



Geothermal Energy: The Regional Approach

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Paula ABREU MARQUES
Head of Unit
Renewables and CCS Policy
DG ENERGY
European Commission

Clean Energy Package: 2030

Innovative



Enabling Framework

Inter-connected



Energy Union Governance

Energy Efficiency



32.5%

Renewables



32%

Electricity Market Design



Regulation and Directive on internal electricity market; Regulation on risk-preparedness, ACER regulation



Inclusive



Safe for all



Socially fair



Digital

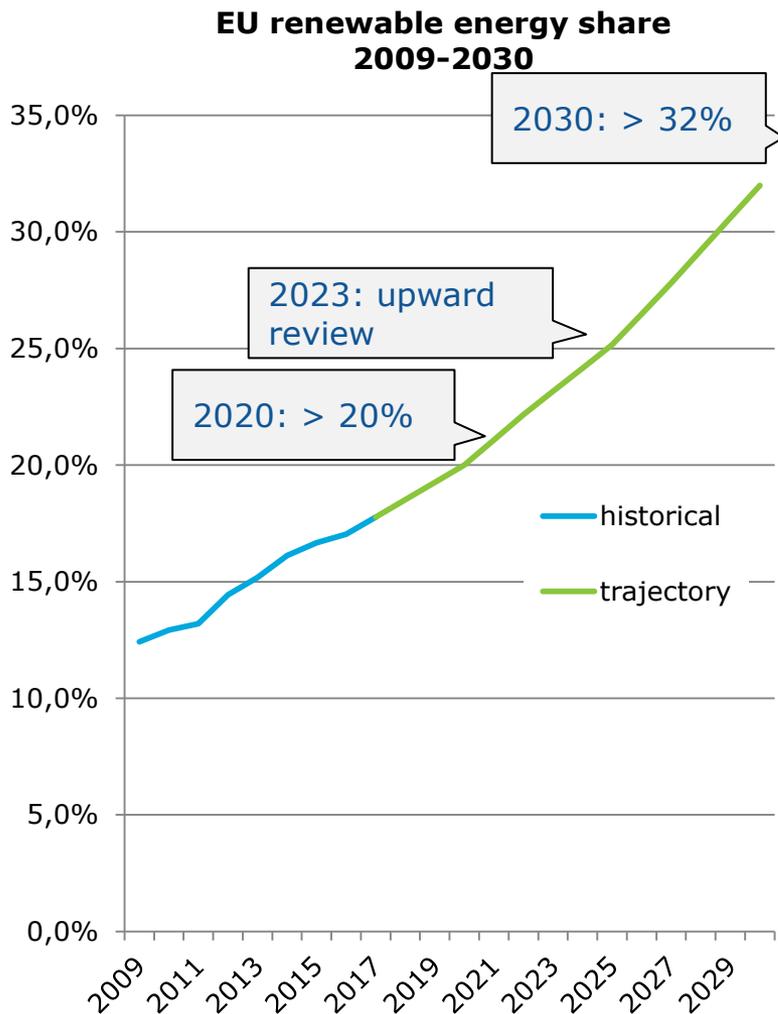


Investment-friendly



European Commission

