The added value of the European Wind Initiative

European Wind Energy Technology Platform

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The European Wind Initiative – introduction

- The European Wind Initiative (EWI), rooted in the 2007 Strategic Energy Technology Plan (SET-Plan), was **published** by the European Commission in 2009 in its **Communication on** Investing in the Development of **Low Carbon Technologies** (COM(2009) 519) and will provide the sector with € 6 bn of public and private resources over the 2010 – 2020 period
- The EWI was officially **launched at** the Madrid **SET-Plan conference in June 2010**: it was one of the first European Industrial Initiatives to be launched
- The launch of the EWI coincided with the establishment of its **managing structure**, which is composed of **EU, national and industry** representatives
- **Since the end of 2010**, EU and national authorities have therefore been in the position, for the first time, to coordinate their efforts and concentrate their financial support on the priorities of the EWI, hence **increasing the effectiveness of public funding** for wind energy R&D
- This presentation will focus on the **opportunities provided** to the sector by the EWI and its **impact on** the current level of **public support**

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The European Wind Initiative – strengths

- The EWI was **developed by** the European Wind Energy Technology Platform (**TPWind**) in cooperation with the European Commission and Member States
- TPWind is a **network of wind energy experts** representing the EU wind energy industry and R&D community. It was launched in 2006 and is composed of approximately 150 members. It is managed by the European Wind Energy Association (EWEA) with the support of Garrad Hassan and Risoe/DTU
- The **EWI** published by the European Commission is therefore the result of a **transparent and shared process**, in which all relevant stakeholders have been involved
- The implementation of the **EWI will speed up** the development of wind power and help Europe to **maintain** its global **technological leadership**
- The implementation of the **EWI will** also **contribute to** the achievement of the **EU 20% binding target** for renewable energy production by 2020, set by the new RES Directive (approved in December 2008)
- Further to that, the EWI will contribute to de-carbonize the EU economy, fight climate change, increase security of energy supply and create new jobs

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The European Wind Initiative – opportunities for wind energy operators

- The **EWI will increase** the level of **public support** to wind power R&D at both EU and national level, as outlined in the next slides
- The **EWI will ensure coordination** in terms of **public support** (EU and national) to wind power R&D, hence providing transparency on which activities will be financed in the 2010 – 2020 period and increasing the effectiveness of public spending
- For this reason, the EWI is a game-changer in terms of public support of wind energy R&D: the **cooperation between EU and national authorities** required to implement the EWI was never attempted before
- The EWI will also **facilitate private investments** in wind energy R&D by clarifying how the sector will develop over the next 10 years
- Further to that, the EWI will facilitate the implementation of **international R&D** projects, the mobility of researchers and the exchange of know-how
- Finally, the EWI will encourage the **development of other relevant sectors**, in particular the EU grid, which the wind energy sector will contribute to shape), hence creating a virtuous circle

