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European Renewable Energies Federation



## Renewable Energy Framework in the EU

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Dr. Dörte Fouquet  
- EREF Representing Director -

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## About EREF

- Federation of national associations from the EU Member States, working in the sector of energy produced from renewable sources
- Representing more than 50,000 MW of installed power capacity and a growing capacity in other sectors
- Voice of independent producers of energy from renewable sources

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## The Renewable Energy Directive 2009/28/EC





## Renewable Energy Directive - targets

- Binding overall EU target of at least 20% renewable energy in final consumption
  - Translated into binding national targets for each Member State according to their respective potentials and ambitions
    - Each Member State to reach its own target
    - = EU is going to reach the overall 20% target
  - Separate target of at least 10% for transport sector
- Member States discretion how they achieve their target
  - Directive suggests (non-exhaustive)
    - Use of support mechanisms
    - Use of certain flexibility mechanisms based on cooperation



## Renewable Energy Directive – flexibility mechanisms

- Statistical Transfer (Art. 6)
  - Member State buys the right to count a certain amount of renewable energy production towards its own national target from another Member State
    - No physical transfer needed
- Joint projects between Member States (Art. 7)
  - Discretion to the Member States how to design such joint projects, but notification to the Commission required e.g. how much of the energy so generated they want to count towards their target
- Joint projects with third countries (Art. 9)
  - Here, it needs to be ensured that the energy produced reaches the territory of the European Union
    - At least based on an assumption
- Joint support schemes (Art. 12)



## Renewable Energy Directive - discretion

*“Member States have different renewable energy potentials and operate different schemes of support for energy from renewable sources at the national level. (...) For the proper functioning of national support schemes it is vital that Member States can control the effect and costs of their national support schemes according to their different potentials. One important means to achieve the aim of this Directive is to guarantee the proper functioning of national support schemes, as under Directive 2001/77/EC, in order to maintain investor confidence and allow Member States to design effective national measures for target compliance. (...) In order to ensure the effectiveness of both measures of target compliance, i.e. national support schemes and cooperation mechanisms, it is essential that Member States are able to determine if and to what extent their national support schemes apply to energy from renewable sources produced in other Member States and to agree on this by applying the cooperation mechanisms provided for in this Directive.” (Rec. 25)*

Confirmed by the ECJ in  
Ålands Vindkraft and Essent



## Renewable Energy Directive - NREAP

- Member States submit National Renewable Energy Action Plans
  - = How to reach the target
    - Which renewable energy sources will lead to target achievement, which developments are predicted etc.
  - Including the instruments in existence or planned
    - Includes transport and renewable heating and cooling
      - Though in particular in the heating and cooling sector, most of the plans are far less detailed than in the electricity sector
  - European Commission considers the plans as binding
    - Only in exceptional circumstances and in particular if it seems that a Member State may fail to achieve its target, they can be changed
    - Changes have to be notified to the Commission



## Renewable Energy Directive – other features

- Facilitation of administrative procedures (Art. 13)
  - Based on (at least) principle of non-discrimination
- Establishment of an electronic Guarantee of Origin system (Art. 15)
  - To allow proving the “renewable energy quality” to the consumer
    - Not in any case for achievement of the binding national target
    - System of Guarantees of Origin is thus not a “European Quota System”, as the European Commission had once proposed
- (Facilitated) Grid access for renewables (Art. 16)
- Reporting and Monitoring Obligations to control progress



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## Role of public authorities





## European Institutions – observer status?

- **Member States had to notify NREAP to the European Commission**
  - BUT: Commission little “enforcement” = as long as the target will be reached, no “reason” to act?
    - STILL: Once target is not reached = “too late”?
- **European Court of Justice confirmed the Member States discretion**
  - BUT: also largely defers to the Member States when it comes to changes to the support scheme = little protection under EU “fundamental principles” of rule of law (prohibition of retroactive changes to national laws and protection of legitimate interests)?
- **EU to present and promote renewable energy and greenhouse gas reduction worldwide**
  - See negotiations around Kyoto
  - Also: Commission President Juncker wants EU to be world leader in renewable energy?



