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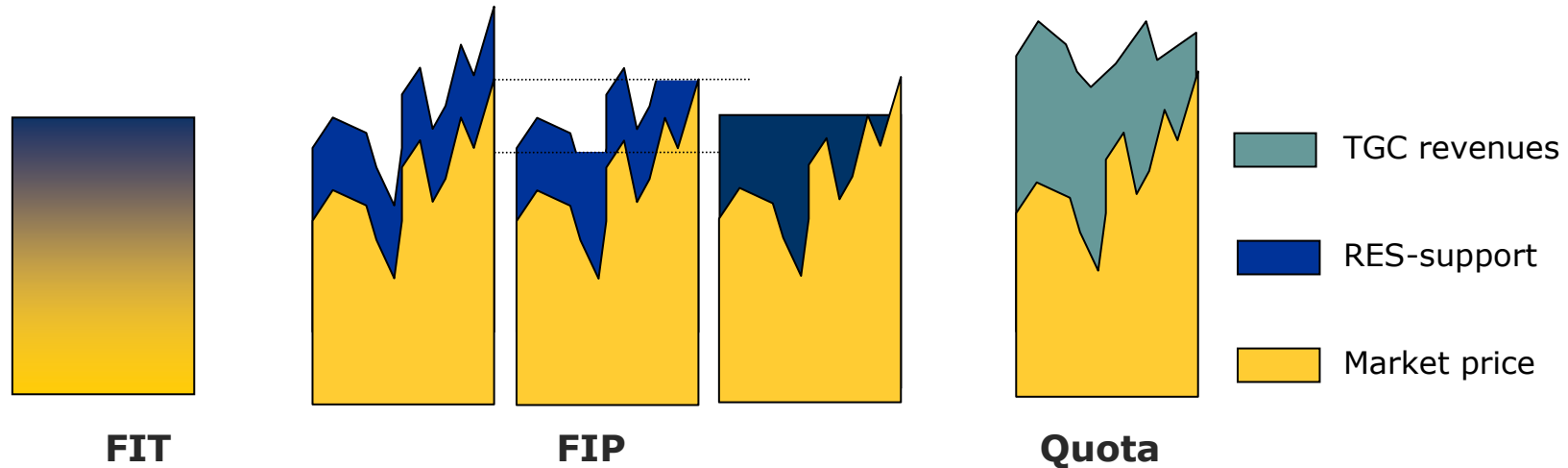
# Renewable Energy policies in the EU Member States

Indicators assessing market status & policy performance

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# Key features FIT, FIP & Quota



fixed premium - cap & floor - sliding/Cfd

## Fixed feed-in tariff (FIT)

*Gov fixes price, market decides quantity*

- Fixed tariff (€/MWh)
- Guaranteed during lifetime or x years
- Purchase obligation
- (Grid (access & use) priority)

