



Empowered lives. Resilient nations.

General Country Information

Population: 3,883,916
Surface Area: 51,210 km²
Capital City: Sarajevo
GDP (2012): \$ 17 billion
GDP Per Capita (2012): \$ 4,447
WB Ease of Doing Business: 131

Electricity Generating Capacity 2012



1.5% RE Share

2
Riomass



Installed RE Capacity





Installed Renewable Electricity Capacity 2012 in MW

Technical Potential for Installed Renewable Electricity Capacity in MW

Diomass	Joiai i V	Willia	Jiliali Hyalo
0	<1	0	59.8
600	48,700	2,000	600

Sources: Karakosta et al. (2012); Lalic et al. (2011); ECS (2012); SERC (2012); SERC (2013); Pavlovic et al. (2013); World Bank (2014); Renewable Facts (2013); Hoogwijk and Graus (2008); Hoogwijk (2004); JRC (2011); SRS NET & EEE (2008); and UNDP calculations.

Key information about renewable energy in Bosnia and Herzegovina

Just 1.5 percent of Bosnia and Herzegovina's total installed electricity capacity comes from renewable sources. The technical potential of renewable energy is huge, particularly in solar photovoltaic energy. Both of the country's two political entities, the Republic Srpska (RS) and the Federation of Bosnia and Herzegovina (FBiH), promote electricity generated from renewable sources via a feed-in tariff. In both RS and FBiH, the guaranteed tariffs are calculated by adding technology-specific premiums to a reference price. In FBiH, technology-specific conversion factors are multiplied by the reference price of 0.081 BAM/kW-h. In RS, absolute determined premiums are added to the reference price of 0.0541 BAM/kW-h in RS. RS also offers a premium for electricity produced from renewable sources, which is either sold directly to the market or is used for its own consumption. Tariffs are granted for 15 years in RS, and for 12 years in FBiH. Bosnia and Herzegovina's is ranked 131st in the World Bank's Ease of Doing Business index (IFC & World Bank, 2014).

Feed-in tariff and feed-in	nyomium nyomot	ian in Danublic C	wo also
reed-in tariff and feed-in	premium promot	ion in Republic 3	rpska

Eligible technologies	Additional constrain	Installed capacity	Tariff granted in €/MW-h	Premium in€/MW-h
Wind		< 10 MW	84.47	40.95
Solar PV (since 01.01.2014)	ground mounted ground mounted	< 50 KW 50 KW - 250 KW 250 KW - 1 MW < 250 KW 250 KW - 1 MW	173.74 150.68 120.56 139.84 111.51	130.23 107.12 77.05 96.28 68.00
Hydro		< 1 MW 1 - 5 MW 5 - 10 MW	78.79 67.85 63.66	35.28 24.34 20.14
Biomass		< 1 MW 1 - 5 MW	211.16 115.60	79.86 72.09

Source: RERS (2013) BAM/€ exchange rate as on 28 February 2014.

Feed-in tariff in the Federation of Bosnia and Herzegovina ¹			
Eligible technologies	Installed capacity	Tariff granted in €/MW-h	
Wind	_	51.77	
Solar	< 10 KW 10 KW - 30 KW 30 KW - 150 KW 150 KW - 1MW 1 MW - 10 MW exceeding 10 MW	310.61 273.34 248.49 173.94 157.38 124.24	
Hydro	< 150 KW 150 KW - 1 MW 1 - 10 MW	48.46 41.99 41.83	
Solid Biomass from Forestry and Agriculture	< 150 KW 150 KW - 1 MW 1 - 10 MW exceeding 10 MW	60.88 60.05 59.22 58.39	
Solid Biomass from Wood	< 150 KW 150 KW - 1 MW 1 - 10 MW exceeding 10 MW	59.22 58.39 57.57 56.74	

Source: FBiH (2011) and FBiH (2013) BAM/€ exchange rate as on 28 February 2014.

Legislation and Policy:

In line with EU Directive 2009/28/EC, Bosnia and Herzegovina is committed to an ambitious national binding target of 40 percent share of renewable energy sources in the gross final energy consumption by 2020 (EC, 2012). Bosnia and Herzegovina consists of two separate political entities, each with different energy laws and regulations. In FBiH, the Law on the Use of Renewable Energy Sources and Efficient Cogeneration, adopted in 2013, the Law on Electricity and the Decree on the Use of Renewable Eneray and Cogeneration form the leaislative basis for the renewable energy policy. RS also adopted a new law on Renewable Energy in 2013. That, together with the decision of the Regulatory Commission for Energy of Republic of Srpska on the tariff level and premium prices, governs the promotion of renewable energy. In both entities, renewable energy de-