## Member States – typical approach to renewable energy

- **Renewable Energy Law**
  - Through parliamentary legislative process
    - Alternative: provisions spread over several different laws, e.g. energy law
- **Regulations relating to renewable energy**
  - On administrative level, i.e. Ministry
    - Sometimes even through agencies (e.g. regulator)
- **In most Member States = Federal, with Federal Ministry responsible**
  - However, e.g. in Belgium different systems (energy as competence of the provinces) or in Sweden differences within the different regions as regards e.g. administrative procedures
- **(Renewable) Energy Regulator**
  - For the administration/all issues dealing with the system
    - BUT: alternatives possible, e.g. outsourcing to companies

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## Role of leading companies





## Renewable energy – a chance for newcomers?

- **Renewable Energy in Europe often through decentralized “Independent Power Producers”**
  - Renewable energies often produced locally – using local resources to meet local energy demand
    - Counter-trend against the (historically) centralized energy industry
  - Many renewable energy projects of smaller sizes (compared to e.g. coal or nuclear power plants)
    - From e.g. roof-top PV in private households to community-owned windfarms
- **THUS: renewable energy brought competition into the markets and challenged the “leading energy companies” so far**
  - Big “traditional” energy companies only started late with renewable energy projects
    - And normally large projects, e.g. offshore-wind



## Renewable energy – new market entrants

- **First condition: market access**
  - Within the EU = energy market liberalization
    - = new market entrants have the chance to produce and sell their production
      - i.e. can act as
        - Producer and
        - Supplier
    - = old incumbents have to “unbundle” and may not discriminate against new market entrants
  - However, “as first step” possible to have e.g. “single-buyer” systems
    - = new market entrants can produce but sell their production to one supplier
      - i.e. only possible to act as producer

E.g. as  
Transitional  
regime...

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## Preferences for certain renewable energy sources and technologies





## Preferences? – Left to the Member States

- **EU does not prescribe the Member States in which renewable energy sources and technologies to invest**
  - Member States make their own decisions in the NREAP
    - Depending on potential
      - E.g. wind power in Portugal
      - E.g. biomass in Sweden
      - E.g. hydropower in Austria
    - And national policy choices
      - E.g. wind and PV in Germany
      - BUT also decision not to build solar PV anymore e.g. as in Greece; or to reduce support/introduce new system related charges for solar PV e.g. as in Belgium or Bulgaria
- **Note also: Under Art. 194 TFEU Member States have sovereignty over their energy mix**



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## Success of the policies





## Will we reach the renewable energy targets in the EU?

- **Overall EU target**
  - Likely not to be reached
- **Member States targets**
  - **Trajectory target in the NREAP**
    - 22 Member States on track, 6 not
  - **Indicative target for 2011/2012**
    - 26 Member States have met the milestone
      - For electricity: 12 Member States overachieved, 16 underachieved
      - For heating and cooling: 23 Member States overachieved, 5 underachieved
      - For transport: 8 Member States reached their target, 20 underachieved
- **Binding national target**
  - More than 14 Member States not to/questionable whether they reach their target