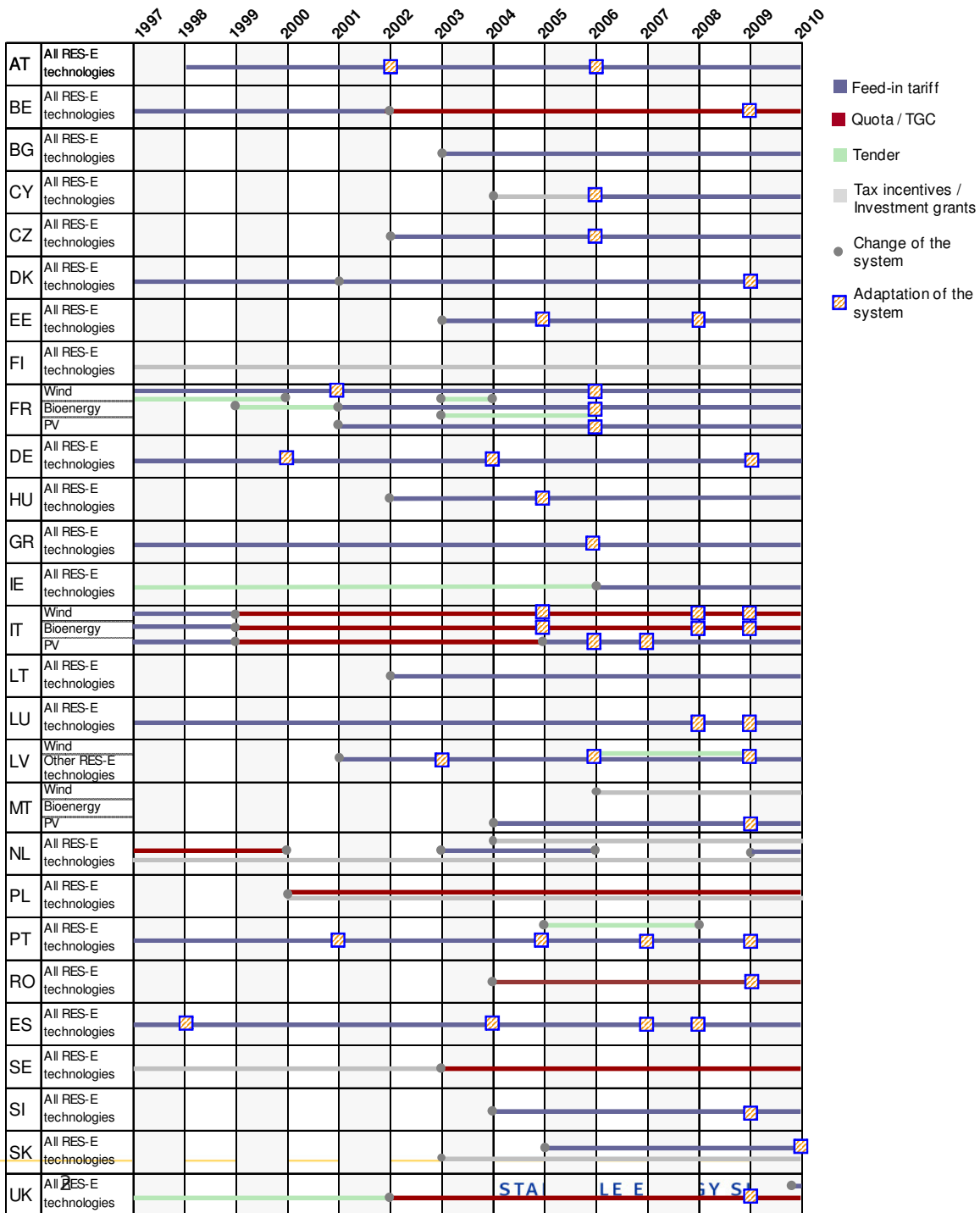
## Feed-in premium (FIP)

- Fixed premium (€/MWh)
- Guaranteed during lifetime or x years
- Power sold on conventional markets





## Quota

*Gov fixes quantity, market decides price*

- Obligation for suppliers:
  - Minimum RES-E share
  - Increasing over time
  - Penalty
- Tradable certificates for RES-E production ('market' price)
- Obligation is met by submission of certificates to competent authority
- Power sold on conventional markets



