



LEGISLATION AND REGULATION ANALYSIS COUNTRY BROCHURES

BOSNIA & HERZEGOVINA

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The analysis presented below summarises the legislative and regulatory conditions for the virtual case study site in Sarajevo, Bosnia in Herzegovina.

GEOHERMAL LEGISLATION

Geothermal Energy is defined by the law on the use of renewable energy sources and efficient cogeneration ("Official Gazette of B&H", No. 70/13 dated 11.09.2013.) Geothermal energy is defined as geothermal energy for electricity production as well as for heating/cooling applications. Most of the legislation refers to the use of renewable energy sources in the case of electricity production. Only one article of the law treats the use of renewable energy for heating/cooling of buildings.

There is no specific legislative definition of shallow geothermal energy resources.

LOCAL LEGISLATION

There is no specific local legislation and GHSPs systems are not defined at local level in the Canton of Sarajevo.

LICENSING & PERMITTING PROCEDURES

LICENSING AND PLANNING APPLICATION

A specific licensing system for GSHPs is in place. The Ministry of Spatial Planning of the Federation of Bosnia and Herzegovina issues permits.

Planning permission is required for GSHP system and the planning process requires that a full technical design and specification be submitted as part of the application. Permits can be issued by the local municipal administration or by the Ministry, depending in the nature of the project. The latter would apply in the case of historical buildings.

The application processing time is typically 30days and at a cost of 1% of the total value of the project including the technical design study.

DRILLING PERMITS

A permit for drilling is required in accordance to the legislation on Geological Investigations. There is no cost associated with the permit and a period of 30 days is applicable for the decision.

EIA REQUIREMENTS

No requirements for EIA were reported as part of the analysis.

MONITORING REQUIREMENTS

No monitoring requirements were reported as part of the analysis.

REGULATIONS

GSHP SYSTEM REGULATIONS

No regulations of GSHP systems were reported in the analysis.

ENVIRONMENTAL

No detailed regulations of GSHP systems were reported in the analysis, but restrictions are applicable to the construction of boreholes and earthworks. These are governed by the Law on Water of the Federation of Bosnia and Herzegovina ("FB&H Official Gazette", number 70/O6).

No restrictions for the development of heat pump projects are applicable with respect to the protection of water and environment. Because of the generally small temperature difference from the collectors in the ground between production and injection it is considered that there is no risk of thermal pollution.

BUILDINGS

No building regulations were reported in the analysis and consequently any requirements for the integration of renewable technologies and GSHPs are considered not applicable.

Renovations in historical buildings are covered by the Law on Protection of Cultural Heritage of the Sarajevo Canton ("Official Gazette of Canton Sarajevo", r.2 / 00). Cultural heritage buildings can undergo reconstruction and rehabilitation in respect to their protection, however the works carried must be in compliance with the applicable rules and regulations, as well as the decision of the Cantonal Institute for the protection of heritage. The technical solutions for providing heating, cooling and ventilation to the building, as well as the system of generating heat and cooling must be adapted to the purpose of the building and should not significantly change the appearance of cultural heritage.

HEATING & COOLING PLANTS

The main regulations on heating and cooling plants are covered by the Law on Construction activities, with GSHP mainly dealt with in the HVAC regulations.

POLICY CONTEXT

No policy context was presented as part of the analysis and no national targets have been set in the NREAP for Bosnia In Herzegovina for heat pumps or ground source heat pumps.

STANDARDS & GUIDELINES

No specific standards and guidelines to ground source heat pump systems were provided in the analysis. The following standards with respect to the construction and completion of different building elements are given and include the list below.

BAS EN ISO 6946:2008 Building components and building elements – Thermal resistance and thermal transmittance – Calculation method

BAS EN ISO 13789:2009, Thermal performance of buildings - Transmission and ventilation heat transfer coefficients - Calculation method

BAS EN ISO 10077-1:2011, Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - Part 1: General

BAS EN ISO 10077-1/Cor1:2011 Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - Part 1: General

BAS EN 673:2012, Glass in building - Determination of thermal transmittance (U value) - Calculation method

BAS EN 12831:2010, Heating systems in buildings - Method for calculation of the design heat load

BAS EN ISO 13790:2008, Energy performance of buildings – Calculation of energy use for space heating and cooling

TRAINING & CERTIFICATION

Training and certification schemes are available through university faculties for designer, drillers, earth work contractors and installers in the Sarajevo Canton. Some of these courses are delivered by Faculty of Mechanical Engineering in Sarajevo and include:

- Training programmes for energy audits and energy certification of buildings,
- Training of servicers/operators and technicians in the cooling and air conditioning technology in the Federation of B&H. These comply with the Montreal Protocol and national legislation concerning the ozone-depleting substances.

The building regulations require that all professionals in architecture, civil engineering, electrical engineering, mechanical engineering and transport involved in construction sites pass a certification exam. This exam is organized by the Federal Ministry of Physical Planning and provides the successful participants with a license in accordance with the Regulations ("Official Gazette of the Federation B&H", Nos. 9/06 and 6/08).

OTHER INFORMATION

Geological information can be accessed free of charge through the Federal Institute for Geology website (<http://www.fzzg.gov.ba/geoloske-karte>). Information on the geothermal resources are available upon request to the Geological Institute of Bosnia in Herzegovina.

No database of GSHP systems is available at the time of reporting.