## Progress alongside the trajectories

### RES SHARE IN GROSS FINAL ENERGY CONSUMPTION

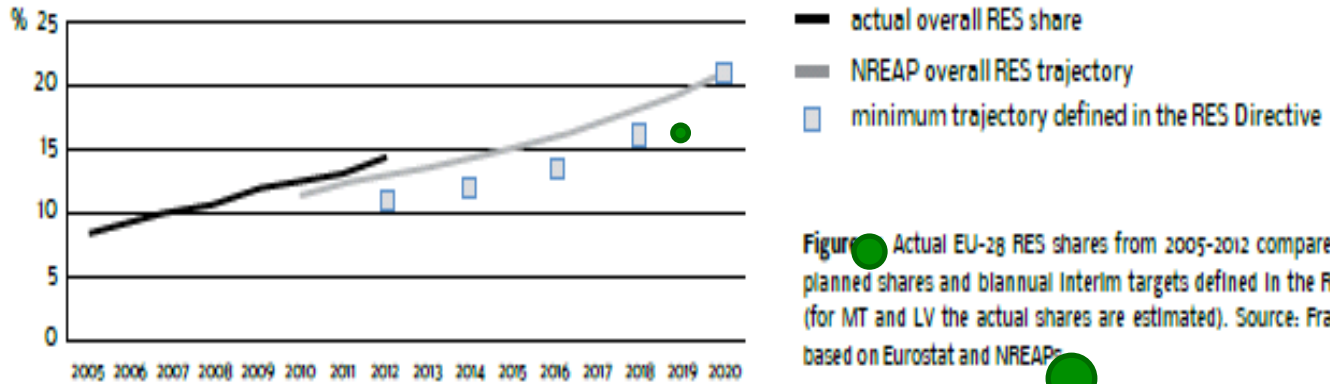


Figure 1. Actual EU-28 RES shares from 2005-2012 compared to NREAP planned shares and biannual interim targets defined in the RES Directive (for MT and LV the actual shares are estimated). Source: Fraunhofer ISI based on Eurostat and NREAPs.

The EU-28 are on track with an overall RES share of 14.07% in 2012, compared to a planned share of 12.87% according to the NREAPs.

But note how steep it gets here!

Source: Keep on Track!



## Progress needed to reach the Overall EU 2020 target

RES GROWTH RATE 2010-2012 VERSUS AVERAGE ANNUAL GROWTH RATES REQUIRED

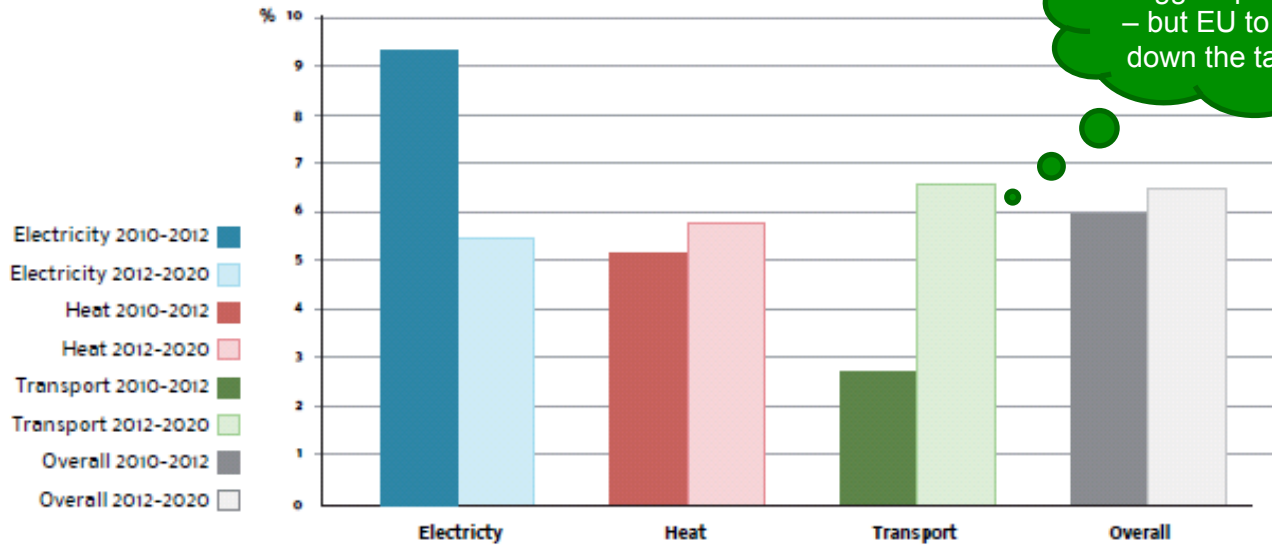


Figure 4: Growth rates of RES sector shares 2011-2012 [%/a] <sup>4</sup> and average annual growth rates [%/a] required from 2012 to 2020 to achieve the 2020 target. Source: Fraunhofer ISI based on Eurostat and other sources.

Source: Keep on Track!

