



# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



# EFFECTIVENESS OF FINANCIAL INCENTIVES FOR STIMULATING BEV UPTAKE

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UNIVERSITY  
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## INTRODUCTION – Who are we?

We believe in moving from:

- Conventional to smart
- Combustion to electric
- Ownership to mobility as a service

Smart e-mobility & logistics

- International business development
- Support industry, retail/distribution & public authorities
- (EU-) project & consortia development (PPP)



Themes:





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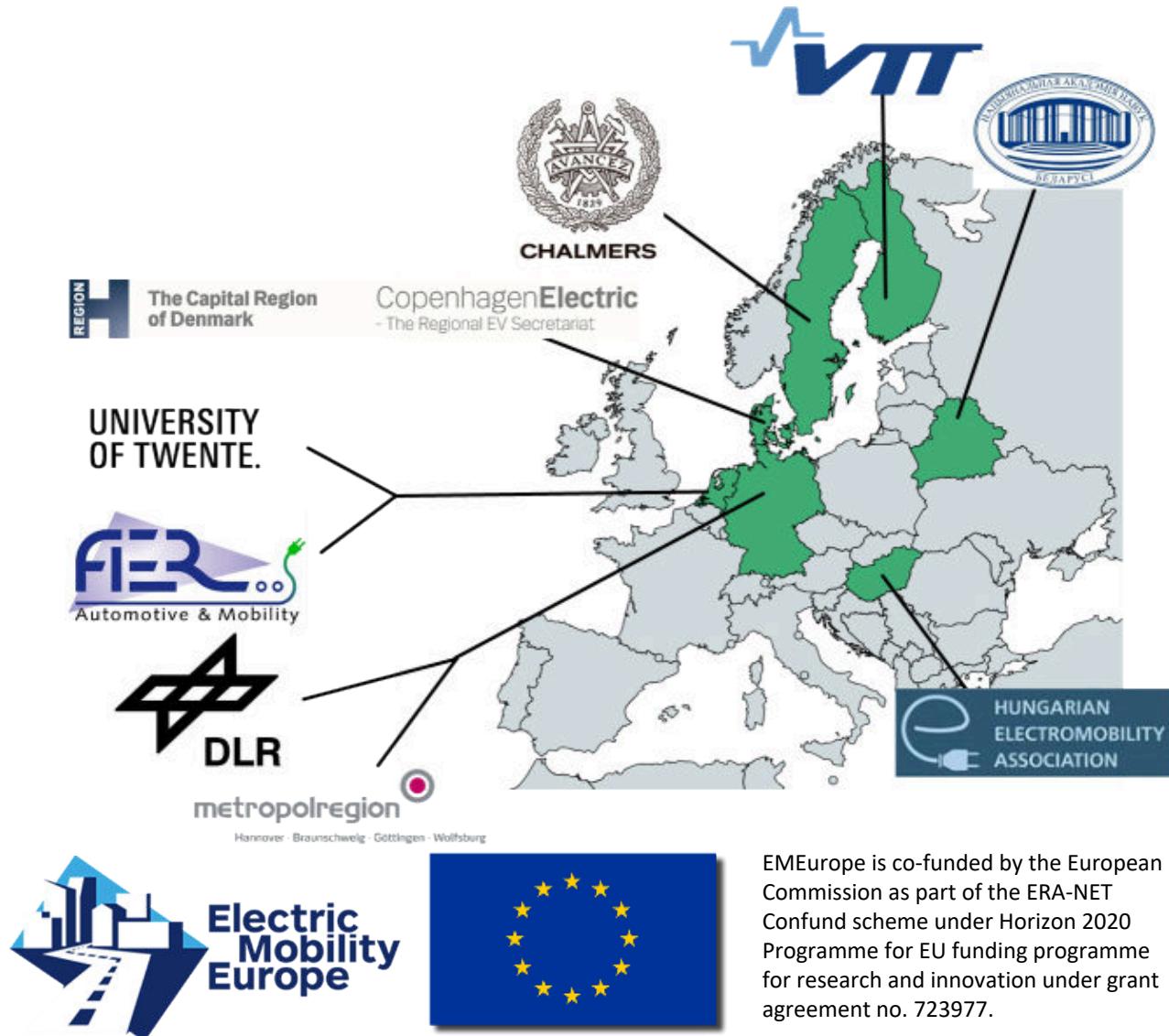


## proEME – Introduction

Overall goal is to support the uptake of EV's by building knowledge and tools to support policy makers

By:

- Bringing incentives in different countries in to perspective
- Compare effectiveness / vehicle uptake



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## proEME – Introduction

I-CVUE >>

ENEVATE

fRevue

PROMOTING  
**proEME**  
ELECTRIC MOBILITY EUROPE



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## proEME – Introduction

proEME will advance knowledge, create critical mass in selected applications/regions and provide blueprints on accelerate EV uptake



4 fields of applications

New and 2nd  
hand Evs

New Mobility

E-Busses

E-Logistics.

4 lines of Actions

Data and  
Policy Analysis

Support (tools)

Working with  
Markets

Working with  
Governments



# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



## proEME – Introduction



FEDERATION  
INTERNATIONALE  
DE L'AUTOMOBILE

*The Royal Dutch Touring Club ANWB*



Federation of Danish Motorists



Automobile and Touring  
Club of Finland (ATCF)



Dutch Organisation for Electric Transport



FRAMO



LeasePlan



BELKOMMUNMASH

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NATUUR  
& MILIEU

Leaseurope

The Voice of Leasing and Automotive Rental in Europe



Ministry of Economic Affairs



Gemeente Rotterdam

STUTTGART



PBL Netherlands Environmental  
Assessment Agency



. Sabancı .  
Universitesi

JOANNEUM  
RESEARCH

LIFE



NATIONAL ACADEMY OF SCIENCES OF BELARUS

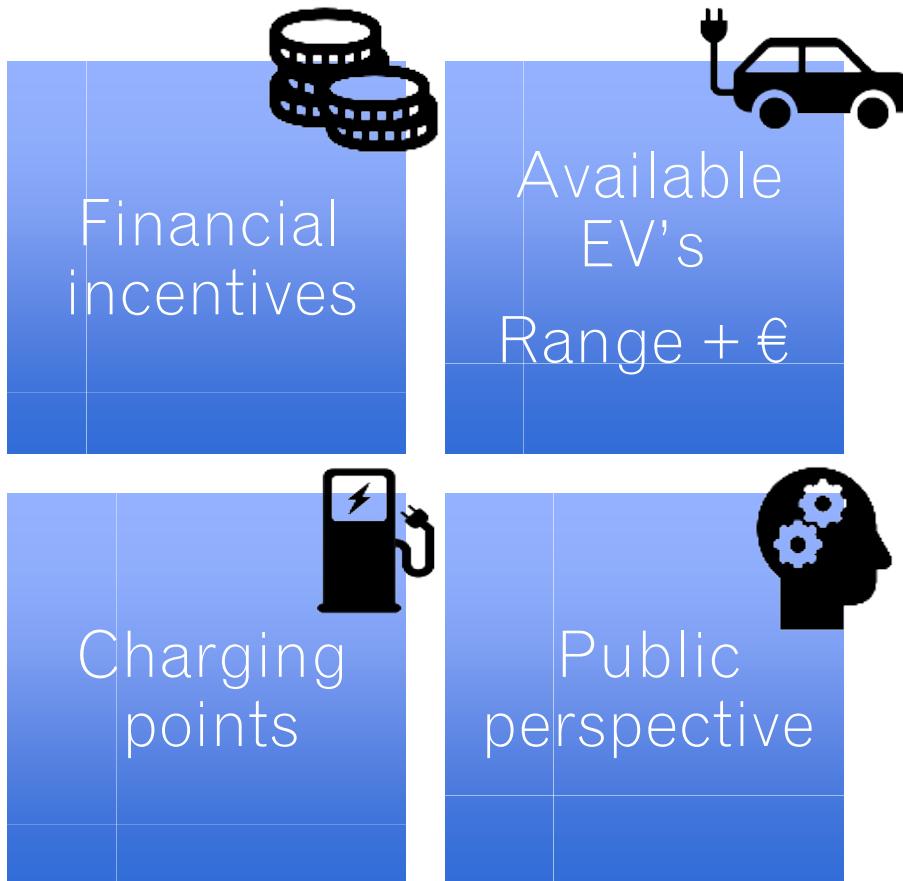
JOINT STOCK COMPANY  
"INSTRUMENT MAKING PLANT  
OPTRON"



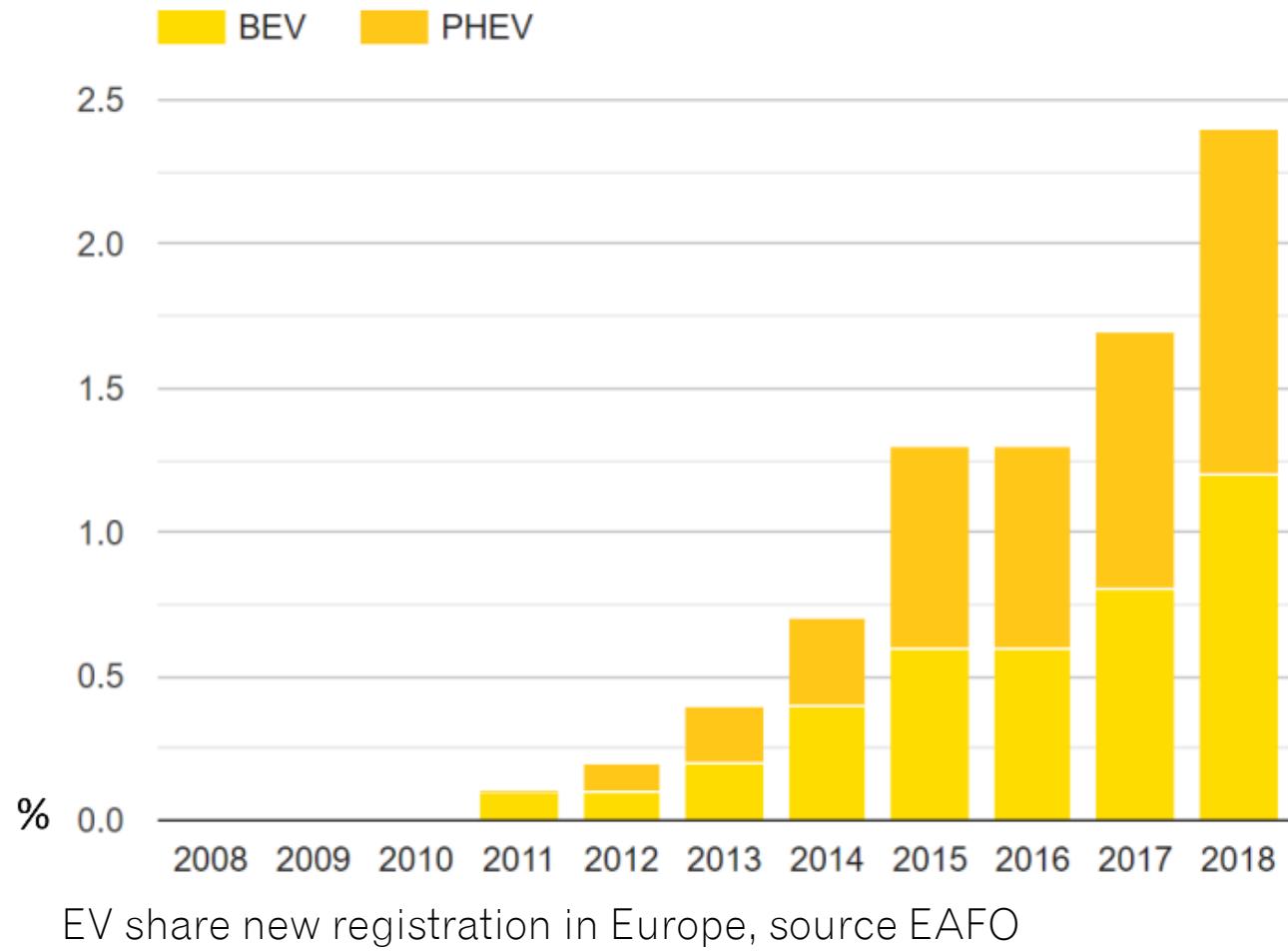
# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



## proEME – Overview



### EFFECTIVENESS OF FINANCIAL INCENTIVES FOR STIMULATING BEV UPTAKE

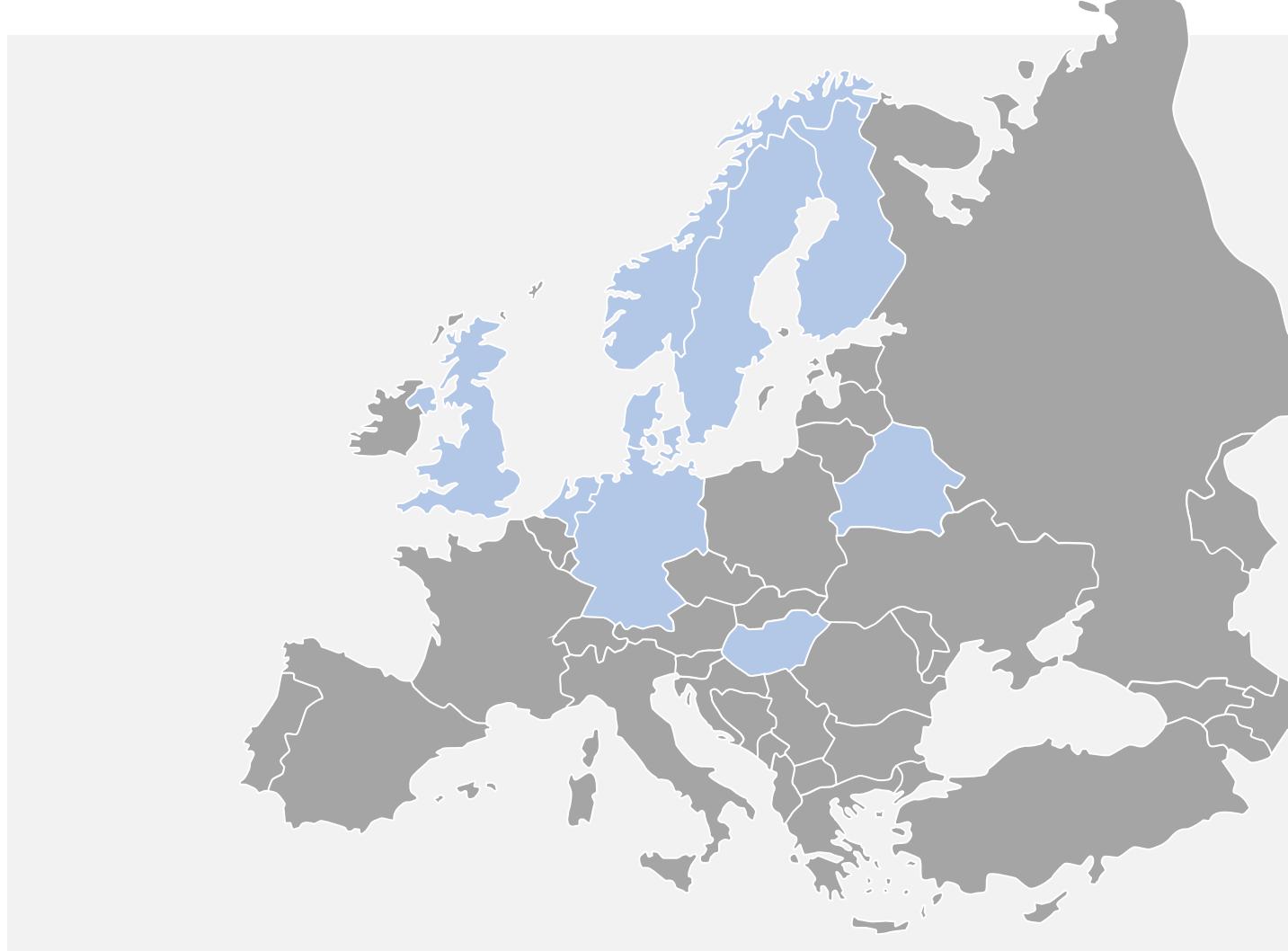




# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



proEME





# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



## proEME



Norway as example

### Purchase Grants

No purchase grant

### Registration Tax

BEVs have been exempted from registration tax since 1990. The exemption from VAT and registration taxes is only granted to BEVs. In January 2017, the incentives for PHEVs were increased. In particular, the deduction on the total weight to be used for the determination of the taxation rate increased from 15% in 2015 to 26% in 2017. For large PHEVs this change leads to registration tax cuts of NOK 16 000- 80 000 (€ 1 700- 8.400) compared with similar ICE cars.

