The Research Council of Norway

Energy Research in Norway

Fridtjof Unander
Executive Director, Division for Energy, Resources and The Environment
The Research Council of Norway

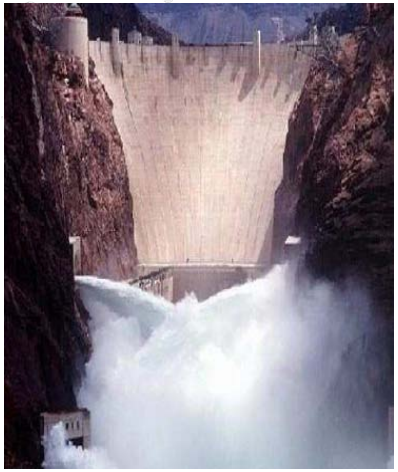
The Research Council's roles

- Adviser to the government
- Covers all scientific and technology fields
- Research funding
  - Support basic research
  - Implement national thematic priorities
  - Support private R&D
- Networking and dissemination
- International collaboration

National starting point –

Norway is "an energy nation"

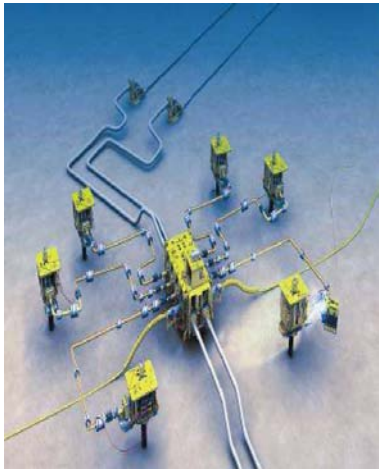
Oil , gas
Maritime

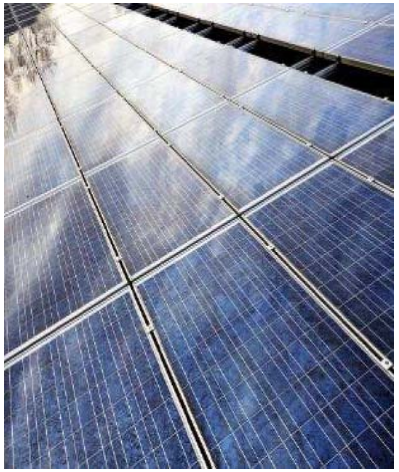


Hydropower

Sun and wind

Market design
Infrastructure



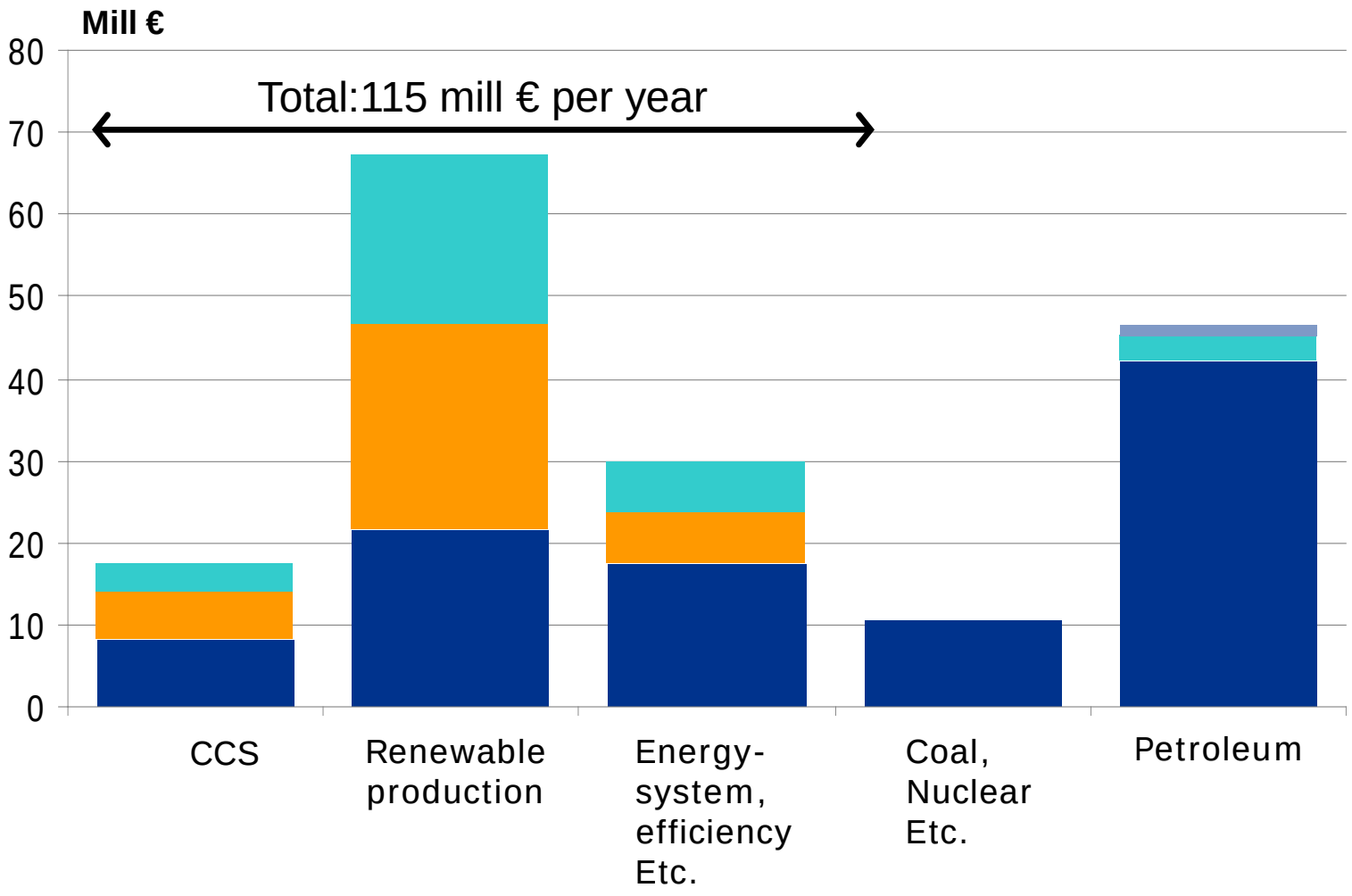


Energy & Climate R&D
Norwegian strategic model

- Strategic, long-term, involving key players and politically rooted
- National strategies designed and developed by industry, government and research institutes
- **OG21** - technology strategy for the Norwegian Continental Shelf and the Norwegian supply industry
- **Energi21** - R&D strategy for the energy sector

