November 15, 2007

Mayor Lois Jackson
The Corporation of Delta
4500 Clarence Taylor Crescent
Delta, BC V4K 3E2

Dear Mayor Lois Jackson:

RE: Hybrid Car Presentation at Council meeting

I am writing this letter to you on behalf of the AEBC Lower Mainland Chapter. Founded in 1992, The Alliance For Equality of Blind Canadians (AEBC), is an organization of people who are blind, partially sighted or deaf-blind who joined together to improve public awareness of issues facing us as we continue to work towards equal rights and privileges in society. For more information on our programs, visit us at www.blindcanadians.ca

Recently, you may have been in receipt of a letter concerning hybrid cars and their impact on us as we travel throughout your city and others like it. (See attached letter and articles). As you may be aware, hybrid cars make no noise at low speeds. Because of this, this greatly increases the hazards to blind pedestrians and therefore, further reduces our safety on busy and even not so busy streets.

We are seeking your support in two ways. First we would like you to join us in lobbying regulators and auto manufactures to ensure that a non-intrusive noise generator is installed on all hybrid vehicles. Second, we would like your local government to use its purchasing power to ask if a noise generator can be installed on the cars you may be planning to purchase in the future. If the manufacturer refuses, please consider supporting us by purchasing other environmentally friendly vehicles.
We would like an opportunity to address your council on this very important issue. We feel this would help your local government gain a better understanding of the danger that the increasing number of hybrid vehicles, is having on a considerable number of your constituents. I look forward to your response. If you have any questions, I can be reached at Richard.marion@shaw.ca, or by telephone at 604-936-4698. Thank you for your attention and support on this matter.

Sincerely,

Richard Marion
President
AEBC Lower Mainland Chapter
#304 – 515 Whiting Way
Coquitlam, BC V3j 7W9

cc
AEBC National Board (Electronic Mail)
Advocates for Sight Impaired Consumers (Electronic Mail)

ENCLOSURES

Alliance for Blind Canadians is seeking council’s support in two ways: Would Council lobby regulators and auto manufacturers to ensure non-intrusive noise generators are installed on all hybrid cars, and secondly, would council consider purchasing noise generators for any hybrid cars they may purchase in future. Council may also want to consider sending the issue to the FCM because of the federal component.
July 13, 2007

Donald Atchison
City of Saskatoon
222 3rd Ave North
Saskatoon, SK S7K 0J5

Dear Mayor Donald Atchison:

Re: Dangers of the Hybrid Automobile

I am writing to you on behalf of the Alliance for Equality of Blind Canadians (AEBC), to bring to your attention and to seek the assistance of you and your Council on a new barrier that affects the safety of blind and partially sighted citizens, namely, the quiet hybrid automobile.

The AEBC is a national, not for profit organization of Canadians who are blind, deaf-blind and partially sighted. We have come together to work collaboratively on public policy issues, and improving public attitudes. All of our work is aimed at enabling us to participate more fully in all aspects of regularly community life.

We are well aware of the environmental benefits of the new hybrid autos. However, as the attached Brief will outline in some detail, they pose real dangers to all residents, but especially to we who rely upon our hearing to move safely and independently through our communities.

We believe that an urgent dialogue, including auto manufacturers, government regulators, trade unions and consumer organizations such as the AEBC is required to develop a solution to this new danger on our streets.

We ask your Council to bring pressure on auto manufacturers by writing in support of our concerns, and by refusing to purchase such vehicles until they include a feature that will make them safer for all pedestrians.

We look forward to hearing from you in the near future on actions you and your Council are taking in this important issue.

