



**“BETTER”
EUROPEAN STAKEHOLDER WORKSHOP**

**Results from the EC project “RES Support
Schemes and Cooperation Mechanisms in
Europe”**

Malte Gephart
08/10/2014

Content

- Project overview
- Current status of Cooperation Mechanisms
- Barriers: Why are they not yet implemented?
- Results of case studies (example): Joint Projects between the Netherlands and Portugal
- Conclusion

Project team: EC project "RES Support Schemes and Cooperation Mechanisms in Europe"

Main contractor



Core partners



Regional partners



Project Objectives

Two over-arching objectives:

- Providing a knowledge base for understanding cooperation mechanisms, support schemes and their interactions, complementing the EC guidance documents
- Facilitating stakeholder discussions and providing practical assistance to stakeholders that seek to engage in Cooperation Mechanisms

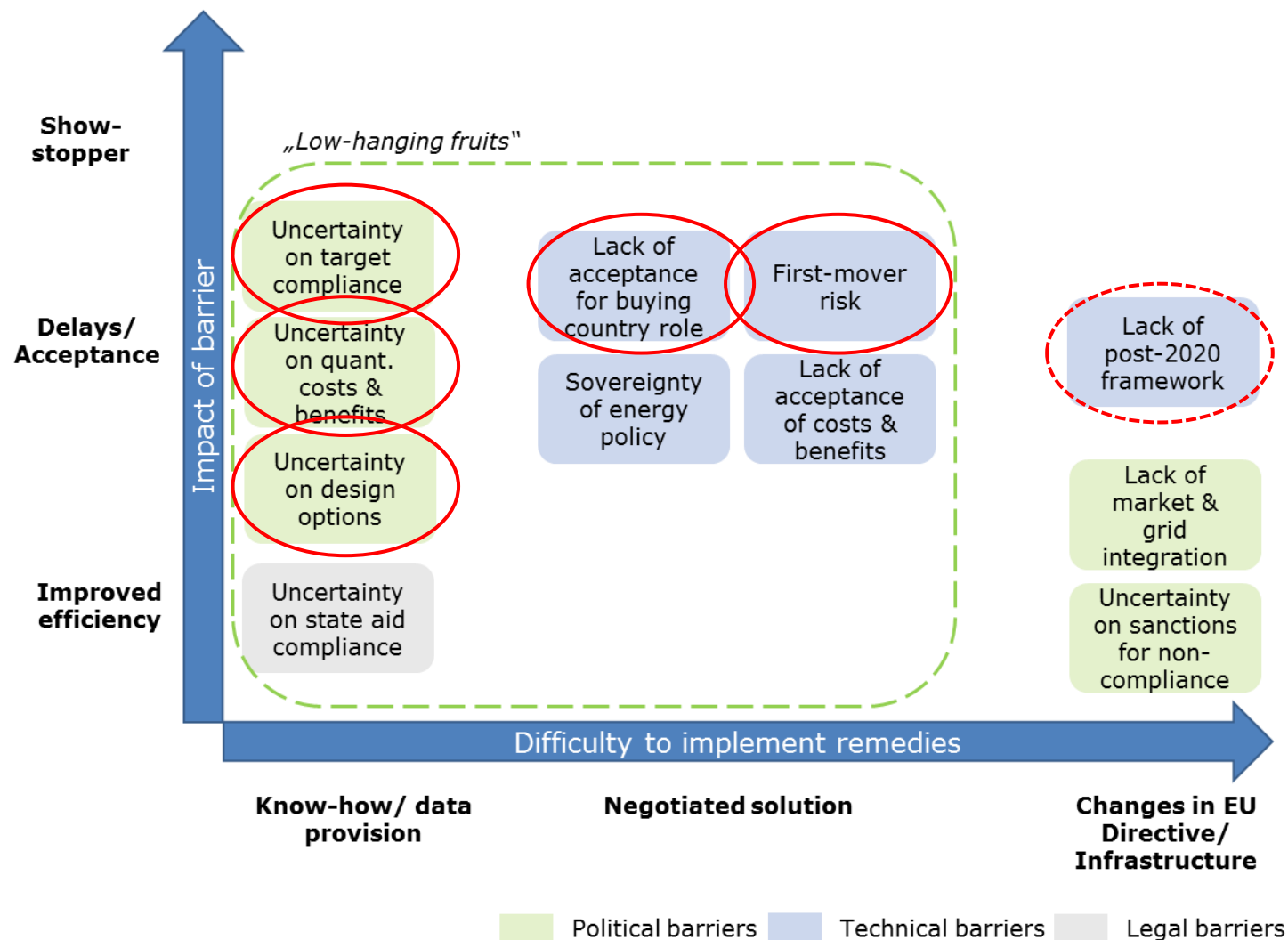
Interest in Cooperation Mechanisms

- From interviews with Member State representatives (ministries, energy agencies, etc.) and from the case studies we know that:
- Several Member States pursue the implementation of Cooperation Mechanisms actively, many say they will consider using **statistical transfers or joint projects** in the future
- The main motivation of potential **buying Member States** is target achievement (more than cost-effectiveness) → most proactive are countries with expected target deficits
- Potential **selling Member States** are mainly interested in (partly) covering the costs of their excess RES production.

Steps towards cooperation taken so far

- Many Member States had (or still have) **exploratory talks** with other countries, often with no concrete follow-up.
- At the start of each process countries typically investigate their **future RES surplus or deficit**.
