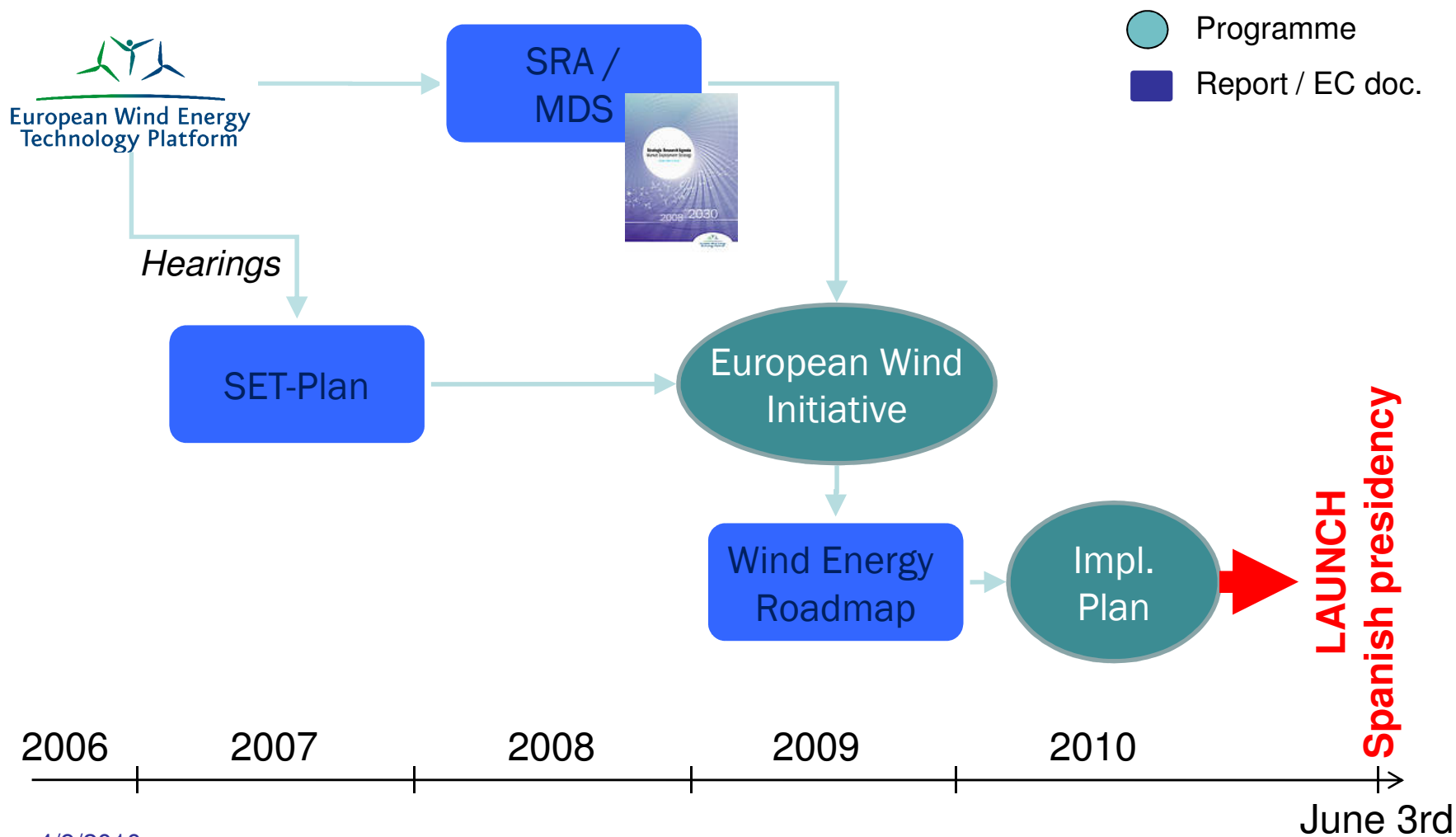


Wind Energy Technology Roadmap

Implementation plan 2010 - 2012



TPWind involvement in SET-Plan process







Implementation plan – Guidelines – Dec. 09

The implementation plan should cover the first 3-year period and will be revised every year, thus becoming rolling out programmes. The following elements should be included:

