

### **Road transport emission projections**

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# Historical and projected GHG emissions from road transport





### Main principles

- 1. Assessment of road transport development (per person or per vehicle)
- 2. Total traffic activity calculated total for each vehicle class
- 3. CO2 emissions calculated
- 4. Assessments «translated» into HBEFA input
- 5. HBEFA used to calculate
  - a. Average EFs for each subsegment in the last inventory year
  - b. Total traffic activity for the same subsegments for the projection time series
- 6. Emission calculations of CH4 and N2O, as well as LRTAP components



## Assessment of road transport characteristics

- Based on historical development for
  - Development in traffic, e.g. annual mileage
  - Emission factors
  - Energy efficiency
- Expert judgement to assess possible impact in the future for different parameters
- Biofuel shares in petrol and diesel constant in the projections



### Assessment of characteristics – Passenger cars

- Annual mileage per person stable for the period to 2030
- Average emissions per kilometer is expected to decrease
  - Due to higher share of hybrid vehicles, higher energy efficiency, hydrogen, etc.
- Number of electric vehicles are expected to increase according to national targets



## Assessment of characteristics – LDV and buses

- The vehicle fleet develops with the same rate of increase as the population projections
- Average annual driving length per vehicle is assumed to increase i accordance with historical development (0.2 per cent per year for LDV and 0.1 per cent per year for buses)
- Fuel efficiency development differentiated on petrol and diesel for LDV, no efficiency development for buses



## Assessment of characteristics – HGV

- The vehicle fleet is set constant at 2012 level
- Annual increase in driving lengths per vehicle based on assessment of historical development
- No fuel efficiency development assumed



#### HBEFA projections

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#### Input to HBEFA projections

1. Development in total vehicle stock per segment + age distributions + other input at same level of detail as for historical emission calculations

OR

2. Number of new cars + survival rates + other input at same level of detail as for historical emission calculations





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