Green Dealer Guide

Honda Canada Green Dealer Recognition Program for Automotive Dealerships

Version 1.1
October 15, 2018

Honda Canada, Inc.

Table of Contents

Water

Site

New Builds and Major Renovations

Energy

Water

Site

Appendices

Foreword

A message from Honda Canada

Being a responsible company has been a mandate for Honda since the advent of our "Blue Skies for our Children" philosophy. As part our ongoing effort in the area of environmental sustainment activities, we are pleased to announce the highlights of the Honda Canada Green Dealer Recognition Program to reduce our carbon footprint, waste and water usage.

The main objective of this program is to provide a roadmap for dealers to quantifiably reduce their energy consumption. This unique resource provides a step-by-step detailed guidance to implement systems and technologies that help dealers achieve their environmental goals and gain recognition as leaders in the local community.

The overall environmental result is significant. Since 2012, Honda Green Dealers in America have collectively reduced their CO_2 output by approximately 58,000 metric tons. This is not the only impressive "green" stat: the same dealers have cumulatively saved $12.7 million USD in energy costs since.

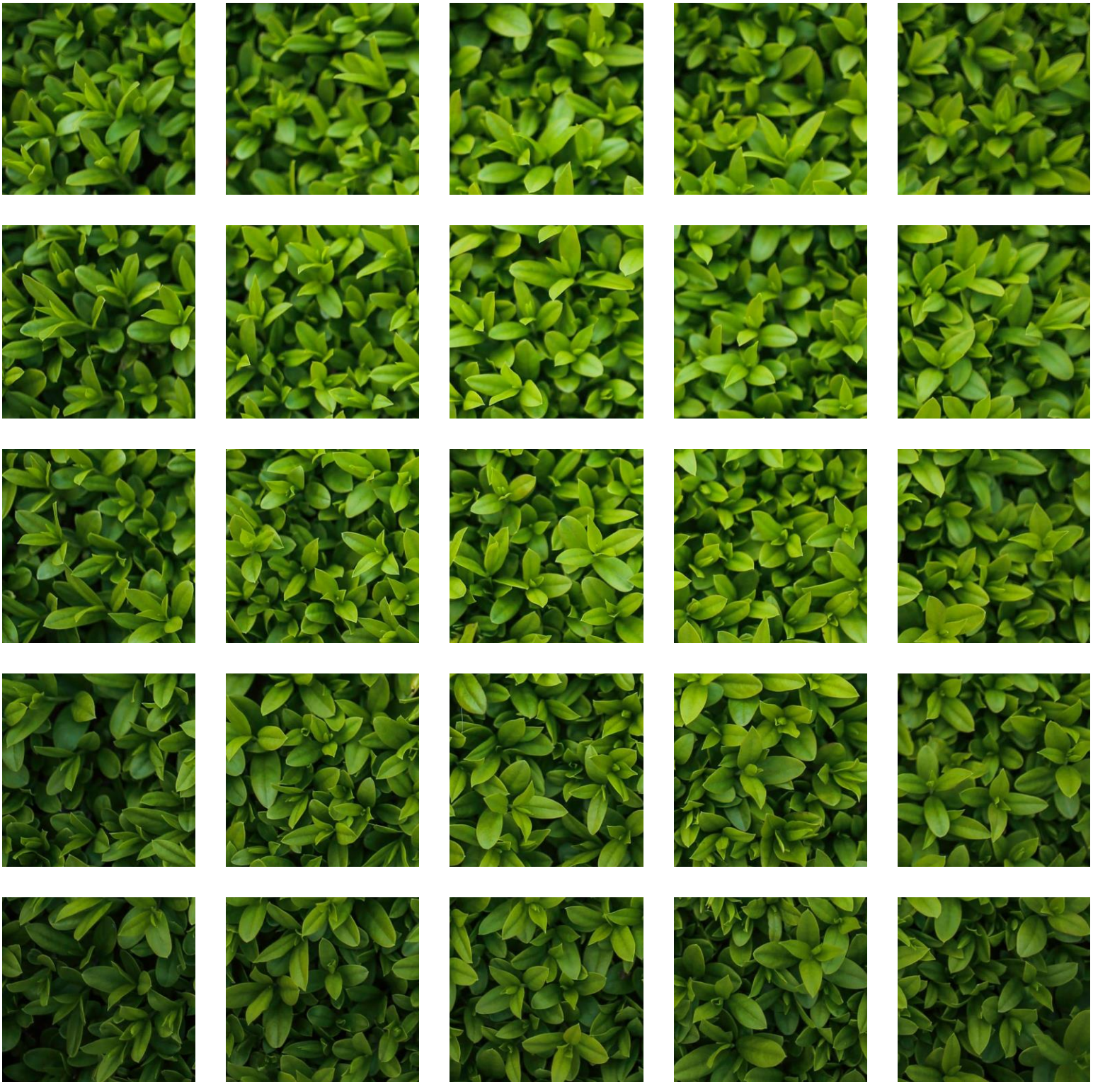
As Honda Green Dealers in America have demonstrated, reducing energy and water use are achievable goals that can save money, address climate change, and inspire others to make a difference for the future of our planet. Please join us to reduce our impact to the environment by taking part in this initiative. Your customers will thank you!

HONDA CANADA INC.

Jean Marc Leclerc,

Senior Vice-President, Honda Canada Sales and Marketing

Introduction



Introduction

Background

As part of its global initiative to reduce carbon emissions, Honda developed a program to help dealerships reduce building-related carbon dioxide emissions.

In 2011, an initial pilot program identified the unique energy needs of automotive dealerships with varying sizes, locations, and ages. Interior and exterior lighting and HVAC systems make up the majority of energy consumption and costs, and by appropriately addressing these systems, dealerships can both reduce energy use AND save money.

At the time, there was no established award-based program that focused on how to reduce energy consumption and minimize costs for automotive dealerships. This prompted development of the U.S. Green Dealer Program, which launched in April 2012. Since launch, the program resulted in cumulative energy cost savings of over $12.7M USD and over 58,000 tonnes of carbon dioxide equivalent (CO_2e) savings across all Honda brands in the United States[1]. To continue program growth, this program has been updated for Honda Canada and tailored specifically for Canadian dealerships to minimize environmental impact by focusing on reduced energy consumption and cost savings.

- **» Reduce energy consumption:** The Green Dealer Recognition Program focuses on measurable energy reductions, targeting a 10% or greater reduction in dealership total energy use. When also meeting applicable prerequisites and total points, a 10% reduction is recognized with the Silver award; a 30% reduction is recognized with the Gold award; and with a 50% reduction, a dealership earns the highest-level Platinum award.

- **» Maximize cost savings:** The Green Dealer Recognition Program also focuses on cost savings. Significant reductions in energy use can be achieved by **low- or no-cost** measures, and a simple payback of zero to five years is considered core to the program.

This Green Dealer Guide provides recommendations based on a comprehensive set of environmental guidelines designed by Honda specifically for dealerships enroled in the Green Dealer Recognition Program. By making this information accessible to the public, Honda hopes to provide a path for all automotive dealerships to reduce their environmental impact, thereby contributing to a healthier and more sustainable future.

1 Honda internal calculation based on data from U.S. EPA and DOE through Apr 2018. Cost saving, CO_2e reductions are published on greendealer.honda.com.

About this Green Dealer Guide

This Green Dealer Guide is a resource for automotive dealerships to improve energy and water efficiency, reduce waste, and minimize environmental impact through site improvements. It does not include details regarding specific equipment installations, but offers valuable information and recommendations for dealers when considering facility upgrades.

Updates to the Guide

Updates to the Canada Green Dealer Guide include adjusted point weightings emphasizing measures that have even greater environmental benefit in Canada, recommendations based on regional factors such as local electricity grids, and other measures focused on reducing CO_2e emissions and increasing energy cost savings. Honda Canada plans to update this guide periodically as new green building technologies and guidelines develop and as the program changes and grows.

Facility Types

Recognizing that automotive dealerships can be in various stages of design, construction and operation, this guide is divided into two sections:

- **Section 1** provides guidelines for **Existing Facilities**, which are at least one year old and not in the process of planning a major renovation or addition, with recommendations in the areas of energy, water, and site attributes.
- **Section 2** provides guidelines for **New Builds and Major Renovations**, explaining how Green Dealer Recognition Program recommendations integrate into design and construction planning.

This guide offers options in many areas of conservation so dealers can choose the recommendations that best fit their dealerships and preferences. While some recommendations require capital investments, others are **low- or no-cost modifications** that can result in significant energy savings and environmental improvements.

Cost to Dealers

Although voluntary, the Green Dealer Recognition Program is comprehensive and includes a facility assessment performed by energy efficiency professionals, tailored recommendations based on each dealership, and ongoing energy and environmental support. Therefore, dealers enroled in the program are charged a participation fee. This is subject to change by Honda Canada.

Green Dealer Guide: Other Uses

This guide can be used by any small to medium retail or commercial property as a resource for minor facility upgrades, to improve facility maintenance, and to assist with decisions regarding future major construction projects. It can also be used by any organization looking to incentivize building and energy efficiency projects over which it does not have direct decision-making power, such as suppliers, business partners, and franchises.

The Green Dealer Recognition Program Structure

The Green Dealer Recognition Program evaluates dealerships in the areas of energy performance, water efficiency, waste reduction, site attributes, and other sustainable best practices. The program recognizes dealerships with three award levels — Silver, Gold, and Platinum. The table below summarizes the program award criteria required for each type of dealership.

				
Award Criteria[2]	**Existing Facilities**	40 points	60 points	80 points
		10% energy use reduction	30% energy use reduction	50% energy use reduction
	New Builds and Major Renovations	40 points	60 points	80 points
				Fast Track to Platinum – "Electric Grid Neutral"[3]

The dealership award path differs based on the age of the facility and construction or renovation status:

» **Existing Facilities** often use older technologies that, if upgraded, can significantly reduce energy usage. These dealerships achieve points for adopting recommendations found in the Green Dealer Recognition Program Scorecard for Existing Facilities, which assigns point values for measures focused on improving the operational efficiency and environmental impact of a dealership.

» Dealerships must upload at least 24 months of historical energy bills to ENERGY STAR® Portfolio Manager® to measure energy consumption before and after an energy efficiency upgrade. The resulting percentage reduction in energy use can help verify that upgrades have had the intended impact.

» **New Builds and Major Renovations** can incorporate high-efficiency measures during the design and planning process to minimize cost and maximize building performance. Dealership award eligibility is based on the Green Dealer Recognition Program Scorecard for New Builds and Major Renovations, which assigns point values for building efficiency measures that should be integrated into the planning process of any major construction.

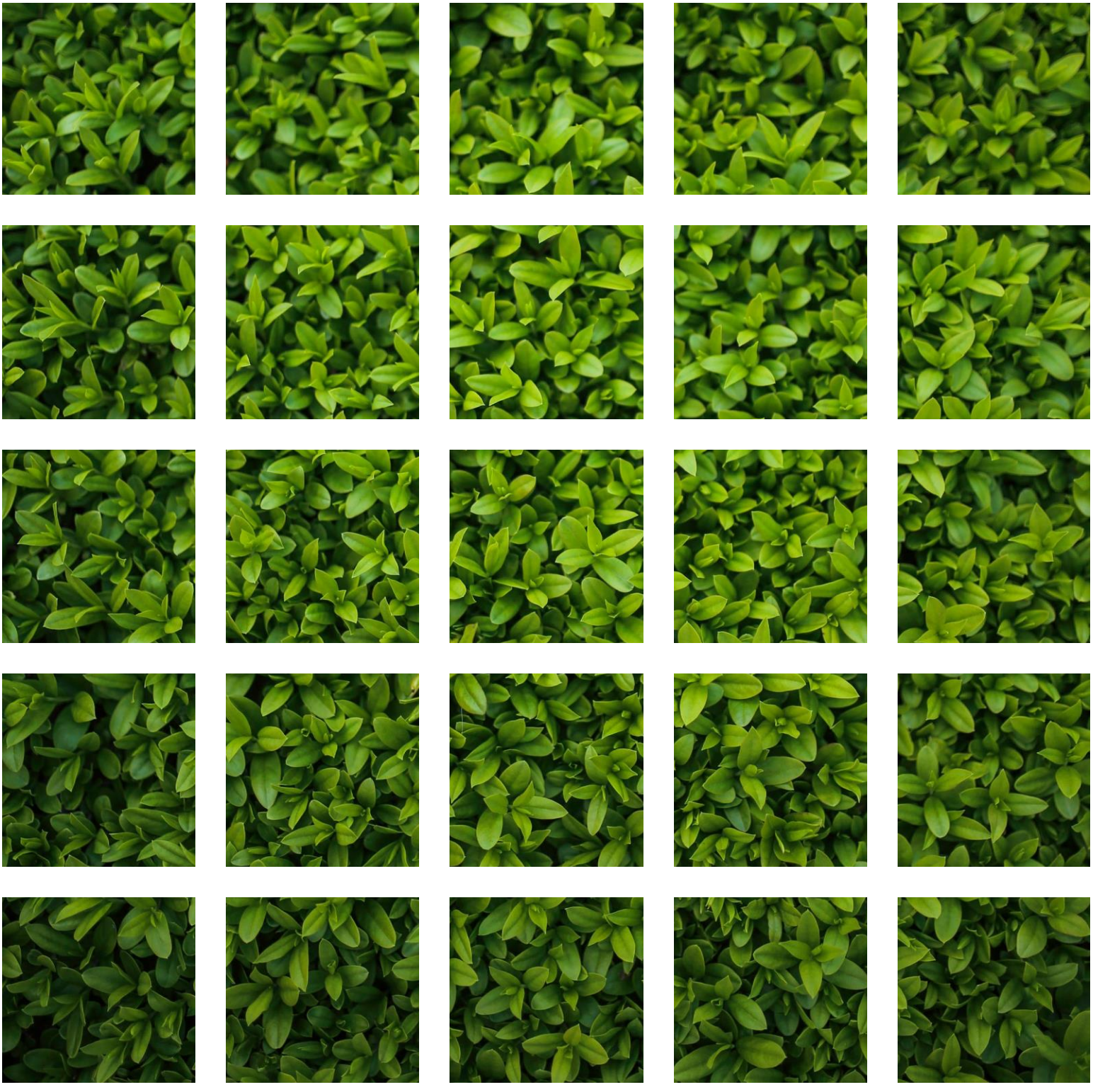
» New Builds and Major Renovations do not need to submit historical energy data because it does not exist or cannot be compared due to significant changes in building footprint. However, dealerships must upload utility (electricity, natural gas, and water) data to ENERGY STAR Portfolio Manager on an ongoing basis once construction is complete.

2 Full program details and energy reduction requirements subject to change as the program changes and grows.

3 "Electric Grid Neutral" means that when averaged over one year, the dealership offsets its grid electric use with an equal amount of on-site renewable generation exported to the grid.

Section 1

Existing Facilities



Existing Facilities

Path to the Green Dealer Recognition Program Award

				
Award Criteria	**Existing Facilities**	40 points	60 points	80 points
		10% energy use reduction	30% energy use reduction	50% energy use reduction
				Fast Track to Platinum – "Electric Grid Neutral"

This section provides recommendations in the areas of energy performance, water efficiency, waste reduction, site attributes and other sustainable best practices for Existing Facilities.

» **Step 1. Enrolment:** Complete and submit a Green Dealer Recognition Program Enrolment Agreement. Prepare by gathering at least 24 consecutive months of your dealership's utility bills (water and energy, including natural gas, electric, heating oil, etc.).

» **Step 2. Assessment:** Honda Canada will arrange a dealership assessment, which includes documenting your dealership's energy performance, water use, waste practices, and site attributes. You may need to provide documentation such as photographs, invoices, site plans, or other materials to verify implemented measures. You must track your dealership's utility data through ENERGY STAR Portfolio Manager by uploading monthly utility consumptions and costs (electricity, natural gas, water, etc.).

» **Step 3. Environmental Assessment Report:** This report includes recommendations on energy performance, water use reductions, recycling practices and other measures and, if appropriate, estimated cost and simple payback information. If you have already made environmental improvements that meet program requirements, Honda will note such improvements in the report and your dealership may qualify for an award.

Takes four to six weeks — or longer if additional information is needed post-assessment.

Path to the Green Dealer Recognition Program Award (cont'd)

» Step 4. Improvements: Review the environmental assessment report and choose improvements to implement. Honda Canada will verify your dealership's performance through analysis of ongoing utility bills. If your dealership demonstrates energy savings in addition to all the other requirements as defined by the program, Honda Canada will verify the improvements and reevaluate your dealership's award status. Please note energy and water reductions demonstrated by data uploaded to ENERGY STAR Portfolio Manager will need to be confirmed by Honda Canada through utility bill verification (i.e. utility bill scans).

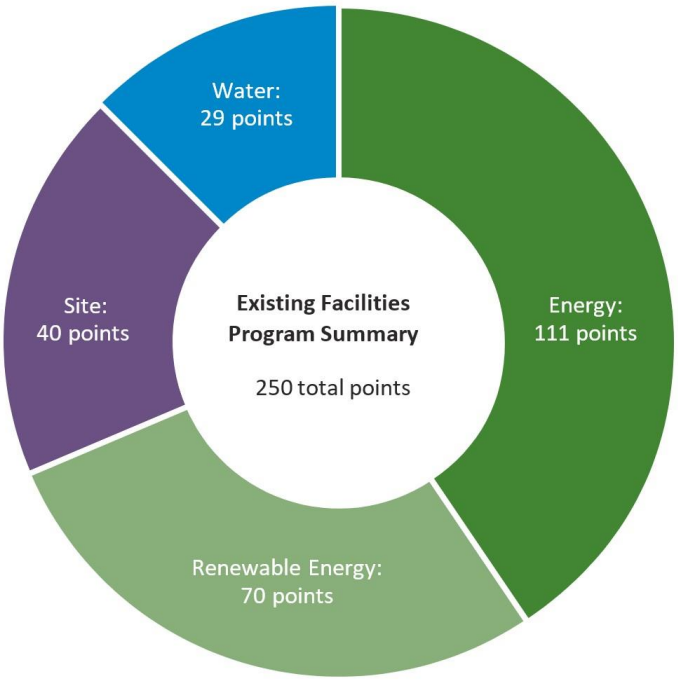
» Estimated timeframe: Implementing recommended measures can occur in as little as a month or take up to six months or more. The timeline to implement recommendations from the environmental assessment report is completely up to the dealer. Post- implementation verification can take up to 12 months.

» Step 5. Award Recognition: Depending on your level of achievement, Honda Canada will recognize your dealership with a Silver, Gold, or Platinum award. Award recipients will be identified on honda.ca and may receive other award materials.

» Step 6. Continuous Improvement: Upon achieving an award, your dealership will continue to receive guidance for continuous improvement in environmental efforts and potentially move up to the next award level.