- Some also conducted research on **potential costs and benefits** of the cooperation (although difficult in detail).
- Lately intensity of talks has increased: for ST on price setting, for JP on opening national support schemes

Which are the key barriers?



Case studies

Between January and May 2014 our project team has elaborated several case studies (input from all part. MSs)

- Statistical Transfer between Estonia and Luxembourg
- Statistical Transfer/Joint Projects between Italy and Malta
- Joint Projects between Portugal and the Netherlands
- An offshore wind park in the North Sea (cooperation between the Netherlands, Belgium, UK, and Luxembourg)
- Opportunities for implementing joint support schemes: Joint Quota System in Scandinavia, Joint Feed-in Premium System in Central and Eastern Europe, Technology-specific Joint Support Scheme for offshore wind energy

Objective

- Assisting Member States in the assessment of cooperation opportunities
- Exploring solutions for addressing concrete challenges that Member States face when implementing Cooperation Mechanisms

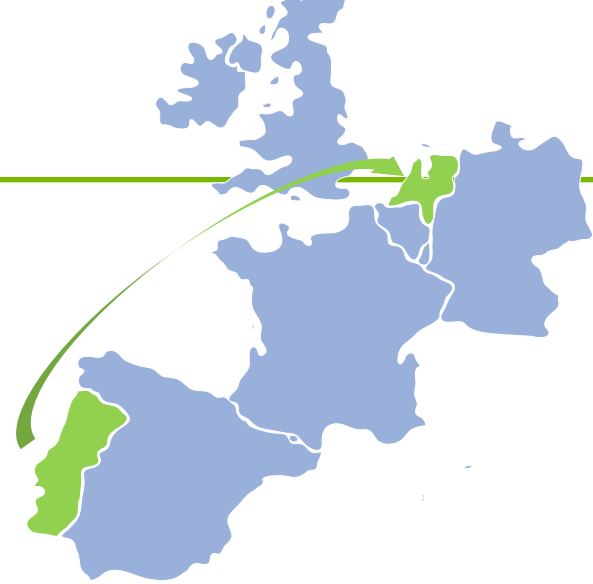
Results of a case study (example): Joint Projects between the Netherlands and Portugal

Cost reduction and local industry development

- NL RES target: 14% and lack of cheap RES options
- Despite ambitious Energy Agreement (16% RES in 2023):
 - NL might consider Cooperation Mechanisms to increase efficiency of its target achievement
 - NL is currently lagging behind planned RES deployment: Cooperation might serve to hedge risks of non-fulfillment
- PT RES target: 31%
- PT has excellent RES sites and might offer part of its RES potentials for target achievement in NL to foster local industry development

