Incentives for CO_2 emissions reductions in motor vehicle taxes

Presentation at
an ITF roundtable on Stimulating low-carbon Vehicle Technologies

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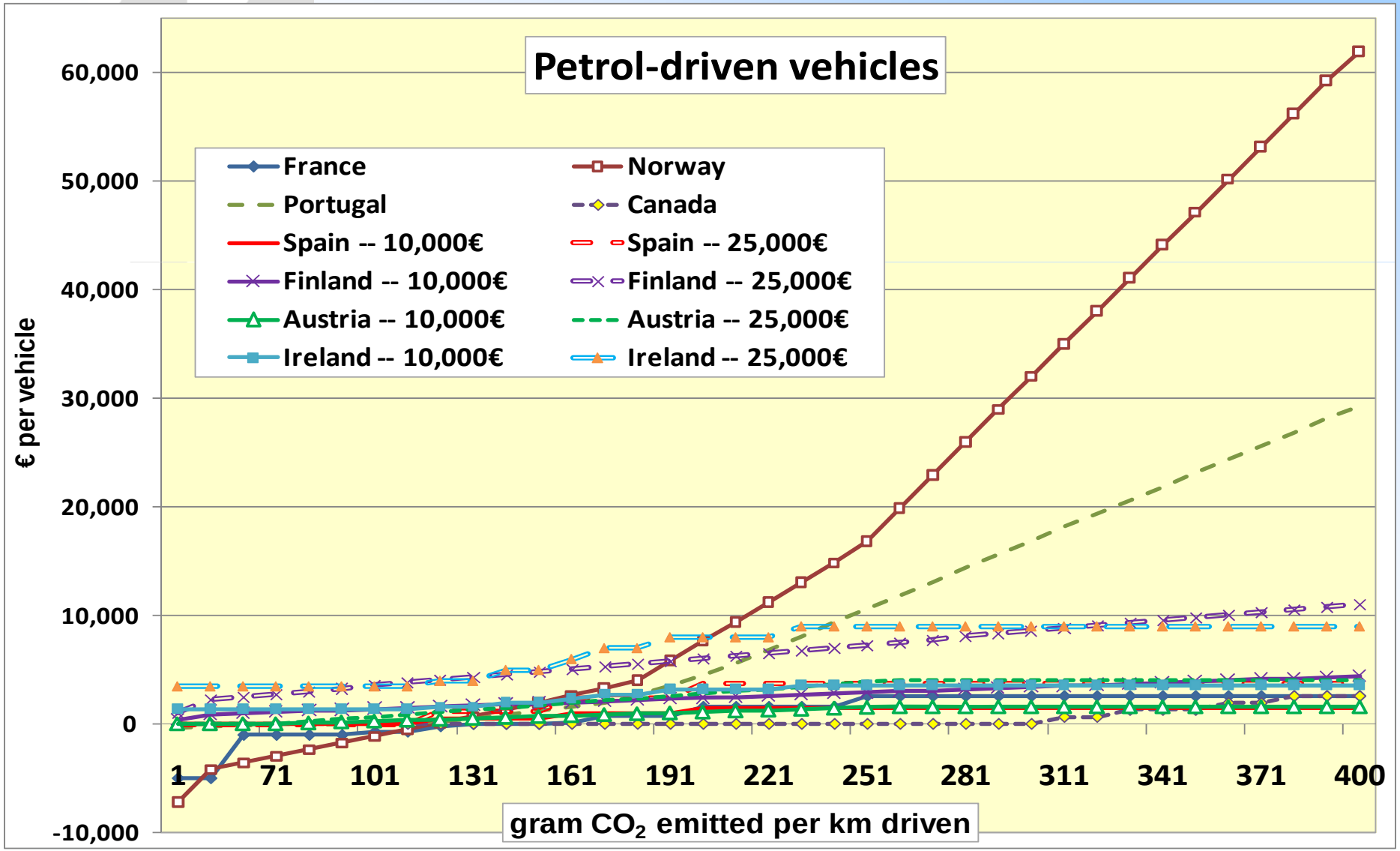
Background

- A paper Dr. Rana Roy, London, prepared for OECD discusses the theoretical basis for CO_2-related tax rate differentiation in motor vehicle taxes is available at www.oecd.org/env/taxes and.
- This presentation describes the current use of such tax rate differentiation, drawing on information in the OECD database on instruments used for environmental policy: www.oecd.org/env/policies/database.
- (Additional) CO_2-related tax rate differentiation in motor vehicle taxes in Austria, Denmark and the Netherlands is not included in the present presentation.
- The tax rates shown were valid as of 01.01.2009.

