# *WHAT CAN ELECTROMOBILITY CONTRIBUTE TOWARDS THE 2030 GOALS?*

Raul Potisepp

Elektritransport LLC

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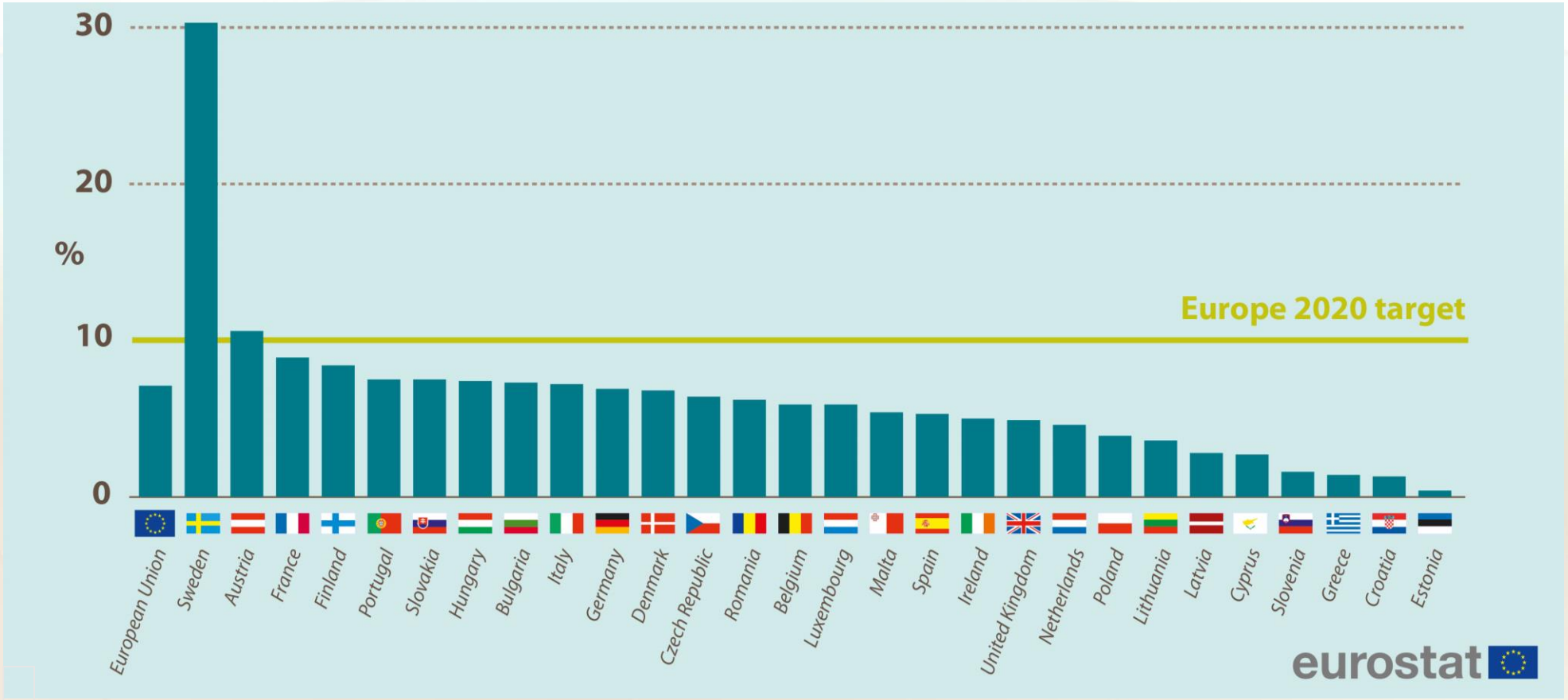
# Share of energy from renewables in transport (2016)



# Electrification (or Batterification) has begun

- IEA predicts 125 million to 220 million electric vehicles by 2030
- Car manufacturers are coming up with electrication plans
- Cost parity with ICE vehicles between 2023-2025
- Falling battery costs

# Falling battery costs


Source: Bloomerg New Energy Finance

# Electromobility in heavier vehicles

- Buses
  - E-buses or BEB (battery electric buses) could become mainstream even before passenger vehicles based on TCO
  - China dominates the market
  - Shenzhen first city in the world to electrify its entire bus fleet (over 16 000 buses)

# Electromobility in heavier vehicles

- Trucks
  - Light and medium duty vehicles operating in urban areas are coming around 2025, heavy duty vehicles achieving price parity around 2027-2030
  - Delivery truck, rubbish truck, milk truck, semi, etc.
  - Bans on diesel vehicles in urban areas (2025, 2030) have positive effect on sales of LDV, MDVs.

# Potential of EVs in Nordics and Baltics

- Nordic EV Outlook 2018
  - Massive increase forecasted in Nordics for EV-s
  - 2017 - 250 thousand, 2030 – 4 million
  - Additional 9TWh (2-3%demand) needed for EV-s
  - Possible to reduce $CO_2$ emissions by 98% (0.2 vs 8.4Mtons) compared with ICE-s
- Baltic Energy Technology scenarios
  - Most ambitios scenario 10% of cars and buses, 20% LDV-s, 5% trucks by 2030
  - Additional 2,2 TWh needed for EV-s
  - Possible to reduce $CO_2$ emissions up to 60% (0.9 vs 2.05 Mtons)
- Closer cooperation between Nordics and Baltics needed

# Contribution to 2030 goals

Direct contribution:

- 14% renewable energy target in transportation sector

Indirect contribution:

- EV-s increase energy efficiency significantly by providing more passenger kilometres using less energy
- Help with integration of renewable (vehicles and used batteries as storage units, V2G)
- EV-s help to lower dependence on imported fossil fuels
- Improved air quality and lower noise levels

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# „Transition from a mobility system fuelled with (imported) oil to one that is driven by renewable energy“

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