Green Dealer Recognition Program Scorecard for Existing Facilities

Honda Canada evaluates Existing Facilities more than one year old and not undergoing major renovations using the Green Dealer Recognition Program Scorecard for Existing Facilities. Existing Facilities must also demonstrate an energy-use reduction based on either their historical energy consumption, or the Honda Awarded Dealership Benchmark[4]. Below is a summary of the total available points by category used to evaluate Existing Facilities.



To achieve the Green Dealer Recognition Program award for Existing Facilities, a dealership must satisfy program prerequisites and achieve at least 40, 60, or 80 points for a Silver, Gold, or Platinum award, respectively, along with demonstrated energy reductions. See the next page for a summary of the Green Dealer Recognition Program Scorecard for Existing Facilities.

4 The Honda Awarded Dealership Benchmark is based on the average annual energy use of all Honda dealerships (based on building area) that have achieved the Green Dealer Recognition Program award in Canada.

Existing Facilities

ENERGY	MAX: 181
E1. Track energy consumption in ENERGY STAR Portfolio Manager	Prerequisite
E2. Use 7-day programmable thermostats to automatically control temperature set points	Prerequisite
E3. Provide more than three years of historical energy data to ENERGY STAR Portfolio Manager for better benchmarking	1
E4. Demonstrate a reduction in energy consumption	33
E5. Set efficient thermostat set points and setbacks	9
E6. Use an energy management system (EMS) to monitor and control HVAC and other energy- consuming devices	4
E7. Install energy efficient HVAC units, including space heating and hot water heaters, using recommended fuel source	14
E8. Use efficient insulation, triple-pane windows, skylights, revolving doors, vestibules and/or high-speed doors	7
E9. Participate in a demand response program to reduce energy use during peak hours	2
E10. Install energy-efficient lighting systems	14
E11. Apply automatic controls to shut off interior lighting systems	10
E12. Apply automatic controls to exterior lighting systems	8
E13. Implement preventative maintenance plans for HVAC (incl. space heating), thermostats, lighting systems, and air compressors	5
E14. Complete energy audit	4
E15. Generate or purchase renewable energy	70

Existing Facilities (cont'd)

WATER	MAX: 29
W1. Track water consumption in ENERGY STAR Portfolio Manager	Prerequisite
W2. Provide more than three years of historical water data to ENERGY STAR Portfolio Manager for better benchmarking	1
W3. Demonstrate a reduction in water usage	10
W4. Use low-flow or low-flush interior water fixtures	6
W5. Use smart irrigation technologies (or no irrigation)	2
W6. Use alternative water sources such as reclaimed water or rainwater	4
W7. Use recycled water system and/or other sustainable best practices for car wash	6

SITE	MAX: 40
S1. Provide recycling bins in at least two space types	Prerequisite
S2. Recycle consumables (paper, plastic, aluminum cans, glass), cardboard, light bulbs, and organic waste	4
S3. Institute a waste reduction program to reduce source and/or end waste	1
S4. Track waste in ENERGY STAR Portfolio Manager	2
S5. Landscape at least 75% of planted area with native or adaptive vegetation	1
S6. Use a light-colored hardscape	1
S7. Apply cool (white) or vegetated roofing	2
S8. Apply methods to reduce storm water runoff and improve water quality	3
S9. Achieve third-party environmental certification	15
S10. Sell alternative fuel vehicles when available (BEV, PHEV, FCEV)	1
S11. Install alternative fueling stations	4
S12. Apply educational signage for customers, employee engagement practices, or other noteworthy measures to further reduce environmental impact	6

Section 1 - Existing Facilities

Energy

Energy (181 total points)

Overview

Measurable energy reduction is key to the Green Dealer Recognition Program because it generally has the highest impact on reducing CO_2e emissions. For this reason, Honda Canada allocates the majority of program points to the Energy category.

Recommended measures with a simple payback of zero to five years are considered core to the program. Some upgrades require capital investment that can reduce current and future monthly utility bills. However, several **low- or no-cost** measures can also achieve significant energy and cost reductions; these options can be found in:

E2. Use 7-day programmable thermostats to automatically control temperature set points

E5. Set efficient thermostat set points and setbacks

E11. Apply automatic controls to shut off interior lighting systems

E12. Apply automatic controls to exterior lighting systems

E13. Implement preventative maintenance plans for HVAC (incl. space heating), thermostats, lighting systems, and air compressors

E14. Complete energy audit

Throughout the Energy section, the word "energy" is defined in this document as total consumption of electricity, natural gas, and other fuels used to provide power to the dealership. In the lighting sections, the term "electricity" is used since lighting only consumes electricity.

Points Available

ENERGY	MAX: 181
E1. Track energy consumption in ENERGY STAR Portfolio Manager	Prerequisite
E2. Use 7-day programmable thermostats to automatically control temperature set points	Prerequisite
E3. Provide more than three years of historical energy data to ENERGY STAR Portfolio Manager for better benchmarking	1
E4. Demonstrate a reduction in energy consumption	33
E5. Set efficient thermostat set points and setbacks	9
E6. Use an energy management system (EMS) to monitor and control HVAC and other energy- consuming devices	4
E7. Install energy efficient HVAC units, including space heating and hot water heaters, using recommended fuel source	14
E8. Use efficient insulation, triple-pane windows, skylights, revolving doors, vestibules and/or high-speed doors	7
E9. Participate in a demand response program to reduce energy use during peak hours	2
E10. Install energy-efficient lighting systems	14
E11. Apply automatic controls to shut off interior lighting systems	10
E12. Apply automatic controls to exterior lighting systems	8
E13. Implement preventative maintenance plans for HVAC (incl. space heating), thermostats, lighting systems, and air compressors	5
E14. Complete energy audit	4
E15. Generate or purchase renewable energy	70

E1. Track Energy Consumption in ENERGY STAR Portfolio Manager (Prerequisite)

Tracking monthly energy consumption is necessary to benchmark dealership energy use, discover opportunities for improvement, and verify energy reductions resulting from retrofits and/or operational improvements.

By tracking energy consumption, dealers can validate project cost savings, verify whether building systems are working efficiently, and determine if equipment repair or replacement is necessary.

ENERGY STAR Portfolio Manager is backed by the Government of Canada and Natural Resources Canada as a nationally standardized system for building benchmarking use.

Recommendations

To satisfy this prerequisite, your dealership must track energy data on an ongoing basis by uploading energy data directly to ENERGY STAR Portfolio Manager. Dealerships must input at least 24 months of historical energy usage and cost data, unless unable to do so due to the age of the facility, length of occupancy, or other factors. Utility data must be continually uploaded to ENERGY STAR Portfolio Manager on an ongoing basis. The following information must be tracked to satisfy the prerequisite:

- Bill start and end dates
- Utility cost information
- Monthly kWh of electricity consumed
- Cubic meters of natural gas consumed
- Meter readings for other fuel types

E1. Track Energy Consumption in ENERGY STAR Portfolio Manager	
Track energy consumption and cost data in ENERGY STAR Portfolio Manager	Prerequisite

E2. Use 7-day Programmable Thermostats to Automatically Control Temperature Set Points (Prerequisite)

Automatic temperature controls are a **low- or no-cost** measure that can significantly reduce energy consumption. Heating and cooling can represent 40-60% of total dealership energy use. This is a substantial impact, and programmable thermostats or centralized controls can reduce energy and save money by adjusting space temperatures according to the time of day and the day of the week[5].

Recommendations

To satisfy this prerequisite, your dealership must have seven-day, programmable thermostats or a central building automation system to control temperature set points for all conditioned spaces, including the service area[5]. "Smart" or "networkable" thermostats can further reduce energy by adjusting to real-time occupancy sensors and/or making occupancy schedules accessible through the Internet (allowing for connection to an energy management system).

E2. Use 7-Day Programmable Thermostats to Automatically Control Temperature Set Points	
Use 7-day programmable thermostats to automatically control temperature set points.	Prerequisite

5 Honda Canada will evaluate exceptions on a case-by-case basis.

E3. Provide More Than Three Years of Historical Energy Data to ENERGY STAR Portfolio Manager for Better Benchmarking (1 point)

Providing multiple years of utility data history is essential for useful building benchmarking as it allows the dealership to compare current energy performance to historical standards. Dealerships who provide at least three years of historical energy data, including usage and cost, from their electricity and natural gas utility providers also have a greater chance of demonstrating energy reductions from historical energy conservation measures completed.

Recommendations

Dealerships may earn a maximum of 1 point by providing at least three years of historical energy data into ENERGY STAR Portfolio Manager.

E3. Provide More Than Three Years of Historical Energy Data to ENERGY STAR Portfolio Manager for Better Benchmarking	MAX: 1
Provide more three years of historical electricity and gas utility data, including usage and cost, to ENERGY STAR Portfolio Manager.	1

E4. Demonstrate a Reduction in Energy Consumption (33 points)

Reducing energy use is essential to the Green Dealer Recognition Program because it has the highest impact on reducing CO_2e emissions.

Your dealership can demonstrate energy reductions using either of the following two methods:

1. **Historical Baseline Method:**

   The Green Dealer Recognition Program performs a detailed energy analysis using at least 24 months of historical utility data (natural gas, electricity, heating oil[6], etc.) normalized using local weather data to account for seasonal weather impacts. The percent difference in weather-normalized usage between the baseline period and the performance period determines your dealership's energy reductions.

   » **Performance period:** the most recent 12 months of utility data submitted.

   » **Baseline period:** the highest consecutive 12 months of energy consumption from the data provided, or the earliest 12-month period available that does not overlap with the performance period.

2. **Honda Awarded Dealership Benchmark Method:**

   This method is an alternative pathway for high-performance facilities to demonstrate energy use reductions. Your dealership may qualify for this option if it is already demonstrating strong energy performance, making it difficult to significantly reduce energy use from your baseline period[6].

   The Green Dealer Recognition Program compares data from the 12-month performance period to the Honda Awarded Dealership Benchmark. This benchmark is based on the average annual energy use of all Canadian dealerships (based on dealership size) that have achieved the Green Dealer Recognition Program award.

   The percent difference between the Honda Awarded Dealership Benchmark and your dealership's weather-normalized source energy usage equals your dealership's energy reduction equivalent.

   The Green Dealer Recognition Program requires the most recent 12 months of utility data (electric and natural gas) to establish your dealership's performance period.

6 Energy reductions due to waste oil fuel usage are not used for program compliance because while energy cost is reduced, there is no reduction in energy usage or CO_2e emissions. Dealerships who use a waste oil burner for heating do not qualify for the Honda Awarded Dealership Benchmark Method as their total energy usage cannot be verified. See Section 1: Existing Facilities, E7. Install Energy Efficient HVAC Units, Including Space Heating and Hot Water Heaters, Using Recommended Fuel Source for more information.

E4. Demonstrate a Reduction in Energy Consumption (cont'd)

Definitions

Source Energy: Represents the total amount of raw fuel required by the utility to operate the facility, including all transmission, delivery and production losses. ENERGY STAR Portfolio Manager, which is the nationally standardized benchmarking system backed by the Government of Canada and Natural Resources Canada for building benchmarking use, recommends representing total energy usage as source energy instead of site energy; this provides a more complete picture of how much energy is used to operate a building (www.energystar.gov/buildings/tools-and-resources/portfolio-manager-technical-reference-source- energy).

Weather Normalization: Refers to the process of adjusting actual metered energy consumption to the consumption expected to occur under conditions representing a typical meteorological year (based on 30-year averaged weather conditions). This regression-based analysis is commonly used in building energy analysis because year-to-year changes in weather or climate can skew energy usage.

Recommendations

Dealerships may earn a maximum of 33 points by demonstrating an energy use reduction using either the Historical Baseline Method or the Honda Awarded Dealership Benchmark described above.

E4. Demonstrate a Reduction in Energy Consumption	MAX: 33
Demonstrate energy use reductions	33

E5. Set Efficient Thermostat Set Points and Setbacks (9 points)

Temperature set points establish a specific temperature level for a space; if the space gets hot or cold due to changing outside temperatures, the heating and cooling system will automatically turn on or off to bring the space temperature back to a comfortable level. Setting lower heating and higher cooling set points is a **low-to no-cost** measure to reduce energy consumption.

Recommendations

Dealerships may earn a maximum of 9 points by setting automatic temperature controls to 21ºC or lower for heating, 23ºC or higher for cooling, and to set back by 5ºC or more during unoccupied times. Dealerships may earn partial points for setting back both heating and cooling set points by at least 3ºC.

Set daytime temperatures to resume 1-2 hours before opening to ensure the space reaches a comfortable temperature during occupied hours. At closing time and on holidays, use setback temperatures of 5ºC beyond the typical heating and cooling set points to conserve energy. For example, a qualifying nighttime and unoccupied set point for full points is 16ºC for heating and 28ºC for cooling. This reduces costs incurred by running heating and air conditioning units when the building is unoccupied.

Your HVAC or electrical contractor can assist in configuring temperature controls. Since occupant comfort can be a subjective measurement, thermostat set points may require regular communication with your dealership staff and refinement over time. To prevent occupants from overriding the controls and/or leaving the system on at night, lock thermostat controls.

E5. Set Efficient Thermostat Set Points and Setbacks	MAX: 9
Daytime set points: 21ºC or lower for heating	2
Daytime set points: 23ºC or higher for cooling	1
Nighttime and unoccupied set points set back by at least 3ºC	3
Nighttime and unoccupied set points set back by at least 5ºC (or 16ºC for heating, 28ºC for cooling)	6

E6. Use an Energy Management System (EMS) to Monitor and Control HVAC and Other Energy-Consuming Devices (4 points)

An energy management system (EMS) allows building managers to monitor and control energy consuming equipment including HVAC systems, pumps, fans, lighting, and other equipment within a facility using a mobile or web-based control platform.

Energy management systems and networked controls are powerful tools for optimizing a facility's energy use and maintaining persistent savings over time.

Energy management systems use a network of sensors and controllers to administer thermostat set point controls based on occupancy, and enable/disable relays for lighting, air compressors, or exhaust fans. They also monitor building power circuits to identify control failures or peak demand events. An EMS is capable of monitoring solar production, electric vehicle (EV) charging systems, dispatching electric battery storage, EV charging limits, and temporary standby thermostat controls to reduce peak electric demand charges.

Recommendations

Dealerships may earn a maximum of 4 points by installing an energy management system capable of centrally monitoring and controlling the building HVAC and lighting systems. Dealerships with networked controls that manage HVAC schedules and settings, but not lighting controls, may earn partial points.

E6. Use an Energy Management System (EMS) To Monitor and Control HVAC and Other Energy-Consuming Devices	MAX: 4
Use an energy management system (EMS) to monitor and control HVAC and other energy-consuming devices	4
Use networked temperatures controls	2

E7. Install Energy Efficient HVAC Units, including Space Heating and Hot Water Heaters, Using Recommended Fuel Source (14 points)

The Green Dealer Recognition Program uses the National Energy Code of Canada for Buildings (NECB) 2017 as a guideline for energy-efficient HVAC equipment. The NECB 2017 establishes high performance standards for HVAC equipment including space heating, heat pumps, air conditioning units, and hot water heaters.

Energy-efficient HVAC systems improve building energy performance by lowering energy demand, which reduces monthly utility bills. Newer, more efficient HVAC systems use less energy to produce the same amount of cooling or heating when compared with older, less efficient systems.

Additionally, air-side economizers use low-temperature outside air rather than cooling the warmer return air from the building interior. This method is more effective in drier climates and regions with large temperature swings during a typical day.

Honda Canada offers additional points to dealerships for using the lower-carbon fuel source (between electricity or natural gas) for heating units, which is based on the CO_2e emission factors of their regional electricity grids. Electricity grids that rely on high proportions of renewable energy, such as hydropower, to generate power will subsequently have exceedingly low CO_2e grid emission factors for electricity. In these regions, Honda Canada recommends considering using HVAC units with electric resistance heating to lower the overall carbon emission impact associated with dealership operations.

The lower-carbon fuel source by province for heating HVAC units can be seen in the table below:

GHG Emission Factors for Electricity and for Natural Gas in Canada by Province

Province	Indirect CO_2e Emissions for Electricity (kg/GJ)	Direct CO_2e Emissions for Natural Gas (kg/GJ)	Lower-Carbon Fuel Source for Heating Units
Alberta	244.26	50.42	Natural Gas
British-Columbia	4.63	50.38	Electricity
Manitoba	0.98	49.33	Electricity
New Brunswick	79.66	49.72	Natural Gas
Newfoundland and Labrador	8.61	49.72	Electricity
Northwest Territories	83.27	64.41	Natural Gas
Nova Scotia	202.63	49.72	Natural Gas
Nunavut	208.18	64.41	Natural Gas
Ontario	11.10	49.38	Electricity
Prince Edward Island	79.66	49.72	Natural Gas
Quebec	0.45	49.36	Electricity
Saskatchewan	249.81	47.86	Natural Gas
Yukon	11.38	49.72	Electricity

E7. Install Energy Efficient HVAC Units, including Space Heating and Hot Water Heaters, Using Recommended Fuel Source (cont'd)

Recommendations

Dealerships may earn a maximum of 14 points by meeting the following requirements:

» Provide documentation that HVAC equipment meets or exceeds NECB 2017 compliance, NECB 2017 equivalent, and/or meets the minimum efficiency standards shown in the next table. To determine if specific HVAC equipment is NECB 2017 compliant, visit the "Codes Canada Publications" section of the National Research Council Canada (NRC) website where the NECB 2017 guideline is available for public download. Note: The weighted average of all HVAC unit efficiencies must meet the minimum efficiency standards noted in NECB 2017 and/or the below table to earn points.

» Work with your HVAC contractor to determine if air-side economizers are appropriate for your dealership's HVAC equipment and climate zone. Economizer controls must be checked regularly to effectively respond to changes in outside air; damper actuator failures and outside air blockages can occur over time especially when exposed to outside elements.

» Before replacing or installing new HVAC units, follow the criteria listed in the above table to determine which fuel source (electricity or natural gas) is the lower-carbon option to power the heating equipment based on your dealership's local electricity grid emission factors. You may also contact your Green Dealer Recognition Program representative or find the Canadian electricity grid and natural gas CO_2e emission factors in ENERGY STAR's Technical Reference "Greenhouse Gas Emissions". Note: Emission factors shown in this resource have been converted to kilograms (kg) of CO_2e per gigajoule (GJ) of energy consumed.

