



FEEM seminar

Does the EU have a climate/energy technology deployment strategy?

Christian Egenhofer

Senior Research Fellow

Centre for European Policy Studies, Brussels;
Visiting professor College of Europe (Bruges, Natolin),
SciencesPo (Paris), LUISS (Rome)

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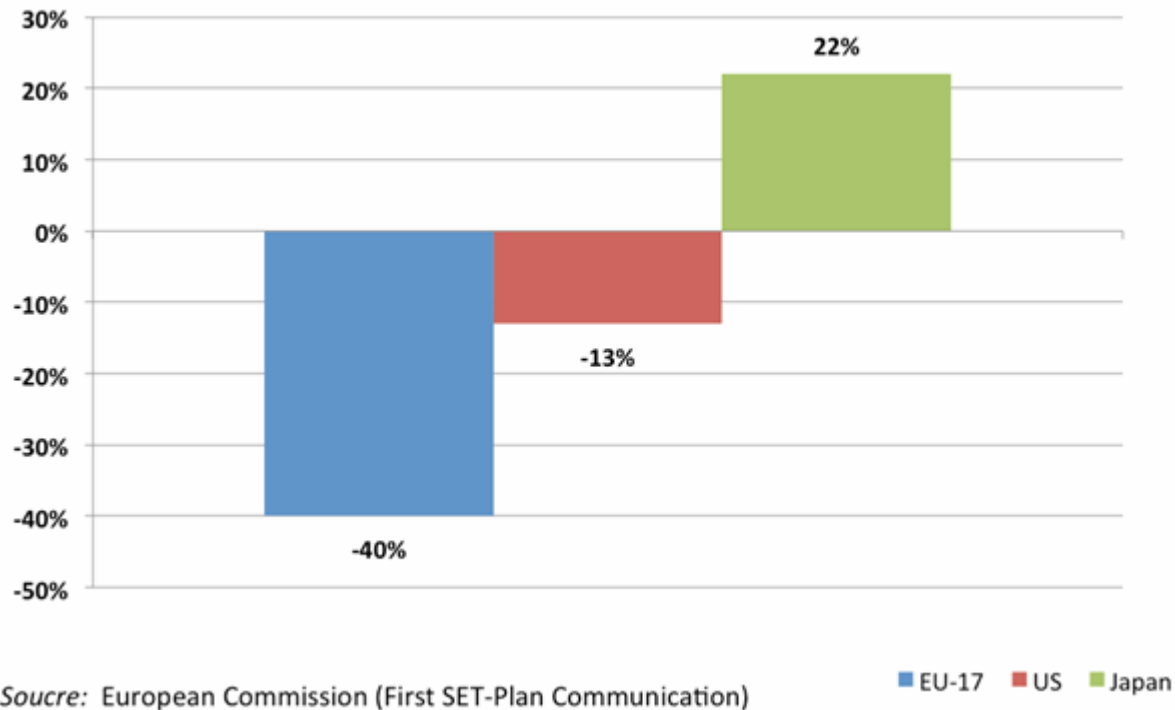
**Governments want to accelerate rate of innovation, investment
& technological step change**

- **EU Climate Change policy (20-20-20)**
- **Europe 2020 (economic growth) strategy**

- **Research & development**
- **Demonstration**
- **Deployment**

... of existing and new 'green' technologies

Figure 1: Comparative evolution of energy R&D public expenditure in the EU-17, the US and Japan between 1991 and 2005



→ Strategic Energy Technology (SET)-Plan



What is SET-Plan?

Commission brochure:

More than just a research agenda: The SET-Plan is not just a list of research priorities; it includes eight lines of action designed to guarantee its successful implementation. These put in place the governance structures and mechanisms to guide and track the implementation of the plan.

DG ENER: The European Strategic Energy Technology Plan - Towards a low-carbon future

The Commission presents a strategic plan to accelerate the development and deployment of cost-effective low carbon technologies. This plan comprises measures relating to planning, implementation, resources and international cooperation in the field of energy technology.

DG Research:

The EU supports a broad portfolio of energy technologies ... This support is embedded in the policy framework of the SET-Plan.