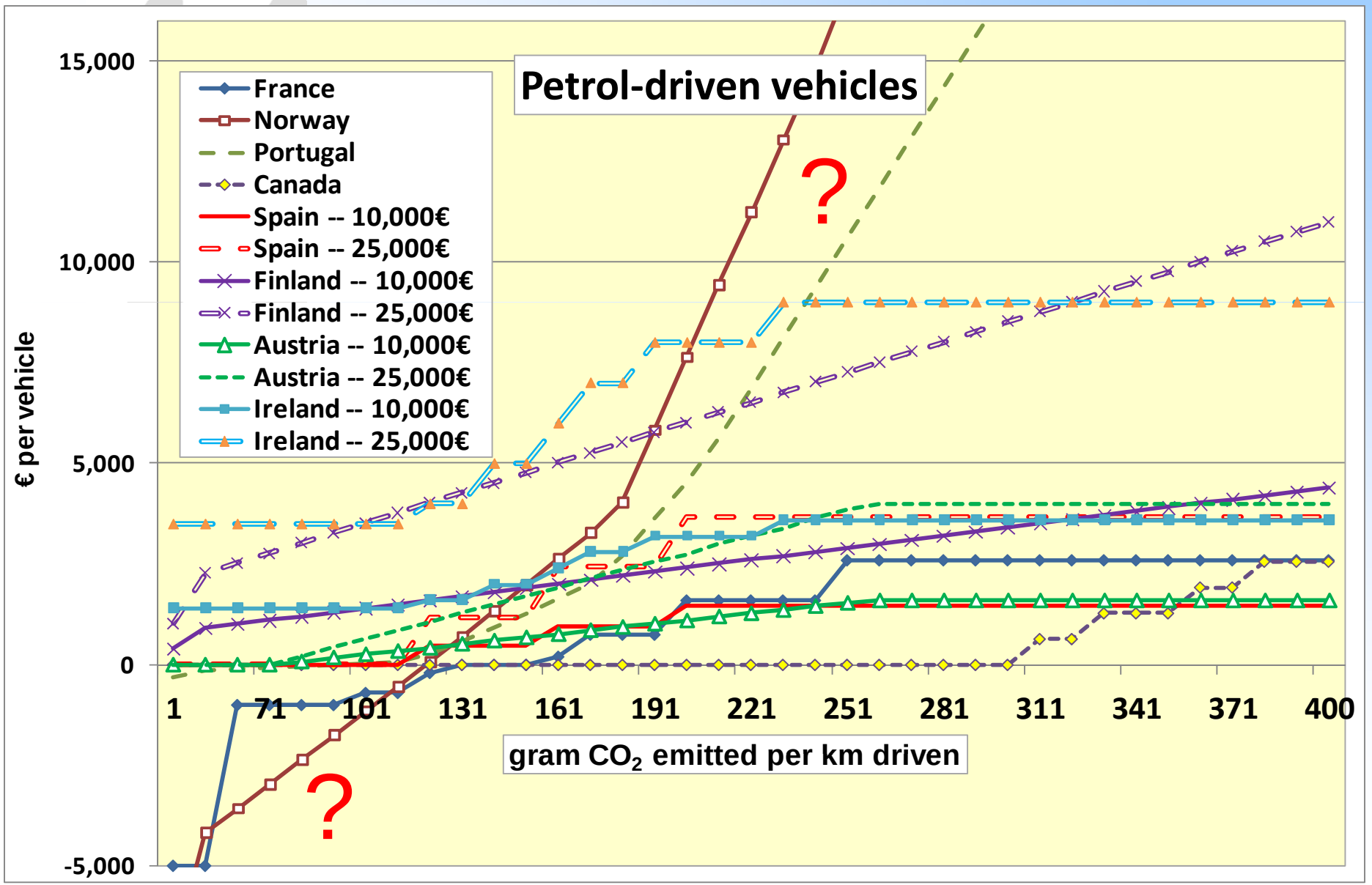
Types of differentiation used

- One-off (purchase) taxes vs. recurrent (use) taxes;
- CO_2-differentiation vs. energy-efficiency differentiation;
- Petrol vs. diesel (and possibly other engine categories);
- Tax rates varying with motor vehicle prices.

