



# Latvia's approach to transport GHG reduction opportunities and challenges

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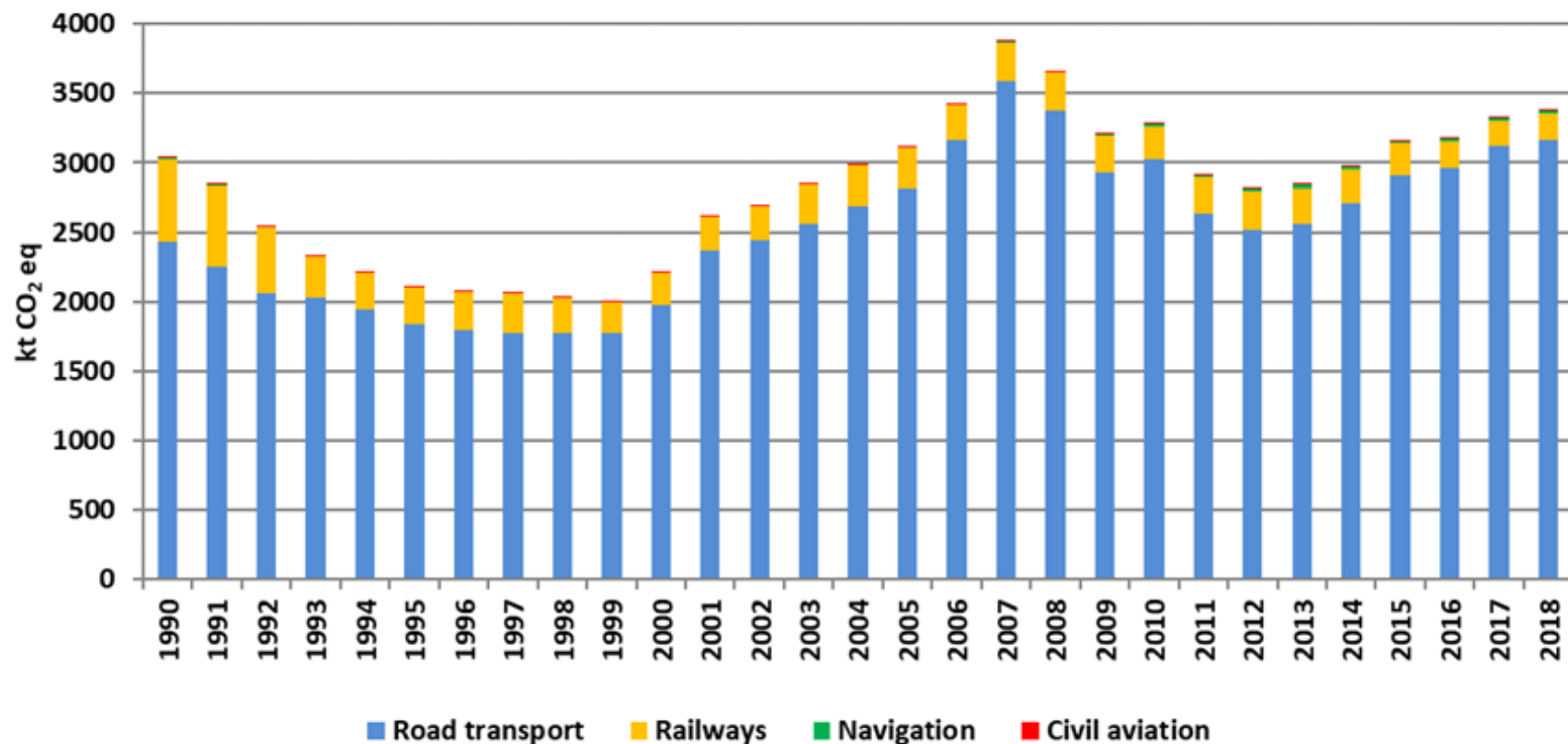
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Capacity Building for Member States on the Effort Sharing Regulation - Online Workshop