E7. Install Energy Efficient HVAC Units, including Space Heating and Hot Water Heaters, Using Recommended Fuel Source — **MAX: 14**

	Minimum Efficiency Rating or Other Notes	Points Available
Domestic hot water heater	NECB 2017 compliant or equivalent	1
	Lower-carbon fuel source based on regional electric grids	1
Space heating (boiler, furnace, radiant heating, etc.)	NECB 2017 compliant or equivalent	2
	Lower-carbon fuel source based on regional electric grids	2
Heat pump or A/C unit	Energy Efficiency Ratio (EER) ≥ 12* Seasonal Energy Efficiency Ratio (SEER) ≥ 15* *Weighted average of all units	3
	Lower-carbon fuel source based on regionality (heating only)	3
Air-side economizers	For cooling units over 5 tons	2

E7. Install Energy Efficient HVAC Units, including Space Heating and Hot Water Heaters, Using Recommended Fuel Source (cont'd)

It is usually not economically feasible to replace all existing HVAC units with newer units at the same time due to high equipment and installation costs. However, be sure to select energy-efficient HVAC equipment when an existing unit reaches the end of its life.

Waste Oil Burners/Heaters: Although the use of used oil (waste oil) burners/heaters at a dealership may reduce heating fuel costs, studies have shown that the resulting pollutant emissions may have negative impacts on local air quality.

In 2007, the province of Ontario banned the burning of waste oil heaters as a source of highly toxic local air pollution in an effort to improve air quality and remove a potential health threat to workers and local residents (Toronto Environmental Alliance. (2006). Ban on Burning Used Oil Improves Ontario's Air). Higher zinc, lead, hydrochloric acid, and total particulate emissions can occur with waste oil combustion than with virgin fuel oil. (U.S. Department of Energy, Office of Fossil Energy. (2006). Used Oil Re-Refining Study to Address Energy Policy Act of 2005, Section 1838.)

The goal of the Green Dealer Recognition Program is to reduce energy usage and CO_2e emissions. Burning used oil does not reduce total energy consumption or emissions and therefore is not included in the energy reduction calculations for the program. Dealerships who use waste oil burners and are not able to verify the amount of fuel oil used cannot use the Honda Awarded Dealership Benchmark to demonstrate energy reductions.

E8. Use Efficient Insulation, Triple-Pane Windows, Skylights, Revolving Doors, Vestibules and/or High-Speed Doors (7 points)

High-performing building envelopes can improve building insulation and help minimize heat gain or loss, which help lower a building's heating and cooling costs.

Improve building insulation by providing the minimum recommended insulation values for roofing, exterior walls, and windows for your dealership's climate zone, as defined by NECB 2017 (Table 3.2.2.2. and Table 3.2.2.3.).

NECB 2017 – Building Envelope Requirements by Climate Zone

Climate Zone	Window	Roof	Walls
	Assembly Max. U-Value (W/m^2*K)	Assembly Max. U-Value (W/m^2*K)	Assembly Max. U-Value (W/m^2*K)
4	**2.1**	**.193**	**.315**
5	**1.9**	**.156**	**.278**
6	**1.9**	**.156**	**.247**
7	**1.9**	**.138**	**.210**
8	**1.4**	**.121**	**.183**

The above table summarizes the thermal performance characteristics for each building envelope component in each climate zone in NECB 2017 (Refer to Appendix B).

- The insulation levels of windows, roofs, and exterior walls are measured in U-value; a lower U-value corresponds to higher levels of thermal insulation-value is typically measured in watts per square meter kelvin (W/m^2*K).
- U-value defines the thermal conductivity of a window assembly (including glass and framing), roofing, and walls.
- Roofing and walls must meet both U-value criteria to earn points.

E8. Use Efficient Insulation, Triple-Pane Windows, Skylights, Revolving Doors, Vestibules and/or High-Speed Doors (cont'd)

As dual-pane windows become more standard for commercial use, triple-pane windows can increasingly minimize undesired thermal gain or loss in a dealership which improves indoor comfort and reduce HVAC cooling and heating loads. Revolving doors, vestibules, and high-speed garage doors minimize loss of conditioned air from interior spaces and/or service bays. Skylights, correctly installed and rated according to dealership's climate zone, add natural light to a space, reducing the need for electrical lighting, which can also lead to reduced HVAC cooling loads.

Recommendations

Dealerships may earn a maximum of 7 points by providing documentation confirming the measures below.

E8. Use Efficient Insulation, Triple-Pane Windows, Skylights, Revolving Doors, Vestibules and/or High-Speed Doors	MAX: 7
Efficient roofing and wall insulation based on climate zone	2
Efficient window insulation based on climate zone	1
Triple-pane windows	1
Skylights in at least one of the following areas: showroom, customer service lounge, offices and breakroom, parts and storage, and service areas	1
Revolving doors with educational signage or vestibule with interior and exterior doors for main entrance	1
High-speed garage doors	1

E9. Participate in a Demand Response Program to Reduce Energy Use During Peak Hours (2 points)

Demand response programs incentivize utility customers to reduce energy use during critical times when electrical grids are approaching peak demand. Dealers can participate in a demand response program administered by their utility or automatically reduce peak demand through an energy management system or automated control program. Utilities will pay demand response program participants based on the amount of power (kW) they can reduce during the identified peak periods. Remote control switches on major HVAC equipment can turn off the unit when the utility declares a demand reduction event.

Recommendations

Dealerships may earn a maximum of 2 points by contacting their local utility company to enrol in a demand response program if available.

E9. Participate in a Demand Response Program to Reduce Energy Use During Peak Hours	MAX: 2
Participate in a demand response program	2

E10. Install Energy-Efficient Lighting Systems (14 Points)

Lighting accounts for a significant portion of a dealership's total electricity usage. Choosing high-performance lighting technologies reduces electricity and maintenance costs over time. The Green Dealer Recognition Program awards points for using high-efficiency lighting and controls in each primary space type of the dealership.

For typical Honda dealerships, the highest electricity-consuming lights are often 250W-1000W metal halides installed in the parking lot, showroom, and service shop. Therefore, replacing these lights with LED or other efficient lamp choices greatly reduces energy consumption.

In general, the Green Dealer Recognition Program recommends LED lighting due to its higher efficiency, lifetime, and lighting output over time. However, there are other cost-effective options depending on the lighting application and utility cost rates; see **Appendix C** for the benefits and drawbacks of various lighting technologies for each space type.

Different space types have different lighting needs; therefore, it is important to discuss whether to re-lamp existing fixtures or to purchase new fixtures with a qualified architect, lighting designer, or electrical contractor. While like-for-like lighting replacements are the simplest solution, a redesigned layout with fewer total fixtures can significantly reduce initial costs.

Where available, leverage rebates offered by local utility companies to offset the initial capital cost of installing energy-efficient lighting systems. Visit your local utility website and search for energy efficiency rebates for businesses to find more information about available incentive programs.

Benefits of High-Performance LEDs

High-performance LED lights deliver consistent, high-quality lighting for 10+ years and can result in 60-80% electricity savings compared to standard metal halide technologies. LED lamps maintain light output and color temperature throughout their lifetime and also produce less heat, which can reduce costs from air conditioning. Recent developments in LED technology have improved performance and lowered cost; new LED product options are continuously available on the commercial market.

E10. Install Energy-Efficient Lighting Systems (cont'd)

Recommendations

Dealerships may earn a maximum of 14 points by installing one or more of the recommended efficient lighting technologies below as the primary type of lighting (at least 90% of total installed wattage) for each space type. The Green Dealer Recognition Program awards points separately for using efficient lighting and controls in each of the following space types:

- Offices
- Showroom
- Service area
- Parts/Storage
- Exterior lot
- Exterior façade

E10. Install Energy-Efficient Lighting Systems	MAX: 14
Interior Lamp Types	
LED	2
Induction fluorescent	1
High-output T5 fluorescent	1
Reduced wattage T8 fluorescent	1
Parking Lot Lamp Types	
LED	6
Induction fluorescent	2
High-output T5 fluorescent	2
Building Façade Lamp Types	
LED	2

Example 1: If you install LED lighting (100% of total installed wattage) in the showroom (2 points) and for the parking lot (6 points) and building-mounted wall packs (2 points), 100% reduced-wattage fluorescents in offices (1 point) and parts/storage (1 point), and 100% metal halides in the service bays (0 points), the total points earned for efficient lighting technologies is 2pts + 6pts + 2pts + 1pt + 1pt + 0pts = 12pts.

Example 2: "Primary lighting type" means at least 90% of total installed wattage in each space type. For example, 90% LED (2 points) and 10% compact fluorescent lighting (CFL) (0 points) of total installed wattage in offices would earn 2 points, 80% LED (0 points) and 20% incandescent (0 points) in the showroom would earn an additional 0 points, and 50% metal halide (0 points) and 50% high-output T5 fluorescents (0 points) in the service areas would earn an additional 0 points.

E11. Apply Automatic Controls to Shut Off Interior Lighting Systems (10 Points)

Automatic lighting controls adjust lighting levels or turn lights off based on the time of day, outside daylight levels, or occupant activity. Automatic lighting controls are a **low- or no-cost** way to conserve energy and reduce costs.

Types of Interior Lighting Controls

- **Time Clocks:** Time clocks turn lighting on or off based on building occupancy schedules and time of day. A basic mechanical time clock allows programming of daily or weekly lighting schedules; more advanced digital controls are capable of automatically adjusting the operating schedule based on the time of year, considering time changes and seasonal variances. Set time clocks to turn lights off within 2 hours of the dealership's closing time.
- **Occupancy Sensors:** Occupancy sensors control lighting systems based on occupant activity in the space, as detected by passive infrared or ultrasonic motion sensors. For example, if a room is unoccupied for 20 minutes or more, occupancy sensors will power-off the light fixtures in that space to eliminate wasted electricity.
- **Photocells:** Photocells are sensors used to automatically control interior lighting levels based on the level of natural daylight in the space; lights dim when natural daylight is high and increase when natural daylight levels are low.

Recommendations

Dealerships may earn a maximum of 10 points by installing automatic lighting controls throughout interior spaces.

Work with your lighting contractor to install and program interior lighting controls. Costs will depend on the lighting zone layout and compatibility with existing light fixtures. Also, check with utility providers to see if rebates are available for these products.

E11. Apply Automatic Controls to Shut Off Interior Lighting Systems **MAX: 10**

	Occupancy Sensor	Time Clock	Photocell	Total Pts per Space
Showroom	N/A	1	2	3
Office	2	1	1	4
Service area	N/A	1	2	3
Parts/storage	2	1	1	4
Bathrooms	2	N/A	N/A	2

E12. Apply Automatic Controls to Exterior Lighting Systems (8 Points)

Parking lot lighting makes up 20-40% of a typical dealership's total annual electricity use. Pairing the right automatic lighting controls with energy-efficient fixtures reduces energy use and can result in significant energy and maintenance cost savings. This is a **low- to no-cost** measure, and utility rebates are often available.

Types of Exterior Lighting Controls

- **Time Clocks:** Exterior time clocks power lighting on or off based on time of day. A basic time clock allows programming of daily or weekly lighting schedules; more advanced controls such as an astronomical time clock automatically adjust the operating schedule based on the time of year, taking into account time changes and seasonal variances (e.g., sunset to sunrise).
- **Photocells:** Exterior photocells automatically control outdoor lighting circuits by turning lights on at dusk and off at dawn in response to available daylight.
- **Automatic Power Reduction Controls:**
    - **Bi-Level Lighting Controls:** Bi-level lighting controls can save energy by reducing light levels in parking lots when not needed. Program controls to dim or turn off a portion of the lights at a certain time, which allows for both acceptable security lighting levels and reduction in power consumption.
    - **Motion Detecting:** Motion detectors may be installed on the building façade and pole lights to allow security lights to remain off or at lower levels until motion is detected in the area. This active control mechanism can significantly deter theft and vandalism, especially when coupled with cameras or other security measures.

E12. Apply Automatic Controls to Exterior Lighting Systems (cont'd)

Recommendations

Dealerships may earn a maximum of 8 points by installing the appropriate automatic lighting controls and efficiently managing exterior lighting operation.

Work with your lighting contractor to install and program exterior lighting controls. Costs will depend on the lighting zone layout and compatibility with existing light fixtures. Also, check with local utility providers to see if rebates are available for these products.

E12. Apply Automatic Controls to Exterior Lighting Systems	MAX: 8
Parking Lots:	
Lights programmed to turn OFF at dawn and ON at dusk, using automatic control mechanism (photocell or astronomical time clock)	1
25% Lighting reduction by 1:00 am, using automatic control mechanism (astronomical time clock, motion detector, dimming)	3
50% Lighting reduction by 1:00 am, using automatic control mechanism (astronomical time clock, motion detector, dimming)	6
Building Façade:	
Façade lights programmed to turn OFF at dawn and ON at dusk, using automatic control mechanism (photocell or astronomical time clock)	1
50% lighting power reduction by 1:00 am, using automatic control mechanism (astronomical time clock, motion detector, dimming)	2

E13. Implement Preventative Maintenance Plans for HVAC (Incl. Space Heating), Thermostats, Lighting Systems, and Air Compressors (5 points)

Routine maintenance checks of HVAC systems (including space heating), thermostats, lighting controls, air compressors and other energy-consuming equipment can help lower energy usage. This **low- to no-cost** measure helps identify potential equipment issues that can cause excess energy consumption or equipment failure. Thermostats and sensors that are out of calibration cause equipment to run longer than necessary and during unoccupied hours. Compressed air leakage causes compressors to run significantly more than required. HVAC fluid leakage causes the release of harmful refrigerants and degrades equipment efficiency. Preventative maintenance plans for HVAC units (including space heating), thermostats, lighting controls, and air compressors help maximize system efficiency and reliability.

Recommendations

Dealerships may earn a maximum of 5 points by implementing preventative maintenance plans for the systems below.

E13. Implement Preventative Maintenance Plans for HVAC (Incl. Space Heating), Thermostats, Lighting Systems, and Air Compressors	MAX: 5
HVAC unit inspection at least twice per year	1
Space heating inspection every two years, (i.e. boiler tune-up)	1
Thermostat calibration at least annually	1
Lighting controls - interior and exterior - inspected at least annually	1
Air compressors, piping, valves and fittings inspected for leakage at least annually	1

HVAC unit checks:

- Ensure all fluids/refrigerants are fully charged per specifications.
- Ensure compressor and condenser functionality.
- Check unit condition (belts, fans, filters, etc.) and replace parts as needed.

Space heating inspection and checks:

- Ensure thermal output is calibrated properly to energy input, and check system condition to ensure all components are functioning properly.

Thermostat maintenance:

- Test all thermostats for accuracy at least once a year, calibrate if needed, and verify that thermostats have been appropriately configured to set back by 5°C or more at night (see Section E5. Set Efficient Thermostat Set Points and Setbacks).

Air compressors:

- Inspect air compressor pipes, hoses, valves, and fittings for leakage at least once a year to minimize wasted energy.

Lighting controls:

- Check all interior and exterior lighting controls, including photocells, timers, and occupancy sensors at least once per year to verify lighting shutoff controls and optimal time schedules.

E14. Complete Energy Audit (4 points)

A third-party energy assessment can help identify opportunities to improve existing building energy performance through cost-effective controls or retrofits. A **low- or no-cost** measure, the energy assessment should evaluate building energy systems, including but not limited to:

- Heating, ventilation and air conditioning systems and controls
- Building envelope
- Lighting systems
- Domestic hot water systems
- On-site renewable energy systems (solar photovoltaic panels) if applicable

The Green Dealer Recognition Program offers a comprehensive environmental assessment performed by a third-party technical expert in building energy efficiency and environmental performance. This assessment is reviewed by a professional engineer. Following the assessment, your dealership will receive a detailed report with recommendations on energy, water, and other environmental improvements, and if appropriate, cost savings estimates and simple payback analysis for recommended efficiency projects.

Recommendations

Dealerships may earn a maximum of 4 points for undergoing an energy assessment.

E14. Complete Energy Audit	MAX: 4
Green Dealer Recognition Program on-site assessment or comprehensive building commissioning	4
Building envelope audit	2
Other type of energy assessment (e.g. utility lighting audit)	1

You may also hire a third party to perform an energy audit of your dealership to identify opportunities for improving energy efficiency. A lighting or HVAC contractor, local utility, energy efficiency consultant, or other qualified service provider may perform an energy audit.

E15. Generate or Purchase Renewable Energy (70 points)

Few things have more impact and visibly demonstrate a commitment to the environment than the presence of renewable energy sources, such as solar panels or wind turbines. On-site renewable generation hedges against utility rate increases that can significantly impact future operating costs. By offsetting energy use with renewable energy, dealerships may be eligible for a lower rate tier and avoid peak demand charges, depending on local utility policies. Some utilities charge more for electricity use during periods of highest demand. Renewable energy is one way to reduce electricity use during peak demand periods, and therefore avoid additional charges.

Some common renewable energy options:

- **Solar Power:** Depending on location, solar photovoltaic (PV) systems can be a cost-effective option for using renewable energy to power a dealership.
- **Wind Energy:** While only feasible in some regions, wind turbines suited for urban environments typically range from 2.5kW to 5kW.
- **Biogas:** Obtained from renewable sources, biogas can power on-site fuel cell generators or micro turbines to reduce grid-purchased electricity.

Dealerships may purchase Renewable Energy Certificates (RECs) from other third-parties that generate renewable energy through installed systems. Dealerships will receive points on the same scaling system shown below, but will only receive half the points by offsetting the same amount of energy usage. This is to encourage dealerships to take more permanent action towards offsetting their energy usage through installed systems.

Recommendations

Dealerships may earn a maximum of 70 points based on the percentage of total annual grid-supplied energy (electricity and natural gas) offset by a renewable energy system.

E15. Generate or Purchase Renewable Energy	MAX: 70
Install a renewable energy system	Up to 70
Purchase renewable energy (i.e. Renewable Energy Certificates)	Up to 35

Solar Calculation Example

A dealership using both electricity and natural gas consumes an equivalent of 1,000,000 units of total energy per year, and has a solar panel system that generates the equivalent of 250,000 units of energy per year. The dealership would be eligible for 32 points - because it uses 25% renewable energy on an annual basis.

Points Calculation - Note: round all fractions to the nearest point:

Percent energy offset ≤10%
Points = 2.5 x percent energy offset

Percent energy offset > 10%
Points = 0.5 x percent energy offset + 19.5

E15. Generate or Purchase Renewable Energy (cont'd)

At this time, solar PV systems are the most cost-effective renewable energy option for dealerships. Honda Canada encourages this option wherever feasible, and will incorporate other renewable energy options as they become more cost-effective for dealerships. A showroom display demonstrating the energy savings generated by the renewable energy system is a great way to show your dealership's commitment to the environment.

Your dealerships can also consider a power purchase agreement (PPA) for renewable energy systems at little to no installed cost, though your dealership will only receive points credit if you own the Renewable Energy Certificates (RECs) associated with the system.

Fast Track to Platinum: Electric Grid Neutral

A dealership can automatically earn a Platinum award if it is Electric Grid Neutral. Electric Grid Neutral means that, when averaged over a year, the dealership offsets its grid electric use with an equal amount of on-site renewable generation exported to the grid. If electric grid neutral is achieved, no other points with the Green Dealer Recognition Program are necessary to achieve the Platinum award. However, the dealership will be required to still meet the prerequisites of the program.