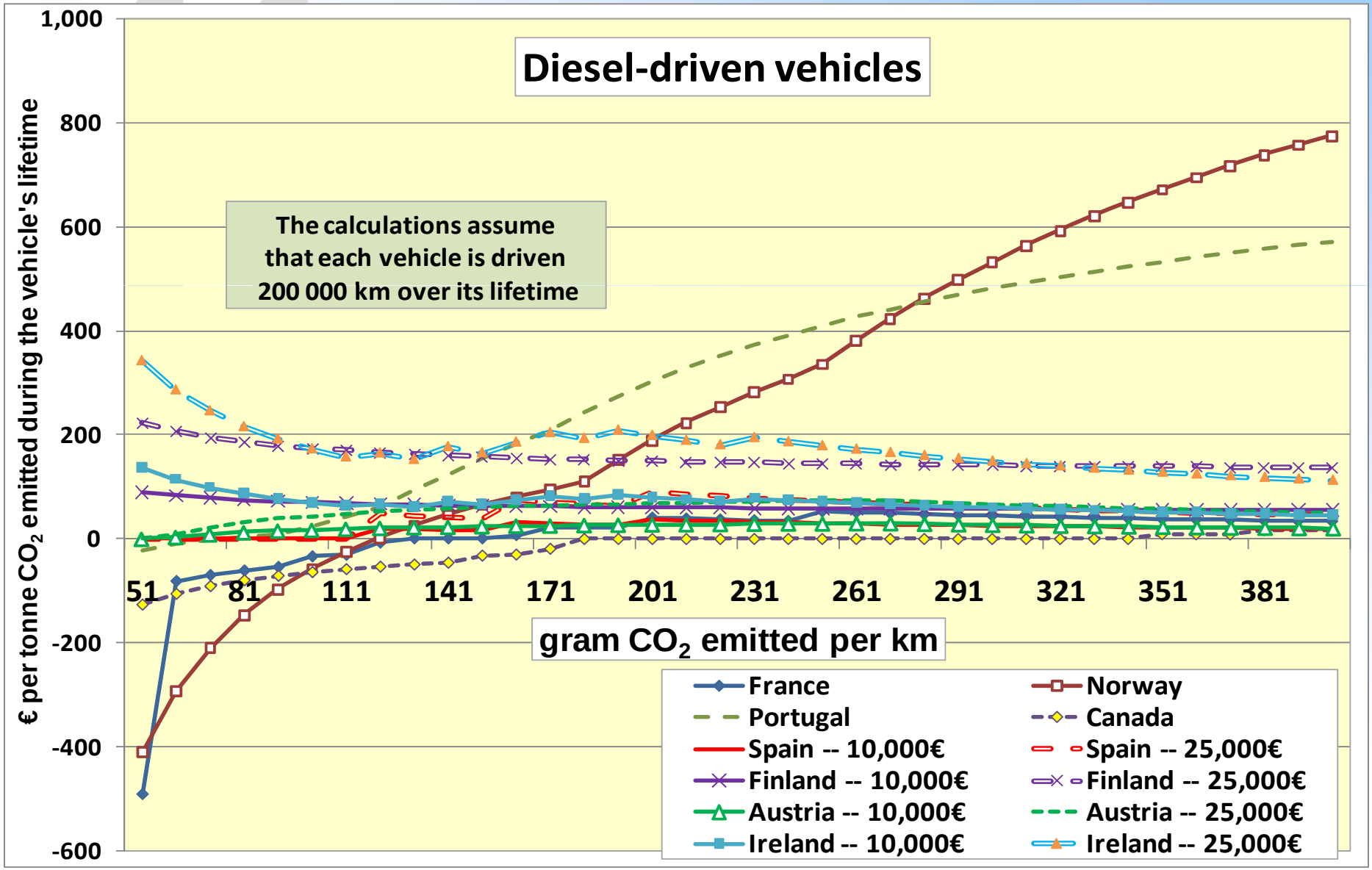
One-off – tax per vehicle, petrol-driven