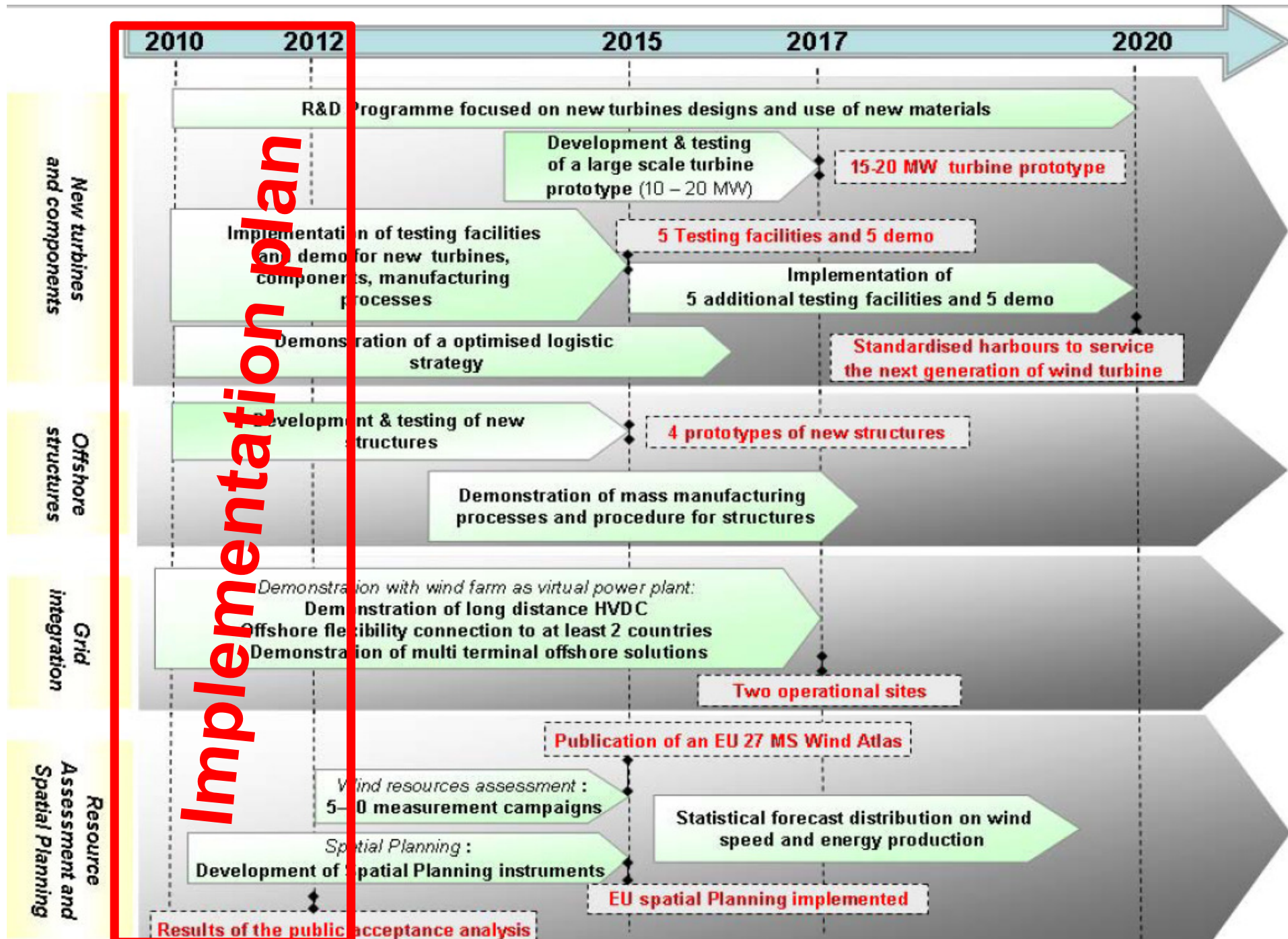
- Taking into account the present technology, and projects financed by the EU and Member States, identifying the priority actions to move towards the objective / milestone
- Estimate the budgets, the European added-value of the actions and the risk involved by the different actions
- Identify the existing available public and private financial sources
- Identify the needed actors and potential countries to finance the actions
- Define Key Performance Indicators
- Estimate the contribution of the identified priority actions towards the 2020 objectives/milestones
- Identify possible links with joined programmes of the EERA
- Deadline: End Jan. 2010



