

# THE ROAD AHEAD TO LOW-CARBON MOBILITY

## A Feebate System for Canada's Light-Duty Vehicle Segment

Équiterre commissioned Horizon Advisors to assess the efficacy of a vehicle feebate system in reducing the tailpipe emissions of Canada's light-duty vehicle (LDV) segment. Horizon Advisors reviewed Canada's separately operated bonus-malus programs, which include fees (or a 'malus') on high-emitting vehicles through the federal Green Levy program and rebates (or a 'bonus') for zero-emission vehicles (ZEVs) and plug-in hybrid vehicles (PHEVs) through the government's iZEV program. Best practices among leading jurisdictions that have demonstrated improvements in average LDV emissions through a feebate system as well as ZEV and PHEV market uptake were examined. Finally, the study proposes a system adapted to the Canadian context.

### WHY SHOULD WE ADOPT A FEEBATE PROGRAM?

The suggested feebate design options can ultimately support *a fully self-funded program*, where fees collected on more polluting vehicles are recycled through consumer rebates for the purchase of lower-carbon vehicles. To this end, it is recommended that Canada amend the Green Levy and iZEV programs, bringing them under one administrative body and with common policy objectives that would *allow the government to review and adjust both measures in tandem* and against a shared set of indicators. Among other strengths, feebates directly *draw attention to the problem of fossil fuel emissions* and *involve manufacturers, dealers and consumers* in the program.

### IMPROVING CANADA'S POLICY TOOLS BY ASSESSING BEST PRACTICES AROUND THE WORLD

Canada's Green Levy program is noted to have several underlying weaknesses: its limited application to a small segment of the vehicle market (primarily larger trucks and luxury vehicles), differentiated levels of incentives that support marginal emission improvements by design, and weak price signals. Jurisdictions reviewed in the report, including Denmark, Germany and the Netherlands, have more stringent GHG-based vehicle fees that cover a larger segment of the vehicle market than that of Canada's. When it comes to rebates, although the iZEV program took a step in the right direction in supporting ZEV and PHEV market uptake, incentives offered by Canada are also significantly less than that of leading jurisdictions.

As part of their post-pandemic economic stimulus packages, European member states with major automobile manufacturing sectors, in particular, have scaled up their ZEV incentive measures.

### THREE POSSIBLE APPROACHES FOR A CANADIAN FEEBATE SYSTEM

There are three (3) different approaches for improving Canada's bonus-malus measures through a more cohesive feebate system. An effective system should:

- *Send appropriate market signals* through pivot points and slope rates;
- *Improve the investment environment* while remaining technology neutral;
- *Communicate environmental and economic benefits* to consumers.

## OPTION A: A CONSTANT-RATE FEEBATE SYSTEM

This approach would set a **constant fee rate for all internal combustion engine (ICE) vehicles**, irrespective of their emissions, and revenues collected would be recycled through rebates for the purchase of ZEVs and PHEVs. The fee rate can be increased annually based on a predetermined schedule that provides sufficient revenues to support a constant rebate rate tied to ZEV targets, that is until 2040. For example, an interim ZEV target of 5 % in 2022 could be supported by a fee of approximately \$500 per ICE vehicle with a ZEV rebate of \$10,000. The fee rate would then gradually increase to \$1,000 by 2025 while ZEV rebates remain constant at \$10,000, which would support a 10 % ZEV target, and so on. The government could also exclude lower-cost vehicles from the fee portion, but such approach would result in increased fees on the remaining ICE vehicles.

## OPTION B: A CIRCULATION FEEBATE SYSTEM

This approach is **comparable to a circulation tax** with the difference that the fees are collected by automobile insurance companies rather than governments. The fee portion would consider a vehicle's emission intensity, and it could potentially include other data such as annual mileage.

## OPTION C: AN EMISSION-BASED FEEBATE SYSTEM (RECOMMENDED)

This approach offers a system whereby **both fees and rebates are determined based on a vehicle's emissions**, and it would allow Canada's bonus-malus measures to align with that of leading jurisdictions over time. Many European jurisdictions have significantly high registration fees and/or circulation taxes that are tied to vehicle CO<sub>2</sub> emissions. Although high fees associated with vehicle emissions dissuade consumers from purchasing more polluting vehicles, this analysis recommend the introduction of **an increasingly stringent fee structure** as the market responds and consumers adapt to CO<sub>2</sub>-based taxation.

The proposed fee structure for 2021 would allow consumers to select lower-emitting vehicles to avoid Green Levy payments altogether. While the stringency of the Green Levy program is improved over time, **Canada should immediately scale up its iZEV rebates to match that of leading jurisdictions**. Furthermore, **incentives offered should correlate with the rebate recipient's income**. Other key recommendations for an improved iZEV program include:

- ❖ Adopt a 1:3 industry-government cost-shared approach for ZEV and PHEV rebates;
- ❖ Set a maximum rebate rate of \$15,000, with lower rates for used-vehicle segment;
- ❖ Correlate the rebate rate directly with the vehicle emissions;
- ❖ Provide additional rebates when an ICE vehicle is scrapped;
- ❖ Require retailers to make the rebate value clearly visible to consumers;
- ❖ Issue ZEV and PHEV rebates by cheque or direct deposit six (6) and twelve (12) months after a buyer has registered the eligible new or used vehicle, respectively.

## THE PATH TO DECARBONIZING CANADA'S LDV SECTOR

By improving Canada's bonus-malus measures under a more stringent and unified system, Canada can send a strong market signal to **accelerate the decarbonization of its LDVs** and attract the necessary capital for domestic ZEV manufacturing. However, **there is no silver bullet solution to achieve decarbonization in this sector**. In addition to a feebate system, the perfect public policy reform would include ICE vehicle scrappage incentives directly tied to ZEV purchases, capital incentives for ZEV manufacturers, additional investment in ZEV charging and fueling infrastructure, a national ZEV mandate, and more stringent vehicle GHG regulations.