velopers enjoy other incentives, e.g. priority in dispatch or distribution in FBiH. Both entities prioritize grid connection for renewable energy source operators. FBiH and RS both offer other incentives for foreign investors, such as customs-free imported materials in FBiH and corporate tax exemption in RS (FIPA, 2012). Energy generation is licenced in both RS and FBiH. Licences are issued by the Regulatory Commission for Electricity in Federation BIH in FBiH and by the Regulatory Commission for Energy of Republic of Srpska in RS respectively. To be eligible for the feed-in tariffs, renewable energy plant developers must have qualified producer status, which is obtained from the Regulatory Commission for Energy in Federation of Bosnia and Herzegovina (FERK) in FBiH and REERS in RS. The new renewable energy legislation significantly improves capacity authorization and access to distribution networks, which is likely to increase effectiveness of renewable energy promotion (IRENA, 2013).

¹ Geothermal, land fill gas, biogas and liquid fuel gas power plants are also eligible to receive a feed-in tariff (FBiH, 2013).

Bosnia & Herzegovina

Institutions:

Organization	Responsibility	Website
Ministry of Economy, Energy and Development	- Responsible for energy policy in the Republic of Srpska	www.vladars.net
Federal Ministry of Energy, Mining and Industry	- Responsible for energy policy in the Federation of Bosnia and Herzegovina	www.fbihvlada.gov.ba/
State Electricity Regulatory Commission (SERC)	Responsible for regulation of electricity transmission, transmission system operation and international trade in electricity Authoritative body for generation, distribution and supply of electricity for customers in autonomous Brčko District	
Regulatory Commission for Energy of Republic of Srpska (REERS)	Responsible for regulation in generation, distribution and trading of electricity in the Republic Srpska Issues licences in the electricity sector and grants status as eligible producer of RES	www.reers.ba/
Regulatory Commission for Energy in Federation of Bosnia and Herzegovina (FERK)	Responsible for regulation in generation, distribution and trading of electricity in the Federation of Bosnia and Herzegovina Issues licences in the electricity sector and grants status as eligible producer of RES	www.ferk.ba/_
Elektroprenos -Elektroprijenos	- Transmission System Operator responsible for transmission and management of the national grid	www.elprenosbih.ba/
Foreign Investment Promotion Agency of Bosnia and Herzegovina (FIPA)	- Foreign Investment Promotion Agency of Bosnia and Herzegovina responsible to facilitate and support foreign direct investment on state level	www.fipa.gov.ba/
Invest in Srpska	- Investment Agency responsible to attract, consult and facilitate potential investors in the Republic of Srpska	www.investsrpska.net/index.aspx?PageID =287&menuID=215

Recent projects

Organization	Responsibility	Website
Elektro Doboj (Bosnia), Fichtner (Germany)	In January 2013, the Republic of Srpska's state-owned electricity utility, Elektro Doboj, signed a €2.76 million consultancy contract with German Fichtner GmbH for the development of the Cijevna 3 small hydropower plant. The plant will have an installed capacity of 13.8 MW. The construction and equipment will be financed with a €50 million loan by German KfW Development Bank and Elektro Doboj intends to call a tender for the construction in early 2014.	Under development
Elektroprivreda HZHB (Bosnian)	As the country's first wind farm, the Mesihovina project has 44 MW installed capacity and estimated construction costs of €78 million is under construction. Germany's KfW Development Bank has provided a grant and a reduced-interest loan to cover some €72 million, with Elektroprivreda HZHB covering the remaining €6 million.	Under construction

Bosnia & Herzegovina

O	C.,		. Daniela and Hillanda and de-
Opportunities to i	nnance renewable energ	iv projects ir	າ Bosnia and Herzegovin

Financing organization	Details	Website
Western Balkans Sustainable Energy Financing Facility (WEBSEFF)	Provides loans of between €2 million and €5 million through local banks (Raiffeisen Bank d.d. or Bosna i Hercegovina UniCredit Bank d.d.) for private investments in energy efficiency or renewable energy projects. Loans can cover 100 percent of the investment costs.	www.webseff.com/
Western Balkans Sustainable Energy Direct Financing Facility (WeBSEDFF)	Locally SMEs with a sound financial and economic structure and sufficient means of equity capital can apply for direct loans from the European Bank for Reconstruction and Development's WeBSEDFF of between €2 million and €6 million.	www.websedff.com
Green Growth Fund	Provides direct and indirect (through financial inter- mediaries) financing for small scale renewable energy projects usually not larger than EUR 50 million.	www.ggf.lu/
International Finance Corporation (IFC)	With investment (equity, loans and other financial instruments) and advisory services, IFC supports investment with focus on Climate change, including investments in infrastructure and energy sectors.	www.ifc.org/
European Bank for Reconstruction and Development (EBRD)	Provides renewable energy developers with equity, loans and loan guarantees for projects with good commercial prospects of up to 15 years' duration.	www.ebrd.com/pages/workingwithus/pro jects.shtml

References

Energy Charter Secretariat (ECS), 2012: In-Depth Review of Energy Efficiency Policy and Programmes – Bosnia And Herzegovina. Available at: www.encharter.org/ filead-min/user_upload/Publications/BiH_EE_2012_ENG.pdf

Energy Community (EC), 2012: Energy Community Ministerial Council adopts Renewable Energy 2020 targets. Available at: www.energy-community.org/portal/page/portal/ENC_HOME/NEWS/News_Details?p_new_id=634?