### Company profit tax

No relevant incentives

### Ownership / circulation tax

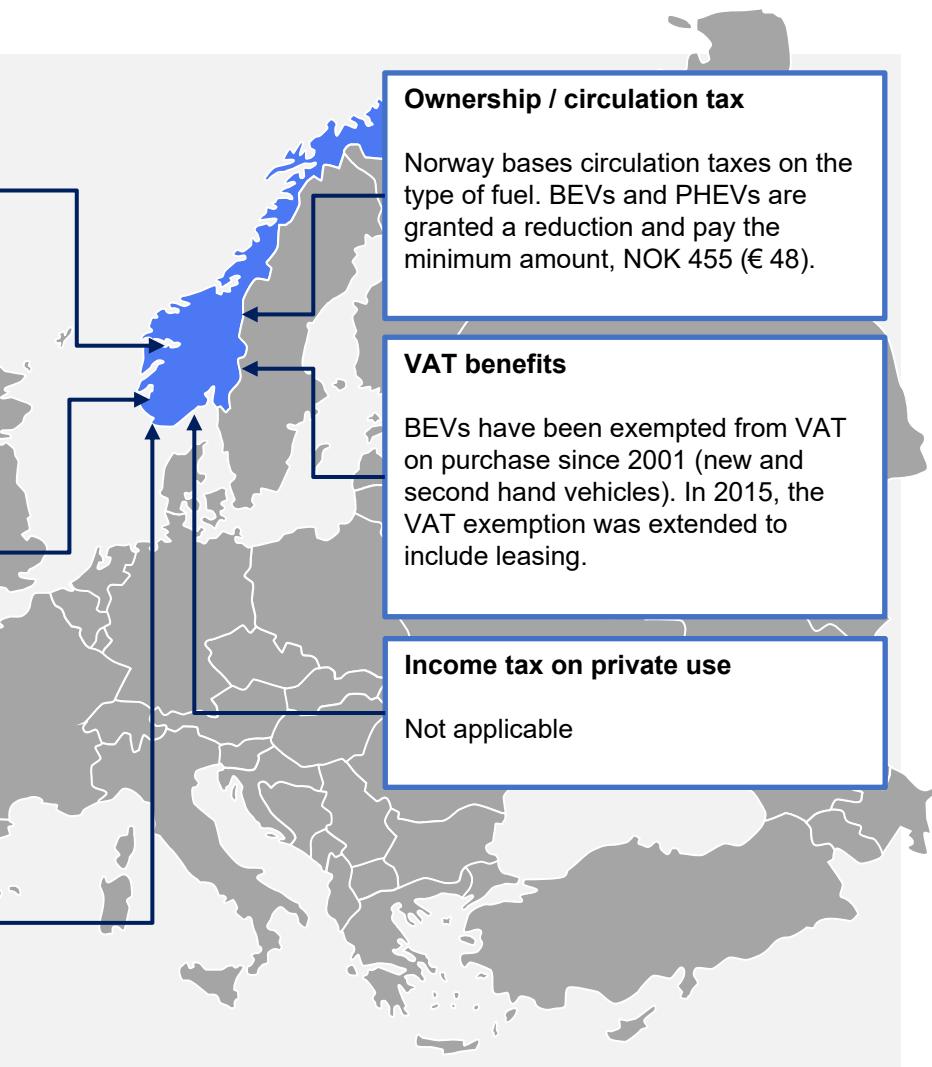
Norway bases circulation taxes on the type of fuel. BEVs and PHEVs are granted a reduction and pay the minimum amount, NOK 455 (€ 48).

### VAT benefits

BEVs have been exempted from VAT on purchase since 2001 (new and second hand vehicles). In 2015, the VAT exemption was extended to include leasing.

### Income tax on private use

Not applicable





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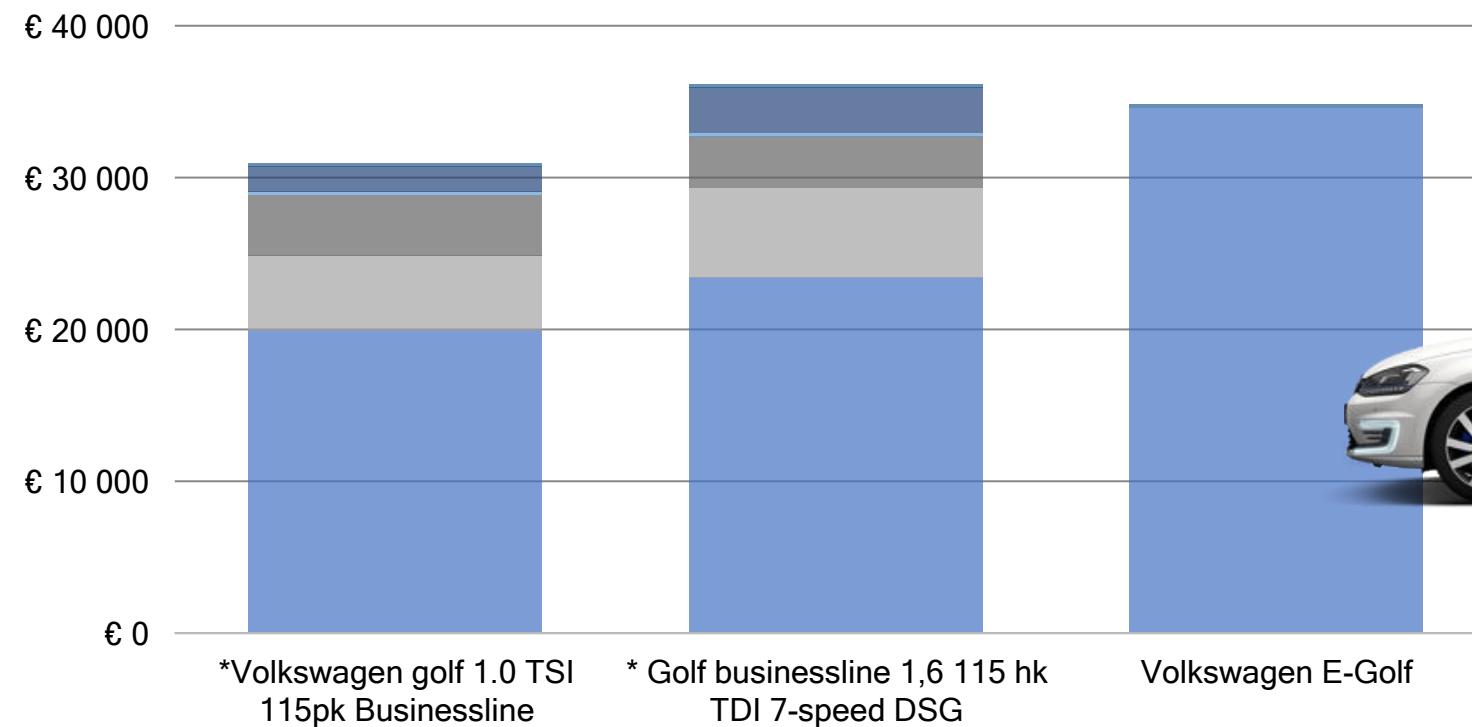


## proEME – Purchase price - private



Norway as example

VW Golf's



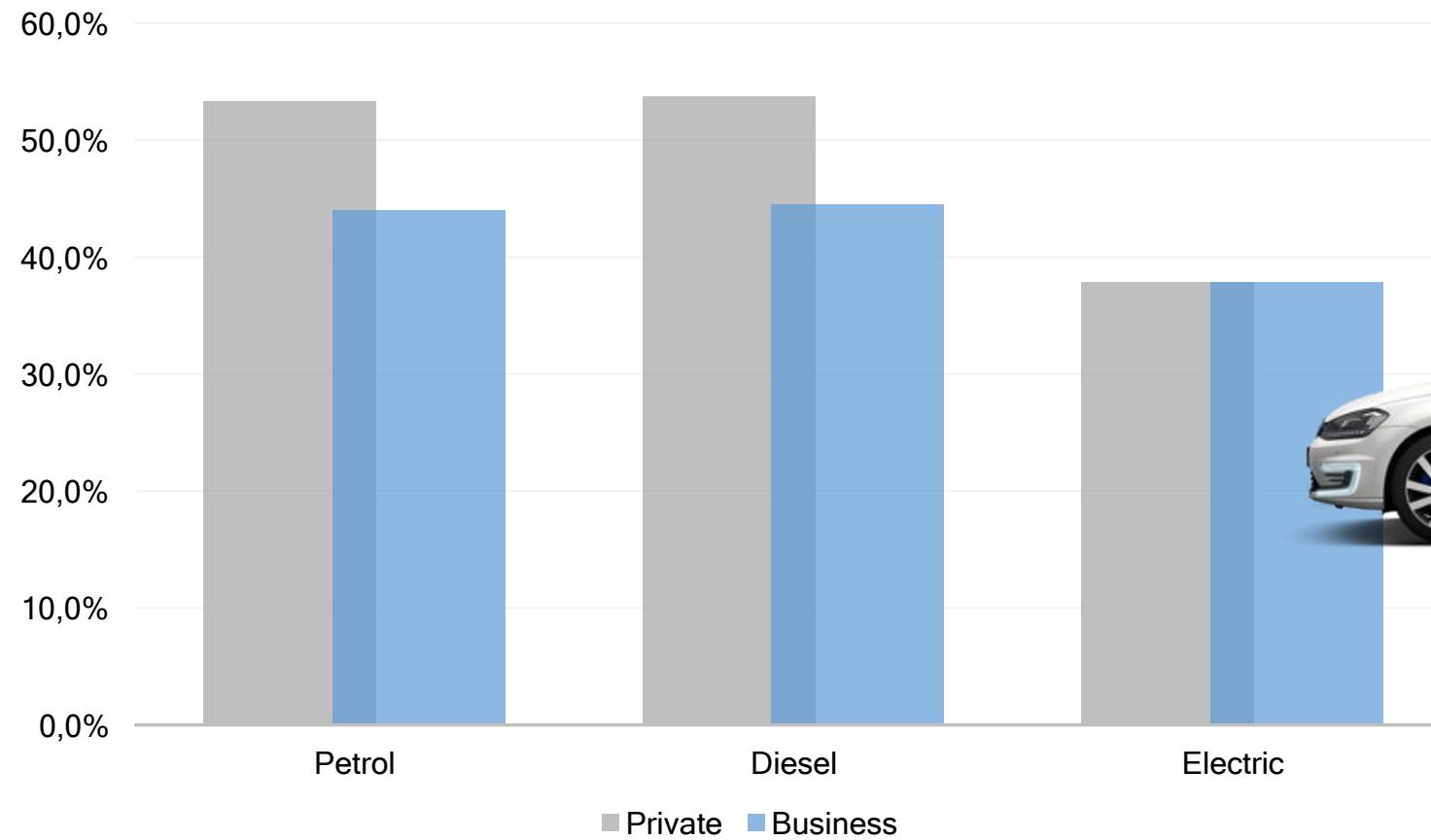
■ Nett (excl VAT and excl taxes) ■ VAT ■ CO2 tax ■ NO2 tax ■ Tare weight tax ■ Scrap deposit tax



# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



## proEME – Depreciation



Norway as example

VW Golf's

15.000 per year

4 year ownership

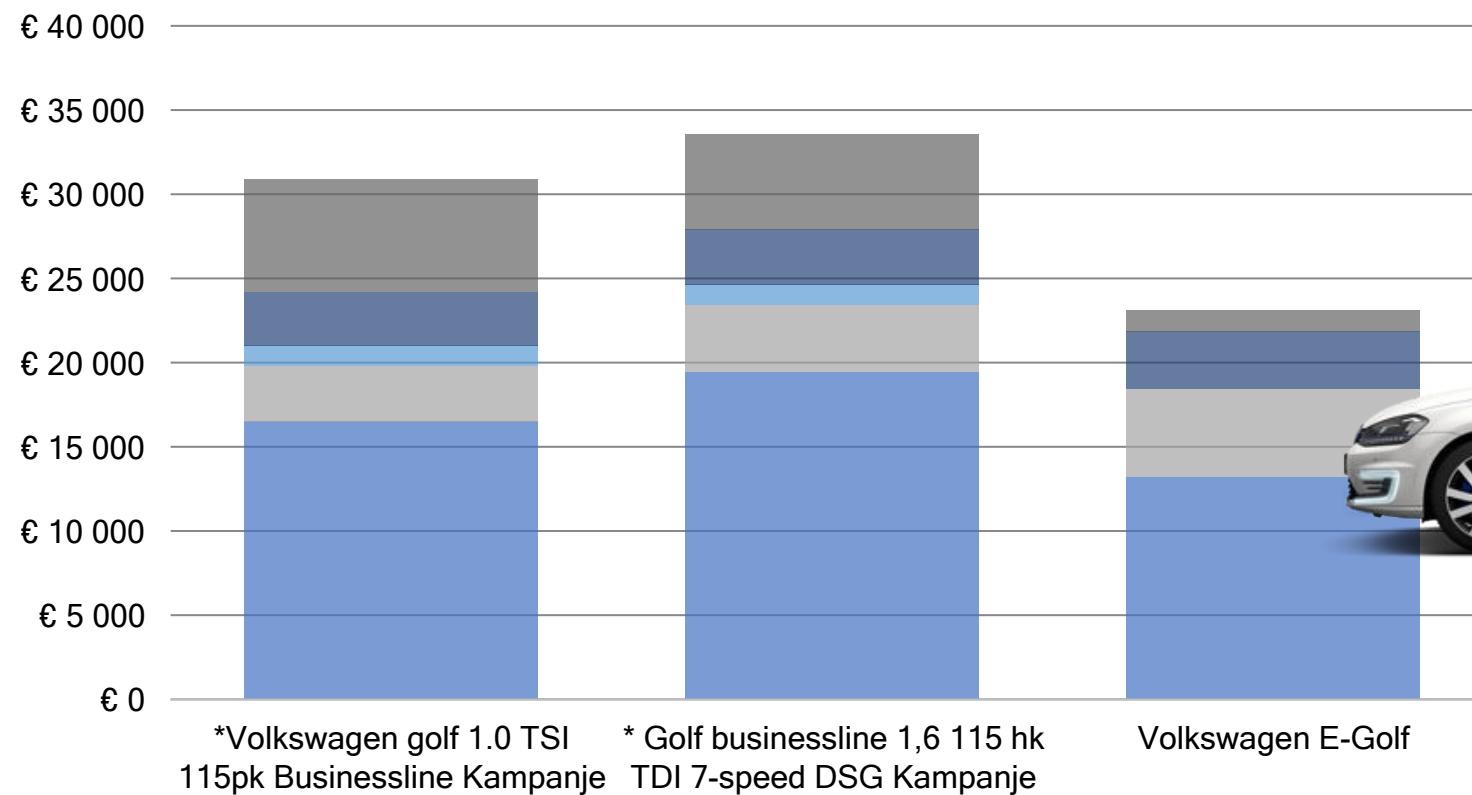




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## proEME – TCO Private



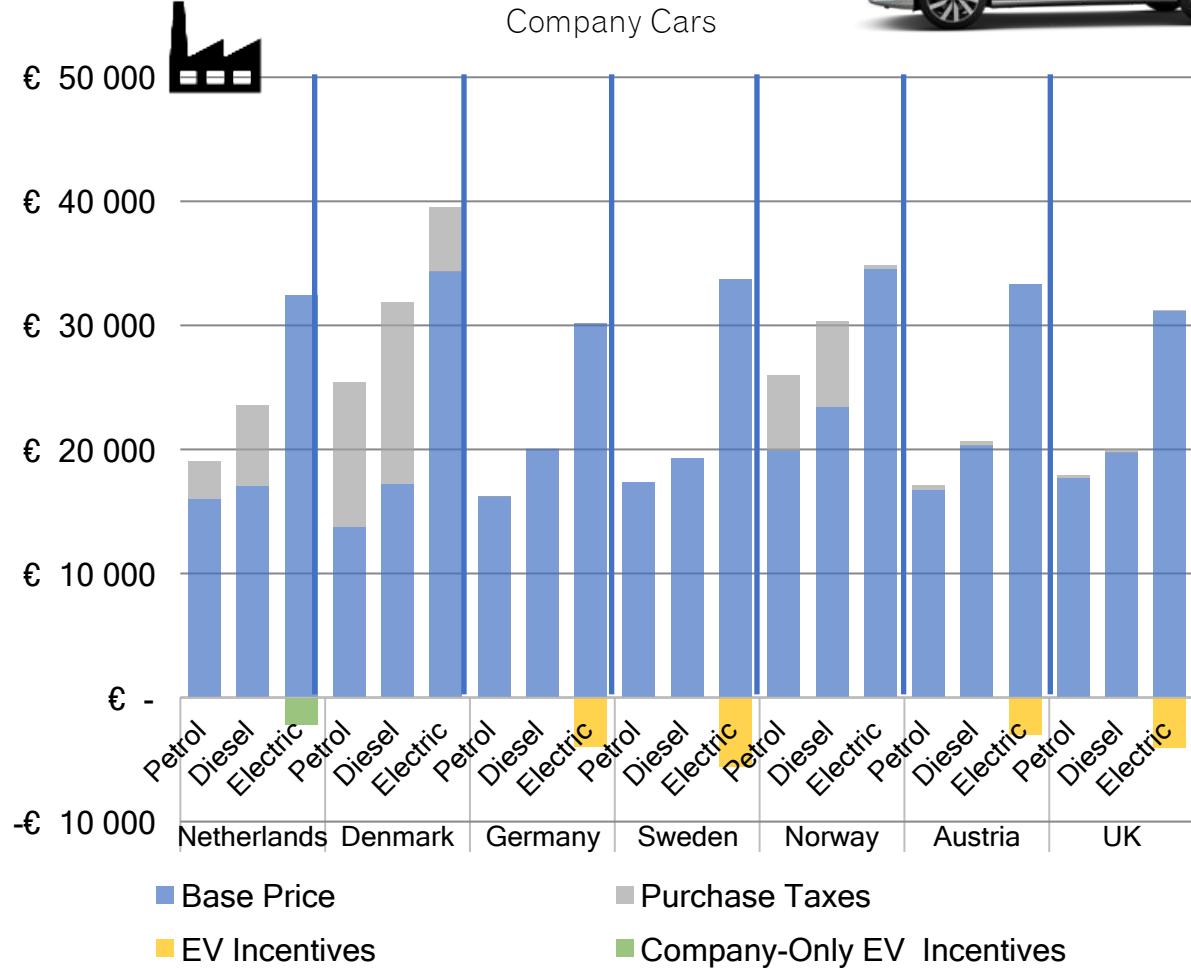
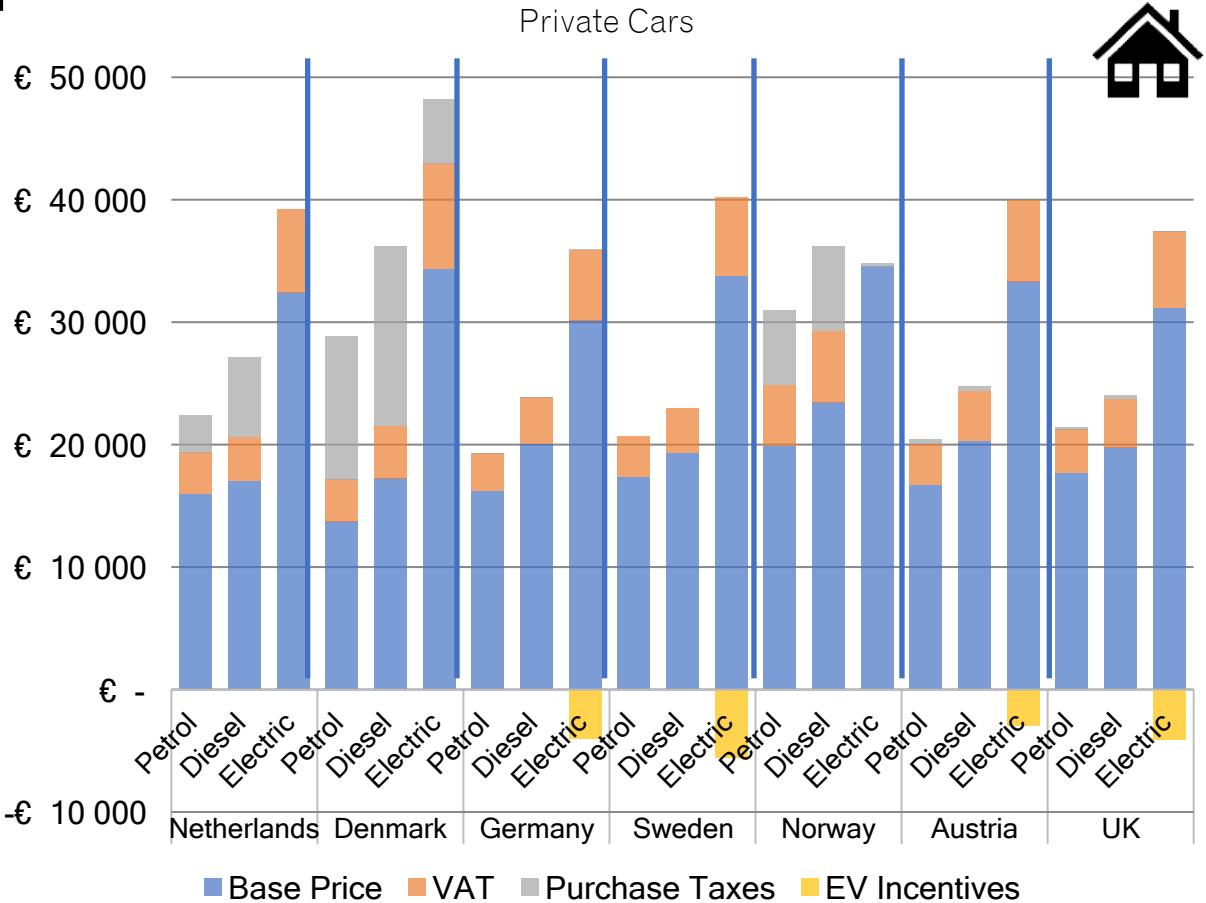
■ Total depreciation ■ Insurance ■ Motor insurance tax ■ Maintenance ■ Total energy costs



# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



## proEME – Purchase costs

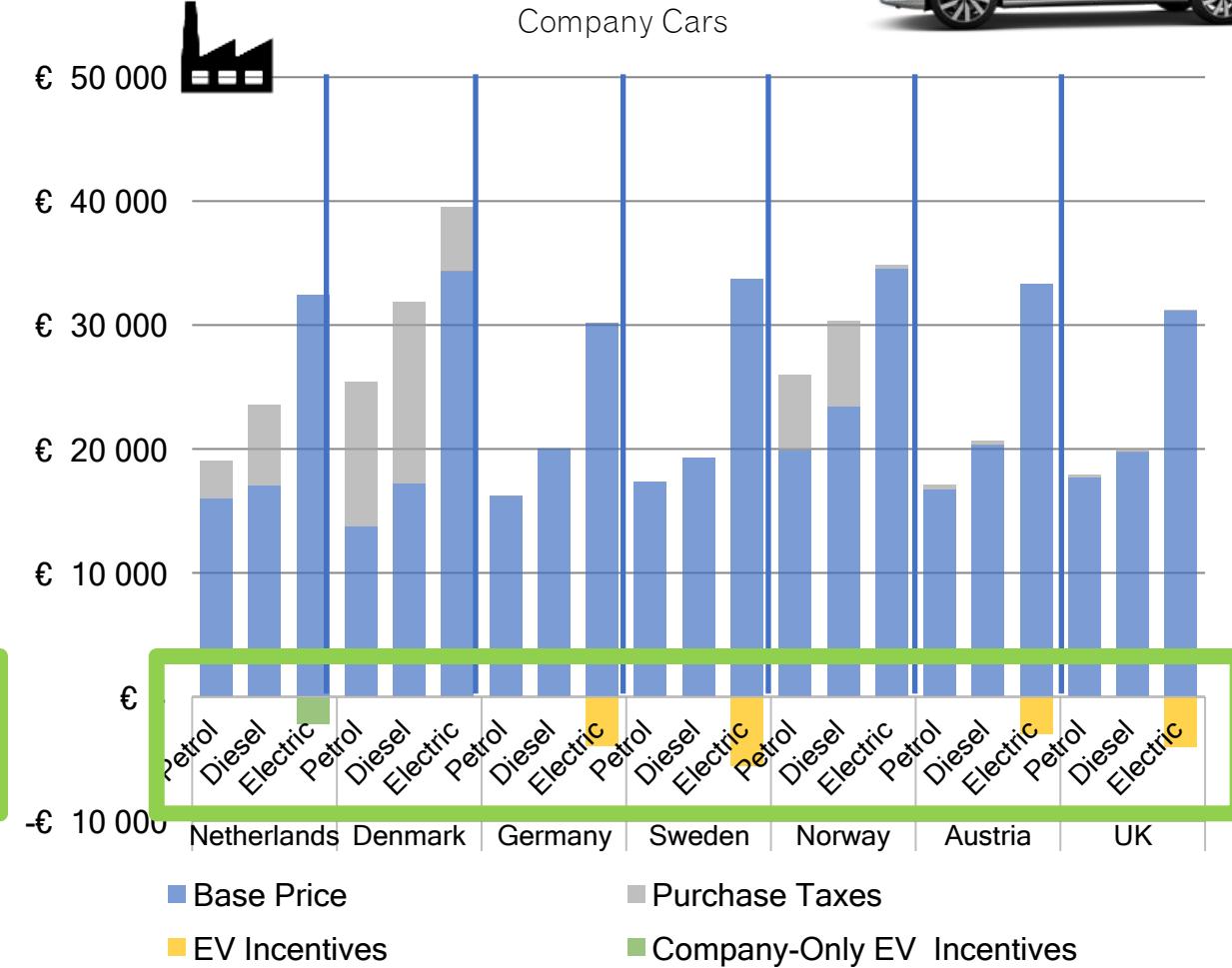
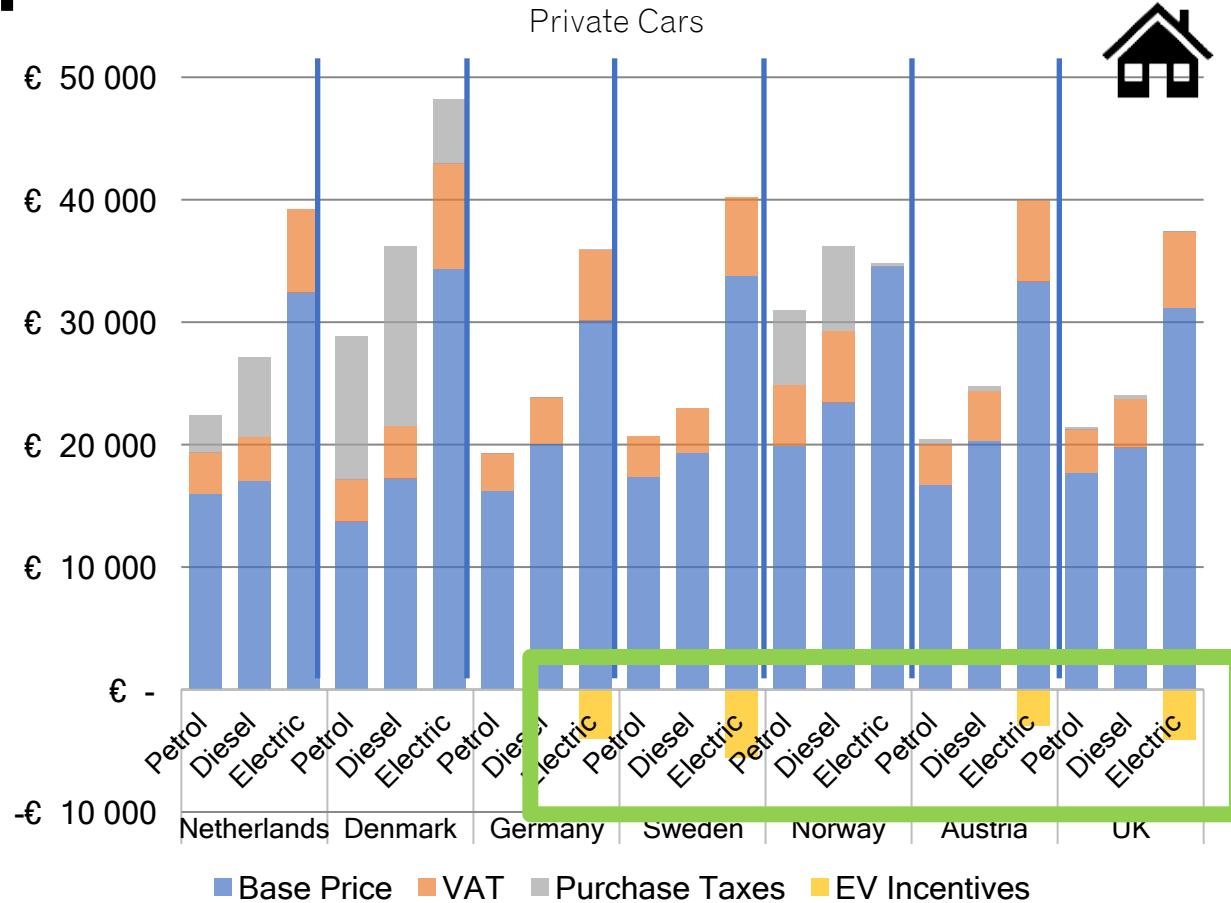




# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



## proEME – Purchase costs

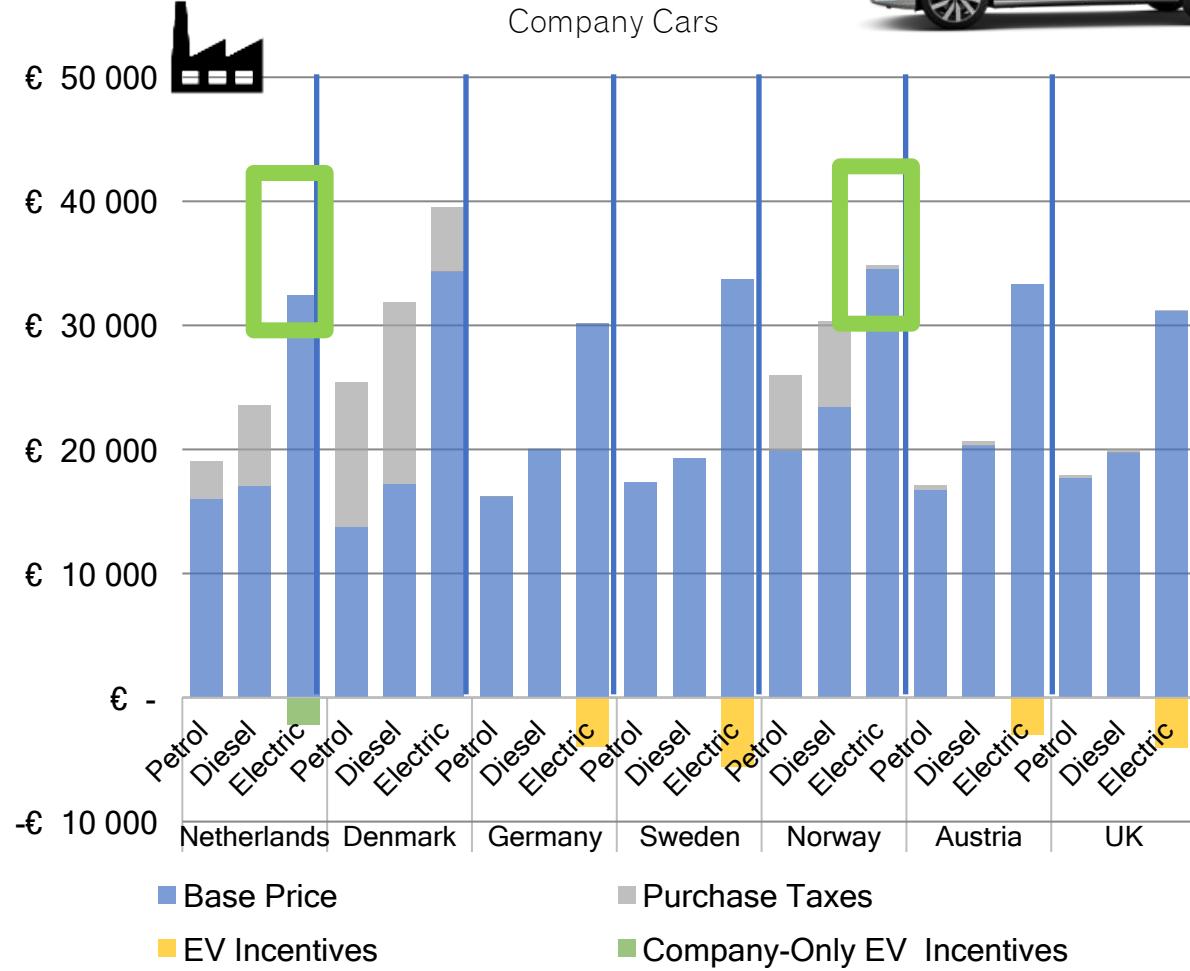
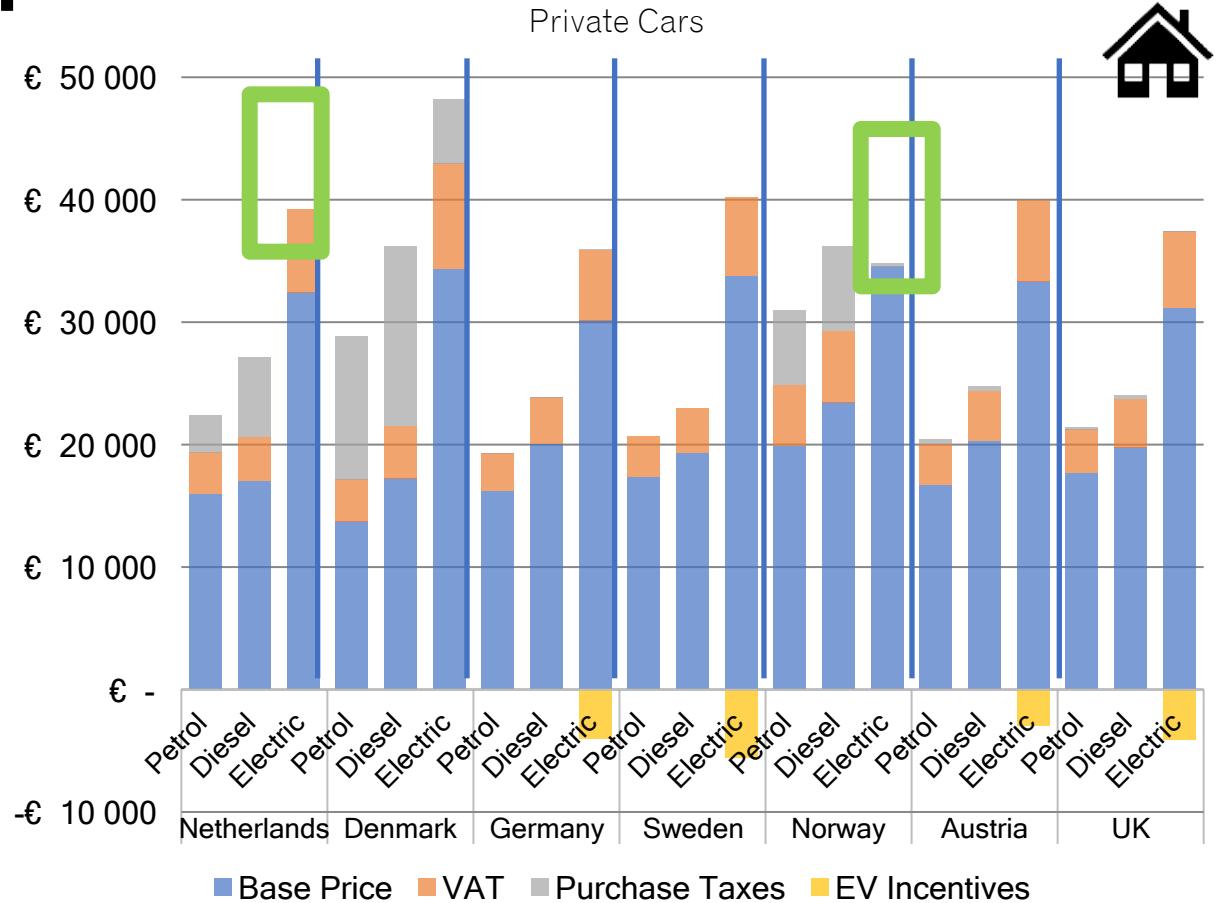




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## proEME – Purchase costs

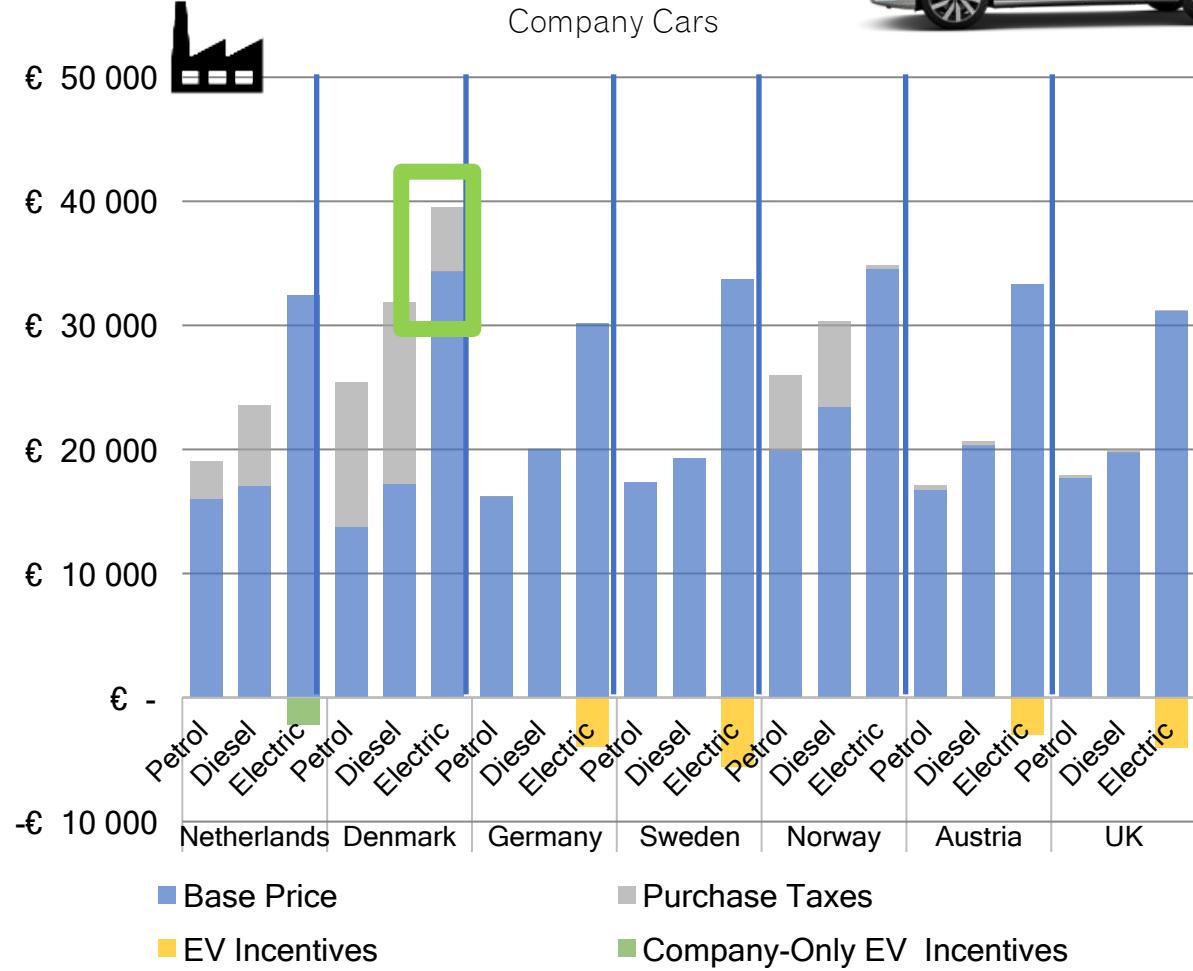
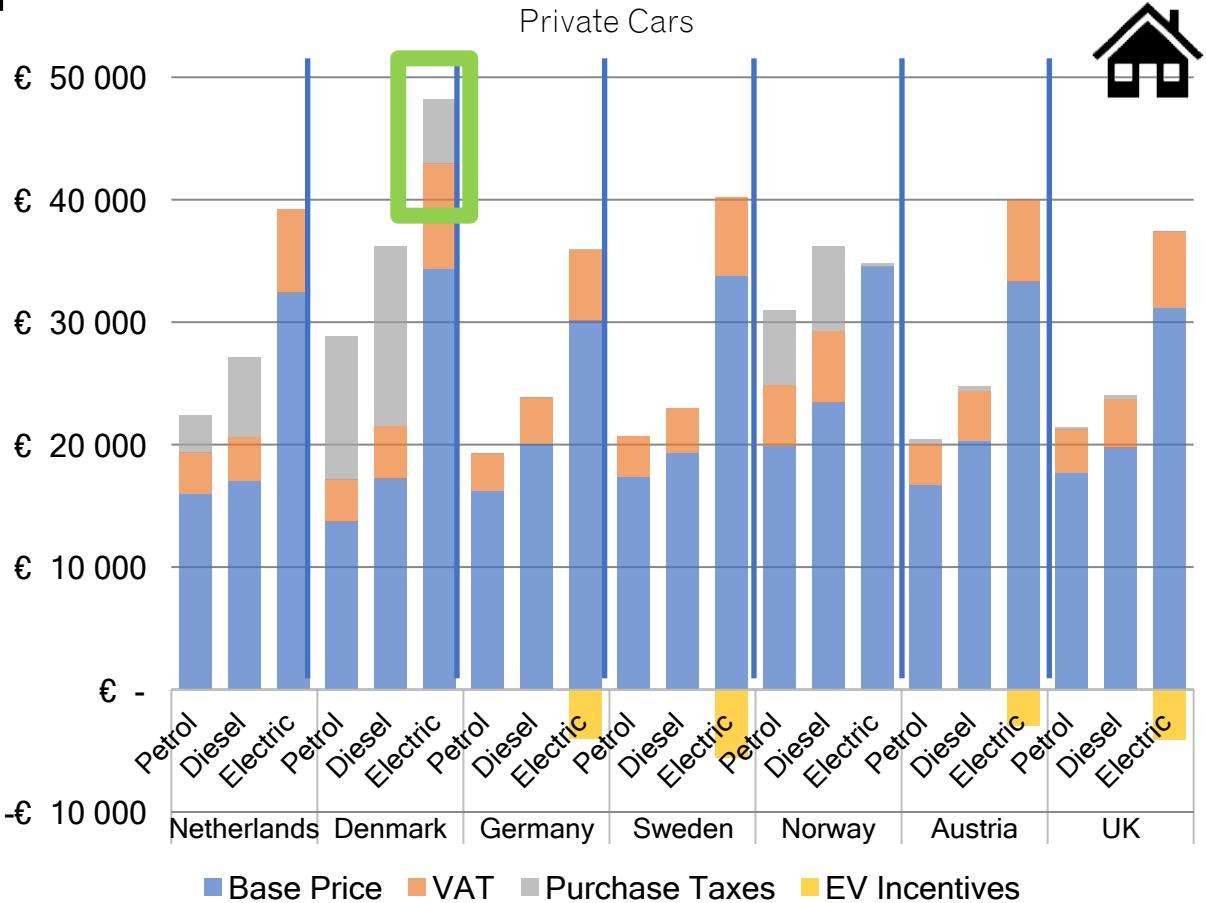