Process

- Dec. 09 
- Draft from 5th GA content
 - Draft circulated to SC, telcos with Chairs and Vice-chairs
- Feb. 10
- Presented by EC to MS experts (Sherpas, feb. 11th)
 - Comments included by Secretariat
 - Presented by EC to High level steering group (March 5th)
- Mar. 10
- Council decision on Ells launch “before 2011” (March 12th)
 - On period Jan. – March, Secretariat visited 10 countries to present and discuss implementation plan (Sherpas and Steering Group members) – It, UK, Fr, Ge, Sp, Pt, Se, Fi, De, Au, + NI, Gr, Be
 - Side meetings: international cooperation, JRC meeting on KPIs, DG RTD on training, EC/ TPWind meeting on grid initiative
- June 10 
- Need development on KPIs
 - Launch under Spanish Presidency – “letter of intent”

Implementation plan





Financing instruments

Preliminary research / Policy actions	Pre-competitive research	Demonstration / Test facilities	Market uptake / Innovation / Private infrastructures
<ul style="list-style-type: none"> 1.1.1 (Large turbines) 4.1.1 (Measurement campaigns) 4.2.1 (Offshore spatial planning) 4.3.1 (Economic value of wind) 	<ul style="list-style-type: none"> 1.1.2 (Reliability) 1.1.3 (Complex terrains) 1.1.4 (Cold climates) 1.2.1 (Testing standards) 3.2.1 (Wind Power Plants) 3.3.1 (Balancing technologies) 3.3.2 (Market integration) 	<ul style="list-style-type: none"> 1.2.2 (Large testing facilities) 1.2.3 (Large field testing facilities) 1.3.1 (Large-scale manufacturing) 2.1.1 (Offshore sites) 2.3.1 (Standards) 3.1.1 (Kriegers Flak) 3.1.2 (HVDC multi terminal solutions) 	<ul style="list-style-type: none"> 2.2.1 (Mass manufacturing of substructures)
<p>EU Grants, Member States for relevant actions</p> <p>Total public funding level 50%</p>	<p>EU Grants, Member States for relevant actions</p> <p>Total public funding level 50%</p>	<p>EU Grants, Member States, equity (EIB)</p> <p>Total public funding level 50%</p>	<p>Member States, Loans or equity (EIB)</p> <p>Total public funding level 25%</p>

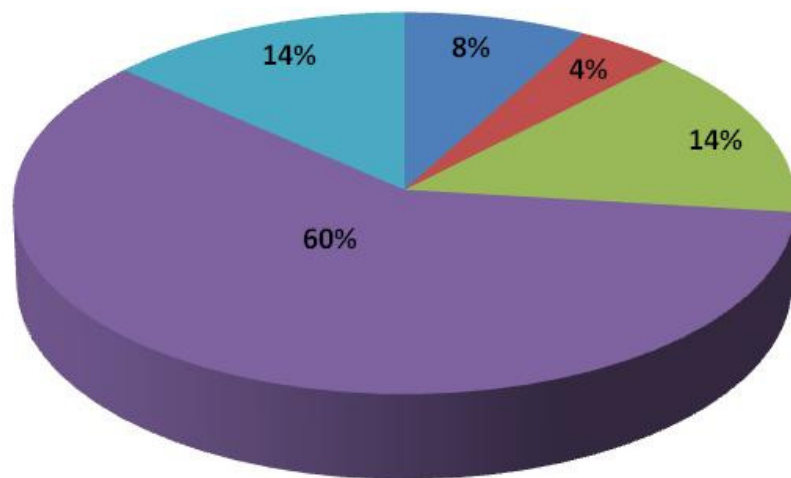


Budget intensity

Technology objectives	Total budget (M€)	Budget (M€) on period 2010-2012	Budget intensity
1. New turbines and components	2 500	760	30%
2. Offshore structure-related technologies	1 200	310	25%
3. Grid integration	2 100	334	16%
4. Resource assessment and spatial planning	200	36	18%
Total incl. EEPR	6 000	1443	24%
Total excl. EEPR	6000	924 (EEPR 519)	15%



