

Assessment of Feed-In Tariffs and Other Market Support Mechanisms in the EU

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Presentation overview

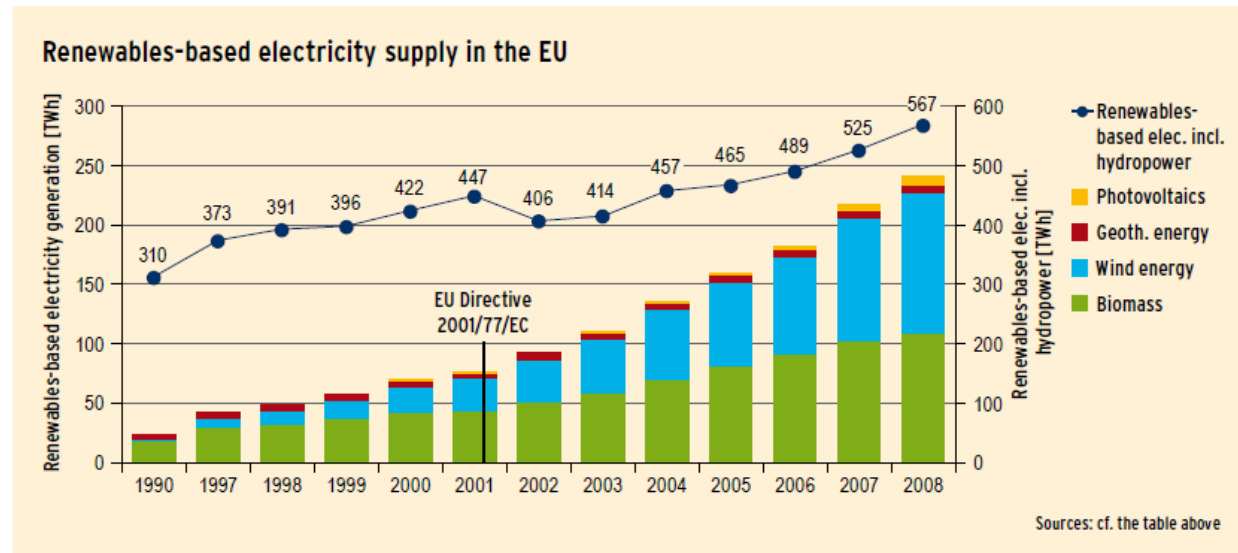
With a focus on the EU:

- RES-E policy drivers and growth
- Overview of support schemes
- Success of RES-E support schemes
- Experienced pros and cons of support schemes
- Future design challenges
- Concluding remarks

RES-E policy drivers and growth in the EU

RES-E Directive (2001/77/EC)

- EU target: 21% share of RES-E in total electricity consumption by 2010
- National *indicative* targets
- National support schemes
- Priority access and removing barriers



Source: BMU Report: Renewable Energy Source in Figures – National and International Development, June 2010 (www.bmu.de/english)

RES Directive (2009/28/EC)

- EU target: 20% renewable share in overall Community energy consumption by 2020
- National *mandatory* targets, uneven distribution of overall EU burden
- Support schemes (national) but new measures to cooperation between Member States introduced: statistical transfers, joint projects & joint support
- Strengthened & more detailed provisions on priority access and measures to reduce barriers





Main support systems and design choices

Feed-in-systems:

- Tariff and/or Premium
- Technology differentiation
- Differentiation according to availability of resources, generation costs, etc.
- Method for calculating support, e.g. “avoided cost” of conventional power, financial gap to make projects economically viable
- Period of validation, who pays
- Frequency and transparency of review
- Degression
- Can be combined with tender system

