

European Technology & Innovation Platform on Deep Geothermal

Accelerating the development of **deep geothermal** technology in Europe

ETIP-DG annual meeting 2020



ETIP-DG

European Technology & Innovation
Platform on **Deep Geothermal**

www.etip-dg.eu



Co-funded by the European Union's Horizon 2020 Research and Innovation Programme [GA. N. 773392]

Agenda

14:00	Welcome by the outgoing President: Fausto Batini
	<ul style="list-style-type: none">• Review ETIP-DG activities 2019-2020: ETIP DG secretariat, P Dumas• Presentation of the new SC• New ToR: presentation & vote
14:30	Roadmap Implementation
	<ul style="list-style-type: none">• ETIP DG activities 2020-2021: ETIP DG secretariat, P Dumas• R&I current and upcoming funding opportunities for deep geothermal: SU-IWG-DG - EGEC, R Dimitrisina• Synergy in national funding programs and transnational activities: DG-IWG upcoming Chairwoman Gerdi Breembroek (RVO)
15.15	Session 1: R&I to tackle environmental concerns, moderator: A Manzella (CNR)
	<ul style="list-style-type: none">• The GEOENVI project, P Dumas (EGEC & project coordinator)• The Environmental database: environmental matters, mitigation measures, and classification of risks and impacts, J Maury (BRGM)• Regulatory framework and recommendations, A Manzella (CNR)• Life Cycle Assessment methodology, V Harcouet-Menou (VITO)
16.15	Session 2: R&I to decrease costs and improve efficiency, moderator: F Batini
	PROJECTS PRESENTATION: <ul style="list-style-type: none">• GEODRILL• Eavor-Loop project at Geretsried, Germany• CROWD THERMAL• GEORISK
17.00	End of the meeting

Review ETIP-DG activities 2019-2020

- From the Vision to the Roadmap implementation
- ETIP structure: A new Steering Committee, President and Vice-Presidents, Membership
- A liaison with other platforms & groups, new initiatives
- Briefing of funding instruments
- Monitoring project results
- Matchmaking events

THE VISION

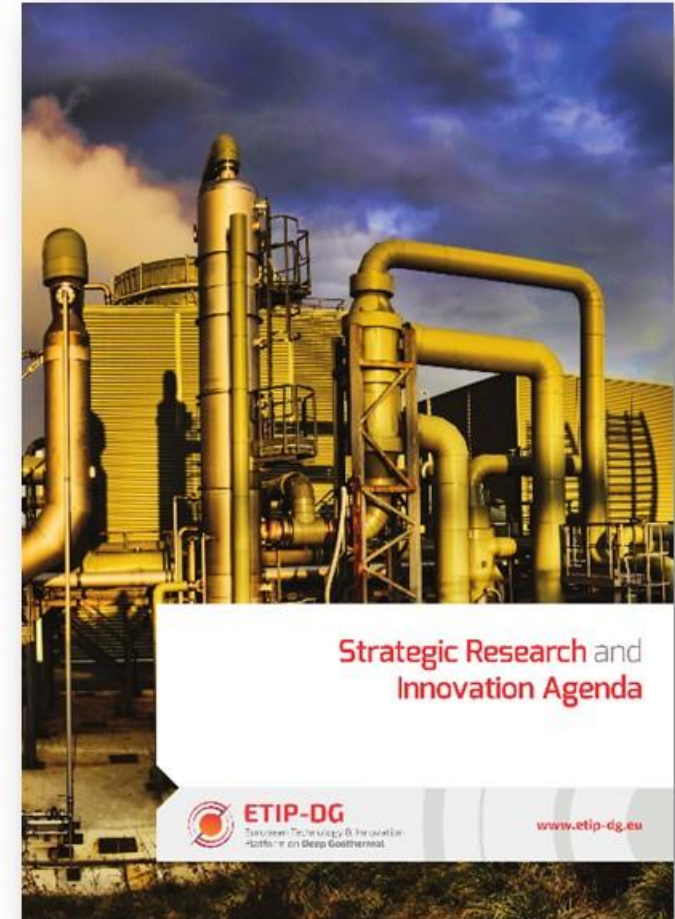
Promotion of the research and innovation in the Deep Geothermal sector to contribute to the City of the Future, where a combination of renewable energy sources are integrated into the system.



