Agenda – Executive Policy Committee – July 15, 2011

REPORTS

Item No. 1 Use of Environmentally Friendly Vehicles

WINNIPEG PUBLIC SERVICE RECOMMENDATION:

1. That the Agency consult with the City's designated representative to the Province of Manitoba's Electric Vehicle Advisory Committee to determine the way forward as it relates to low emission and electric vehicles, with particular emphasis on the progress of the recently announced pilot project between the Province and Red River College relating to the utility of electric vehicles in Manitoba.

2. That with respect to parking incentives to encourage the use of environmentally friendly vehicles:

    a. that a pilot project offering a 10% discount on monthly parking fees be provided to PHEVs and EVs in the Millennium Library or Civic Centre Parkade where the PHEV or EV is the only vehicle registered for use of the permit; and
    b. that premium locations will be designated for the use of PHEVs and EVs in the Millennium Library or Civic Centre Parkade.
    c. appropriate infrastructure to support the installation of electric vehicle charging stations be included in any future parkade construction

3. That the Public Works Department will not be seeking amendments to the Highway Traffic Act to accommodate individual small vehicles parking perpendicular to the curb.

DECISION MAKING HISTORY:

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On May 18, 2011, the Executive Policy Committee further laid the matter over for up to 60 days.

On March 16, 2011, the Executive Policy Committee laid the matter over for up to 60 days.

On January 19, 2011, the Executive Policy Committee further laid the matter over for up to 60 days.

On September 15, 2010, the Executive Policy Committee laid the matter over for 60 days.

On May 12, 2010, the Executive Policy Committee received as information the Fourth Quarter Report 2009 from the Mayor's Environmental Advisory Committee.

Further on May 12, 2010, the Executive Policy Committee referred the following recommendation of the Mayor's Environmental Advisory Committee to the Winnipeg Public Service for recommendation and report back to the Executive Policy Committee in 90 days, namely:

1. The Winnipeg Public Service explore options and possibilities to encourage the use of environmentally friendly vehicles, including but not limited to:

    (i) incentivized parking for low emissions vehicles and electric vehicles;
    (ii) free parking for PHEVs and EVs;
    (iii) the City and Province exploring amendments to The Highway Traffic Act, which would allow parking of vehicles perpendicular to the curb."

ADMINISTRATIVE REPORT

Title: **PARKING OF ALTERNATIVE FUEL VEHICLES**

Issue: **RESPONSE TO EPC REQUEST FOR RECOMMENDATIONS**

Critical Path: **EPC**

AUTHORIZATION

Author	Department Head	CFO	CAO
C. Stewart, WPA, K. Boutilier, WPA	R. Topolniski, Acting COO, WPA	M. Ruta Deputy CAO/ Chief Financial Officer	A. Robinson Deputy CAO

RECOMMENDATIONS

1. That the Agency consult with the City's designated representative to the Province of Manitoba's Electric Vehicle Advisory Committee to determine the way forward as it relates to low emission and electric vehicles, with particular emphasis on the progress of the recently announced pilot project between the Province and Red River College relating to the utility of electric vehicles in Manitoba.

2. That with respect to parking incentives to encourage the use of environmentally friendly vehicles:

    a. that a pilot project offering a 10% discount on monthly parking fees be provided to PHEVs and EVs in the Millennium Library or Civic Centre Parkade where the PHEV or EV is the only vehicle registered for use of the permit; and
    b. that premium locations will be designated for the use of PHEVs and EVs in the Millennium Library or Civic Centre Parkade.
    c. appropriate infrastructure to support the installation of electric vehicle charging stations be included in any future parkade construction

3. That the Public Works Department will not be seeking amendments to the Highway Traffic Act to accommodate individual small vehicles parking perpendicular to the curb.

REASON FOR THE REPORT

At its May 12, 2010 meeting, the Executive Policy Committee referred the following recommendation of the Mayor's Environmental Advisory Committee (MEAC) to the Winnipeg Public Service for recommendation and report back to the Executive Policy Committee in 90 days (September 8, 2010), namely:

1. The Winnipeg Public Service explore options and possibilities to encourage the use of environmentally friendly vehicles, including but not limited to:
    (i) Incentivized parking for low emissions vehicles and electric vehicles;
    (ii) Free parking for PHEVs and EVs;
    (iii) The City and Province exploring amendments to The Highway Traffic Act, which would allow parking of vehicles perpendicular to the curb.

IMPLICATIONS OF THE RECOMMENDATIONS

Recommendation 1 – There is no financial implications at this time and the Agency will continue to explore options to extend Incentivization parking to on-street parking meters within the framework of the Province of Manitoba's strategies for electric vehicles. The financial impact of offering incentives may be extensive given the large number of vehicles that meet the current industry standard for classification of low emission vehicles.

