



Bosnia and Herzegovina Renewables Readiness Assessment

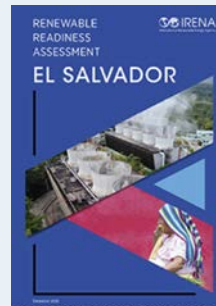
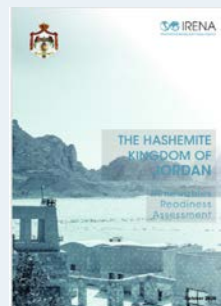
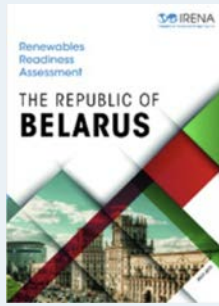
Renewables Readiness Assessment

- Key instrument in IRENA's country-level engagement
- Country-initiated, country-led and country-owned process facilitated by IRENA
- Inclusive and multi-stakeholder process promoting consensus
- Process establishing a basis for future collaboration towards the energy transition



Objectives of the RRA

- Comprehensive assessment of the situation on the ground
- Identification of obstacles hindering accelerated RE deployment for the energy transition
- Recommendations on short and medium-term actions for a long-term development pathway



- Initiated end of 2021
- Main objective of RRA process to contribute to the preparation of NECP
- Combined with assessment for alignment of the level of ambition in NDC and NECP
- Special focus on renewable energy financial landscape and project pipeline
- Two workshops with country's stakeholders for consultation and validation of the results
- Launch of RRA report on 25 September 2023 at Sarajevo climate and energy week
- Post RRA activities for implementation of the recommended actions

- Improvement of regulatory performance, learning from the previous experience
- Integrated strategy for planning and investment
- More clarity vis-à-vis project capacities and locations with verified solid pipeline of projects
- Enforcement of the retail electricity market reform and consumer empowerment
- Take into account the positive socioeconomic aspects of the energy transition and RE deployment
- Active promotion of renewable energy and energy efficiency in buildings
- More renewables in transport and implementation of “Avoid-Shift-Improve” principle
- Streamline and strengthen the capacity in RE projects preparation , financing and performance phase
- Improvement of the alignment between NDC and NECP

NDC and NECP alignment

Alignment of NDC and NECP refers to the process of ensuring consistency and coherence between the two frameworks in terms of renewable energy targets and greenhouse gas emissions reduction goals. Ensuring alignment is essential for coordinated policy actions and efficient resource allocation to achieve shared climate and energy objectives.

Specific considerations related to Bosnia and Herzegovina:

- Energy Community Contracting Parties are committed to monitoring and reporting in areas of renewables, energy efficiency, greenhouse gas emissions, and other relevant climate change information in their NECPs.
- Preparation of strategy documents and climate plans (incl. NDCs and LT-LEDS) presents a challenge in terms of available resources for planning exercises.
- There are significant opportunities to explore the synergies between NDC and NECP processes to ensure cross-sector planning towards agreed climate and energy objectives and targets.
- Ensuring consistency and coordination between NDC and NECP is crucial for coordinated policy actions and efficient resource allocation to achieve shared climate and energy goals.



Existing sector strategies should inform the NECP which in turn can feed into the updated NDC

