GENERAL INFORMATION

Parameter name	Annual thermal load - closed loop systems
Name of the layer in EGDI Map Viewer	Annual thermal load, Girona
Original name of the layer uploaded to EGDI database	PP03_ICGC_annual_therm_load_CLS
Category	Resources for closed loop systems
Definition	The annual amount of thermal energy available to be used with a closed loop system.
Harmonized unit	MWh/a
Relevance for shallow geothermal energy	Average thermal energy that could be exchanged with the subsoil by a single Borehole heat exchanger
Data type	Discrete data classes based on a joint legend.
Data format	Raster
Projection	EPSG: 3034
Dataset selected for pilot area	Brussels, Vienna, Zagreb (TBC), **Girona**

ATTRIBUTES

Unit	MWh/a

DATA SOURCE

Pilot area	Urban area of Girona city (Catalonia, NE Spain)
Data source	Geoíndex – Shallow Geothermal energy viewer (IGCC, 2021) and other data obtained during the field work
Contact data owner	geotermia@icgc.cat
Last Update	June 2021

Explanatory text English
Raster dataset which represents the average thermal energy that could be exchanged with the subsoil during the heating season length by a single Borehole Heat Exchanger (BHE) of 100 m in length and a diameter of 150 mm with a thermal resistance of 0.095 mK/W. To perform this layer, the G.POT calculation method was used (Casasso, A, 2016)*. This method considers thermal conductivity and thermal capacity of the subsoil, undisturbed ground temperature and several settings of the BHE among others. *Casasso A., Sethi R. (2016). G.POT: A quantitative method for the assessment and mapping of the shallow geothermal potential. Energy, 106, 765-773. DOI: 10.1016/j.energy.2016.03.091.*

Explanatory text national language	
Language	Catalan
Conjunt de dades ràster que representa l'energia tèrmica mitjana que es podria bescanviar amb el subsol durant l'època de calefacció mitjançant un bescanviador de calor (BHE) de 100 m de longitud i un diàmetre de 150 mm amb una resistència tèrmica de 0,095 mK/W. Per realitzar aquesta capa d'informació, s'ha utilitzat el mètode de càlcul G.POT (Casasso, A, 2016) *. Aquest	

mètode té en compte la conductivitat tèrmica i la capacitat tèrmica del subsol, la temperatura del sòl no pertorbada i diversos paràmetres propis del BHE entre d'altres.

Casasso A., Sethi R. (2016). G.POT: A quantitative method for the assessment and mapping of the shallow geothermal potential. Energy vol. 106 (2016), pp. 765-773. DOI: 10.1016/j.energy.2016.03.091.