# Overview

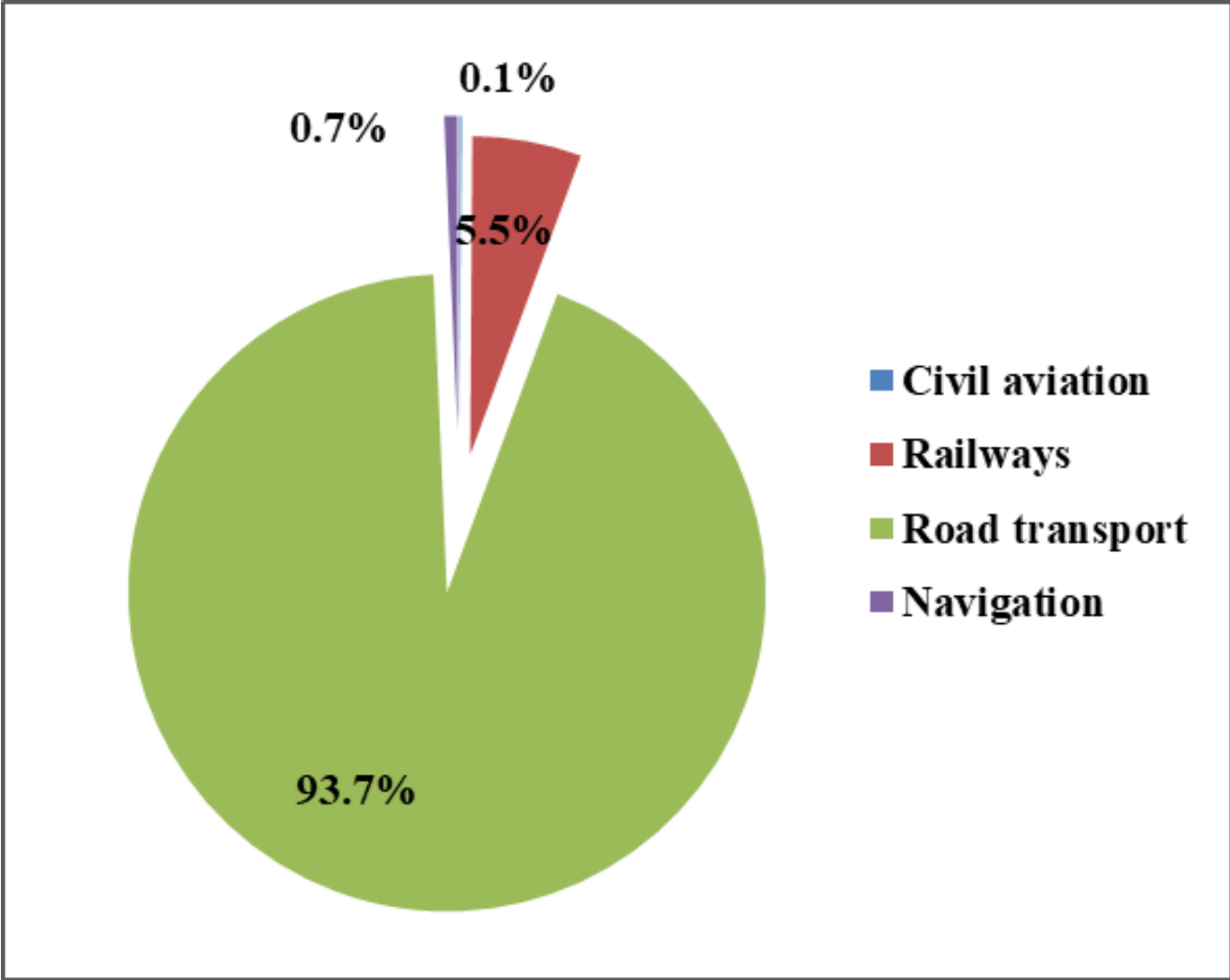
- Introduction to transport GHG emissions
- Implemented policies for GHG reduction in transport
- Approach for electric vehicle technologies introduction in Latvia transport