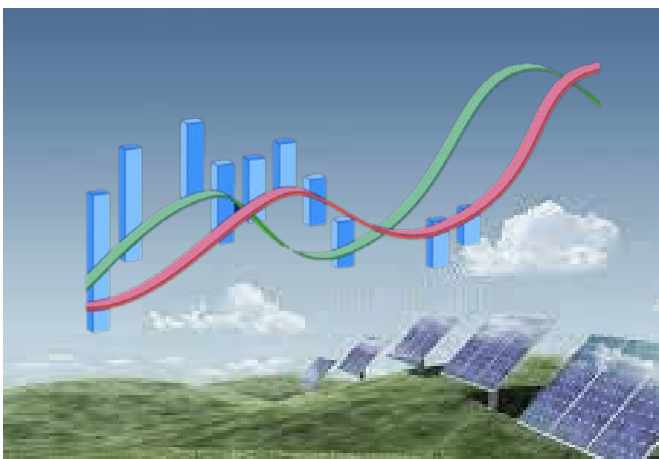
NDC and NECP alignment support

Objectives

- Align the renewable energy targets in the NECP currently in development and the ones stated in the recently adopted NDC for 2020-2030
- Verify the results of current assessments developed at the national level
- Contribute to the alignment between national level technical assessments and studies for the energy sector, serving as input to the NDC implementation phase, long-term plans and upcoming NDC update



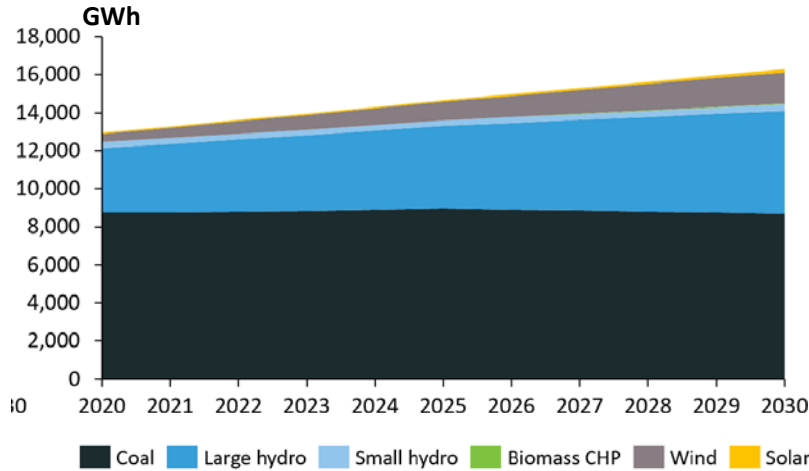
Methodology



- Analysis of national plans and studies, including NDC, NECP, and LEAP model
- Evaluation of quantitative measures for mitigation options
- Comparison of scenarios used in the analysis for the NDC and NECP
- Validate recommendations to ensure that the RE targets to be set in the NECP are consistent with the Paris Agreement's, the EU's, and the Sofia Declaration on the Western Balkans' Green Agenda's climate neutrality targets.

Efficient policy integration and alignment of power generation projections in NDC and NECP are crucial for achieving shared renewable energy targets and sustainable growth

NDC - SIII Scenario



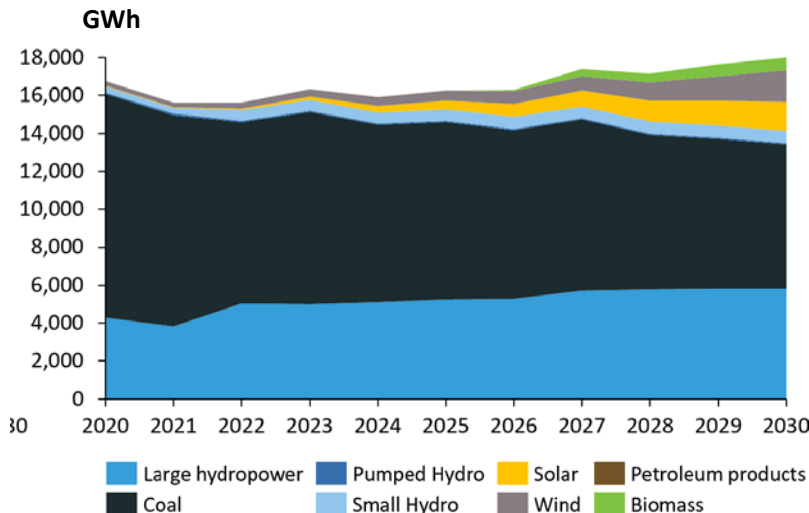
In 2020, Power generation starts at 12,950 GWh, with coal power plants contributing 8,766 GWh and renewable energy accounting for 32% of the generation mix. Power generation is expected to grow by 26%, reaching 16,304 GWh in 2030. Coal share will slightly decrease by 0.7%, while renewable energy will experience significant expansion, increasing its share to 47% by 2030.