Recommendations 2(a) and 2(b) – there is a financial impact to the off-street incentivization recommendation and it is included in the Financial Impact Statement. Each discounted vehicle that is provided a designated stall receives an additional discount due to the de facto provision of a reserved space at a discounted rate. Using the 2011 rates for the Millennium Library parkade as an example, the cost per registered vehicle would be $49.50 per month (Regular non reserved rate of $195 per month less 10% is $175.50. As the vehicles receive a preferred location, the equivalent value is a reserved stall at $225.00 per month and the benefit is the difference) – for an annual cost to the Agency of $594 per vehicle.

Recommendation 2(c) – While there will be a financial impact it cannot be determined until the full scope any parkade project is defined. Individual parkade projects will be brought before the appropriate Committees of Council in a separate report and the financial implications will be outlined at that time.

Recommendation 3 – There is no financial impact to this recommendation.

HISTORY

In October 2009, the Agency was asked to consider incentivized or free parking for fuel efficient vehicles. At that time, WPA advised that there were technical challenges in doing this, and that parking policies are universally based on the use of space rather than the type of vehicle using the space, and that incentivization was not standard practice in North American cities.

In May 2010, MEAC brought a recommendation to EPC recommending the Public Service report on the options to encourage the use of low emission and electric vehicles.

The Agency proposes recommendation 2 concerning the May 2010 MEAC directions 1 (i) and (ii) and recommendation 3 concerning the May 2010 MEAC direction 1 (iii). The Agency believes that direction 1 (ii) to provide free on-street parking across the entire on-street inventory to PHEVs and EVs is cost prohibitive. Simply by moving their vehicles every two hours a motorist with a PHEV or EV could park for free all day. As a result, each PHEV or EV that parks on-street removes one stall from the available inventory. The resulting annual loss of revenue, based on the high demand rate would be $4,000.00 per vehicle. This does not include the administrative costs of the permitting program which would be required to allow enforcement.

Currently the definition of what is a low emission vehicle is larger than what most would assume. A recent study by JD Power & Associates defined a low emission vehicle as "Low-Emission Vehicle - This standard was the required average for all light vehicles sold nationwide for model years 2004 and beyond". A search of the US Environmental Protection Agency website indicated that, for the State of California, over 200 vehicles met this standard, including models such as the Toyota Camry, Chevrolet Equinox and the Audi TT Roadster. In Canada, vehicles that meet the Natural Resources Canada definition of a fuel efficient vehicle include the Audi A3 TDI and the GMC Savanna Cargo Van.

The current Manitoba Hybrid Electric Vehicle Rebate Program has no provision for vehicles purchased in Manitoba after October 31st, 2010. The program does provide for applications for rebates for up to two years following the lease or purchase date of new hybrid electric vehicles that were previously unregistered, however the eligible vehicle list does not provide for new models or for purely electric vehicles.

The Ontario Electric Vehicle Incentive Program promotes the purchase or lease of new plug-in hybrid electric (PHEV) or battery electric (BEV) vehicles. This program specifically targets vehicles that have the capability of being recharged from an external source of electricity, are registered in the province, are manufactured primarily for use on public streets, roads and highways and are not low speed vehicles. As this program is targeting new technology, the program does not provide incentives for vehicles

converted to plug-in electric capability or conventional hybrid vehicles that do not plug into an external source of electricity. Currently only the Tesla Roadster and the SmartforTwo battery powered model qualify for this program. To further support this program, Ontario is releasing new green license plates for plug-in hybrid and battery electric vehicles. This will help readily identify vehicles that qualify for the program.

A PHEV is a hybrid vehicle with rechargeable batteries that can be restored to full charge by connecting a plug to an external electric power source (usually simply a normal electric wall socket). A PHEV shares the characteristics of both a conventional hybrid electric vehicle, having an electric motor and an internal combustion engine; and of an all-electric vehicle, also having a plug to connect to the electrical grid. A BEV is a passenger vehicle that runs entirely on a battery an electric drive train without the support of an internal combustion engine.

Until such time as the Province of Manitoba creates a new incentive program, the Agency will refer to the Province of Ontario program for guidance in creating a parking incentive program. This will help ensure that the incentive program will promote new passenger vehicles available for general sale in Manitoba and not: conversions of existing vehicles; out-of-province vehicles; vehicles using a battery of less than 4 kWh in capacity; or low speed vehicles. The Province has recently initiated a pilot project with Red River College on the utility of electric vehicles in Manitoba and there will likely be no new incentive program until the completion of this project.