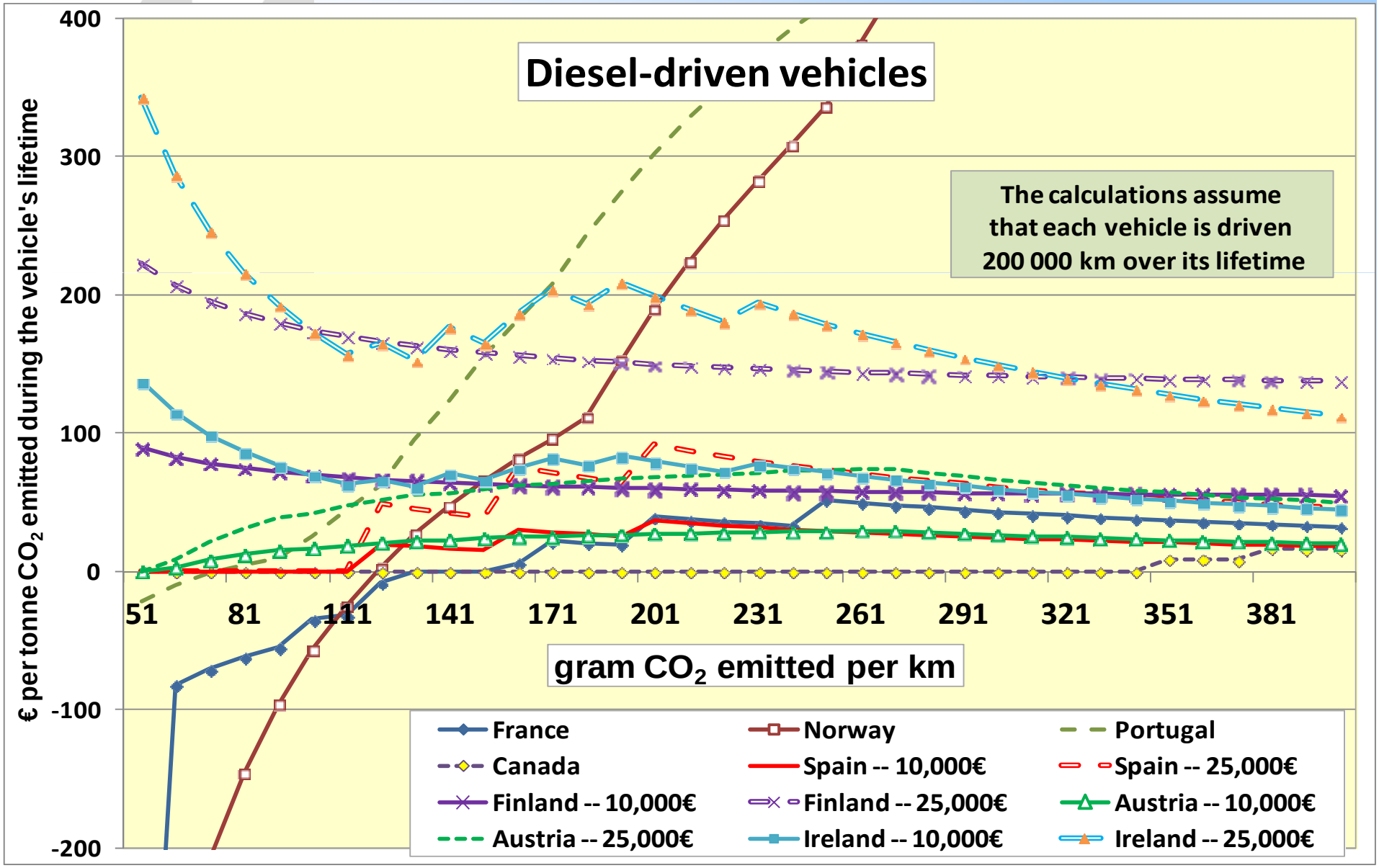
One-off – tax per vehicle, petrol-driven II