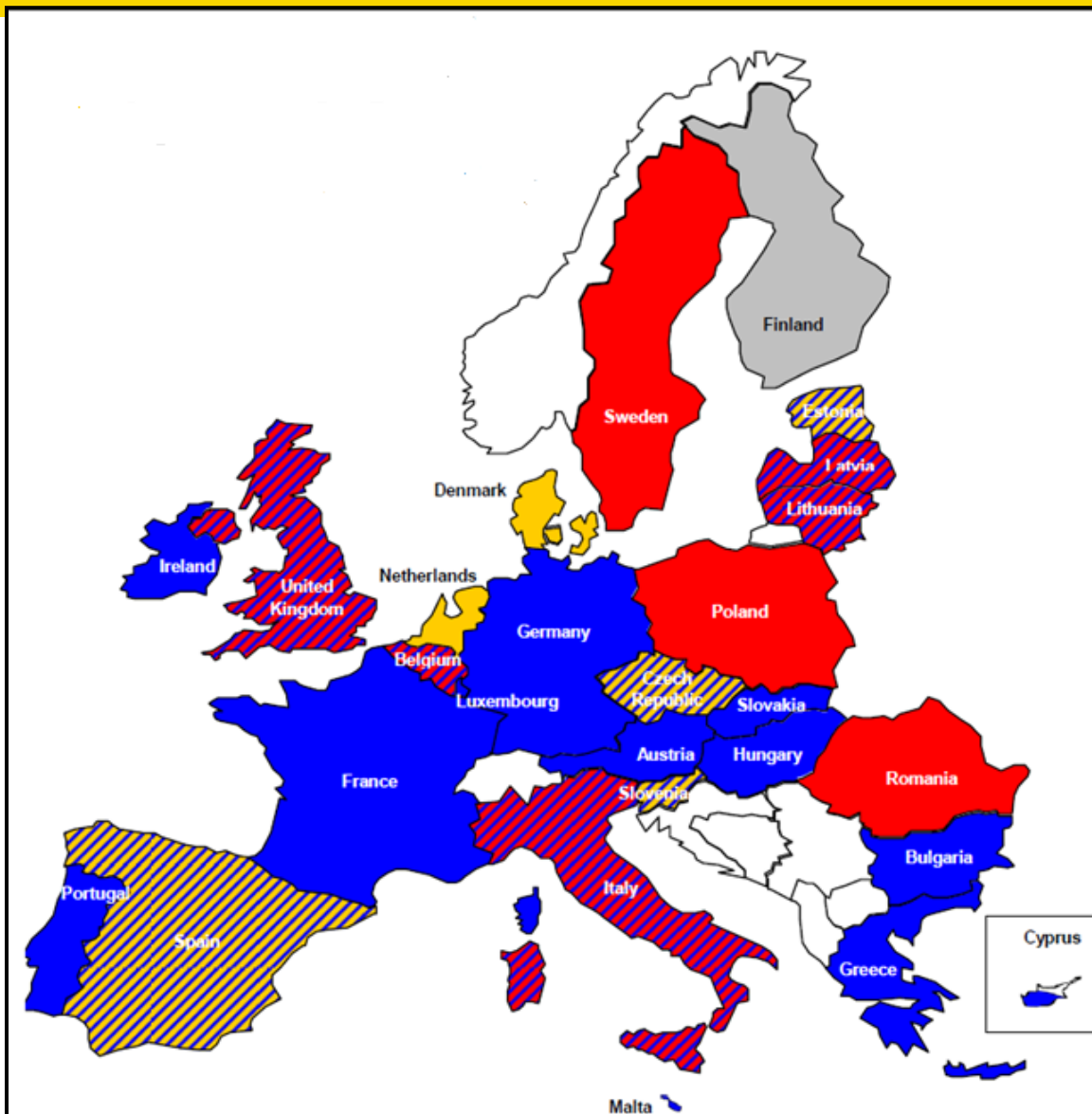
Renewable Portfolio Standards:

- “Obligation & trade” or “Just obligation”
- Where is obligation placed (producer, supplier, consumer)
- Price stabilization mechanisms
- Penalties or not
- Period of eligibility
- Banding (technology differentiation)
- Frequency of review

	RPS
	Feed-In Tariff
	Feed-In Premium
	Other instrument

Note:

- 1) Patterned colours represent combination of instruments
- 2) Investment grants, tax exemptions and fiscal incentives not included



Source: European Commission

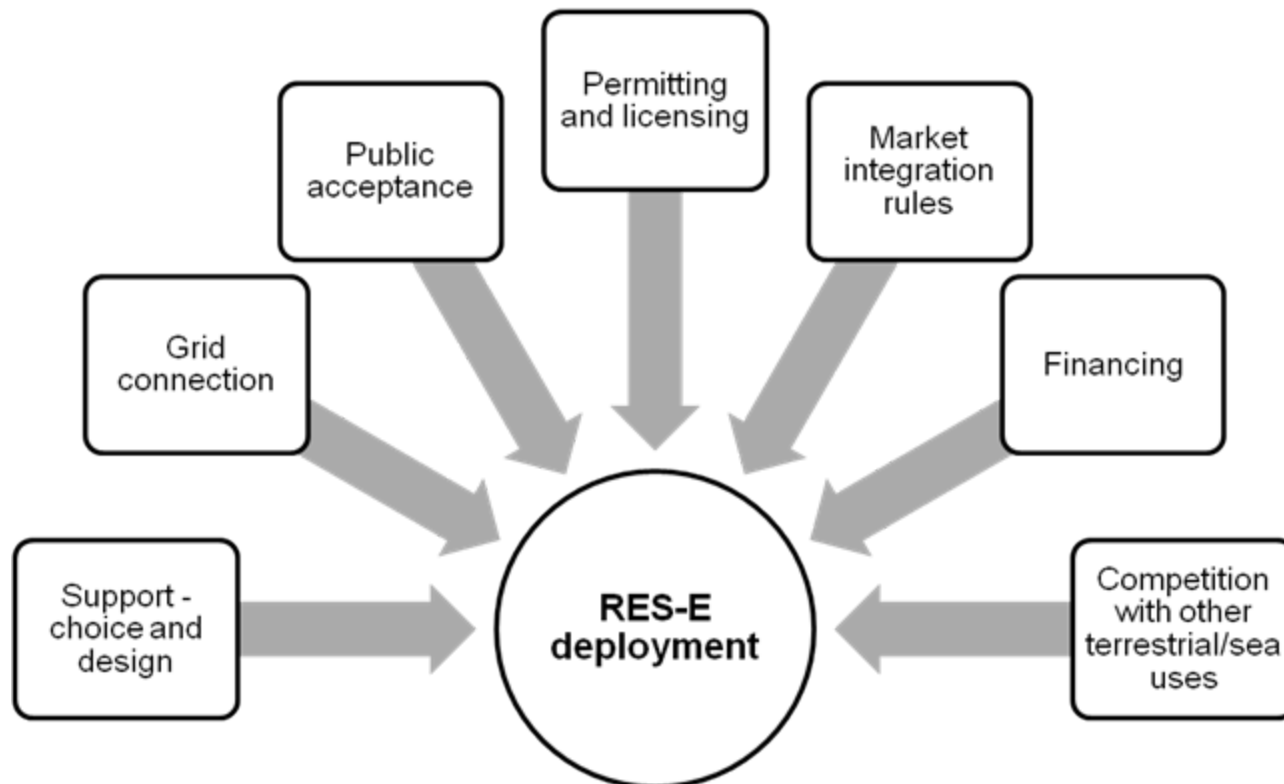
Possible criteria for assessing the success of RES-E support mechanisms in the EU