The Agency has recently been in discussions with Manitoba Hydro and asked to participate on their “Electric Vehicle Steering Committee” and related workgroups to examine the evolution of this technology and what impact there will be on required infrastructure. As, at the current time, there are less than 20 BEV in Manitoba, Manitoba Hydro intends to continue to monitor developments in this field before making any decisions on infrastructure development.

As the various types of charging equipment utilize the same infrastructure, new parkade planning will include appropriate electrical infrastructure to support Level 1 and level 2 charging stations for electric vehicles. There are currently three types of charging stations:

Level 1 charging stations are 120 volt and require 8 – 20 hours to fully charge a vehicle battery. Requiring no special infrastructure they can use a standard house outlet. Due to time constraints, they are not effective as charging stations for commuters during their work day.

Level 2 charging stations use a 220/240 volt charger and can full charge a vehicle battery in three to four hours. They require a dedicated 220 volt line and current cost is approximately $5,000 per charger. Only one vehicle can be charged at a time.

Level 3 charger units utilize a 400 volt charger and can fully charge a vehicle in 20 – 30 minutes. However, they require specialized infrastructure and can only be operated by certified personnel. The current cost is approximately $50,000 per unit.

Including the necessary infrastructure in the planning stage will permit the rapid installation of charging stations without compromising the electrical system (including lighting, access control system or the ability of customers to use block heaters in winter) once the appropriate charger has been identified and approved.

As a result of US Federal funding, a number of companies have begun to provide charging stations. Once this initial funding is expended, there is no guarantee which companies will continue to operate, and once a company ceases to operate, there is no guarantee that support for their equipment will be available. As the industry is in flux at this time, it would be imprudent of the agency to expend civic funds without ensuring the long-term viability of the equipment.

It has been suggested that very short cars (for example "Smart Cars") could be allowed to park on public roadways perpendicular to the curb without intruding into driving lanes. This matter was discussed with regulatory officials and the Agency was advised that while the Highway Traffic Act gives each jurisdiction the authority to allow this practice through a permit process, there are operational issues which concern Provincial and City officials, particularly with those related to the length of this vehicle. It is advised that the maximum vehicle width allowed on roadways in Manitoba is 2.6m or 102 inches (which is the width of wider than usual heavy tractor semitrailer trucks); current model Smart Cars measure 2.7m or 106.1 inches and therefore the Smart Car cannot be compared to the typical width of a passenger vehicle (70-85 inches).

There is a further impediment in that no practical regulatory mechanism exists to ensure vehicles parking parallel to the curb will leave enough room for vehicles parked perpendicular to the curb to open their doors (Figure 1). Also, it is likely that most people will not park next to the curb and therefore having one end (likely the front end) of the Smart Cars protruding closer to the adjacent traffic lane (Figure 2), particularly in winter. Perpendicular parking for small vehicles is not currently allowed or permitted in any jurisdiction in Canada or the US.



Figure 1: Space between cars



Figure 2: Protrusion beyond that of a regular car

In discussions with the Department of Public Works, they conclude perpendicular parking would create a traffic safety hazard and are not pursuing any changes to the Highway Traffic Act to accommodate this practice.

FINANCIAL IMPACT

Financial Impact Statement

Date: July 7, 2011

Project Name:
PARKING OF ALTERNATIVE FUEL VEHICLES

First Year of Program **2011**

	2011	2012	2013	2014	2015
Capital					
Capital Expenditures Required					
Less: Existing Budgeted Costs					
Additional Capital Budget Required	$ -	$ -	$ -	$ -	$ -
Funding Sources:					
Debt - Internal					
Debt - External					
Grants (Enter Description Here)					
Reserves, Equity, Surplus					
Other - Enter Description Here					
Total Funding	$ -	$ -	$ -	$ -	$ -
Total Additional Capital Budget Required	$ -				
Total Additional Debt Required	$ -				
Current Expenditures/Revenues					
Direct Costs	$ 1,782				
Less: Incremental Revenue/Recovery					
Net Cost/(Benefit)	$ 1,782	$ -	$ -	$ -	$ -
Less: Existing Budget Amounts	-				
Net Budget Adjustment Required	$ 1,782	$ -	$ -	$ -	$ -

Additional Comments:

Six stalls for six months under the initial pilot result in potential revenue decrease of $1,782

original signed by
Kevin Boutilier
Manager of Finance & Administration

CONSULTATION

In preparing this report there was consultation with:

Public Works Department - - Transportation Division
Winnipeg Fleet Management Agency
Manitoba Hydro

SUBMITTED BY

Department
Division
Prepared by: Colin Stewart, Kevin Boutilier
Date: July 7, 2011
File No.