European Wind Energy Association (EWEA), 2013: Annual Report 2012. Available at: www.ewea.org/filead-min/files/library/publications/reports/EWEA_Annual_Report_2012.pdf

Federation of Bosnia and Herzegovina (FBIH), 2011: Regulation amending regulation on use of renewable energy and co-generation. Available at: www.fbihvlada.gov.ba/bosanski/zakoni/2010/uredbe/13hrvhtml (Bosnian)

Federation of Bosnia and Herzegovina (FBIH), 2013: Law on the Use of Renewable Energy Sources and Efficient Cogeneration. Available at:

www.fbihvlada.gov.ba/bosanski/zakoni/

Foreign Investment Promotion Agency of Bosnia and Herzegovina (FIPA), 2012: Incentives for foreign investors. Available at:

www.fipa.gov.ba/informacije/povlastice/strani_investitori/default.aspx?id=141&langTag=en-US

Hoogwijk, M., 2004: On the global and regional potential of renewable energy sources. Utrecht: Universiteit

Utrecht, Faculteit Scheikunde. Dissertation. Available at: http://igitur-archive.library.uu.nl/dissertations/2004-0309-123617/full.pdf

Hoogwiijk, M. and W. Graus, 2008: Global Potential of Renewable Energy Sources: A Literature Assessment. Available at:

www.ecofys.com/files/files/report_global_potential_of _renewable_energy_sources_a_literature_assessment odf

International Finance Corporation (IFC) and World Bank, 2014: Doing Business – Measuring Business Regulations. Available at: www.doingbusiness.org/data/exploreeconomies/bosnia-and-herzegovina/

International Renewable Energy Agency (IRENA), 2013. IRENA Executive Strategy Workshop on Renewable Energy in South East Europe - Background Paper Topic A-Renewable Energy Action Plans and Regulations to Harmonise with EU Directives (Revised Draft 20131201). Availabe at: www.irena.org/Document/Downloads/events/2013 / December/Background_Paper-Apdf

Joint Research Centre of the European Commission (JRC), 2011: Technical Assessment of the Renewable Energy Action Plans. Available at:

http://ec.europa.eu/dgs/jrc/downloads/jrc_reference_report 2011 reap.pdf

Karakosta, C., Flouri, M., Dimopoulou, S. and J. Psarras, 2012: Analysis of renewable energy progress in the Western Balkan countries: Bosnia–Herzegovina and Serbia. In: Renewable and Sustainable Energy Reviews, 16: 5166-5175

Lalic, D., Popowski, K., Gecevska, V., Vasilevska, S. P., and Z. Tesic, 2011: Analysis of the opportunities and challenges for renewable energy market in the Western Balkan countries. In: Renewable and Sustainable Energy Reviews, 15: 3187-3195

Pavlovic, T. M., Milosavljevic, D. D., Mirjanic, D., Pantic, L. S., Radonjic, I. S., and D. Pirsl, 2013: Assessments and perspectives of PV solar power engineering in the Republic of Srpska (Bosnia and Herzegovina). In: Renewable and Sustainable Energy Reviews, 18: 119-133

Regulatory Commission for Energy of Republic of Srpska (RERS), 2013: Guaranteed redemption prices and premiums for electricity generated from renewable energy sources or in efficient cogeneration facilities: Available at

Renewable Facts, 2013: Bosnia and Herzegovina. Available at: www.renewablefacts.com/country/bosnia-and-berzegovina

Scientific Reference System on New Energy Technologies, Energy Find-use Efficiency and Energy (FRS NET & EEE), 2008: WP3-Technology data - Executive Summary on Small Hydro. Available at http://srs.epuntua.gr/Portals/SRS/material/technologyreview/Small%20Hydro.pdf

State Electricity Regulator Commission (SERC), 2012: Report on Activities of the State Electricity Regulatory Commission. Available at: www.derk.ba/DocumentsPDFs/DERK_izvjestaj_o_radu_2012-en.pdf

World Bank, 2014: Data Catalog. Available at: http://datacatalog.worldbank.org/