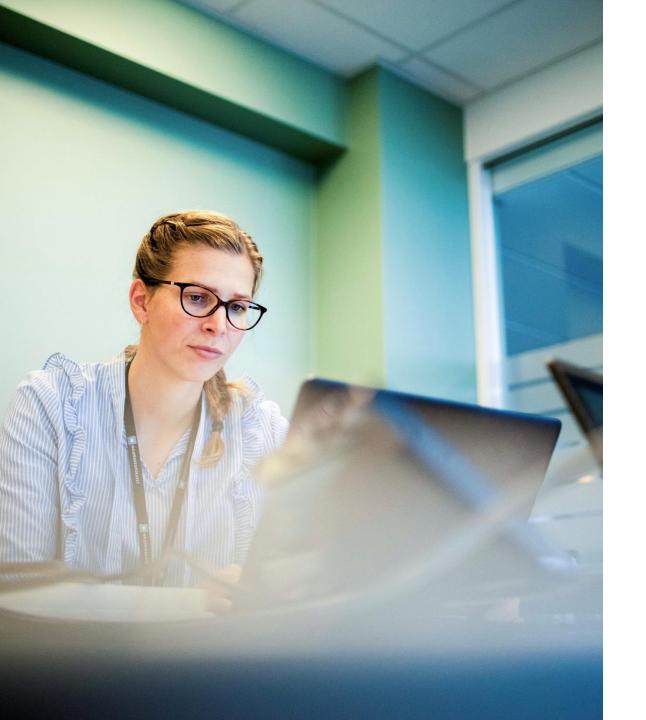


Norwegian national approaches in reducing emissions from off-road equipment

Mats Nordum, acting head of transport section, climate department, the Norwegian Environment Agency

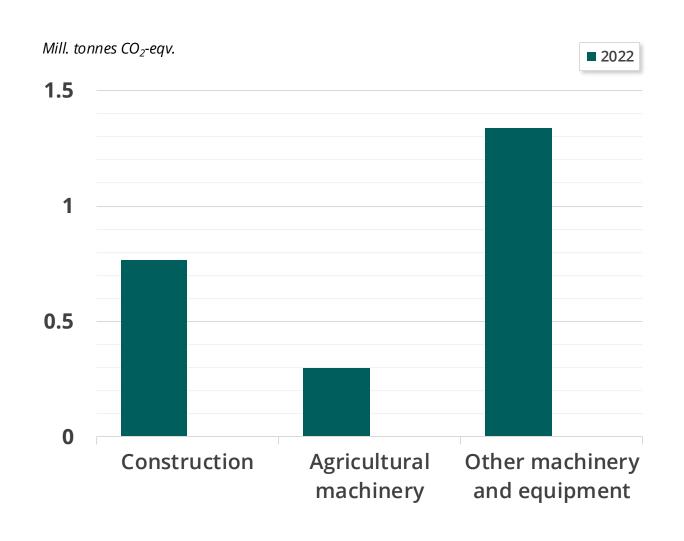


This is us

- Agency under the Ministry of Climate and Environment
- We give advice on the development of climate policy
- Perform mitigation analysis
 - Analyse possible mitigation measures, barriers and policy instruments that can reduce Norway's emissions
- Perform impact assessments of specific policy instruments



5 % of Norway's emissions are from offroad equipment



- Machinery used in construction make up a significant share
- Public sector constitutes up to 70 % of construction machinery emissions