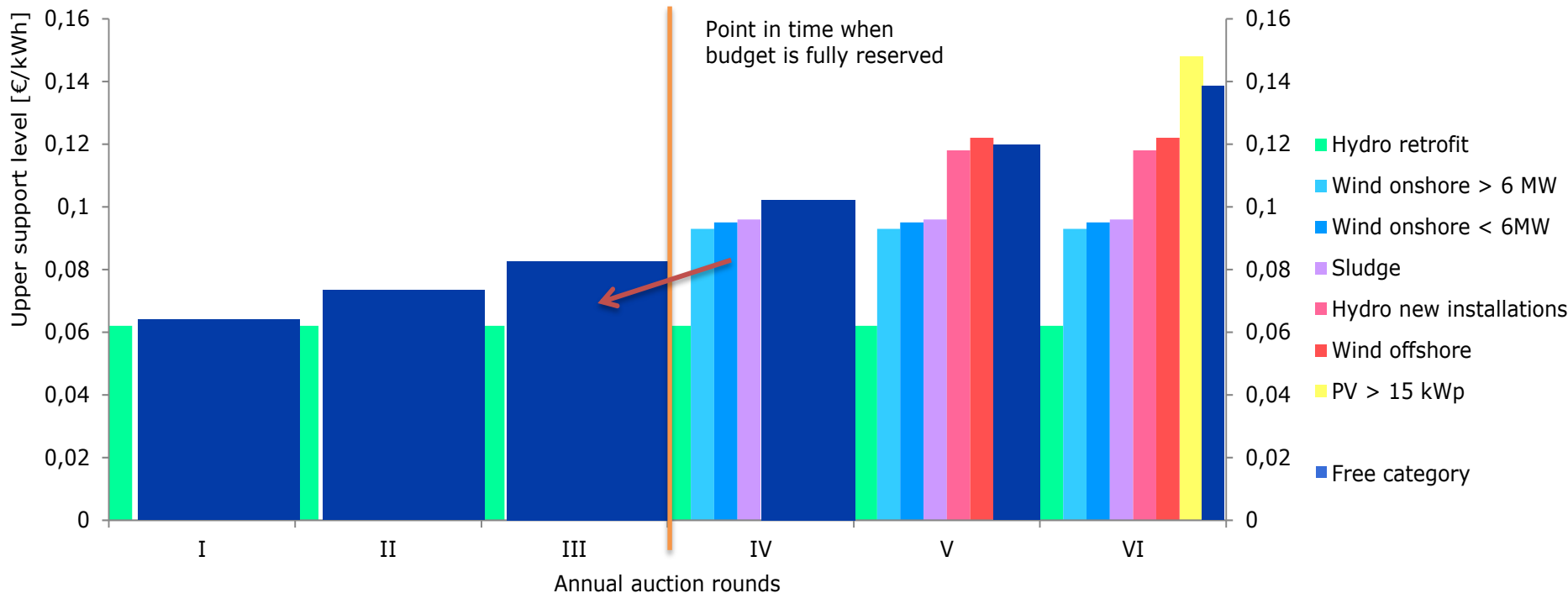
SDE+ supports projects in PT

- Multiple project framework
- Access to Dutch support scheme: NL directly finances RES projects in PT
- Projects from PT bid into existing Dutch scheme and compete with projects from NL
- SDE+ scheme aims to incentivise the deployment of RES at the lowest possible cost: technology-neutral budget / auction with technology-specific maximum support levels



SDE+

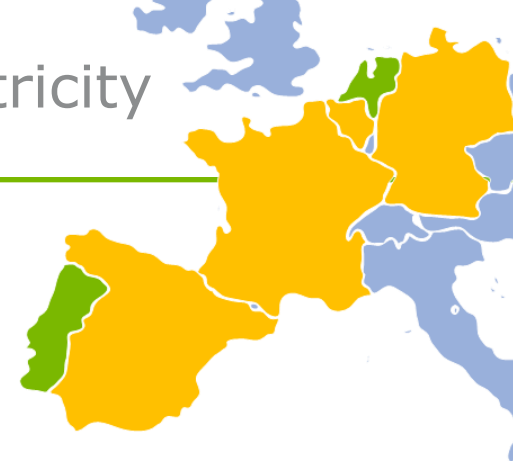
- Technology-specific maximum support levels per round
- “Free category” in each round: open for all technologies that are able to produce at lower costs than the (maximum) support level
- Opportunity to access the SDE+ sooner (as thus increase chance to receive support)