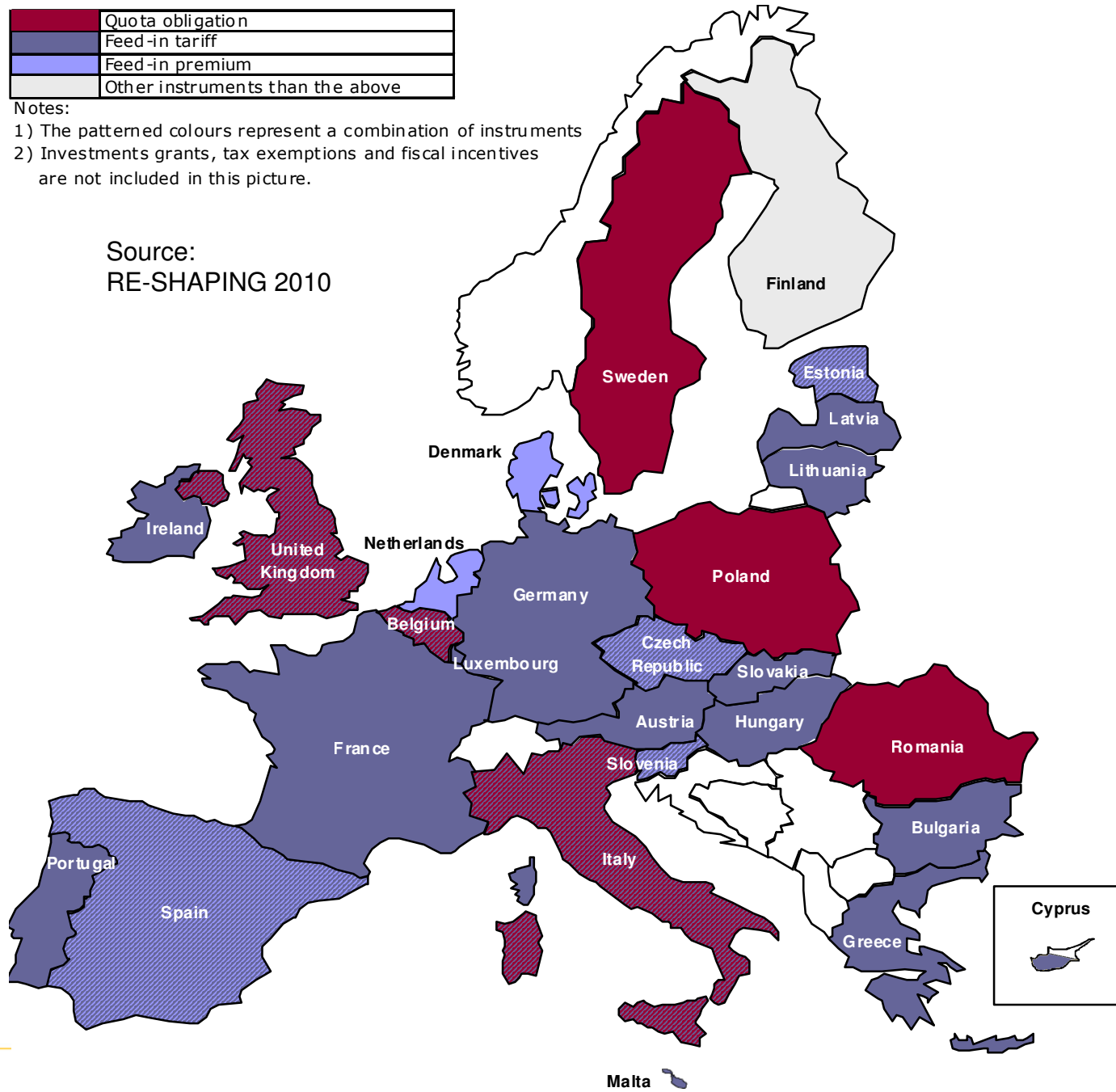
# Main support instrument RES-E & policy changes 1997-2010

	Quota obligation
	Feed-in tariff
	Feed-in premium
	Other instruments than the above

Notes:

- 1) The patterned colours represent a combination of instruments
- 2) Investments grants, tax exemptions and fiscal incentives are not included in this picture.

