Environmental technology challenges for the Nordic Countries

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Nordic project on eco-efficient or environmental technology

• Introduction
• Project financed by the Nordic Ministers Council
• Tendencies
  – No global climate change agreement
  – Shortage of resources
  – Economic crisis
  – Green growth or green economy
  – Explosion of information, reports etc.
Why the importance?

- Central to development in environment and economy
- Central to the basis of Green growth
- An number of important reports
  - Economics, cheaper than expected
  - Markeds, large potential
- Cases or stories
  - Finland, UPM delivers paper without flourinated compounds
  - Sweden to Denmark, household waste, biogas/burn
  - Iceland, Verne Global zero carbon datacenter
Recommendations 1

• 1) Improve demand side activities
  – Binding green public procurement
  – Role of the ministries of environment

• 2) Sufficient manpower resources
  – Administration, analysis etc.

• 3) Sufficient amounts of funding available
  – Demonstration activities
  – More information, analysis, examples
Recommendations 2

• 4) Use evaluations
  – No serious evaluations

• 5) Clear use of concepts
  – Ecoefficient or environmental technology
  – Resource efficiency and eco-innovation

• 6) Strong leadership and efficient coordination
  – Political leadership
  – State actors
Recommendations 3

• 7) Improve international cooperation
  – Nordic level, EU-level

• 8) Concrete strategies for Green Growth
  – To improve eco-efficient technology

• 9) Improve statistics and knowledge
  – Companies
  – Exports
  – Patents
  – Funding
Obstacles 1

• Politicians
  – Little or no experience and knowledge
  – Focusing on short term perspective

• Civil servants
  – Protecting the existing
  – Difficult to be innovative

• Different ministerial interests
  – Strong economic ministries
  – Sectorministeries in favor of sectors
  – Ministries of funding versus ministeries of regulation
Obstacles 2

• Science versus demonstration
  – Too much focus on science

• Conflicting interests
  – Good position on energiefficiency versus cheap energy available
**Recommendations to Countries 1**

- **Denmark (windpower position (?))**
  - Improving energyposition
  - Needs to do more on environment: MUDP, GUDP, Fornyelsesfonden, more strategy

- **Finland (a number of interesting reports)**
  - New actionplan from government needed
  - Focus on implementation
Recommendations to Countries 2

• Iceland (large potential to become a zero carbon country)
  – Implement the strategy on green economy
  – Develop the potential from geothermal energy

• Norway (good quality reports and serious approach)
  – Implementation of the new strategy
  – Better coherence between policy statements and instruments or efforts
Recommendations to countries 3

• Sweden (in front on a number of areas)
  – Implementation of the new strategy
  – Find a way to carry on the good work of Swentec
Work for a common cause

• Set up

• Denmark
  – Report on the new climate strategy: zero fossil energy in 2050
  – Report on eco-efficient technology in the agricultural sector

• Finland
  – Report on promoting demand side aspects
  – Report on user-driven innovation
Work for a common cause 2

• Iceland
  – Report on the road to green economy
  – Report on the future use of geothermal energy

• Norway
  – Report on the aspects of CCS (carbon capture and storage)
  – Report on high efficiency of energy use in industry
Work for a common cause 3

- Sweden
  - Report on sustainable cities
  - Report on green public procurement