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## proEME – Purchase costs



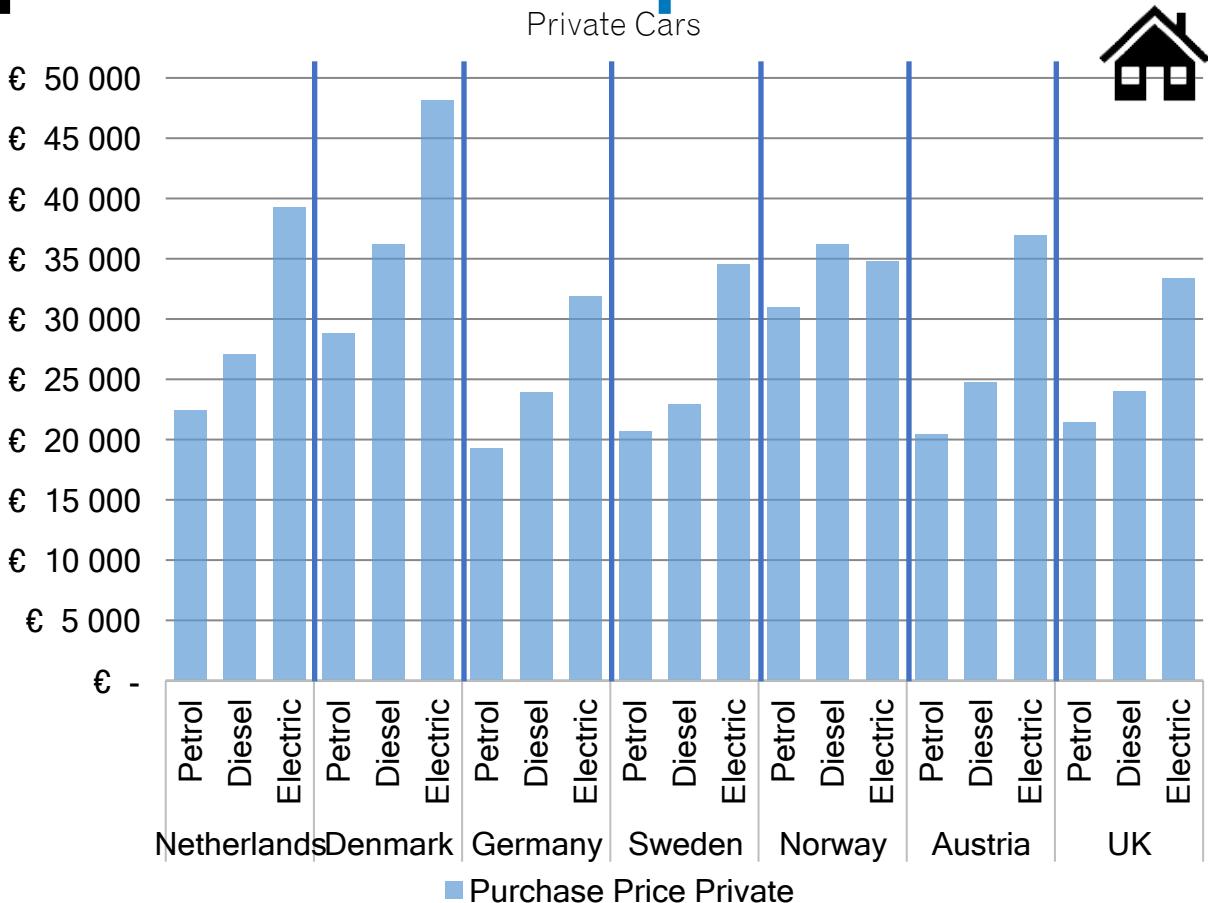


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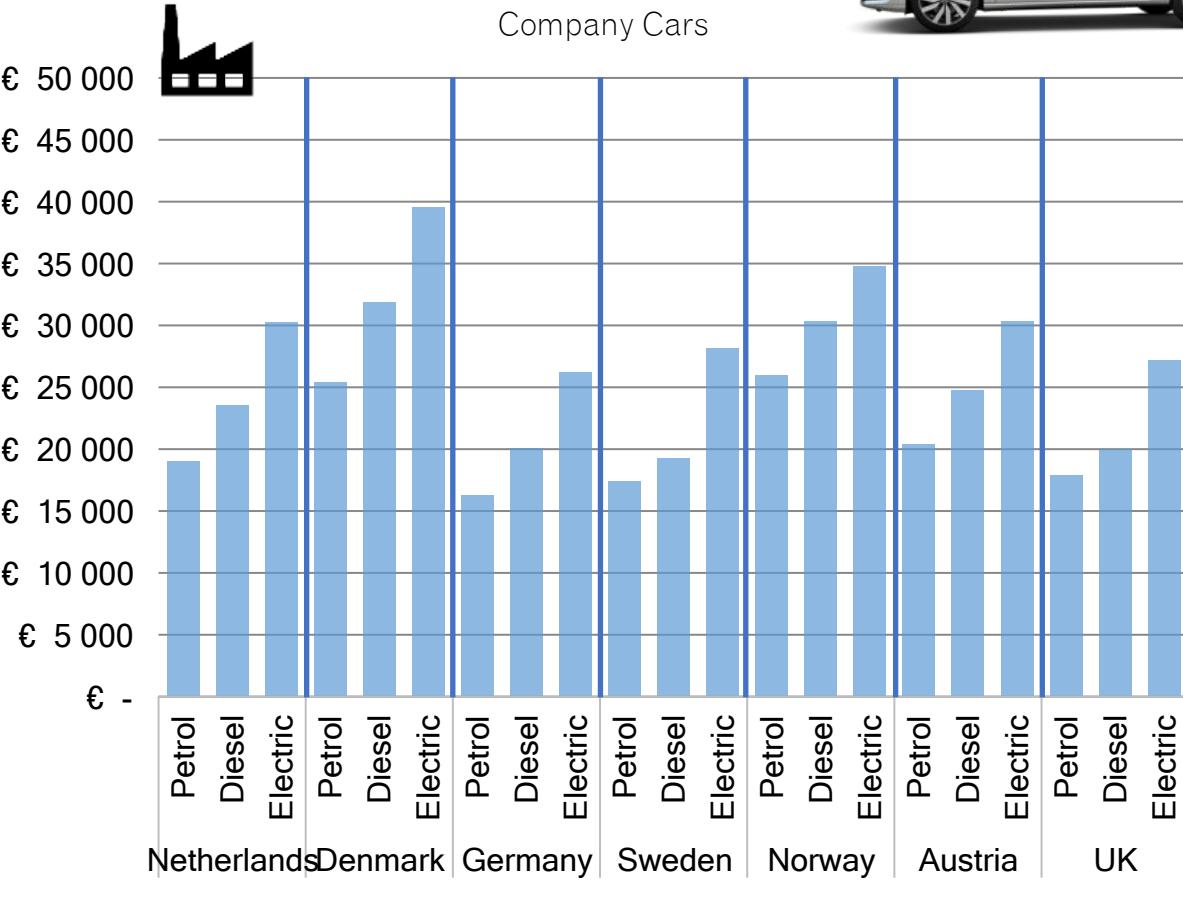


## proEME - Total purchase costs

Private Cars



Company Cars





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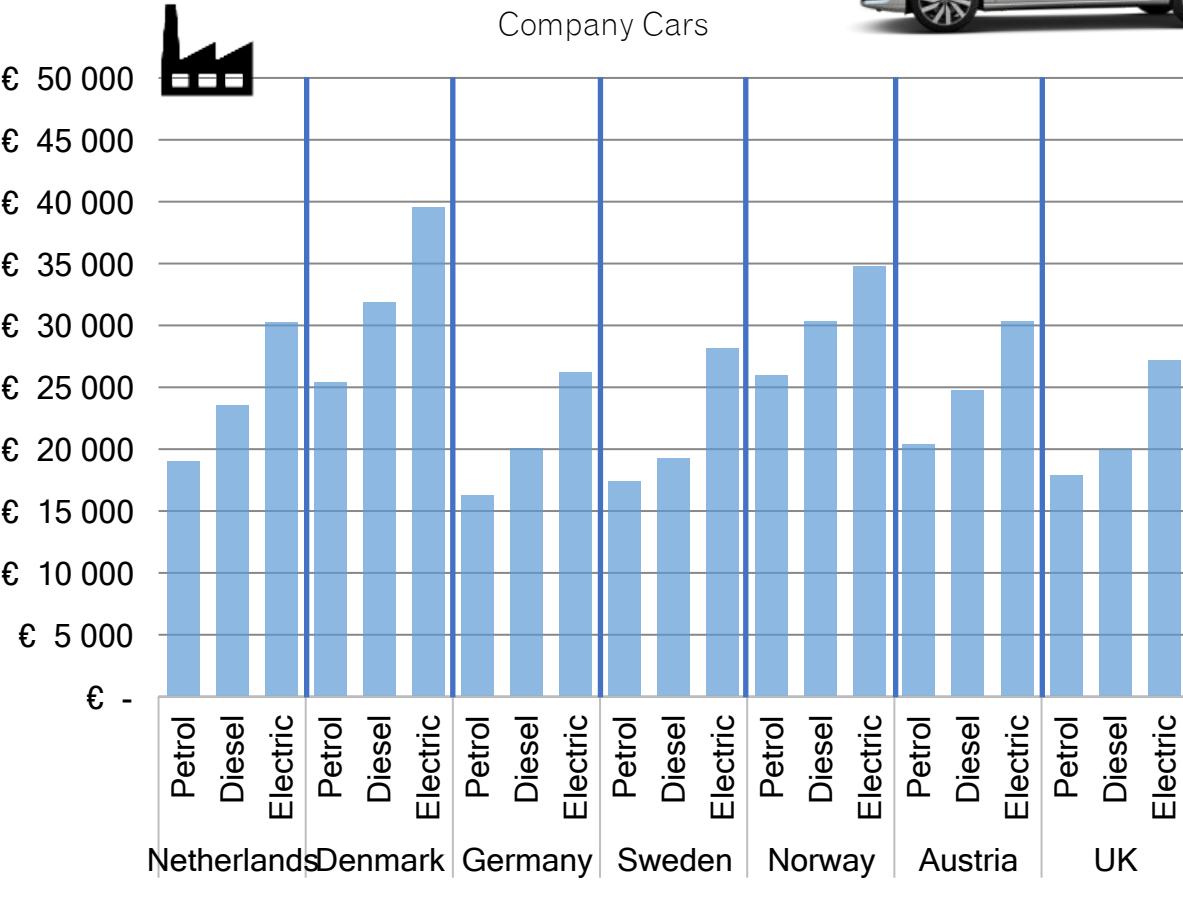