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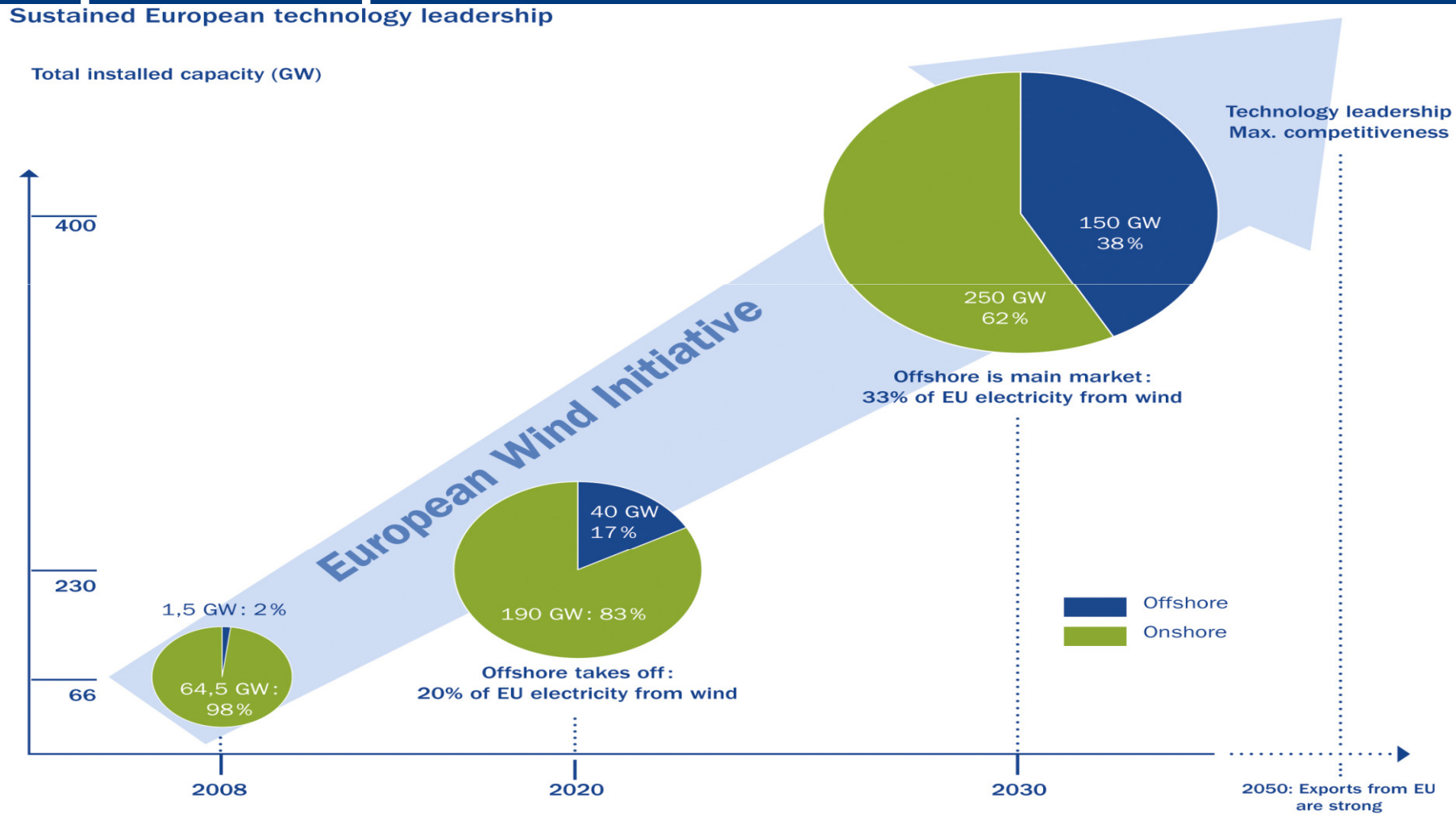
The European Wind Initiative – expected impact on the sector



