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Norwegian greenhouse gas analysis «Climate cure»

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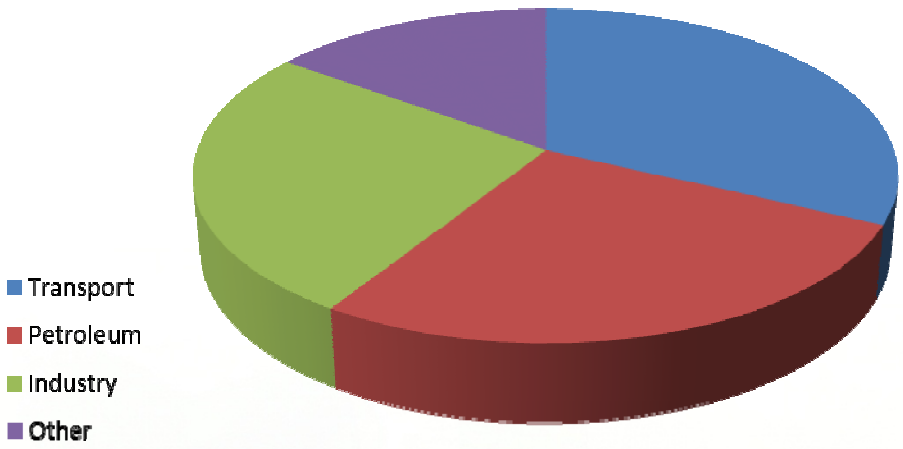
Statens vegvesen

Norwegian Climate Goals

set by Parliament in 2008

- Strengthen our Kyoto commitment with 10 %
- Cut emissions by
  30–40 % by 2020
- **Cut 15–17 mil. tonnes of national emissions (the rest abroad)**
- Become carbon neutral by 2030