To achieve points, provide the technical specifications of the renewable energy system installed at your dealership. If the system has been installed for at least one year, provide Honda Canada with data that shows how much energy is produced by the renewable energy system over the most recent 12 months.

Section 1 - Existing Facilities

Water

Water (29 total points)

Overview

Water conservation measures often include upgrading fixtures, fixing leaky faucets, or choosing native plants for landscaping instead of grass or non-native species that require extra water.

It takes a considerable amount of energy for the regional utility to treat and pump the water used by a dealership, so saving water means saving energy too.

Points Available

WATER	MAX: 29
W1. Track water consumption in ENERGY STAR Portfolio Manager	**Prerequisite**
W2. Provide more than three years of historical water data to ENERGY STAR Portfolio Manager for better benchmarking	**1**
W3. Demonstrate a reduction in water usage	**10**
W4. Use low-flow or low-flush interior water fixtures	**6**
W5. Use smart irrigation technologies (or no irrigation)	**2**
W6. Use alternative water sources such as reclaimed water or rainwater	**4**
W7. Use recycled water system and/or other sustainable best practices for car wash	**6**

W1. Track Water Consumption in ENERGY STAR Portfolio Manager (Prerequisite)

Regularly tracking monthly water consumption is necessary to benchmark a dealership's water use, establish opportunities for improvement, identify leaks, and quantify water use reductions resulting from retrofits or operational improvements.

Recommendations

To satisfy this prerequisite, your dealership must track water data on an ongoing basis by uploading water data directly to ENERGY STAR Portfolio Manager. Dealerships must input at least 24 months of historical water usage and cost data, unless unable to do so due to the age of the facility, length of occupancy, or other factors. Utility data must be continually uploaded to ENERGY STAR Portfolio Manager on an ongoing basis.

Track the following information to satisfy the prerequisite:

- Monthly water cost
- Monthly water usage
- Bill start and end dates

W1. Track Water Consumption in ENERGY STAR Portfolio Manager	
Track water cost and consumption data in ENERGY STAR Portfolio Manager	Prerequisite

W2. Provide More Than Three Years of Historical Water Data to ENERGY STAR Portfolio Manager for Better Benchmarking (1 point)

Providing multiple years of utility data history is essential for useful building benchmarking as it allows the dealership to compare current water performance to historical standards. Dealerships who provide at least three years of historical water data, including usage and cost, from their water utility providers also have a greater chance of demonstrating water reductions from historical water conservation measures completed.

Recommendations

Dealerships may earn a maximum of 1 point by providing at least three years of historical water data into ENERGY STAR Portfolio Manager.

W2. Provide More Than Three Years of Historical Water Data to ENERGY STAR Portfolio Manager for Better Benchmarking	MAX: 1
Provide more than three years of historical water utility data, including usage and cost, to ENERGY STAR Portfolio Manager	1

W3. Demonstrate a Reduction in Water Usage (10 points)

Water use reductions are essential to the Green Dealer Recognition Program because this reduces a dealership's overall environmental impact. Water conservation helps minimize strain on natural fresh water sources and reduces the energy required to treat, store, and transport water. Measuring and comparing total water usage over time allows dealerships to see the impact and cost benefits of water efficiency improvements, such as installing more efficient interior water fixtures or exterior landscape irrigation systems.

Dealerships demonstrate water use reductions by comparing water use during the baseline period to water use during the performance period.

» **Performance period:** the most recent 12 months of utility data submitted.

» **Water baseline period:** the previous 12 months of utility data prior to the performance period.

Recommendations

Dealerships may earn a maximum of 10 points by demonstrating water use reductions. Your dealership earns two points for every 10% of water use reduction, up to 50%.

W3. Demonstrate a Reduction in Water Usage	MAX: 10
Demonstrate water use reductions	10

W4. Use Low-Flow or Low-Flush Interior Water Fixtures (6 points)

High-efficiency interior water fixtures typically use 30-50% less water than their conventional counterparts and can reduce operating costs. New technology has enabled lower flow alternative fixtures to achieve the same or better performance than their conventional counterparts at no additional cost.

In Canada, fixture flow rates are typically measured in liters per minute (LPM) for flow-based fixtures such as lavatory faucets. For flush fixtures like urinal or toilets, water consumption is measured in liters per flush (LPF).

Recommendations

Dealerships may earn a maximum of 6 points by verifying that fixtures meet the criteria listed below.

W4. Use Low-Flow or Low-Flush Interior Water Fixtures	MAX: 6
Urinals: ≤ 1.9 LPF (1pt) or 0.5 LPF or less (2pts)	2
Toilets: ≤ 4.8 LPF; or dual-flush toilets: ≤ 4.2/6 LPF (1pt) or ≤ 3.8 LPF or less (2pts)	2
Lavatory faucets: ≤ 3.8 LPM (1pt) or ≤ 1.9 LPM or less (2pts)	2

While replacing toilets and urinals with more efficient options may only be cost-effective when remodeling bathrooms, there are other less expensive ways to save water:

- Replace faucets or add low-flow aerators to existing faucets.
- Retrofit existing flush valves on toilets and urinals with dual flush options to reduce the flush volume.

Consult with a professional plumber to carefully evaluate the feasibility of fixture replacements.

W5. Use Smart Irrigation Technologies (or No Irrigation) (2 points)

Landscape irrigation efficiency measures how efficiently water is delivered to the roots of a plant without excess loss due to evaporation, dissipation, or other factors that waste water.

Efficient irrigation systems distribute water exactly when and where needed with minimal loss. Weather-based controls can further increase overall efficiency by turning the system on and off based on actual weather conditions or the moisture content of the soil. Water needs differ depending on climate zone, precipitation patterns, periodic droughts, extreme weather conditions, and other factors. For more information about water-efficient irrigation equipment, visit EPA's WaterSense® Water-Saving Technologies website.

Recommendations

Dealerships may earn a maximum of 2 points through any combination of measures listed below.

W5. Use Smart Irrigation Technologies (or No Irrigation)	MAX: 2
No irrigation	2
Bubblers, drip lines, or weather-based irrigation controls	1

Dealerships with landscapes that require no irrigation can earn the most points in this category. Landscaping with native or adaptive plants can help reduce or eliminate irrigation, and weather-based controls can reduce unnecessary watering. The Green Dealer Recognition Program recommends drip lines or bubblers that minimize evaporation compared to conventional spray heads.

W6. Use Alternative Water Sources such as Reclaimed Water or Rainwater (4 points)

Alternative water systems use water that is not drinking quality for toilet flushing, landscape irrigation, and washing vehicles. Examples of alternative water sources include municipally supplied reclaimed water, gray water, captured rainwater, and recovered HVAC condensate water.

Definitions

Gray Water: Wastewater generated from wash hand basins, showers and baths, which dealerships can recycle on-site for uses such as toilet flushing and landscape irrigation.

Recovered HVAC Condensate Water: Recycled water from an inexpensive, low-tech method that can be especially effective in hot climates. This method conserves water and reduces energy used by water treatment facilities.

Recommendations

Dealerships may earn a maximum of 4 points by incorporating the following alternative water systems for the uses listed below.

W6. Use Alternative Water Sources such as Reclaimed Water or Rainwater	MAX: 4
Use alternative (recycled) water for toilet flushing	2
Use alternative (recycled) water for landscape irrigation	2

Your dealership can receive credit for using non-potable water in interior and exterior applications, including toilet flushing and landscape irrigation. Non-potable water includes all water sources that are not of drinking quality, but can be used for other purposes such as rainwater capture, grey water, and recycled or reclaimed water. Check with your local water district to determine if incentives are available for retrofitting existing water systems to use reclaimed water. Local codes may restrict or prohibit use of gray water; consult the local building codes for details.

See the W7. Use Recycled Water System and/or Other Sustainable Best Practices for Car Wash section for details on washing cars with alternative water sources.

W7. Use Recycled Water System and/or Other Sustainable Best Practices for Car Wash (6 points)

Water-efficient vehicle wash systems use less potable water compared to their conventional counterparts. For example, a 100% closed loop, recycled water vehicle wash system, also called a non-discharge vehicle wash system, recycles both wash and rinse water with no wastewater discharge. Other water conservation measures include using low-flow, high pressure car wash nozzles reduce overall water usage of the system.

Water discharge from car wash systems can be contaminated by harmful cleaning solvents and motor fuels. This water discharge can enter the surrounding ecosystem including wetlands, forests, and nearby bay or ocean waters. Using Green Seal® GS-53 certified or equivalent cleaning products help reduce the environmental impact of the dealership.

Recommendations

Dealerships may earn a maximum of 6 points by utilizing any combination of measures listed below for either an on-site or offsite car wash.

W7. Use Recycled Water System and/or Other Sustainable Best Practices for Car Wash	MAX: 6
100% Closed-loop water recycling system	5
Partial closed-loop (at least 50%) water recycling system	3
Car wash system that uses alternative water source	2
Low-flow/high pressure wash nozzles (2 GPM / 7.6 LPM at 2000 PSI)	1
Environmentally safe car wash soap	1

Your dealership is eligible to earn points if your on-site or offsite vehicle wash employs any of the water-efficient technologies in the table above.

Replacing existing vehicle wash systems may be cost prohibitive, but it may be possible to partially recycle water or use reclaimed water from your municipal water provider.

Section 1 - Existing Facilities

Site

Site (40 total points)

Overview

Certain aspects of a dealership's site can be optimized to reduce energy, water and carbon footprint, while saving money. For example, native plants require less watering, reflective hardscapes reflect solar energy and reduce the urban heat island effect (the phenomenon in which a metropolitan area is much warmer than the rural areas surrounding it), and efficient roofing makes buildings less expensive to heat and cool.

Similarly, waste reduction and recycling eases stress on local landfills and decreases the amount of resources required to manufacture new materials.

Other positive impacts of recycling include:

- Reduced greenhouse gas emissions associated with landfills
- Conservation of natural resources used to produce new materials
- Reduced pollution caused by harvesting new raw materials
- Reduced energy used to operate landfill and incineration facilities

This section also contains other best practices that can further contribute to a healthier, more sustainable environment.

Points Available:

SITE	MAX: 40
S1. Provide recycling bins in at least two space types	Prerequisite
S2. Recycle consumables (paper, plastic, aluminum cans, glass), cardboard, light bulbs, and organic waste	4
S3. Institute a waste reduction program to reduce source and/or end waste	1
S4. Track waste in ENERGY STAR Portfolio Manager	2
S5. Landscape at least 75% of planted area with native or adaptive vegetation	1
S6. Use a light-colored hardscape	1
S7. Apply cool (white) or vegetated roofing	2
S8. Apply methods to reduce storm water runoff and improve water quality	3
S9. Achieve third-party environmental certification	15
S10. Sell alternative fuel vehicles when available (BEV, PHEV, FCEV)	1
S11. Install alternative fueling stations	4
S12. Apply educational signage for customers, employee engagement practices, or other noteworthy measures to further reduce environmental impact	6

S1. Provide Recycling Bins in At Least Two Space Types (Prerequisite)

Dealerships should encourage recycling practices for customers and dealership staff by providing recycling bins placed in highly visible locations throughout the dealership. Easily accessible recycling bins encourage customers and employees to recycle and demonstrates a commitment to recycling.

Encouraging recycling practices is key to improving the environmental impact of the dealership and is a prerequisite for award eligibility.

Recommendations

To satisfy this prerequisite, dealerships must provide recycling bins in at least two of the four spaces identified below.

S1. Provide Recycling Bins in At Least Two Space Types	
Place recycling bins in at least two of the following space types: » Showroom » Customer Service Lounge » Office and Break Room » Service Area	Prerequisite

S2. Recycle Consumables (Paper, Plastic, Aluminum Cans, Glass), Cardboard, Light Bulbs, and Organic Waste (4 points)

Proper recycling practices are integral to improving the environmental impact of a dealership. While not all waste streams may be able to be recycled based on provincial recycling availability, it is highly encouraged for the dealership to investigate all potential options to divert these materials from landfill.

Recommendations

Dealerships may earn up to 4 points by recycling consumables (including paper, plastic bottles, aluminum cans, & glass bottles), cardboard, metal halide and fluorescent light bulbs (if used), and/or organic waste. In some regions, trash and recycling collections are commingled. Honda Canada will evaluate dealerships in those regions on a case-by-case basis.

S2. Recycle Consumables (Paper, Plastic, Aluminum Cans, Glass), Cardboard, Light Bulbs, and Organic Waste	MAX: 4
Consumables (Paper, Plastic, Aluminum Cans, Glass)	1
Cardboard	1
Light bulbs	1
Organic waste	1

Dealerships must comply with federal, provincial, and municipal regulations for disposing hazardous waste, which may include motor oil, refrigerant, paint, and other waste types.

S3. Institute a Waste Reduction Program to Reduce Source and/or End Waste (1 point)

Source waste reduction refers to minimizing waste generated from activities at the dealership. Preventing materials from entering the waste stream decreases strain on natural resources caused by disposal, recycling, or other processing methods.

Waste audits provide valuable information about the composition of a dealership's waste and recycling streams and can identify opportunities for further waste reduction and diversion.

Recommendations

Dealerships may earn 1 point by implementing waste reduction measures.

S3. Institute a Waste Reduction Program to Reduce Source and/or End Waste	MAX: 1
Implement source waste reduction measure(s) or waste audit	1

Examples of source reduction measures

Your dealership can reduce source waste by:

- Programming printers to print on both sides of the paper.
- Providing reusable water bottles or cups and a water filtration system instead of disposable water bottles and cups for employees and customers.
- Designating an office product reuse shelf where employees can leave unused office products for other employees to use instead of purchasing new items.

S4. Track Waste in ENERGY STAR Portfolio Manager (2 points)

ENERGY STAR Portfolio Manager tracks waste streams in the same way as energy and water. Work with your waste hauler to determine if waste bills include valuable data such as type of waste hauled, quantity or volume, etc. Tracking waste can promote more awareness of the quantity of waste produced by the dealership.

Recommendations

Dealerships may earn a maximum of 2 points for uploading their waste hauling data to ENERGY STAR Portfolio Manager on an ongoing basis.

S4. Track Waste in ENERGY STAR Portfolio Manager	MAX: 2
Submit waste hauling bills on a regular basis	2

S5. Landscape at Least 75% of Planted Area with Native or Adaptive Vegetation (1 point)

Native and adaptive landscaping use plants that occur naturally or easily adapt to the local environment. Once native and adaptive plants are established, they require significantly less or no watering, fertilizers, herbicides, and pesticides compared to non-native species.

Recommendations

Dealerships may earn 1 point by planting at least 75% native or adaptive vegetation for all landscaped areas.

S5. Landscape at Least 75% of Planted Area with Native or Adaptive Vegetation	MAX: 1
At least 75% of the landscaping on the site is landscaped with plants that are native or adaptive to the region	1

Consult with your landscape maintenance contractors to determine if your site's plants are native or adaptive and to develop a list of appropriate plants. If plants are non-native or non-adaptive, integrate native and adaptive plants in the landscaped area over time.

S6. Use a Light-Colored Hardscape (1 point)

Highly reflective light-colored pavement surfaces reflect solar energy, which helps reduce ground-level temperatures. For example, gray concrete is considered highly reflective in this context, whereas, dark-colored pavement and asphalt do not qualify.

A highly reflective hardscape is particularly important in a densely-populated area because predominantly dark pavements increase ground-level temperatures, which increases the amount of energy required to cool the building as a result of the urban heat island effect.

Recommendations

Dealerships may earn a maximum of 1 point if at least 75% of the site hardscape is reflective, light-colored material.

S6. Use a Light-Colored Hardscape	MAX: 1
At least 75% of the site hardscape includes paving or other surfaces made up of light-colored or reflective materials (excludes building footprint)	1

In the case of any landscape or hardscape renovation, explore the opportunity of integrating highly reflective surfaces into the design of repaving plans.

S7. Apply Cool (White) or Vegetated Roofing (2 points)

'Cool' white reflective roofs can minimize heat absorption into the interior of the building, which can reduce cooling loads during warmer months and help reduce the urban heat island effect generated in urban areas. Vegetated roofs help to limit both heating and cooling energy loss from the building due to increased insulation, reducing heating loads during colder months and cooling loads during the warmer months.

Roofs with solar photovoltaic (PV) systems can provide energy by generating renewable electricity for the building.

» **Cool roofs:** White roofs reflect sunlight, which reduces the temperature of the building and helps minimize energy used for cooling. Thermoplastic polyolefin (TPO) membrane roofing is an example of reflective white roofing.

» **Vegetated roofs:** Roofs planted with vegetation insulate the building to reduce heating and cooling loss from the roof. Vegetated roofs also help control storm water and provide natural habitat for birds and insects.

For existing cool (white) or vegetated roofs, it is important to maintain roofing systems according to the manufacturer's specifications.

Recommendations

Dealerships may earn a maximum of 2 points by utilizing efficient roofing for more than 75% of the roof area.

S7. Apply Cool (White) or Vegetated Roofing	MAX: 2
Vegetated roofing for >75% of roof area	2
'Cool' white roofing for >75% of roof area	1

S8. Apply Methods to Reduce Storm Water Runoff and Improve Water Quality (3 points)

Proper storm water management practices reduce flooding, land erosion, water pollution and burden on municipal water treatment systems. Storm water that is directed away from municipal sewer systems and stored on site may be used for landscape irrigation or other applications requiring water.

Bioswales (drainage ditches that are often vegetated), rain gardens, and water detaining ponds are landscaping options that either hold or slow storm water and clean it, often by allowing natural filtration through soil, before storm water enters a sewer system or underground water tables or aquifers.

Deicing exterior parking lots and driveways with standard road salts or chemicals can have negative impacts on local water quality. The salts and nitrates found in these chemicals enter into local water sources and accumulate over time, causing environmental damage and degraded natural ecosystems. As an alternative to using standard salts for deicing applications, dealerships can use natural white or clear beet juice, alfalfa meal, or 'pet safe' deicing solutions that are non-toxic and contain non-corrosive materials.

Commercial snow removal services can offer dealership's an alternative to deicing exterior lots themselves. Snow removal services who perform regular snow removal, filter the snowmelt to remove harmful or corrosive materials, and divert the snowmelt to a local water source can serve as an effective way to promote persistence of local water resources.

Recommendations

Dealerships may earn a maximum of 3 points by implementing any of the measures listed below.

