EU policies for geothermal: Opportunities, challenges for regions and cities

Launching conference of the Mayors' Geothermal Club
Budapest, 8 October 2015

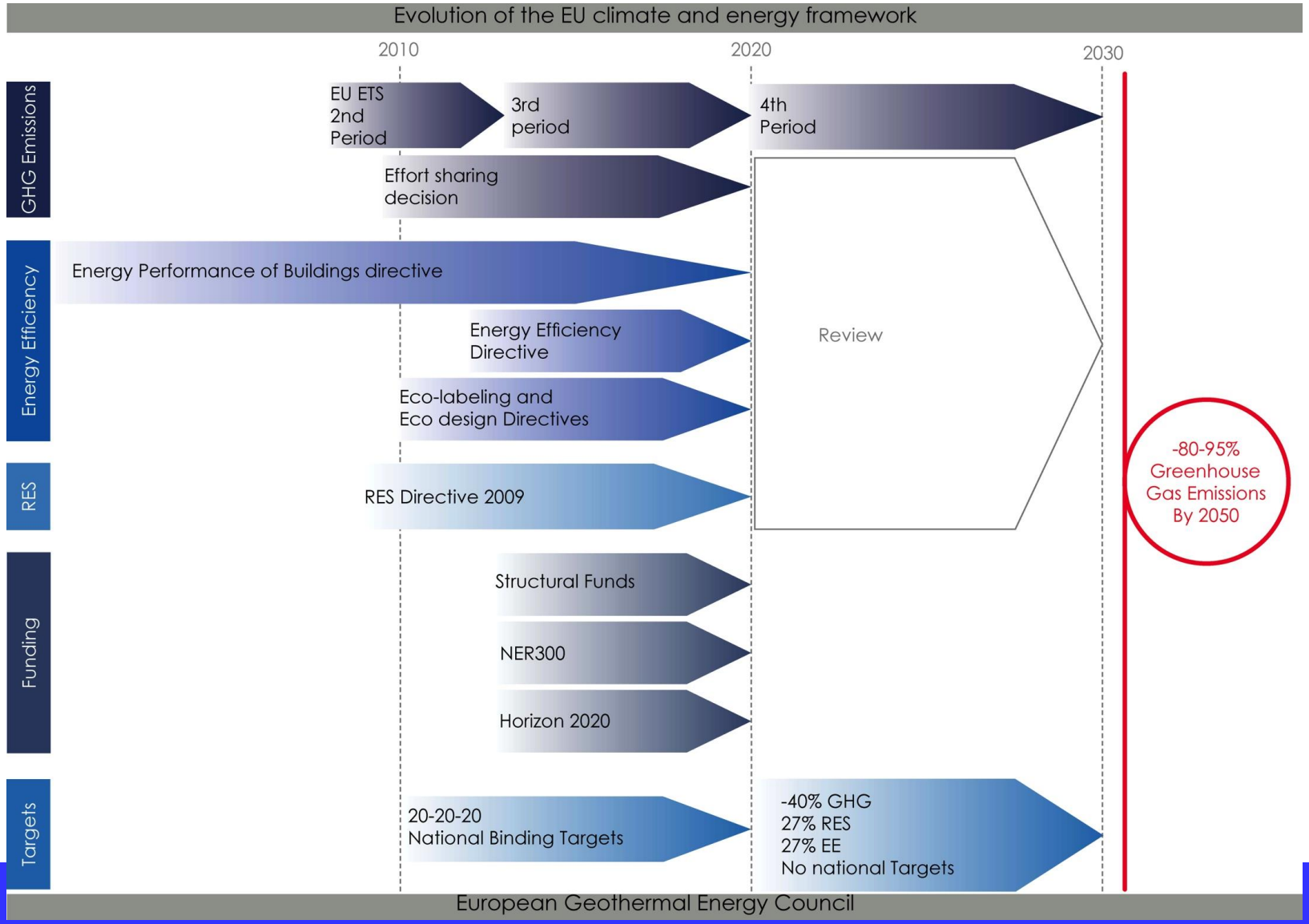
Luca ANGELINO

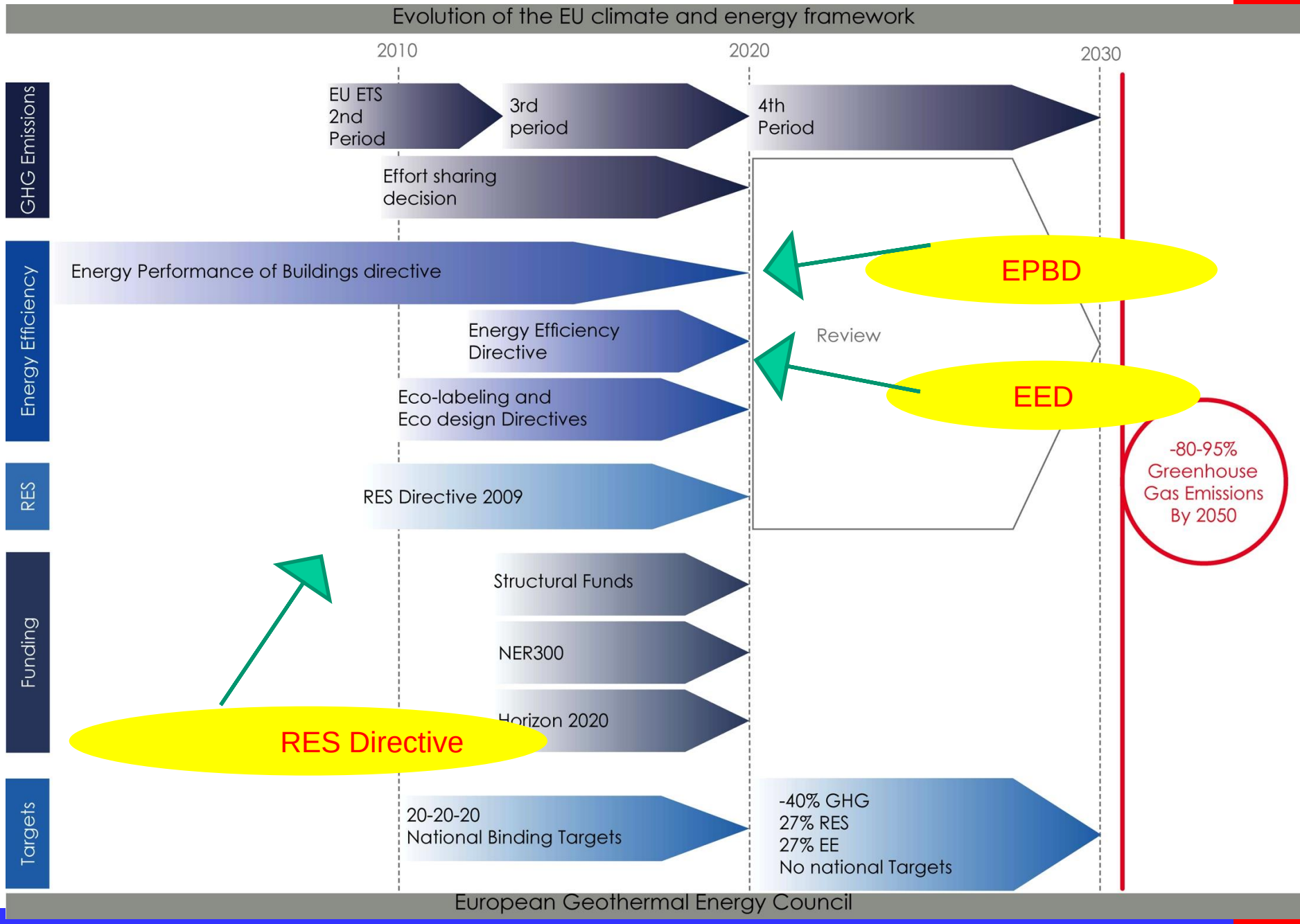
European Geothermal Energy Council

Content

- Introduction: Evolution of the EU climate and energy framework
- Main EU provisions related to geothermal energy
- Regulatory frameworks: positive and negative conditions
- Conclusions

Introduction: Evolution of the EU law




Evolution of the EU climate and energy framework
2010
2020
2030
GHG Emissions
EU ETS 2nd Period
3rd period
4th Period
Effort sharing decision
Energy Efficiency
Energy Performance of Buildings directive
Energy Efficiency Directive
Eco-labeling and Eco design Directives
Review
EPBD
EED
RES
RES Directive 2009
-80-95% Greenhouse Gas Emissions By 2050
Funding
Structural Funds
NER300
Horizon 2020
RES Directive
Targets
20-20-20 National Binding Targets
-40% GHG
27% RES
27% EE
No national Targets
European Geothermal Energy Council

