



Bundesministerium
für Umwelt, Naturschutz
und Reaktorsicherheit

The Innovation Challenge

Presentation on behalf of the EU

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Need for technological change

Prevention of dangerous climate change
implies move towards a **low-carbon
economy**

Some technology change will occur in any
event – but **substantial additional
technology change is needed** in all
sectors



Bringing technologies to the markets

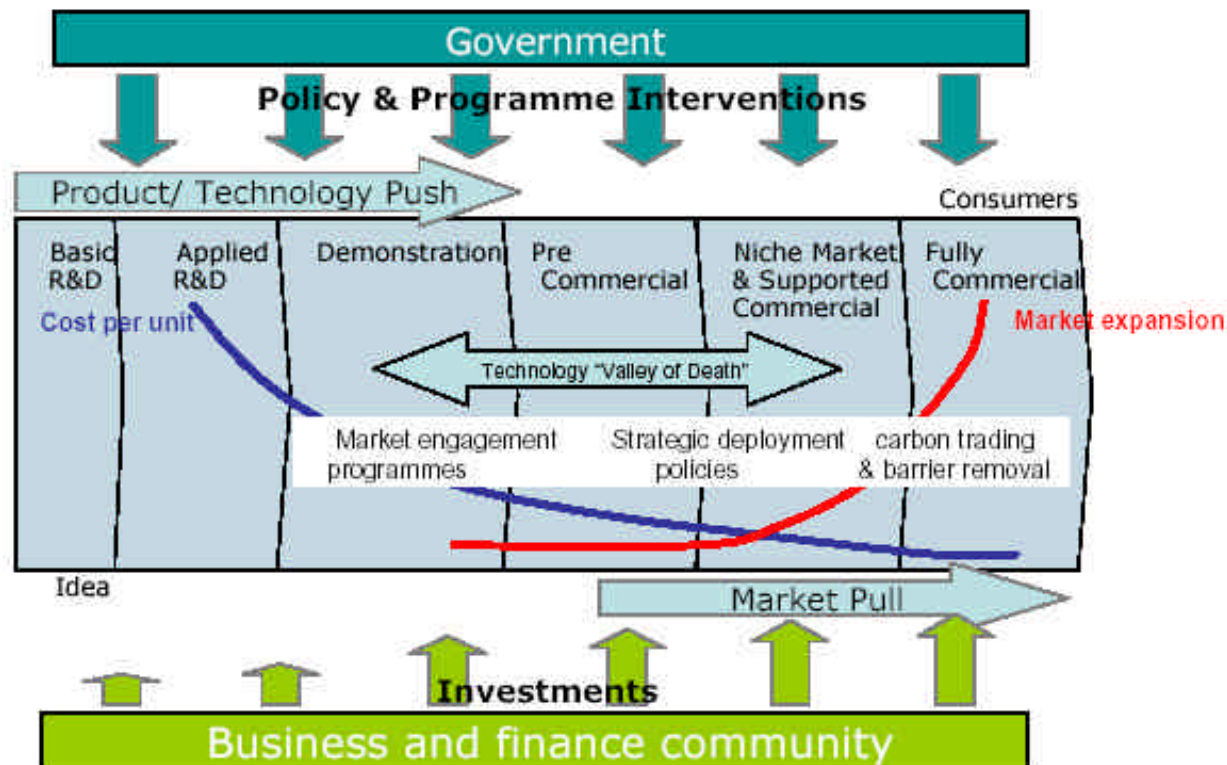
Many technologies to reduce greenhouse gas emissions, e.g. renewable energy technologies or combined heat and power production, **exist already**

Both **existing technologies** and **new advanced technologies** have to be brought to the markets

Technological innovation needs to be linked with **investment cycles** – to **avoid lock-in effects** into high-emission pathways



Technology innovation needs 'push' and 'pull' policies



Source: Michael Grubb (2004)



Example: Renewable Energy

- **European Experience: Cost reduction**
1980 – 1995 through active support policies:
 - By 65% for photovoltaics
 - By 82% for windpower
 - By 85% for electricity from biomass
- **Technology costs will further decrease** -
continuing learning curves and accelerated
mass production



Faster deployment of climate friendly technologies is possible

- **IEA alternative policy scenario:** No increased overall investment needed.
- Gradual transformation requires a **predictable and stable long term policy framework** and **political commitment**.



Questions for SoGE: Role of UNFCCC process

How can we secure a **stable long-term policy framework**.



- to drive technology policy opportunities
- to facilitate and enhance international synergies
- to facilitate the implementation of ‚push‘ and ‚pull‘ policy approaches
- to ensure broad and fair participation with regard to technological change