

Regional Workshop Renewable Energy Benefits: Can South East Europe realise the full potential of the Energy Transition?

11-12 June 2019, Sarajevo, Bosnia and Herzegovina

Summary Report

Background

To support South East Europe¹ in realising the full potential of the energy transition, within the framework of [Regional Initiative in South East Europe](#), IRENA organized the regional workshop **Renewable Energy Benefits: Can South East Europe realise the full potential of the Energy Transition?**, co-hosted by the Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina in Sarajevo on 11-12 June 2019.

The meeting took place against a backdrop of an unprecedented pace of renewables development underpinned by technological advances and falling costs. In less than a decade, renewable energy has changed from being seen as a prerogative of rich countries to becoming a most economically viable and socially and environmentally beneficial solution to meet our energy needs.

In 2018 alone, 171 GW of renewable power capacity was added globally, making it the sixth consecutive year in which additional power generation capacity from renewables outpaced conventional sources. At the same time many renewable energy technologies are achieving dramatic cost reductions. In 2018 the average LCOE of utility-scale solar PV and onshore wind has fallen by respectively 77% and 35% compared to 2010. And, according to IRENA's [Renewable Power Generation Costs in 2018](#), it is anticipated that this trend will continue.

As identified in IRENA's [Global energy transformation: A roadmap to 2050](#), the global energy transition promises GDP, job creation and human welfare benefits. In particular, if the world is on a pathway towards meeting the aims of the Paris Agreement, the energy transition brings about relative improvements of GDP and whole-economy employment of 2.5% and 0.2% respectively, by 2050. The global welfare indicator would be enhanced by 17% in 2050, compared to the Reference Case. Most immediately, welfare gains are the result of reduced negative externalities such as pressure on ecosystems (less mining of coal and less drilling for oil and gas) and impacts on human health (lower exposure to air and water pollutants stemming from fossil-fuel use).

Employment opportunities will continue to be considered key in planning for low-carbon economic growth. Worldwide, renewable energy sector employed 11 million people at the end of 2018 (according to the sixth edition of IRENA's [Renewable Energy and Jobs series](#)) and by 2050 it's expected to be more than [28 million jobs](#).

In this context, in H2 2019, IRENA will launch a report **Renewable Energy Market Analysis for South East Europe** which, among other objectives, aims to quantify how the SEE region could benefit from the energy transition. Some preliminary results were presented during the workshop.

¹ Geographical scope: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo*, Montenegro, North Macedonia, Republic of Moldova, Romania, Serbia, Slovenia. Experts from Ukraine and Georgia were invited to participate in the workshop as well.

*This designation is without prejudice to positions on status and in line with the United Nations Security Council Resolution 1244 (1999)

Objective and Participants

Around 80 participants from governments, industry, academia, international financial institutions and other relevant institutions discussed:

- how to maximize socio-economic and environmental benefits of RE;
- how to increase use of modern bioenergy in the region;
- how the falling costs of renewable power generation can influence developments in South East Europe;
- IRENA's role in South East Europe in the upcoming years in the context of the 2020-2021 Work Programme.

In particular, this workshop aimed to put emphasis on a very important aspect of the RE development: socio-economic and environmental impacts that include, among others, job creation, GDP and human welfare (from air quality to energy poverty). The event intended to cover all these different aspects and the intensive discussion among participants proved their importance for the future of renewables in the region. All the presentations from sessions can be found [here](#).

Furthermore, during the workshop IRENA held consultations on its role in the region in the context of the ongoing preparations of the Work Programme for 2020 – 2021. Four proposed areas of interest were identified, based on the outcomes of the various programmatic activities implemented in the frameworks of IRENA's regional initiative in South East Europe.

Additionally, government representatives were invited to present their views on preliminary results of the REmap analysis that IRENA develops for countries of Central and South East Europe within the frameworks of the CESEC initiative. The study will determine cost-effective technical options to accelerate renewables deployment by 2030.

Summary of the discussion

The opening remarks were provided by Mr. Admir Softić, Assistant Minister, Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina; Mr. Radu Tudor Toncea, Ministry of Energy, Romanian Presidency of the Council of the European Union; and Mr. Marcin Scigan, Regional Programme Officer for South East Europe, IRENA, who highlighted the important role that renewables play in the global energy transition.

Socio-economic and environmental impacts of Renewables

Presenters and panelists:

- **Emanuele Bianco**, Associate Programme Officer, IRENA
Socio-economic impacts of Renewable Energy, Preview from: "Renewable Energy Market Analysis: Southeast Europe"
- **Julian Popov**, Fellow, European Climate Foundation
Bulgaria's experience in the low carbon transition
- **Griša Močnik**, Professor, Jozef Stefan Institute
Using black carbon to measure the efficiency of air pollution abatement
- **Garret Patrick Kelly**, Principal, SEE Change Net
Is there a link between Energy Poverty, Energy Efficiency and (Renewables) for Consumer?