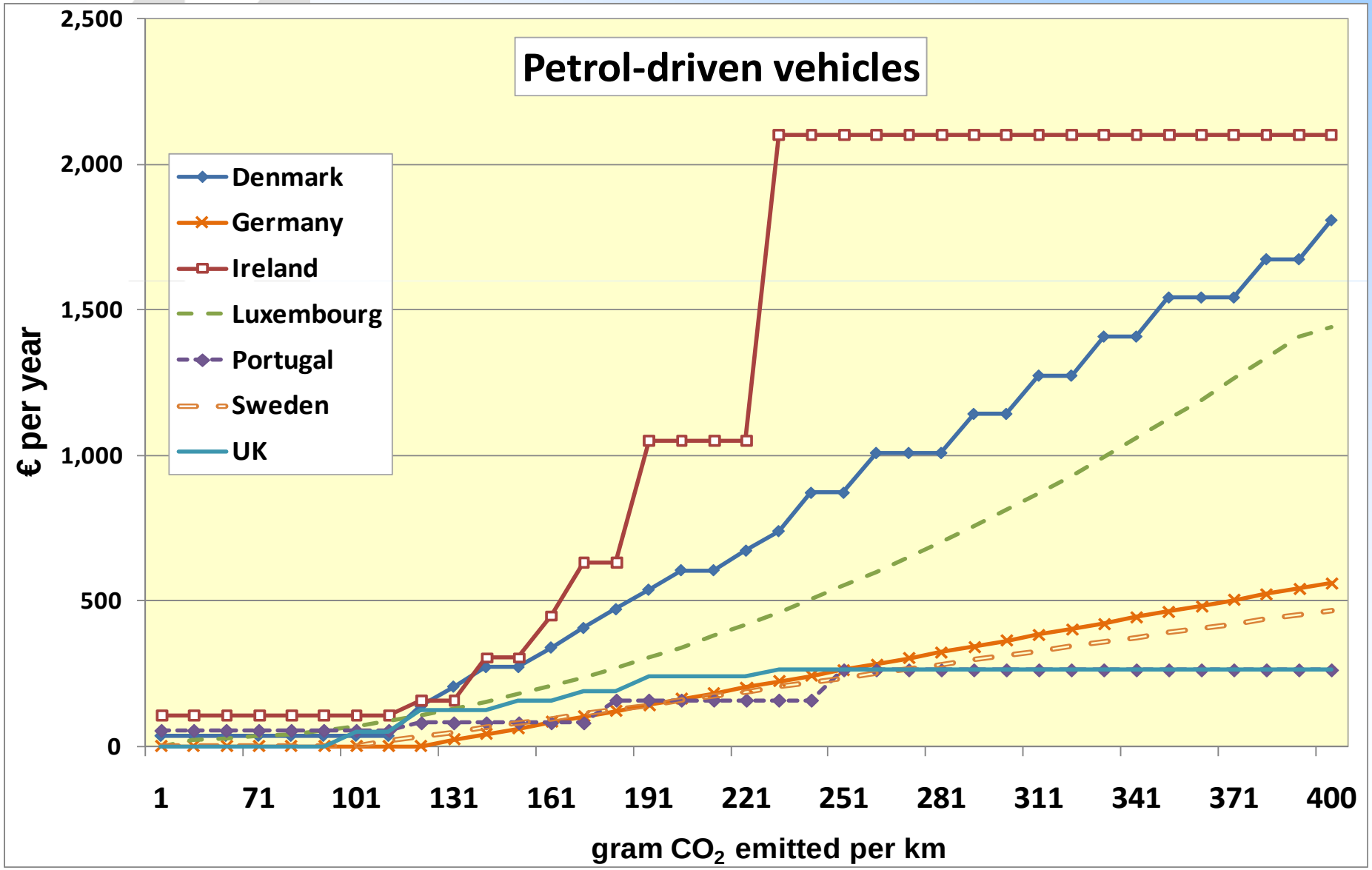
One-off – tax per tonne CO_2, diesel-driven



