the slow-moving vehicle emblem and operate with flashing lights.

Zenn welcomed the additional visibility introduced by the addition of the emblem requirement, citing that it already installs such an emblem on vehicles shipped to jurisdictions that have slow-moving vehicle emblem requirements in their local laws. GEM and the associations, however, did not support the added requirement. GEM noted that the addition of the signage would interfere with the provinces and territories' prerogative to establish operating rules. Only a few of the comments from Canadians noted any concern for the addition of the slow-moving vehicle emblem.

The government notes that the vast majority of provinces and territories currently require the use of a slow-moving vehicle emblem on vehicles that do not travel over 40 km/h. The specification of a standard slow-moving vehicle emblem will increase other road users' awareness of the nature of LSV especially in the case where the LSV closely resembles a passenger car.

The associations requested that the government consider improvements to the safety standards for LSV. Ontario also suggested that further safety requirements be added to the LSV class including

service brakes, performance standards for seat belts, roof intrusion protection, safety signage and a horn. In addition, Zenn indicated support for the government increasing the LSV safety requirements including: seat belt restraint standards, automotive lighting, seat anchorages and braking performance requirements. The government has not chosen to include these upgraded safety standards, as it is important that LSV be manufactured to a set of similar North American standards. As the design requirements for LSV are already aligned in the United States and Canada, it is currently possible for a manufacturer to make one design for both markets.

Finally, GEM noted that there should be a clarification made in the Regulations that only the windshields of LSV need comply with the Canadian safety standard for glazing. No clarification is required as the incorporated Technical Standards Document notes that only the windshield need comply.

The traffic mix on today's roads involves a diverse range of vehicles from motorcycles to large trucks and buses. Each vehicle class is subject to safety performance standards in line with their design and use and LSV would continue to be required to meet a far more limited set of safety standards than all the other prescribed classes of vehicles that are regulated under the MVSR. In addition, each vehicles class is subject to specific provincial and territorial, licensing and operating requirements and driver licensing requirements commensurate with their use. As a result, it is important that LSV be uniquely identifiable to potential buyers as well as to other road users, and that they not be mistaken in appearance or in design intent for regular passenger cars.

The government has been in contact with United States organizations including the United States Department of Transportation's National Highway Traffic Safety Administration, IIHS, and AAMVA (American Association of Motor Vehicle Administrators) with the purpose of determining the safety record and performance of LSV in the United States. These organizations all noted the need to carefully control the road use of LSV to protect occupant safety. Nevertheless, they were not able to provide any data on the safety history of LSV or results of testing. The government hence undertook a safety assessment of various LSV including testing of their performance in the types of collisions that could occur on streets with low speed limits. The assessment confirmed that the LSV lacked many of the standard safety features that are common in passenger cars and would also pose significantly greater safety risks to occupants, compared to fully safety certified vehicles.

The government is of the opinion that it is important to amend its definition of LSV in order to allow low-speed trucks to be sold in Canada. More importantly, many of the proposed amendments are needed to align the Canadian requirements with those of the United States in order to increase the availability of LSV in the marketplace. As a result, no substantive changes have been made to the original proposal.

While no substantive changes have been made to the original amendment, the expiration date of the safety standard has been extended to June 1, 2013, to be in line with the date of similar requirements in other Canadian regulations. This has resulted in the requirement to re-enact the entire section 500 of MVSR.

Compliance and enforcement

Motor vehicle manufacturers and importers are responsible for ensuring that their products comply with the requirements of the MVSR. The Department of Transport monitors self-certification programs of manufacturers and importers by reviewing their test documentation, inspecting vehicles, and testing the compliance of vehicles obtained in the open market. Also, when the Government of Canada, a manufacturer or importer identifies a defect, the manufacturer or importer must issue a notice of defect to owners, and to anyone who has received parts for the vehicle and to the Minister of Transport, Infrastructure and Communities. If a vehicle does not comply with a safety standard, the manufacturer or importer is subject to prosecution and, if found guilty, may be fined as prescribed in the *Motor Vehicle Safety Act*.