Interplay between EU, national and local levels

EU level

- EU Directives, EU funding, State Aid rules, Technical Assistance

National Level

- Support schemes/ State Aid, Implement regulations

Regional and local levels

-Using EU structural funds, Implement regulations

Key EU provisions related to geothermal

Date	Provision
2009	Binding national targets by 2020 and National Renewable energy action plans

Key EU provisions related to geothermal

Date	Provision
2009	Binding national targets by 2020 and National Renewable energy action plans
As of 2011	**Member States should streamline administrative procedures, including through simple notification if possible.** **Governments shall encourage local and regional administrative bodies in particular to include heating and cooling from renewable energy sources in the planning of city infrastructure, (Art. 13 RES Directive)**

EGEC GEOTHERMAL

Correct Implementation of the RES Directive key!!!

3 projects key to implement the RES Directive

GEOELEC

GEODH

REGEOCITIES

GeoDH

- Removing administrative and financial barriers for the promotion of (deep) geothermal district heating in 14 MS in the EU

- Targeted collaboration/capacity building with and for a number of regional/local public authorities

- Drafting of recommendations for a Regulatory Framework for Geothermal DH in EU -> accelerate approval procedures

http://geodh.eu/

REGEOCITIES

http://www.regeocities.eu

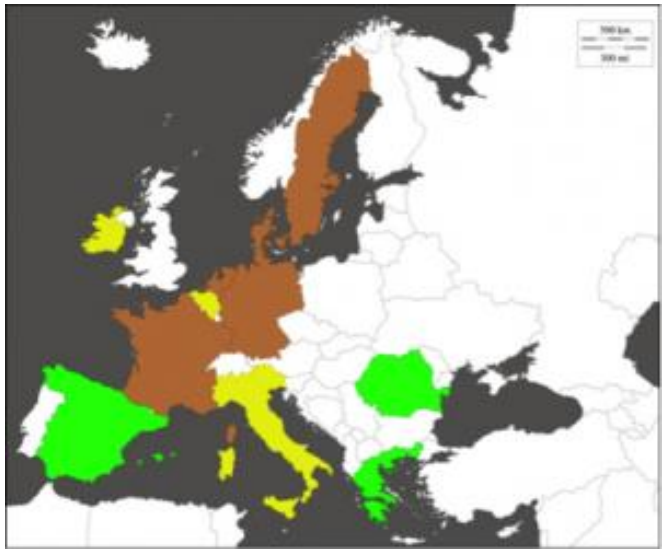
http://www.heatunderyourfeet.eu/

Objective:

- Removing administrative / regulatory barriers affecting the uptake of **shallow geothermal systems** at local and regional level

Outcomes

- **Transfer best practice** regulatory frameworks from mature to juvenile regions
- Develop a **common methodology for regulation** of shallow geothermal systems in cities
- **Training** developed on how to plan and regulate shallow geothermal systems **for policy makers and administrative staff** / officers in public administrations



Key EU provisions related to geothermal

Date	Provision
2009	Binding national targets by 2020 and National Renewable energy action plans
As of 2011	Member States should streamline administrative procedures, including through simple notification if possible. Governments shall encourage local and regional administrative bodies in particular to include heating and cooling from renewable energy sources in the planning of city infrastructure, (Art. 13 RES Directive)
By 31 December 2012	**Member States should ensure that certification schemes or equivalent certification is available for installers of small scale RES technologies including shallow geothermal technologies (RES Directive, Geotrainet)**

Key EU provisions related to geothermal

Date	Provision
2009	Binding national targets by 2020 and National Renewable energy action plans
As of 2011	Member States should streamline administrative procedures, including through simple notification if possible. Governments shall encourage local and regional administrative bodies in particular to include heating and cooling from renewable energy sources in the planning of city infrastructure, (Art. 13 RES Directive)
By 31 December 2012	Member States should ensure that certification schemes or equivalent certification is available for installers of small scale RES technologies including shallow geothermal technologies (RES Directive, Geotrainet)
As of 2014	**Member States to renovate each year an average 3% of the public building stock owned by central governments (EED)**