Domestic heat and electrical power demand in Europe can be significantly covered taking the advantage offered by the flexibility of geothermal production.

MISSION

- **Contribute to clean energy production in Europe by further unlocking geothermal energy**
- **Improvement of social welfare by a responsible deployment of Deep Geothermal energy**



THE ROAD MAP

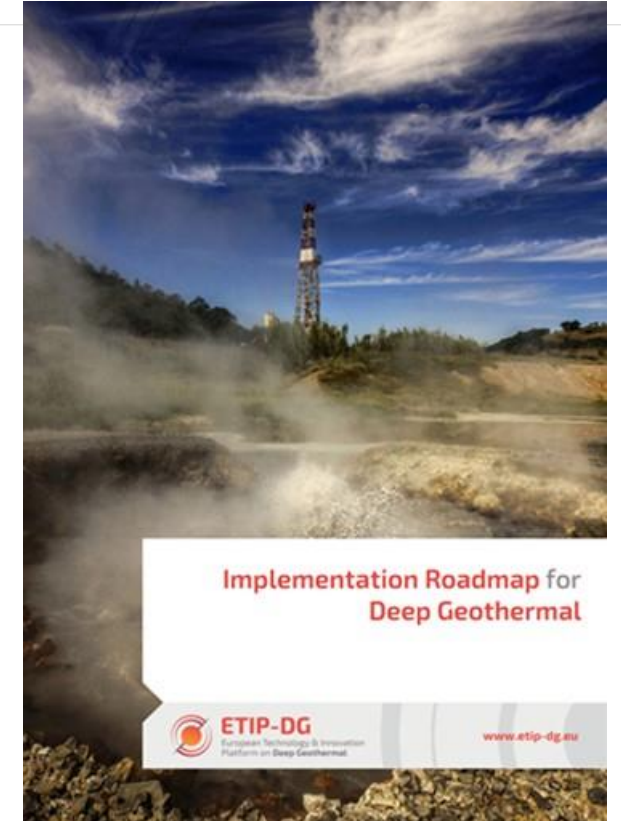
From Vision and SRIA, R&I priorities, targets and KPIs were defined for unlocking geothermal energy and improving social welfare:

Technical

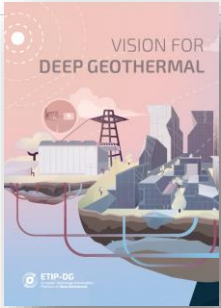
1. Better Prediction and assessment of geothermal resources
2. More efficient Resource access and development
3. Deploy Heat and electricity generation and system integration

Non technical

1. From R&I to deployment, market uptake
2. Knowledge sharing

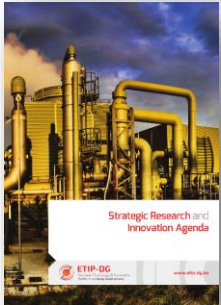


ETIP_DG – MAIN ACHIEVEMENTS UNTIL 2019



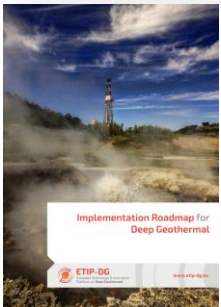
- VISION FOR DEEP GEOTHERMAL (September 2017 - March 2018)

- ✓ Open consultation process with the Stakeholders
- ✓ Publication



- STRATEGIC RESEARCH AGENDA (March 2018 - April 2019)

- ✓ Data collection and discussion about RD&I priorities with TWG.
- ✓ Drafting with the contribution of ETIP_DG WG
- ✓ Publication



- ROAD MAP (May-June 2019).