Adapting the SDE+ for projects from PT

- Maximum support levels for each technology in the SDE+ specifically for projects in Portugal (preference of NL, other options possible)
- Keep the existing LCoE formula, replace only specific resource-related factors to limit the consultation process for the categories under the SDE+
- Additional option: lowering cost of capital for projects in PT by referring to SDE+ when seeking financing
- WACC in RES can make up to 20-50% of LCoE (for wind and PV)
- Exact share of country risk, policy risk, etc. in WACC not clear
 - ✓ decrease LCoE, increase competitiveness of PT-projects

Requirement of physical transfer of electricity



- For PT RES export is mandatory: high RES shares in ES and PT, limited interconnections to FR and MO to balance RES-E
- Requirement for being granted support: RES producers and market participants sell electricity from PT to Dutch electricity exchange or via over-the-counter contract (OTC) to a market participant in the Netherlands
- Use of “explicit” cross border capacity allocation and PTR-nominations as proof of export: RES-producer acquires and nominates physical transmission rights (PTRs) for electricity to be supported by SDE+, i.e. it reserves capacity at interconnector
- Alternative: Make participation in Dutch support scheme dependent on interconnector capacity

Permits and supervision

How to meet permitting and reporting requirements of the SDE+?

- SDE+ / application: project developer confirms that all permits are in place
- PT: official confirmation of public authority: all permits required to built installation are in place
- SDE+ / project progress: After 1 year, project developers have to prove that they have at least commissioned a firm to effectively build the installation
- PT: official confirmation of public authority of proof of commissioning
- SDE+ / proof of production: CertiQ (Tennet) issues GO certificates and provides RVO with information = payments
- PT: TSO provides CertiQ with relevant information?

General conclusions from the case studies, what to expect until 2020 and how about the 2030 framework?

General conclusions from the case studies

- General barrier for all cases:
 - Public/political acceptance for financing RES deployment abroad (off-taking country)
- Several barriers are case-specific:
 - Cost-benefit sharing (most evident in ST cases)
 - First mover risk (also most evident in ST cases)
 - Details of cooperation design (most evident in Joint Projects)
- MS have very diverse and very specific issues to address:
 - Lowering costs (NL, MT, LU = off-taking countries)
 - Showing concrete projects (MT)
 - Physical transfer of electricity (PT and UK, not NL and IT)
 - Keeping existing support schemes in place (NL, not Italy)

What's to expect until 2020?

- In a bottom-up tailor made approach, these issues can be successfully addressed
- An increasing number of countries is seriously dealing with all aspects of implementing the Cooperation Mechanisms (ST, JPs, opening of national support schemes)
- Target trajectory is becoming steeper until 2020: potentially increased need for cooperation and more certainty on target fulfillment (and deficit and additional RES supply)
- 2030 framework will be decided soon. Depending on outcome, this will increase likeliness of cooperation beyond ST (timeframe until 2020 might be short for JPs).

Potential role of RES cooperation in a 2030 framework

- Specific role of RES cooperation depends on 2030 framework
 - How specific are national obligations? Thus, which incentive exists to reach RES deployment more efficiently than only domestically? (in strict sense of RES cooperation as defined right now)
- However, main issues will be relevant, directly or indirectly:
 - How to share and distribute costs and benefits?
 - How to incorporate support for cooperation projects into existing national support schemes?
- Cooperation Mechanisms could be
 - made obligatory
 - incentivized financially
 - be part of a broader cooperation approach, as suggested by the EC (with regionally coordinated, comprehensive plans)