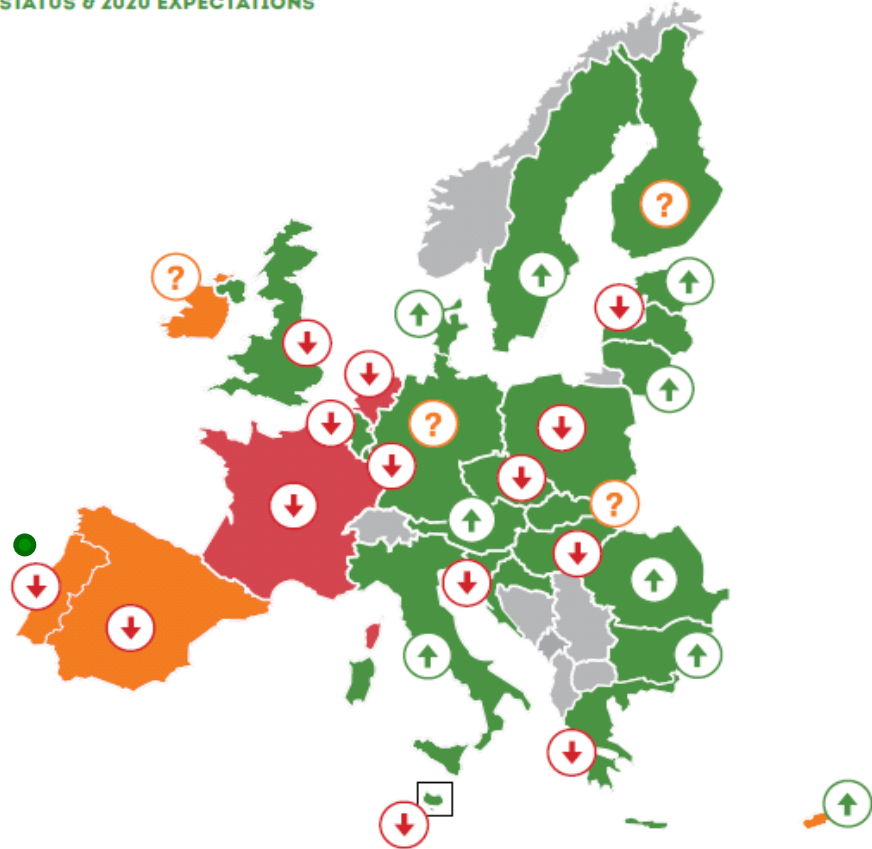
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More than 14 Member States not to reach their target?

## ACHIEVEMENT OF RES TARGETS BY MEMBER STATES: CURRENT STATUS & 2020 EXPECTATIONS



### 2020 EXPECTATIONS

- This MS is expected to reach the 2020 target.
- This MS is NOT expected to reach the 2020 target.
- There are doubts whether this MS will achieve the 2020 target.

### CURRENT STATUS (IN 2012)

- This MS has achieved the NREAP 2012 target and the 2011/2012 Interim target set by the RES Directive.
- This MS has NOT achieved the NREAP 2012 target but has achieved the 2011/2012 Interim target set by the RES Directive.
- This MS has NOT achieved the NREAP 2012 target and has NOT YET achieved the 2011/2012 Interim target set by the RES Directive.
- No data.

Source: Keep on Track!

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## Food for thought: Differences between EU and China in renewable energy development and their global impact





## Some questions one may think about...

- **Decentralized as in the EU or rather centralized as in China?**
  - What are the pro's and con's for the countries?
    - How about competition? How about market regulation?
  - What impact does it have on neighboring countries?
    - How about interconnectors? How about balancing?
      - Is that relevant for the companies in question?
- **How to ensure investor confidence in the sector? How to secure investments?**
  - Government-chosen projects as in China or e.g. large offshore wind parks in the EU?
  - Or rather small community projects supported through legislative framework (e.g. Feed-in Tariff)?
    - How to ensure that such framework is in fact reliable?



## Some questions one may think about...

### ■ **How to deal with foreign investment?**

- Do we want foreign investment in energy (infrastructure)? If so, how to attract it?
- How about “local content” clauses to ensure local benefits for the local industry?
- How to justify e.g. joined projects under the Renewable Energy Directive or Statistical Transfers, where the benefits are in other countries?

### ■ **How about research and innovation?**

- With PV and wind being (next to) competitive in the market, what about “new” renewable energy technologies, e.g. wave and tidal? How to foster that?
- Generally, on the way to 100% renewable energy, how to find the right mix? And the technologies to provide it?

### ■ **What is the link between a strong renewable energy policy and greenhouse gas emission reduction targets?**

- With a strong renewable energy policy and an ambitious target, should there not be more we can do e.g. under Kyoto?

■ ...



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# Thank you for your attention!

Dr. Dörte Fouquet  
[doerte.fouquet@eref-europe.org](mailto:doerte.fouquet@eref-europe.org)