- ✓ SC prepare a list of topics to be included in the Roadmap.
- ✓ Questionnaire for definition of the priorities
- ✓ Open discussion and validation during the ETIP_DG Annual Conference 2019
- ✓ Publication

ETIP-DG ORGANIZATION

STRUCTURE

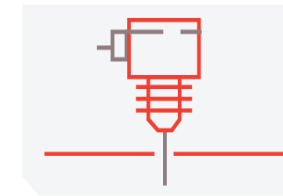


ETIP_DG brings together representatives from industry, academia, research centres, and sectoral associations, covering the entire deep geothermal energy exploration, production, and utilization value chain.

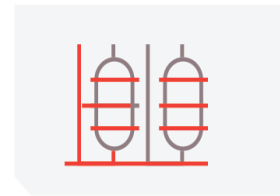
WORKING GROUP



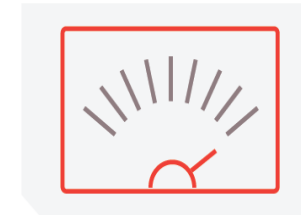
Exploration



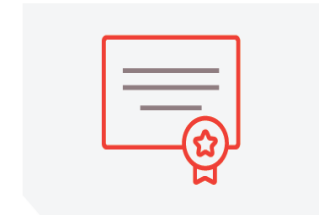
Deep Drilling



Production technologies



Surface systems



Non-Technical

ETIP_DG – Structure 2017-2020

STEERING COMMITTEE 2017-2020

• CHAIR

- Ruggero Bertani, Enel Green Power (2017-2018)
- Fausto Batini, Magma Energy Italia – Rete Geotermica, Italy (2019-2020)

• VICE CHAIRS:

- Bruno Leray, Storengy – Group ENGIE, France
- Jan-Diederik Van Wees, TNO & UU, The Netherlands

• MEMBERS

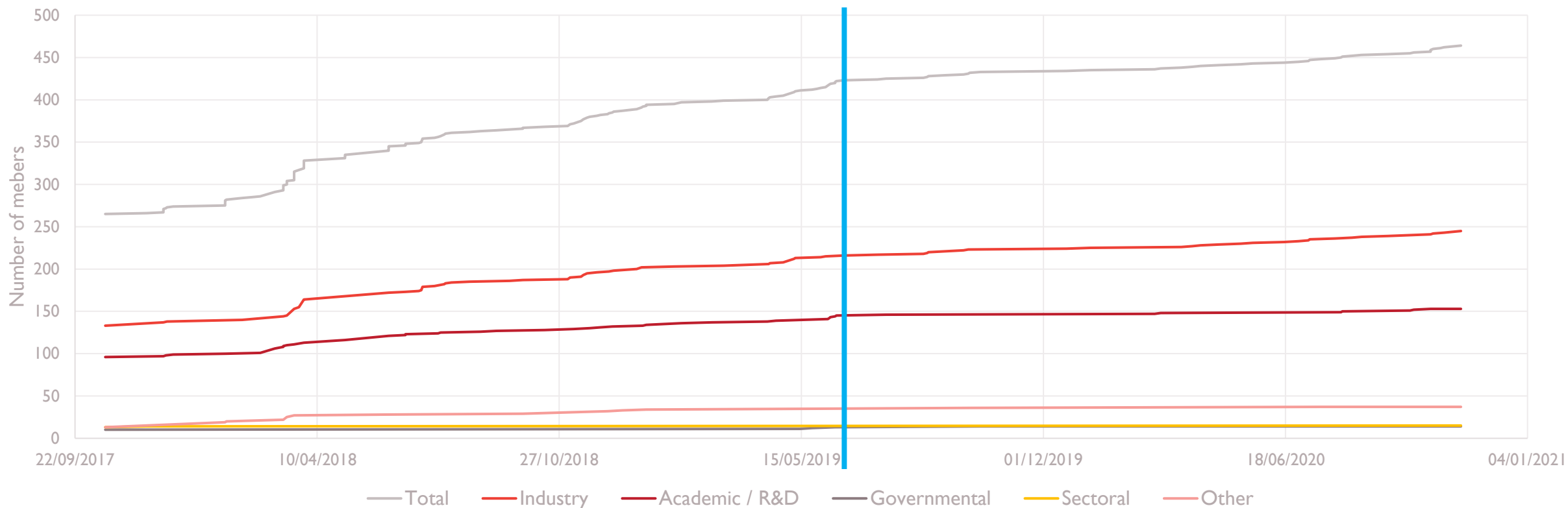
- Miklos Antics, GPC IP/GEOFLUID, France
- Marco Baresi, Turboden, Italy
- David Bruhn, Helmholtz Centre Potsdam- GFZ, Germany, and TU Delft, The Netherlands
- Bodo von Düring, von Düring Group, Germany
- Sylvie Gentier, BRGM, France
- Hjalti Páll Ingólfsson, GEORG, Iceland
- Adele Manzella, Italian National Research Council, Inst. Geosciences and Earth Resources (CNR-IGG), Italy
- Sara Montomoli, ENEL Green Power, Italy
- Jean Philippe Soulé, Fonroche Géothermie, France
- Philippe Dumas (EGEC appointed)
- Inga Berre (EERA-JPGE appointed)
- Stepan Schreiber (ERANET appointed)
- Jiri Muller (IEA-Geothermal appointed)

