

## **Tenth session of the IRENA Assembly**

### **High-Level Meeting The Geopolitics of the Energy Transformation**

10 January 2020, 14:00 – 16:00, Room A2  
St. Regis Hotel, Saadiyat Island, Abu Dhabi

#### ***Background***

At the 8<sup>th</sup> session of its Assembly, IRENA convened a Global Commission to gain a better understanding of the geopolitical implication of the energy transformation. The Commission deliberated over one year and completed its work with the launch of the report, “[\*A New World: the Geopolitics of the Energy Transformation\*](#)” at the 9<sup>th</sup> session of the IRENA Assembly in January 2019. Members noted the importance of this forward-looking work and underlined the relevance of the Report and its timeliness. They also encouraged the continuation of this work within the IRENA framework, to stay abreast of the developments and delve deeper into different aspects of the report’s findings. This meeting is being convened to exchange views on the geopolitical implications of the energy transformation, and priorities for future work.

The report of the Commission is premised on the fact that renewables have grown at an unprecedented rate and now form the leading edge of a global energy transition. The impact of this remarkable growth has mostly been felt in the electricity sector. Since 2012, renewables have added more new power generation capacity than conventional sources of energy. Wind and solar now provide 6% of electricity generation worldwide, up from 0.2% in 2000. In the aggregate, renewables account for around a quarter of global electricity generation. A number of major economies are setting zero-carbon goals by 2050 and a target of 100% renewable power is becoming more common. New technologies implemented in the energy industry, such as smart grids, the internet of things and big data, are helping countries accelerate the shares of renewables in their energy mix and maximise these benefits.

The transition to renewable energy is not just a shift from one set of fuels to another but involves a much deeper transformation that will have major social, economic and political implications beyond the energy sector. It will also transform geopolitics as we have known it for years. The Commission’s report was a systematic effort to examine this subject in a comprehensive manner.

#### ***Key findings of the report of the Global Commission***

The report of the Global Commission outlines how the global shift towards renewable energy sources will impact geopolitical dynamics and change international relations. Below are some of the report’s key findings:

Renewables will transform geopolitics and reshape relations between and within states. Most renewables are available in one form or another in most countries. They do not exhaust themselves and are harder to disrupt. They can also be deployed at almost any scale. Renewables provide the possibility of attaining energy independence for many countries that can harness their



indigenous renewable energy sources. Particularly for fossil-fuel importing countries, this will improve their trade balance and lead to significant macroeconomic and welfare benefits. Renewables will configure new geographies of connections and dependencies between countries and regions. Countries that once were importers of energy can become energy producers, leading to a shift in energy trade patterns. As energy trade routes are redrawn by the energy transition, a new geopolitical map is emerging, which will see an expansion in the trade of renewable energy goods and technology that promote regional cooperation including in low emissions fuels and electricity trade, especially cross-border interconnections.

The energy transformation, driven by renewables, will lead to decentralised energy systems and a dispersion of power, empowering new actors such as citizens, cities and new corporations. Renewables will play a key role in achieving universal energy access and meeting global sustainable development and climate objectives while bringing significant socio-economic benefits, including creating local industries and jobs. The accelerated deployment of renewables can help mitigate many of the social, economic and environmental challenges that are often among the root causes of geopolitical instability. For instance, renewable energy adoption can help strengthen water and food security at a time when global demand for water and food is set to increase by over 50% by 2050. Unlike fossil fuels, renewables require less water than conventional energy resulting in alleviated competition for water.

It is important to be prepared for the new energy age. In addition to the above, measures to improve cybersecurity will be critical in a world run by renewables. The energy transition is also resulting in growing demand for critical materials to advance innovation in the production and storage of renewables. Greater transparency and accountability in global supply chains might require greater attention.

