



The Karmøy Technology Pilot and Norway's Enova fund

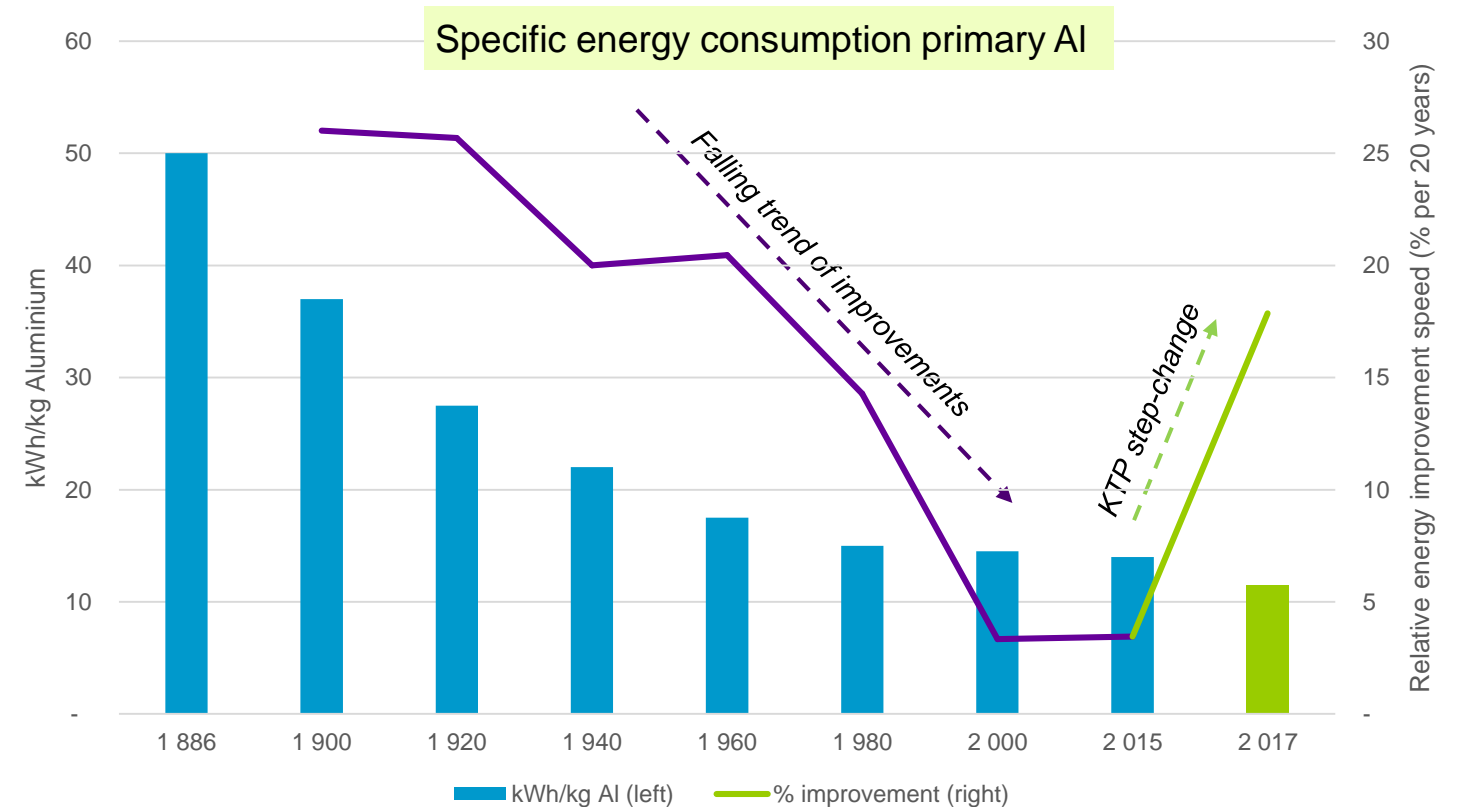
Torkil Tyvold, 17 Feb 2017

Karmøy Technology Pilot - A pilot for the future of aluminium production

Verification of the world's most climate and energy efficient electrolysis technology



Investment cost 550 mill EUR, financial support from Enova 200 mill EUR



GHG savings potential/environment benefits from the project

Effects for a new 500 kt Al smelter

- 1 TWh reduced electricity consumption
- 1 mill ton reduced CO_{2e} emissions for coal-based electricity
- 4.5 mill ton reduced CO_{2e} emissions for location in Norway compared to location with coal-based electricity