S8. Apply Methods to Reduce Storm Water Runoff and Improve Water Quality	MAX: 3
Bioswales, rain gardens, water detaining ponds, or other storm water reduction measure	1
Snow removal service that diverts snowmelt to a local water source	1
Eco-friendly deicing alternatives	1

S9. Achieve Third-Party Environmental Certification (15 points)

Several third-party award programs certify various aspects of a building's environmental footprint and provide a sustainability framework to benchmark performance and demonstrate environmental stewardship. Well-known certifications are listed below:

- **LEED™ (Leadership in Energy and Environmental Design)** is a green building rating developed by the U.S. Green Building Council (USGBC) and widely adopted in the U.S. and worldwide. See the USGBC website for more information about the program.
- **Green Globes** is a rating system used for both existing and new buildings in the United States and Canada and is administered by the Green Building Initiative. See the Green Globes website for more information about the program.
- **BOMA BEST** is a national green building certification program launched by Building Owners and Managers Association (BOMA) to provide a framework for owners, managers, and building operators for energy and environmental performance of existing buildings throughout Canada. See the BOMA BEST website for more information about the program.
- **BREEAM (Building Research Establishment Environmental Assessment Method)** is an environmental assessment method and rating system for buildings used to masterplan projects, infrastructure, and buildings, launched by the Building Research Establishment (BRE). See the BREEAM website for more information about the program.
- **Living Building Challenge** is a green building certification program and sustainable design framework launched by the Cascadia Green Building Council. See the Living Building Challenge website for more information about the program.
- **Carbon Neutral** is earned by achieving net zero carbon emissions through a combination of energy efficiency, renewable energy, and carbon offsets. Honda Canada must approve third-party carbon neutral certifications to meet certain program criteria.
- **Other qualified programs**[7] have been developed by provinces, utilities, and local governments to provide guidance and incentives for sustainable buildings and operations. These programs recognize building owners who are making significant headway in energy and water efficiency. Honda Canada will evaluate these on an individual basis.

Recommendations

Dealerships may earn a maximum of 15 points through the third-party certifications listed below.

S9. Achieve Third-Party Environmental Certification	MAX: 15
LEED Certified / Silver or equivalent[7]	5
LEED Gold or equivalent[7]	10
LEED Platinum or equivalent[7]	15
Carbon Neutral (less than 50% purchased offsets)	15
Carbon Neutral (more than 50% purchased offsets)	5
Other qualified program (e.g. Green Globes)[7]	2

7 Equivalences for the listed environmental certifications are determined by Honda based off overall energy, water, waste, and other sustainable best practices

S10. Sell Alternative Fuel Vehicles When Available (BEV, PHEV, FCEV) (1 point)

Alternative fuel vehicles use fuels other than gasoline or diesel, including electricity, natural gas, biodiesel, ethanol, and hydrogen. Most alternative fuels are produced domestically and some are derived from renewable sources. Vehicles powered by alternative fuels typically produce less pollution and greenhouse gas emissions than those powered by gasoline or diesel. In addition, they help reduce dependence on oil.

Alternative fuel vehicles include:

- Battery Electric Vehicles (BEV), fueled with electricity
- Plug-In Hybrid Electric Vehicles (PHEV), fueled with electricity and gasoline
- Fuel Cell Electric Vehicles (FCEV), fueled with hydrogen

Recommendations

Dealerships can earn a maximum of 1 point by selling alternative vehicles:

S10. Sell Alternative Fuel Vehicles When Available (BEV, PHEV, FCEV)	MAX: 1
Sell battery electric vehicles (BEV), plug-in hybrid electric vehicles (PHEV), and/or fuel cell electric vehicles (FCEV) when available.	1

S11. Install Alternative Fueling Stations (4 points)

The success of alternative fuel vehicles depends on a solid fueling infrastructure. A sufficient distribution of fueling stations is necessary for customers to view alternative fuel vehicles as viable options.

By providing alternative fueling stations on-site, a dealership can:

- Include a full battery charge at vehicle delivery
- Provide post-service refueling
- Create a bridge in public infrastructure
- Build customer engagement and offer convenience

Recommendations

Dealerships can earn a maximum of 4 points by installing on-site alternative vehicle fueling stations.

S11. Install Alternative Fueling Stations	MAX: 4
Electric vehicle charging station (1 point per Level 2 station up to 2 stations)	2
Electric vehicle DC fast charge station (2 points per DC fast charge station up to 2 stations)	4
Fuel cell electric vehicle fueling station	2

Fueling stations should be available to Honda customers. Public access is up to the dealer's discretion.

Electric Vehicle (EV) charging stations:

Honda Canada recognizes the greenhouse gas reduction benefit created by EVs by applying an annual credit towards the dealership's annual energy use. Honda Canada will subtract the electricity used by the EV charging station from the dealership's total in order to accurately represent building electricity consumption.

Additionally, for every 1 kWh dispensed through the charging station to EVs, 3.5 kWh are subtracted from the dealership's annual electricity bills. To accurately measure electricity used by electric vehicle (EV) charging stations, stations must have a dedicated submeter or belong to an EV charging network.

Greenhouse Gas Reduction Benefit:

Electric vehicles (EVs) generate a greenhouse gas reduction benefit – compared to gasoline-powered vehicles, electric vehicles (EVs) reduce greenhouse gas emissions by producing zero tailpipe emissions and using energy more efficiently.

For details on how this number is calculated see Appendix E: Alternative Fueling Station Energy Credit.

S12. Apply Educational Signage for Customers, Employee Engagement Practices, or Other Noteworthy Measures to Further Reduce Environmental Impact (6 points)

The Green Dealer Recognition Program encourages dealerships to contribute to the future development of the program. If the dealership engages in educational or employee engagement measures, or other extraordinary or impactful sustainability practices not currently specified in this guide, inform the Green Dealer Recognition Program and it is up to Honda Canada's discretion to award additional points. Green Dealer Recognition Program award banners, plaques, or any other award recognition materials placed at dealerships do not qualify for additional points.

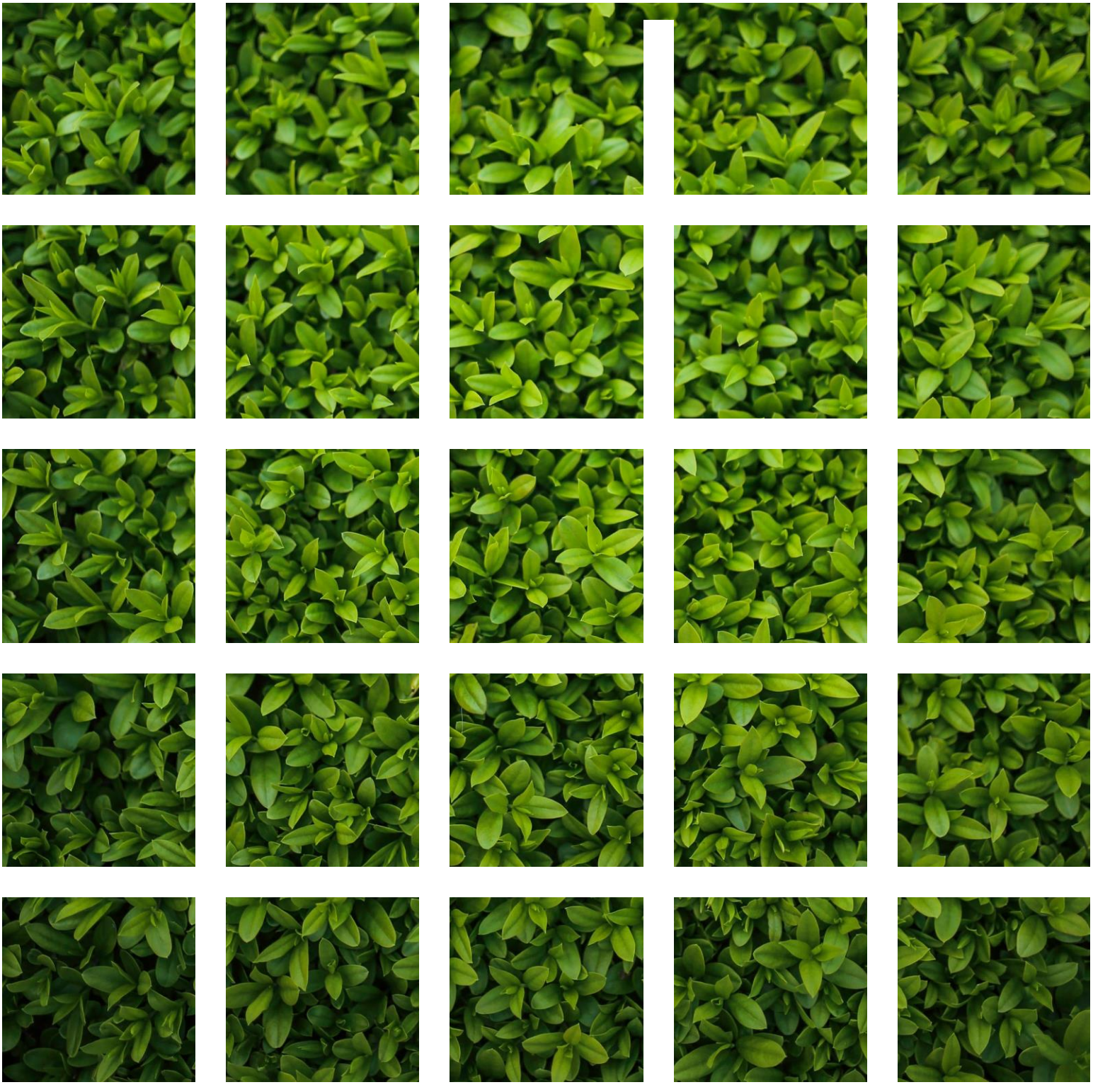
Recommendations

Dealerships may earn a maximum of 6 points by implementing extraordinary or impactful sustainability practices not currently specified in this guide.

S12. Apply Educational Signage for Customers, Employee Engagement Practices, or Other Noteworthy Measures to Further Reduce Environmental Impact	**MAX: 6**
Implement custom measures to improve the environmental performance of the dealership (1 point per measure)	6

Section 2

New Builds and Major Renovations



New Builds and Major Renovations

Path to the Green Dealer Recognition Program Award

				
Award Criteria	**New Builds and Major Renovations**	40 points	60 points	80 points
				Fast Track to Platinum – "Electric Grid Neutral"

This section provides recommendations in the areas of energy performance, water efficiency, waste reduction, site attributes and other sustainable best practices for New Builds and Major Renovations.

To qualify for a Green Dealer Recognition Program award, dealerships planning a new build or major renovation should use the Green Dealer Recognition Program Design Scorecard for New Builds and Major Renovations to integrate sustainable design measures into the architectural and construction documents. The dealership must then provide a copy of the design drawings and specifications to verify that program guidelines have been met.

New Builds and Major Renovations
A **New Build** is a ground-up new construction project.
A **Major Renovation** is a significant upgrade to an existing building. Upgrades can include substantial changes to the building envelope, interior and exterior spaces, lighting and HVAC equipment.

New Builds and Major Renovations must meet two types of guidelines to earn an award:

1. **Prerequisite measures** must be incorporated into the overall project design. These measures include efficient HVAC controls, recycling bins, and a commitment to share ongoing energy and water consumption data with Honda Canada.
2. **Award Requirements** are achieved by earning points for implementing environmental best practices into the building design. These point thresholds are used to determine the Silver (40 points), Gold (60 points), and Platinum (80 points) award levels.

To earn a Silver, Gold, or Platinum award, dealerships must satisfy all prerequisites and achieve the minimum number of points for each award level.

Path to the Green Dealer Recognition Program Award (cont'd)

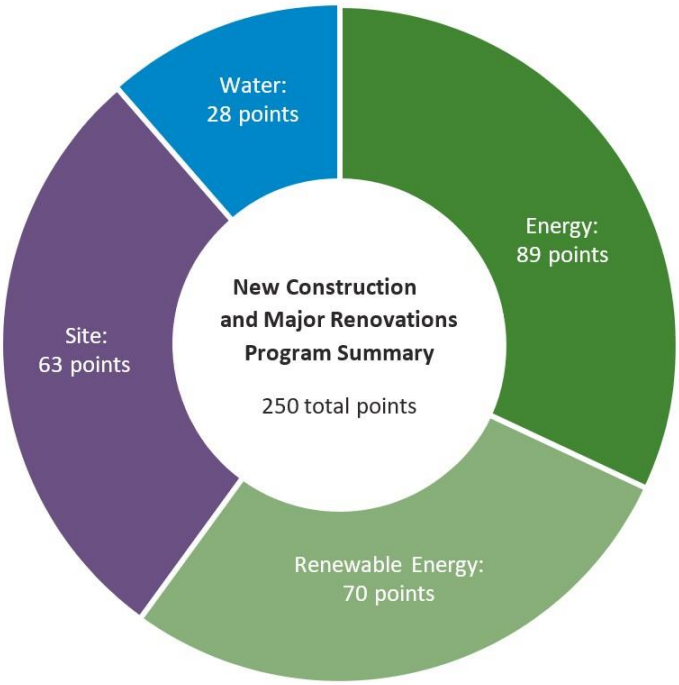
- **Step 1. Enrolment:** Complete and submit the Green Dealer Recognition Program Enrolment Agreement.
    - **Estimated timeframe:** Enrolment processing can take from two to six weeks; However, this timeframe varies depending on the volume of enrolments received.
- **Step 2. Assessment and Expert Advice:** Submit design and construction plans for review. These planning documents are assessed for compliance with the energy and building efficiency measures outlined in the Green Dealer Recognition Program Design Scorecard for New Builds and Major Renovations. Throughout the design process, you will receive expert advice on energy and water-efficient design, including building envelope features (roofing, insulation, windows, etc.), lighting and HVAC equipment and controls, renewable energy options, and other design considerations.
    - The estimated timeframe for completion of the assessment varies greatly and depends on the individual dealership's construction schedule and response times from the dealership.
- **Step 3. Performance Tracking and Verification:** After construction is complete, upload monthly utility data to the ENERGY STAR Portfolio Manager for performance tracking. Your dealership may also be required to verify measures not specified in construction plans during this step.
- **Step 4. Award Recognition:** Depending on your level of achievement, Honda Canada will recognize your dealership with a Silver, Gold, or Platinum award. Award recipients will be identified on honda.ca and may receive other award materials publicizing your dealership's environmental achievements.
    - The estimated timeframe to achieve an award varies greatly and depends on the individual dealership's construction schedule.
- **Step 5. Continuous Improvement:** Upon achieving an award, your dealership can continue to receive guidance for continuous improvement in environmental efforts and potentially move up to the next award level.

  As part of the continuous improvement process, Honda will evaluate any future award upgrades for your dealership using the Existing Facilities award criteria. This is to encourage the dealership to engage in energy saving and environmental operational practices after construction completion.

Green Dealer Recognition Program Scorecard for New Builds and Major Renovations

The intent of the Green Dealer Recognition Program Design Scorecard for New Builds and Major Renovations is to help dealerships achieve optimal building performance and efficiency by incorporating environmental conservation measures right from the start. By integrating these guidelines into the design drawings of any major construction project, dealerships can reduce costs associated with operations, maintenance, and future retrofits.

Below is a summary of the total available points by category used to evaluate New Builds and Major Renovations.



To be eligible for an award, New Builds and Major Renovation projects must meet all prerequisites and achieve at least 40, 60, or 80 points to be eligible for the Silver, Gold, or Platinum award, respectively. Below is a summary of the Green Dealer Recognition Program Design Scorecard for New Construction and Major Renovations.

The Green Dealer Recognition Program weighs some measures in the Design Scorecard for New Builds and Major Renovations differently than in the Scorecard for Existing Facilities. This is to emphasize design phase measures that have long-term positive effects on building energy demand and environmental impact. Operational measures that are not applicable for new builds or major renovations are not included in this design scorecard and can be found in the Scorecard for Existing Facilities.

Green Dealer Recognition Program Scorecard for New Builds and Major Renovations (cont'd)

ENERGY	MAX: 159
E1. Track energy consumption in ENERGY STAR Portfolio Manager after construction completion	Prerequisite
E2. Use 7-day programmable thermostats to automatically control temperature set points	Prerequisite
E6. Use an energy management system (EMS) to monitor and control HVAC and other energy-consuming devices	4
E7. Install energy efficient HVAC units, including space heating and hot water heaters, using recommended fuel source	25
E8. Construct building with high-performance envelope criteria, including triple-pane windows, skylights, insulation, revolving doors, vestibules, or high-speed garage doors	14
E10. Install energy-efficient lighting systems	20
E11. Apply automatic controls to shut off interior lighting systems	12
E12. Apply automatic controls to exterior lighting systems	10
E14. Complete commissioning for building mechanical, electrical and plumbing systems	4
E15. Install or purchase renewable energy	70

Green Dealer Recognition Program Scorecard for New Builds and Major Renovations (cont'd)

WATER	MAX: 28
W1. Track water consumption in ENERGY STAR Portfolio Manager after construction completion	Prerequisite
W4. Install low-flow or low-flush interior water fixtures	6
W5. Install smart irrigation technologies (or no irrigation)	5
W6. Design systems to use alternative water sources such as reclaimed water or rainwater	6
W7. Install recycled water car wash system or design with other sustainable practices	11

SITE	MAX: 63
S1. Install built-in recycling bins or provide recycling bins in at least two interior space types	Prerequisite
S3. Divert a minimum of 75% of construction waste from landfill	3
S5. Landscape at least 75% of total planted area with native or adaptive vegetation	2
S6. Construct site with light-colored hardscape	2
S7. Install cool (white) or vegetated roofing	2
S8. Construct site with methods to reduce storm water runoff	2
S9. Achieve third-party environmental certification	40
S11. Install alternative fueling stations	6
S12. Create educational signage for customers, employee engagement practices, or other noteworthy measures to further reduce environmental impact	6

Section 2 - New Builds and Major Renovations

Energy

Energy (181 total points)

Overview

The following sections provide design recommendations on energy-efficiency measures for dealerships. For additional information and details on the benefits of these measures, see Section 1: Existing Facilities, Energy.

Points Available

ENERGY	MAX: 159
E1. Track energy consumption in ENERGY STAR Portfolio Manager after construction completion	Prerequisite
E2. Use 7-day programmable thermostats to automatically control temperature set points	Prerequisite
E6. Use an energy management system (EMS) to monitor and control HVAC and other energy-consuming devices	4
E7. Install energy efficient HVAC units, including space heating and hot water heaters, using recommended fuel source	25
E8. Construct building with high-performance envelope criteria, including triple-pane windows, skylights, insulation, revolving doors, vestibules, or high-speed garage doors	14
E10. Install energy-efficient lighting systems	20
E11. Apply automatic controls to shut off interior lighting systems	12
E12. Apply automatic controls to exterior lighting systems	10
E14. Complete commissioning for building mechanical, electrical and plumbing systems	4
E15. Install or purchase renewable energy	70

E1. Track Energy Consumption in ENERGY STAR Portfolio Manager After Construction Completion (Prerequisite)

Tracking monthly energy consumption is necessary to benchmark dealership energy use, discover opportunities for improvement, and verify energy reductions resulting from retrofits and/or operational improvements.

By tracking energy consumption, dealers can validate project cost savings, verify whether building systems are working efficiently, and determine if equipment repair or replacement is necessary.

ENERGY STAR Portfolio Manager is backed by the Government of Canada and Natural Resources Canada as a nationally standardized system for building benchmarking use.