Budget intensity incl. EEPR



■ EU funds contributing to implementation plan activities

■ National schemes, incl. EERA, contributing to implementation plan activities

■ EEPR funding

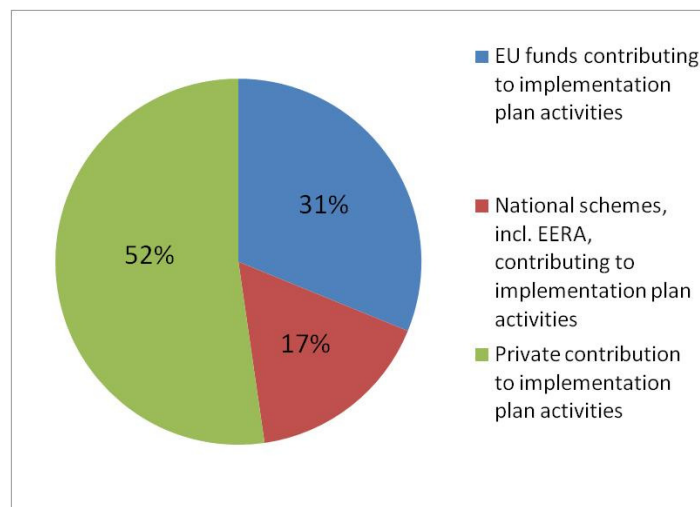
■ Private contribution to EEPR

■ Private contribution to implementation plan activities

EEPR €519 m
Ind. €2.1 bn



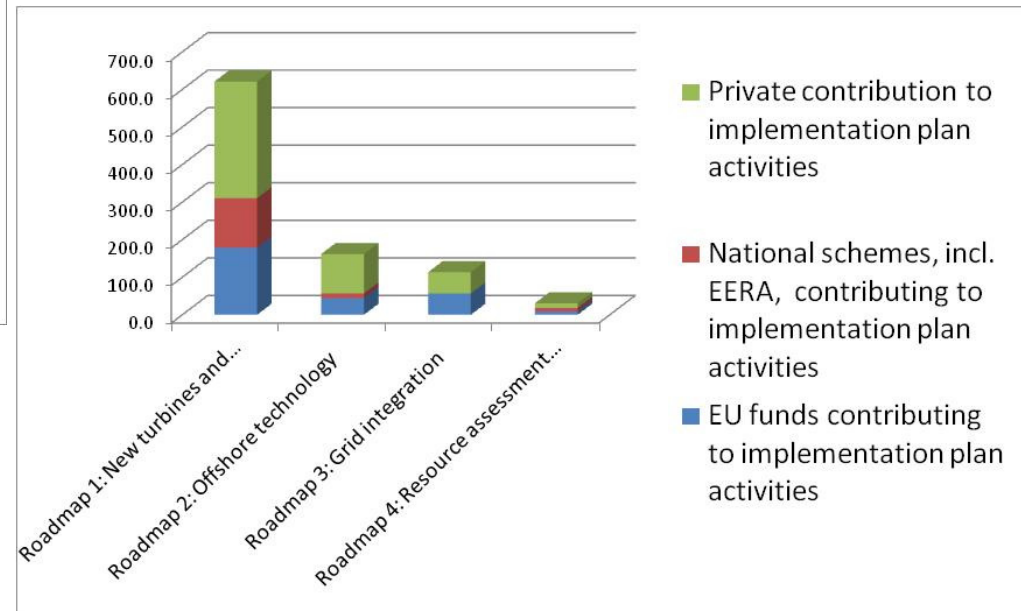
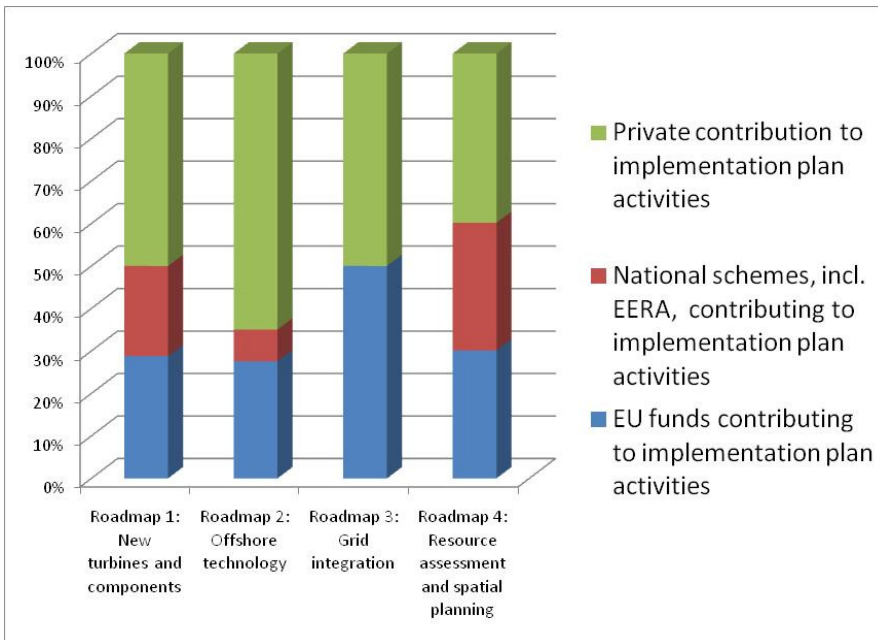
Budget intensity and repartition for new funds