A significantly increased energy R&D portfolio

2008 + Climate agreement 2009 + Climate agreement 2010

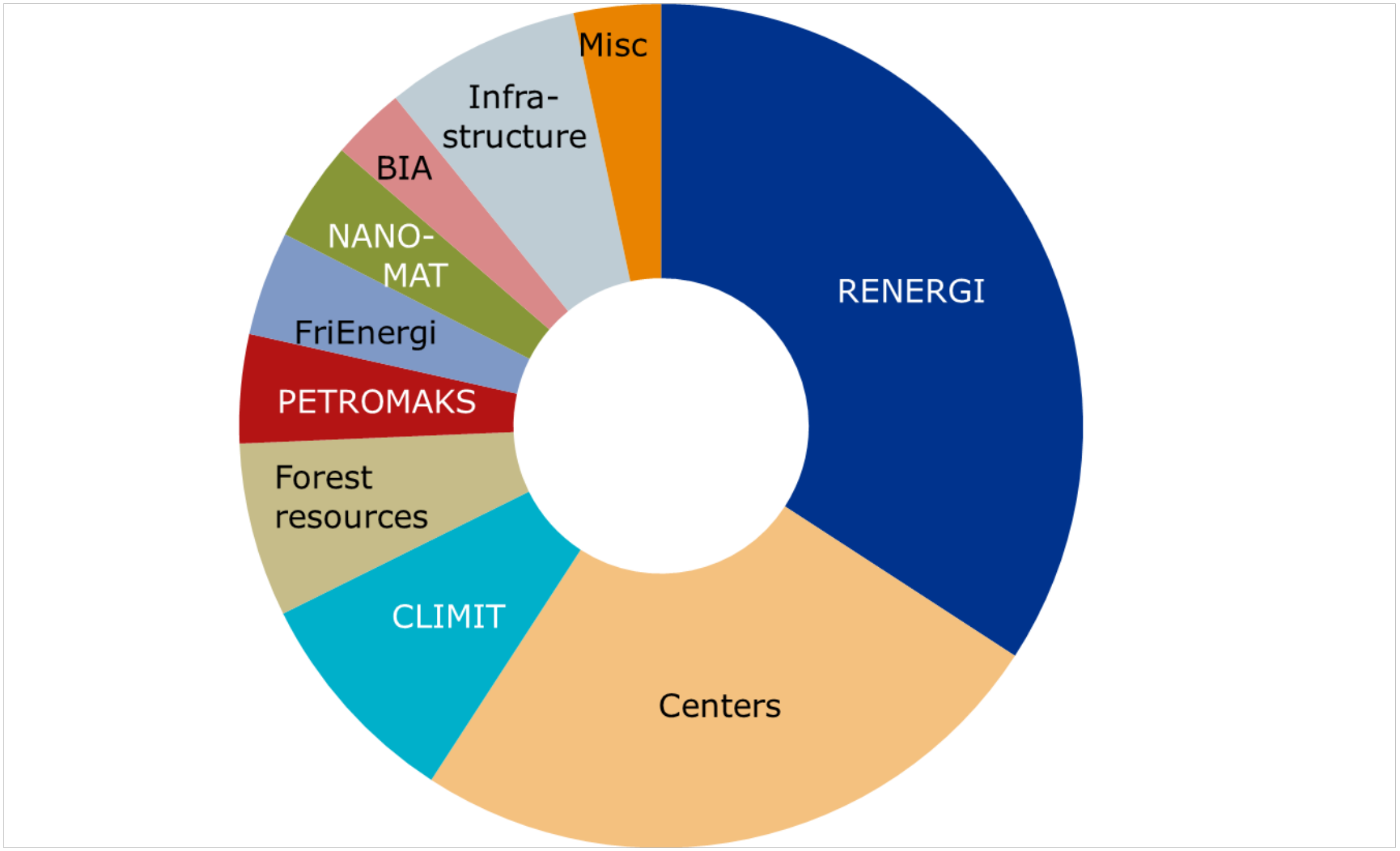


Priority Setting for Implementation

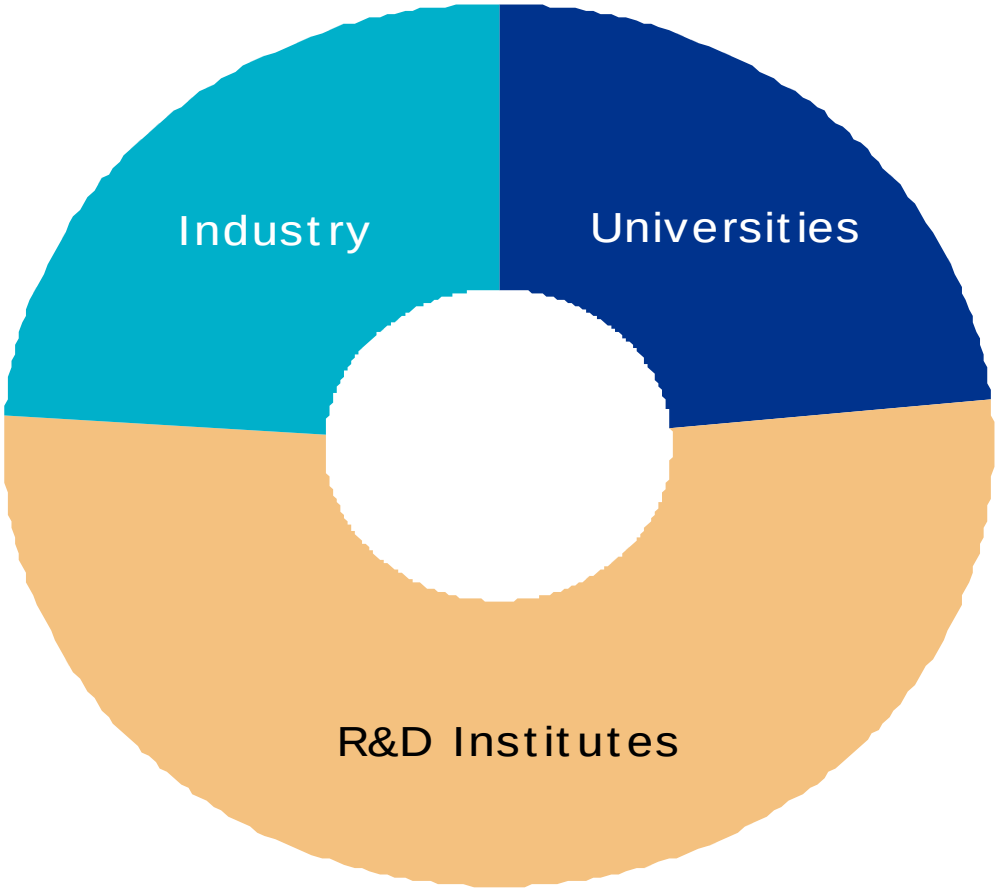
- Priorities - topic
  - Energi21 recommendations
  - Areas important for national energy and climate policy
  - Areas with potential international markets where Norway has advantages