# Transport sector GHG emissions in Latvia



**Transport sector emissions represent around 29% of total GHG emissions and 37% of non-ETS emissions in 2018.**

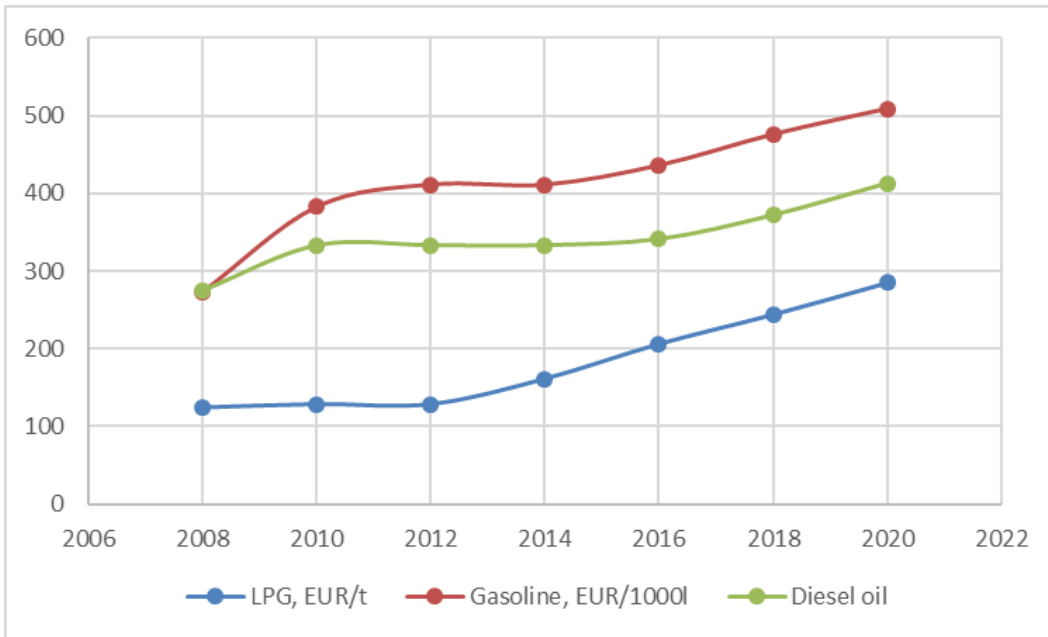
# GHG emissions in Transport sector



## Implemented policies in transport sector

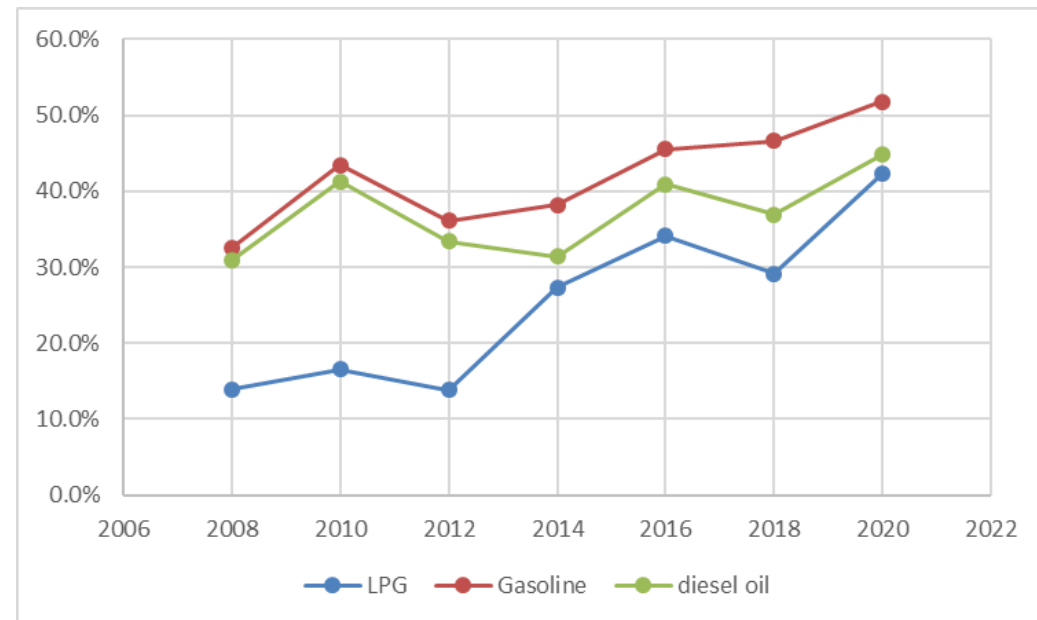
- Regulatory policies (Biofuel Mix Obligation; Public Procurement: Promotion of clean and energy efficient road transport)
- Fiscal policies (excise tax; annual taxation of vehicles);
- Economic policies (**Implemented:** support Program for EV infrastructure development, Support for the infrastructure of environmentally friendly public transport in cities; **Planned:** Support Program for biomethane (2nd generation) production and utilization in transport);

