

Ninth session of the Assembly
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Note of the Director-General Socio-economic Benefits of the Energy Transition

1. The energy transition discourse has thus far been largely technology-oriented. There is a need for this discourse to be more closely connected to socio-economic aspects to ensure its long-term sustainability. Analysing the socio-economic footprint of proposed transition pathways is essential to align outcomes with sustainability and resilience objectives.
2. IRENA has evaluated the socio-economic footprint of its Renewable Energy roadmap (REmap) in its report, *Renewable Energy Benefits: Measuring the Economics*. IRENA's report *Global Energy Transformation: A Roadmap to 2050*, later analysed, in 2018, REmap pathways for a low-carbon future and its associated socio-economic footprint. Through this analysis, which included an expanded regional focus, IRENA gained an in-depth understanding of different socio-economic drivers such as the level of ambition, fair transition and equity elements, and the impacts of localisation on the energy transition.
3. IRENA's socio-economic footprint analysis shows that the REmap roadmap performs better than the reference case even in conventional terms (higher GDP), while increasing employment and welfare, improving energy security, widening access to energy and reducing the adverse effects of climate change. The overall welfare indicator improvement is mainly dominated by the social and environmental welfare dimensions.
4. These results, however, should not overshadow the fact that performing better than the reference case is not sufficient to achieve the required sustainability and resilience goals. Greater insight into the structural elements that condition the socio-economic footprint are, therefore, required. Some industries, national or regional economies, and specific communities may experience profound changes and disruptions unless the transition is conceived in such a way as to address these structural issues. In this context, the forthcoming report *Renewable Energy Benefits: Measuring the Economics V2.0* provides an in-depth analysis of the socio-economic impacts of the energy transition under diverse geographic, economic and social contexts. Understanding these structural elements will inform policy-making, improve transition outcomes, and help achieve the ultimate goal of an inclusive and just energy transformation.
5. Depending on the structure of the economy and of the proposed transition roadmap, the energy transition can generate different overall and regional socio-economic footprints. Regions could fare better or worse depending on factors like the regional level of ambition for the energy transition, the existing economic structure and the extent to which fair and just transition considerations are incorporated. Generally, the ability of a country or region to reap the benefits of the transition depends to a large extent on the degree to which domestic supply chains can respond to new economic patterns stimulated by the transition. It is therefore essential that countries and regions introduce a set of policies that provide resilience and a fair share of the transition's benefits.

6. Fairness and justice, including distributional and trade effects, are important components of a successful, sustainable and resilient transition. The large-scale dimension of the transition process and the tight time frame available to complete it, require collaborative approaches to incorporate these components.

7. The level of ambition in the energy transition can reinforce or remedy structural socio-economic inequalities, and these have important regional effects. A transition path, that reinforces current structural inequalities, risks generating barriers that jeopardise a successful completion and compromise resilience. Incorporating fairness elements into the energy transition roadmaps and measuring the associated socio-economic footprint would provide important insights to inform policy-making and planning for the transition.

8. The overall transformation process and outcomes can be improved by addressing the appropriate structural elements in both the specific energy transition pathway and the broader socio-economic structure, and by maximising the synergies between them. Tomorrow's renewable energy based system should not only meet energy demand, but must also result in prosperity, fostering local industries, creating new jobs and enhancing human health and welfare at the global, regional, national and local levels.

Objective of the session

The objectives of the plenary session are to:

1. Highlight the importance of the interaction between the energy transition and the socio-economic structure, as well as the need to measure the transition's socio-economic footprint for informed planning and policy making.
2. Provide insights into the structural elements - and related policy interventions - required to maximise socio-economic benefits from the transformation under different sets of geographic, economic and social contexts.

The discussion is supported by the analysis being carried out by IRENA on *Renewable Energy Benefits: Measuring the Economics V2.0* and IRENA's ongoing work on the socio-economic analysis of the transition.

Guiding questions

- How can governments ensure that interactions between the energy and socio-economic systems maximise the benefits of the transformation and ensure a fair and just transition?
- What can governments do to encourage wider social engagement in the energy transformation?
- How can local capacities be best leveraged to ensure that all regions and communities benefit?
- How can governments ensure that the benefits are widely spread and not concentrated in a specific region or country?