# Defining coordination and harmonisation of European RES-E support mechanisms

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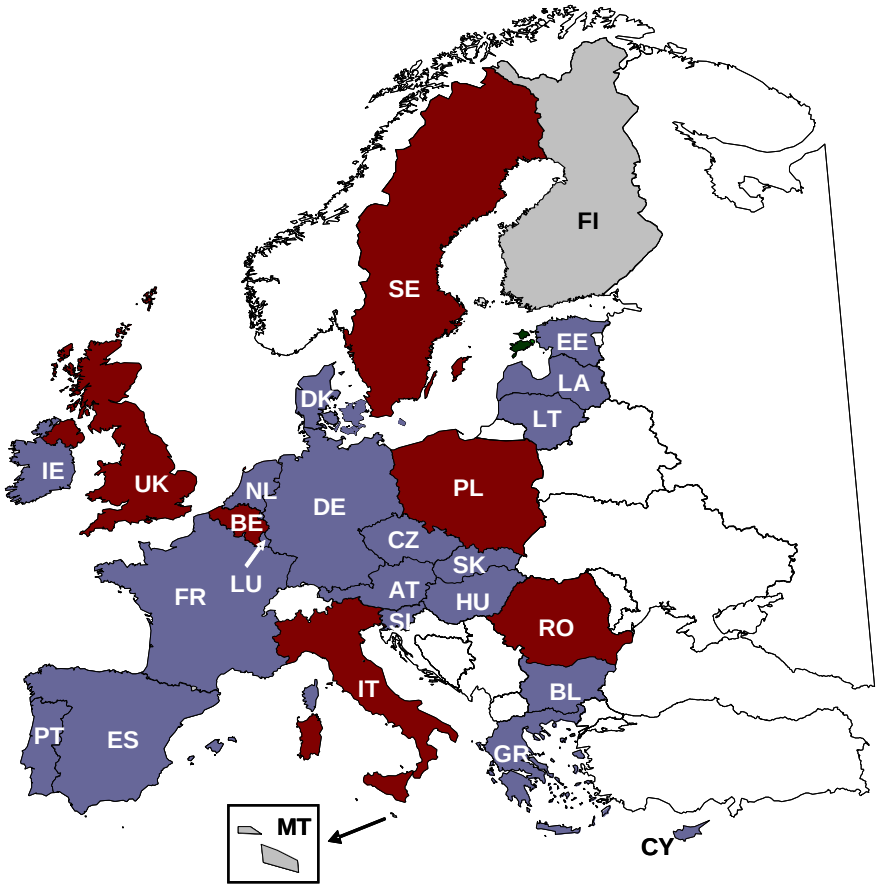
# Outline

1. Policy background
2. Definition of harmonisation and general questions
3. Types and degrees of harmonisation
4. A possible way towards EU-wide harmonisation