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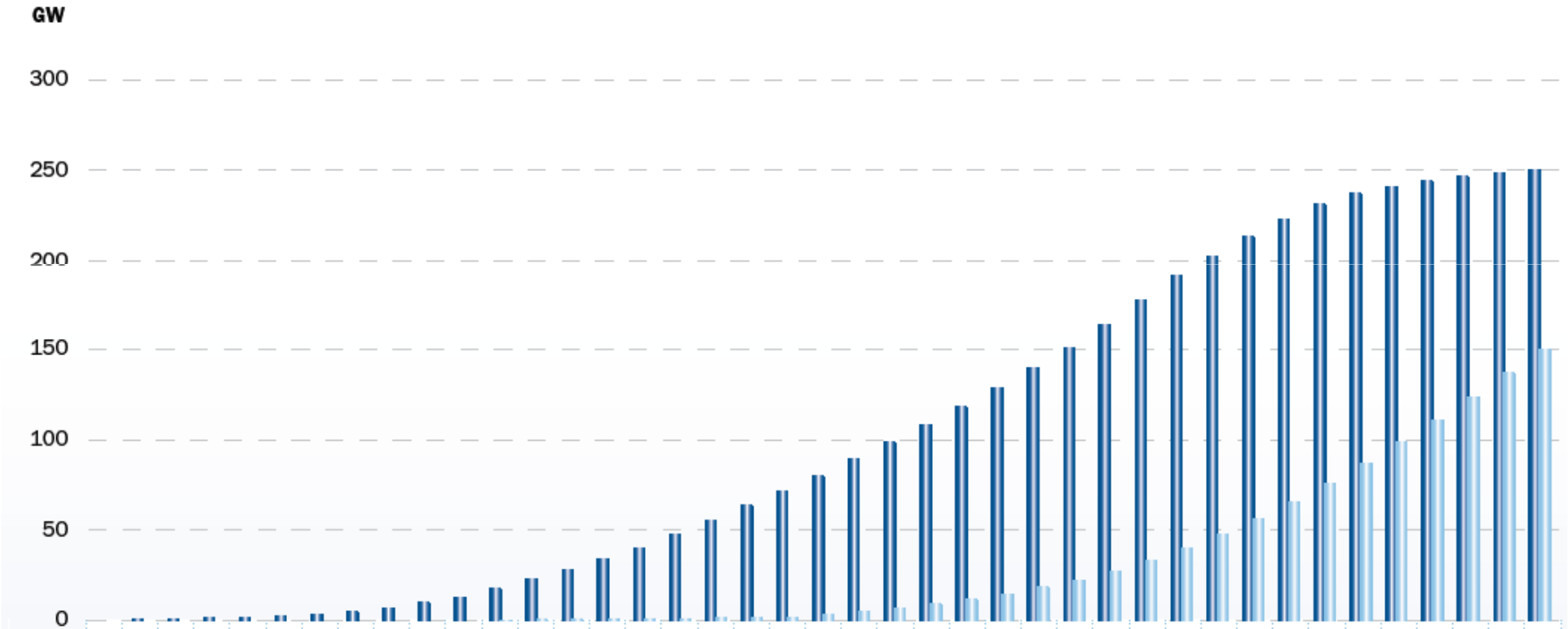
The European Wind Initiative – expected impact on the sector (installed capacity)



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Onshore	0.4	0.6	0.8	1.2	1.7	2.5	3.4	4.7	6.4	9.6	13	17	23	28	34	40	47	55	63.5	72	80	89	98	108	118	128	139	151	163	176	190	202	213	223	231	237	241	244	246	248	250
Offshore	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1.5	1.9	3	5	6	9	12	15	18	22	27	33	40	48	56	66	76	87	98	110	123	136	150
Total	0.4	0.6	0.8	1.2	1.7	2.5	3.5	4.8	6.5	9.7	13	17	23	28	34	41	48	57	65	73	83	93	105	117	129	143	157	173	191	209	230	250	269	288	307	323	339	354	370	385	400

Source: EWEA

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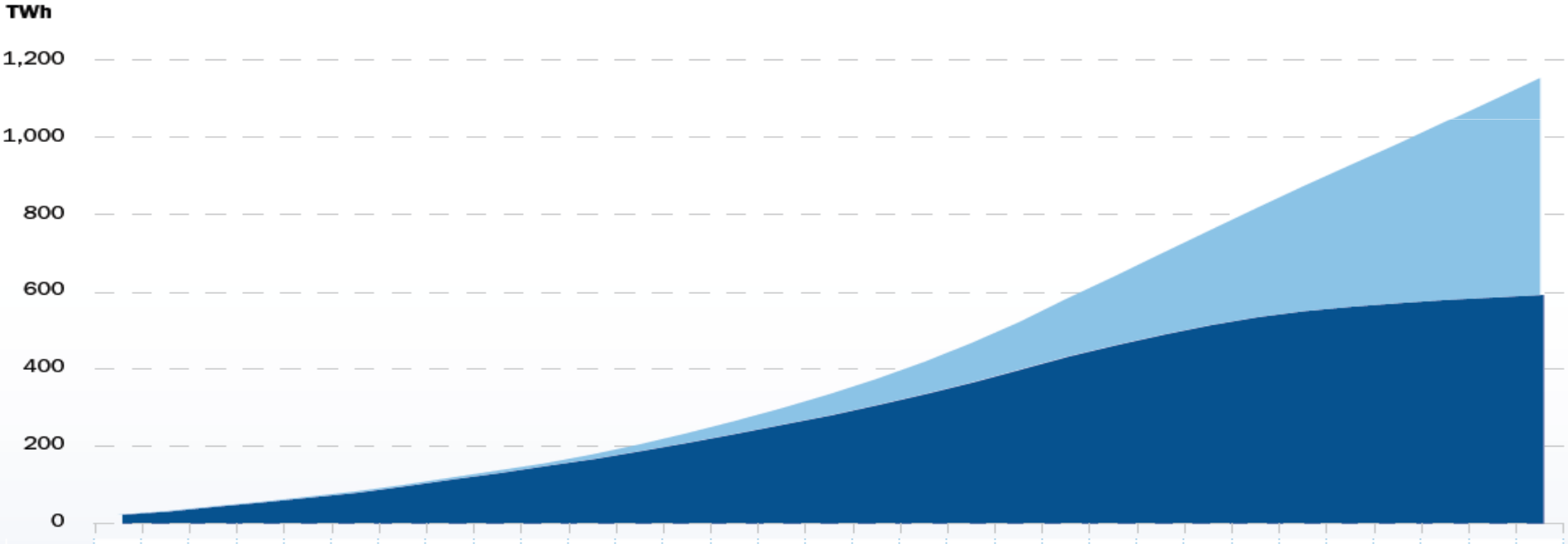
The European Wind Initiative – expected impact on the sector (power production)