Source:  
RE-SHAPING 2010



# Overview of indicator set

## Policy performance indicators

**Policy effectiveness indicator**  
**Support level vs generation cost**  
**Profit range (efficiency)**

**Ex-post evaluation of policy performance**

## Market status indicators

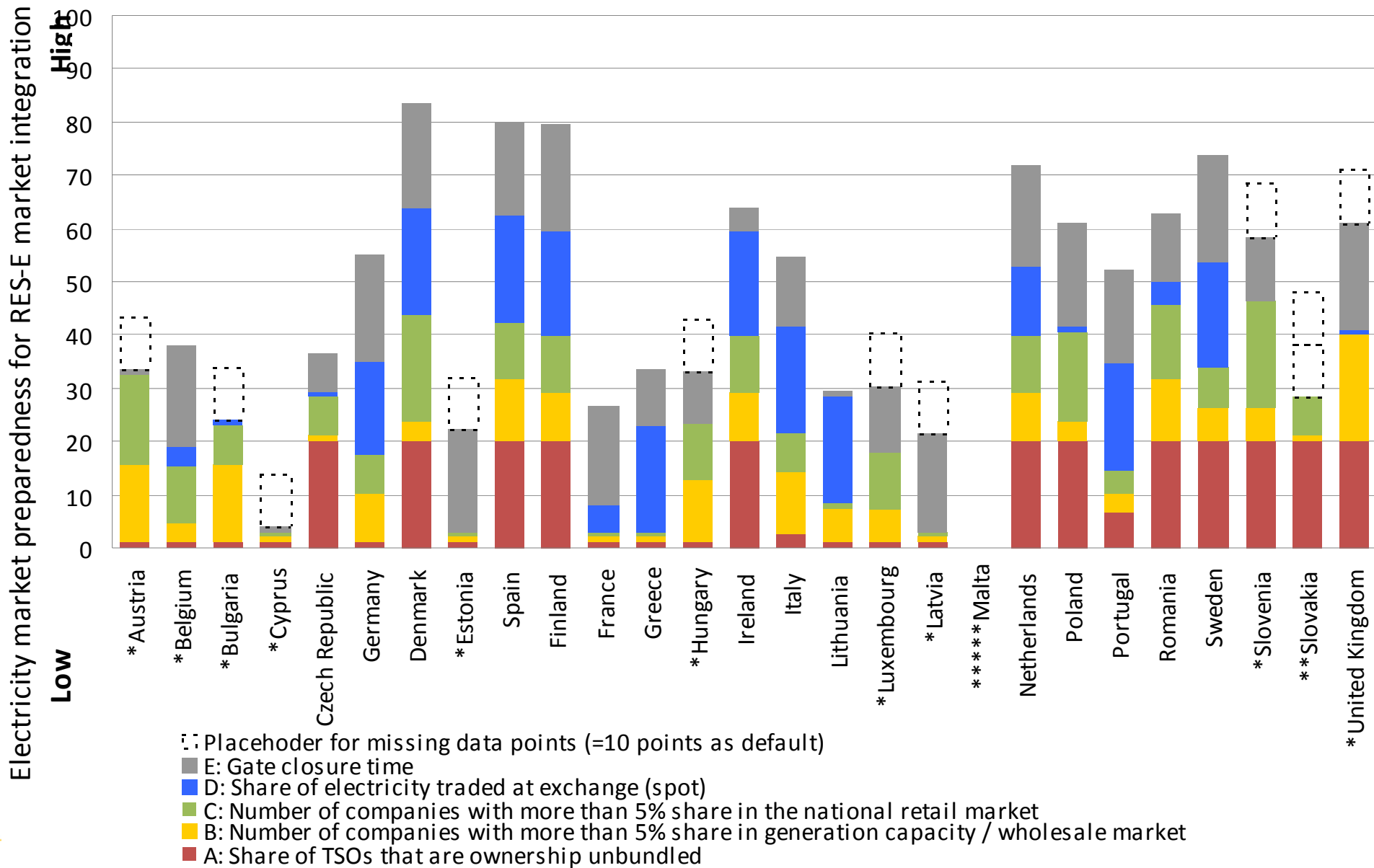
**Deployment status indicator**  
**Electricity market preparedness indicator**

