

Do we need a common support scheme for renewables-sourced electricity in Europe?

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Outline

1. European harmonisation?
2. If so, which common support scheme?
3. Case study
4. Conclusions

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European harmonisation of RES-E support in the medium run? -1-

We would argue: **Yes !**

- Utilisation of EU-wide cheapest potential for RES-E key for cost-effectiveness of support: 27 different national approaches are increasingly inefficient
- Realising *gains from trade* through the Internal Electricity Market concept is increasingly urgent

→ More competitive Europe

European harmonisation of RES-E support in the medium run? -2-

BUT ...!

Due allowance needed for country-specific conditions:

- Many MS keen to limit social cost of dedicated RES policy
- Other MS keen to pursue national green industrialisation policies; even at higher (short-term) social cost
- Trade-off between short-term efficiency gains and long-term gains of technology diversity

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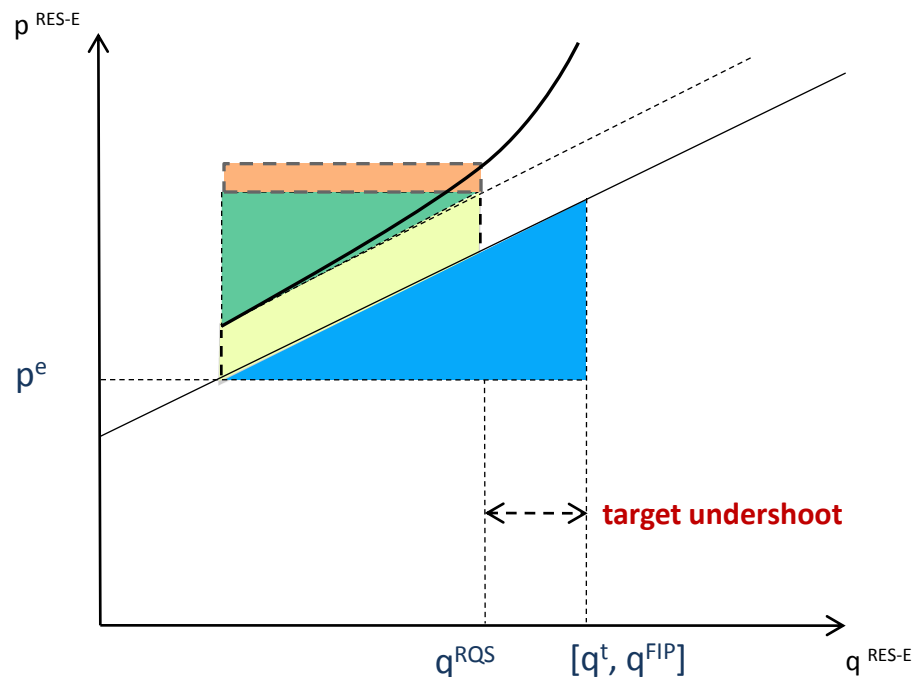
Which common support system(s)? -1 -

- **Joint feed-in tariff scheme (FIT)**
 - Common guaranteed technology-specific feed-in prices
 - Priority network access
- **Joint feed-in premium scheme (FIP)**
 - Common technology-specific price (premium, bonus) subsidies
 - Own responsibility (of RES-E generator) to sell his power
 - Own responsibility to match notified with real production
- **Joint renewable quota scheme (RQS)**
 - Power suppliers have to meet a RES-E quota target
 - All eligible RES-E generators get a certificate per MWh generated
 - Power suppliers need to prove target compliance with certificates
 - **Trade in electricity and certificates de-linked**
- **Joint hybrid renewable quota Scheme (hRQS)**
 - **Joint RQS**
 - *MS- and technology-specific* **additional** support measures

Which common support system(s)? -2 -

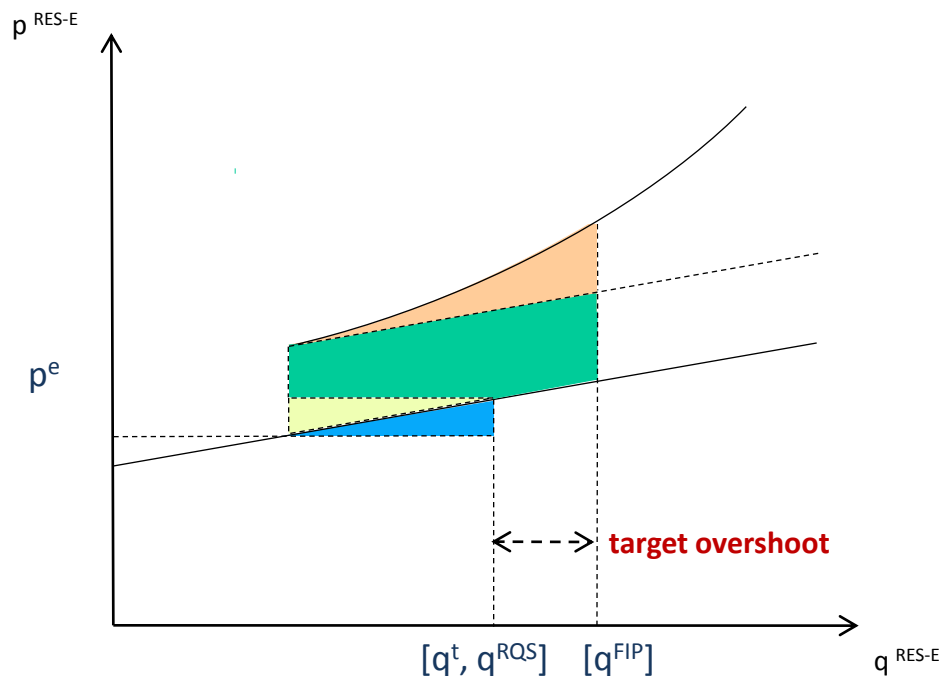
- Common uniform FIT?
 - Stable environment for investors → Effective
 - Technology diversity → Probably high dynamic efficiency
 - Poor market integration → Some key FIT countries move towards FIP
- Common uniform FIP?
 - Fairly stable inv. environment + better market integration
 - (Like FIT) Administratively less feasible (e.g. common fund and rates)
 - (Like FIT) Less efficient RES-E investment portfolio and siting
 - (Like FIT) High risk of target over/undershoot
- Common uniform (technology-neutral) certificates-endorsed Renewable Quota System (RQS)?
 - A *pure* RQS has compelling features regarding market efficiency
 - **but also some serious cons** (windfall profits risk; poor technology diversity; no allowance for specific national conditions)