DG CLIMA Roadmap 2050: “research and demonstration” (p. 5)

DG Move:

(in reference to SET-Plan) ... “innovation and deployment strategy” (Transport White Paper, p. 14)



SET-Plan (Cont'd)

- **Major differences across technologies or technology clusters in relation to the nature of barriers which are dependent on the technology maturity,**
 - proven technologies that show potential for commercial deployment,
 - proven technologies that are not yet commercially competitive and,
 - unproven technologies with significant research and development.
- **Support for R&D and demonstration are well established, the role of *early* deployment support is less prominent.**



7 EU Industrial Initiatives

- European Industrial Bioenergy Initiative (EIBI) (Nov 2010)
- European Sustainable Nuclear Industrial Initiative (ESNII) (Nov 2010)
- Wind European Industrial Initiative (WEII) (June 2010)
- Solar Europe Industry Initiative (SEII) (3 June 2010)
- Solar Thermal Electricity European Industrial Initiative (STE-EII) (June 2010)
- The European Electricity Grid Initiative (EEGI) (June 2010)
- Carbon Capture and Storage European Industrial Initiative (CCS-EII) (June 2010)
- Smart Cities European Industrial Initiative (EII) (September 2011)

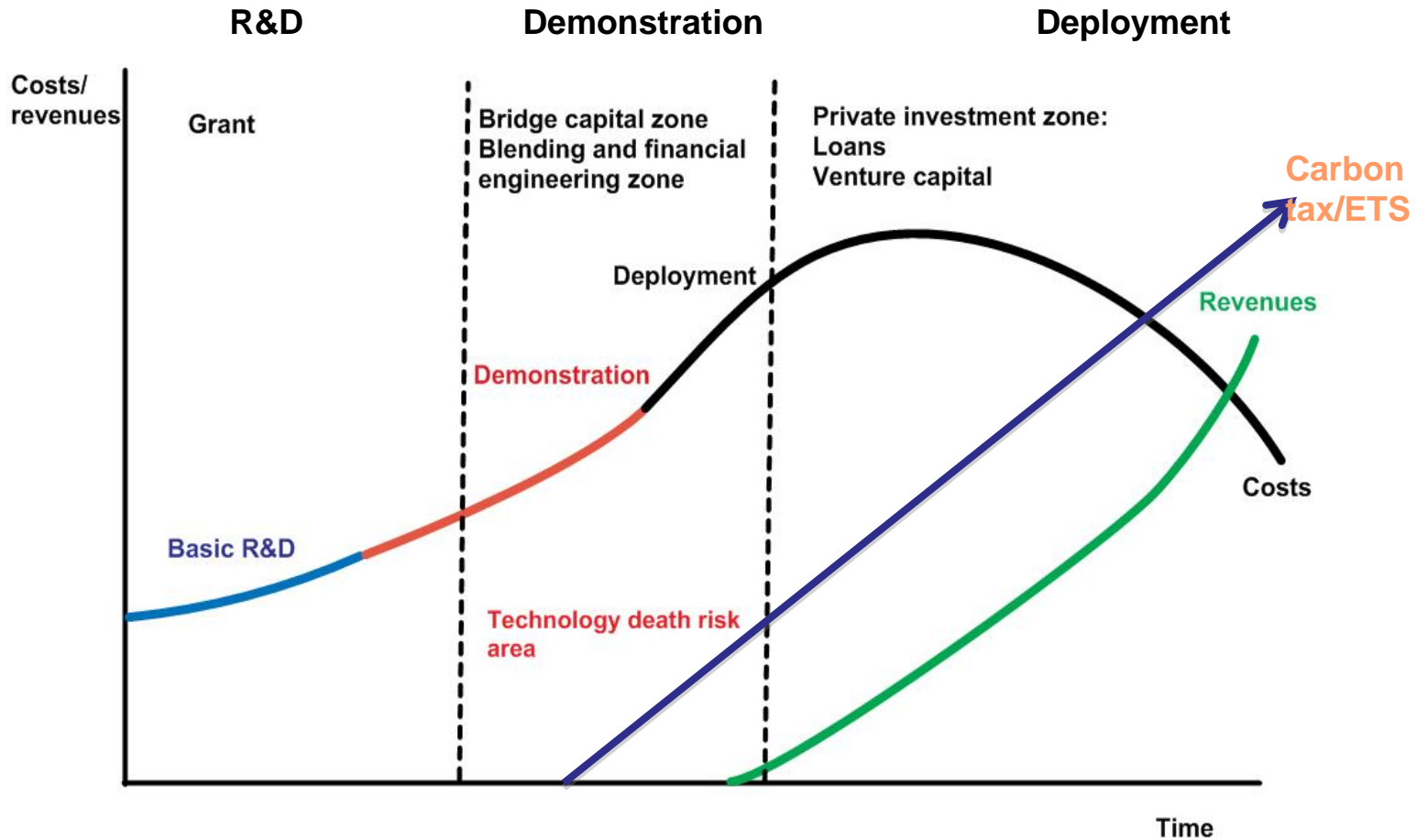
→ Goalpost for 2020 and 2050

Why support (for early deployment)?

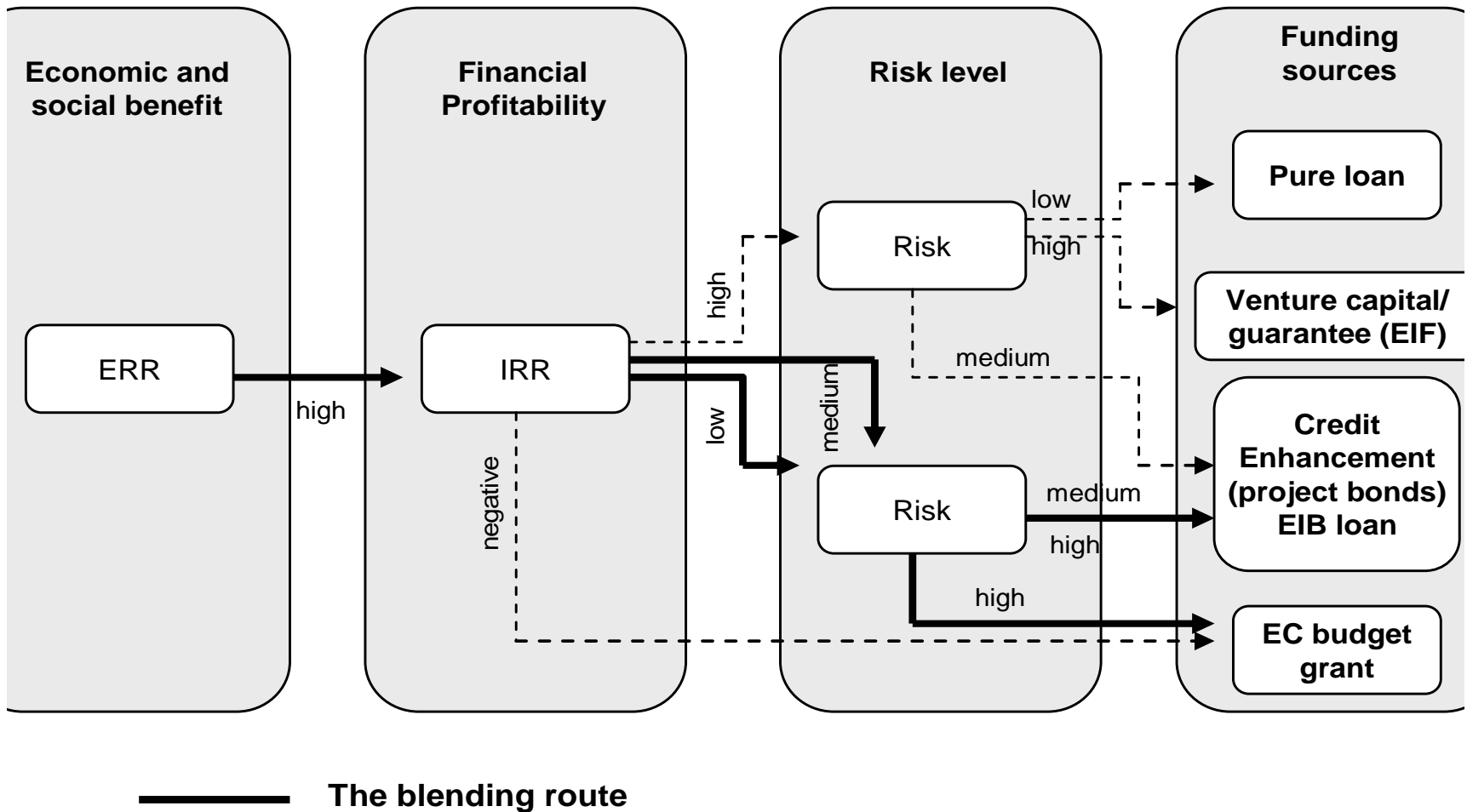
- Market and financial risks
- Technology risks
- To overcome the disadvantage that new technologies have if the infrastructure for existing technologies is paid off
- Market failure