- Based on the **EWEA reference scenario** for installed capacity up to 2030 (previous slide), the wind energy sector could provide approximately **20%** of EU electricity **in 2020** and **34% in 2030**



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Offshore	0	0	1	2	2	3	3	4	5	7	11	16	24	32	42	54	67	82	101	122	148	177	209	244	282	323	366	413	461	511	563
Onshore	22	32	44	55	67	80	96	115	132	150	168	189	211	233	257	281	308	336	367	399	433	462	489	514	535	551	562	571	579	586	592
Total	23	32	44	57	70	83	100	119	137	157	179	205	234	265	299	335	375	419	467	522	582	639	698	758	816	873	928	984	1,040	1,097	1,155

Source: EWEA

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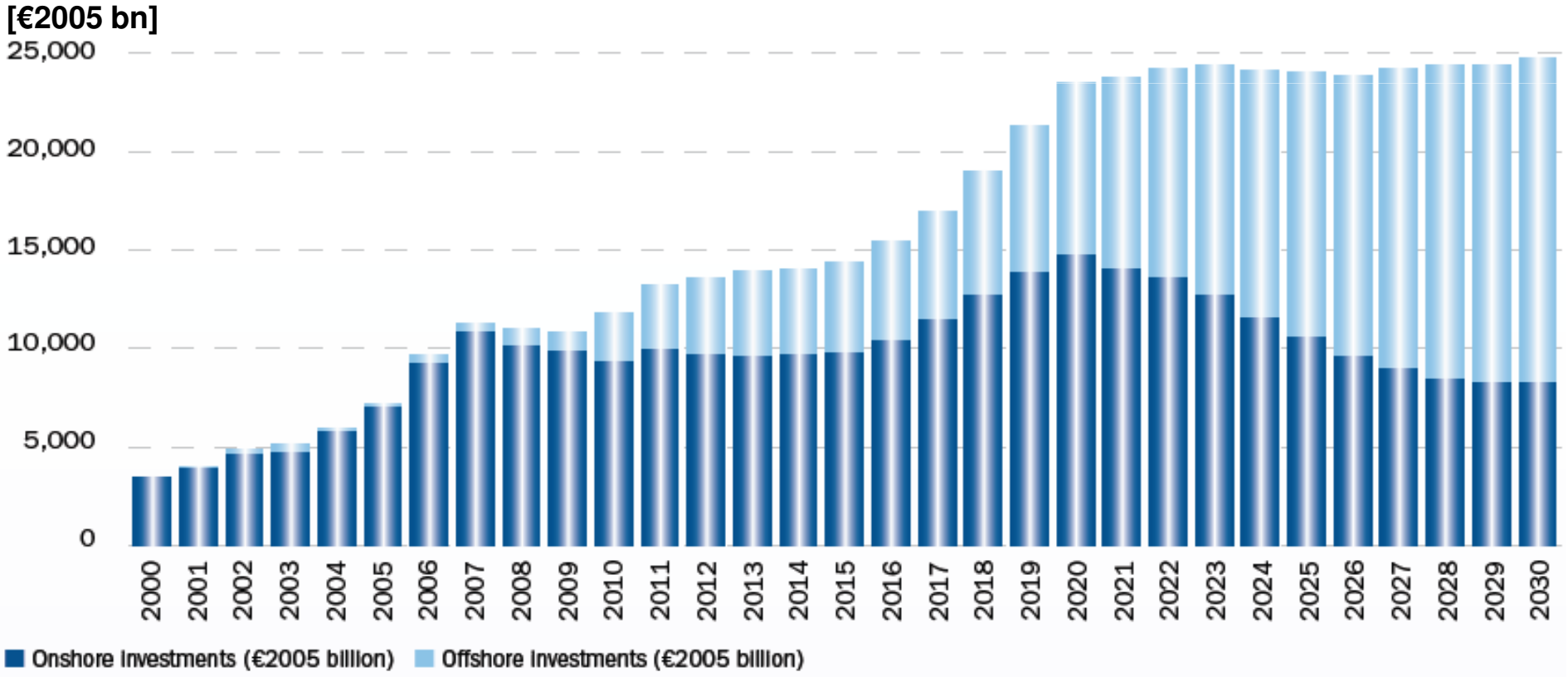
The European Wind Initiative – total wind energy investments