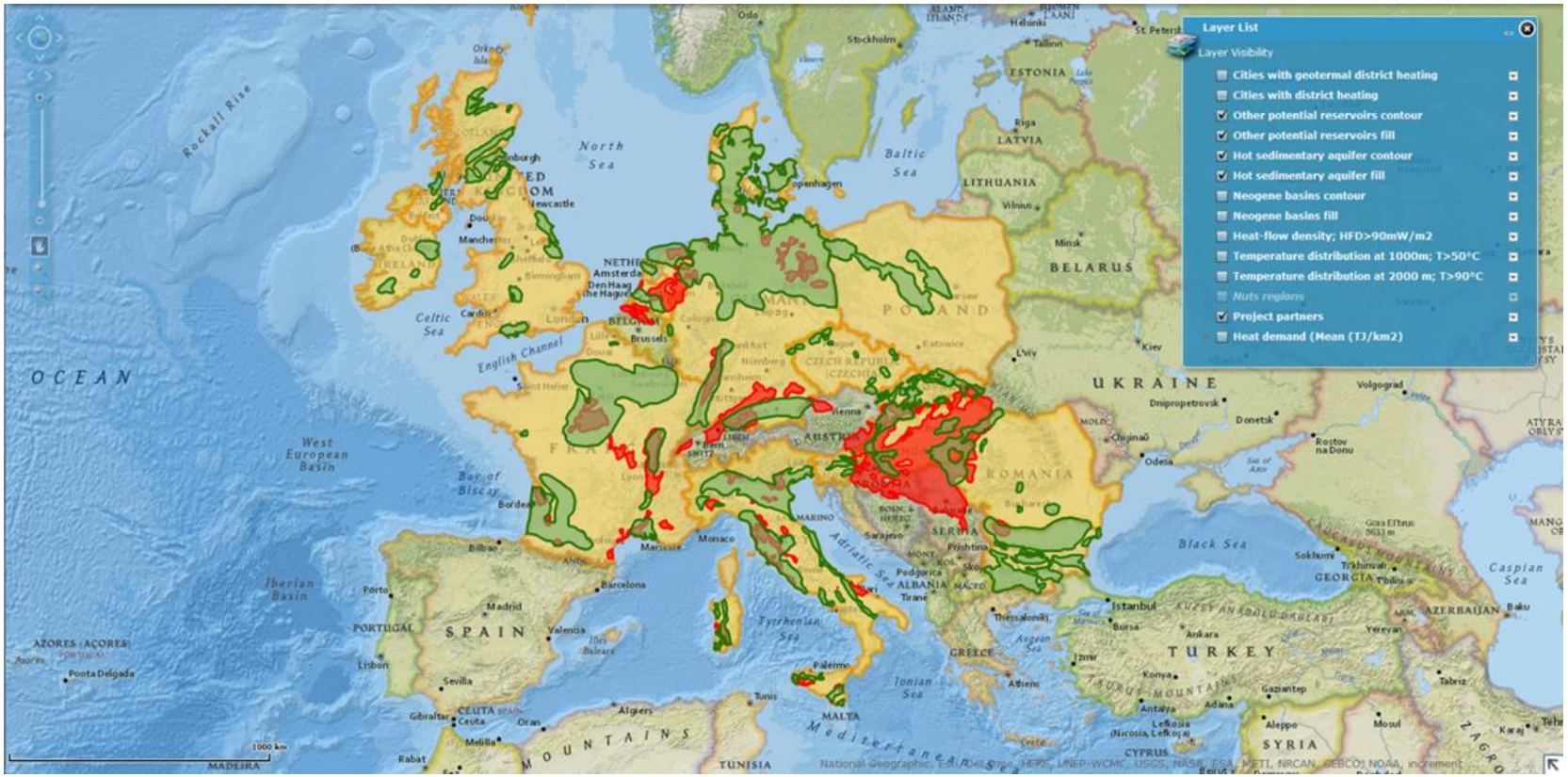
Key EU provisions related to geothermal

Date	Provision
2009	Binding national targets by 2020 and National Renewable energy action plans
As of 2011	Member States should streamline administrative procedures, including through simple notification if possible. Governments shall encourage local and regional administrative bodies in particular to include heating and cooling from renewable energy sources in the planning of city infrastructure, (Art. 13 RES Directive)
By 31 December 2012	Member States should ensure that certification schemes or equivalent certification is available for installers of small scale RES technologies including shallow geothermal technologies (RES Directive, Geotrainet)
As of 2014	Member States to renovate each year an average 3% of the public building stock owned by central governments (EED)
As of 2015	**Member states to introduce, where appropriate, measures to set the minimum levels of RES which should be used in buildings or equivalent supporting measures (RES Directive) and intermediate targets for improving the energy performance of new buildings (Art. 9.3 (b) EPBD)**