- Effectiveness in deployment
- Efficiency in deployment
- Simple and transparent in design and implementation
- Public acceptance
- Cost of delivered RES-E
- Investor confidence (low risk)
- Conformity with electricity market
- Diversity of technologies supported
- Socio economic benefits

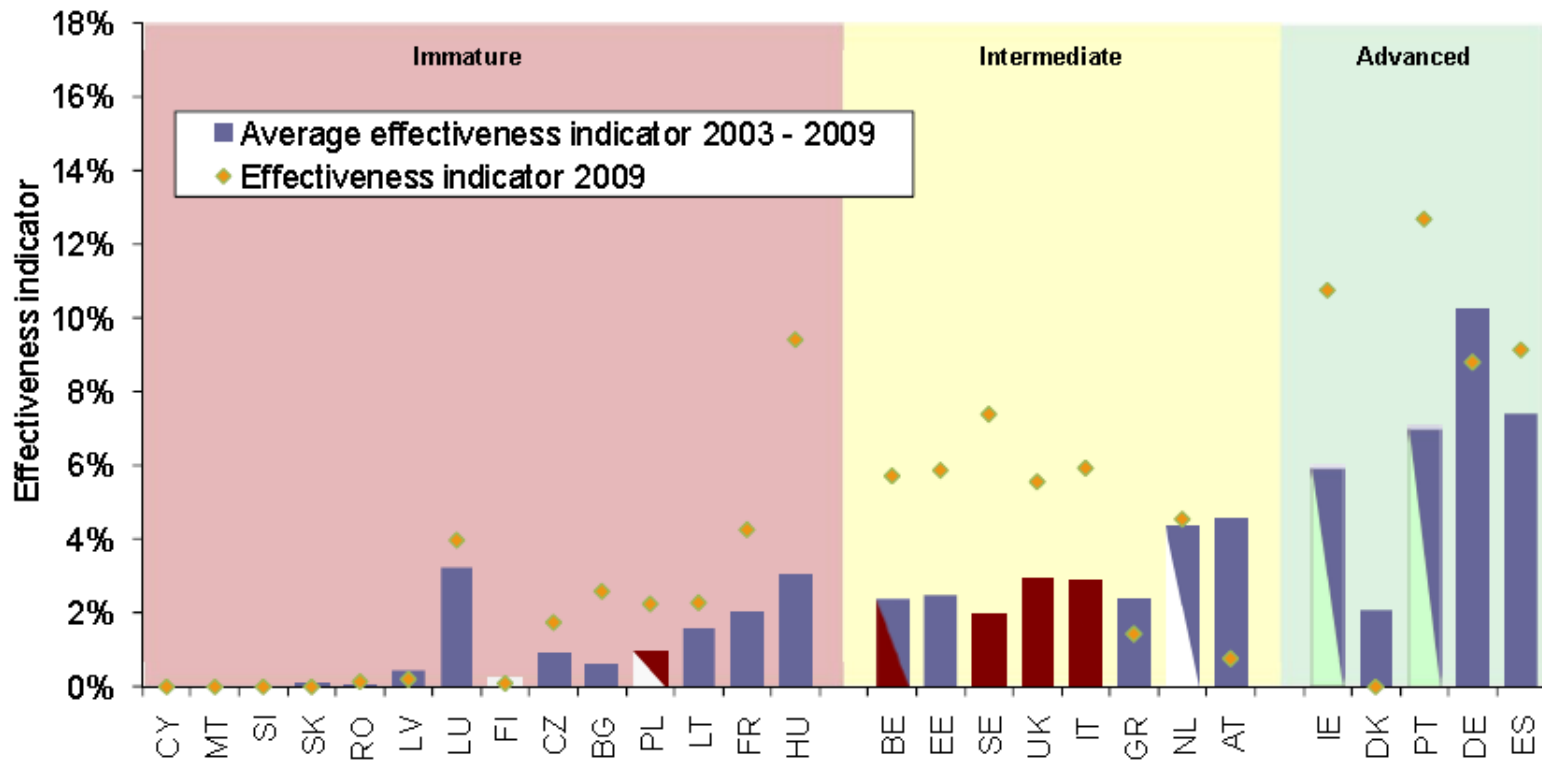
How successful are support schemes in the EU?



