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Items for the Information of the Partners in Project Green Executive Management Committee

TO: Chair and Members of the Partners in Project Green Executive Management Committee
Tuesday, September 21, 2021 Meeting

FROM: Darryl Gray, Director, Education and Training

RE: **UPDATE ON THE ALTERNATIVE FUNDING MODELS AND EV POLICES**

KEY ISSUE

Update on two items for further inquiry identified at the June 16, 2021, Executive Management Meeting: (1) Alternative funding models to finance capital projects, and (2) Electric Vehicle (EV) policies in the public and private sectors.

RECOMMENDATION

IT IS RECOMMENDED THAT the following information report be received.

BACKGROUND

At PPG EMC Meeting #02/21, held on June 16, 2021, members of the committee inquired for further information on:

1. Alternative funding models to finance capital projects, referring to the ESCO model and a service-based model to provide Charging-as-a-Service.
2. EV policies in the public and private sectors that members and staff can refer to.

RATIONALE

The Committee will be updated on the two identified areas.

Alternative Funding Models to Finance Capital Projects

Financing models for energy projects have existed since the start of energy efficiency industry in the 1970s and 1980s. The first models were called energy service companies (ESCOs) and were commissioned by businesses to develop, design, build, and arrange financing for projects to save energy and decrease operations and maintenance costs at their customers' facilities.

Energy Service Performance Contracts (ESPCs) are common agreements entered into by customers and ESCOs. The objective is to be budget neutral, meaning the cost savings achieved are equal to or greater than the expense of procuring the ESCOs services. The US Department of Energy's background information on developing programs, selection considerations and more, can be found at <https://www.energy.gov/eere/slsc/energy-savings-performance-contracting>. In May 2021, Global Industry Analysts, Inc. published a report entitled "Energy As A Service – Global Market Trajectory and Analysis" that stated the global market for Energy-as-a-Service estimated at US\$49.6 Billion 2020 is projected to reach a revised size of US\$88.4 Billion by 2027, growing at a compound annual growth rate of 8.6% over the analysis period 2020-2027. In 2019, Deloitte published a report called "Energy-as-a-Service" that provides a sound overview of the model, players, and potential outcomes. It is attached to this report.

The greatest challenge with these types of arrangements is clarifying terms of payment based

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on the energy *not used*. Energy savings must be calculated based on the baseline of energy that would otherwise have been consumed. Leveraging a third-party to verify these calculations is a trend that helps avoid disputes over achieved energy savings. For example, if energy savings are measured at the facilities' utility meter (whole building) then a significant change to the equipment on site due to, say, an unplanned replacement of an HVAC unit, can call for a "baseline adjustment." How these adjustments are calculated can be complex and it can be beneficial to have a third-party to verify the payments required by the host. The Efficiency Valuation Organization offers standardized protocols for measurement and verification of energy savings known as the International Performance Measurement Verification Protocol (IPMVP). In general, thorough submetering of any equipment included in an energy performance arrangement improves transparency of savings.

Slightly alternative arrangements, called "As-a-Service" models, can be attributed to a variety of services wherein the customer agrees to regular payments in lieu of capital investments upfront, in order to receive a minimum standard of service by the provider. For EV charging, for example, a Charging-as-a-Service (CaaS) arrangement would define responsibilities of the provider and the host facility along with minimum standards the provider must meet.

There are several businesses initiating networks of Level 3 Fast Chargers in Canada based on the CaaS model. Host facilities pay minimal fees to have chargers installed and the vendor owns and operates the stations, ostensibly recovering costs through customer use fees. Examples include Ivy Network, Electrify Canada and Baseload Power. It is possible (though unconfirmed) that host facilities desirous of CSR/ESG credentials or who are looking to attract customers to the site agree to make regular payments to the vendors to ensure success of the business model on their sites. There are no cases of a CaaS model known to PPG at this time that have not relied on up-to 50% capital costs offset by government grants. Nor are there any known cases of Level 2 charger CaaS agreements in place.

EV Policies in the Public and Private Sectors

Few published policies have been identified for the private sector with regards to EV chargers. These are far more common in the public sector, typically providing guidance to facility operators on: (A) How and when to install charging stations, and (B) How to manage driver use of the stations and (C) Procurement of Green Fleets.

Examples of public bodies implementing station use policies includes: Toronto and Region Conservation Authority (Attachment 2), City of Vaughan (Attachment 3), Town of Aurora (Attachment 4) and York Region (Attachment 5). In 2021, Clean Air Partnership released a Green Fleets Support Package, which includes: Green Fleets Business Case Series, Model EV Employee Policy, and a Model Green Fleets Policy. These currently can be accessed at: <https://www.cleanairpartnership.org/caps-releases-green-fleets-support-package/>. In addition, in April 2019 the federal Office of Energy Efficiency released the "EV Readiness Requirement Framework". The report provides guidance on establishing minimum requirements for EV charging infrastructure in buildings and provides recommendations for Natural Resources Canada to advance provinces' and local governments' adoption of minimum requirements for EV charging infrastructure for buildings.

It is notable also that in December 2019 the provincial Ministry of Transportation amended the Highway Traffic Act to include parking in a dedicated EV parking spot as an offence (Reserved Parking for Electric Vehicle Charging Act, 2019, S.O 2019, c.18 – Bill 123).

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Relationship to Building the Living City, the TRCA 2013-2022 Strategic Plan

This report supports the following strategy set forth in the TRCA 2013-2022 Strategic Plan:

Strategy 8 – Gather and share the best sustainability knowledge

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Attachments: 5

Attachment 1: Deloitte UK Energy-as-a-Servicer Report 2019

Attachment 2: TRCA's Electric Vehicle Charging Policy

Attachment 3: Vaughan Workplace Electric Vehicle Charging Policy

Attachment 4: Aurora Electric Vehicle Charging Station Policy Process

Attachment 5: Region of York Electric Vehicle Charging Station Policy