**Framework conditions for RE policy (RET market maturity, electricity market)**

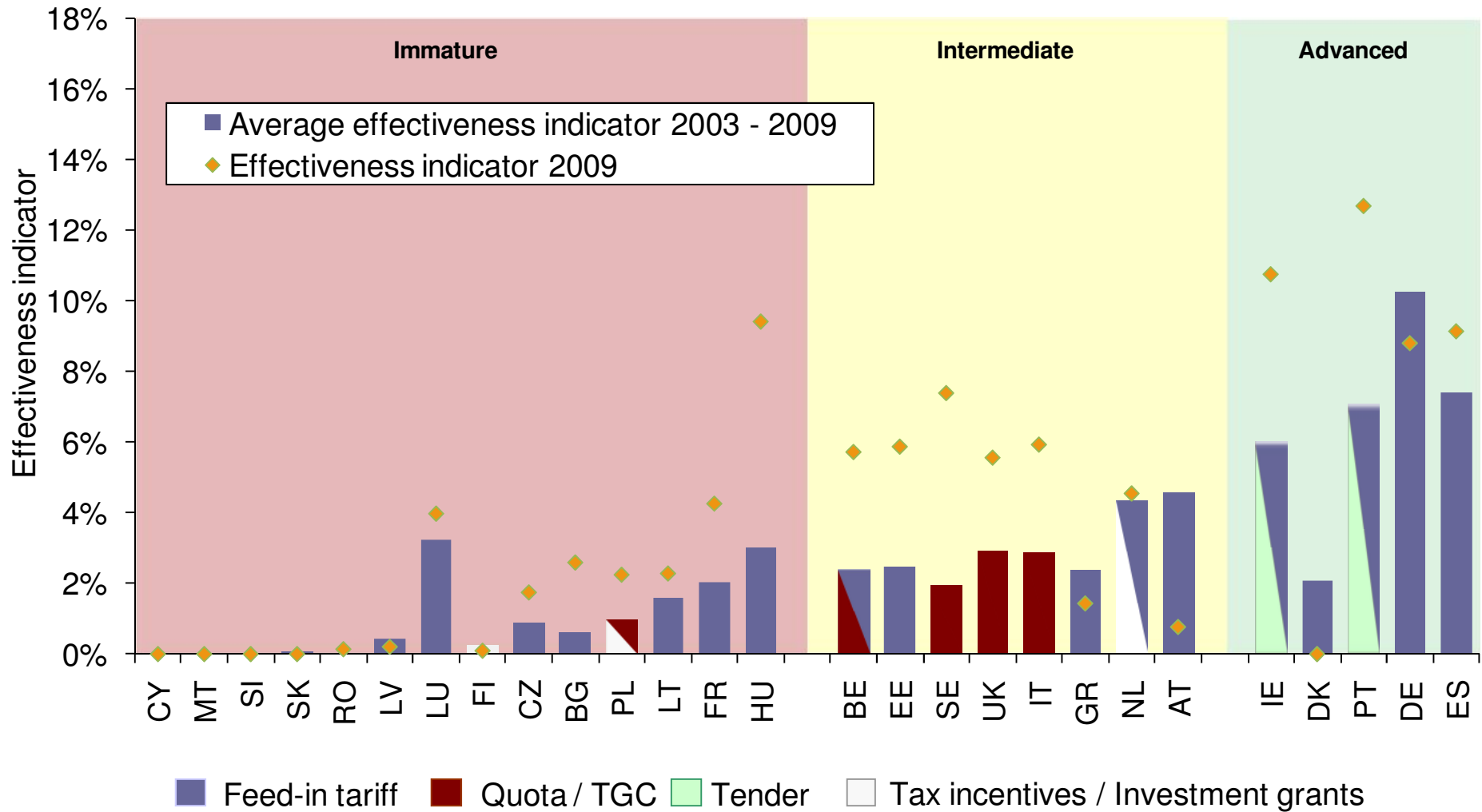
Used (e.g. by EC) since 2005 and constantly improved, updated, extended.