# Excise tax in Latvia

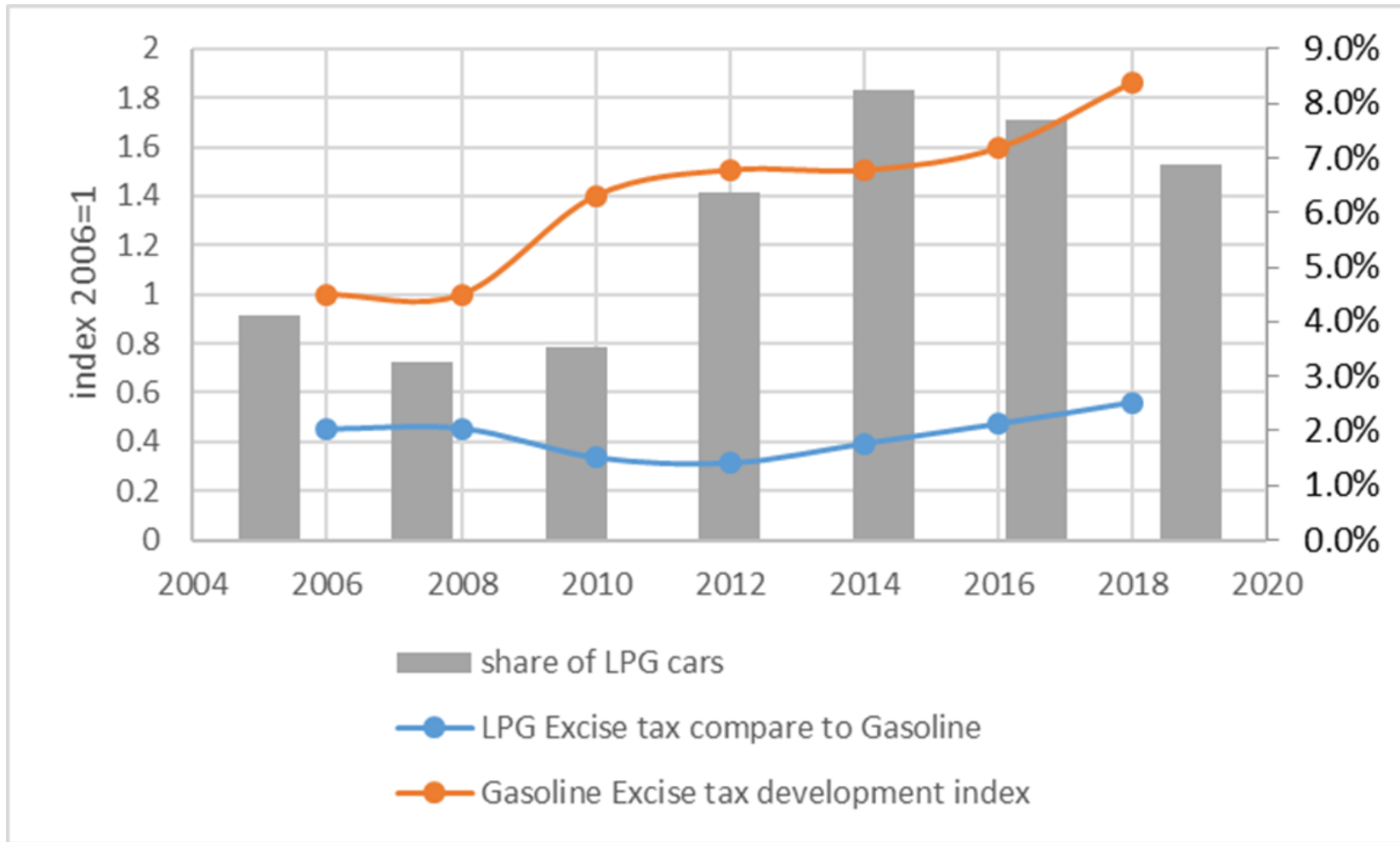


**Excise tax 2020 vs 2008**  
**LPG 130%**  
**Gasoline 86%**  
**Diesel oil 50%**

**Share of Excise tax from retail price  
 (without VAT)**



# Impact of excise tax implementation to LPG cars penetration



# Excise tax implementation

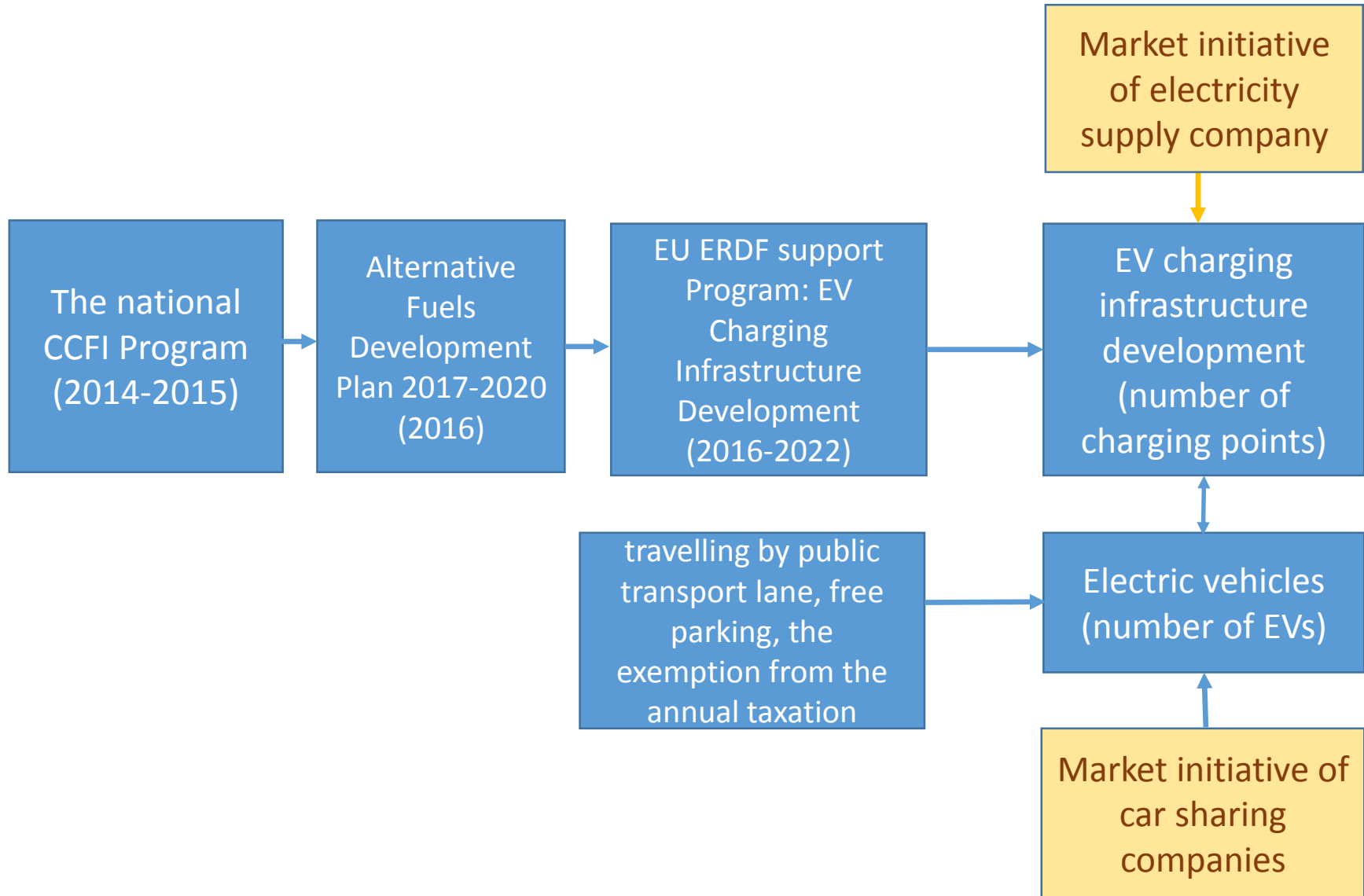
- Experience with the application of excise tax in Latvia shows that it is only possible, in certain cases, to influence the choice of consumers with regard to the technology to be used.
- Impact to technology change is in place when:
  - If the starting value of the tax rate is low.
  - The difference between the rates of excise tax of different types of fuel must be significant;
- Low rates of excise tax (compare to other fossil fuel for transport) in combination with the price of LPG affected the number of LPG cars in Latvia.
- Increasing of excise tax is limited because actual rates (converted to CO<sub>2</sub>) are high: diesel oil - 156 EUR/t CO<sub>2</sub>; gasoline – 217 EUR EUR/t CO<sub>2</sub>; LPG – 96 EUR/t CO<sub>2</sub>.



# Policies to enhance the development of electromobility

- Economic policies
  - Support for Electric Vehicles (EV) and EV Charging Infrastructure: 2014-2015, national CCFI
  - Electric Vehicles Charging Infrastructure Development: EU ERDF Program Planning Period of 2014-2020.
- Fiscal policies
  - tax discount (exempt from annual taxation of vehicle),
  - car parking for free,
  - subsidized electricity at charging stations.

