

## **Decarbonizing Road Transport and the Potential of Electric Roads**

Road transport represents around 25 % of EU greenhouse gas emissions and the transition away from fossil fuels in road transport is a pressing matter. In this talk, we will discuss the current political ambition levels in relation to scientific recommendations, and the likely emissions reduction impact from different proposed solutions within the allotted timeframe. Ongoing collaborative assessment by RISE, LTH, VTI and Fraunhofer Institute points to that the contribution of e-fuels, hydrogen and reduced road transport in this transition will be minimal, suggesting that a rapid transition to direct electrification, backed up by biofuels, is the only viable path. Potential strategies to greatly accelerate the EU-wide adoption of electric vehicles and phase-out of fossil fuels will be discussed.

In the latter half of the presentation, we will delve into the concept of electric roads. Findings will be presented from a simulation study focused on interaction effects in space and time, revealing how deployment of electric roads would affect the charging infrastructure market and the economic and logistic conditions for adoption of electric heavy trucks. Long-term risks to the economic viability of electric roads will be discussed, along with how to mitigate them, leading to the conclusion that electric roads are a no-regret investment, if accompanied by policy. Finally, we will look at the mechanisms through which electric road deployment could reduce greenhouse gas emissions from road traffic, and the potential impact.

Join us for a comprehensive overview of the future of road transport, as we weigh the benefits and challenges of various decarbonization strategies, and the role electric roads might play in this transition.