# Dominating support schemes for RES-E in the EU

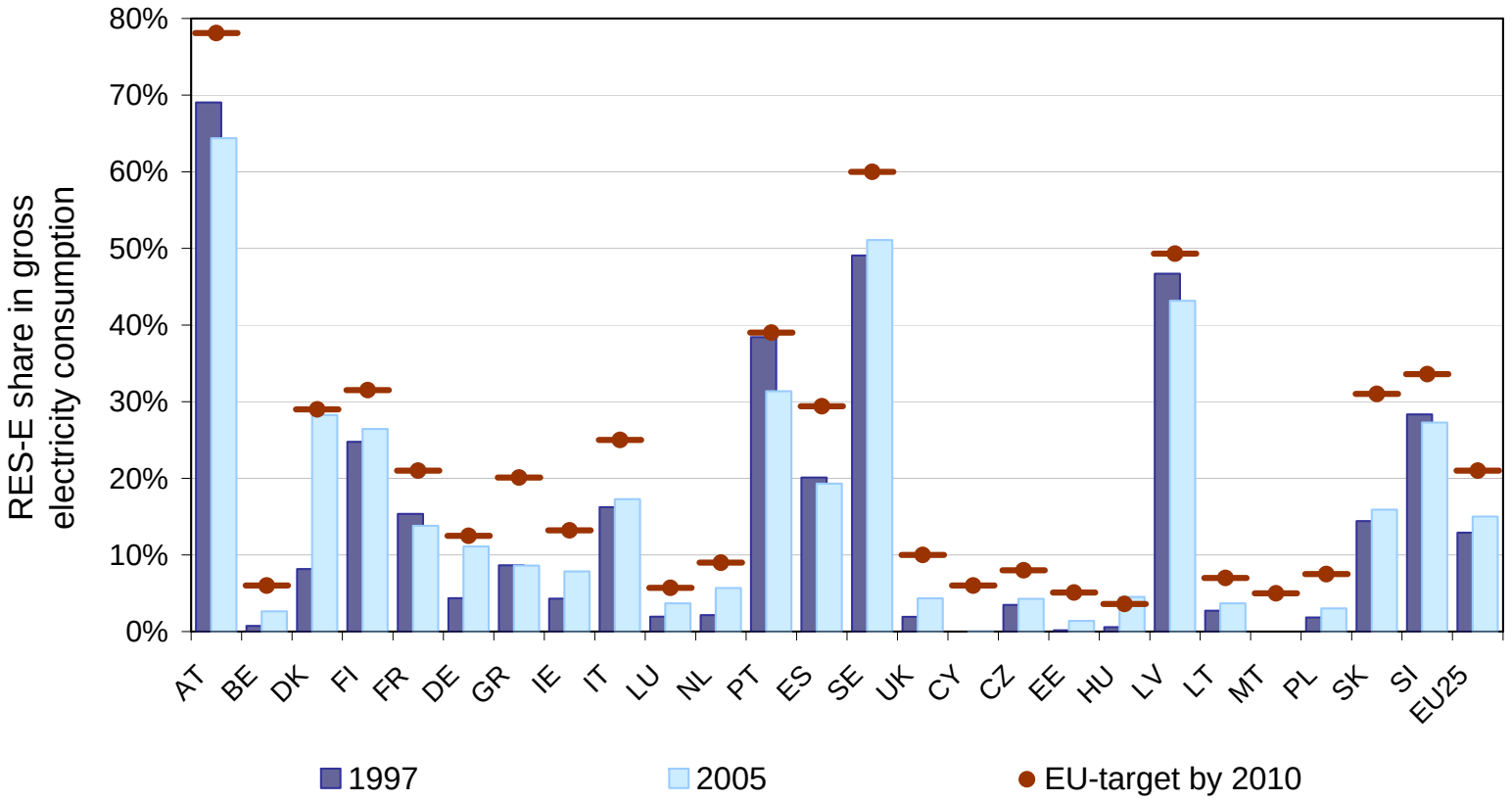



- Feed-in tariff system
- Quota obligation with Tradable Green Certificates (TGC)
- Tax incentives / Investment grants

19 EU countries use feed-in tariffs as main instrument

5 countries have implemented a quota obligation with TGCs

# Progress towards the RES-E targets for the EU-25




Based on normalised electricity generation figures / "Smoothing" of wind and hydro power volatility

# Measuring the effectiveness of RES-E support

1. **Relative or absolute growth rates** are typically used to demonstrate the achievements of countries, however both measures are biased