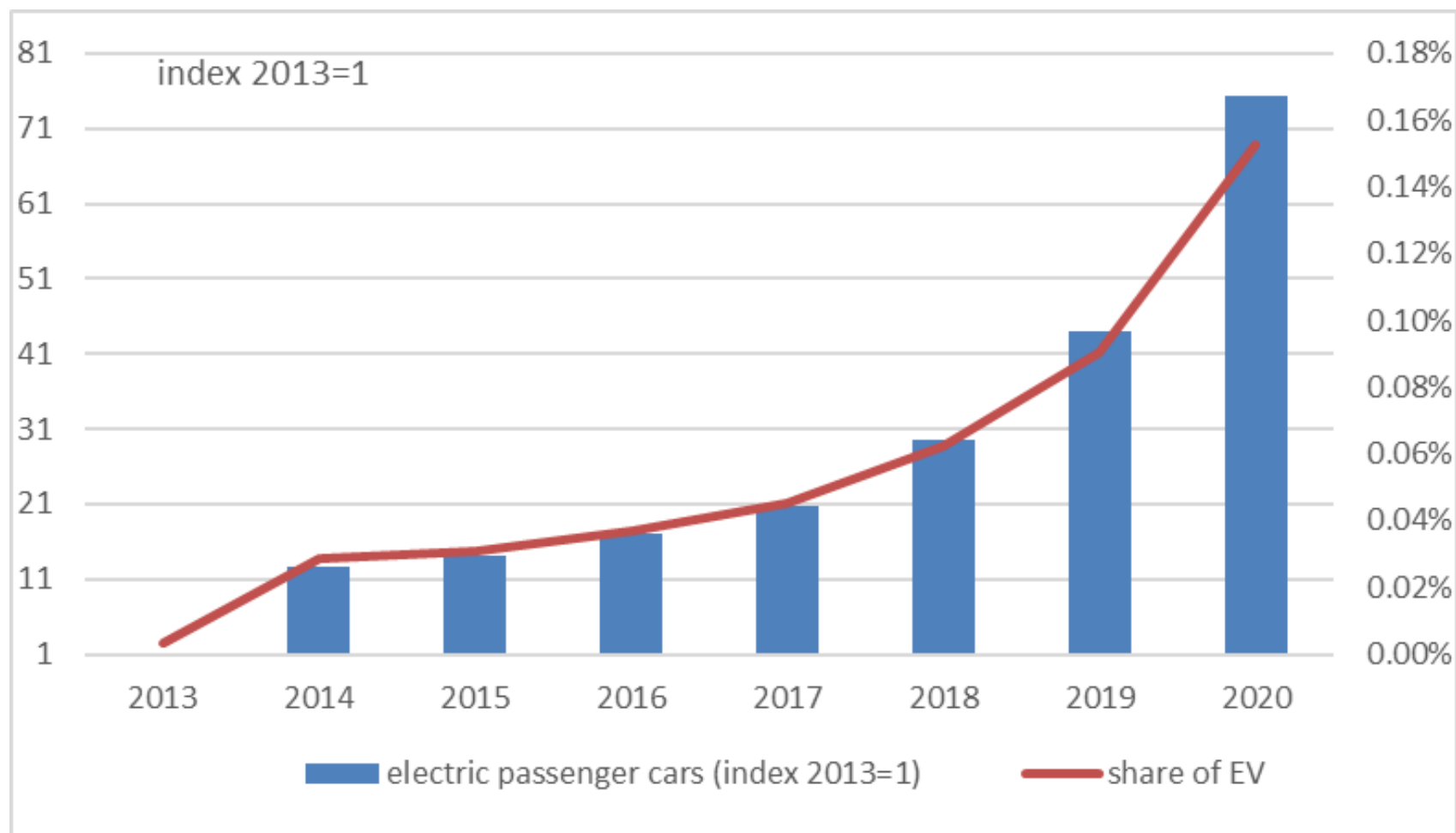
# Development of electromobility: Policies and market activities



## Support programs to enhance the development of electromobility

- Revenues obtained from the sale of GHG emissions allowances (National Climate Change Financial Instrument ) ~208 MEUR were directed on reduction of CO<sub>2</sub> (GHG) emissions by improving energy efficiency and use of RES.
- In 2014 the national CCFI programme for CO<sub>2</sub> emissions reduction in transport sector by supporting acquisition of new EV and installation of publicly available EV charging infrastructure had been implemented. Within the programme it was supported acquisition of 174 EV and installation of 11 charging stations.
- Development of country-wide EV charging infrastructure is supported by the ERDF within the framework of the national Operational Programme "Growth and Employment» (2016-2022). It is planned: number of installed EV charging points - 150 points (direct current fast charging stations with capacity at least 50 kW).