• WORKING GROUP (WG) LEADERS

- Exploration: Jan-Diederik Van Wees (TNO)
- Deep drilling: Ernst Huenges (GFZ)
- Production technologies: Fausto Batini (Magma Energy Italia)
- Surface systems / Generation: Marco Baresi (Turboden S.p.a.)
- Non-technical: Bruno Leray (Storengy) and Bodo von Düring (CLEAG)

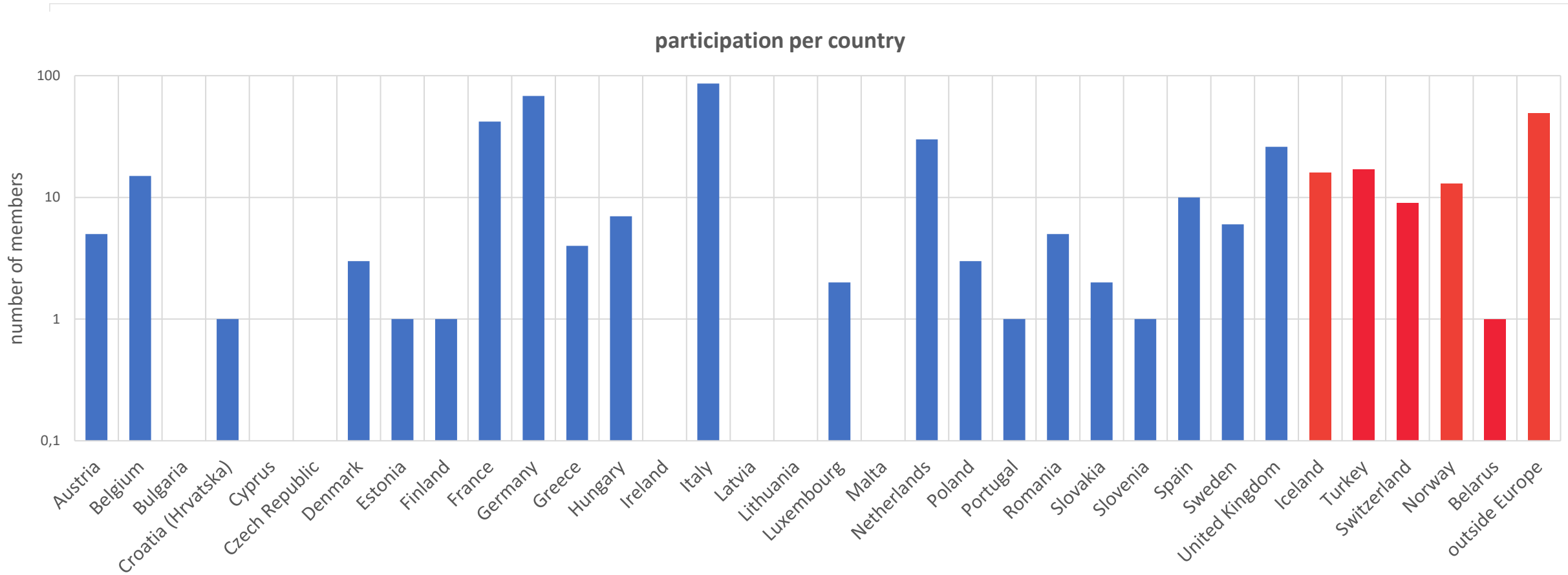
Membership: 292 organisations & 464 individual members