Please contact us for more information

Ecofys Netherlands B.V. / Ecofys Germany GmbH

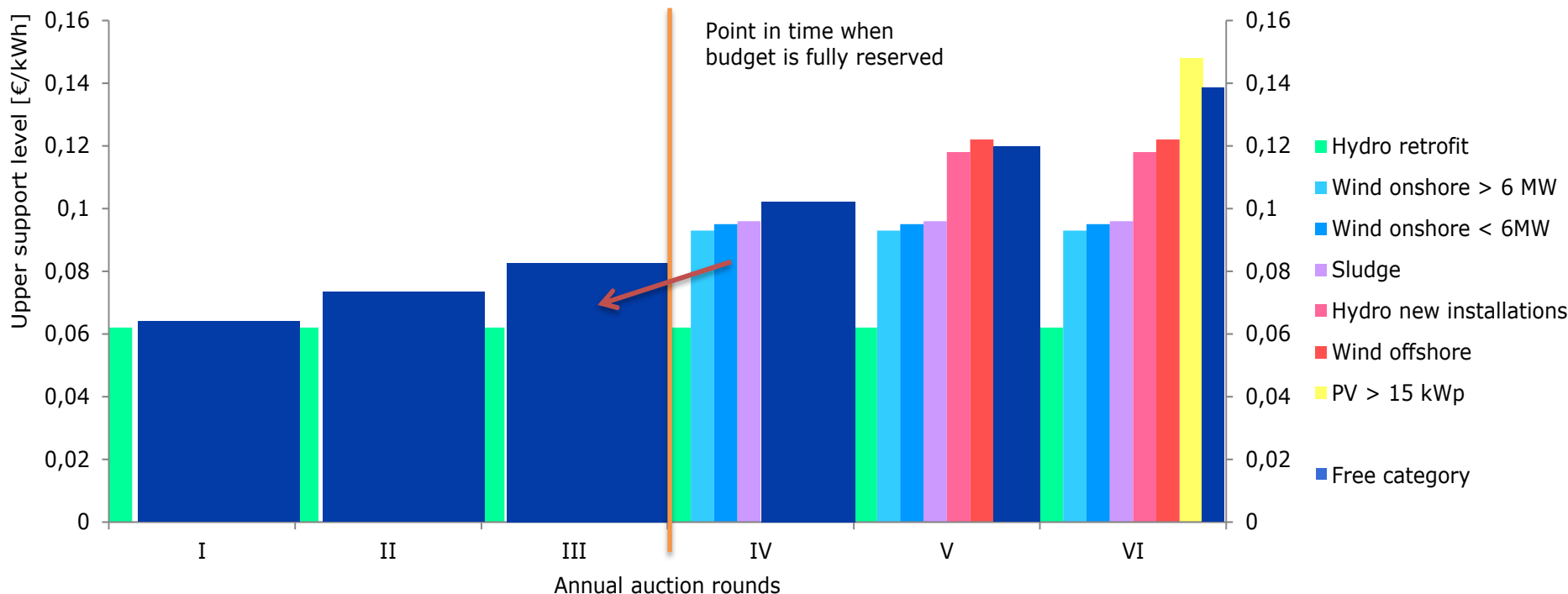
Malte Gephart

E: m.gephart@ecofys.com

http://ec.europa.eu/energy/renewables/studies/renewables_en.htm

Backup: SDE+

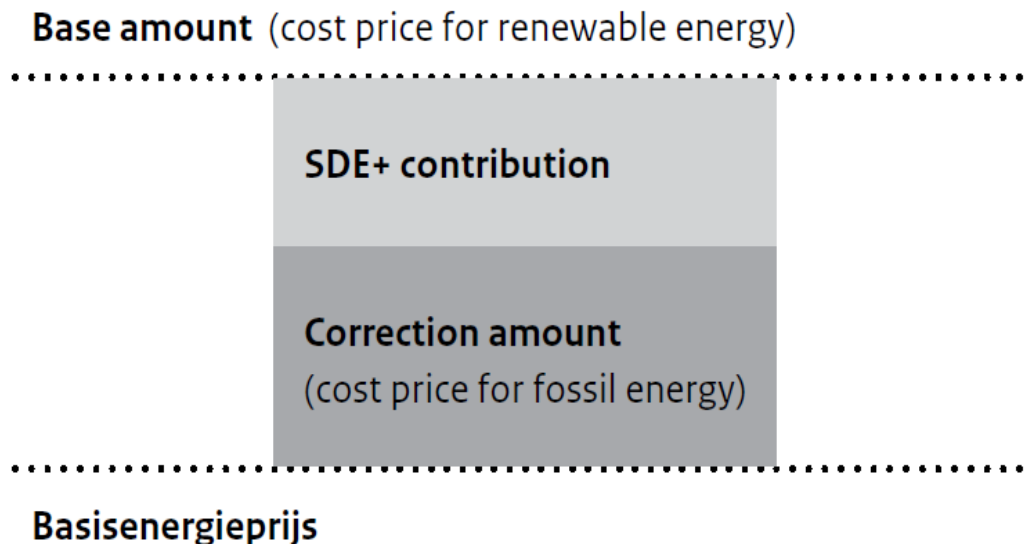
- Technology-specific maximum support levels per round
- “Free category” in each round: open for all technologies that are able to produce at lower costs than the (maximum) support level
- Opportunity to access the SDE+ sooner (as thus increase chance to receive support)



Backup: SDE+

- Sliding premium: calculated as the difference of the nominal "base amount" (strike price that is announced in the respective round) and the average annual electricity value, the so called "correction amount"
- Use PT market price for premium calculation?
- Replicate SDE+ calculation method?

$$SDE+ \text{ contribution} = \text{base amount} - \text{correction amount}$$