# Changes in the number of electric cars



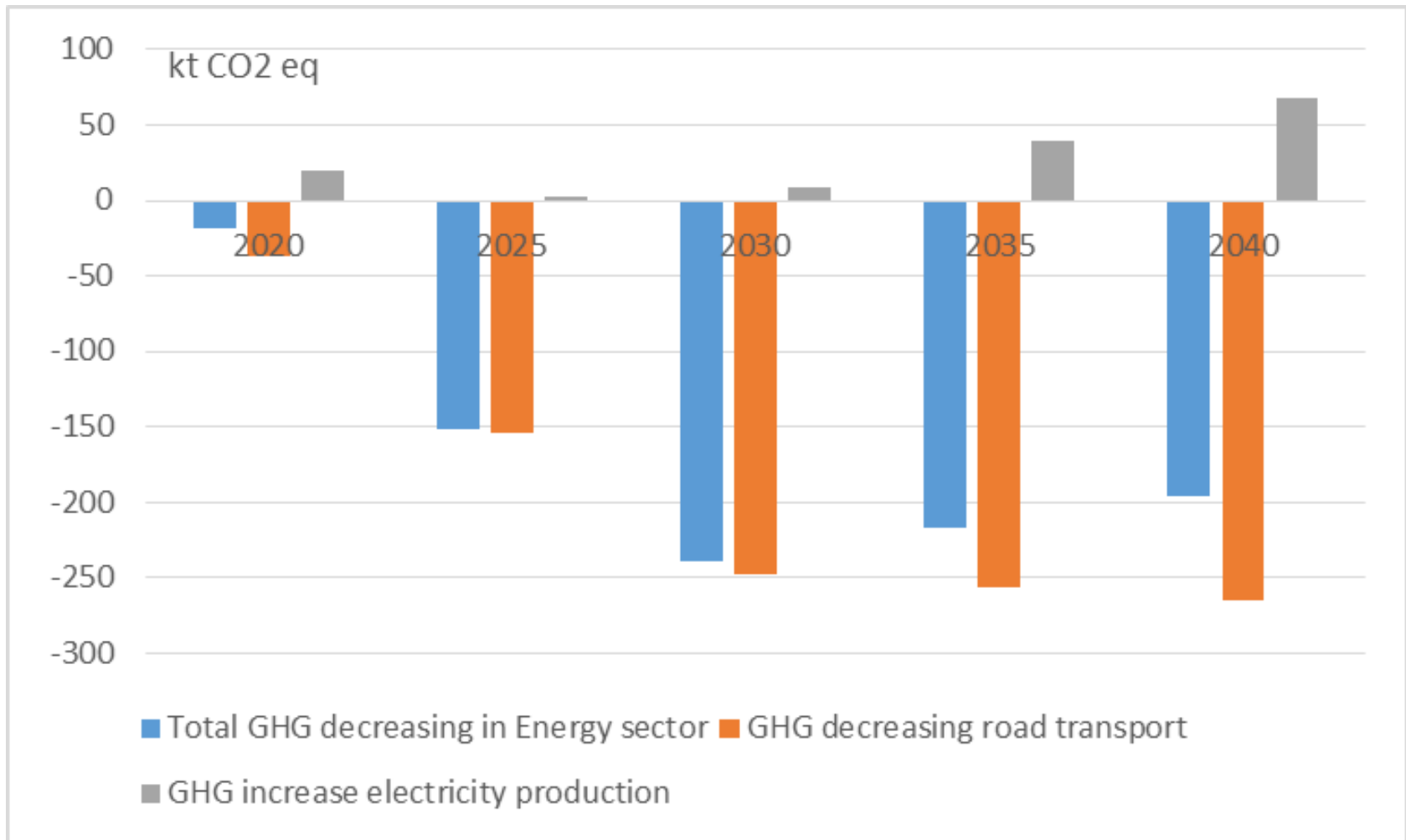
## Other policies and activities

- Other benefits include the possibility of travelling by public transport lane, free parking in capital parking areas and the exemption from the annual taxation.
- State JSC «Latvenergo» is planning to discover at least 84 EV charging points on the Elektrum network by the end of 2021. Thus, Elektrum will be the largest commercial electric car charging network in Latvia.
- In 2020 the Latvian company Fiqsy, which has been dealing with shared cargo buses and electric skatewheels, also offers shared electric vehicles. Overall, a hundred EVs are available on Fiqsy's service.
- A memorandum of cooperation in the field of electromobility will be signed for the first time in Latvia. Latvia's largest charging service providers – the Road Traffic Safety Directorate, state JSC «Latvenergo», as well as the largest transport sharing service providers – Fiqsy, Carguru and CityBee.