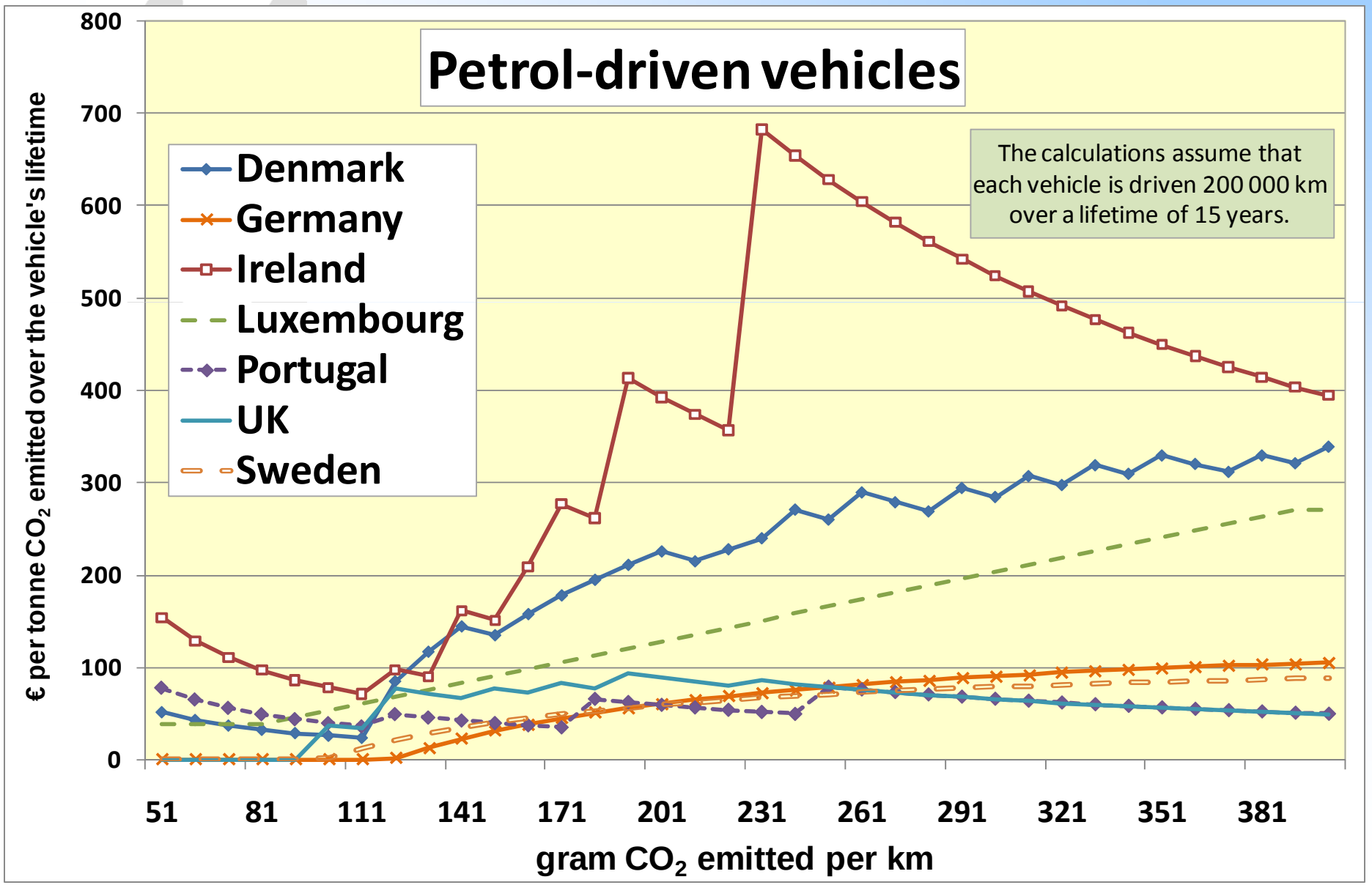
One-off – tax per tonne CO_2, diesel-driven II