Enablers for future growth

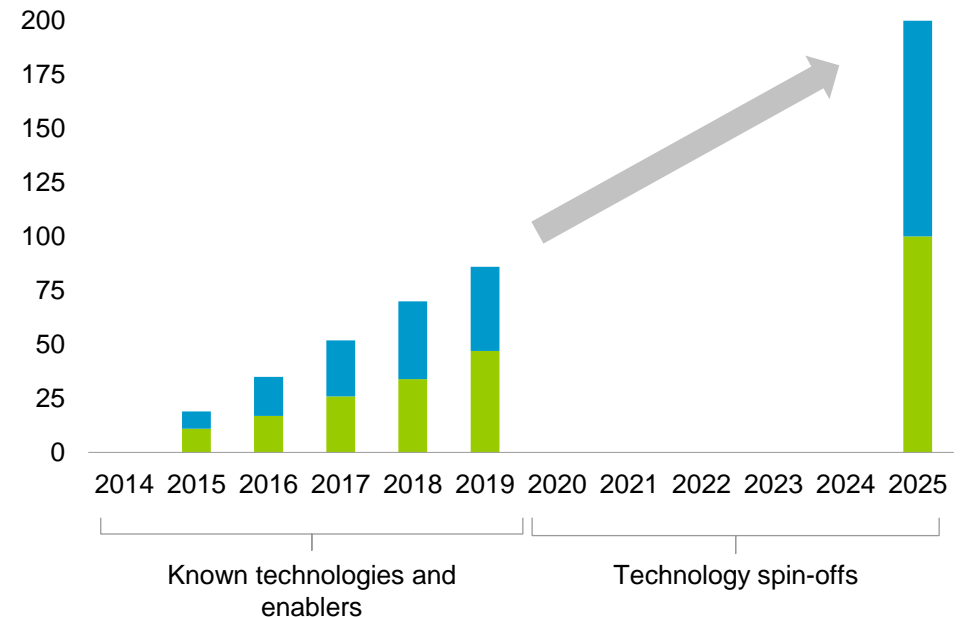
- Support for innovation
 - Predictable framework conditions
- CO₂-compensation

Important spin-off effects from KTP

More than 50% of Hydro's creep ambitions in Europe

Primary Al Production increase 2014-2025

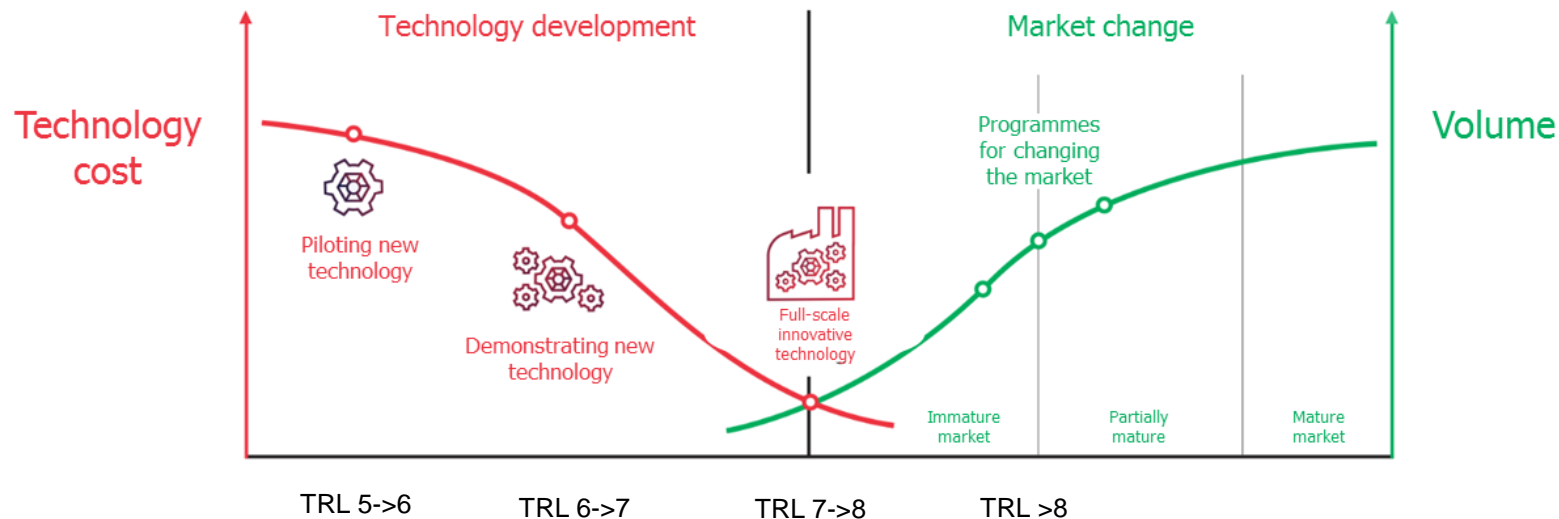
In thousand mt



Enova's support programs* for new technology development

State owned fund for development of technology leading to reduced GHG emissions on a longer term

From piloting to market introduction



- 250 million EUR annually
- 7000 projects since 2001
- Energy savings: 22TWh

* Support to lift commercial full scale operation of the technology to reasonable profitability. Max 25-60% of investment cost depending on company size and TRL maturity.