Norwegian GHG Emissions



Year	Mil. tonnes
1990	50
2010	54
2020	59

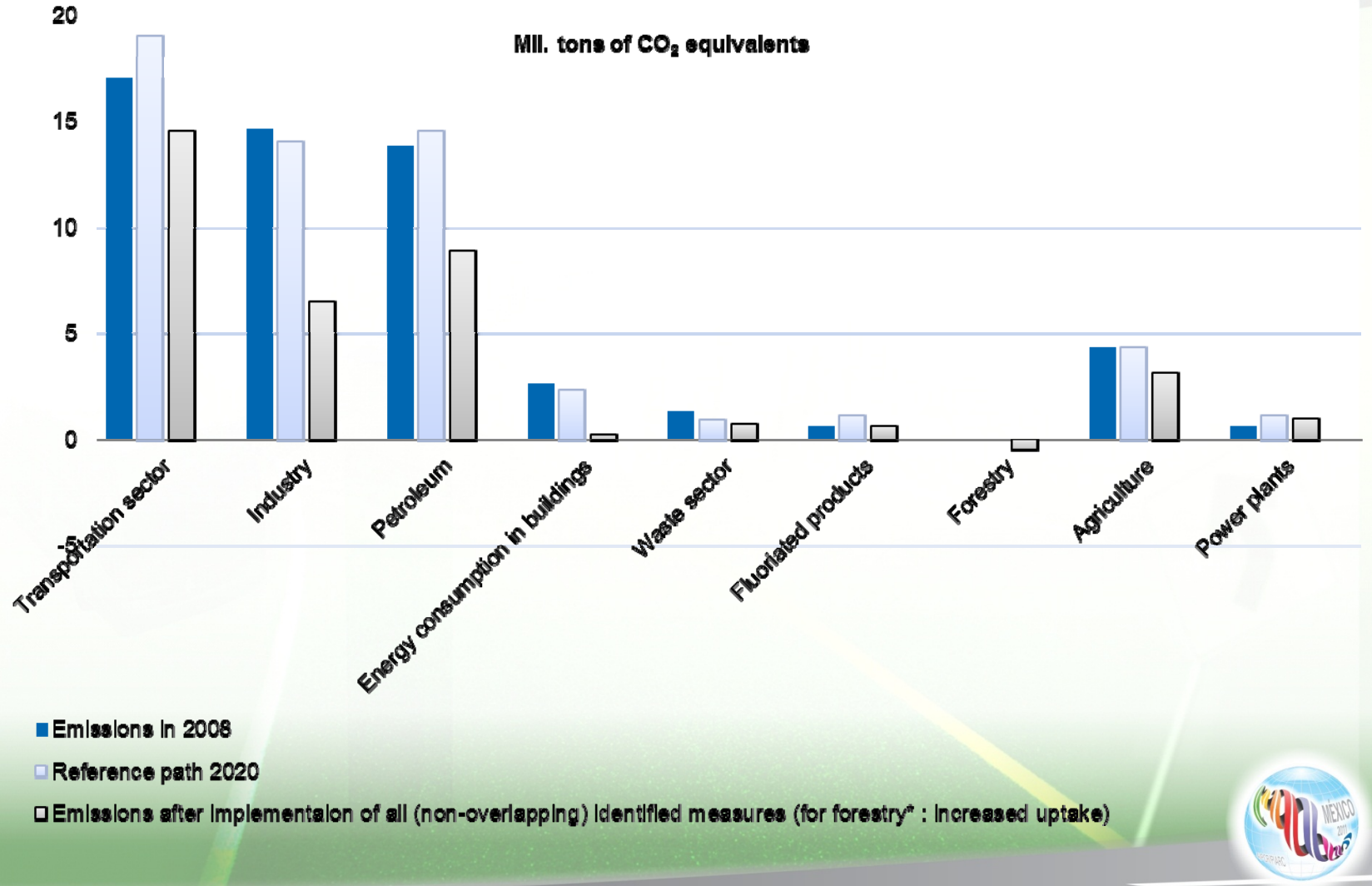
Climate Cure 2020

Mandate:

- **To present options for measures with reduction potential to achieve the national goal**
- To address the impact and assess the costs of the identified measures
- To assess the need for new policy instruments
- To present the different options, but not recommend Government policy

Responsible authorities:

Summary of findings in each sector



Emissions – distribution within the transport sector

Road traffic	10.3m tonnes
Civil aviation	1.0m tonnes
Military aviation	0.1m tonnes
Shipping	2.3m tonnes
Fisheries	1.1m tonnes
Other mobile combustion	2.5m tonnes

Transport sector – measures analysed

- Biofuels
- Measures to reduce emissions from vehicles
- Rail/ public transport, increased charges/taxes for car or air traffic
- All other measures e.g. within air and maritime transport