Recommendations

To satisfy this prerequisite, your dealership must track energy data on an ongoing basis by uploading energy data directly to ENERGY STAR Portfolio Manager on an ongoing basis. The following information must be tracked to satisfy the prerequisite:

- Bill start and end dates
- Utility cost information
- Monthly kWh of electricity consumed
- Cubic meters of natural gas consumed
- Meter readings for other fuel types

E1. Track Energy Consumption in ENERGY STAR Portfolio Manager After Construction Completion	
Track energy consumption and cost data in ENERGY STAR Portfolio Manager	Prerequisite

E2. Use 7-Day Programmable Thermostats to Automatically Control Temperature Set Points (Prerequisite)

Automatic temperature controls are a **low- or no-cost** measure that can significantly reduce energy consumption. Heating and cooling can represent 40-60% of total dealership energy use. This is a substantial impact, and programmable thermostats or centralized controls can reduce energy use and save money by adjusting space temperatures according to the time of day and the day of the week.

Recommendations

To satisfy this prerequisite, your dealership must have seven-day, programmable thermostats or a central building automation system to control temperature set points for all conditioned spaces, including the service area[8]. "Smart" or "networkable" thermostats can further reduce energy by adjusting to real-time occupancy sensors and/or making occupancy schedules accessible through the Internet (allowing for connection to an energy management system).

E2. Use 7-Day Programmable Thermostats to Automatically Control Temperature Set Points	
Use 7-day programmable thermostats to automatically control temperature set points.	Prerequisite

Programmable thermostats are readily available at low cost since they have become the code minimum standard in many jurisdictions throughout the country.

See Section 1: Existing Facilities, E5. Set Efficient Thermostat Set Points and Setbacks, for more details on suggested temperature set points for dealerships after construction completion.

8 Honda Canada will evaluate exceptions on a case-by-case basis

E6. Use an Energy Management System (EMS) to Monitor and Control HVAC and Other Energy-Consuming Devices (4 points)

An energy management system (EMS) allows building managers to monitor and control energy consuming equipment including HVAC systems, pumps, fans, lighting, and other equipment within a facility using a mobile or web-based control platform.

Energy management systems and networked controls are powerful tools for optimizing a facility's energy use and maintaining persistent savings over time.

Energy management systems use a network of sensors and controllers to administer thermostat set point controls based on occupancy, and enable/disable relays for lighting, air compressors, or exhaust fans. They also monitor building power circuits to identify control failures or peak demand events. An EMS is capable of monitoring solar production and electric vehicle (EV) charging systems, dispatching electric battery storage, EV charging limits, and temporary standby thermostat controls to reduce peak electric demand charges.

Recommendations

Dealerships may earn a maximum of 4 points by installing an energy management system capable of centrally monitoring and controlling the building HVAC and lighting systems. Dealerships with networked controls that manage HVAC schedules and settings, but not lighting controls, may earn partial points.

E6. Use an Energy Management System (EMS) To Monitor and Control HVAC and Other Energy-Consuming Devices	**MAX: 4**
Use an energy management system (EMS) to monitor and control HVAC and other energy-consuming devices	4
Use networked temperatures controls	2

E7. Install Energy Efficient HVAC Units, including Space Heating and Hot Water Heaters, Using Recommended Fuel Source (25 points)

Specifying energy-efficient heating, ventilation, and air conditioning (HVAC) equipment early in the design process improves ongoing building energy performance by reducing energy demand, which can reduce monthly utility bills. Newer, more efficient HVAC systems use less energy to produce the same amount of cooling or heating when compared with older, less efficient systems.

Honda Canada offers additional points to dealerships for using the lower-carbon fuel source (between electricity or natural gas) for heating units, which is based on the CO_2e emission factors of their local electricity grid. Electricity grids that rely on high proportions of renewable energy, such as hydropower, to generate power will subsequently have exceedingly low CO_2e grid emission factors. In these regions, Honda Canada recommends considering HVAC units with electric resistance heating to lower the overall carbon emission impact associated with the dealership.

The lower-carbon fuel source by province for HVAC units can be seen in the table below:

GHG Emission Factors for Electricity and for Natural Gas in Canada by Province

Province	Indirect CO_2e Emissions for Electricity (kg/GJ)	Direct CO_2e Emissions for Natural Gas (kg/GJ)	Lower-Carbon Fuel Source for Heating Units
Alberta	244.26	50.42	Natural Gas
British-Columbia	4.63	50.38	Electricity
Manitoba	0.98	49.33	Electricity
New Brunswick	79.66	49.72	Natural Gas
Newfoundland and Labrador	8.61	49.72	Electricity
Northwest Territories	83.27	64.41	Natural Gas
Nova Scotia	202.63	49.72	Natural Gas
Nunavut	208.18	64.41	Natural Gas
Ontario	11.10	49.38	Electricity
Prince Edward Island	79.66	49.72	Natural Gas
Quebec	0.45	49.36	Electricity
Saskatchewan	249.81	47.86	Natural Gas
Yukon	11.38	49.72	Electricity

E7. Install Energy Efficient HVAC Units, including Space Heating and Hot Water Heaters, Using Recommended Fuel Source (cont'd)

Recommendations

Dealerships may earn a maximum of 25 points by meeting the following requirements

E7. Install Energy Efficient HVAC Units, including Space Heating and Hot Water Heaters, Using Recommended Fuel Source		**MAX: 25**
	Minimum Efficiency Rating or Other Notes	Points Available
Domestic hot water heater	NECB 2017 compliant or equivalent	2
	Lower-carbon fuel source based on regionality	2
Space heating (boiler, furnace, radiant heating, etc.)	NECB 2017 compliant or equivalent	3
	Lower-carbon fuel source based on regionality	3
Heat pump or A/C unit	Energy Efficiency Ratio (EER) ≥ 12* Seasonal Energy Efficiency Ratio (SEER) ≥ 15* *Weighted average of all units	5
	Lower-carbon fuel source based on regionality	5
Air-side economizers	For cooling units over 5 tons	5

Waste Oil Burners/Heaters: Although the use of used oil (waste oil) burners/heaters at a dealership may reduce heating fuel costs, studies have shown that the resulting pollutant emissions may have negative impacts on local air quality.

In 2007, the province of Ontario banned the burning of waste oil heaters as a source of highly toxic local air pollution in an effort to improve air quality and remove a potential health threat to workers and local residents (Toronto Environmental Alliance. (2006). Ban on Burning Used Oil Improves Ontario's Air). Higher zinc, lead, hydrochloric acid, and total particulate emissions can occur with waste oil combustion than with virgin fuel oil. (U.S. Department of Energy, Office of Fossil Energy. (2006). Used Oil Re-Refining Study to Address Energy Policy Act of 2005, Section 1838.)

The goal of the Green Dealer Recognition Program is to reduce energy usage and CO_2e emissions. Burning used oil does not reduce total energy consumption or emissions and therefore is not included in the energy-reduction calculations for the program.

See Section 1: Existing Facilities, E7. Install Energy Efficient HVAC Units, including Space Heating and Hot Water Heaters, Using Recommended Fuel Source, for more details.

E8. Construct Building with High-Performance Envelope Criteria, Including Efficient Insulation, Triple-Pane Windows, Skylights, Revolving Doors, Vestibules, or High-Speed Garage Doors (14 points)

High-performing building envelopes can improve building insulation and help minimize heat gain or loss, which help lower a building's heating and cooling costs.

Improve building insulation by providing the minimum recommended insulation values for roofing, exterior walls, and windows for your dealership's climate zone, as defined by NECB 2017 (Table 3.2.2.2. and Table 3.2.2.3.).

NECB 2017 – Building Envelope Requirements by Climate Zone

Climate Zone	Window	Roof	Walls
	Assembly Max. U-Value (W/m^2*K)	Assembly Max. U-Value (W/m^2*K)	Assembly Max. U-Value (W/m^2*K)
4	**2.1**	**.193**	**.315**
5	**1.9**	**.156**	**.278**
6	**1.9**	**.156**	**.247**
7	**1.9**	**.138**	**.210**
8	**1.4**	**.121**	**.183**

The above table summarizes the thermal performance characteristics for each building envelope component in each climate zone in NECB 2017 (Refer to Appendix B).

- The insulation levels of windows, roofs, and exterior walls are measured in U-value; a lower U-value corresponds to higher levels of thermal insulation.
- U-value defines the thermal conductivity of a window assembly (including glass and framing), roofing, and walls.
- Roofing and walls must meet both U-value criteria to earn points.

E8. Construct Building with High-Performance Envelope Criteria, Including Efficient Insulation, Triple-Pane Windows, Skylights, Revolving Doors, Vestibules, or High-Speed Garage Doors (cont'd)

As dual-pane windows become more standard for commercial use, triple-pane windows can increasingly minimize undesired thermal gain or loss in a dealership which improves indoor comfort and reduce HVAC cooling and heating loads. Revolving doors, vestibules, and high-speed garage doors minimize loss of conditioned air from interior spaces and/or service bays. Skylights, correctly installed and rated according to dealership's climate zone, add natural light to a space, reducing the need for electrical lighting, which can also lead to reduced HVAC cooling loads.

Recommendations

Dealerships may earn a maximum of 14 points by providing documentation confirming the measures below.

E8. Construct Building with High-Performance Envelope Criteria, Including Efficient Insulation, Triple- Pane Windows, Skylights, Revolving Doors, Vestibules, or High-Speed Garage Doors	MAX: 14
Efficient roofing and wall insulation based on climate zone	4
Efficient window insulation based on climate zone	2
Triple-pane windows	1
Skylights in at least one of the following areas: showroom, customer service lounge, offices and breakroom, parts and storage, and service areas	3
Revolving doors with educational signage or vestibule with interior and exterior doors for main entrance	2
High-speed garage doors	2

See Section 1: Existing Facilities, Section E8. Use Efficient Insulation, Dual-Pane Windows, Skylights, Revolving Doors, Vestibules and/or High-Speed Doors, for more details.

E10. Install Energy-Efficient Lighting Systems (20 Points)

Lighting accounts for a significant portion of a dealership's total electricity usage. Specifying high-performance lighting technologies reduces electricity and maintenance costs over time. The Green Dealer Recognition Program awards points for using high-efficiency lighting and controls in each primary space type of the dealership.

Recommendations

Dealerships may earn a maximum of 20 points by installing one or more of the recommended efficient lighting technologies below as the primary type of lighting (at least 90% of total installed wattage) for each space type. The Green Dealer Recognition Program awards points separately for using efficient lighting and controls in each of the following space types:

- Offices
- Showroom
- Service area
- Parts/Storage
- Exterior lot
- Exterior façade

E10. Install Energy-Efficient Lighting Systems	MAX: 20
Interior Lamp Types	
LED	3
Induction fluorescent	1
High-output T5 fluorescent	1
Reduced wattage T8 fluorescent	1
Exterior Lamp Types	
Parking Lot LED	8
Building façade LED	2

See Section 1: Existing Facilities, Section E10. Install Energy-Efficient Lighting Systems, for details regarding lighting types and Appendix D: Lighting Specifications for additional details.

E11. Apply Automatic Controls to Shut Off Interior Lighting Systems (12 Points)

Install lighting controls such as time clocks, occupancy sensors, photocells, or any combination thereof, to reduce lighting power through automatic control of lighting levels. Advanced controls for exterior lighting include astronomical timeclocks, photocells, dimmers and motion sensors.

Recommendations

Dealerships may earn a maximum of 12 points by installing interior automatic lighting controls in the following spaces:

- Offices
- Showroom
- Service area
- Parts/Storage
- Bathroom

E11. Apply Automatic Controls to Shut Off Interior Lighting Systems **MAX: 12**

	Occupancy Sensor	Time Clock	Photocell	Total Pts per Space
Office	2	1	1	4
Showroom	N/A	1	2	3
Service area	N/A	1	2	3
Parts/storage	2	1	1	4
Bathrooms	2	N/A	N/A	2

See Section 1: Existing Facilities, E11. Apply Automatic Controls to Interior Lighting Systems, for details regarding specific lighting control types and Appendix D: Lighting Specifications for additional details.

E12. Apply Automatic Controls to Exterior Lighting Systems (10 Points)

Recommendations

Dealerships may earn a maximum of 10 points by installing exterior automatic lighting controls that turn off pole and façade lighting before 1:00 a.m.

E12. Apply Automatic Controls to Exterior Lighting Systems	MAX: 10
Parking Lots:	
Install lighting controls programmed to turn exterior pole lighting OFF at dawn and ON at dusk, using an automatic control mechanism such as a photocell or astronomical time clock	1
Install automatic controls (e.g. astronomical time clock, motion detector, dimming) to reduce 50% of lighting power, either by circuit or dimming, during late night hours	8
Building Façade:	
Install lighting controls programmed to turn exterior façade lighting OFF at dawn and ON at dusk, using an automatic control mechanism such as a photocell or astronomical time clock	1
Install automatic controls (e.g. astronomical time clock, motion detector, dimming) to reduce 50% of lighting power, either by circuit or dimming, during late night hours	2

To reduce after-hours lighting and unnecessary energy usage, work with the lighting designer or engineer to incorporate separate lighting circuits for distinct exterior areas. For example, use one circuit for the building façade lighting, a second circuit for the back parking lot, and a third circuit for the front parking lot.

See Section 1: Existing Facilities, Section E12. Apply Automatic Controls to Exterior Lighting Systems, for details regarding specific lighting control types and Appendix D: Lighting Specifications for additional details.

E14. Complete Commissioning for Building Mechanical, Electrical and Plumbing Systems (4 points)

Building commissioning is a quality assurance process used to ensure that building performance meets owner requirements and design intent. Commissioning starts during the early design phase and continues through construction completion into the first year of operations. The dealership may also adopt commissioning on an ongoing basis during the operational phase of the building to maintain optimum performance.

A commissioning agent leads the commissioning process, partnering with the construction team to integrate pertinent tasks into the overall design and construction process. Depending on facility size and complexity, the commissioning agent is typically a third-party provider.

At a minimum, commission the following systems for all ground-up new construction projects:

- Lighting and related controls (e.g. occupant sensors, photocells, time clocks, etc.)
- Heating, ventilation and air conditioning (HVAC) and related controls
- Domestic hot water and related controls
- Compressed air and vacuum systems and related controls
- Other major energy consuming process loads

For major renovations that include changes to building envelopes, HVAC, lighting, and/or plumbing systems, commission both the new equipment and the existing equipment it impacts.

Recommendations

Dealerships may earn a maximum of 4 points for completing commissioning.

E14. Complete Commissioning for Building Mechanical, Electrical and Plumbing Systems	MAX: 4
Complete commissioning for building mechanical, electrical, and plumbing systems	4

E15. Install or Purchase Renewable Energy (70 points)

Few things have more impact and visibly demonstrate a commitment to the environment than the presence of renewable energy sources, such as solar panels or wind turbines. On-site renewable generation hedges against utility rate increases that can significantly impact future operating costs. By offsetting energy use with renewable energy, dealerships may be eligible for a lower rate tier and avoid peak demand charges, depending on local utility policies. Some utilities charge more for electricity use during periods of highest demand. Renewable energy is one way to reduce electricity use during peak demand periods, and therefore avoid additional charges.

Dealerships may purchase Renewable Energy Certificates (RECs) from other third-parties that generate renewable energy through installed systems. Dealerships will receive points on the same scaling system shown below, but will only receive half the points by offsetting the same amount of energy usage. This is to encourage dealerships to take more permanent action towards offsetting their energy usage through installed systems.

Recommendations

Dealerships may earn a maximum of 70 points based on the percentage of total annual grid-supplied energy (electricity and natural gas) offset by a renewable system.

E15. Install or Purchase Renewable Energy	MAX: 70
Install a renewable energy system	Up to 70
Purchase renewable energy (i.e. Renewable Energy Certificates)	Up to 35

Estimates will be made using industry standard calculation methodologies and average energy usage based on dealership size.

The Green Dealer Recognition Program strongly recommends designing roof areas to be "solar ready", even if your dealership is not integrating a renewable energy installation into its design. To design a "solar-ready roof", locate HVAC equipment or skylights on the north side of building, design parapet height at 1 meter, provide electrical conduit run to roof, and design flat roofing. Consult a structural engineer for additional structural requirements needed for larger PV systems or for dealerships located in geographic regions with snowfall.

See Section 1: Existing Facilities, E15. Generate or Purchase Renewable Energy, for more details and specifics on the points calculation for renewable energy systems.

Section 2 - New Builds and Major Renovations

Water

Water (28 total points)

Overview

The following sections provide design recommendations on water efficiency measures for dealerships. For additional information and details on the benefits of these measures, see Section 1: Existing Facilities, Water.

Points Available

WATER	MAX: 28
W1. Track water consumption in ENERGY STAR Portfolio Manager after construction completion	Prerequisite
W4. Install low-flow or low-flush interior water fixtures	6
W5. Install smart irrigation technologies (or no irrigation)	5
W6. Design systems to use alternative water sources such as reclaimed water or rainwater	6
W7. Install recycled water car wash system or design with other sustainable practices	11

W1. Track Water Consumption in ENERGY STAR Portfolio Manager After Construction Completion (Prerequisite)

Regularly tracking monthly water consumption is necessary to benchmark a dealership's water use, establish opportunities for improvement, identify leaks, and quantify water use reductions resulting from retrofits or operational improvements.

Recommendations

To satisfy this prerequisite, your dealership must upload water data directly to ENERGY STAR Portfolio Manager.

Track the following information to satisfy the prerequisite:

- Monthly water cost
- Monthly water usage
- Bill start and end dates

W1. Track Water Consumption in ENERGY STAR Portfolio Manager after Construction Completion	
Track water cost and consumption data in ENERGY STAR Portfolio Manager	Prerequisite

W4. Install Low-Flow or Low-Flush Interior Water Fixtures (6 points)

High-efficiency interior water fixtures typically use 30-50% less water than their conventional counterparts and can reduce operating costs. New technology has enabled lower-flow alternative fixtures to achieve the same or better performance than their conventional counterparts at no additional cost.

In Canada, fixture flow rates are typically measured in liters per minute (LPM) for flow-based fixtures such as lavatory faucets. For flush fixtures like urinal or toilets, water consumption is measured in liters per flush (LPF).

Recommendations

Dealerships may earn a maximum of 6 points by verifying that fixtures meet the criteria listed below.

W4. Install Low-Flow or Low-Flush Interior Water Fixtures	MAX: 6
Urinals: ≤ 1.9 LPF (1pt) or 0.5 LPF or less (2pts)	2
Toilets: ≤ 4.8 LPF; or dual-flush toilets: ≤ 4.2/6 LPF (1pt) or ≤ 3.8 LPF or less (2pts)	2
Lavatory faucets: ≤ 3.8 LPM (1pt) or ≤ 1.9 LPM or less (2pts)	2

See Section 1: Existing Facilities, W4. Use Low-Flow or Low-Flush Interior Water Fixtures, for more details.