Additional panelists: **Sanja Kapetina**, Ministry of Foreign Trade and Economic Relations of BiH; **Neven Duić**, International Centre for Sustainable Development of Energy, Water and Environment Systems; **Mladen Perkov**, Croatian Chamber of Economy, **Ivan Komusanac**, WindEurope.

Highlights of the discussion:

- By 2050, the energy transition driven by renewables could create around 50,000 additional jobs in the overall economy of South East Europe and lead to a GDP gain of around USD 500 billion between 2019 and 2050, compared to a business as usual scenario.
- Lack of political commitment towards increasing RE acceptance remains an important barrier for further deployment. Engagement with the civil society and local stakeholders is perceived as a necessary tool to address this challenge.
- With only 38.4% of the working age population employed in 2015 in the Western Balkans and a high rate of brain drain, job creation is a top priority for governments in SEE.
- Energy sector in SEE highly relies on fossil fuels. As a result, 9 out of 10 top polluting power plants in Europe are in the region. Just one coal power plant, Ugljevik (300MW) in Bosnia and Herzegovina, emits more SO₂ than all German coal power plants.
- In top 15 European cities when it comes to air pollution, 12 are from SEE region. Air pollution in Western Balkans every year cause 3,000 premature deaths, 8,000 cases of bronchitis in children, and other chronic illnesses costing both health systems and economies a total of EUR 6.1-11.5 billion ([HEAL and partners](#)). Although there is no unique solution to solve this issue, participants agreed that improved use of bioenergy in the residential sector and in district heating is very important.
- Immediate action is needed to address energy poverty in the region not only because there is, to an extent, a humanitarian crisis on the rise in certain population groups, but also because those required investments would improve the economy and decreasing energy import dependency. The undertaken actions would also protect the environment and eliminate unnecessary CO₂ emissions. Sustainable use of renewable energy solutions can solve part of the energy poverty related issues, leading to the improved livelihood in SEE.
- Some representatives of academia perceive curriculums of universities in the region as not up to date - they are not preparing workforce to the energy transition which is happening globally.
- In many cases across the region, miners from the lignite sector are in fact engineers who could, with adequate support, have safer and better payed jobs in the renewable energy sector.
- Wind energy has created jobs, not only in turbine manufacturing and electricity production, but also in many other industries and economic sectors. In 2016 the wind energy industry accounted – both directly and indirectly – for 262,712 jobs in the EU.
- Governments need to have a clear long-term vision for RE to be able to support effectively the development of RE industries in their respective countries. One example shows that activities of RE-related Bulgarian companies are much more significant abroad than within the country.

Future of modern Bioenergy in SEE

Presenters and panelists:

- **Adam Brown**, bioenergy expert
Future of modern bioenergy in SEE
- **Nicolae Zaharia**, bioenergy expert, Republic of Moldova
The experience of expanding the use of modern biomass in Republic of Moldova
- **Elvis Hadzikadic**, Project Manager, UNDP CO BIH
Key findings of studies on expanding and improving the district heating system in the Canton Sarajevo and utilization of renewable energy in Bosnia and Herzegovina
- **Andrej Gubina**, Head of the Laboratory of Energy Policy, University of Ljubljana
Waste for Energy, Experience of Ljubljana

Additional panelists: **Vesna Simić**, Ministry of Mining and Energy of Serbia, **Milka Mumović**, Energy Community Secretariat, **Aleksandar Dedinec**, Macedonian Academy of Sciences and Arts

Highlights of the discussion:

- At the moment most of bioenergy use in the region is categorized as “traditional” which involves the direct burning of organic material to produce heat. Although biomass potential is well understood, additional efforts are needed to utilize use of this source in a sustainable manner.
- Therefore, efforts to increase the use of bioenergy should concentrate on ways to expand the clean and sustainable use of bioenergy using modern, more efficient technologies to replace inefficient traditional uses and to extend the use of bioenergy in other end-use sectors.
- District heating (DH) systems should be installed wherever it’s applicable and the ones already in place in SEE should be upgraded to increase efficiency, allow metering and use sustainable solid biofuel, solar and geothermal energy technologies.
- Promoting the use of modern bioenergy appliances would be beneficial for both the local economies and the vulnerable population (energy poverty issue), benefitting from a large, already existing supply chain.
- In the Republic of Moldova, almost 200,000 people in 235 communities are indirectly benefiting from the EU financed project, implemented by UNDP, that funded the installation of efficient, biomass-based heating devices in 249 public buildings, such as schools, where heating was not available to the extent required due to high costs. As a result, over 1,000 families and microenterprises heat their premises with green energy thanks to the subsidy program. In addition, over 600 new jobs were established in communities (biomass boilers operators, teachers) and 40,000 tons of CO₂ emissions are reduced annually.
- Households income have an impact on the choice of energy sources, therefore support from government is needed to swich from use of conventional fuels (such as coal) and traditional biomass for heating, to modern bioenergy and/or DH systems.
- Regional Centre for Waste Treatment and Recovery (RCERO) in Ljubljana is one of the best and the most modern plant of its kind in Slovenia and Europe. It can process over 170,000