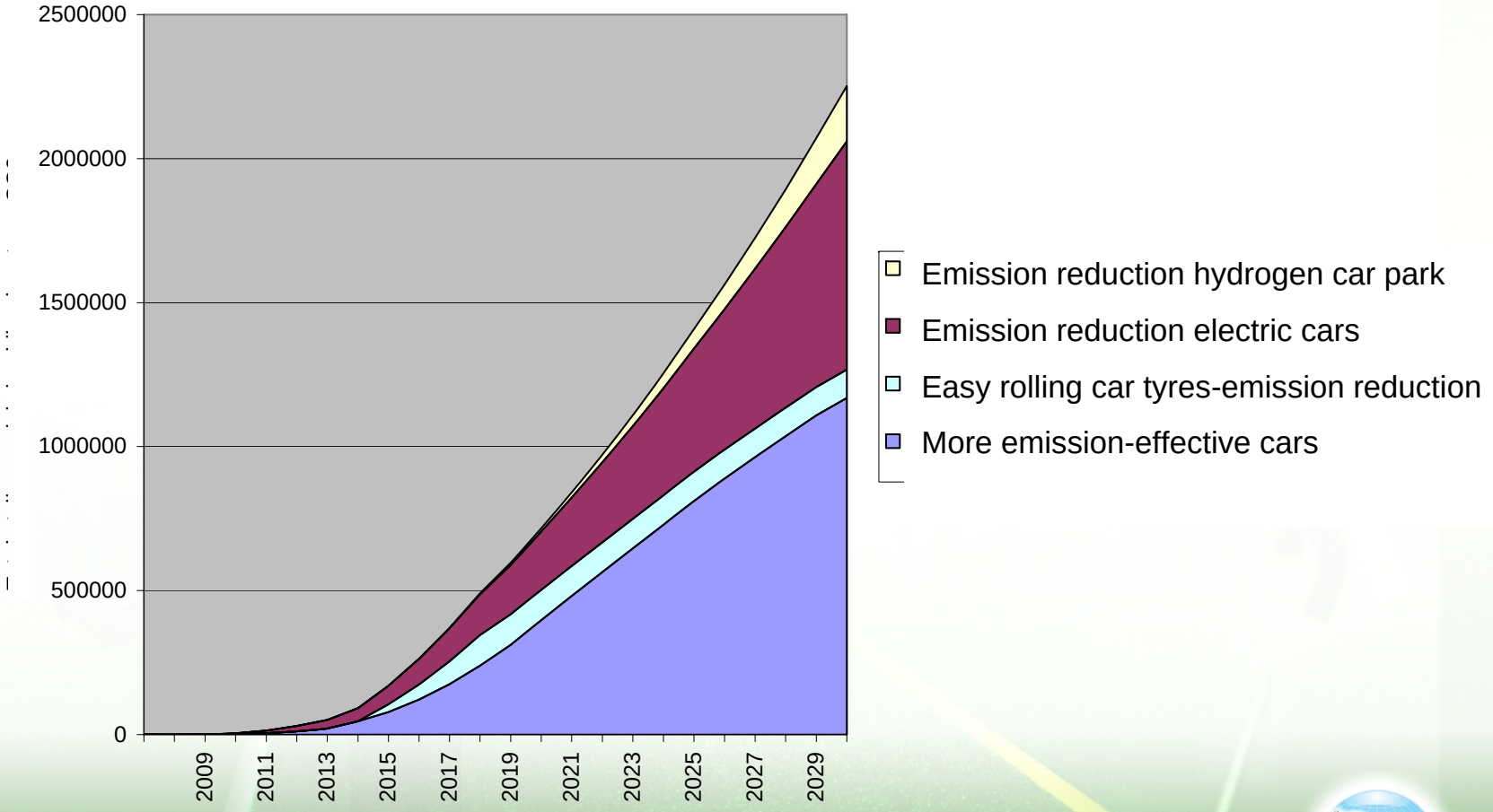
Emissions reductions of 3 - 4.5m tonnes could be achieved by 2020 .

Biofuels

- Main source of reduction
- Potential: 1.8-1.9m tonnes
- Costs: 130-180 EUR/tonne

Emission reduction – private cars

Total reduction of emissions in the car park (tonnes CO_2)



Public transport and fuel- and vehicle taxes

Emissions reduction potential:

•Measures targeting public transportation alone have little effect in curbing emissions

•However, by halving public transport fares, doubling fuel prices and doubling toll charges these measures result in a 1.2m tonne reduction

- Costs: 310-670 EUR/tonne

Conclusions

Biofuels	1.8 – 1.9m tonnes
Other vehicle related measures	0.8m tonnes
Public transport and charges – up to	1.2m tonnes
Other measures	0.8m tonnes
Total roughly	3-4.5m tonnes

The highest estimate includes increasing vehicle taxes and halving public transport fares.

Conclusions (cont.)

- Possible, but difficult, to reach 3 - 4.5m tonnes reduction by 2020 (from 17.3m tonnes)
- Time is short - it is important to act now
- A long-term strategy is vital
- Severe restrictions on car and/or air traffic are required to achieve the potential
- The social effects of increasing fuel- and vehicle taxes have not been analysed

Present situation

- White book on Norwegian greenhouse gas policy 2011
- Annual increases in vehicle- and fuel taxes
- “Transnova” - a trial funding programme for new technologies close to market introduction
- National transport plan 2014-2023 to be finished in 2012 – public transport and urban strategy will be central