W5. Install Smart Irrigation Technologies (or No Irrigation) (5 points)

Landscape irrigation efficiency measures how efficiently water is delivered to the roots of a plant without excess loss due to evaporation, dissipation, or other factors that waste water.

Efficient irrigation systems distribute water exactly when and where it is needed with minimal loss. Weather-based controls can further increase overall efficiency by turning the system on and off based on actual weather conditions or the moisture content of the soil. Water needs differ depending on climate zone, precipitation patterns, periodic droughts, extreme weather conditions, and other factors. For more information about water-efficient irrigation equipment, visit EPA's WaterSense® Water-Saving Technologies website.

Recommendations

Dealerships may earn a maximum of 5 points through any combination of measures listed below.

W5. Install Smart Irrigation Technologies (or No Irrigation)	MAX: 5
No irrigation	5
Bubblers, drip lines, or weather-based irrigation controls	2

Dealerships with landscapes that require no irrigation can earn the most points in this category. Landscaping with native or adaptive plants can help facilitate reducing or eliminating irrigation, and weather-based controls can reduce unnecessary watering. Drip lines or bubblers minimize evaporation and are preferred over conventional spray heads.

W6. Design Systems to Use Alternative Water Sources Such as Reclaimed Water or Rainwater (6 points)

Alternative water systems use water that is not drinking quality for toilet flushing, landscape irrigation, and washing vehicles. Examples of alternative water sources include using municipally supplied reclaimed water, gray water, captured rainwater, and recovered HVAC condensate water.

Recommendations

Dealerships may earn a maximum of 6 points by incorporating the following alternative water systems for the uses listed below.

W6. Use Alternative Water Sources such as Reclaimed Water or Rainwater	MAX: 6
Design systems to use alternative (recycled) water for toilet flushing	3
Design systems to use alternative (recycled) water for landscape irrigation	3

See Section 1: Existing Facilities, W6. Use Alternative Water Sources Such as Reclaimed Water or Rainwater, for more details.

W7. Install Recycled Water Car Wash System or Design With Other Sustainable Practices (11 points)

Water-efficient vehicle wash systems use less potable water compared to their conventional counterparts. For example, a 100% closed-loop, recycled water vehicle wash system, also called a non-discharge vehicle wash system, recycles both wash and rinse water with no wastewater discharge.

Water discharge from car wash systems can be contaminated by harmful cleaning solvents and motor fuels. This water discharge can enter the surrounding ecosystem including wetlands, forests, and nearby bay or ocean waters. Using Green Seal GS-53 certified or equivalent cleaning products help reduce the environmental impact of the dealership.

Recommendations

Dealerships may earn a maximum of 11 points by utilizing any combination of measures listed below for either an on-site or offsite car wash.

W7. Install Recycled Water System or Design with Other Sustainable Practices	MAX: 11
100% Closed-loop water recycling system	10
Partial closed-loop (at least 50%) water recycling system	5
Low-flow/high pressure wash nozzles (2 GPM/7.6LPM at 2000 PSI)	3
Car wash system that uses alternative water source	3
Environmentally safe car wash soap	1

See Section 1: Existing Facilities, W7. Use Recycled Water System and/or Other Sustainable Best Practices for Car Wash, for more details.

Section 2 - New Builds and Major Renovations

Site

Site (63 total points)

Overview

The following sections provide design recommendations on waste reduction measures for dealerships. For additional information and details on the benefits of these measures, see Section 1: Existing Facilities, Site.

Your dealership's site practices and design can have a significant impact on energy usage and environmental performance. Recycling and waste reduction practices ease stress on landfills and incineration facilities, decreasing the amount of virgin resources required to manufacture new materials. Building and site design can also ease your dealership's carbon footprint, water usage impact, and save money by taking into consideration the local habitat and weather patterns.

This section also contains other best practices that can further contribute to a healthier, more sustainable environment.

Points Available:

SITE	MAX: 63
S1. Install built-in recycling bins or provide recycling bins in at least two interior space types	**Prerequisite**
S3. Divert a minimum of 75% of construction waste from landfill	**3**
S5. Landscape at least 75% of total planted area with native or adaptive vegetation	**2**
S6. Construct site with light-colored hardscape	**2**
S7. Install cool (white) or vegetated roofing	**2**
S8. Construct site with methods to reduce storm water runoff	**2**
S9. Achieve third-party environmental certification	**40**
S11. Install alternative fueling stations	**6**
S12. Create educational signage for customers, employee engagement practices, or other noteworthy measures to further reduce environmental impact	**6**

S1. Install Built-In Recycling Bins or Provide Recycling Bins in at Least Two Interior Space Types (Prerequisite)

Dealerships should encourage recycling practices for customers and dealership staff by including built-in recycling bins and other stand-up bins in highly visible locations including: showroom/customer refreshments area, customer service lounge, offices/break room, and service area.

Encouraging recycling practices is key to improving the environmental impact of the dealership and as such is a prerequisite for award eligibility.

Recommendations

To satisfy this prerequisite, dealerships must provide recycling bins in at least two of the four spaces identified below.

S1. Install Built-In Recycling Bins or Provide Recycling Bins in at Least Two Interior Space Types

Install built-in recycling bins or provide visible and clearly labeled recycling bins in at least two of the following areas:

- Showroom
- Customer service lounge — Prerequisite
- Office and breakroom
- Service area

S3. Divert a Minimum of 75% of Construction Waste from Landfill (3 points)

Waste recycling and diversion during construction eases burden on local landfills and incineration facilities, decreases the amount of resources required to manufacture new materials, and reduces greenhouse gas emissions.

To reduce the burden on landfills by sending waste during construction, contract with waste haulers to divert at least 75% of construction waste from the landfill. Recycle or reuse construction debris for another purpose on-site or offsite.

Recommendations

Dealerships may earn a maximum of 3 points for diverting at least 75% of your construction waste from landfills.

S3. Divert a Minimum of 75% of Construction Waste from Landfill	MAX: 3
Divert at least 75% of construction waste (by volume) from the landfill	3

S5. Landscape at Least 75% of Planted Area with Native or Adaptive Vegetation (2 points)

Native and adaptive landscaping uses plants that occur naturally or easily adapt to the local environment. Once native and adaptive plants are established, they require significantly less or no watering, fertilizers, herbicides, and pesticides when compared to non-native species.

Recommendations

Dealerships may earn 2 points by planting at least 75% native or adaptive vegetation for all landscaped areas.

S5. Landscape at Least 75% of Planted Area with Native or Adaptive Vegetation	MAX: 2
At least 75% of the landscaping on the site is landscaped with plants that are native or adaptive to the region	2

S6. Construct Site with Light-Colored Hardscape (2 points)

Highly reflective light-colored pavement surfaces reflect solar energy, which helps reduce the ground-level temperature. For example, gray concrete is considered highly reflective in this context. Dark-colored pavement and asphalt do not qualify.

A highly reflective hardscape is particularly important in a densely-populated area because predominantly dark pavements increase ground-level temperatures, which increases the amount of energy required to cool the building as a result of the urban heat island effect.

Recommendations

Dealerships may earn a maximum of 2 points if at least 75% of the site hardscape is reflective, light-colored material.

S6. Construct Site with Light-Colored Hardscape	MAX: 2
At least 75% of the site hardscape includes paving or other surfaces made up of light-colored or reflective materials (excludes building footprint)	2

S7. Install Cool (White) or Vegetated Roofing (2 points)

'Cool' white reflective roofs can minimize heat absorption into the interior of the building, which can reduce cooling loads during warmer months and help reduce the Urban Heat Island effect generated in urban areas. Vegetated roofs help to limit both heating and cooling energy loss from the building due to increased insulation, reducing heating loads during colder months and cooling loads during the warmer months.

Roofs with solar photovoltaic (PV) systems can provide energy by generating renewable electricity for the building.

» **Cool roofs:** White roofs reflect sunlight, which reduces the temperature of the building and helps minimize energy used for cooling. Thermoplastic polyolefin (TPO) membrane roofing is an example of reflective white roofing.

» **Vegetated roofs:** Roofs planted with vegetation insulate the building to reduce heating and cooling loss from the roof. Vegetated roofs also help control storm water and provide natural habitat for birds and insects.

For existing cool (white) or vegetated roofs, it is important to maintain roofing systems according to the manufacturer's specifications.

Recommendations

Dealerships may earn a maximum of 2 points by utilizing efficient roofing for more than 75% of the roof area.

S7. Install Cool (White) or Vegetated Roofing	MAX: 2
Vegetated roofing for >75% of roof area	2
'Cool' white roofing for >75% of roof area	1

S8. Construct Site with Methods to Reduce Storm Water Runoff (2 points)

Storm water management reduces flooding, associated land erosion, and water pollution. It can involve temporarily redirecting water away from sewer systems and possibly storing it for later use. Storm water reduction measures include landscaping water management strategies.

Bioswales (drainage ditches that are often vegetated), rain gardens, and water detaining ponds are different types of landscaping options that either hold or slow storm water and clean it, often by allowing natural filtration through soil, before storm water enters a sewer system or underground water tables/aquifers.

Recommendations

Dealerships may earn a maximum of 2 points by implementing any of the measures listed below.

S8. Construct Site with Methods to Reduce Storm Water Runoff	MAX: 2
Site contains a bioswale, rain garden, or storm water detention pond to capture and filter storm water	2

S9. Achieve Third-Party Environmental Certification (40 points)

Several third-party award programs certify various aspects of a building's environmental footprint and provide a sustainability framework to benchmark performance and demonstrate environmental stewardship. Well-known certifications are listed below:

- **LEED™ (Leadership in Energy and Environmental Design)** is a green building rating developed by the U.S. Green Building Council (USGBC) and widely adopted in the U.S. and worldwide. See the USGBC website for more information about the program.
- **Green Globes** is a rating system used for both existing and new buildings in the United States and Canada and is administered by the Green Building Initiative. See the Green Globes website for more information about the program.
- **BOMA BEST** is a national green building certification program launched by Building Owners and Managers Association (BOMA) to provide a framework for owners, managers, and building operators for energy and environmental performance of existing buildings throughout Canada. See the BOMA BEST website for more information about the program.
- **BREEAM (Building Research Establishment Environmental Assessment Method)** is an environmental assessment method and rating system for buildings used to masterplan projects, infrastructure, and buildings, launched by the Building Research Establishment (BRE). See the BREEAM website for more information about the program.
- **Living Building Challenge** is a green building certification program and sustainable design framework launched by the Cascadia Green Building Council. See the Living Building Challenge website for more information about the program.
- **Carbon Neutral** is earned by achieving net zero carbon emissions through a combination of energy efficiency, renewable energy, and carbon offsets. Honda Canada must approve third-party carbon neutral certifications to meet certain program criteria.
- **Other qualified programs**[9] have been developed by provinces, utilities, and local governments to provide guidance and incentives for sustainable buildings and operations. These programs recognize building owners who are making significant headway in energy and water efficiency. Honda Canada will evaluate these on an individual basis.

Recommendations

Dealerships may earn a maximum of 40 points through the third-party certifications listed below.

S9. Achieve Third-Party Environmental Certification	MAX: 40
LEED Certified / Silver or equivalent[9]	20
LEED Gold or equivalent[9]	30
LEED Platinum or equivalent[9]	40
Carbon Neutral (less than 50% purchased offsets)	40
Carbon Neutral (more than 50% purchased offsets)	20
Other qualified program (e.g. Green Globes)[9]	2

9 Equivalences for the listed environmental certifications are determined by Honda Canada based off overall energy, water, waste, and other sustainable best practices

S11. Install Alternative Fueling Stations (6 points)

The success of alternative fuel vehicles depends on a solid fueling infrastructure. A sufficient distribution of fueling stations is necessary for customers to view alternative fuel vehicles as viable options.

By providing alternative fueling stations on-site, a dealership can:

- Include a full battery charge at vehicle delivery
- Provide post-service refueling
- Create a bridge in public infrastructure
- Build customer engagement and offer convenience

Recommendations

Dealerships can earn a maximum of 6 points by installing on-site alternative vehicle fueling stations.

S11. Install Alternative Fueling Stations	MAX: 6
Electric vehicle charging station (1 point per Level 2 station up to 2 stations)	2
Electric vehicle DC fast charge station (3 points per DC fast charge station up to 2 stations)	6
Fuel cell electric vehicle fueling station	2

See Section 1: Existing Facilities, S11. Install Alternative Fueling Stations, for more details.

S12. Create Educational Signage for Customers, Employee Engagement Practices, or Other Noteworthy Measures to Further Reduce Environmental Impact (6 points)

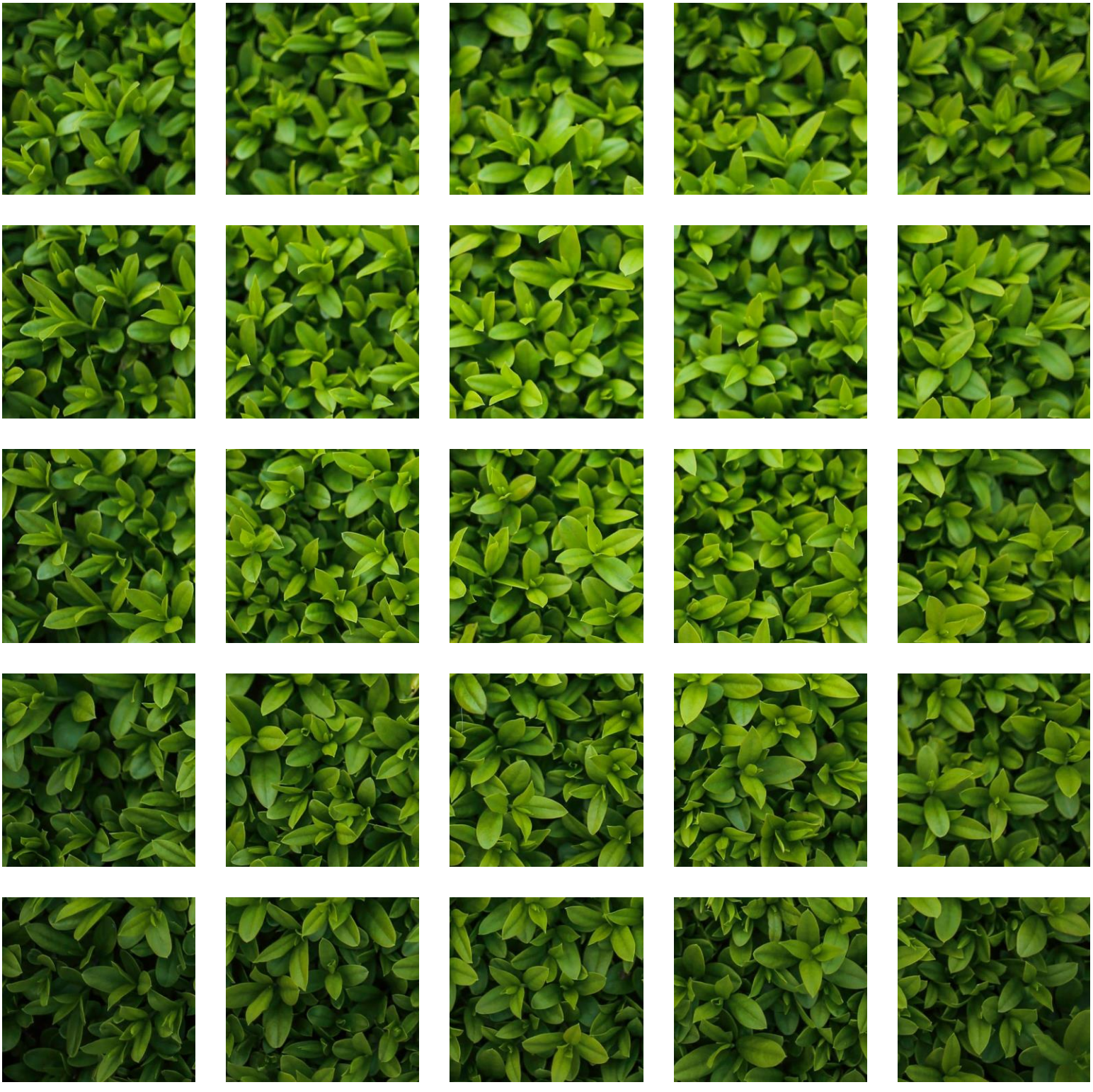
The Green Dealer Recognition Program encourages dealerships to contribute to the future development of the program. If the dealership engages in educational or employee engagement measures, or other extraordinary or impactful sustainability practices not currently specified in this guide, inform the Green Dealer Recognition Program and it is up to Honda Canada's discretion to award additional points. Green Dealer Recognition Program award banners, plaques, or any other award recognition materials placed at dealerships do not qualify for additional points.

Recommendations

Dealerships may earn a maximum of 6 points by implementing extraordinary or impactful sustainability practices not currently specified in this guide.

S12. Create Educational Signage for Customers, Employee Engagement Practices, or Other Noteworthy Measures to Further Reduce Environmental Impact	MAX: 6
Implement custom measures to improve the environmental performance of the dealership (1 point per measure)	6

Appendices



Appendix A: Glossary

(AFUE) Annual Fuel Utilization Efficiency: Measures the efficiency at which equipment converts fuel energy into usable energy.

CO_2e (Carbon Dioxide): Primary gas used for quantifying the global warming potential of greenhouse gases, CO_2e emissions are a by-product of fossil fuels combustion.

Commissioning: A rigorous quality-assurance process used for new construction projects to ensure a building operates as intended by the building owner. It begins in the design phase and continues through construction into occupancy and operations.

(AFV) Alternative Fuel Vehicles: Includes Battery Electric Vehicles (BEV), Plug-In Hybrid Electric Vehicles (PHEV), Compressed Natural Gas Vehicles (CNG), Fuel Cell Electric Vehicles (FCEV), and Hydrogen Vehicles (H2).

ASHRAE: Formerly known as American Society of Heating and Refrigerating and Air Conditioning Engineers. The organization publishes industry standards and codes relating to HVAC systems.

Electric Grid Neutral: Electric Grid Neutral means that when averaged over one year, the dealership offsets its grid electric use with an equal amount of on-site renewable generation exported to the grid.

Energy: In this document, energy is defined as the total consumption of electricity, natural gas, and other fuels used to provide power to the dealership.

(EER) Energy Efficiency Ratio: Ratio of output cooling (in BTU/h) to input electrical power (watts) at a given operating point.

(EMS) Energy Management System: Network of sensors and controls that allows building managers to monitor and control the energy consuming devices (HVAC equipment, pumps, fans, lighting, and electric vehicle (EV) chargers within a facility using a mobile or web-based control platform.

(GWP) Global Warming Potential: A measure of how much a refrigerant contributes to global warming compared to carbon dioxide, a common greenhouse gas.

