

FACTSHEET | on the energy model used for the Phase II Drina Nexus Assessment

TYPE OF MODEL	LONG-TERM WATER-ENERGY MODEL
<i>Modelling tool</i>	The Open Source Energy Modelling System (OSeMOSYS)
<i>Institutions developing the model</i>	KTH (The Royal Institute of Technology, Sweden)
<i>Licences, availability, openness</i>	Open Source: Tool licence: Apache 2.0 Data licence: CC BY4.0
<i>Links to models & resources</i>	Tool: https://github.com/KTH-dESA/OSeMOSYS
<i>Model characteristics</i>	Cost minimisation, technology-rich, dynamic, perfect foresight, competitive market
<i>Geographical scope and resolution</i>	Bosnia and Herzegovina, Montenegro, Republic of Serbia
<i>Temporal scope and resolution</i>	Monthly time steps from 2020 to 2040
<i>Key assumptions and inputs</i>	Capacity of all power plants (thermal and renewables), techno-economic characteristics of power plants (e.g. costs, efficiencies, capacity factor, etc.), annual electricity demand, electricity trade interconnectors, simplified hydrological representation of the cascade.
<i>Key outputs</i>	Installed capacity (GW) Electricity generation (GWh) Investment, operation and system costs (million USD)

CHARACTERISTICS OF EXISTING AND PLANNED HYDROPOWER PLANTS (HPPS) IN THE DRINA BASIN

Power plant	Year of commission (est.)	Spillway capacity (m ³ /s)	Installed through flow (m ³ /s)	Installed capacity (MW)	Average yearly power production (GWh)
<i>Existing</i>					
HPP Zvornik	1955	9000	620	96	500
HPP Bajina Bašta	1966	12244	644	368	1650
HPP Bistrica	1959	1400	36	103	370
HPP Kokin Brod	1962	1400	37.4	21.4	60
HPP Uvac	1979	1050	43	36	72
HPP Potpeć	1967	3240	165	51	300
HPP Višegrad	1989	11190	800	345 (315)	1010 (980)
HPP Piva	1976	2283	240	342	860
<i>Planned</i>					
HPP Buk Bijela	2025	3790	350	93.52	332.3
HPP Foča	2025	5600	350	44.15	175.9
HPP Paunci	2025	8716	450	43.21	166.9