Roadmap strand	EU funds	National schemes, incl. EERA	Private contribution
Roadmap 1: New turbines and components	178.5	132.0	310.5
Roadmap 2: Offshore technology	44.6	12.1	105.3
Roadmap 3: Grid integration	56.7	0.0	56.7
Roadmap 4: Resource assessment and spatial planning	9.3	9.3	12.3
Total	289	153.4	484.7

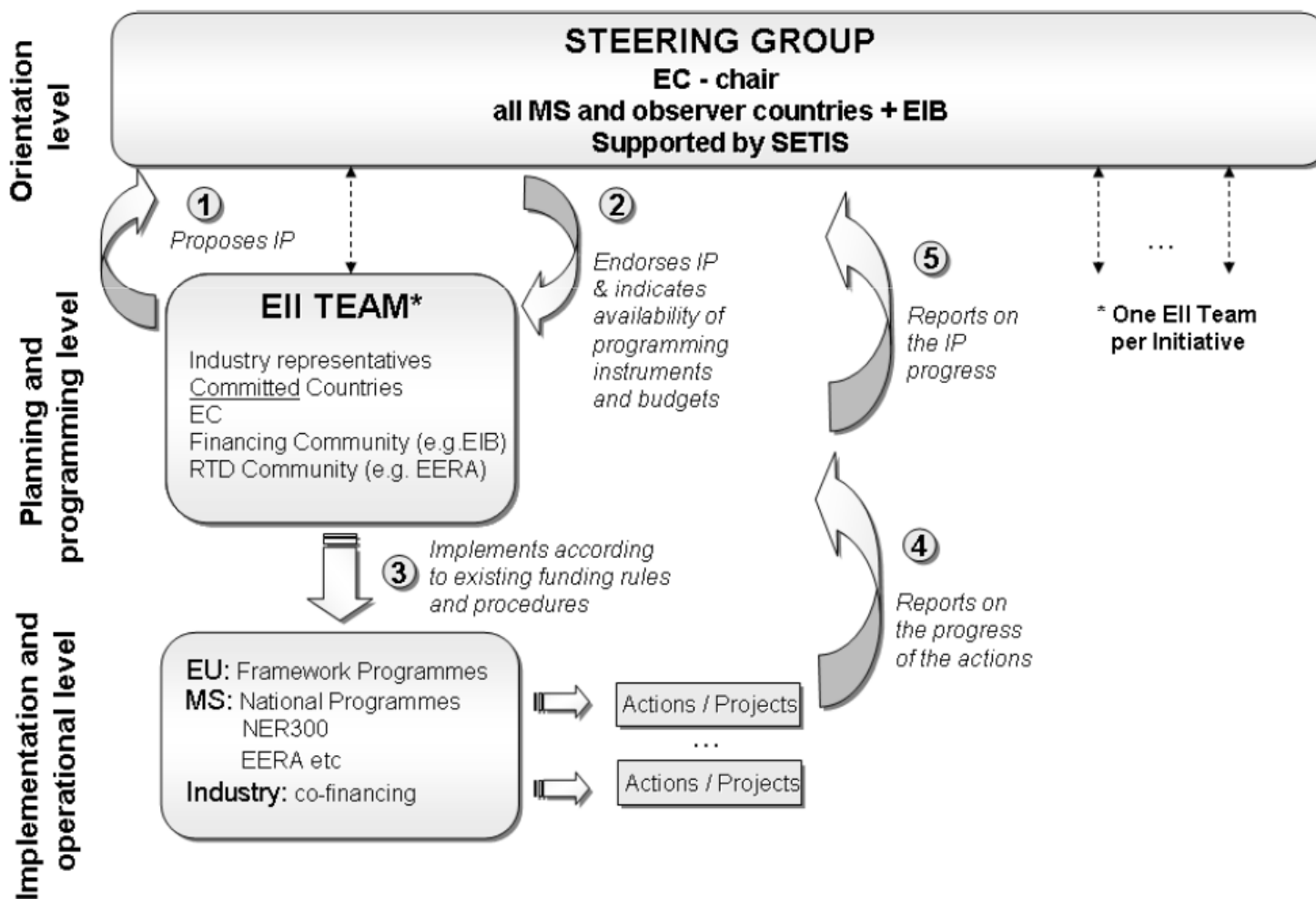


Budget intensity and repartition for new funds





Governance





One funding instrument: NER300

- ❑ Substantial fund for demonstration of low-carbon power, at the moment worth around €4bn
- ❑ Targeting key technologies of the future with a good technological balance - minimum of 8 CCS projects and 34 RES projects
- ❑ Major support for European leadership in clean technology, green growth and jobs
- ❑ European Investment Bank will assist in swift implementation of the demonstration programme.
- ❑ First call for large-scale demonstration projects mid 2010, with first decisions end 2011, to allow plants to be in operation by end 2015.



One funding instrument: NER300

- ❑ Off-shore wind (minimum turbines size 6 MW) with nominal capacity 40 MW
- ❑ Off-shore wind (minimum turbines size 8 MW) with nominal capacity 40 MW
- ❑ Off-shore wind (minimum turbines size 10 MW) with nominal capacity 40 MW
- ❑ Floating off-shore wind systems with nominal capacity 25 MW
- ❑ On-shore wind turbines optimised for complex terrains (e.g. forested terrains, mountainous areas): with nominal capacity 25 MW
- ❑ On-shore wind turbines optimised for cold climates (compatible with temperature lower than - 30 °C and severe icing conditions) with nominal capacity 25 MW
- ❑ Award decisions for the first round should be issued by 31 December 2011, and for the second round by 31 December 2013



Project selection

European selection to ensure a comprehensive technology portfolio and geographical balance, but with a strong Member State role

- ❑ Member States assess eligibility and identify which projects they wish to submit
- ❑ Flexibility to submit projects below the RES thresholds if a Member State has no project in a particular sub-category that is above the threshold
- ❑ EIB assesses the financial and technical robustness of proposals, and ranks according to cost per unit performance
- ❑ Commission confirms overall funding package with Member States, consults the Climate Change Committee, and makes the final award decisions
- ❑ At least one, but no more than three, projects per Member State to ensure geographical balance, does not include transboundary projects