Technology neutrality?

Government intervention, e.g. finance, regulation, other is warranted



Source: Jorge Núñez-Ferrer, Christian Egenhofer & Monica Alessi, 2011



EU added value ?

EU framework/governance pools innovation capabilities

- collaboration
- economies of scale & cross-border effects
- Too costly for one member state
- Avoid duplication
- More leverage by EU finance

EU lead: CCS, grids, nuclear

Other: EU coordination

Where does money come from ? (Closing the gap)

EU

- Leveraging EU funds
- Bridge finance: blending; balancing grants and loans, Risk-Sharing Financing facility
- EU budget
- Project bonds
- NER 300
- Innovation/technology accelerator

Support: €8 billion p.a.

25% EU; 35% MS; 40% business

Shortfall: €5 bn (of which EU 1.7)

Harnessing the potential other sources

- Improving management of EU innovation and research policy
- Structural and cohesion funds
- Public procurement
- Coherence of state aid between EU and member states

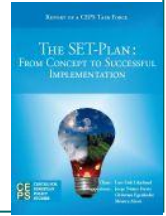
Recommendations



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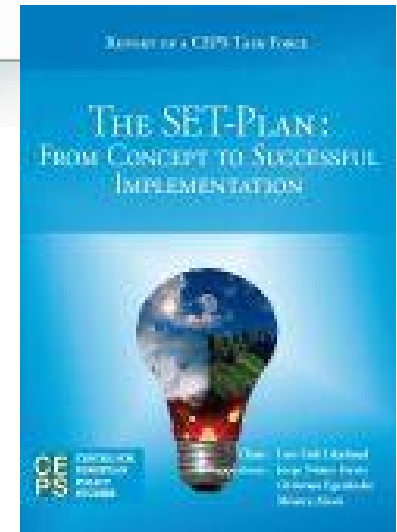


1. **Start with economic framework: integrated and competitive energy market with appropriate cross-border infrastructure and prices that reflect externalities**
2. **In parallel: address specific non-market barriers and finance**
3. **EU lead: (smart) grids, CCS, nuclear**
4. **All technologies: Commission coordination → compatibility, avoid duplication, spread best-practice and ensure inclusion**
5. **Finance: + grant for basic research; + bridge finance to cover ... risks**
6. **→ Risk-sharing facilities**
7. **More**
 - **Member states must use Cohesion and Structural Fund resources**
 - **EU procurement rules**
 - **Align state aid guidelines**
 - **Reform financial and control rules for EU research funding (Carvalho Report - EP)**
 - **Address issue of IPR rules**

Research Agenda

1. **Understanding innovation: more than R&D, how to support (government-led) system transformation**
2. **Financial engineering for low carbon technologies: “horses for courses”**
3. **Identify the EU’s added value: excellence; inclusion**
4. **Policy reform**

Content



Preface

Executive Summary & recommendations (6 pages)

Introduction

1. **The SET-Plan: A pillar of EU Climate Change, Energy and Growth Strategies (pp. 11-20)**
1. **Closing the EU Financing Gap for Innovation (pp. 21-33)**
 - Expanding leverage of EU funds
 - Bridge financing
 - Increasing the contribution from EU budget
 - Project bonds
 - NER 300
 - Innovation/technology accelerator
3. **Harnessing the Potential of the SET-Plan through Policy Coherence (pp. 34-38)**
 - Management of EU innovation and research policy
 - Synergies SET-Plan and EU Structural and Cohesion Funds
 - Public procurement
 - Coherence of state aid between EU and MS

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