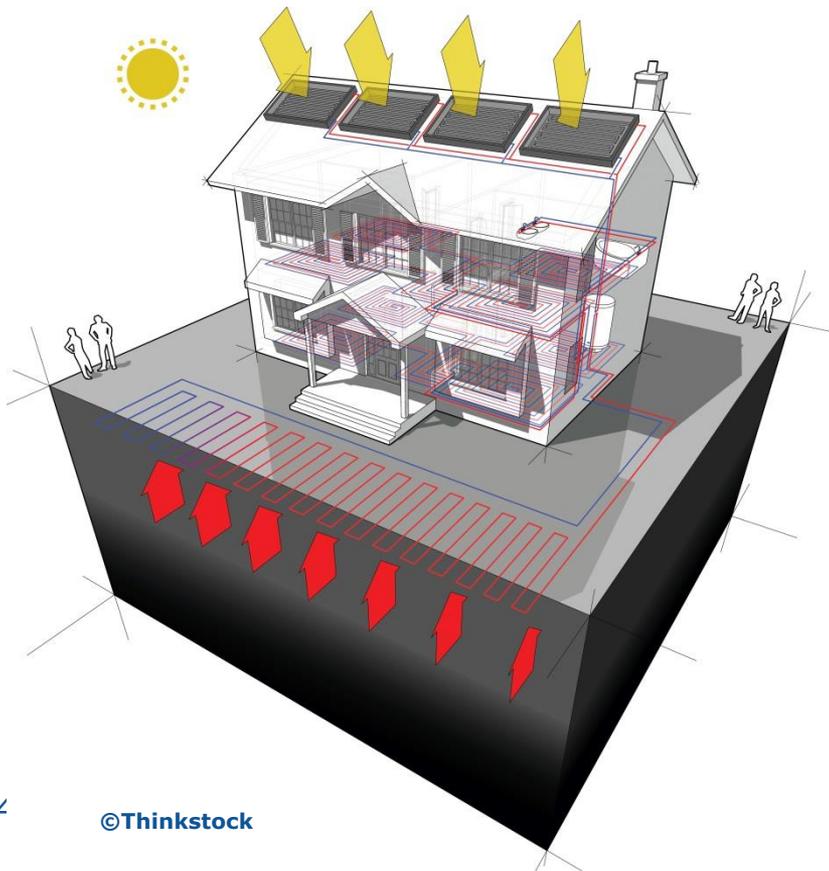
MOVING TO A NEW MORE EUROPEAN APPROACH TO RENEWABLES



- **Binding EU-target of at least 32%** (upward review in 2023)
- Underpinned by **national contributions**
- **Formula** to assess contributions (in case of ambition gap)
- **Collective responsibility** of target achievement
- **Joint measures** (EU financial platform)

MAINSTREAMING RENEWABLES IN HEATING AND COOLING: NEW DEDICATED PROVISIONS

- Target to **increase** renewables in all heating and cooling by **1.3 percent point per year** (2021-2030)

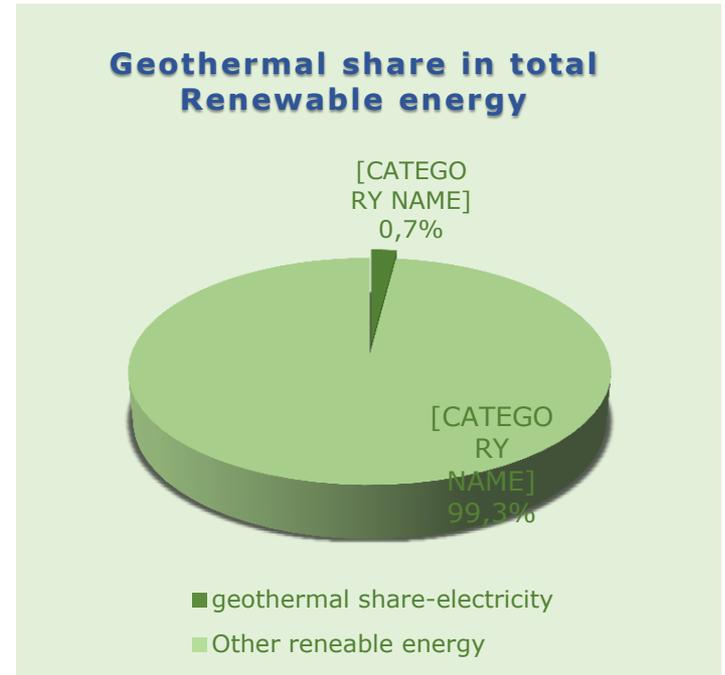
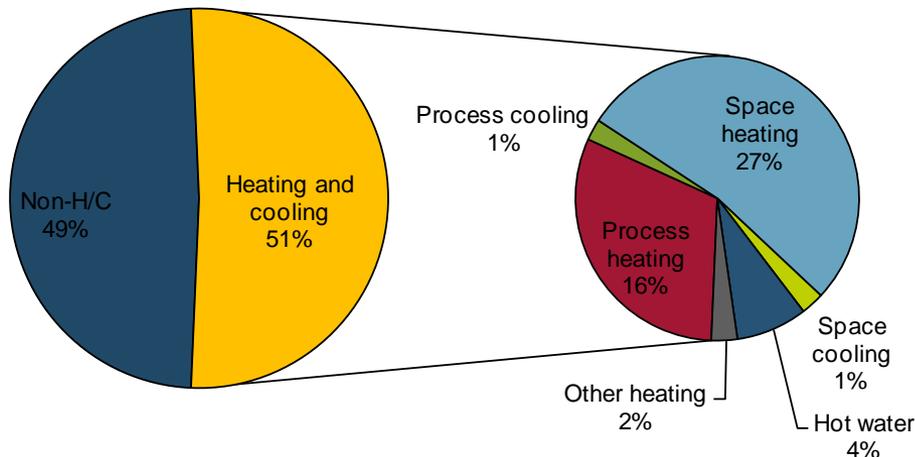