- In order to achieve **EWEA's targets**, the annual market is to increase gradually from **€11 bn in 2008 to € 23,5 bn in 2020**. In the decade up to 2030, the market will be stable - just below € 25 bn annually, with a gradually increasing share of investments going to offshore



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The European Wind Initiative – R&D wind energy investments (I)

- **Europe is** the current wind power global **technological leader** and holds approximately **48% of the total capacity** installed worldwide (according to the 2009 GWEC Global Wind Report)
- With wind energy in general being considered a **rather mature technology**, **R&D investments** are clearly dominated by the **industry**, accounting for **three quarters of the total**
- However, wind power has a **long way to go** before it reaches its full **potential** and becomes fully **competitive** (especially offshore)
- **Significant cost reductions** are therefore still necessary through **market development** and especially **R&D** to foster the development of wind power
- The importance of **R&D** is confirmed by the fact that some **60%** of cost reductions in the last two decades are estimated to be the result of **economies of scale**, while the remaining **40%** are attributed to **research**
- For these reasons the **EWI is essential**

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The European Wind Initiative – R&D wind energy investments (II)

- The most recent data on EU wind power R&D investments are from 2007
- Estimated **corporate** wind energy R&D investments increased significantly (+20% in comparison to 2006), to reach **€ 292 m in 2007** (this is the result of an assessment of 13 companies)
- At the same time, **public national** funds showed a small decrease **(-7%). EU** funds under the FP6 amounted to around € 43 m over the 2002 - 2006 period (or **€11 m on an annual average**)
- In 2007, the **total** EU wind power R&D investment was **€ 383 m**
- The largest contribution came from the **private sector (76%),** Member States contributed to **21%** and the Framework Programme only to **3%**
- **R&D support** to wind energy **should** therefore **be increased** in order to **implement the EWI** and reflect the new **RES Directive**, which binds the EU to **increase** the share of **renewables** in its energy mix to **20% by 2020**