- Priorities – instruments
  - New Research centres
  - Programs – Basic Science – Innovation
  - Infrastructure
  - Test/pilot projects
  - International collaboration

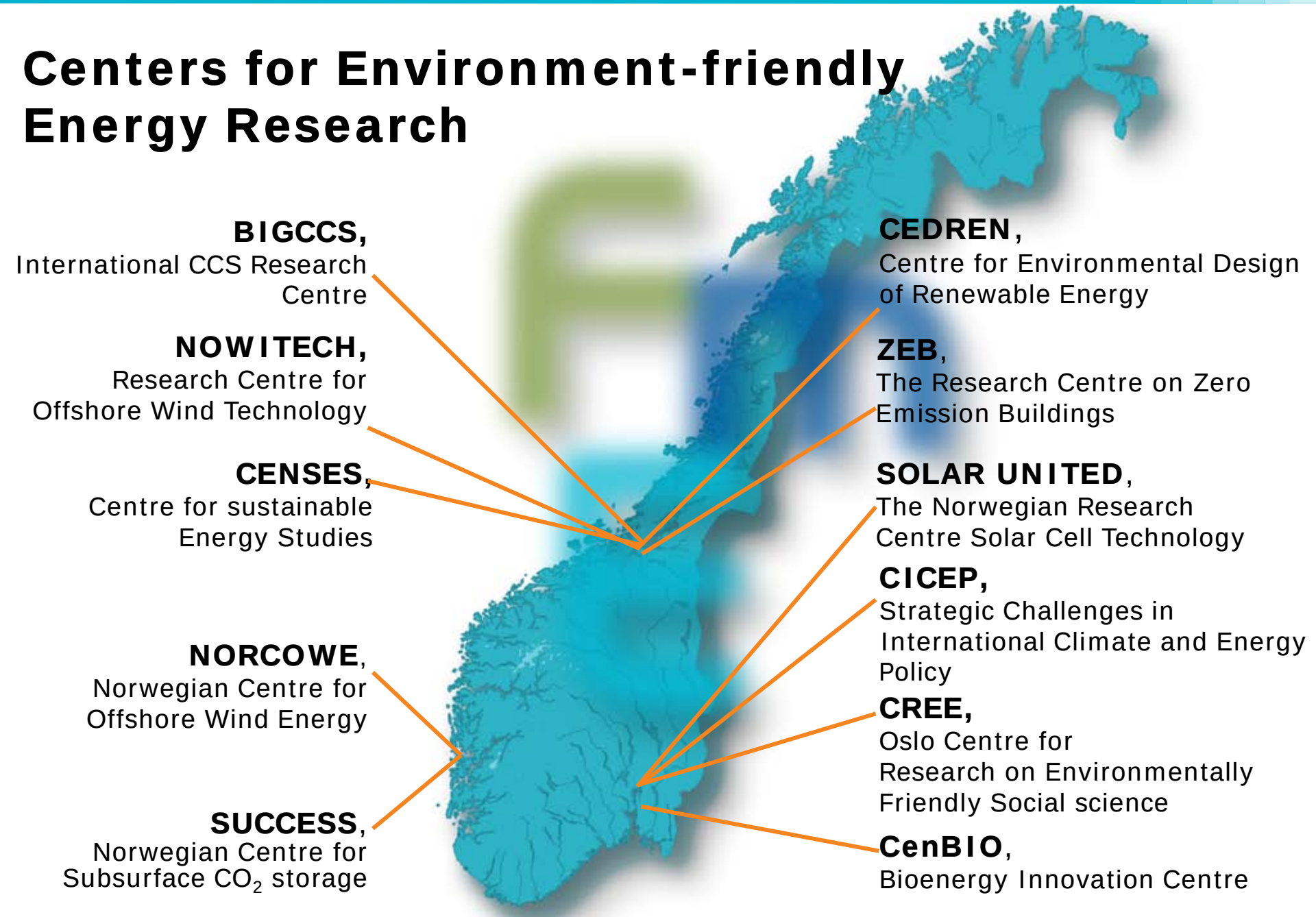
Climate Agreement
Growth 2008-2010 – by Instruments