Sincerely,

John Rae
1st Vice President
INCREASING DANGER OF HYBRID VEHICLES:  
PERSPECTIVES AND ISSUES ON THE DEVELOPMENT OF THE QUIET HYBRID AUTOMOBILE

RAE, John  
President, Alliance for Equality of Blind Canadians / L'Alliance pour l'Égalité des Personnes Aveugles du Canada  
Toronto, Ontario, Canada  
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**Keywords: Hybrid cars, pedestrian safety**

Pedestrian safety is of utmost importance to all members of the public who use city sidewalks, attempt to enter shopping malls, or cross busy intersections. It is also a basic human rights issue.

This paper is intended to increase awareness of the dangers of the quiet, hybrid automobile, foster dialogue among major stakeholders, and discuss several issues and possible solutions to this growing menace on our streets. The perspectives presented are drawn from a variety of sources, both personal communications and published sources.

My name is John Rae. I live in Toronto, Ontario, and have been blind for the majority of my 58 years. I navigate around Toronto on subways, buses, streetcars and on foot. I also travel regularly to other cities in Canada, and have visited 24 countries on five continents. Safe and independent travel is vitally important to me and all other pedestrians.

Today city streets are becoming increasingly dangerous for all pedestrians. There are more and more motorists; many are in a hurry in this fast-paced world; and many are distracted while talking on their cell phones. The presence of more and more quiet automobiles on our streets will only add to existing safety hazards throughout our communities.

**HOW QUIET ARE SOME OF THESE CARS?**

"I encountered my first hybrid car when Jim, a family friend, dropped by one morning driving a brand-new Toyota Prius. He explained that the Prius uses electric power when running at speeds up to about twenty mph and periodically switches to electric power at faster speeds as well. He added that the car is extremely quiet in its electric mode--so silent, in fact, that car dealers have affectionately dubbed it a stealth vehicle."
Eager to prove to myself that I would be able to hear the Prius, no matter what the dealers boasted, I asked Jim to conduct an experiment. He agreed to take the Prius for a short test drive while I listened from the sidewalk in front of my house on a quiet side street. I heard him climb into the car and slam the door on the driver's side. Then I waited, listening for him to start the engine. Nothing happened. I heard only the sparrows chirping in the trees and the distant roar of a lawn mower. At last the car door opened again and Jim asked, "Could you hear it?"

"Hear what?" I demanded. "Why didn't you start up?"

"I did start up," he said. "I drove to the end of the block. Then I backed up and went about three houses past yours. Then I drove back and parked here in front of you again."

I went to the curb and rested my hand lightly on the passenger door. Again Jim started the engine. I felt the car move forward. Uncannily, eerily, it did not make a sound. With horror I realized that I could easily step straight into the path of an oncoming Prius with no hint of peril." (Stein, 2005)

**HOW DO THESE HYBRIDS OPERATE?**
A number of cars and pick-up trucks now operate using a combination of electricity and gasoline. These vehicles are known as hybrids because they blend combustion-engine and electric-motor technologies. Excess energy from the combustion-engine energy, which is wasted in conventional vehicles, charges the battery that runs the hybrid's electric motor. When it is in operation, the hybrid vehicle shifts automatically from one power mode to the other. How often and in what circumstances the vehicle uses electric power varies widely according to model and design. The engine is silent when operating in electric-power mode.

Some examples of hybrid autos are: Lexus RX 400h hybrid, Lexus GS 450h Hybrid, Honda Civic Hybrid, Honda Accord Hybrid, Honda Insight Hybrid, Toyota Prius, 2007 Toyota Camry hybrid, Toyota Highlander, and Ford Escape Hybrid.