Evolution of the number of members ETIP-DG



30/06/2019: End of EU project support unit

Membership



ETIP_DG – Meeting & Workshop 2019 - 2020

- Briefing of funding instruments, Monitoring project results, Matchmaking events
Brussels, 23 September 2019
- Workshop on geothermal projects in the innovation fund & ETIP-DG Stakeholders Meeting
Brussels, 05 February 2020
- ETIP-DG Stakeholders Meeting & Matchmaking session on EU funding opportunities
Virtual meeting , 16 October 2020
- ETIP DG's Annual General Meeting
Virtual meeting, 27 November 2020

ETIP_DG - Liaison with other platforms, initiatives & groups 2019 - 2020

- EERA-geothermal,
- IWG-DG,
- Geothermica,
- CETP,
- RHC Platform...

ETIP_DG -The new SC 2021-2023

74 members of ETIP voted for the new members of the Steering Committee 2021-2023. Here the list of the elected members:

- **Batini Fausto, Magma Energy Italia/Rete Geotermica, Chief Technology Officer**
- **Antics Miklos, GPC IP/GEOFLUID, Managing Director**
- **Manzella Adele, Italian National Research Council & UGI, CNR Senior Researcher & UGI President**
- **Bruhn David, TU Delft / GFZ Potsdam, Professor for Geothermal Engineering**
- **Van Wees Jan-Diederik, TNO and Utrecht University, Principal Scientist**
- **Montomoli Sara, Enel Green Power, Head of Geothermal Innovation**
- **Baresi Marco, TURBODEN, Institutional Affairs & Marketing Director**
- **Jahrfeld Thomas, Stadtwerke München (SWM) & Bundesverband Geothermie (BVG), Head of department for geothermal and Vice president**
- **Escaré Laurent, Storengy SAS, Geosciences Lead – ENGIE Key Expert**
- **Uhde Joerg, Pfalzwerke geofuture GmbH, CEO**
- **Guglielmetti Luca, University of Geneva, Senior Researcher**
- **Gentier Sylvie, BRGM, Head of scientific programme “subsurface space in the energetic transition**
- **Graff Jean-Jacques, BYGéo & AFPG, President**
- **von Düring Bodo, AAT Geothermae d.o.o. and CLEAG CloZED Loop Energy AG, CEO**

Appointed members to the SC are **Inga Berre (UIB on behalf of EERA-geothermal), Paul Ramsak (RVO on behalf of Geothermica), Jiri Muller (IFE on behalf of IEA-GIA), and from EGEC (tbc).**

Originally, the Steering Committee had to elect 12 people. ETIP-DG outgoing President (Fausto Batini) has decided to change this number to 14, due to a tie in the voting of three candidates. It is a possibility contemplated in the current [terms of reference](#).