- District heating and cooling
 - **1 ppt increase** in renewables and waste heat/cold or
 - **Third Party Access** for suppliers of renewables and waste heat/cold
- Renewable cooling
 - **New definition and calculation** to contribute to:
 - **1,3 ppt overall increase** in renewables and
 - **1 ppt increase** in renewables in district heating and cooling
 - **Delegated act** by 31 December 2021

NEW OPPORTUNITIES FOR GEOTHERMAL ENERGY UNDER THE NEW RENEWABLE ENERGY DIRECTIVE

Geothermal energy is needed for fulfilling the:

- 1,3 ppt RES increase in HC
- 1 ppt RES increase in DHC
- decarbonise HC by 2050
- help decarbonise electricity



Large geothermal potential exist:

1. >45 % of Europe heat demand could be met
2. >25% of Europe heat demand can be covered by geothermal district heating
3. can provide bot baseload and flexible electricity & storage

THE RECAST RENEWABLE ENERGY DIRECTIVE SELF-CONSUMPTION AND RENEWABLE ENERGY COMMUNITIES PROVIDE FURTHER TOOLS FOR RENEWABLES DEPLOYMENT



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Renewable self-consumption:

- **Consumers entitled to become self-consumers**, including multi-apartment blocks

Renewable energy communities:

- **RES communities are entitled to generate, sell and store renewable energy**
 - **Definitions** for the first time in EU legislation
 - Citizens and Communities can directly reap the **environmental, economic and social benefits** of renewable energy
 - **Any final energy customer** can become member (while maintaining all rights and obligations)

THE REVISED SUPPORT SCHEME FRAMEWORK PROVIDES INCREASING STABILITY, PREDICTABILITY AND MARKET BASED SUPPORT

Don't turn back time!



Abrupt and "retroactive" changes are toxic for RES investments and ...make them more expensive

- Specific provision to **avoid "retroactive" changes** to support
- Revisions **may not compromise the economic viability** of supported projects
- Need to **publish long-term schedules** for support schemes
- **Market based premium** and competitive bidding as the main form of support

Part of the enabling framework: ENHANCED FINANCING TOOLBOX



EU Funding Instruments supporting Clean Energy in the next MFF



INCREASED CLIMATE MAINSTREAMING ACROSS EU BUDGET (25%)