Many countries and businesses which rely predominantly on fossil fuels for their revenues are adapting through pro-active economic diversification strategies. The changes are influencing the political and economic dynamics of the global energy landscape and they need to be well understood. New forms of international cooperation will be key to ensuring a smooth and just transition and avoid the emergence of new tensions related to these changes.

#### *Potential Opportunities for international cooperation*

Based on the findings of the Commission's report, and the feedback provided by Members, a number of key areas have been identified for possible for future work.

- *The climate and security nexus*

Climate change will have widespread effects - 'threat multipliers' – that can increase poverty, and aggravate risks of conflict and political instability. Renewables will induce geopolitical effects by mitigating climate change and helping to reduce competition over natural resources. While there is growing attention paid to the climate and security nexus, there is still not sufficient awareness about the extent to which renewables can help address the 'threat multipliers' of climate change particularly in terms of improving food and water security, reducing poverty, and tackling other root causes of geopolitical instability. Further research and analysis could be carried out highlighting the contribution of renewable energy to the climate and security nexus, and particularly in the water, energy and food nexus.



- *Geopolitical implications of energy transition in fossil fuels exporting countries*

The Report of the Global Commission highlights that fossil fuel exporting countries may face certain consequences as fossil fuel rents decline. This in turn could have important geopolitical consequences. In recent years, several fossil fuel exporters have been implementing plans to diversify their economies and increase their resilience, including by developing their renewable energy potential. The United Arab Emirates (UAE), where IRENA is based, is a successful example of such economic diversification policy. IRENA could provide a framework for the exchange of experiences regarding policies and technology options for fossil fuel exporting countries that wish to accelerate renewables deployment potential while maximising their socio-economic benefits.

- *Industrialisation and cross-border trading in renewable electricity*

The accelerated deployment of renewable energy will increase electrification and stimulate cross-border trading in electricity. Countries will seek to develop renewables at home and to integrate their grids with those of their neighbours. Governments will need to develop appropriate arrangements to enable electricity to flow freely in well-regulated and transparent markets. While there are already some successful examples of regional cooperation, major impediments remain in different regions to foster cross-border trade of renewable electricity and cooperative grids. To date, there has not been a systematic effort in an international setting to draw lessons from these different regional examples, and to share experiences with a view to identify best practices. The Agency could use its convening capacity to bring together governments and key stakeholders to discuss these issues in a series of action oriented international and regional dialogues.

- *Managing risks around critical materials*

Renewable technologies and batteries require certain minerals for their production, such as cobalt, lithium, and rare earth elements. The growing demand for these materials combined with their relative scarcity and concentration in a limited number of countries have given rise to concerns regarding potential bottlenecks and disruptions in their production and supply. This issue could have significant geopolitical implications.

- *The role of green hydrogen*

Many industrial countries are currently developing strategies to become climate neutral by 2050 or even before. A key role in this endeavour is attributed to carbon neutral synthetic fuels, among which is green hydrogen. There is growing momentum behind the idea to establish a global market for hydrogen. Such a market could have a wide impact on geopolitics, international trade and bilateral relations.



### *Objectives*

As the global energy transformation gains momentum, driven by technology and policy innovation, and with potentially far reaching impacts, this high-level meeting will aim to identify and discuss key areas in the changing geopolitical dynamics of this energy transformation and IRENA's role in strengthening international co-operation and engaging with existing and/or emerging initiatives and frameworks in support of its Members.

### *Guiding Questions*

- To be better prepared for the geopolitical consequences of the energy transformation, what are the most pressing issues that require the attention of leaders of governments, business and other sectors of society, and how could they be addressed?
- How can IRENA contribute to this work, including through the development of analytical inputs and proposed courses of action in the context of its next Work-Programme and Budget 2020-2021 and the Medium-term Strategy?

### *Associated Publications*

- [A New World: The Geopolitics of the Energy Transformation](#) (2019)
- [Future of Solar Photovoltaic](#) (2019)
- [Future of Wind](#) (2019)
- [Transforming the Energy System](#) (2019)

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