## proEME - Total purchase costs

Private Cars



Company Cars



■ Purchase Price Business



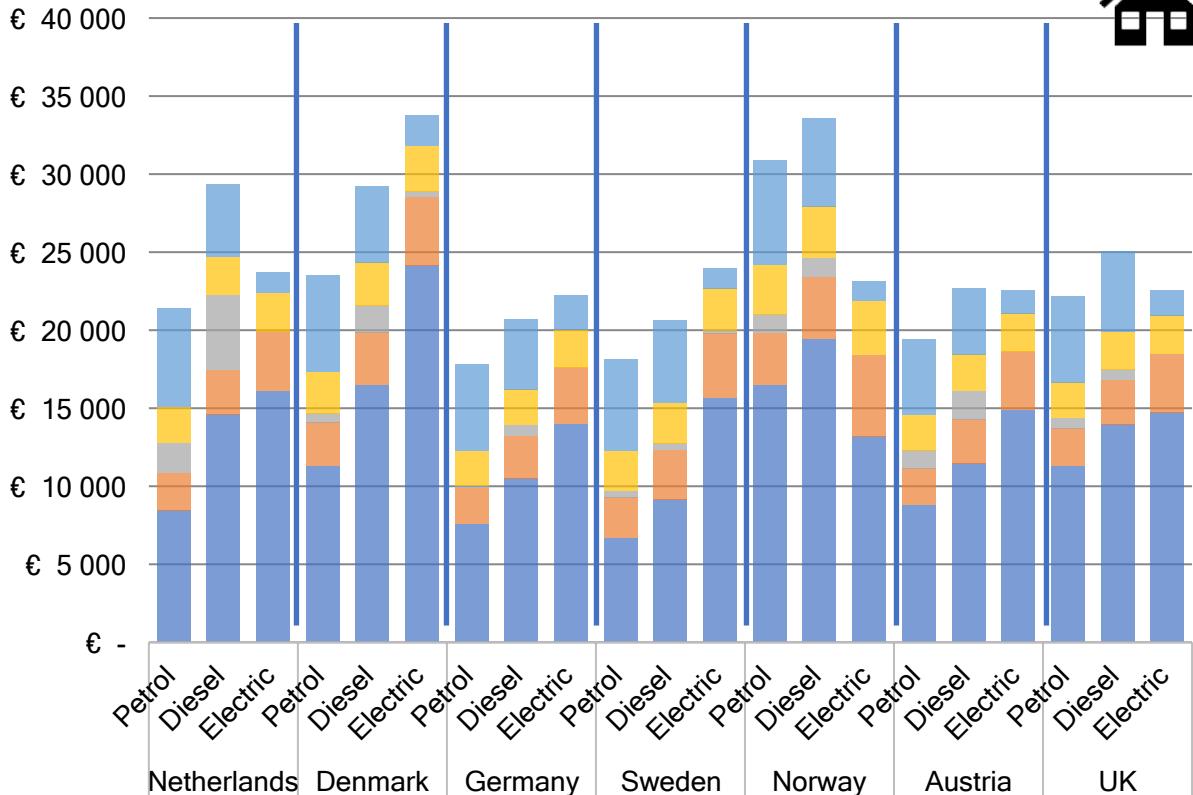


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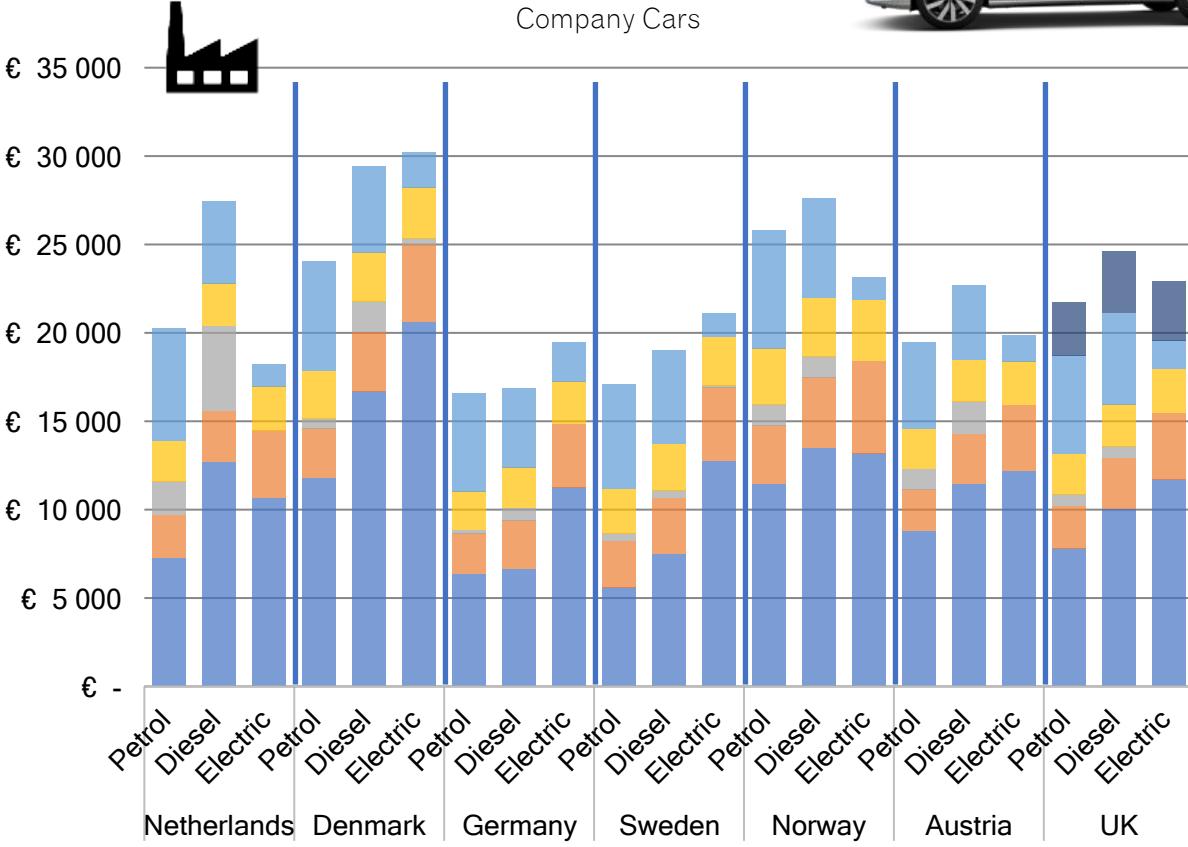


## proEME – TCO

Private Cars



Company Cars



■ Total depreciation ■ Insurance ■ Road Tax ■ Maintenance ■ Total energy costs

■ Total depreciation

■ Insurance

■ Vehicle Tax

■ Maintenance

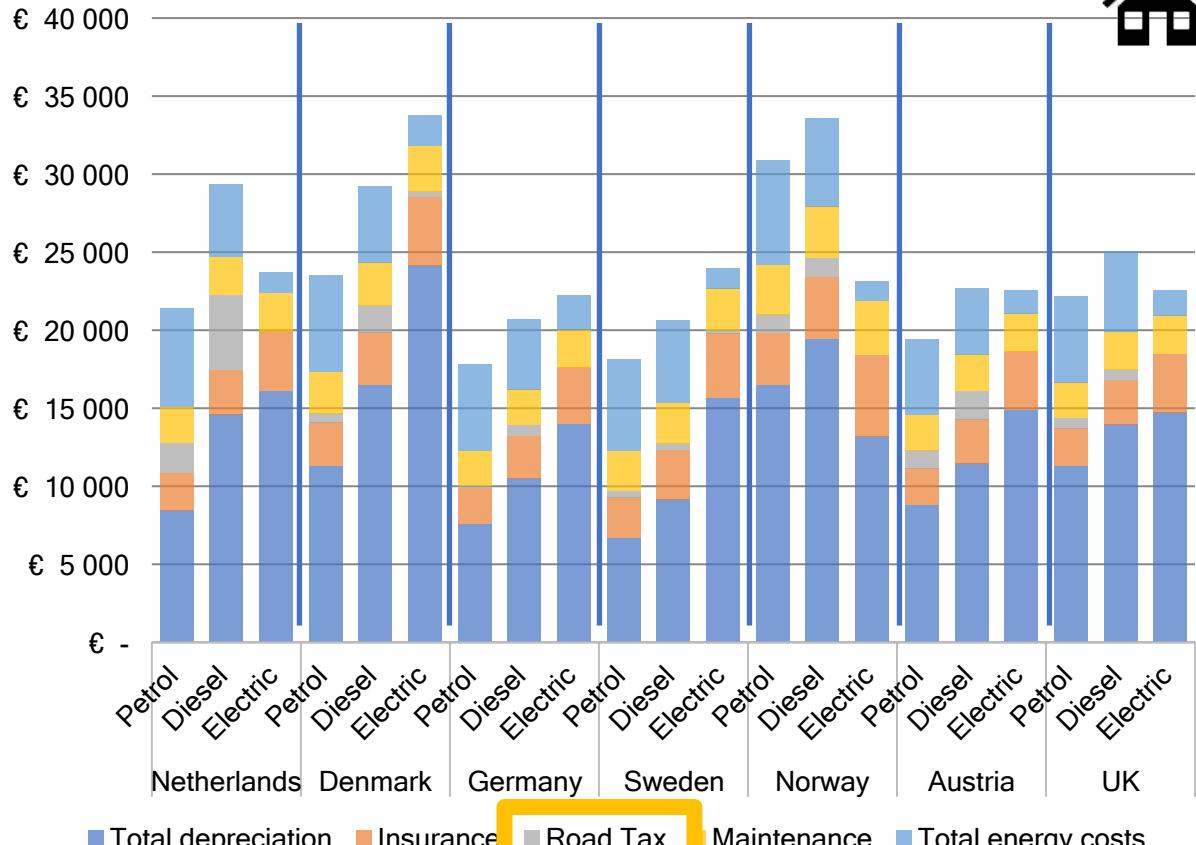


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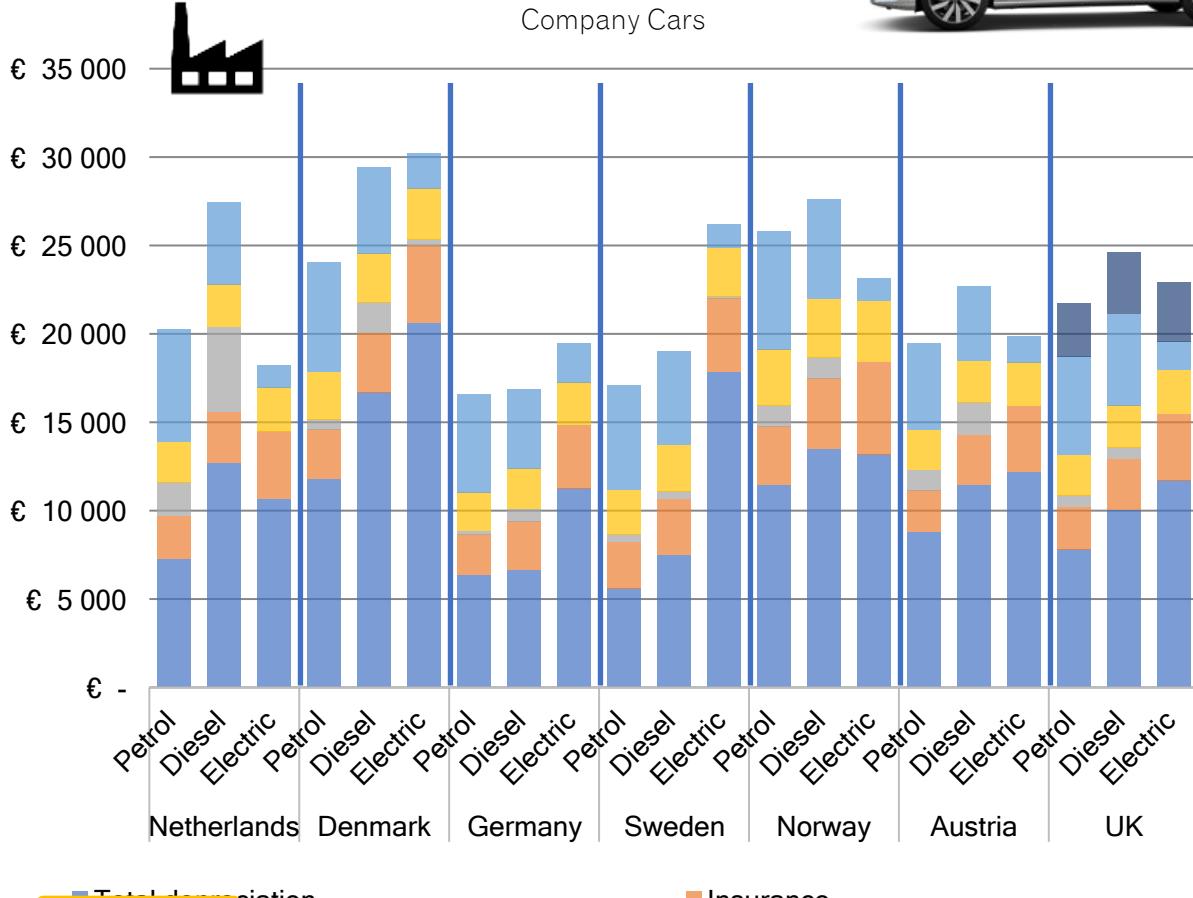