Calls

- ❑ Two sets of calls for proposals
 - First covers 200m allowances and decisions will be taken by end 2011
 - Second covers 100m allowances and decisions will be taken by end 2013
 - Decision will be reviewed and can be adjusted after first call based on experience and with a view to achieving overall technological and geographical balance

- ❑ Funding is in principle 50% of extra investment and operating costs for demonstration
 - But will take account of funds received under EEP and funds from operator

- ❑ Investment decisions and permits need to be in place within 24 months, extension for saline aquifers to 36 months



Projects to be supported

Good balance between CCS and RES, determined by demonstration needs:

- ❑ Minimum 8 CCS projects in four categories
 - At least one and at most three of pre-combustion, post-combustion, oxy-fuel, industrial applications

- ❑ Minimum 34 RES projects
 - In eight categories: bioenergy, concentrated solar, photovoltaics, geothermal, wind, ocean, hydropower and distributed renewable management (smart grids)
 - Where MSs have no project above the threshold for a given sub-category, they can propose projects below the threshold
 - If there are no projects in some sub-categories, additional projects can be funded in others



EIB's role

Centralised monetisation to streamline conversion of allowances and confirm available funding

- EIB will sell allowances on secondary market and manage the revenues
- EIB will pass revenues to MSs as required for project financing
- Amount of funding available is clear at time award decisions are made, so removing carbon price risk
- EIB reimbursed for its services from income generated from its management of revenues



Timetable

- EP and Council scrutiny until May 2010
- Assuming successful, formal adoption of the proposal by COM in May/June 2010
- Launch of call for proposals early summer
- Projects to submit applications to MSs mid-Autumn
- Member States to submit applications to EIB end 2010
- EIB evaluation and ranking during 2011
- Consultation of CCC and final COM decisions on awards by end 2011
- First round projects operational by end 2015



European Wind Energy
Technology Platform

NER300 timeline – call 1

Website

<http://www.ner300.com/>

Thank you for your attention!



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Technology Platform

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