Factors influencing the success of support schemes

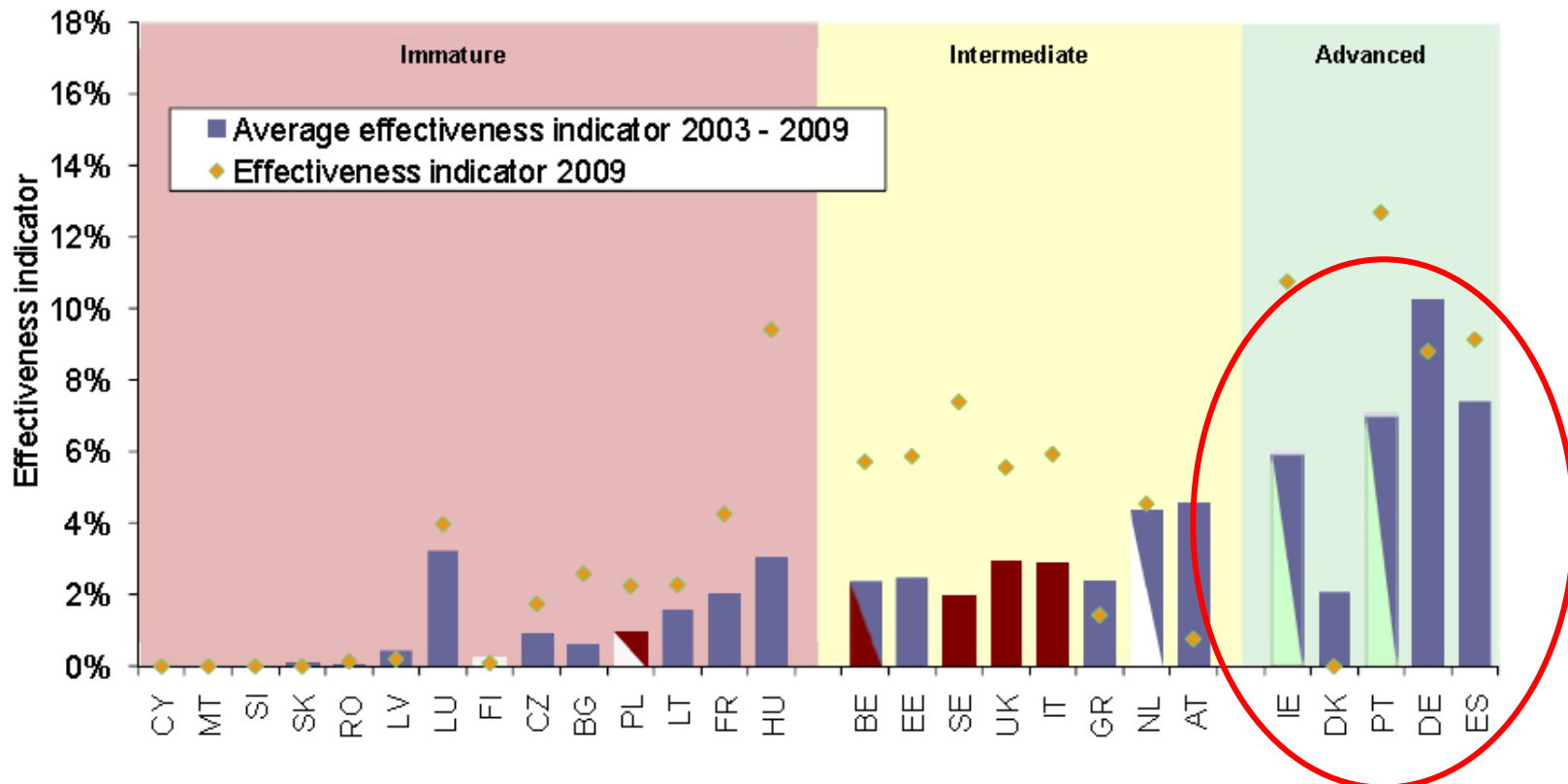


Effectiveness Indicator – Wind Onshore (2003 – 2009)



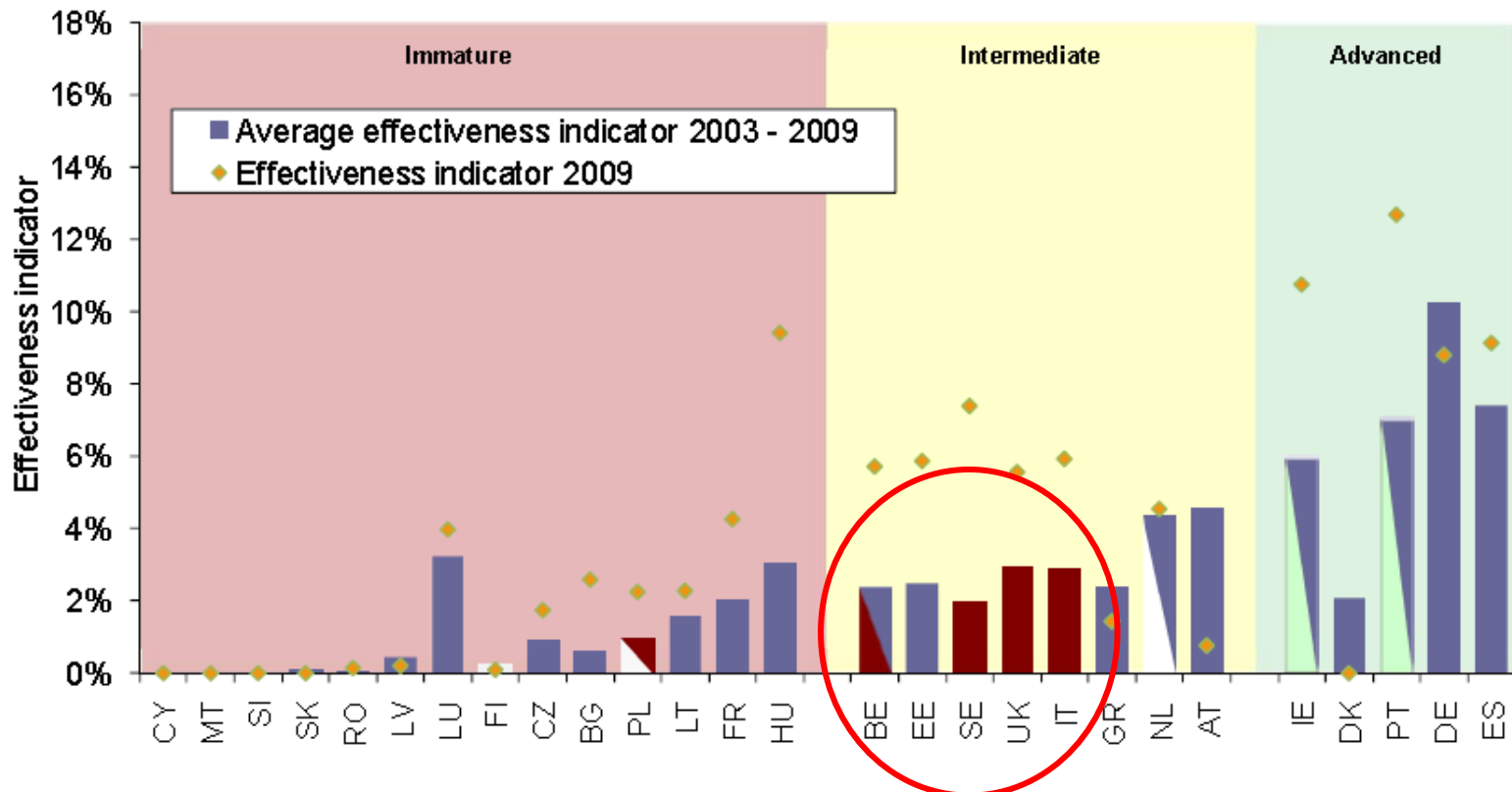
Source: Deliverable D5&6, Re-Shaping project, *Held. A and el.*,
(http://www.reshaping-res-policy.eu/downloads/RE-Shaping%20D5D6_Report_final.pdf)