Cohesion
Funds

Invest EU

Horizon
Europe

Connecting
Europe
Facility

LIFE
Clean Energy
Transition
Program

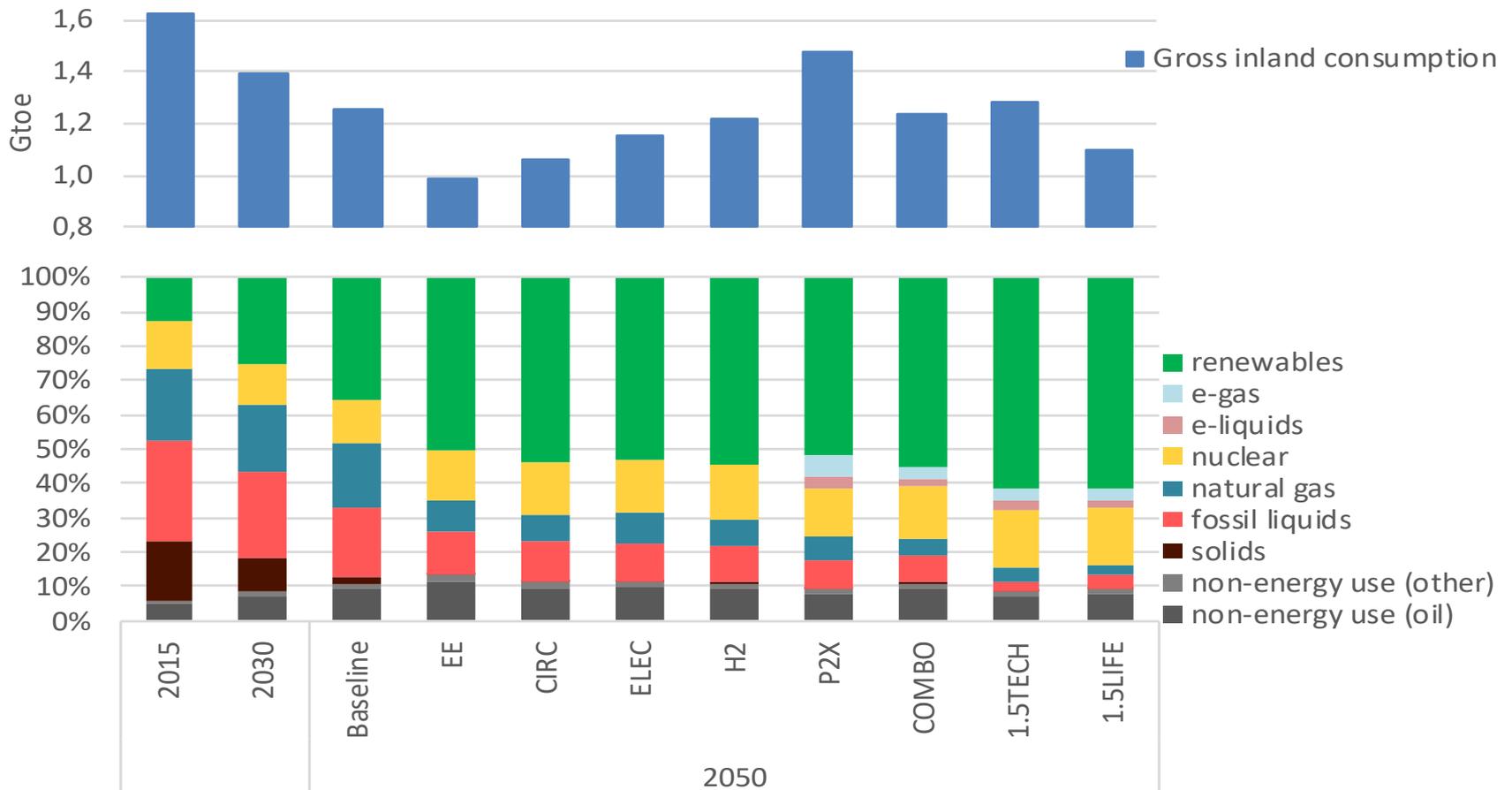
Innovation
Fund*

- + Low Carbon Investments kept as priority for Member States under **Cohesion funds** with **higher ring fencing** (30%)
- + **New Invest EU Fund** with a € 11.5 bln Sustainable Infrastructure window to unlock private investment through financial instruments and **tailor made products**
- + **Increased Funds** under **Horizon Europe** for R&I in climate, energy and mobility (€15 bln)
- + **New Window under CEF to support cross border RES Projects (€ 865 mln)**
- + **New Programme** (CEPE) under LIFE for RES & Energy efficiency capacity building and policy implementation
- + **New Innovation Fund** targeting market uptake of innovative RES, CCS and solutions for Energy Intensive Industries (€ 2bln-€12 bln)

Long Term Decarbonisation Strategy:

2050

- > 60% of all energy produced from renewables
- > 80% of electricity produced by renewables
- EUR 2-3 trillion of energy import savings (2030-2050)



Unlocking geothermal potential under the Clean Energy Package and beyond

Geothermal energy can become **one of the main renewable energy sources in 2020-2030** and by 2050

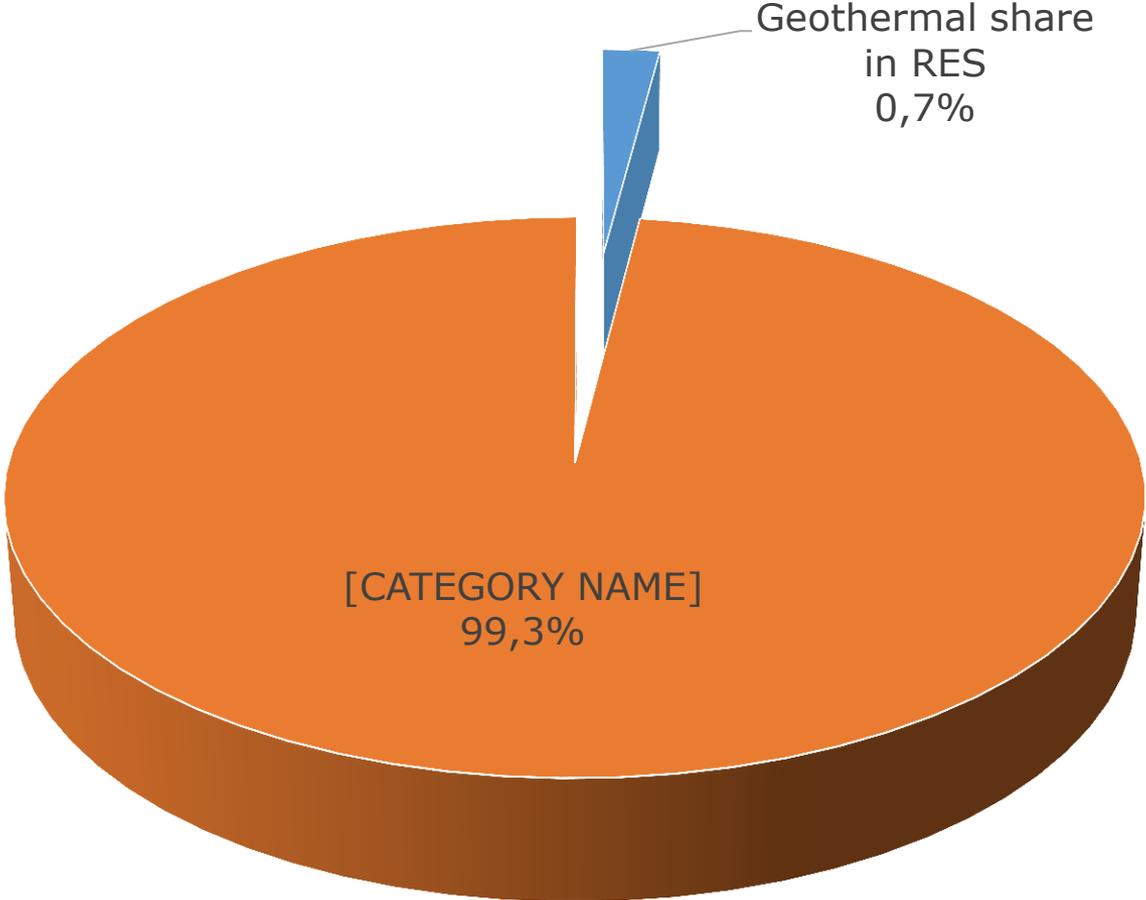
- Implementation of the Clean Energy package, in particular RED II, and its enabling framework, including EU funding and RD&I opportunities
- Interegional cooperation – The Commission welcomes the new S3 Partnership on Geothermal Energy
- Continued EU support for **geothermal energy** with low environmental impacts ensuring **public acceptance** and **high environmental standards**.