Results of case studies: Statistical Transfer between Estonia and Luxembourg

Description of the case

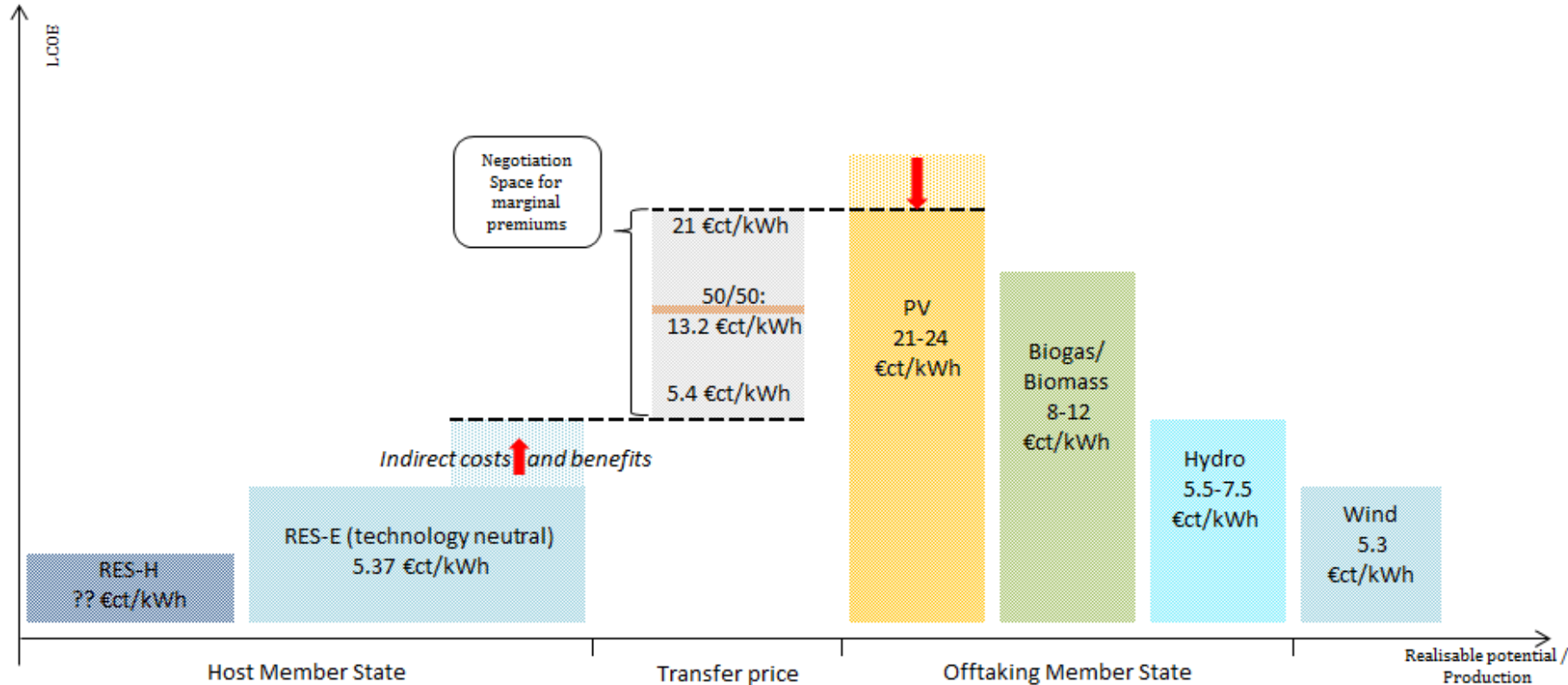
- **Estonia** as **host country** and **Luxembourg** as **off-taking** country.
- Both countries expressed their interest to cooperate through Statistical Transfer (the implementation is seen as easiest and administrative costs are lowest).
- **Estonia** is expected to have a surplus of renewable energy up to 2020. Share of RES reached 25.9% in 2011 (above the EU-target of 25% in 2020)
- Currently, Estonia has made a draft legislation that sketches the concept for Statistical Transfers.
- For **Luxembourg** it will be difficult to meet its national RES target (11% in 2020) using domestic resources only.
- “Balanced approach” between domestic deployment and exploitation of lower cost options in other countries might lead to meeting at least 2% of the target through Cooperation Mechanisms (estimate from NREAP)