2. Better measure to judge the performance is the **absolute growth as ratio of the additional potential**

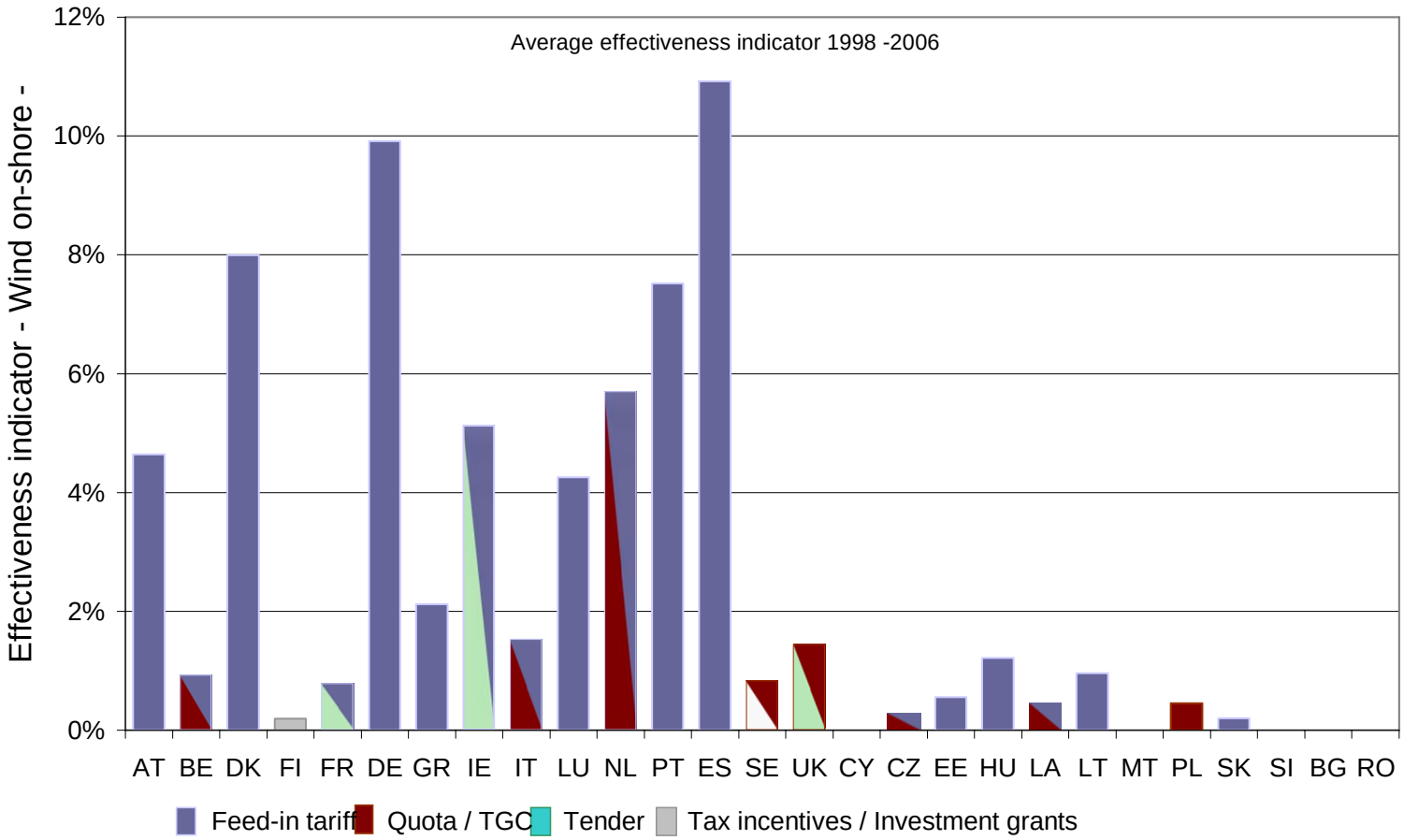
$$E_n^i = \frac{G_n^i - G_{n-1}^i}{POT_n^i}$$

| | |
|---|---|
| $E_n^i$ | Effectiveness indicator for RES technology i for the year n |
| $G_n^i$ | Existing electricity generation potential by RES technology i in year n |
| $POT_n^i$ | Additional generation potential of RES technology i in year n until 2020 |





# Effectiveness for wind on-shore in EU-27 (1998-2006)



# Challenges with respect to support schemes

Policy makers are looking for the right balance between a harmonisation of support and the continuation of national instruments in order to:

(1) not disrupt currently successful instruments by superimposing a harmonised system that may or may not be optimally designed

(2) increase the overall effectiveness and efficiency on a European scale

(3) improve the compatibility of RES support with other community policies such as creating a single European electricity market and establishing an effective CO2 abatement framework and

(4) allow Member States to reach their national targets if efficient and effective national instruments are implemented





# What is meant by “harmonisation”?

→ Top-down implementation of standardised, binding provisions concerning the support instruments of RES-E throughout the EU

Aims:

- Making support systems compatible with each other and with the internal electricity market
- Reducing distortions, especially in cross-border trade
- Increasing efficiency of support
- Achievement of targets (concerning the share of RES-E in total electricity consumption)