Effectiveness Indicator – Wind Onshore (2003 – 2009)



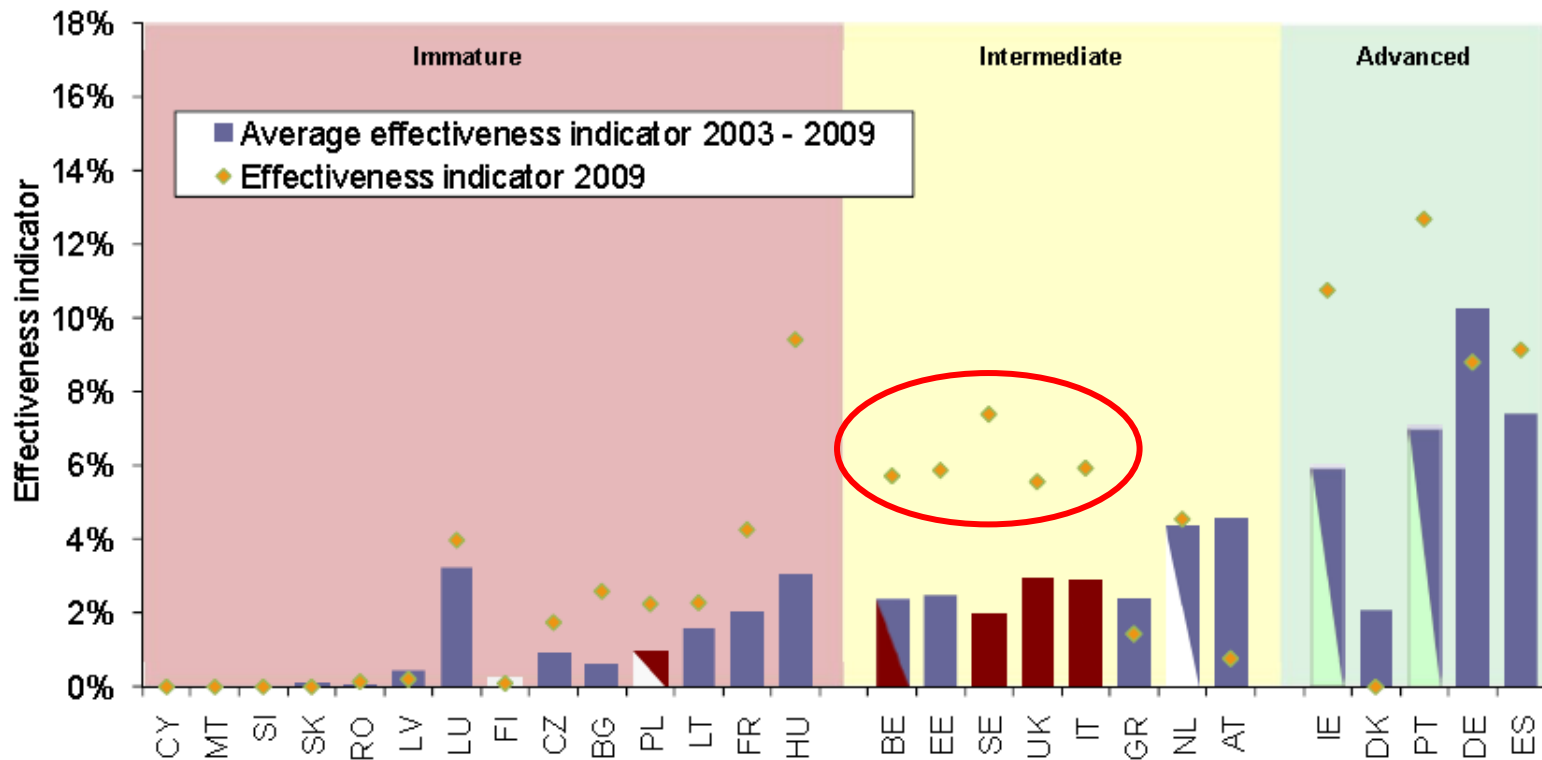
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Effectiveness Indicator – Wind Onshore (2003 – 2009)