The following is an owner's perspective:

"I purchased a Toyota Prius in June, 2006. My decision to buy this particular car was primarily based on a desire to purchase a fuel efficient and well made vehicle which would withstand the long commutes to and from my job and still be an optimal choice environmentally. The Toyota Prius exceeds all of my expectations, and friends of mine have raved about how quiet it is. Many have remarked that had they not seen the car approaching, they wouldn't have known my car was coming toward them. This does bring up a concern for me, however. I have a sister who has been blind since birth. Even before I purchased my car, she and I had spoken about the pros and cons of such hybrid cars and the dangers they pose to blind pedestrians because no sound is made..."
by the Prius and other hybrid cars when they are stopped at intersections or when they begin to accelerate. My sister and I both believe that manufacturers of hybrid vehicles need to take concerns of blind pedestrians very seriously and have a responsibility to somehow make them emit some kind of sound when the engine is not engaged and the vehicle is running on electric power."
--Douglas Taube, Hayward, California

The following is a perspective from a concerned parent who is blind:

"I am particularly worried as I am a parent of boys 2 and 4 years old. I am often accessing the local community with them and I have to know that I am safe as I am responsible for them both. So it is always at the back of my mind that one of these days I will be confronted with these new types of cars. This new technology poses a new challenge to road safety and as a result access."  {Bartlett, 2005}

For pedestrians who are blind or partially sighted, the issue isn't just being able to cross an intersection with confidence and in safety; it has wider implications for our overall mobility and independence.

The following illustrates how blind pedestrians evaluate various travel environments:

"Contrary to popular belief, our guide dogs do not read the traffic lights for us. When I reach a lighted intersection, I listen for the sound of traffic flow. If the traffic is flowing parallel to me, it means my light is green, and I can cross. If the intersection were full of quiet cars, I could not read the traffic and would not know when to give my dog the "forward" command.

When I stop at the corner of a stop street with no light, I listen to make sure no traffic is approaching before giving my dog the "forward" command. Again, if the intersection were filled with quiet vehicles, I would not know when it was safe to do this.

When I travel on a road with no sidewalks, I walk on the left-hand side with my dog on my left facing traffic. When cars approach us, I turn us into the curb edge to make sure we are out of the line of fire! Again, I would not know when traffic was approaching.

When walking through parking lots, I would not know if quiet cars were suddenly turning in front of me or coming from behind.

When walking down a sidewalk, I would not know if a quiet car was pulling into or out of a driveway.

Many of our big cities are now filled with wheelchair ramps at curbs. This is generally a good thing but makes lining up with an intersection trickier for someone who is blind. I use traffic noise to make sure I am pointing in the correct direction for a street crossing."
This is especially useful when coming to rounded curbs, which make it even more difficult to line up with intersections.

In the winter here in Canada with snow-covered corners, lining up with intersections is trickier. When it is windy or raining hard or in winter when you need to wear a hat, traffic noise is already more muffled." (Kilpatrick, 2005)

We must all admit that automobiles are a major cause of the pollution that is endangering the health of our planet. Hybrid vehicles typically offer higher gas mileage, and lower engine exhaust emissions. Cleaner air and a reduction in greenhouse gases benefits our environment, and everyone needs to support more environmentally friendly programs. However, as currently manufactured, the increasing prevalence of quiet hybrid vehicles on our roads creates new safety hazards for all pedestrians, especially individuals who are blind, partially sighted or who have reduced hearing.

"Who doesn't want to do something good for the environment including reducing noise pollution? How do we find the balance between noise pollution and the right of pedestrians to travel safely? In my books, pedestrian safety trumps driver comfort. Driving is a privilege, my safety is a right."
-- Linda Bartram, Victoria, BC

"I applaud the concept behind them. Anything that allows people to use less gasoline should be a good thing. However, these things are going to be death sentences for the blind and hard of hearing. I myself in addition to being blind am deaf in one ear with a mild to moderate hearing loss in the other and hearing aids do me no good. I have enough trouble crossing streets to begin with. It's gotten harder over the years as cars have gotten quieter by the year. The last thing we need is a car with no sound at all.