Additional costs of RES-E support schemes according to FIP (FIT) proponents



- Additional cost of pre-commercial RES-E under a FIP(FIT) regime
- Extra additional cost under a RQS regime due to extra financing risk premium
- Windfall profits under a RQS regime
- Extra windfall profits due to exercise of market power

Additional costs of RES-E support schemes according to RQS proponents



- Additional cost of pre-commercial RES-E under a RQS regime
- Windfall profits under a RQS and a FIP regime
- Extra windfall profits under a FIP regime (asymmetric info + lobbying)
- Extra additional costs under a FIP regime (inefficient RES-E portfolio + siting)

A hybrid RQS: framework conditions

Technology- and MS-specific additional support measures:

- **To be based on subsidiarity**: not all MS are capable or willing to allocate additional money on supplementary support measures
- **Subject to prior approval** by the RQS supervisory body
- **Any rejection to refer only to *justifiable arguments*** on:
 - incompatibility with proper functioning of the RQS-certificates market
 - major electricity market distortions

A hybrid RQS?

Pro's

- Compared to a pure RQS: windfall profits substantially reduced
- Broader technology base →
 - higher (certificates) market volume
 - less supply-side (certificates) market concentration
 - Better prospects for target realisation
 - Better prospects for high *dynamic* (electricity) market efficiency
- Better control of cross-border transfers (**less congestion in networks of exporting MS**; extra instrument to manage the certificate price)
- Allowance for MS-specific concerns (subsidiarity)

Cons

- More complex
- Slightly lower *static* efficiency compared to a pure RQS

Qualitative assessment

{(scores from 1 (lowest) to 5 (highest))}

	Well-designed <i>joint</i> support schemes			
	FIT	FIP	Pure RQS	Hybrid RQS
Speed of RES-E penetration	5	4	2	3
Target achievement	2	2	4	5
Market integration	1	3	4	4
System integration	1	3	2	3
Static market efficiency	2	2	5	4
Dynamic market efficiency	5	4	3	4
Allowance for MS-specific concerns	5	5	1	4
Conceptual simplicity	5	5	3	1
Administrative feasibility	1	1	4	3
Σ/n	3,0	3,2	3,1	3,4

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- 3. Case study: joint NO-SE-NL support scheme**
4. Conclusions

A joint support scheme for Norway, Sweden and the Netherlands

-1-

- **The imminent RQS between Norway and Sweden denotes a breakthrough regarding ‘joint support schemes’** (a cooperation mechanism of the RES directive)
- Norwegian and Swedish governments have indicated an interest in international expansion
- **In the Netherlands the government intends to introduce an RQS as from 1 January 2015 (“Green Deal”)**

A joint support scheme for Norway, Sweden and the Netherlands

-2-

Consequences of a joint *pure* RQS

- NL has steeply rising RES-E supply curve as against gently sloped ones in NO and SE
- Accession of NL to the NO-SE scheme will bring about a massive NL import of RQS certificates originated in NO and SE
- Higher risk of undesirable:
 - upward movements of certificate price
 - network congestion problems in NO and SE
 - downward movements of Nordic electricity price
- Risk of RQS target undershoot increases
- High risk of undesired windfall profits for low-cost RES-E producers

A joint support scheme for Norway, Sweden and the Netherlands

-3-

Consequences of a joint hybrid RQS

- Assumption: NL opts for *acceptable* additional feed-in premium support for high-cost RES-E
 - ➔ extra certificates originated in NL
 - ➔ extra control instrument to check NL import of RQS certificates originated in NO and SE
 - ➔ *controlled* upward impact on certificate prices + downward impact on Nordic electricity prices (**less congested Nordic networks including Nordic interconnectors to e.g. NL**)
- Low risk of undesired windfall profits for low-cost RES-E producers and/or RQS target undershoot

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European harmonisation of RES-E support can *not* remain on the backburner

A hybrid RQS for bottom-up harmonisation warrants further consideration

To avoid congested networks investment in interconnections (with among others NO and SE) need to be stepped up!

Contact

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