tonnes of waste annually and it serves 700,000 citizens of 43 municipalities (1/3 of Slovenia). The biogas produced in the biological processing of waste generates enough electrical and heat energy needed for the operation of the RCERO.

- Using wastes and residues especially, via biogas, was suggested as an immediate priority for the region in the Preview from IRENA's report Renewable Energy Market Analysis: Southeast Europe. Additionally, more efforts towards improving residential biomass use, and exploiting potential for biofuels are required.
- Decarbonisation of the transport sector in the region is a slow process, due to the slow uptake of the EU rules for biofuel sustainability. The new RE directive reinforces the sustainability criteria of bioenergy through different provisions, including the negative direct impact that the production of biofuels may have due to indirect land use change (ILUC). To address the issue of ILUC, it sets limits on high ILUC-risk biofuels, bioliquids and biomass fuels with a significant expansion in land with high carbon stock. Furthermore, the directive introduced the sustainability criteria for biomass used in the power and heat sectors.

Affordability of Renewables

Presenters and panelists:

- **Emanuele Bianco**, Associate Programme Officer, IRENA
Cost and affordability of Renewable energy sources, Preview from: "Renewable Energy Market Analysis: Southeast Europe"
- **Milka Mumović**, Electricity and Statistics Expert, Energy Community Secretariat
Subsidies to electricity generation from coal in the Energy Community
- **Sonja Risteska**, Project Officer Southeast Europe, Agora
De-risking on-shore wind in SEE: Serbia as a case study
- **Mak Dukan**, AURES II Researcher, Technical University of Denmark
The effects of auctions on financing conditions for renewable energy projects

Additional panelists: **Laureta Dibra**, Ministry of Infrastructure and Energy of Albania, **Francesco Corbo**, Associate Director, European Bank for Reconstruction and Development, **Maja Pokrovac**, Croatian Renewable Energy Association, **Krešimir Štih**, Croatian Chamber of Economy

Highlights of the discussion:

- Long term vision, envisaged in energy strategies and to be adopted 2030 targets, is needed for further deployment of RE in the region. Furthermore, good de-risking mechanisms should be introduced to tackle the issue of high cost of capital that the region faces.
- In most of the countries renewables are still perceived as luxury and deployment is still driven by obligations from EnC/EU. At the same time, on global scale onshore wind and solar PV power are now, frequently, less expensive than any fossil-fuel option, without financial assistance. With lower cost of capital onshore wind may offer less expensive electricity than the cheapest fossil fuel alternative in South East Europe as well.
- Auctions for RE could exhibit a positive impact on costs of capital, by enabling greater support scheme sustainability and predictable roll out schedules.

- A few RE auctions were already successfully conducted in the region, for example in Albania and Slovenia. According to participants of the workshop, technology specific auctions are considered as more relevant in the region (than technology neutral).
- Integration of variable renewables (VRE) is still considered to be a significant barrier for government representatives, although there are technological solutions and several examples of good practices, including in the neighbouring countries. Therefore, additional efforts should be given to provide guidance on market design and VRE integration.
- More assistance needs to be provided to local commercial banks to scale up financing opportunities for small-scale projects in the region.
- As highlighted in the Clean Energy Package for all Europeans, ‘prosumers’ should be placed in the focus of energy transition. Net metering/billing should be legally regulated and smart grid systems should be in place.
- EU countries in the region, for example Croatia, have more experience and stand ready to support neighbours in deploying renewable energy.
- According to recently published Energy Community study, citizens of EnC Contracting Parties do not only subsidize renewable energy, but also electricity produced from coal. In some cases (Bosnia and Herzegovina, Kosovo*, Serbia and Ukraine) the subsidies for coal are even higher than those for renewables. While the cost of RE subsidies is clearly indicated on electricity bills, citizens are not aware of support provided in the case of coal. In this context, the issue of hidden subsidies should be addressed to support ongoing efforts towards the energy transition.
- If households would be charged with all costs included (no subsidies, carbon price and fair return on state owned capital, no cross subsidization) the electricity price in Bosnia and Herzegovina would increase 37%, Montenegro 31%, North Macedonia 13%, Kosovo* 30%, and Serbia 52%, according to the Energy Community’s study.