# Electricity market preparedness for RES-E market integration

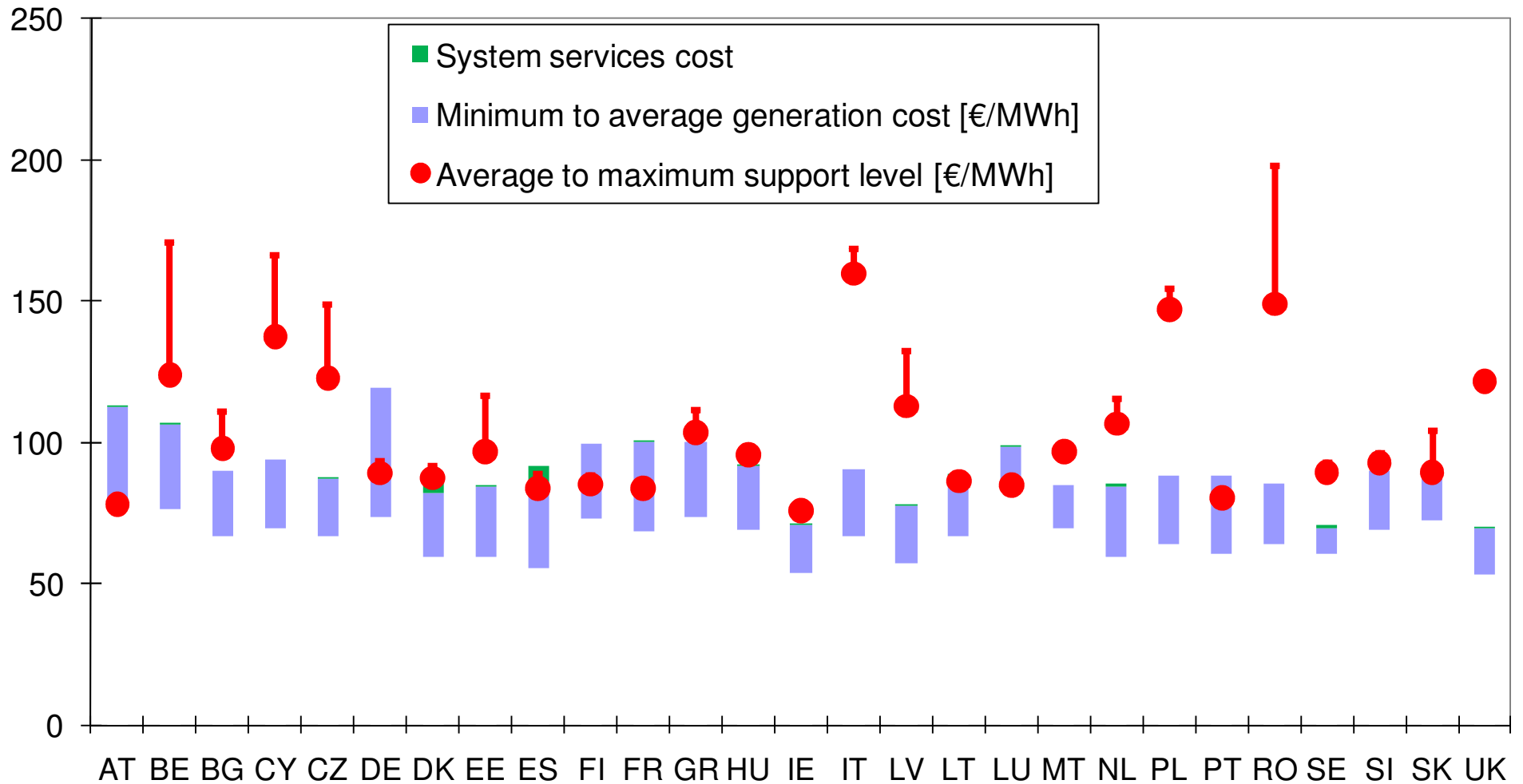
High score necessary but insufficient precondition for successful use of FIP/Quota?