Design characteristics, main issues - I

- Luxembourg prefers a **multiannual** contract to meet interim targets and to ensure long-term cooperation with the host country
 - Such a contract brings more certainty for both parties.
- Both MS have a clear preference for a **bilateral contract** with a **binding sales contract (and fixed ex-ante volumes)** as this:
 - is suitable in case of predictable surplus
 - ensures a predictable revenue stream for selling Member State
 - gives higher planning certainty for buying Member State
 - A call-option might be considered, too.

Costs and benefits – example for determining the price corridor (hypothetical)

- Out of many costs and benefits that can be considered: support costs for RES in Estonia vs. support costs for RES in Luxembourg
- A potential price corridor is between the marginal costs of additional RES capacity of both countries



Costs and benefits – price corridor

- The **floor of the price corridor** is determined by Estonia as the selling party
 - Estonia has a uniform 5.37 €ct/kWh premium for new RES installations. This means that the preferred selling price for Estonia might be around this price.
 - Alternatively: Estonia accepts a lower price to at least recover part of its costs for RES deployment
- The **cap of the price corridor** is determined by Luxembourg as the buying party. Several options are possible:
 - The price cap is defined by the alternative cost of domestic RES deployment (opportunity cost). Then, Statistical Transfer is a complementary alternative to own domestic RES deployment development, e.g. if not enough projects are available domestically;
 - The more likely option: Luxembourg refers to alternative options to get RES Statistics (e.g. Sweden)

Potential obstacles and how to overcome them

- **Public acceptance** of the Statistical Transfer
 - Difficult to communicate the role of the buying country that is sponsoring RES deployment abroad (Luxembourg)
 - Statistical Transfer does not imply physical transfer of RES-E, is more difficult to explain.
 - Advantages have to be clearly communicated, it has to be made clear that ST results in significant savings
- Estonia mentioned the lacking progress on implementing domestic legislation allowing for the government to participate in cooperation mechanisms as a **legal barrier**.
- **First mover risk** – i.e. engaging in cooperation mechanisms without building on the experience and best practices of other countries that have done so previously, is a barrier (e.g. without first projects that could be used as price setting).