## proEME – TCO

Private Cars



Company Cars



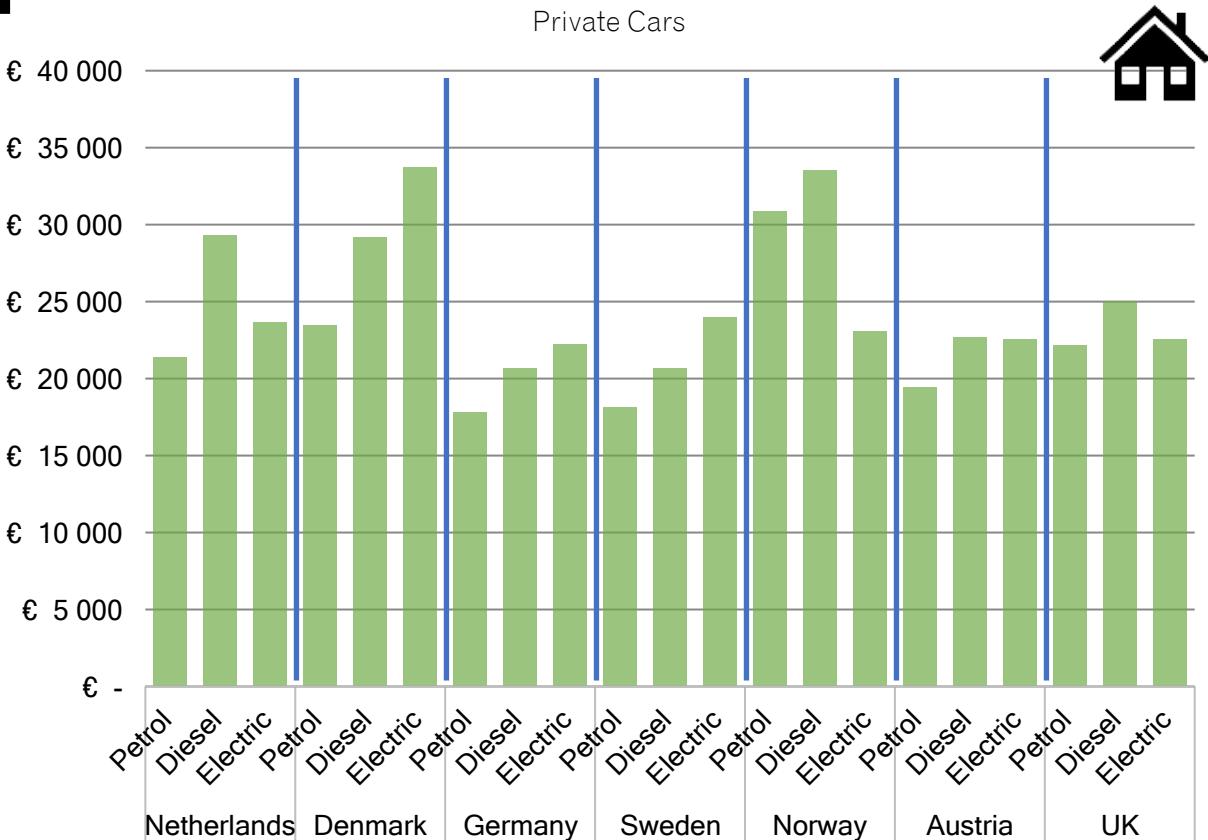


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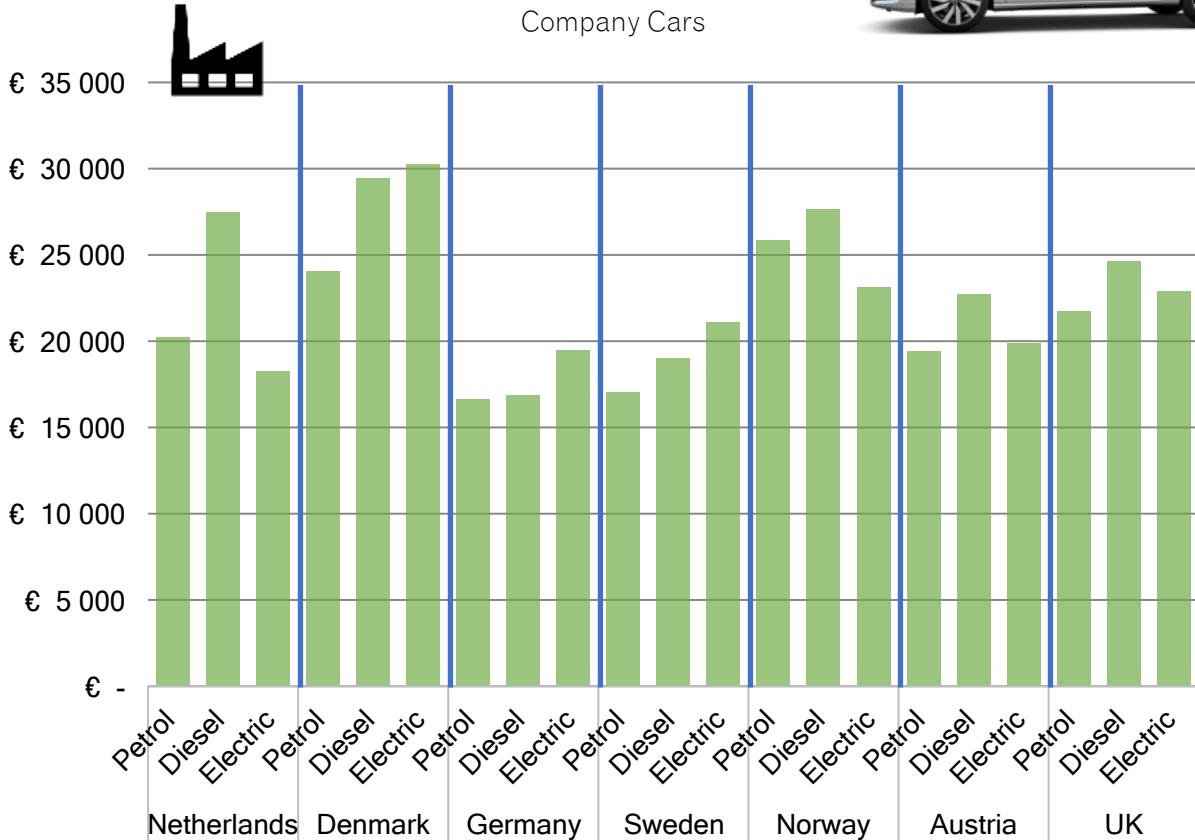


## proEME – TCO

Private Cars



Company Cars



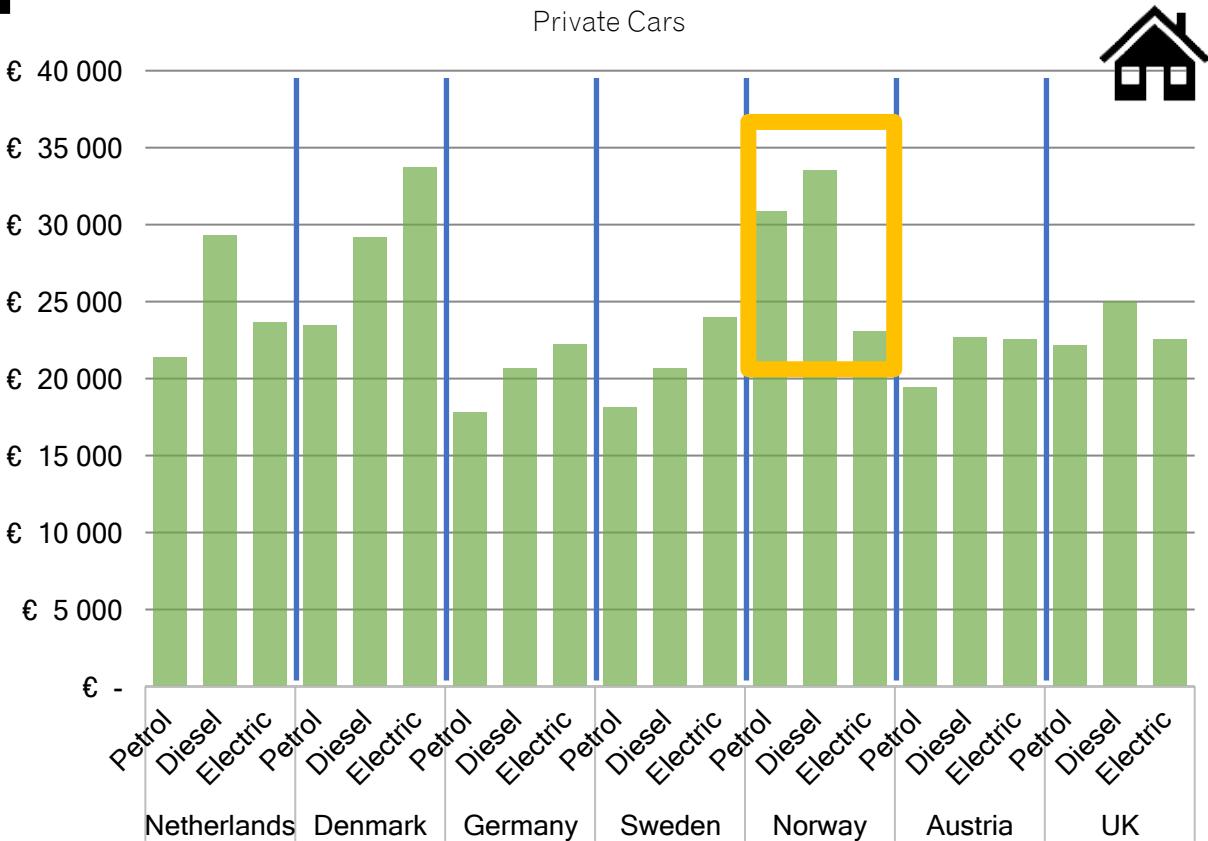


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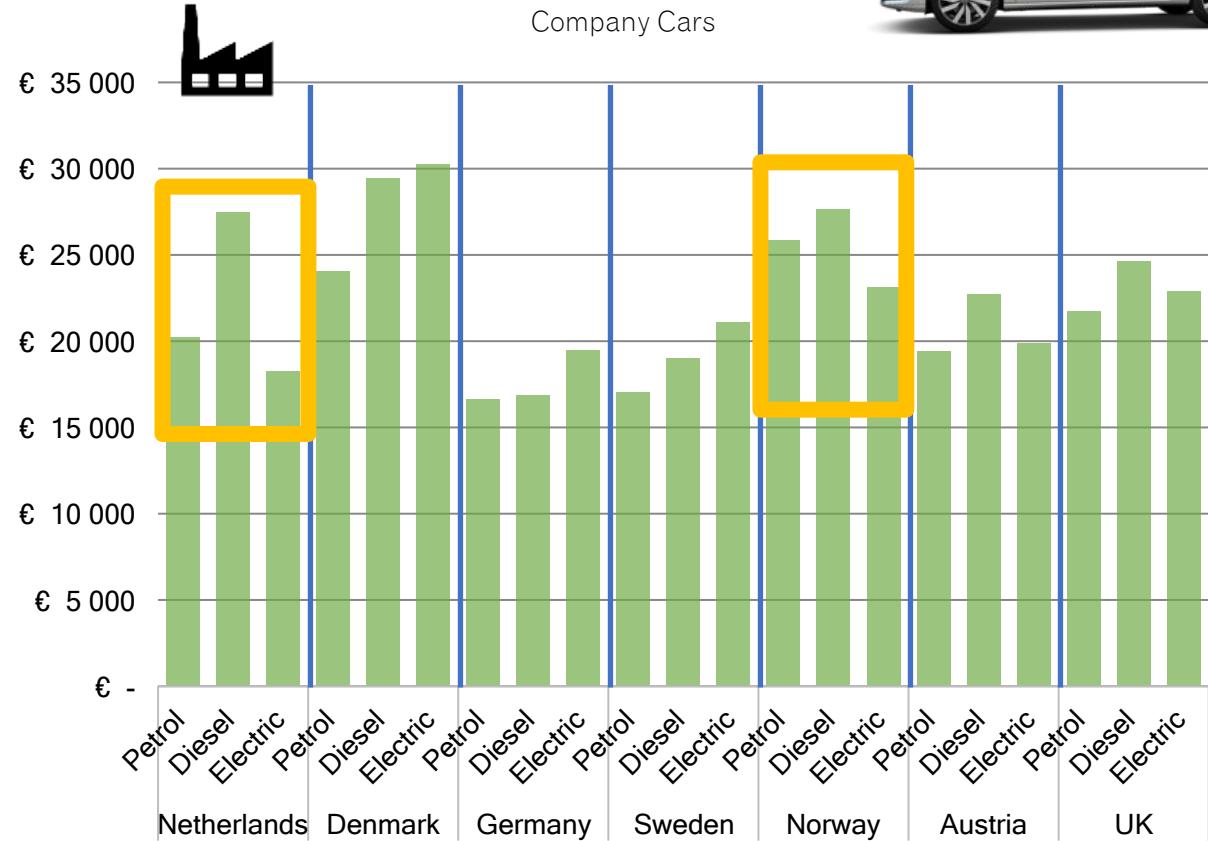


## proEME – TCO

Private Cars



Company Cars





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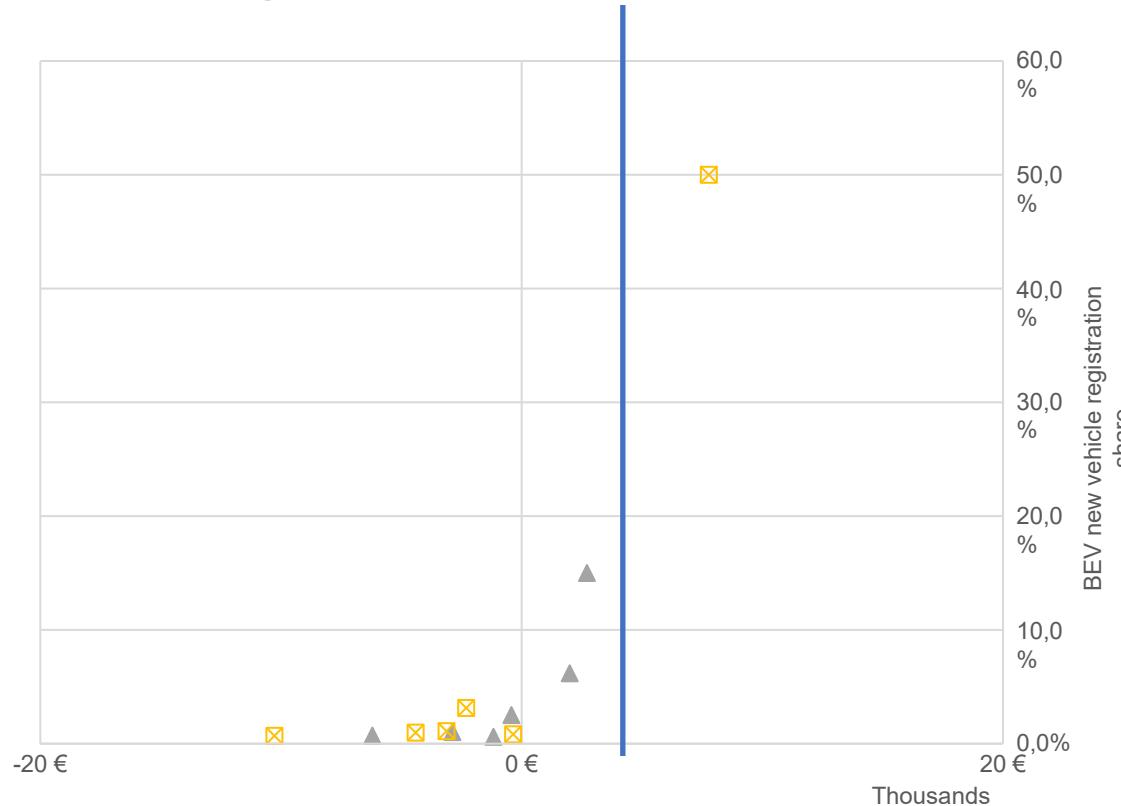
## proEME – Price elasticity