The streets are becoming more and more unsafe for blind people, this at a time when the blind are being encouraged to not use the paratransit system. If this continues the blind will have two choices, surrender their independence and have someone drive them everywhere, or take their life even more in their hands. I for one, think people should be able to safely walk the streets to get where they need to go each day on foot if they please. That means that the hybrid cars must be modified to make some kind of noise so that we will be able to identify them when we try to cross streets."
-- Sue Ellen Melo, Cleveland, Ohio

While the increasing prevalence of quiet vehicles may seriously affect the ability of blind and otherwise disabled people to travel safely, low-noise vehicles are also likely to affect the safety of sighted pedestrians and cyclists.
Sighted people also rely on sound at times to alert them to the presence of vehicles outside their line of vision. Hearing the approach of a car, they can glance in its direction to gauge its speed and location. It is no accident that generations of schoolchildren have been taught to "stop, look, and listen" at every intersection. Both blind and sighted pedestrians make better decisions about crossing streets when they can hear vehicles in their environment.

POSSIBLE SOLUTIONS
Three basic approaches currently exist to solve this serious problem.

The first would involve the emission by vehicles of a silent radio transponder, infrared, Bluetooth, or other signal which would activate a receiver carried by anyone who needed the audio information. The second would involve a sound source, which instead of operating continuously, would rely upon the driver to activate it at crucial times. The third involves adding a sound source that would be audible whenever the vehicle is in motion or stopped at an intersection.

The first would force blind pedestrians to carry around yet another piece of technology. Such a device might be mounted on a cane handle or on the harness of a guide dog. However, no device in the foreseeable future is likely to give pedestrians as much information as they now receive audibly about vehicle position and traffic flow. In addition, many of us would not want to rely upon technology that could fail at a critical time should a battery run down or the device simply stop working.

The second would rely upon the judgment of the driver to activate the sound at the appropriate time, and this would also take responsibility for our safety away from us.

The following comes from an experienced Registered Orientation and Mobility Specialist:
"We cannot rely on drivers to be cautious about pedestrians who are unaware of their presence. Pedestrians and drivers alike are taught as children that pedestrians are responsible to "look and listen" for cars, and indeed research in the United States reveals that drivers do not reliably yield to pedestrians, even those with white canes {Geruschat and Hassan, 2005, Guth, Ashmead, Long, Wall & Ponchillia. :2005, Inman, Davis and Sauerburger, 2005, Sauerburger 2003}. For example, drivers who turn right into busy streets from a driveway or turn right on red often do not look to their right before moving forward because they are looking for a gap in traffic to their left; as a result, I know of a half dozen people who have been hit by vehicles as they crossed in front of the drivers from the drivers' right."

-- Dona Sauerburger, Gambrills, Maryland

The third would involve the installation of a device that would emit a sound. For example, Hybrid vehicles could be manufactured so that the radiator fan switches on
whenever the car is operating in electric mode, emitting a hum audible to pedestrians. Perhaps a device built into the axle could make a sound as the wheels rotate.

"Having vehicles produce an audible indication of their presence, designed to be inoffensive to the public, seems most workable. This engineering solution would most likely be an inexpensive minor modification to the existing design of the automobile. It could sound at lower speeds but disappear at faster speeds where car tires and air movement can easily be heard. Vehicles should emit a recognizable sound or class of sounds that can be localized; it is not necessary that this sound duplicate the engine noise we hear today. Such a modification should not require or allow operator intervention. A "minimum standard" for sound level should be established, regardless of the type of engine a vehicle uses." { National Federation of the Blind, 2006}

"While these hybrid cars are absolutely wonderful for the environment, I definitely have concerns about them as a blind pedestrian. These cars are very popular here in California. I truly believe that the manufacturer ought to think about placing a beeper or something on the car which would emit a noise so that we who are blind can hear that the car is close to us. Otherwise, we have no way of knowing that we're nearby such a car."
--Linda Gehres, Alameda, CA

It is not a difficult issue to determine when quiet cars should emit extra sounds. They should do so when stopped, when accelerating, when slowing down, and in fact whenever their gasoline engines are not operating. All vehicles which so outweigh pedestrians as to make any contest ridiculous should emit noise when they are being operated--no noise when in the driveway for the night or in the garage for the weekend, but when someone crawls behind the wheel, that vehicle should start making some level of sound.
-- Gary Wunder, Columbia Missouri

CONCLUSION
Developing solutions to this issue is becoming more and more critical every year, as more and more quiet cars appear on our roadways.