# Policy effectiveness - wind onshore



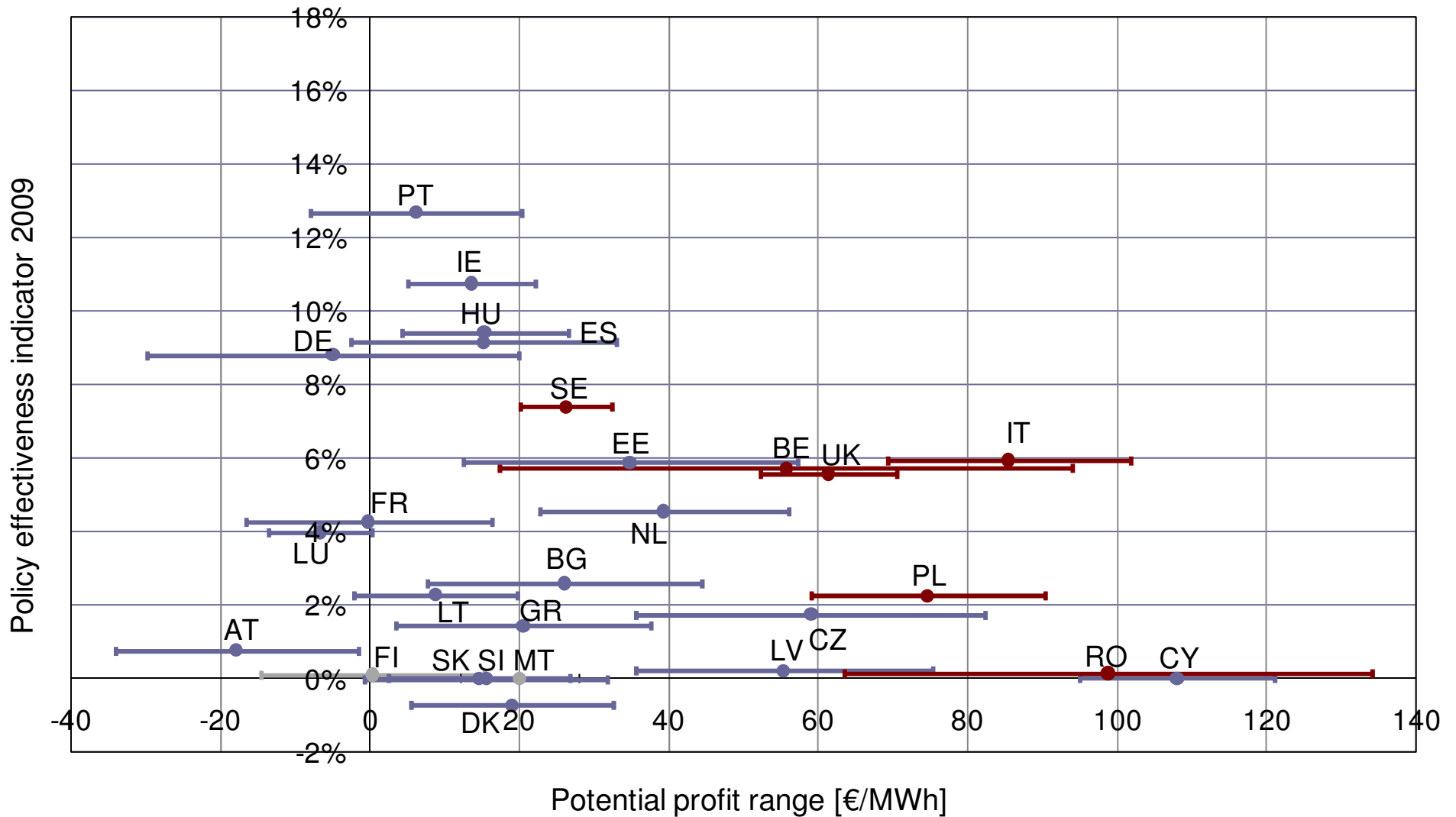
# Support level ranges - wind onshore



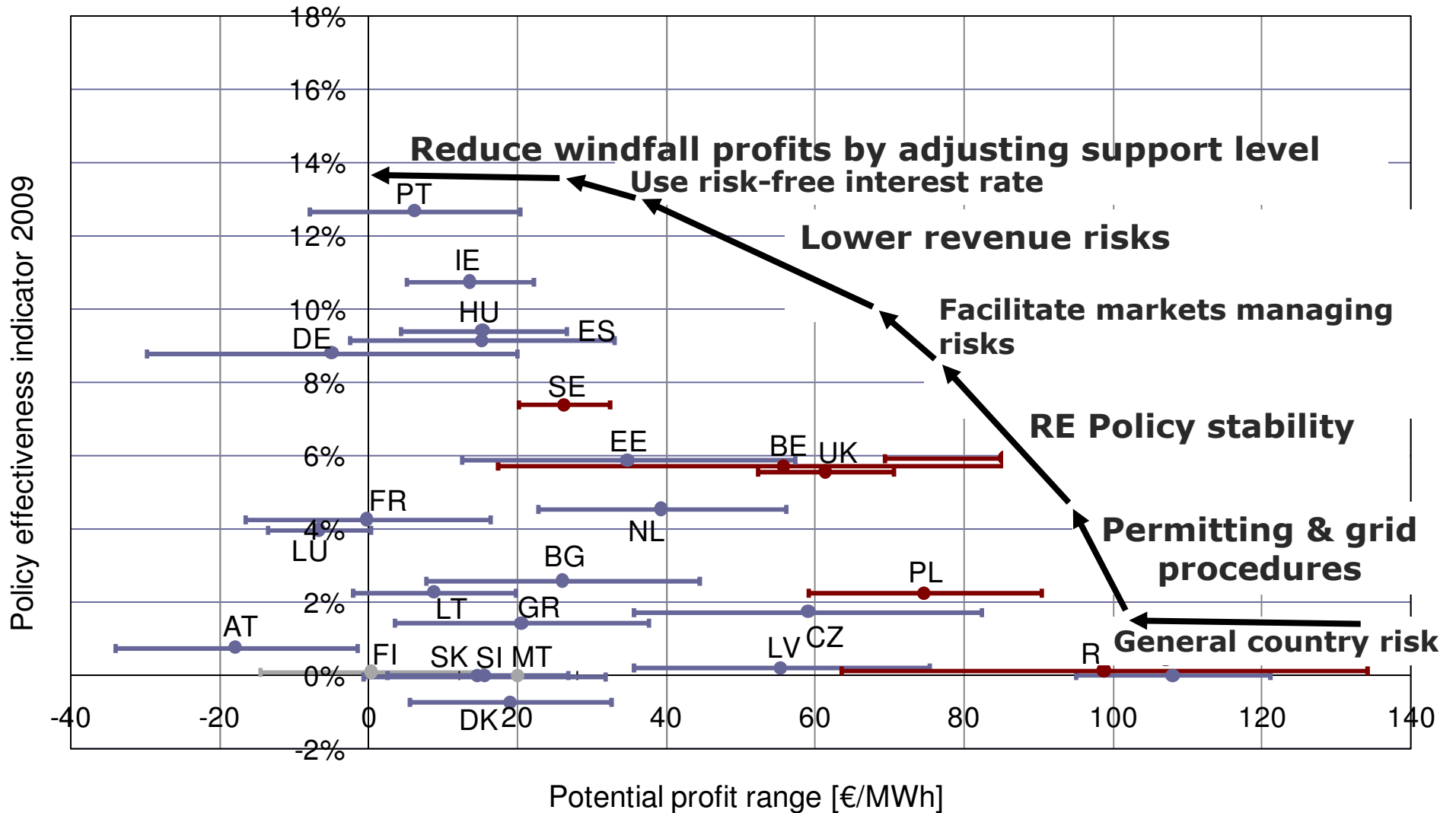


# Potential profit ranges - wind onshore 2009

(=cost-effectiveness of policies)



# Policy effectiveness (growth) versus policy cost efficiency - wind onshore 2009



# Triple-A policy options 1/2

		Levelized cost saving potential	Removing development constraint
Policy stability	⇒ ⇒ No retro-active policy changes for existing projects	> 20%	
	⇒ ⇒ Simple & transparent permitting/grid procedures	> 10%	+++
	⇒ ⇒ No abrupt policy changes for upcoming projects ⇒ ⇒ FIT/FIP: No budget/capacity caps & continual access to support	> 10% Plus 10%	+++ +++
'Policy stabilizer'	⇒ ⇒ FIT/FIP: Support financed via consumer surcharge (off budget)	3%	
	⇒ Loan guarantee	5%	
	⇒ (Temporary) government participation (e.g. wind offshore)	5%	
	EU MS Support level coordination / Minimum policy design standards	See policy stability	

**Note: Not all options apply to all Member States or can be cumulated.**



# Triple-A policy options 2/2

		Levelized cost saving potential	Removing development constraint
Revenue risks	<p><i>Certificate revenue risks in quota systems</i></p> <ul style="list-style-type: none"> <li>⇒ ⇒ Risk reduction: Long time horizon and serious penalties</li> <li>⇒ ⇒ Risk reduction: Price floor applied</li> <li>⇒ ⇒ Risk removal: FIP instead of quota system</li> </ul>	<p>14%</p> <p>Plus 7%</p> <p>Or &gt;10%</p>	++