DRAFT version

VW Golf

15.000 per year

4 year ownership



BEV more expensive

BEV cheaper



# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION

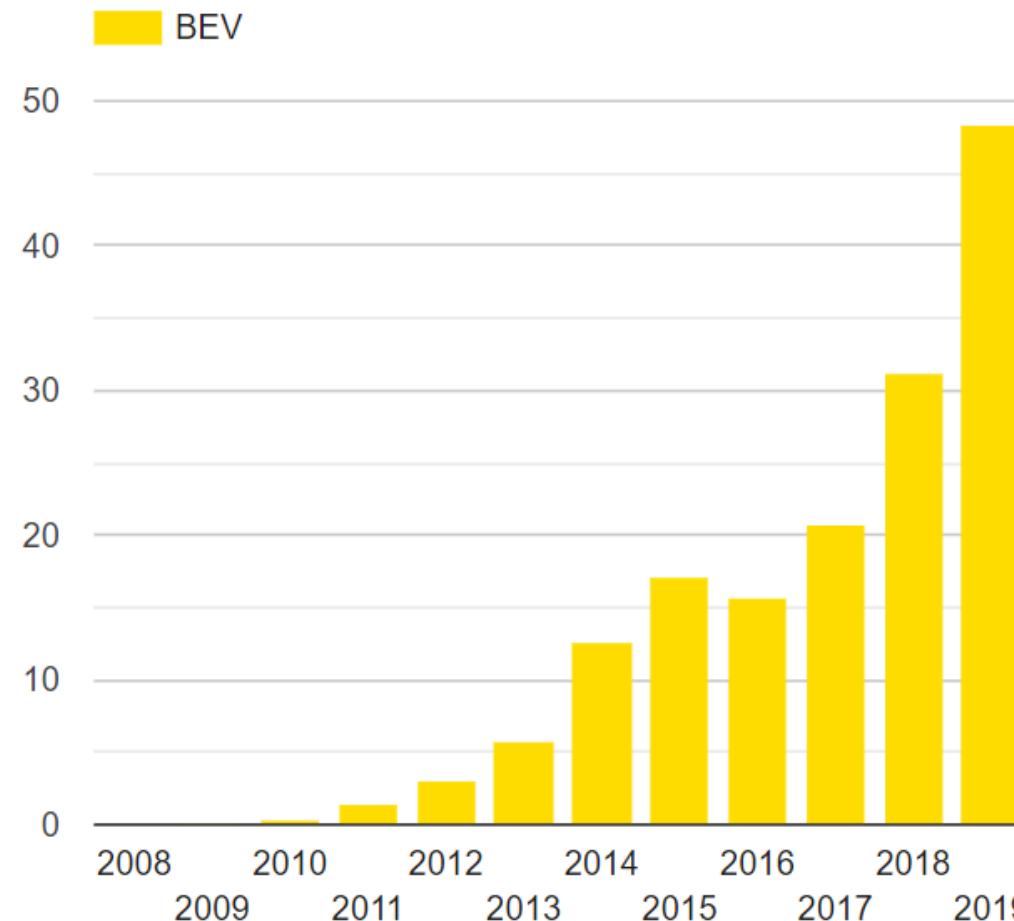


## proEME – Only financial incentives?

BEV market share new registrations (2019)  
Source: EAFO



Norway

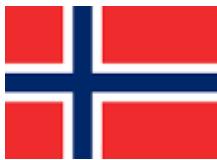




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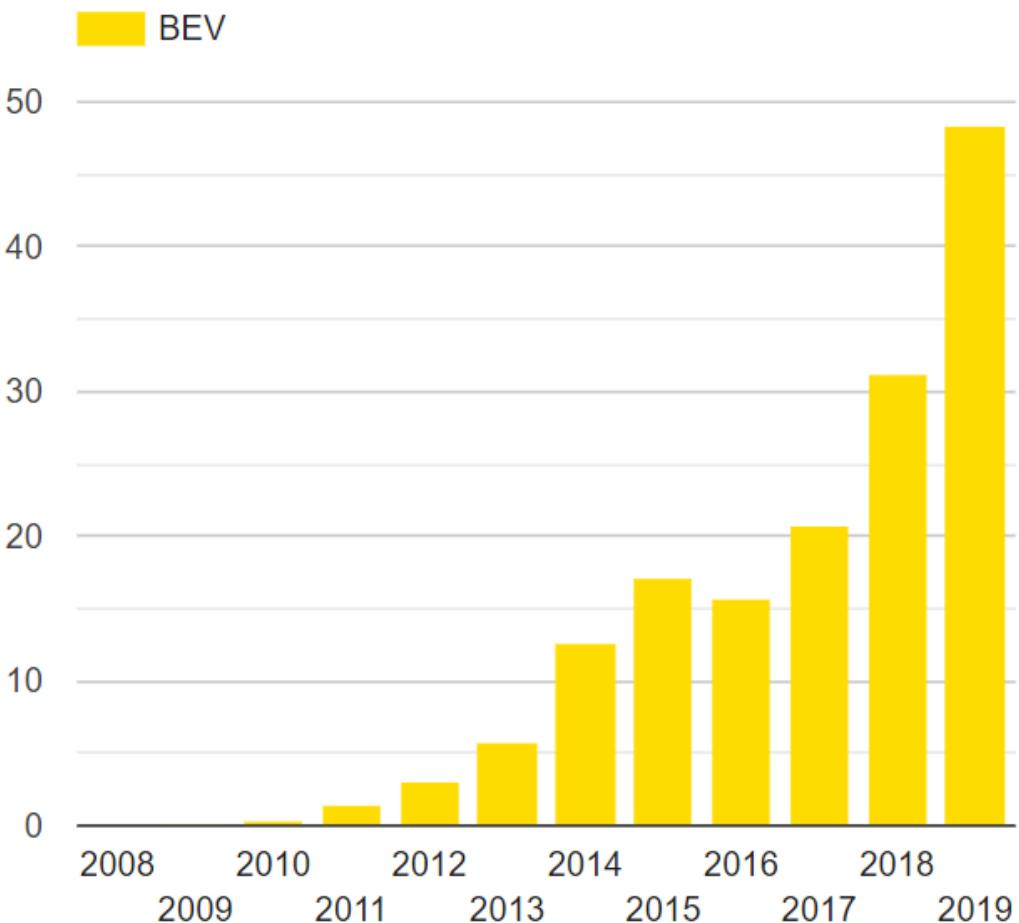
## proEME – Only financial incentives?



Norway

- 1990: No import and purchase taxes
- 1996: Exemption from annual road tax
- 1997-2017: Exemption from road and ferry toll
- 1997-2017: Free municipal parking
- 2000: Reduced company car tax
- 2001: 0% VAT
- 2005: Access to bus lanes

BEV market share new registrations (2019)  
Source: EAFO



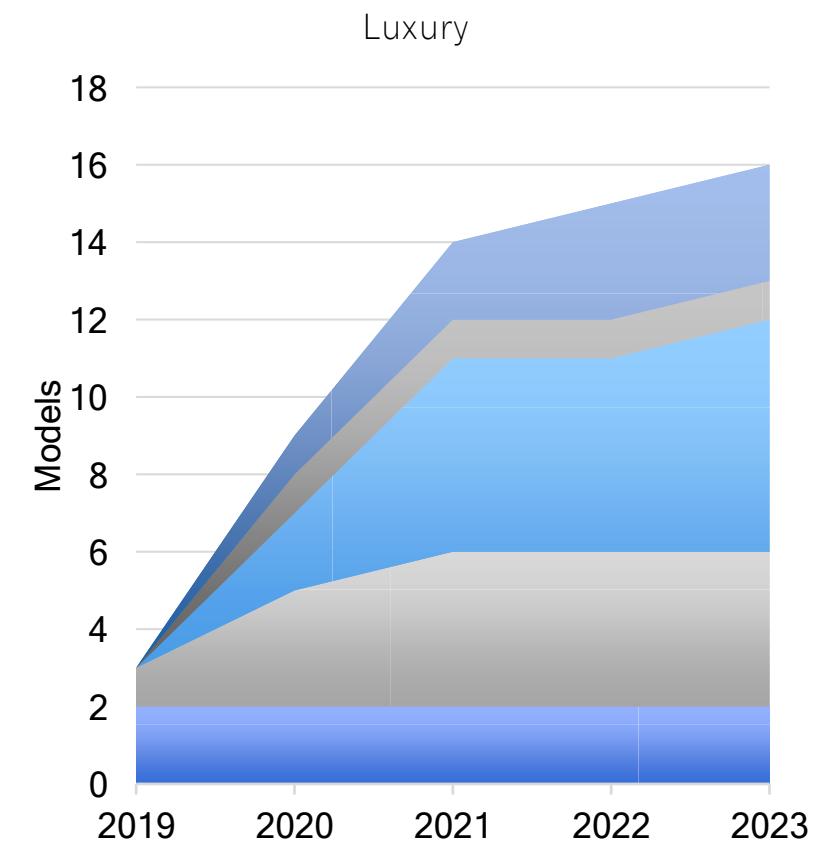
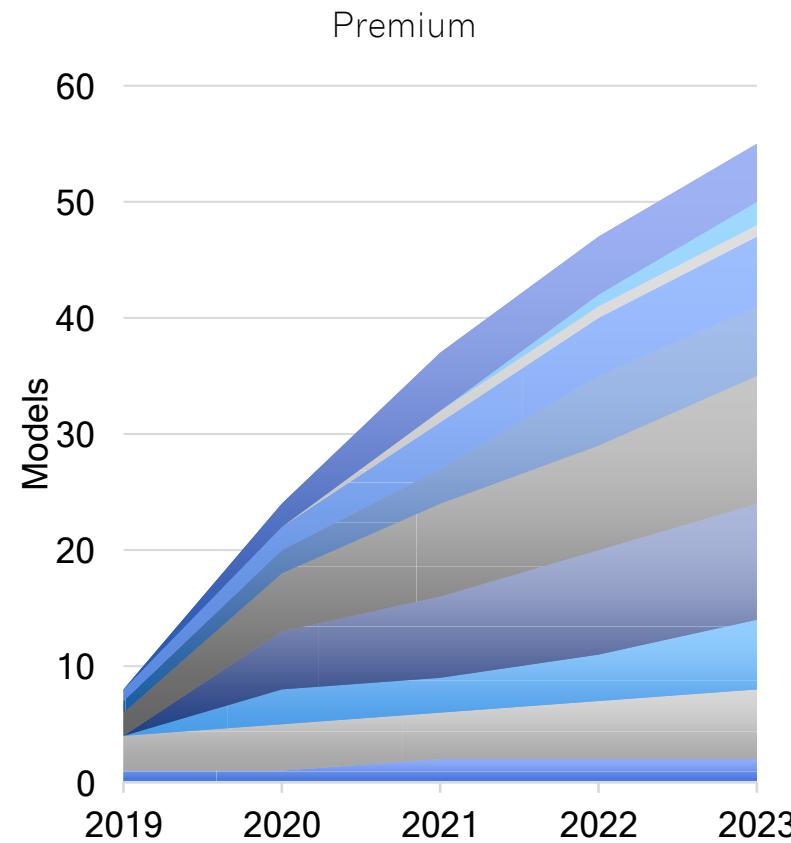
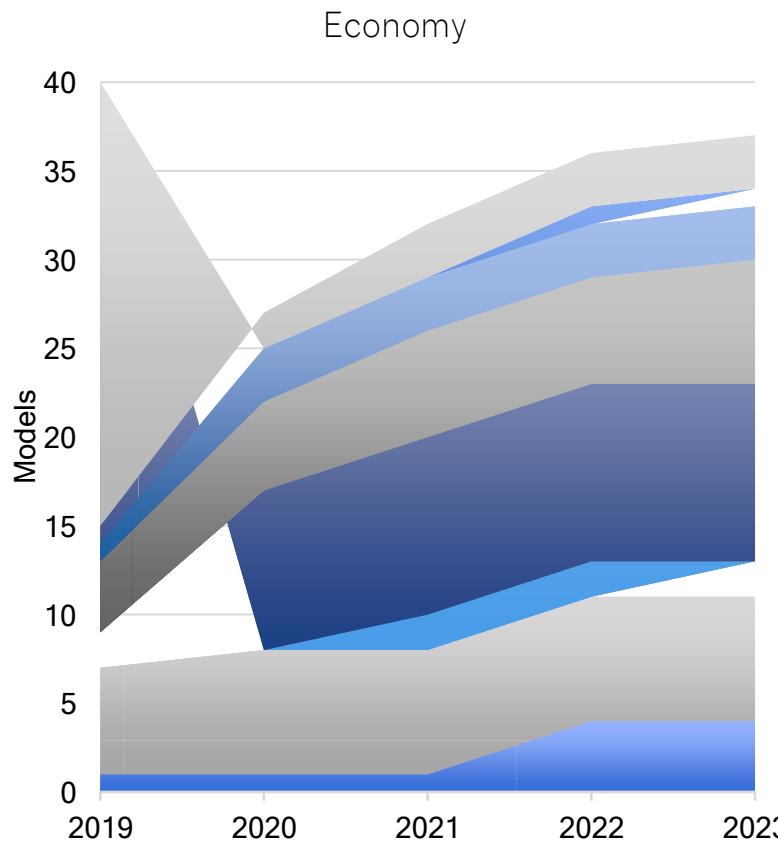


# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



## proEME – Future availability of BEV's

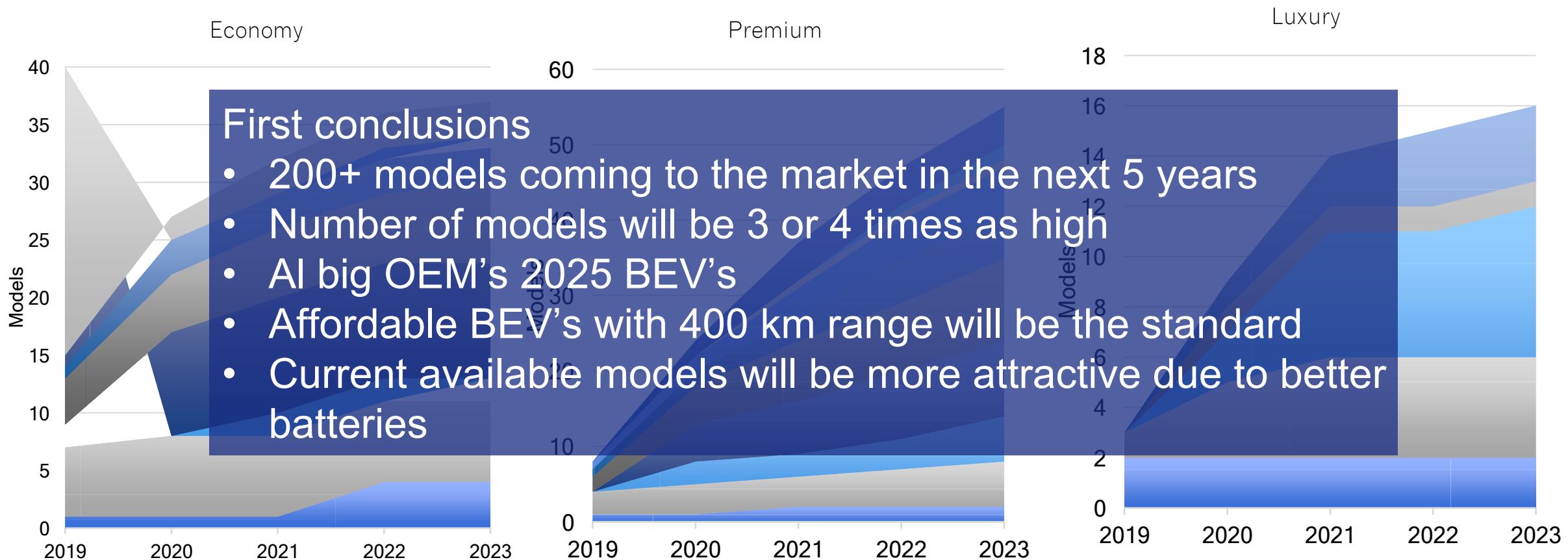
New BEV models cumulative (EU established brands)





## proEME – Future availability of BEV's

New BEV models cumulative (EU established brands)





# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



## proEME – Findings

Market share new EV grows, relative growth is still limited.	Interesting differences in incentives (business vs private)	More taxation on regular vehicles, more steering from government
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# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



## proEME – Findings

Market share new EV grows, relative growth is still limited.	Interesting differences in incentives (business vs private)	More taxation on regular vehicles, more steering from government
Incentives → favourable TCO's = better uptake	Threshold where the sales of BEV's will show progressive uptake	Large & visible policy for EV's priorities



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## proEME – Findings

Market share new EV grows, relative growth is still limited.	Interesting differences in incentives (business vs private)	More taxation on regular vehicles, more steering from government
Incentives → favourable TCO's = better uptake	Threshold where the sales of BEV's will show progressive uptake	Large & visible policy for EV's priorities
Consistency and long-term stability appear to be crucial	Understanding of incentives	Impact of incentives depends on BEV availability



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# Thank you for your attention!

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