Climate Agreement
Growth 2008-2010 – by Sector



Centers for Environment-friendly Energy Research



BIGCCS,
International CCS Research Centre

NOWITECH,
Research Centre for Offshore Wind Technology

CENSES,
Centre for sustainable Energy Studies

NORCOWE,
Norwegian Centre for Offshore Wind Energy

SUCCESS,
Norwegian Centre for Subsurface CO_2 storage

CEDREN,
Centre for Environmental Design of Renewable Energy

ZEB,
The Research Centre on Zero Emission Buildings

SOLAR UNITED,
The Norwegian Research Centre Solar Cell Technology

CICEP,
Strategic Challenges in International Climate and Energy Policy

CREE,
Oslo Centre for Research on Environmentally Friendly Social science

CenBIO,
Bioenergy Innovation Centre

Research Centers as a driving force

- Concentration of the best Norwegian competence in a long-term and concentrated effort
- Provide a platform for taking R&D results to the market
  - Innovation through clustering the country's leading companies, research institutes and universities
- Increase the visibility of the research efforts
  - Attractive for government and industry
- Visible spear heads for international R&D collaboration
  - Leading actors unified under one umbrella
  - Clear targets for international collaboration

A more attractive partner for international collaboration

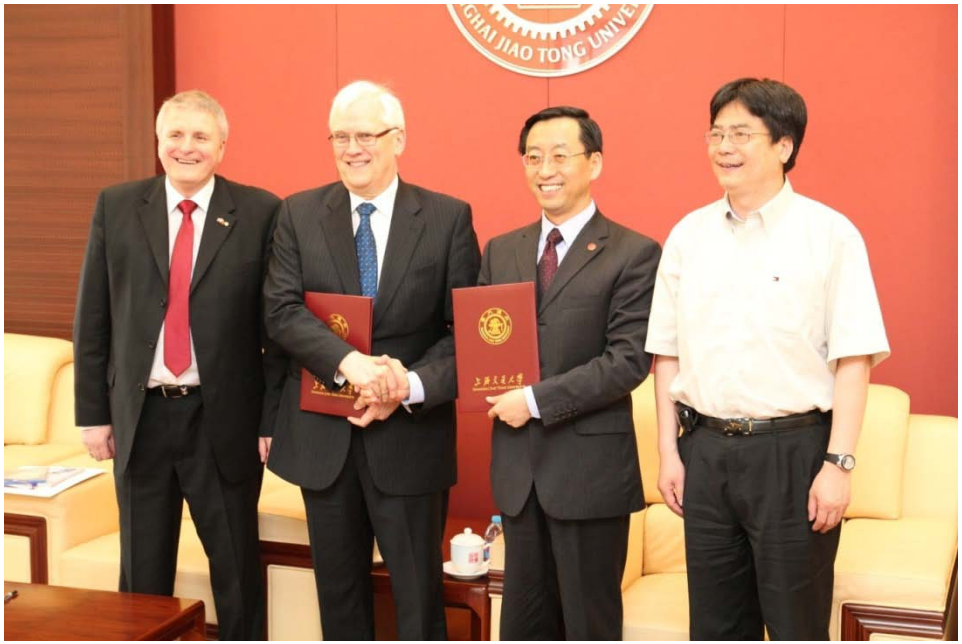
- Increase of nearly 3x R&D volume in less than 3 years
- Allowed for a structured effort to strengthen Norway in areas where we have advantages
- International collaboration a high priority
  - Strengthen research quality
  - Develop knowledge for solving global challenges
  - Value creation for industry
- Increased budgets for key energy R&D programs offer more opportunities to support projects with international collaboration

Priority countries

Institutional R&D Cooperation

RCN goals:

- To promote lasting relationships with successful research institutions
- To develop financial instruments to support long-term cooperation between Norwegian institutions and corresponding institutions in other countries
- To strengthen Norway's role as a leading research nation in selected areas.



Signing of JRC-agreement at Shanghai Jiao Tong University, May 2010

THANK YOU FOR YOUR ATTENTION!