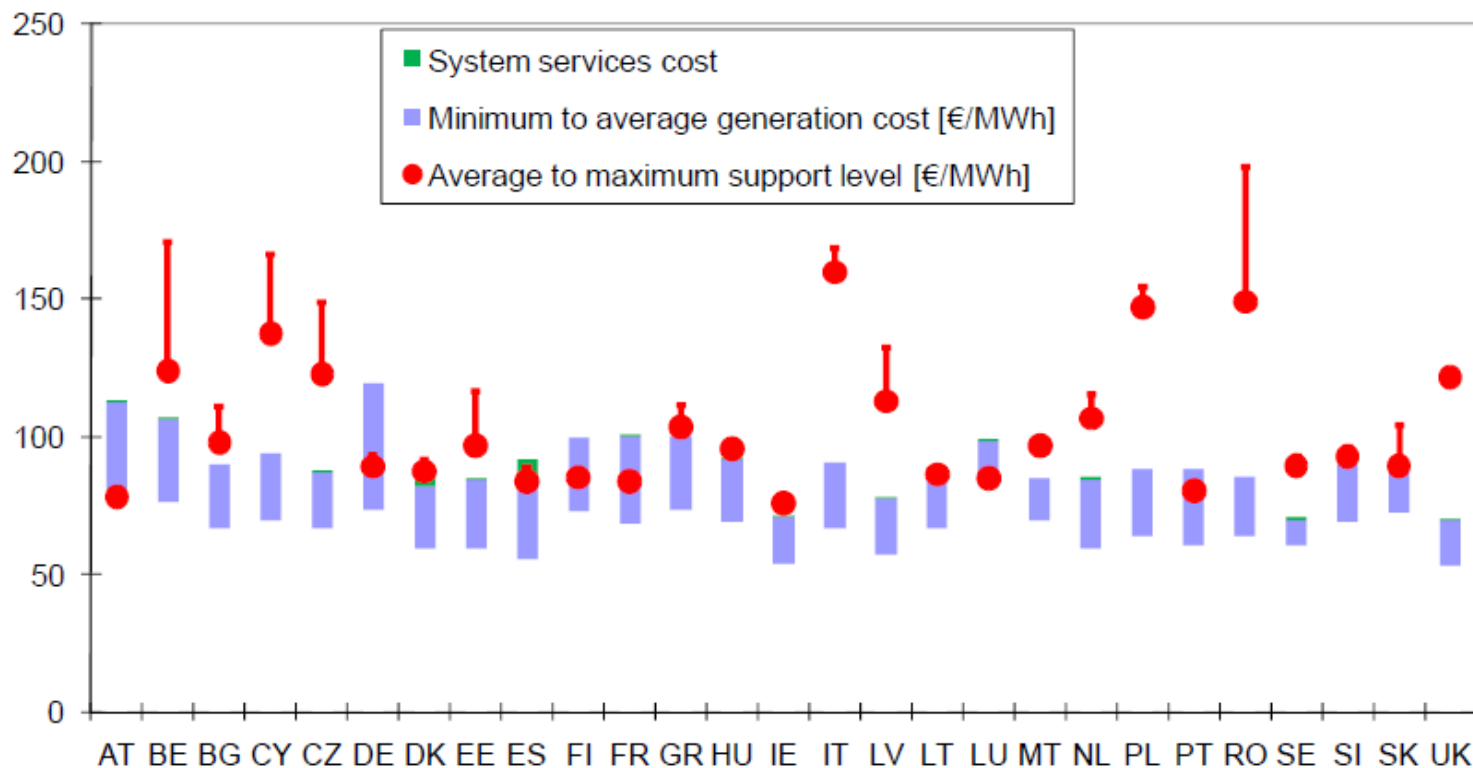
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Effectiveness Indicator – Wind Onshore (2003 – 2009)