**"Harmonisation is a tool but not an aim in itself!"**





# Classification of harmonisation according to types and degrees

| degree of harmonisation \ type of scheme applied | TGC Tradeable Green Certificates | FIT Fixed Feed-in Tariff | FIP Premium Feed-in Tariff | Tender | technology-specific harmonisation |
|---|---|---|---|---|---|
| Increasing degree of harmonisation ↓ | **"Central co-ordination"** (harmonised, binding framework conditions, minimum design criteria → independent of the type of support) | | | | 1 technology . . . . . all technologies |
| | TGC | FIT | FIP | Tender | |
| | **"Convergence"** (one support system, national design) | | | | |
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- Establishment of a unique support mechanism in all Member States possibly including a component to consider national circumstances
- Equalisation of costs of the promotion system between EU Member States





# What's NOT meant by “harmonisation”?

- Bilateral or multilateral cooperation aiming at a mutual improvement of policies, e.g. Feed-In Cooperation, Nordic TGC market

- Convergence of different policy schemes due to policy learning
  Different policies become increasingly similar to each other through an evolving design (implementation of best practice) without central co-ordination

Examples:

→ Quota system with technology-specific quotas (UK)
→ Cap and floor limit total support in premium systems (ES, NL)

→ Premium feed-in tariffs (ES, NL)
→ Incentives in feed-in system for demand orientation (SLO)

# General questions on a full harmonisation

- Is any kind of **full** harmonisation beneficial for the European Energy market compared to an optimisation of national instruments?
- It has been shown that 2/3 of the potential efficiency improvements can be reached through an optimisation of national support schemes.

- Which preconditions at the conventional power market need to be fulfilled?
- Full unbundling & liberalisation, creation of a truly internal electricity market, better interconnections

- What is the relation between harmonisation and national interests of Member States with respect to sharing costs and benefits (Norwegian – Swedish example)?
- Will the introduction of a fully harmonised support system survive negotiations on EU level?





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# Degree "Central co-ordination"

Generic framework conditions of partially harmonised instruments as well as detailed design options of fully harmonised instruments should be based on presently **implemented best practices**

# General design criteria for a central co-ordination

**→ *Ensure effectiveness, reduce risks to investors, minimize cost for consumers***

- Set **long term, sufficiently ambitious** but realistic and binding national targets
  - In particular in quota systems since certificate price drops to zero after fulfilment of short term quota
- **Policy stability,** no stop and go policy!
- Clear separation of **existing** and **new capacities**
- **Duration of support** for new capacities should be restricted
- Similar conditions for **grid access & planning**
- **Technology-specific support** in order to reach long term targets at reasonable costs