Gray Water: Wastewater generated from wash hand basins, showers, and baths, which can be recycled on-site for uses such as toilet flushing and landscape irrigation.

Green Globes: A rating system used for both existing and new buildings in the United States and Canada. In the U.S., Green Globes is administered by the Green Building Initiative.

(HSPF) Heating Seasonal Performance Factor: Ratio of heat output over the heating season to watt- hours of electricity used.

Honda Awarded Dealership Benchmark: Benchmark developed each year by Honda which represents the average annual energy usage of an awarded dealership based on its size, using energy use data from all dealerships that have achieved the Green Dealer Recognition Program Award.

HVAC: Heating, ventilation, and air conditioning equipment, such as boilers, furnaces, heat pumps, and air conditioning units.

LEED™: The Leadership in Energy & Environmental Design (LEED) program, developed by the U.S. Green Building Council (USGBC). LEED provides building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations, and maintenance solutions.

(LPF) Liters Per Flush: For flush fixtures like urinal or toilets, water consumption is measured in liters per flush (LPF).

(LPM) Liters Per Minute: In Canada, fixture flow rates are typically measured in liters per minute for flow-based fixtures such as lavatory faucets.

(LPD) Lighting Power Density: The number of watts per square meter in a particular area.

Lumen Output: A quantitative measure of the total amount of visible light emitted by a source.

(ODP) Ozone Depletion Potential: The ozone depletion potential of a chemical compound is the relative amount of degradation to the ozone layer it can cause.

Re-Commissioning: The process of commissioning an existing building that has already been commissioned to ensure that thermal comfort, indoor air quality and energy savings persist over time.

Renewable Energy: Energy from a source does not deplete when used, such as solar or wind power.

Retro-Commissioning: The process of commissioning an existing building that has never been commissioned.

R-Value: A measure of insulation's ability to resist heat conduction. Higher R-values correspond to higher efficiency.

(SEER) Seasonal Energy Efficiency Ratio: Ratio of total cooling capacity (BTU/h) during typical cooling season (not over 12 months), divided by total electric energy input for the same time period.

Source Energy: The total amount of raw fuel required by the utility to operate the facility, including all transmission, delivery and production losses. The EPA recommends representing total energy usage as source energy, instead of site energy, as the unit of evaluation.

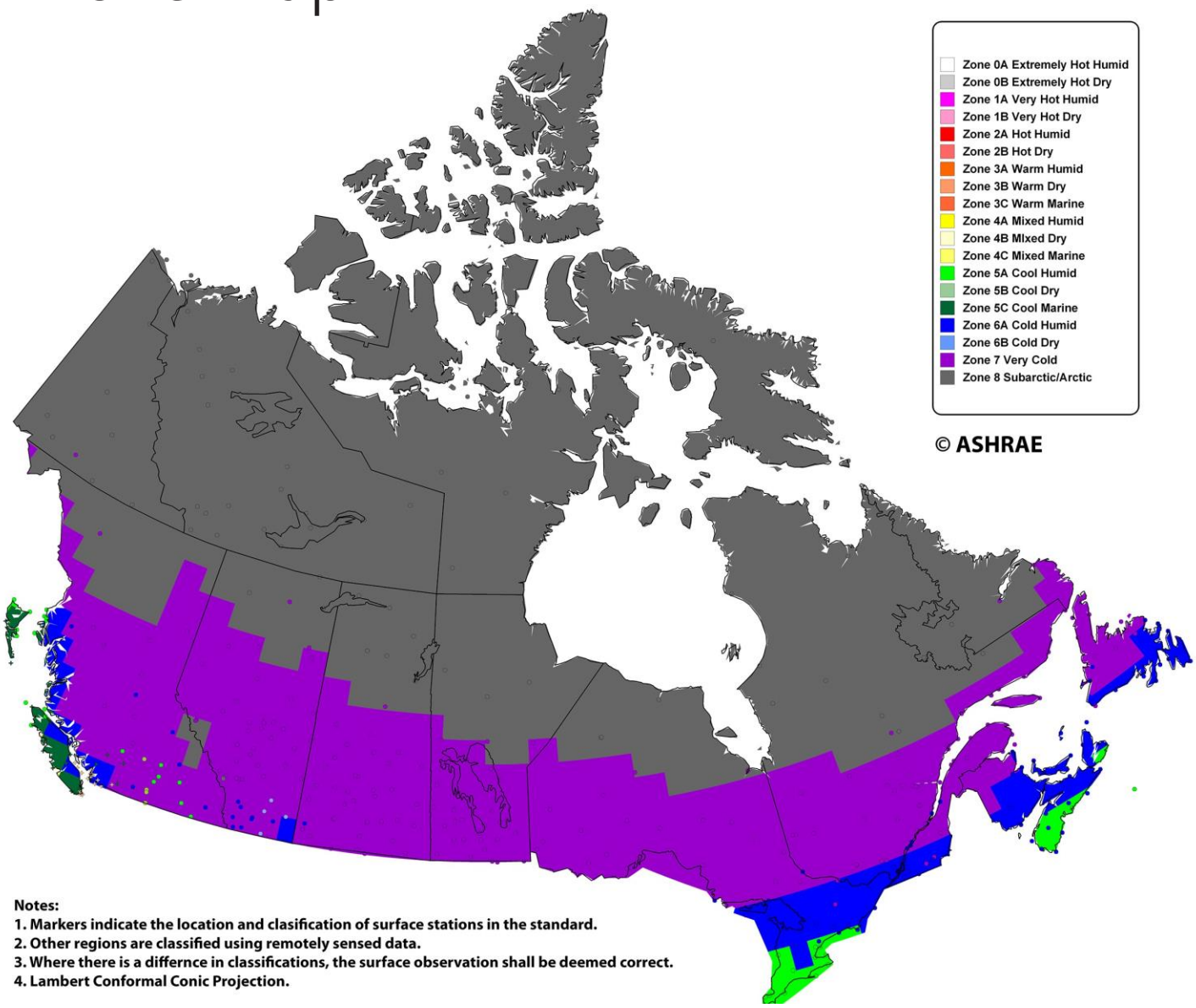
Urban Heat Island: An effect caused by urban or metropolitan areas that are significantly warmer than its surrounding rural areas due to human activities and the building environment, including buildings, roadways, and other infrastructure.

U-Value: The rate of heat loss or gain through building envelope materials such as walls, roofing, and windows. A lower U-value indicates better insulation due to a lower rate of heat loss or gain.

(USGBC) The U.S. Green Building Council: A non-profit organization dedicated to sustainable building design, construction, and operations.

Weather Normalization: The process of adjusting actual metered energy consumption to what would have occurred under conditions representing a typical meteorological year (based on 30-year averaged weather conditions). This process is commonly used in building energy analysis as any given year may be significantly hotter or colder than the climate's average condition, which can skew energy usage.

Appendix B: ASHRAE Climate Zone Map



Notes:
1. Markers indicate the location and clasification of surface stations in the standard.
2. Other regions are classified using remotely sensed data.
3. Where there is a differnce in classifications, the surface observation shall be deemed correct.
4. Lambert Conformal Conic Projection.

Climate Zone	Type	Characteristics
4	Mixed	Below 3500 Cooling Degree Days at 10° C AND between 2000 and 3000 Heating Degree Days at 18° C
5	Cool	Below 3500 Cooling Degree Days at 10° C AND between 3000 and 4000 Heating Degree Days at 18° C
6	Cold	Between 4000 and 5000 Heating Degree Days at 18° C
7	Very Cold	Between 5000 and 7000 Heating Degree Days at 18° C
8	Subarctic/ arctic	Over 7000 Heating Degree Days at 18° C

Heating Degree Days – Heating Degree Days is the equivalent number of days you would have to heat your building by 1 degree to heat to a given temperature. For example, if the outside temperature is 13°C, that day is worth 5 Heating Degree Days because it is 5 degrees below 18°C. This calculation is done for each day of the year and summed to an annual total.

Cooling Degree Days – Cooling Degree Days is the equivalent number of days you would have to cool your building by 1 degree to cool to a given temperature. For example, if the outside temperature is 21°C, that day is worth 11 Cooling Degree Days because it is 11 degrees above 10°C. This calculation is done for each day of the year and summed to an annual total.

Appendix C: Lighting Technologies and Relative Performance

Light Emitting Diode (LED): Best all-around performance technology. 60-80% energy savings compared to metal halide products. High install cost but lowest operating cost. 10-year+ lifetime and under 10% lumen depreciation makes LED the best long-term lighting option, especially for high-wattage exterior and high bay applications. 5-10-year warranties available.

Induction Fluorescent: 50% energy savings compared to metal halide products. Lower install cost than LED and virtually no maintenance cost with 10-year+ lifetime. Induction lights are cost-effective options for reducing energy and maintenance cost, especially in high-bay applications. 5-10 year warranties available. Induction fluorescent lamps contain trace amounts of mercury and should be properly disposed of at the end of life.

High-Output (HO) T5 Fluorescent: T5 fluorescent lighting systems are efficient for producing high-output light, making these lamps a very good application for service areas requiring high lumen outputs. Achieve higher lighting levels while reducing fixture wattage by almost 50% compared to metal halide high bay lights.

Reduced Wattage T8 Fluorescent: Approximately 10-20% energy savings compared to typical linear/ compact fluorescent lighting systems. Many products may be installed, without ballast change, as part of periodic lighting maintenance. Reduced wattage options include 25-28 watts for 4 foot lamps, 51-56 watts for 8 foot inch lamps, or 25-29 watts for parabolic lamps. Linear fluorescent lamps contain trace amounts of mercury and should be properly disposed of at the end of life.

Standard T8 Fluorescent: Tube fluorescent lights, typically T8 17W (2 foot), 32W (4 foot and parabolic) and 59W (8 foot). Standard for interior office/storage applications, with longer life, higher output and lower wattage than older T12 linear fluorescent lamps. Linear fluorescent lamps contain trace amounts of mercury and should be properly disposed of at the end of life.

Compact Fluorescent Lamps (CFL): CFLs can either be screw- or pin-type and can replace incandescent can lights with some energy savings. CFLs contain trace amounts of mercury and should be properly disposed of at the end of life.

Metal Halide: High initial lumens but significant depreciation of light over 2- to 3-year life. Metal halide lamps contain trace amounts of mercury and should be properly disposed of at the end of life.

In general, LED lighting is preferred due to higher efficiency, lifetime, and lighting output over time. However, there are other cost-effective options depending on the lighting application and utility cost rates; see the chart below for the benefits and drawbacks of various lighting technologies.

Lamp Type	Typical Application	Relative Efficiency	Lifetime (Yrs.)	Ability to Maintain Lighting Output Over Time	Contains Mercury
LED	Preferred for all areas	Highest	10-20	Highest	No
High-output T5 fluorescent (T5HO)	Showroom service bays	High	3-9	High	Yes
Reduced wattage T8 fluorescent	Offices	High	3-9	Medium	Yes
Induction fluorescent	Showrooms Service Bays Parking Lots	Medium	10-20	Medium	Yes
Standard T8 fluorescent	Offices	Medium	3-7	Medium	Yes
Compact fluorescent lamp (CFL)	Offices	Medium	3-7	Medium	Yes
High-intensity discharge (e.g. metal halide)	Showrooms Service Bays Parking Lots	Low	1-5	Low	Yes
Incandescent (e.g. Halogen)	Showrooms	Lowest	1-3	Medium	No

Dealerships have diverse space types with specific needs that can be met using different lighting technologies:

- **Showroom:** Lighting in showrooms should be energy-efficient to minimize operational costs, long lasting to reduce maintenance costs, and maintain high-quality output to optimize vehicle displays and customer experience. LED lighting is ideal for showrooms for the following reasons:
  - 60-80% more efficient than metal halides and can significantly reduce electricity costs, including peak demand charges.
  - Longer life significantly reduces maintenance costs and related showroom disturbance, especially for high-ceiling showrooms.
  - Highest lighting quality while maintaining consistent lighting output over time. The full- spectrum nature of LED light improves its rendering of color-ideal for the customer experience in the showroom. Fluorescent lights emit UV rays which can degrade visible colors of your display, and metal halides degrade in output and color rendering significantly over their first year of operation.

- **Offices and Parts/Storage Area:** There are a number of efficient technologies applicable for lower ceilings commonly found in offices and parts/storage areas:
  - LED lighting - Best option for reducing electricity and maintenance costs. LEDs have also been shown to improve worker productivity relative to fluorescent lighting[10].
  - Reduced wattage linear fluorescent lamps - specifically 25W or 28W 4 foot T8 lamps can reduce lighting power by 10-20% while providing relatively consistent lighting output and have a small cost premium compared to standard (32W) lamps.
- **Service Bays and Body Shops:** Since service bays are lit from high-bay ceilings, fixtures for this application must be bright enough for service tasks. Options include:
  - LED lighting - Significantly better light quality and electricity savings when compared to fluorescent and metal halide lighting, allowing for service technicians to work efficiently without requiring task lighting for several tasks. While typically more expensive, lower-cost LED options continue to emerge on the market and should be considered for both new design and retrofit solutions.
  - T5HO fixtures - Good lower-cost option due to high lumen maintenance and longer lifetimes compared to metal halides.
  - Induction fluorescent lamps may also reduce maintenance costs due to longer lifetimes than metal halides, and could be an energy-efficient option.
- **Exterior Pole & Wall Lights:** The most important criteria when considering exterior lighting upgrades are energy efficiency and lifetime to save on operational and maintenance costs. The best options are LEDs and induction fluorescent fixtures:
  - LED lighting - Can be cost effective for both new installation and retrofit applications, consuming up to 80% less electricity than metal halides and lasting up to 10 times longer. Additional energy savings typically makes LEDs more cost-effective relative to induction fluorescent options.
  - Induction fixtures - Last approximately as long as LED lights and operate at about 50% less electricity than metal halides.

10 Hawes, B. K., Brunye, T. T., Mahoney, C. R., Sullivan, J. M., & Aall, C. D. (2012). Effects of four workplace lighting technologies on perception, cognition and affective state. International Journal of Industrial Ergonomics, 42, 122-128.

Appendix D: Lighting Specifications

Examples of Recommended Exterior Pole LED Lighting Replacements

Products are subject to change as LED technologies develop and mature.

Existing Specifications		Proposed Specifications							
Lamp	Watt	Lamp	Watt	Lumen	Lumen/Watt	Lifetime (Hrs.)	CRI	CCT (K)	Warranty
Metal halide	1,000	LED	275	24,500	90	100,000	70	4000	5 years
Metal halide	400	LED	130	13,800	105	100,000	70	4000	5 years
Wall packs	150-250	LED	70	6,800	97	100,000	76	4000	5 years

Sourced from product specification sheets from prevailing LED lighting manufacturers.

Definitions:

» **Lamp:** Commonly referred to as the "bulb." It is the light source such as incandescent, LED, metal halide, and/or fluorescent.

» **Watt:** The SI (international system) unit of power, equivalent to one joule per second.

» **Lumen:** A measure of the total "amount" of visible light emitted by a source.

» **Lumen/Watt:** Metric used to evaluate the efficiency of a lamp in terms of amount of visible light per unit of power.

» **Lifetime (hrs.):** The lifetime of a lamp expressed in hours.

» **(CRI) Color Rendering Index:** A quantitative measure of a lamp's ability to reproduce the colors of natural light. The scale ranges from 1 to 100 where a value of 100 is equivalent to sunlight.

» **[CCT (K)] Correlated Color Temperature:** A common unit of measurement in the color or hue of light produced by a lamp.

» **Warranty:** Period starting from the product purchase date where product is guaranteed or covered by the manufacturer.

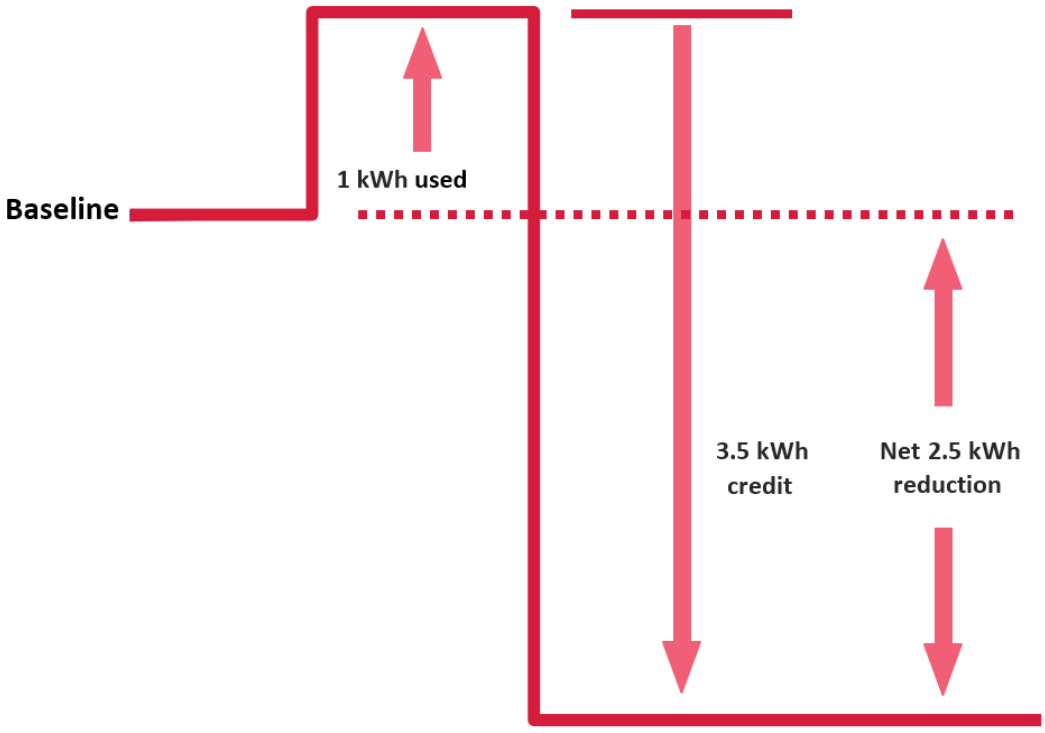
Appendix E: Alternative Fueling Station Energy Credit

Calculating Energy Efficiency

Driving electric vehicles instead of gasoline-powered vehicles reduces greenhouse gas emissions. Taking into account the resource mix of the electric grid, 1kWh of electric vehicle usage produces greenhouse gas offset credit equivalent to 3.5kWh.

Total kWh usage – 3.5 x electric vehicle (EV) kWh = Net kWh usage

For the purpose of calculating the energy efficiency of the dealership for this program, each kWh supplied to an electric car reduces the dealer's electricity usage by 2.5kWh. The alternative fueling station usage must have a dedicated submeter to accurately use this calculation method.



This calculation derives from the methodology set forth by the California Air Resources Board Low Carbon Fuel Standard.

For more information, see the following web link: http://www.arb.ca.gov/fuels/lcfs/lcfs-background.htm