Key takeaways for generation

Reconciling NDC and NECP power supply projections is crucial for efficient policy integration and the attainment of common climate and energy targets.

- The NDC scenario projects a 26% increase in power generation from 12,950 GWh in 2020 to 16,304 GWh in 2030, with the renewable energy share rising from 32% to 47% and a slight decrease in coal power plants.
- In contrast, the NECP scenario projects a rise in power generation from 16,191 GWh in 2020 to 17,731 GWh in 2030, with the renewable energy share projected to increase to 59%, primarily driven by hydropower.
- Ensuring consistency between the two frameworks is essential for coordinated policy actions and efficient resource allocation to achieve shared climate and energy objectives.

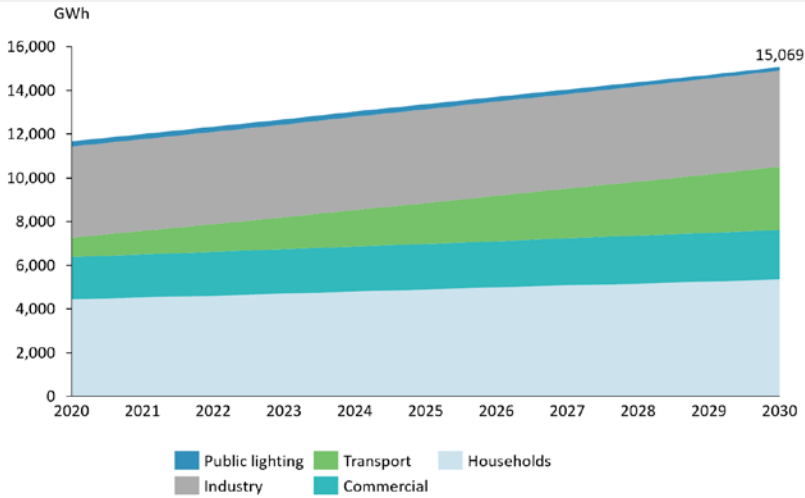
NECP – Policy Scenario



Power generation in 2020 stands at 16,191 GWh, with renewable energy constituting a significant portion of the generation mix. It will rise to 17,731 GWh in 2030. The renewable energy share will see substantial growth, reaching 59% by 2030. Hydropower, in particular, will play a crucial role in the renewable power generation mix.

Examining NDC and NECP projections can improve coherence in electricity demand growth. Aligning these frameworks fosters collaboration and resource optimization

NDC - SIII Scenario



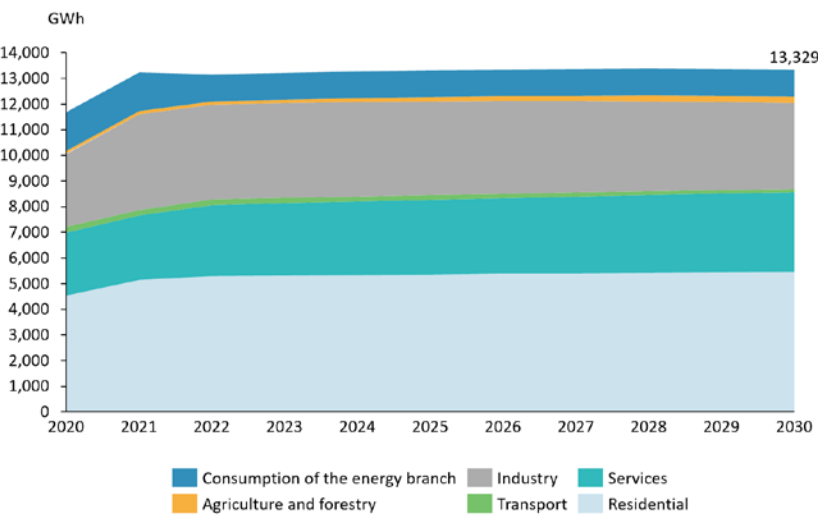
In 2020, electricity demand is estimated at 11,673 GWh, primarily driven by the residential sector (38%), followed by industry (36%), commercial (17%), transport (8%), and public lighting (2%). By 2030, energy demand is expected to reach 15,069 GWh, with transport share rising to 19% and all other sectors decreasing.

