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- The Report has been set as a deliverable in ECRB Work Program 2022 for Electricity Working Group under the Task Force IV (b)
- The Report contains information and data provided by Contracting Parties. For this purpose, questionnaire has been created.
- The questionnaire has been distributed to 9 Contracting Parties (CP's)
- Feedback received from 6 CP's
- Feedback missing from Albania, Georgia and Moldova



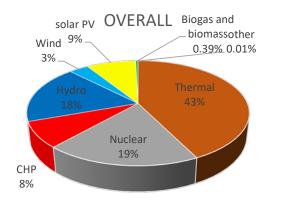
The scope of Report

- Integration of renewable energy sources into the energy systems gains more and more importance but also entails a number of regulatory challenges that come with the need to make the system more flexible. This report look into these aspects including the balancing responsibility of producers from renewable energy sources and marketing.
- Main parts of Report:
 - Overview of generation technologies (installed capacities)
 - The role of Regulators regarding the renewables
 - Support schemes
 - Renewables balancing responsibility
 - Flexibility



Overview of generation technologies

- Installed capacity in CP's has been showed
- HPP and coal-based TPP are dominant, except in case of Ukraine with nuclear PP installed capacity
- Significant penetration of wind and solar power plants is evident



■ Thermal ■ Nuclear ■ CHP ■ Hydro ■ Wind ■ solar PV ■ Biogas and biomass ■ other



The role of Regulator regarding the RES

- Big differences between CP's
 - Wide scope of responsibilities in Bosnia and Herzegovina, Kosovo* and Ukraine (setting the criteria and procedures in support scheme, issuing privileged status, establishing tariffs, ...)
 - Very limited responsibilities in rest of CP's (mostly issuing privileged status to RES producers only)

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^{*}This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Advisory Opinion on the Kosovo* declaration of independence.



Support schemes

- Support schemes applied to specific group of eligible producers from RES
- Cases exist where support for high-efficiency cogeneration and self-consumption applied
- FEED-IN OR PREMIUM MODEL???????
- High-efficiency cogeneration (HEC)
- Self-consumption



RES balancing responsibility

- Generally, RES producers are not excluded from balancing mechanism.
- As exception, for some groups of RES producers under the Feed-in or Premium model, the balancing cost is mostly covered by off-taker, market operator or other entity assigned by the law.
- Bosnia and Herzegovina is the only CP where all RES producers are balancing responsible.
- Many CP's are considering switching to a model of full balancing responsibility of RES producers.
- Kosovo* is the case where gradual transition related to balancing responsibility has already been made. All RES producers under support schemes bear 25% of their imbalances while new RES producers are fully balancing responsible.



Flexibility

- The flexibility of the power system, as the ability of the system to accommodate large volumes of errors between forecast and output, triggered by significant penetration of intermittent sources of electricity such as wind and PV power plants, is becoming more and more important.
- In order to maintain and restore system stability, power systems have to rely on flexible generation, energy storage and flexible demand.
- Shortage in legislation is evident. There are cases where flexibility has been introduced in the Laws but without further elaboration in legislation.
- Legislation has yet to be amended in order to introduce energy storage and aggregation.
- There are no examples of flexible demand except the case of participation of consumers in providing Replacement reserves.



THANK YOU FOR YOUR ATENTION

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