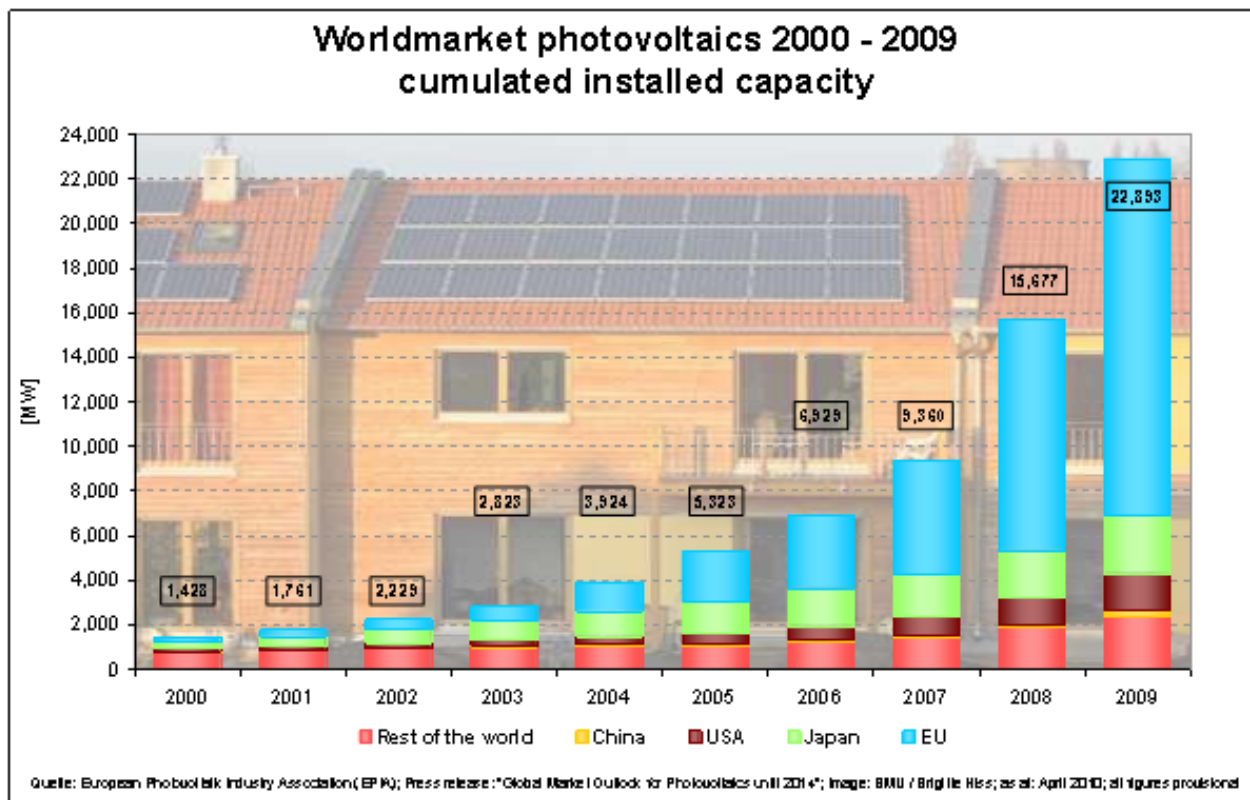
Source: Deliverable D5&6, Re-Shaping project, *Held. A and el.*,
(http://www.reshaping-res-policy.eu/downloads/RE-Shaping%20D5D6_Report_final.pdf)

Efficiency Indicator – Wind Onshore 2009



Source: Deliverable D5&6, Re-Shaping project, *Held. A and el.*,
 (http://www.reshaping-res-policy.eu/downloads/RE-Shaping%20D5D6_Report_final.pdf)

Feed-in-tariffs and PV deployment in the EU – success or not?



Source: BMU presentation – Development of renewable energy sources in Germany in 2009 (September 2010)

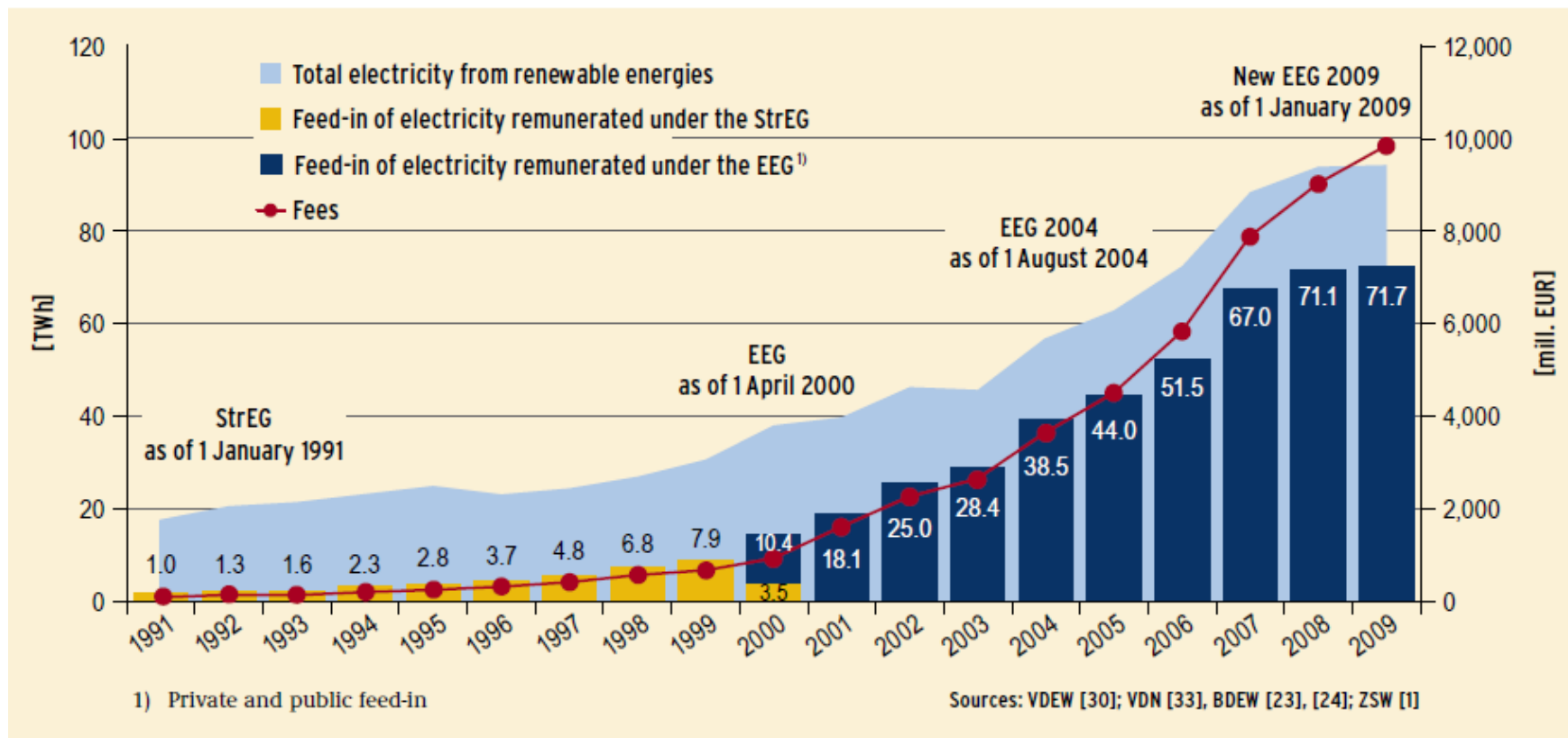
Feed-in-tariffs and PV deployment in the EU – success or not?

