Regional Experiences in Fuel Efficiency

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Types of **public policies** to improve energy consumption in the **transport sector**
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**Information and Training**
- Energy Consumption Labeling
- Efficient Driving Guides (Eco-Driving)
- Comparative Vehicle Consumption Guides/Website

**Fiscal Policies**
- Tax base on CO₂ emissions (*Feebates*)
- Fuel Taxes
- Incentives for vehicles and electrical infrastructure

**Energy Efficiency Standards**
- Mandatory standard for light medium and heavy vehicles
- Vehicle energy consumption tests and certification
- Volunteer Programs and Green Fleets
REGIONAL CONTEXT
Informative Labeling (first stage 2017)
- Informative labeling on new vehicles (M1 and N1 categories)
- CO₂ emissions [g/km] Performance [l/100km] (Urban, extra-urban and mixed cycles)

Labeling (second stage 2022)
- Comparative labeling on new vehicles (M1 and N1)
- CO₂ emissions [g/km] Performance [l/100km]

Intelligent Transportation Program (2016)
- Volunteer for transport companies and related actors to Promote Energy Efficiency Strategies.
Program ROTA 2030 (Ley N°13.755, 2018)

It is a tax incentive program to promote R&D (Research & Development) on energy efficiency and safety issues in the automotive market.

- Its oriented to companies that produce light and heavy vehicles
- Guidelines to promote Energy Efficiency and Security.
- Investment in R&D; Biofuels, propulsion alternatives and energy matrix;
- Requirements since 2022:
  - Labeled (volunteer since 2007)
  - Energy efficiency and security
  - R&D
- Incentives: Reduction of corporate taxes:
  - 30% of spending on R&D (basic level)
  - 15% (max 45%) if R&D (advanced level)
Mexico

NOM-163-SEMARNAT-ENER-SCFI-2013 Valid until 2016, but extensions have been made.

- CO₂ emissions goals by model (Light vehicles PBV < 3,857)
- Credit system:
  - Incorporate Highly Efficient Technologies (TAE)
  - Use efficient air conditioning systems
  - Technological penetration: Incorporation of Fuel Economy technologies in 80% of the fleet.

- 2018: Project to update NOM-163, still not resolved.

- Agreement with the Mexican automotive industry (2002, current)
  Industry: provide information on the energy performance of its models. To CONUEE, to maintain a public database. At points of sale to inform users.
Resolution 00XX-DIR-2021-ANT: Energy efficiency - Motor vehicles categories M1 and N1

Labeling
- The standard establishes the requirements for the Fuel Economy labeling of new M1 and N1 category motor vehicles with an internal combustion engine, pure electric, hybrid electric with and without external recharging and hydrogen fuel cell vehicles.
- Establishes the test method of the UNECE 101 – NEDC Regulation and accepts the European (Euro) and American (EPA) emission regulations.
Informative Labeling

- **Norma UNIT 1130:2020: Eficiencia energética – Vehículos automotores categorías M1 y N1 – Etiquetado**

- The standard establishes the requirements for the **Fuel Economy labeling of new M1 and N1 category motor vehicles** with an internal combustion engine, pure electric, hybrid electric with and without external recharging and hydrogen fuel cell vehicles.

- **Establishes the test method** of the UNECE 101 – NEDC Regulation and accepts the European (Euro) and American (EPA) emission regulations.
Colombia is currently working on a fuel economy standard and fuel economy labeling for LDV and MDVs

(the public consultation of the energy efficiency standard will take place in the second half of this year)
Regulation of vehicular CO$_2$

- There is a **significant gap** in the region between countries that regulate and do not regulate vehicular CO$_2$
- The majority of countries do not require vehicles produced or imported into the country to declare CO$_2$ emissions
- **Without this requirement**, certain measures can be adopted that favor more efficient technologies (i.e. electric vehicles), but **it is impossible** to assess the impact of reducing emissions in the sector.
- The region has a **huge challenge** to improve energy efficiency in the transport sector. **This is even more difficult in a context in which the largest countries, which are also vehicle manufacturers (Mexico, brasil, argentina), have not yet set such strong goals to improve the efficiency of new vehicles.**
The case of Chile
**Context**

- **High levels of PM$_{2.5}$**: Metropolitan Region Decontamination Plan since 1990
- **Advances in the control of transport emissions**:
  - Diesel and gasoline 10 ppm – Euro 6 (light and medium vehicles)
- **Energy Efficiency Law (2021)** that requires to establish energy efficiency standards in transport:
  - Light vehicles (1 year)
  - Medium (3 years)
  - Heavy (5 years)
- **Chile organized the COP 25 (2020)**
  - NDC: Set targets for 2030
  - Climate Change Law (published June 13, 2022) (Goal: carbon neutral by 2050)
Informative Labeling

- Light Vehicles N1 y M1
- European Driving Cycle (NEDC)
- For gasoline, diesel, hybrid or electric vehicles
- Label Information:
  - CO₂ emissions [g/km], according to the European driving cycle.
  - Fuel Efficiency [km/l], according to 80/1268/EEC or Regulation N°101 CEPE/UN.
- WEB: www.consumovehicular.cl
Tax on NOx emissions and fuel consumption for new vehicles (Since 2015)
Tax since 2015

Tax (UTM) = (Sale Price x 0.00000006) x 
[(35 / urban fuel consumption (km/lt)) + (120 x g/km NOx)]

- Factor associated with the price of the vehicle = Price of the vehicle [$] x 0.00000006
- Factor associated with the Fuel consumption = 35 UTM/ urban fuel consumption (NEDC) [km/lt]
- Factor associated with NOx emissions = 120 x NEDC NOx emission [gr/km]
- 1 UTM (monthly tax unit) = 84 [US$]
First Fuel Economy Standard for light vehicles (since February 2022)

The proposed standard takes into account the change in the measurement cycle that will occur in Chile from 2024 due to the start of the Euro 6c emissions standard.

<table>
<thead>
<tr>
<th>Year</th>
<th>Standard (WLTP) [km/le]</th>
<th>Difference compared to 2019</th>
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</thead>
<tbody>
<tr>
<td>2019</td>
<td>12.9</td>
<td>-</td>
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<tr>
<td>2024 - 2026</td>
<td>18.8</td>
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<tr>
<td>2027 - 2029</td>
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<td>2030 en adelante</td>
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</tbody>
</table>
Gracias!
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