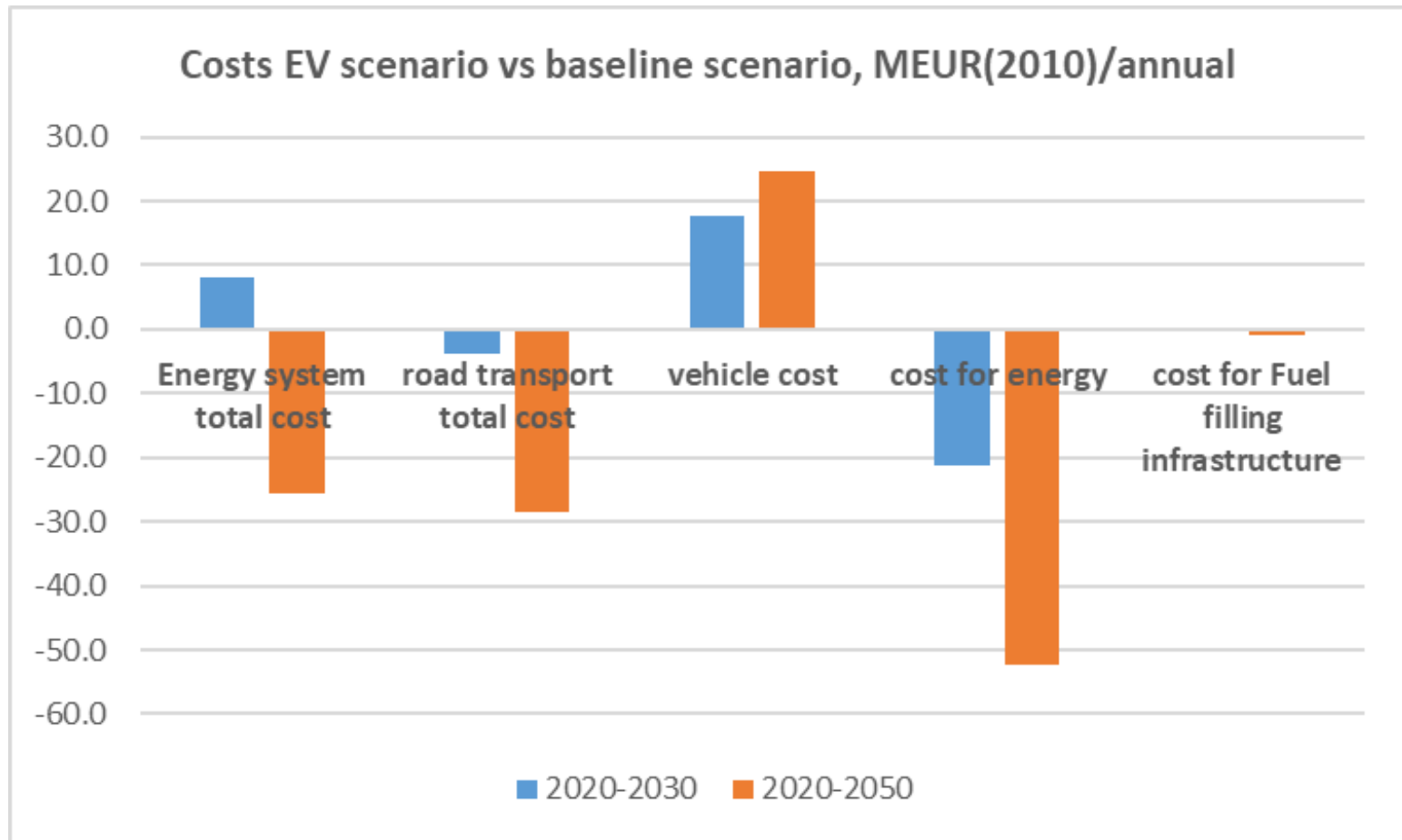
## Example: Electromobility development policy ex-ante impact assessment

- Demand driven bottom-up technology rich optimization model MARKAL-Latvia has been implemented;
- Model covers entire energy system of Latvian (energy balance with further final demand disaggregation);
- Assessment of PAMs impact - mainly to quantify GHG impact of policies (tax, CO<sub>2</sub> price) and packages of measures (RES measures, EE measures, other);
- Scenario approach: establishes baselines and the implications of alternative futures (EV scenario);
- It gives coupling of sectors (energy and transport)

# Ex-ante assessment: Electric vehicle penetration – impact to GHG emissions



# Ex-ante assessment: Electric vehicle penetration – impact to costs



**Costs for energy – costs for fuels and energy in road transport; costs for fuel filling infrastructure – investments, O&M costs for fuel filling, including EV charging infrastructure.**



Thank you for attention!

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