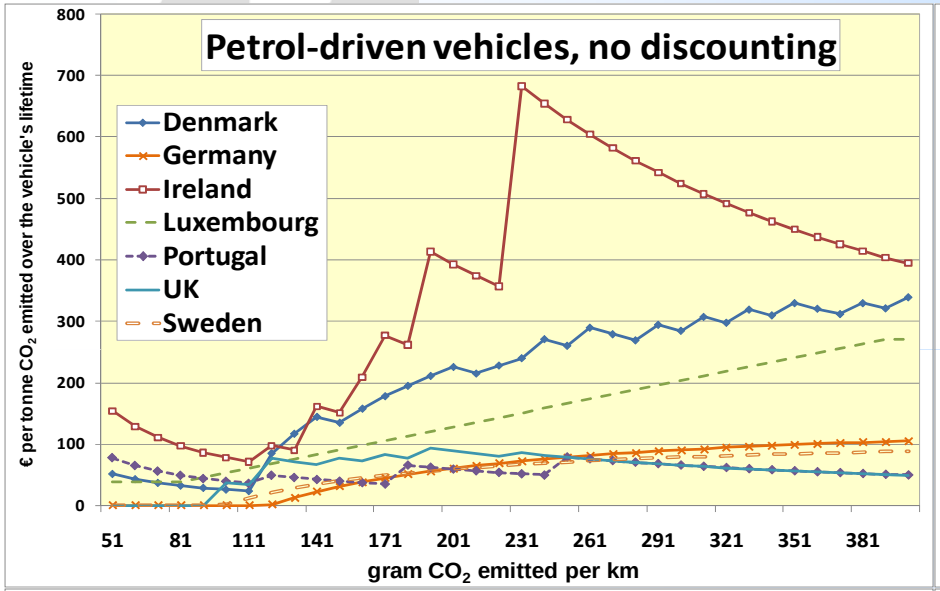
Recurrent – tax per year, petrol-driven

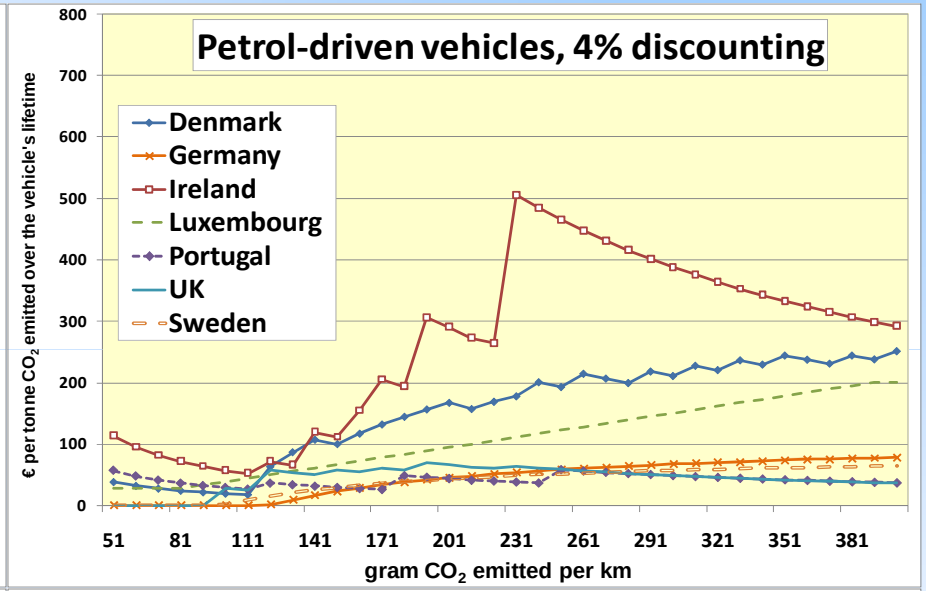


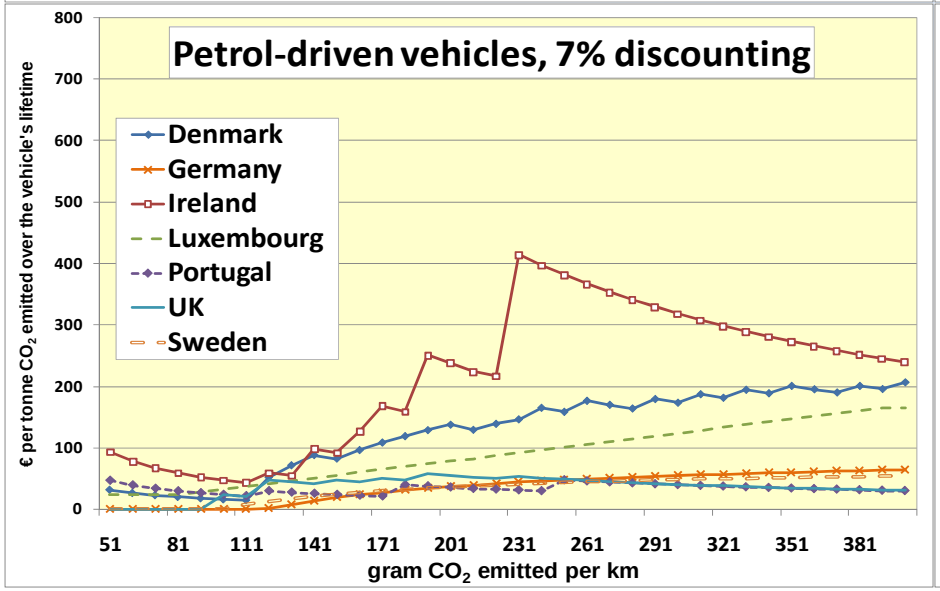
Recurrent – tax per tonne CO_2, petrol-driven