	<p><i>Power revenue and balancing risk</i> ⇒ ⇒ Risk removal: FIT instead of FIP</p>	8%	
	<p><i>Curtailment risk</i></p> <ul style="list-style-type: none"> <li>⇒ ⇒ Grid priority / priority dispatch</li> <li>⇒ ⇒ Compensation for forced curtailment</li> </ul>	<p>10%</p> <p>Plus 4%</p>	++
	<p><i>Annual variability risk</i> ⇒ ⇒ Compensate annual variability wind/solar</p> <p>Comparable: Wind/solar derivatives</p>	2%	
Risk-free interest	<ul style="list-style-type: none"> <li>⇒ ⇒ Front-loading the support payment stream (FIT, FIP, Quota)</li> </ul> <p>Comparable: cash grants or flexible depreciation</p>	2% + 4%	
	<ul style="list-style-type: none"> <li>⇒ ⇒ Soft loan</li> </ul>	2% + 4%	+
Market facilitation	<p><i>Making project risk/performance data publicly available</i></p> <ul style="list-style-type: none"> <li>⇒ Establishing process standards for risk assessment &amp; rating</li> <li>⇒ ⇒ Availability of insurance for risks not yet insurable</li> </ul>	<p>4%</p> <p>2%</p>	++
	<p>Refinancing</p>	0%	++
	<ul style="list-style-type: none"> <li>⇒ ⇒ TSO responsible for grid connection (esp. wind offshore)</li> </ul>	2%	

# Thank you for your attention!

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2010 indicator report available on

[www.reshaping-res-policy.eu](http://www.reshaping-res-policy.eu)

2011 indicator report available during autumn