An urgent dialogue must take place, involving the auto industry, trade unions that represent auto workers, government regulatory bodies, and the disabled community, especially organizations "of" persons who are blind and partially sighted. Such questions as cost, effectiveness, and technology are all questions that need to be examined and resolved.

Additional research into various ways of adding a noise to a car could prove very useful. However, planning, funding, conducting, and analyzing research studies is a slow
process at best. Time is of the essence. This work must take place before individuals are killed because they could not hear an oncoming quiet hybrid stalker.

FOOTNOTES
Bartlett, Alan THE HYBRID CAR IS HERE TO STAY, Blind Citizens News (Australia), September 2004


Kilpatrick, Kim, HYBRID CARS POSE NEW DANGERS, Canadian Blind Monitor, volume 21, Summer/Fall 2005


Stein, Debbie Kent, “Stop, Look and Listen,” The Braille Monitor, June 2005
Hybrid vehicles: A silent danger?

Blind advocate wants sound added to quiet gas-savers

by Lucy-Claire Saunders

HYBRID CARS may play a key role in our push to halt climate change, but they're also putting blind pedestrians at risk.

That's because when they run on battery, they're virtually silent, said Richard Marion, president of the Lower Mainland chapter of the Alliance for Equality of Blind Canadians.

"If a hybrid is edging through an intersection to make a right hand turn, a person that's totally blind wouldn't notice the vehicle," said Marion.

In fact Marion, 39, said a blind person in Victoria had his cane run over by a hybrid vehicle last year in a similar situation.

Burnaby's Traffic Safety Committee will review Marion's group's concerns and make a recommendation to council Feb. 5.

By addressing city councils across Canada, the alliance hopes to fuel a dialogue about the dangers that hybrids pose to the blind and partially-sighted. Burnaby is one of the first cities to respond. The alliance meets with Surrey's council Jan 14.

Marion, a Port Coquitlam resident, said his group hopes the city will lobby regulators about the need to have a sound generator, and use its purchasing power as an opportunity to bring their concerns to manufacturers' attention.

The Alliance proposes manufacturers install a device that would emit a sound. Their website suggests the radiator fan switch on whenever the car is operating in electric mode. Or alternately, a device built into the axle could make noise as the wheels rotate.

Hybrid cars use a blend of the traditional internal combustion-engine and electric motor technologies. Excess energy from the conventional engine, which is normally wasted, instead charges the car's battery. The hybrid switches between the two power sources and it is during the electric-power mode that the engine is silent.

A selling point for hybrid vehicles is their low noise levels. Marion said members of the Alliance understand the sound generator should not be too intrusive to the point where it's causing grief for the driver, but a compromise must be reached.

Bob Glover, a staff liaison to the Traffic Safety Committee, said there are a number of options cities could take.

"The city council might decide to bring this to the attention of the federal government, who is responsible for regulating the auto industry," Glover said.

ICBC reported 7,000 hybrid vehicles in B.C. in 2006. As people look at greater fuel efficiency for environmental and financial reasons, Marion said the number of hybrids on the streets continues to grow. Cyclists have also expressed concern about quiet hybrids.

"There's almost a wish that there should be a little bit of noise on hybrid vehicles so that you can detect them and not get panicked when they pass by," said Jack Becker, president of the British Columbia Cycling Coalition.

Marion hopes city councils like Surrey and Burnaby will take the issue seriously and act quickly.

Richard Marion and his seeing-eye dog Bradshaw wait to cross Broadway St. in Port Coquitlam Tuesday afternoon. Marion is concerned about stepping in front of hybrid vehicles that are virtually silent when they run on battery.