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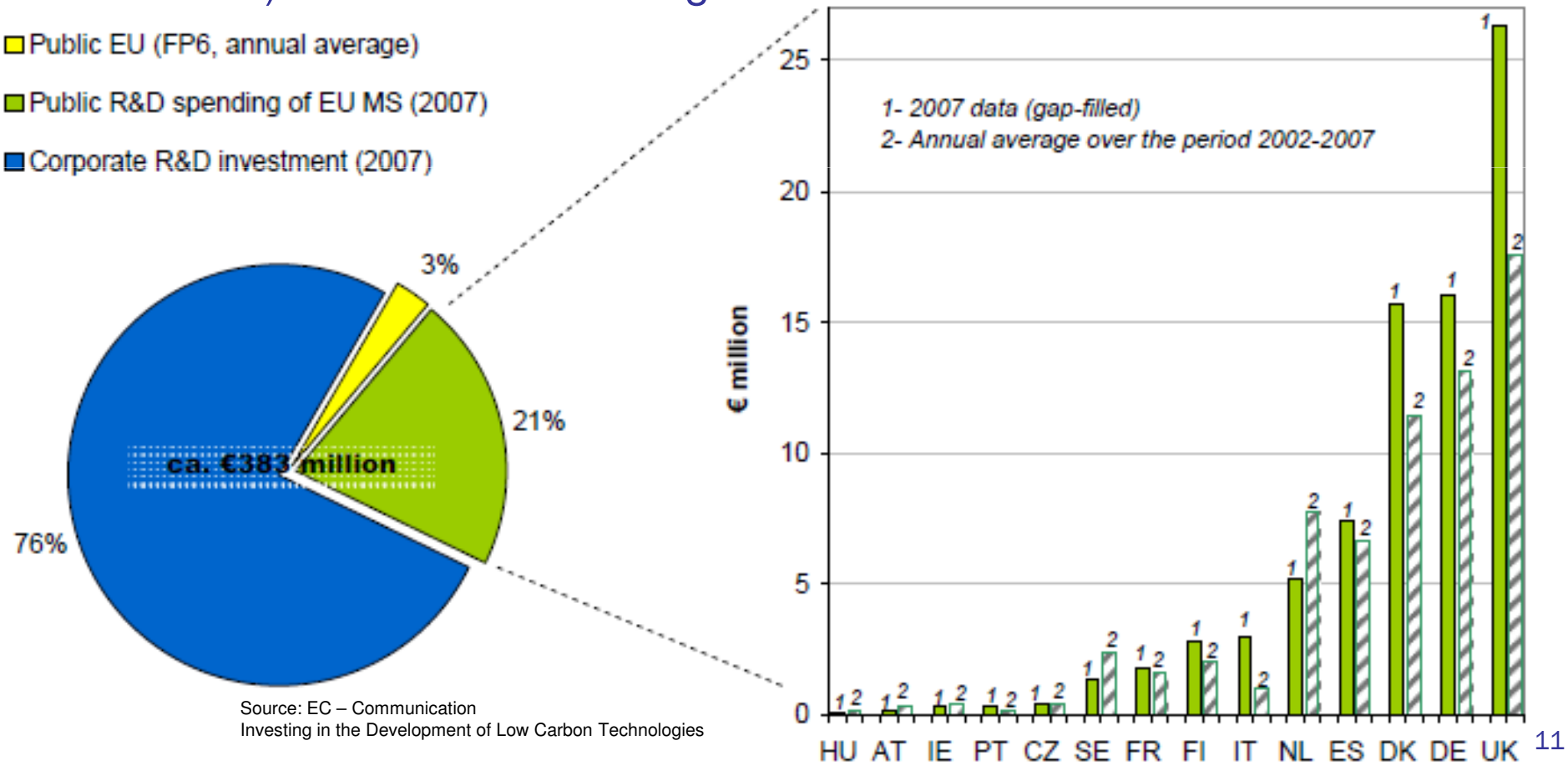
The European Wind Initiative – R&D wind energy investments (III)

- In greater details, the EU wind energy R&D investment in 2007 (total: € 383 m) is outlined in the diagram below



Source: EC – Communication
Investing in the Development of Low Carbon Technologies

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The European Wind Initiative – R&D wind energy investments (IV)

- Providing support to **R&D** projects in the wind energy sector could help the **EU to fulfill** both its original Lisbon's strategy goal (i.e. **increasing R&D** spending **to 3%** of its GDP by 2010) and its new **RES target**
- This should therefore be reflected in the allocations of the **FP7** and of the future **FP8** (2014 – 2020): **renewable energy** sources should receive a **fair share** of the budget in European and National R&D Programmes
- **EWEA and TPWind highlighted this** need on several occasions, e.g. throughout the development and implementation of the **EWI** and in combination with the **FP7 mid-term review**, which took place in 2010
- The proper implementation of the **EWI** in particular, which **is so crucial to the future of Europe**, will require a **significant** effort in terms of national and EU **public funding** (the TPWind proposal is to have public Institutions covering roughly **50% of** its total budget – i.e. **€ 6 bn for the 2010 – 2020** period)