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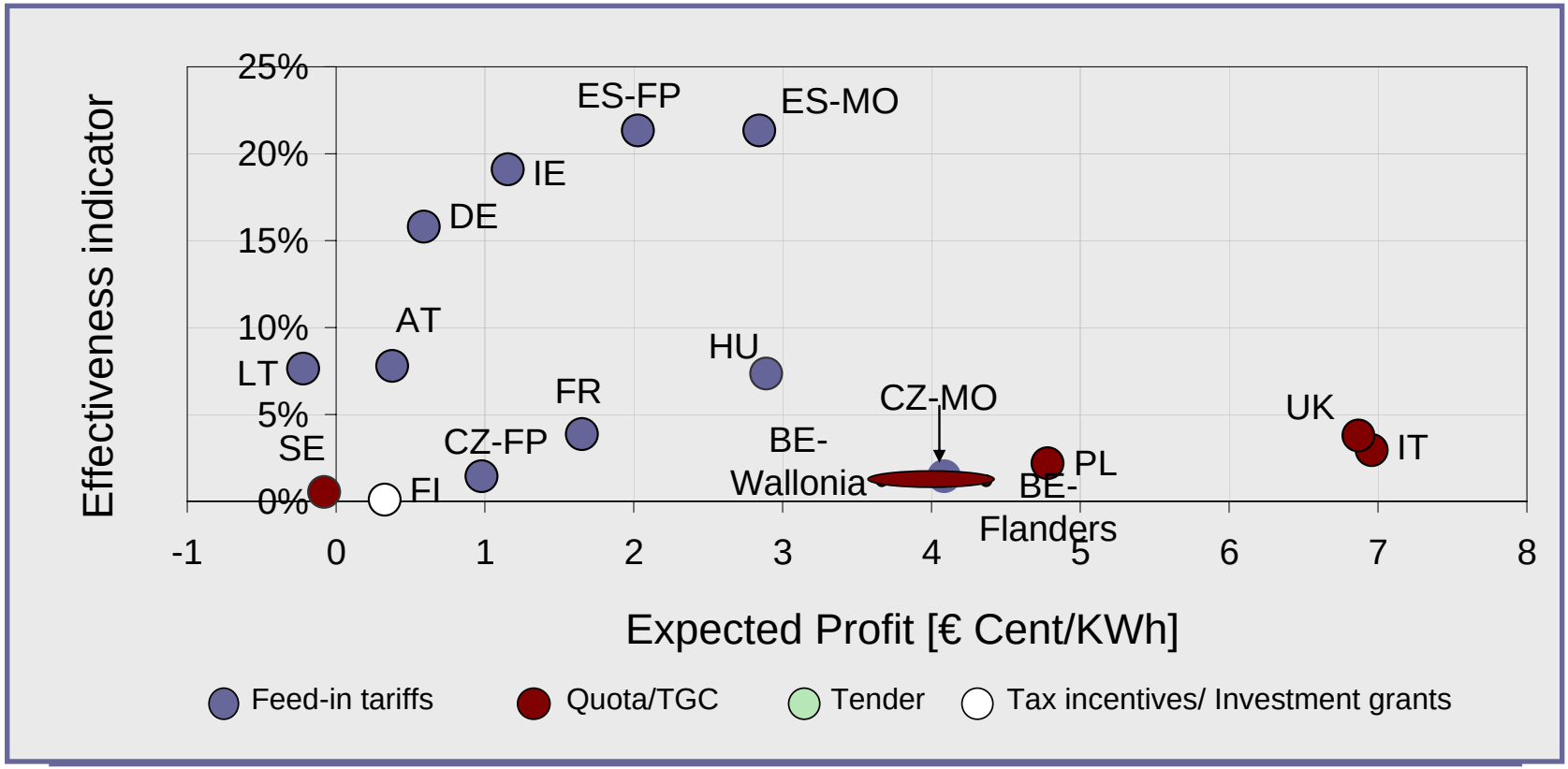
# Degree "Convergence"

- Experience with respect to **effectiveness** as well as economic **efficiency** should decide about the choice of instrument!



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# Degree "Full harmonisation"

- **Generic design criteria** (see above) should be applied …
  - … in particular a **technology specific support** is superior to non-technology specific with respect to cost minimisation and long term growth of RES.
- Full harmonisation does not necessarily mean a common harmonised quota system but could also be reached by technology specific support
- Parallels with ETS are not generally applicable:
  - because the benefits of $CO_2$ reduction are the same for all MS as opposed to the benefits of RES deployment
  - short term $CO_2$ reductions can largely build on mature technologies but RES deployment mostly involves new technologies
  - most RES plants are smaller than the minimum size of ETS plants (transaction costs / risk of fraud)

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# Technology-specific harmonisation

One candidate for a first technology for harmonisation could be **tendering for offshore** wind energy because:

- Large infrastructure developments of European dimension are necessary
- Allows for best placement of parks, with little risk of NIMBY effect
- Typical plant sizes (park level) are above 100 MW





# Harmonisation and burden sharing

- Harmonisation does NOT mean burden sharing…

  For the implementation of a burden sharing a harmonisation of support schemes is NOT needed

- Burden sharing = national target setting on the basis of sharing costs and benefits → NOT the same target (and not the same additional share) for each country

- Harmonisation = defining common framework conditions (and same instruments)

- National targets and corresponding burden sharing could be implemented by each instrument, in the case of Quota-TGC by directly sharing costs and benefits; in the case of feed-in tariffs through inter-governmental agreements also based on sharing costs and benefits





# A possible way towards an EU-wide harmonisation

1. *Set correct framework conditions for conventional power markets* ***(full liberalisation)***
2. *Diminish the key barriers for RES-E development* ***in each Member State***
3. *Set long term targets on EU level*
4. *Set minimum design criteria for support schemes* ***(generic and instrument specific)***
5. *[Optionally: Start regional coordination of RES-E markets* ***e.g. Nordic TGC market, Feed-In Cooperation]***

→ ***Full EU-wide harmonisation only after successful completion of the above steps***





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**Thank you for your attention!**