Key takeaways for demand

Reconciling NDC and NECP electricity demand projections, is vital for targeted policy integration and the attainment of common climate and energy targets:

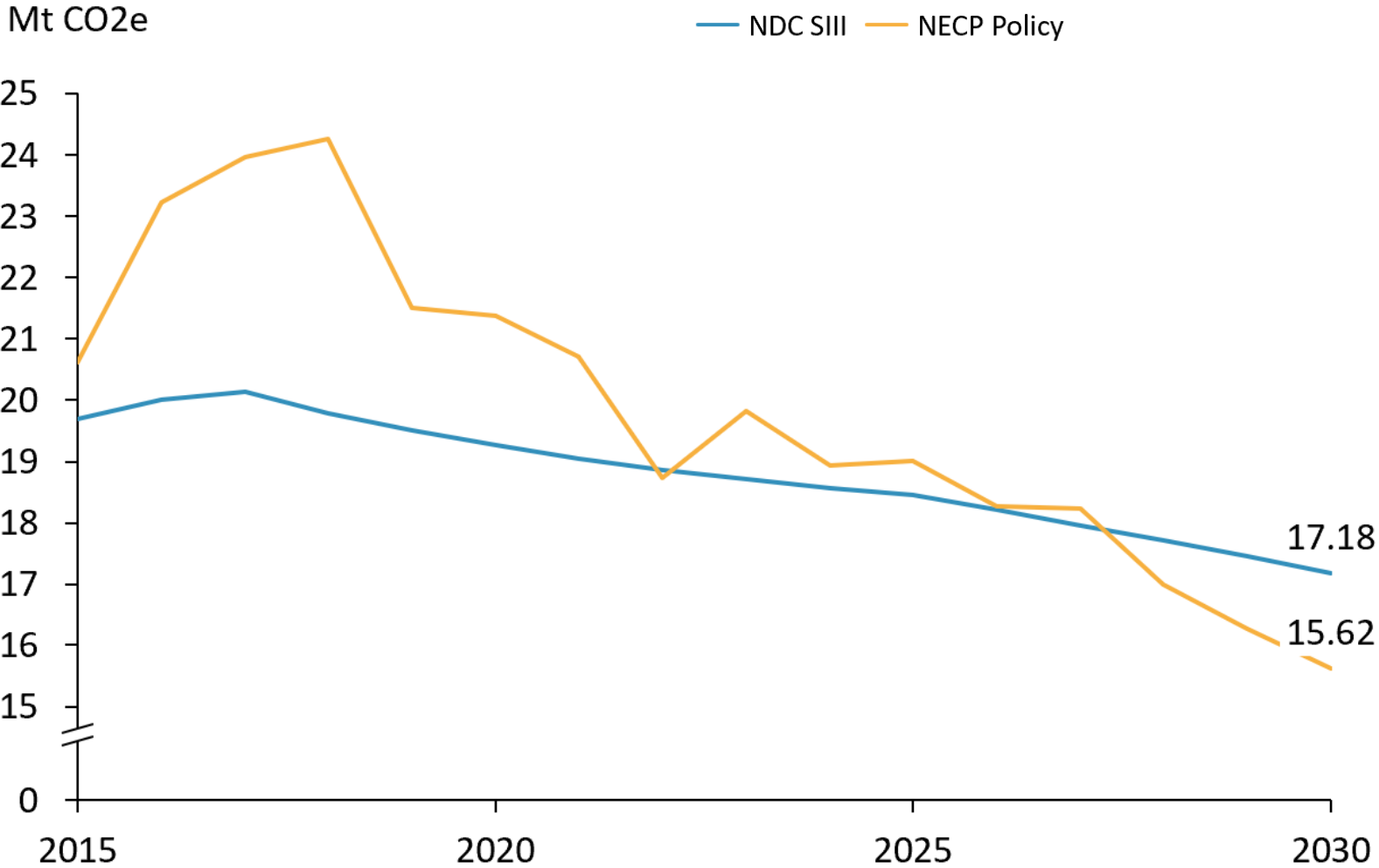
- Comparing NDC and NECP electricity demand projections highlights potential misalignments.
- While both expect increased energy demand by 2030, the NDC anticipates a rise in transport's share and a decrease in other sectors, whereas the NECP projects increased shares across most sectors, except transport and energy branch consumption.
- Ensuring consistency between NDC and NECP is crucial for coordinated policy actions and efficient resource allocation to achieve shared climate and energy objectives.