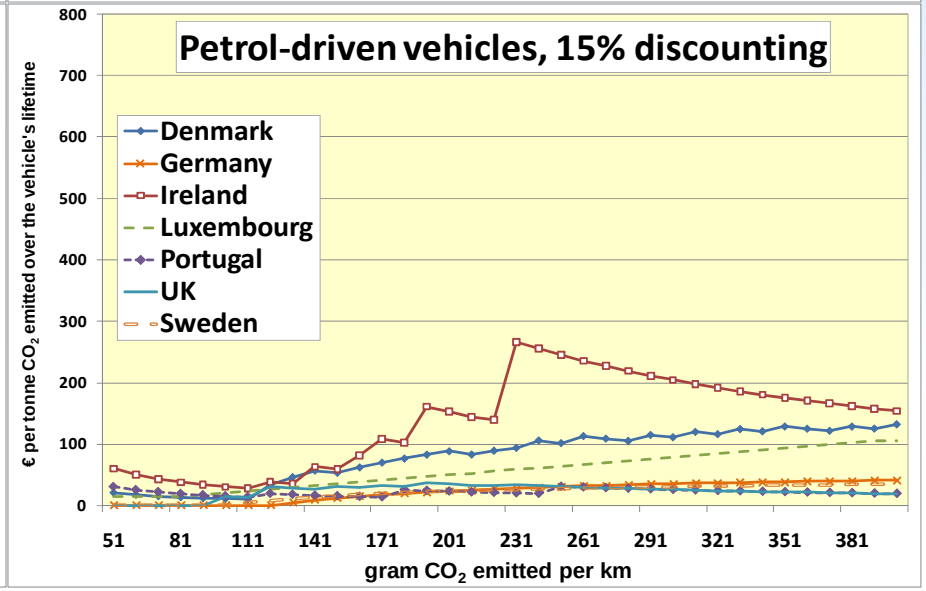


Recurrent – tax per tonne CO_2, discounting

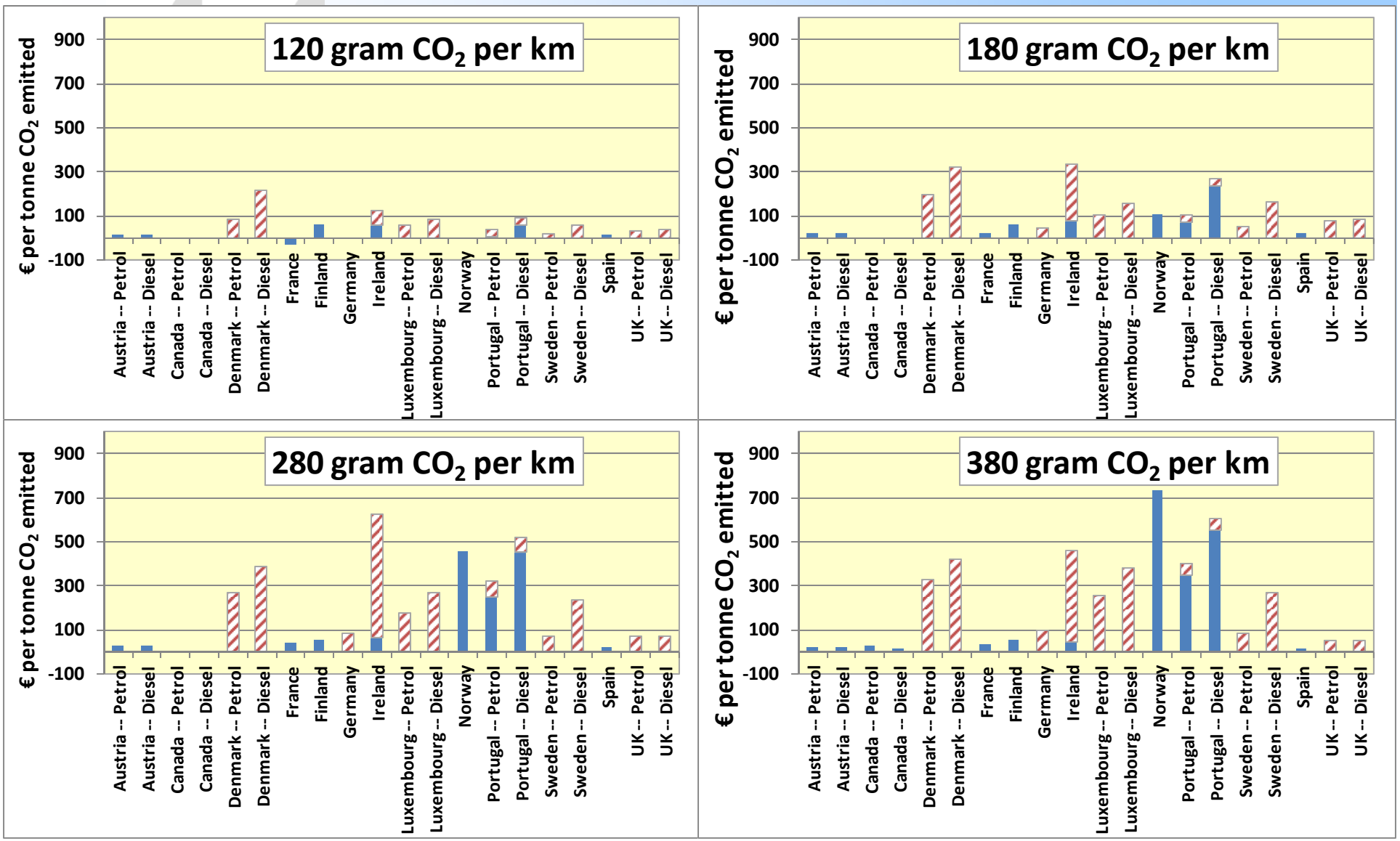








Total taxes – per tonne CO_2



Conclusions

- The tax rates applied per tonne CO_2 emitted over a vehicle's lifetime varies significantly between countries – with Norway, Portugal, Ireland and Denmark having very high tax rates for high-emission vehicles.
- It is difficult to see strong reasons why the tax rate *per tonne lifetime CO_2 emissions* should increase with increasing emissions per km driven.
- Given the much lower marginal abatement costs for other CO_2 emission mitigation options, one can also question why *so* strong incentives are provided to abate CO_2 emissions from some motor vehicles.
- Difficult to understand why a tonne CO_2 emitted over a vehicle's lifetime should be higher for diesel-driven than for petrol-driven vehicles.
- Also, from an environmental point of view, the arguments for applying a higher tax rate per tonne CO_2 emitted from an expensive vehicle than from a cheaper one seem weak.