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Footnote a
S.C. 1993, c. 16

Footnote 1
C.R.C., c. 1038

Footnote 2
SOR/2000-304

Footnote 3
63 FR 33194

Footnote 4
68 FR 43996

Footnote 5
70 FR 48316

Footnote 6
71 FR 20026

APPENDIX C

Schedule

1 Section 1 of the Motor Vehicle Act Regulations, B.C. Reg. 26/58, is amended by adding the following definition:

"neighbourhood zero emission vehicle" means a vehicle that travels on 4 wheels and is powered by an electric motor that is designed to allow the vehicle to attain a speed of 32 km/hr but not more than 40 km/hr in a distance of 1.6 km on a paved level surface, and

(a) meets or exceeds standards of the *Motor Vehicle Safety Act* (Canada) for a low-speed vehicle and bears a compliance label for a low-speed vehicle in accordance with that Act, or

(b) if imported to Canada, has been imported as an admissible low-speed vehicle in accordance with the *Motor Vehicle Safety Act* (Canada) requirements and

(i) bears a compliance label for a low-speed vehicle in accordance with that Act, or

(ii) meets applicable federal United States laws in accordance with the *Motor Vehicle Safety Act* (Canada).

2 Section 7.01 is amended

(a) in subsection (1) by striking out "Subject to subsection (2)" and substituting "Subject to subsections (2) and (3)", and

(b) by adding the following subsection:

(3) A neighbourhood zero emission vehicle need not comply with the requirements set out in this Division but it must meet the equipment standards required under the *Motor Vehicle Safety Act* (Canada) for low-speed vehicles.

3 Section 7.09 is amended

(a) in subsection (1) by striking out "Subject to subsection (2)" and substituting "Subject to subsections (2) and (3)",

(b) by adding the following paragraph to subsection (2):

(f) neighbourhood zero emission vehicles. ***, and***

(c) by adding the following subsection:

(3) The standards for neighbourhood zero emission vehicles are those set out under the *Motor Vehicle Safety Act* (Canada) for low-speed vehicles.

4 Section 7B.01 of Division 7B is amended in the definition of "Slow moving vehicle" by adding "a neighbourhood zero emission vehicle," after "but does not include".

5 The following sections are added to Division 24:

Neighbourhood zero emission vehicles

24.07 (1) No person may drive or operate a neighbourhood zero emission vehicle on a highway or class of highway except as authorized under this section.

(2) A person may drive or operate a neighbourhood zero emission vehicle in unorganized areas of British Columbia

(a) on a highway or class of highway that has a speed limit of 40 km/hr or less, or

(b) if authorized by a road use permit issued by the Minister of Transportation under section 209 (2) (d) of the Act, on a highway or class of highway that has a speed limit of over 40 km/hr but no more than 50 km/hr.

(3) A person may drive or operate a neighbourhood zero emission vehicle in a municipality

(a) on a highway or class of highway that has a speed limit of 40 km/hr or less, or

(b) if authorized by bylaw of the council of a municipality, on a highway or class of highway that has a speed limit of over 40 km/h but no more than 50 km/hr.

(4) A person who drives or operates a neighbourhood zero emission vehicle as authorized by subsection (2) or (3) may cross a highway that has a speed limit that is not greater than 80 km/hr at an intersection to enable the person to continue on a highway on which the person is authorized to drive or operate a neighbourhood zero emission vehicle.

(5) A person commits an offence who operates a neighbourhood zero emission vehicle in contravention of this section.

Grandparenting of neighbourhood zero emission vehicles

24.08 (1) If a person owns or leases a neighbourhood zero emission vehicle on the day before this section comes into force,

(a) Division 7B applies to the neighbourhood zero emission vehicle, and

(b) sections 7.01 (3), 7.09 (3) and 24.07 do not apply to the neighbourhood zero emission vehicle

as long as the neighbourhood zero emission vehicle continues to be owned or leased by the person who owned or leased it on the day before this section comes into force.

(2) A person described in subsection (1) may apply to the director to exempt the person from subsection (1).

(This part is for administrative purposes only and is not part of the Order.)

Authority under which Order is made:

Act and section:- *Motor Vehicle Act*, R.S.B.C. 1996, c. 318, s. 210

Other (specify):- OIC 1004/58

R/297/2008/33

Minister of Transportation