



LEGISLATION AND REGULATION ANALYSIS COUNTRY BROCHURES

ROMANIA

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The analysis presented below summarises the legislative and regulatory conditions for the virtual case study site of a historical residential building in Bucharest, Romania.

GEOTHERMAL LEGISLATION

Geothermal Energy is defined by Romanian Parliament adopted Law (220/2008) on the establishment of a system for the promotion of the energy produced from RES. Subsequently, the law has been amended and supplemented in order to transpose the provisions of the 2009/28/EC Directive in order to achieve the target of 24% by 2020.

LOCAL LEGISLATION

The definition of Geothermal Energy provided by the RES Directive was transposed into national legislation through art. 2 of the Law 220/2008 where Geothermal Energy is defined as "the energy stored in the form of heat beneath the surface of the solid earth".

LICENSING & PERMITTING PROCEDURES

LICENSING AND PLANNING APPLICATION

No licensing or certification system for GHSP installations is in place in Romania at the time of completing this analysis.

A planning permit is required for obtaining a water management authorisation in accordance with order no. 799/2012 from the Ministry of Environment. The Romanian National Water Administration is the licensing authority. A permit processing time of 5 weeks and a cost of €100 is applicable.

DRILLING PERMITS

Both open and closed systems require drilling permits. No special approval procedure is needed for simple open installations which are considered similar to any other water supply solutions.

Closed systems with GHE drilling depths < 100 meters depth need approval not specifically for energy extraction but because these access underground waters. The approval is in this case included in the "Environment Authorization" and is issued by the National Waters Authority. Drilling permit costs are approximately €100 and a processing time of 30 days is applicable.

Closed systems with GHE drilling depths > 100 meters depth need an approval issued by the National Authority for Mineral Resources (ANRM).

EIA REQUIREMENTS

Based on the procedures outlined above, no exemption is applicable for closed loop systems. Where heat exchanger depths are < 100 meters an "Environment Authorization" authorisation is required. A similar requirement for open loop systems is in place. The National Agency for Environmental Protection is the responsible authority and a processing time of 30 days is applicable.

MONITORING REQUIREMENTS

No monitoring requirements are imposed on GSHP systems at the time of completing this analysis.

REGULATIONS

GSHP SYSTEM REGULATIONS

No regulations relating to GSHP systems and hence no definitions of minimum/ maximum values or other limitation and cut off parameters are defined in the legislation.

ENVIRONMENTAL

A limited amount of regulations are in place with respect to the design and installation of GSHP systems. Local offices in the National Water Authority apply some restrictions on open loop systems forbidding re-injection of extracted water to the same aquifer. Restrictions on requirements in source protection areas are applicable and in specific cases a specific impact assessment on the flora and fauna of the receiving environment is required.

A restriction on the permitted re-injection water temperature from the natural extracted groundwater temperatures is imposed on open loop systems, where a variation of no more than 5°C is permitted when the system is operating both in heating or cooling mode.

BUILDINGS

The EPBD Directive was transposed in national Law 372/2005 stating that “For new buildings, Member States shall ensure that, before construction starts, the technical, environmental and economic feasibility of high-efficiency alternative systems such as those listed below, if available, is considered and taken into account: (a) decentralised energy supply systems based on energy from renewable sources; (b) cogeneration; (c) district or block heating or cooling, particularly where it is based entirely or partially on energy from renewable sources; (d) heat pumps.” A general level of 93.1% of integration of renewable energy technologies in building sector is reported.

The integration of renewable technologies in historical monuments can be carried out only in compliance with the authorisation issued by the Ministry of Culture. No specific regulations for the upgrade of H&C systems, but as a general rule “Any intervention on historical monuments shall be performed only on the basis of and in conformity with the endorsement issued by the Ministry of Culture and Religious Affairs or, if the case is, by the decentralised public services of the Ministry of Culture and Religious Affairs”. The above-mentioned authorisation is needed for the retrofit of H&C systems if the works are meant to modify in some way the façade or the external aspect of the historical building or, in some cases, also the internal aspect should the latter have historical value (according to the urban planning certificate and the consequent historic study of the building performed by an authorized specialist).