**THANKS A LOT FOR YOUR
ATTENTION!**

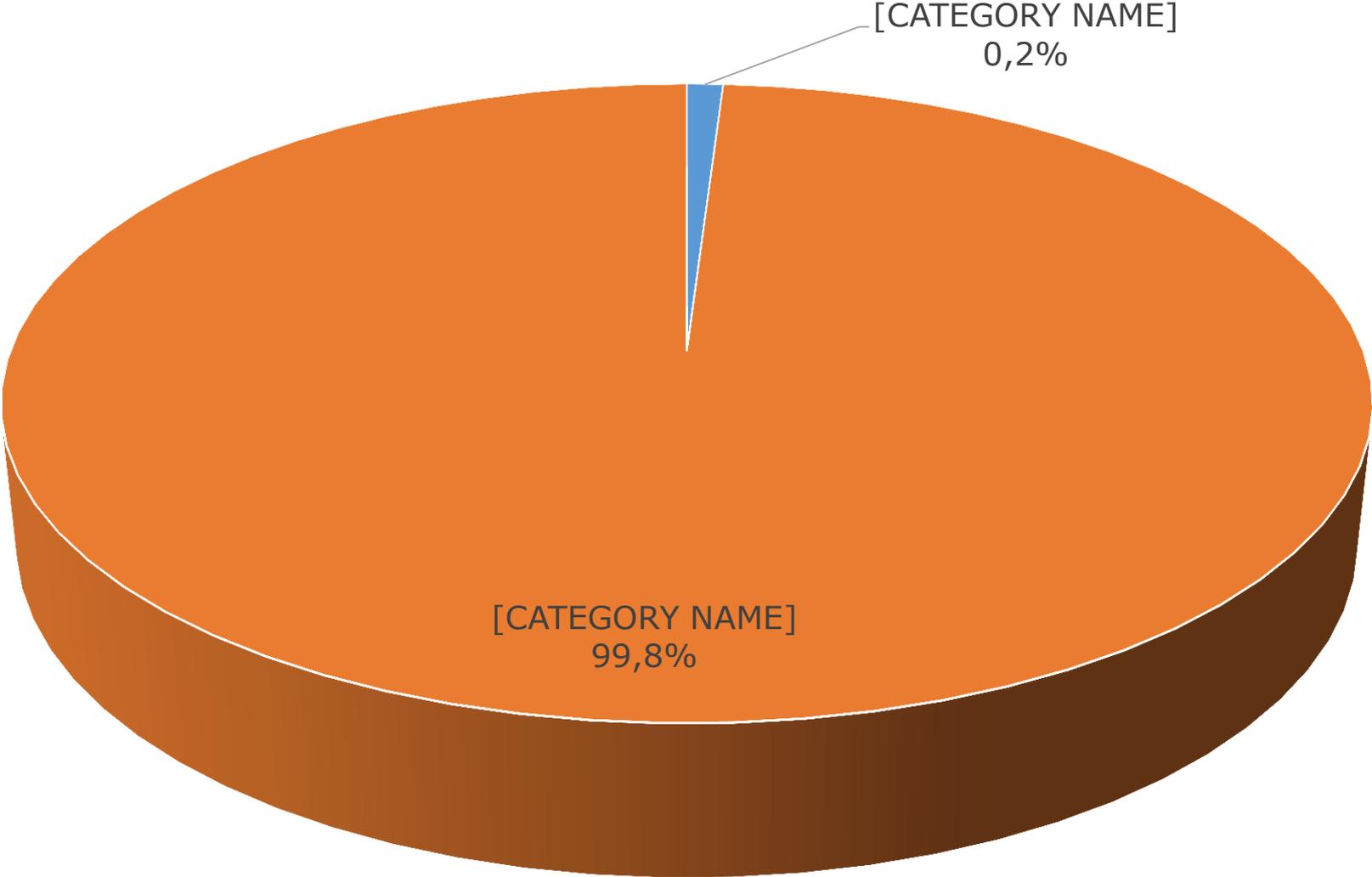


Additional slides

Geothermal share in total Renewable energy



Geothermal share in electricity generation



Geothermal share in Heating and Cooling