Key EU provisions related to geothermal

Date	Provision
2009	Binding national targets by 2020 and National Renewable energy action plans
As of 2011	Member States should streamline administrative procedures, including through simple notification if possible. Governments shall encourage local and regional administrative bodies in particular to include heating and cooling from renewable energy sources in the planning of city infrastructure, (Art. 13 RES Directive)
By 31 December 2012	Member States should ensure that certification schemes or equivalent certification is available for installers of small scale RES technologies including shallow geothermal technologies (RES Directive, Geotrainet)
As of 2014	Member States to renovate each year an average 3% of the public building stock owned by central governments (EED)
As of 2015	Member states to introduce, where appropriate, measures to set the minimum levels of RES which should be used in buildings or equivalent supporting measures (RES Directive) and intermediate targets for improving the energy performance of new buildings (Art. 9.3 (b) EPBD)
By 2015	**National comprehensive assessments of the potential for the application of high-efficiency cogeneration and efficient district heating and cooling as a basis for a sound planning of efficient heating and cooling infrastructures**

Potential for Geothermal District Heating in 14 EU countries



www.geodh.eu

Key EU provisions related to geothemal

Date	Provision
2009	Binding national targets by 2020 and National Renewable energy action plans
As of 2011	Member States should streamline administrative procedures, including through simple notification if possible. Governments shall encourage local and regional administrative bodies in particular to include heating and cooling from renewable energy sources in the planning of city infrastructure, (Art. 13 RES Directive)
By 31 December 2012	Member States should ensure that certification schemes or equivalent certification is available for installers of small scale RES technologies including shallow geothermal technologies (RES Directive, Geotrainet)
As of 2014	Member States to renovate each year an average 3% of the public building stock owned by central governments (EED)
As of 2015	Member states to introduce, where appropriate, measures to set the minimum levels of RES which should be used in buildings or equivalent supporting measures (RES Directive) and intermediate targets for improving the energy performance of new buildings (Art. 9.3 (b) EPBD)
By 2015	National comprehensive assessments of the potential for the application of high-efficiency cogeneration and efficient district heating and cooling as a basis for a sound planning of efficient heating and cooling infrastructures
31st December 2018/2020	**All new buildings owned or occupied by public authorities shall be nearly zero-energy buildings (EPBD) by 2019** **All new buildings shall be nearly zero-energy buildings (EPBD) by 2021.**

Regulatory and market frameworks: favourable conditions

- Geological data is freely available to project developers (e.g. after a five year period in the Netherlands)
- A public risk insurance scheme is in place (e.g. in France and the Netherlands)
- There is a clear definition of procedures and licensing authorities (e.g. France and Denmark)
- Adequate national and regional strategies exist and are integrated with some form of financial support (e.g. Hungary, Italy, the Netherlands)
- Local plans are aligned with long-term energy objectives

Regulatory and market frameworks: negative conditions

- Long and burdensome administrative procedures (e.g. in Italy, Slovenia, and Hungary);
- Market sometimes closed to new entrants (e.g. in Slovenia);
- Serious regulatory gaps such as a lack of dedicated licencing system for deep geothermal and unregulated right to use the geothermal resources (e.g. in Ireland, the UK, and the Czech Republic);
- Lack of a level-playing field (e.g. in Bulgaria, CZ, Slovenia, Poland, Hungary and the Netherlands where gas prices are regulated and /or subsidies

Conclusions

- Interdependence between EU, MS, and local levels;
- Policy /regulatory flows are bi-directional;
- EU Structural Funds are spent on regional /local level
- Need to learn from previous implementation of legislation (e.g. For the next, EPBD, RES-D, EED)
- Need for cities and regions to exchange best practices and to influence decisions at national level (e.g. National Plans post-2020)

Thank you for your attention!