Construction machinery emissions

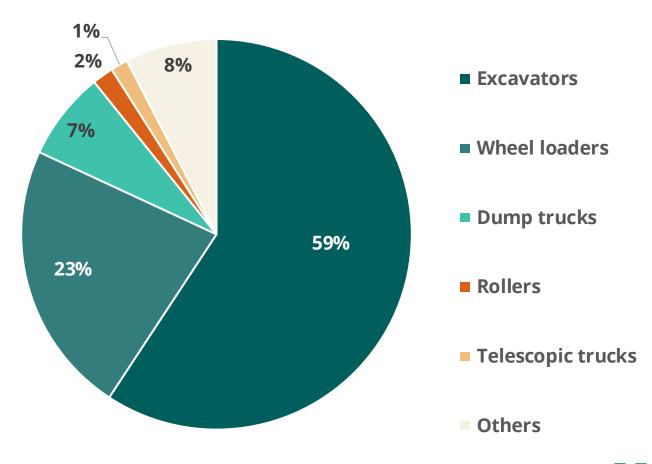
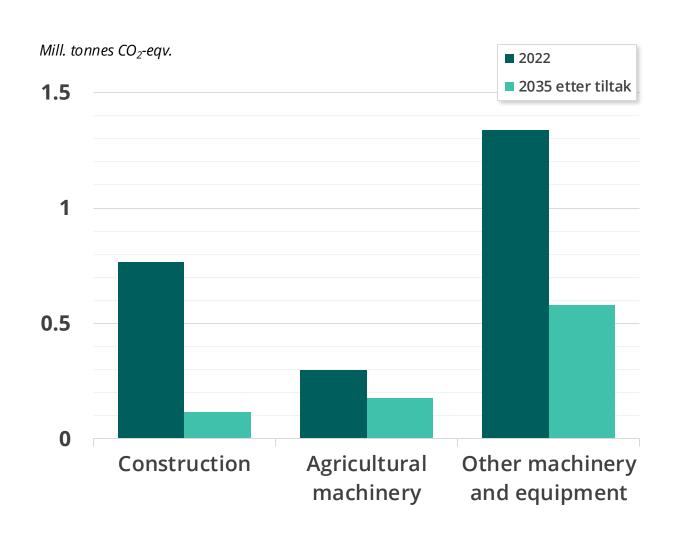




Photo: Svein Magne Fredriksen

Deep emissions cuts are possible by 2035



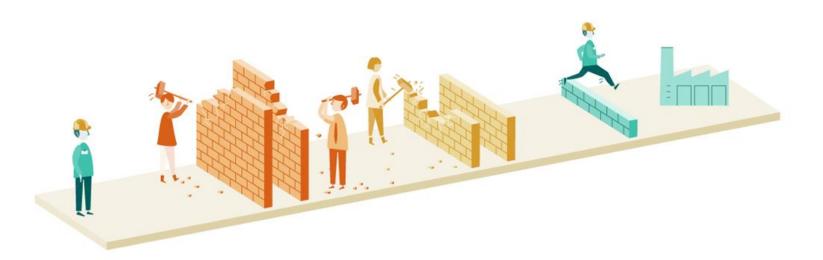
Mitigation measures:

- Improved logistics and efficiency in construction projects
- All new purchases of machinery for construction sites are zero emission in 2030
- Electrification of agricultural machinery
- 70 % of new off-road mobile machinery purchases are zero emission in 2030



Main barriers for zero emission machinery

- High investment cost
- Cost of charging infrastructure
- Limited access to zero emission machinery / technological immaturity
- Access to power, both electrical infrastructure and sufficient capacity





Existing national policy measures

- Financial support schemes
 - Investment in new machinery
 - Support for municipalities for procurement/use of zero emission machinery
- Public sector procurement
 - Environmental concerns must be weighted 30 %

- Prohibited to use mineral oil for heating and drying on construction sites for buildings
- CO₂-tax on diesel
- Biofuel mandate of 10%



Policy measures under development

- Prohibit the use of fossil gas for heating and drying on construction sites for buildings
- To give municipalities authority to demand zero emission on construction sites in their municipalities
- Regulation of public procurement obligatory to use zero emission equipment in all public procurement of construction sites
- Prohibit the use of fossil fuels on all construction sites / ban on the sale of new fossil fuel construction machines from 2035





Other possible policy measures

- Continued financial support, also for charging infrastructure
- Zero emission zones
- Awarding transport reduction and energy efficiency in public procurement of construction sites