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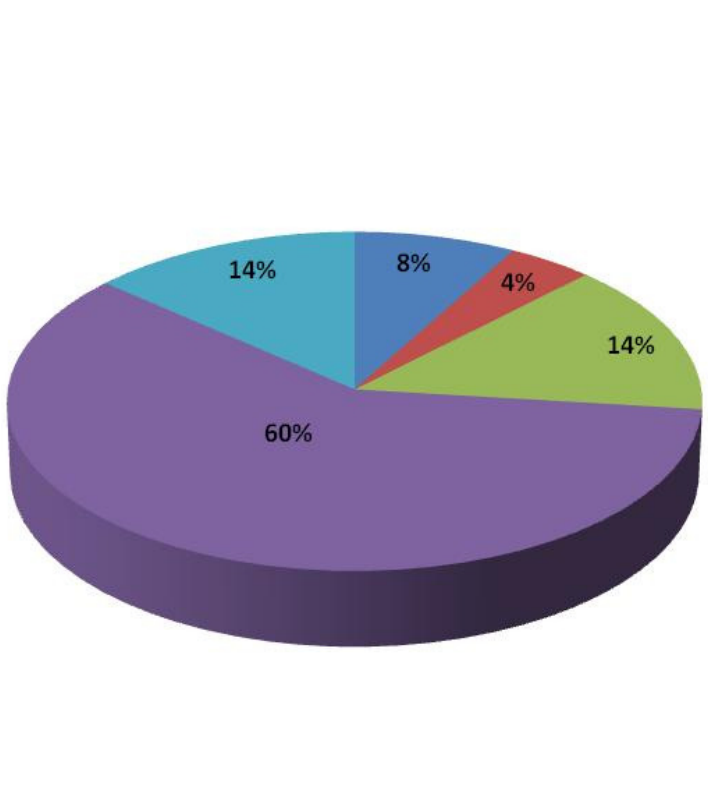
The European Wind Initiative – R&D wind energy investments (V)

In greater details, following the launch of the EWI, **R&D** investments will have **to increase to** a total level of **€ 3.243 m*** for the 2010 – 2012 period, which corresponds approximately to a 282% annual increase:



Note: the diagram takes into account the European Energy Programme for Recovery (**EEPR**), which is part of the EWI funding (the EEPR is a EU package of **€ 519 m** allocated in 2009 to offshore projects, which needs to be complemented by **€2.1 bn from the industry** to be implemented)

* *€ 3.243 m = € 1.443 m (total Roadmap budget for 2010 – 2012) + € 2.100 m required to the industry for the EEPR*

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The European Wind Initiative – R&D wind energy investments (VI)

"The **overall breakdown** of non-nuclear energy research financing in 2007 was **70% private to 30% public**. Given the public policy-driven nature of the energy transition and the current economic situation, a significant rise in the public share of the burden in the short term towards a more equal level of commitment would have to be explored" (COM(2009) 519)

Total Roadmap budget	Costs (€ m)
1. New turbines and components	2 500
2. Offshore structure-related technologies	1 200
3. Grid integration *(pending final agreement with Grid Initiative)*	2 100
4. Resource assessment and spatial planning	200
Total	6 000

- Total EU wind energy R&D investment: **€ 383 m (in 2007)**
  - Industry: € 292 m (76%)
  - Public: € 91m (24%)
- Required **EWI investment**: at least **€ 600 m per year**

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The European Wind Initiative - conclusions

- The launch of the **EWI** in 2010 **changed the EU financing paradigm** of wind power and marked an historic development
- With a budget of **€ 6 bn** of private and public resources for the **2010 – 2020** period, the EWI will **increase total R&D** investments in wind energy and will ensure a **higher participation of public authorities**
- Further to that, the EWI will provide **coordination** between **EU and national** funding schemes, which will focus on the **same priorities and activities** identified **by** the sector through **TPWind**: nothing similar was ever attempted before
- Having **developed the EWI and** its 2010 – 2012 **Implementation Plan** on behalf of the wind energy industry and R&D community, TPWind will continue to be involved in its implementation, together with EU Institutions and Member States. **TPWind** will therefore keep playing an **essential role in the European energy framework** and will contribute to **shaping future EU wind energy policies**

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Thank you for your attention!

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