HEATING & COOLING PLANTS

No specifics on heating and cooling plant regulations are given at the time of this analysis aside from the applicable building code requirements for newly constructed buildings. In terms of minimum energy performance requirements, there are none, neither for new-build nor renovations. The building code contains prescriptive/element-based criteria for thermal insulation and an overall thermal coefficient (G-value). The global heat transfer coefficient, G (W/m^3K), of the heated volume, is an overall minimum requirement and varies as a function of the number of levels of the building and external area per volume ratio (A/V). For residential buildings the maximum heat demand (per total heated volume) varies from 15 kWh/ m³/year to 37.5 kWh/m³/year depending on the external area per volume ratio (A/V). The maximum indicated heat demand does not take into account system efficiencies.

Regarding the energy certification system, classes in EPC are from A (the most efficient) to G (the most energy consuming). Class A in the energy performance certificate (EPC) ranges from 125 kWh/ m²yr (heating, domestic hot water -DHW- and lighting) to 150 kWh/m²yr (all energy uses). EPC covers heating, cooling, ventilation, DHW and lighting (these are the “utilities”, i.e. energy uses). These values are not actually imposed as a minimum requirement for new buildings since there is no requirement for final and primary energy in Romania.

To obtain a building permit, house builders must prove that the maximum U-value and G-value for the building are respected. The EPC is mandatory at the commissioning phase, but there are no specific requirements such as a maximum energy use or minimum energy class. The EPC is mandatory at the commissioning phase, but there are no specific requirements such as a maximum energy use or minimum energy class. So, it is theoretically possible to construct an even more energy efficient building if desired, but this remains voluntary and depends on costs and energy education.

Building requirements (including minimum thermal performance of building components and global indicator G12) are controlled at the stage of construction authorisation (building permit). In principle, the requirements are respected in the design documentation. Otherwise the construction project does not pass the authorisation process. However, in practice, the execution of the work is not always undertaken according to the design because there is no mandatory control mechanism established in the current regulation.

No available details of the status of implementation of the new EU F-GAS (EC 517/2014) regulation in Romania is available. It can be read on the website of the National Environmental Protection Agency. Two regulatory documents are applicable in the case of F-gases:

1. **Government Decision no. 939/2010** regarding the measures adopted for the implementation of the provisions of Regulation (EC) no. 842/2006 of the European Parliament and of the Council of 17 May 2006 on certain fluorinated greenhouse gases; and
2. **Order of the Ministry of the Environment and Forests no. 2210/ 08.12.2010** regarding the Procedure for the implementation of controls on the products and equipment containing certain fluorinated greenhouse gases, as well as the methods of cooperation between the authorities designated under the provisions of Government Decision no. 939/2010.

POLICY CONTEXT

The main objective for the heating and cooling sector is to bring renewables production up to 22% of final consumption by 2020 - but no specific target has been set for heat pumps in particular. The Romanian Energy Strategy for the period of 2007-2020 and the National Renewable Energy Action Plan in place present the implementation of the above objectives.

A target contribution of renewable heat from geothermal heat pumps of 8 ktoe by 2020 has been set in the NREAP for Romania. The recently published progress report in 2013 the progress of the expected target for 2012 of 1ktoe was not reported. No specific targets beyond 2020 have been set.

STANDARDS & GUIDELINES

No standards and guidelines were reported in Romania at the time of completing this assessment.

TRAINING & CERTIFICATION

No training and certification schemes are applicable at the time of writing this assessment. The implementation of a training initiative in Romania was the Geotrained Course in 2010.

OTHER INFORMATION

There are no dedicated information tools for promoting shallow geothermal energy resources in Romania or the benefits of ground source heat pump technology aside from the work carried out by the Romanian Geoexchange Society that has invested a great deal of time and effort in promoting the potential and benefits of GHSP technologies in Romania, as well as in setting training, education and dissemination schemes in the field of geothermal energy.

Financial incentives are provided mainly through Structural Funds. These include the Regional Operational Program 2014-2020 supporting the shift towards a low-carbon economy. The scheme is targeted at tenants and housing associations (priority axis 3) and public administrations and utilities (priority axis 6 – 6.1) and large industrial consumers (priority axis 6 – 6.2). The scheme broadly supports the improvement in energy efficiency, the smart energy monitoring and management systems, as well as the use of renewable energy sources in public infrastructures, including public buildings and in residential buildings, the increase in energy production from less exploited renewable resources including geothermal. The scheme includes the support for geothermal energy and heat pumps amongst other measures. The incentive is provided as a grant of up to 60% or 80% depending on the priority axis and has a minimum and maximum investment value threshold.