NECP – Policy Scenario



In 2020, electricity demand totals 11,678 GWh and is expected to rise to 13,328 GWh by 2030, primarily driven by the residential sector (39%), followed by industry (24%), services (21%), energy sector (13%), transport (2%), and agriculture and forestry (1%). By 2030, all sector shares are projected to increase, with the exception of transport and energy branch consumption.

Aligning NDC and NECP enhances emissions reduction progress and enables a comprehensive, effective climate strategy across all greenhouse gases



Key takeaways for emissions

- Evaluating NDC and NECP alignment in the country reveals progress in emissions reduction across both frameworks. A comprehensive approach, considering CO2 and other greenhouse gases, is essential for effective climate action.
- By assessing strategy consistency and coordination, the country can maximize synergies, streamline resources, and tackle various greenhouse gases' impacts.
- Improved alignment ensures efficient progress towards emissions reduction targets and contributes to global climate goals.

Note: Both NDC and NECP analyses encompass economy-wide emissions. NDC accounts for CO2, CH4, NOx, and HFCs, while NECP focuses solely on CO2. In the NECP scenario, GHG emissions are 20.62 Mt CO2 eq in 2015, decreasing to 15.62 Mt CO2 eq by 2030. For the NDC scenario, emissions stand at 19.69 Mt CO2 eq in 2015 and drop to 17.18 Mt CO2 eq in 2030.



Strengthening NDC and NECP alignment can be achieved by setting ambitious targets, refining sector-specific goals, and extending coordination frameworks, nations can effectively address climate change impacts, such as those on hydropower production.

- **Establish more ambitious renewable energy and greenhouse gas (GHG) reduction targets** in the Nationally Determined Contributions (NDC) update to accelerate the transition to clean energy sources.
- **Clearly delineate base year and sector-specific targets** within the NDC and National Energy and Climate Plans (NECP) to create a structured roadmap for achieving emissions reduction milestones across various industries.
- **Ensure that the 2030 targets** for emissions reduction and renewable energy adoption **are in line with the long-term goal of achieving climate neutrality by 2050**, ensuring consistency in policy actions.
- **Develop comprehensive methodological documentation** to accompany the NECP and the upcoming NDC update, providing transparent guidelines and approaches for achieving established targets and facilitating stakeholder engagement.
- **Expand the existing NECP coordination framework to encompass the NDC update process**, fostering effective collaboration among responsible stakeholders and streamlining efforts towards shared climate objectives.
- **Conduct thorough assessments of the potential impacts of climate change on future hydropower production**, incorporating these insights into energy planning and adaptation strategies to ensure long-term resilience and sustainability.



Thank you!