Falling costs for PV & high demand → ad-hoc changes in Feed-in tariffs (FIT) for PV in 2010

- **France:** FIT for ground mounted PV stations to be lowered by 12%
- **Germany:** German Federal Network Agency has announced 13% cut in PV tariffs
- **Czech Republic:** Parliament approval to reduce level of previously agreed FIT for approved PV projects
- **Spain:** Government confirms cuts in PV tariffs up to 45%
- **UK:** changes are under consideration



Experienced pros and cons – German case (1)



Source: BMU Report “Renewable Energy Source in Figures – National and International Development”, June 2010 (www.bmu.de/english)

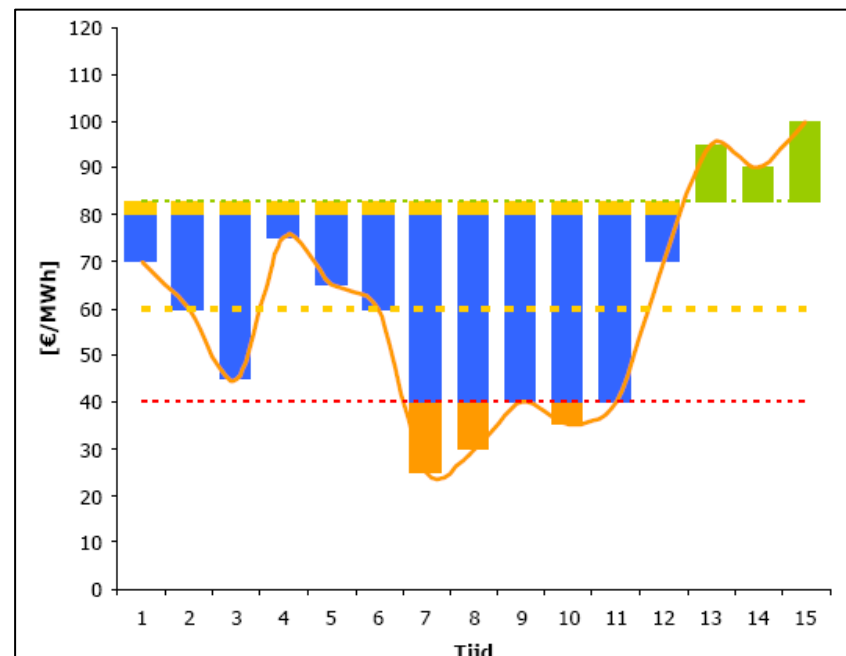
Experienced pros and cons – German case (2)

Pros	Cons
Reaching target ahead of time	Low conformity with power market
Strong links to industrial policy	Open-ended, costly for society
Strong focus on local and regional benefits	Scheme is gradually becoming more complex
Combining long-term stability with continuous improvements	Transparency of real cost to consumer has been questioned

Experienced pros and cons – Dutch case

- → **2003: Tax exemption with certificates**
- **2003 – 2006: MEP (Feed-in-premium)**
- Anticipated support of 2–2,5 euro cents/kWh
- Electricity market introduction (2004) → rising electricity prices → windfall profits and
- no budget caps → **STOP!**
- **2008: SDE introduced (Feed-in-premium)**
- Variable feed-in support where:
subsidy + electricity price = production costs
- Budget caps (total and per category)
- Floor on el price defines max subsidy
- Yearly revisions
- Extensive and transparent consultation
- ... but insufficient budget is a problem!!

Illustration of the SDE:



Future design challenges

- Improving system and market integration
 - Feed-in premiums regarded as an attractive option
 - ... but have potentially higher risks for developers than feed-in tariffs
 - Risks can be reduced thru' good design (e.g. sliding premium, cap and floor)
 - Requirements to contribute to grid stability (e.g. as in Germany)
- Benefiting from cross-border cooperation
 - Cooperation mechanisms identified in EU Renewable Energy legislation: statistical transfers, joint projects and joint support schemes
 - Need to define clear and transparent framework conditions for use of cooperation mechanisms
 - Need to understand relationship between national support schemes and cooperation mechanisms
 - Need to address non-transferable cost & benefits

Concluding remarks

- Debate on what is the best support scheme is very much open but feed-in tariffs have so far shown biggest contribution to new RES-E capacity in the EU
- Good performing support schemes will require a lot more attention to design and better match between support level and generation cost of the different technologies
- Increased focus on economic efficiency is likely to trigger coordination and cooperation between countries....
-but issues such as non-transferable cost and benefits must be addressed!
- As RES technologies increasingly become mainstream, better compatibility with electricity market will be required.

Thank you for your attention!

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