ETIP_DG - Review of the Terms of Reference (ToR)

- When ETIP-DG was established the previous SC decided on the first version of the ToR.
- There is a need to revise them for 3 reasons:
 - a) Update the introduction on the policy framework 2030 & Objectives of ETIP on Deep Geothermal
 - b) Add a fifth appointed member to the SC, from Eurogeosurveys. The aim is to establish an official collaboration with Geological Surveys. Following the success of GeoERA, the EU is about to launch a Geological Service for Europe notably aiming at “Building and maintaining an integrated European geothermal resources database.
 - c) Clarifications on the election process: referring properly to virtual votes, allowing increased n° of SC members and Vice-Presidents...
- These amendments are proposed to be voted during the AGM 2020.

ETIP_DG -ToR _Proposed Amendments (to be voted by the AGM)

1) five nominated representatives:

- one from EERA-JPGE,
- one from Geothermal ERA-NET,
- one from IEA-GIA,
- one from EuroGeoSurveys
- one from EGEC.

2) The SC of the ETIP_DG is composed of **minimum** twelve elected Members

3) The SC is presided over by a President and by ~~two~~ **four** Vice-Presidents, entitled to represent the entire ETIP vis-à-vis external entities and at all official events

- The candidates obtaining the highest number of votes are elected. In case of a tie, the outgoing President has the faculty to cast one vote, having regard to the competences of the candidates, to their experience, and to the opinion of the Secretariat of the ETIP-DG. **In case, the President provides one vote to all candidates getting the same number of votes, the number of elected members for the SC is increasing from 12 to the total number with candidates tied.**

ETIP_DG -ToR _Proposed Amendments (to be voted by the AGM)

4) Objectives of ETIP on Deep Geothermal

The overarching objective of the new ETIP-DG would be to accelerate the development and deployment of deep geothermal technology for producing power and/or heat, in particular such as ~~Enhanced Geothermal Systems (EGS)~~ and with the next generation of geothermal technologies and applications such as cutting edge geothermal resources (geothermal energy in "graben reservoirs", supercritical, magmatic, geopressurised, offshore, etc.), extraction of metals (e.g Lithium) from geothermal brines coupled to power and heat supply.

- Improvement of environmental performance of geothermal plants : Closed loop combined power, heating & cooling plants and integration in circular economy are essential for the sustainable geothermal energy deployment in Europe.
- Innovation for allowing the fuel switch in ~~cogeneration~~ District Heating, Combined Heat and Power and for industrial process: The industry and the DH/CHP sectors must switch to renewables; some innovations are needed for this transition: low temperature (cogeneration) systems, energy efficient devices, micro-CHP, industrial heat pumps, etc. with a development of geothermal large scale heat pumps for DH or industrial applications (steam), and geothermal heat and power cogeneration with low temperature in closed loop systems.

ETIP DG_action plan 2020-2021 (proposal to be voted by new SC)

- Reorganization of the Working Groups and appointment of WG leaders
e.g. SC proposal to have a WG on hydrogen
- Contribution to the SET Plan IWGs and energy policy dossiers
- Deployment and implementation strategy in 2021:
 - Upcoming calls: Innovation Fund, Horizon Europe, etc.
 - Matchmaking events
 - Review R&I project results and update learning curve
 - A series of technical workshops: topics to be defined

Review ETIP-DG activities 2019-2020

- From the Vision to the Roadmap implementation
- ETIP structure: A new Steering Committee, President and Vice-Presidents
- A liaison with other platforms & groups, new initiatives
- Briefing of funding instruments
- Monitoring project results
- Matchmaking events

ETIP_DG structure: Steering Committee, President and Vice-Presidents

Upcoming election of the President and Vice-Presidents:

- We will organise next week the online election of the ETIP DG President and four vice-Presidents.
- In the new ToR, it is proposed to have 4 instead of 2 vice presidents, for corresponding to the increased SC members but also to have a better liaison with the Working Groups.

Application

- Members of the Steering Committee are now asked to apply for the position of ETIP DG President (one) and Vice Presidents (four).
- All members of the SC can submit their candidature by sending their application to the Secretariat of the ETIP-DG at info@etip-dg.eu by **Monday 30th November 2020, COB**
- Please indicate the position on which you apply.

The online vote will happen next week.

**THANKS
FOR YOUR
ATTENTION**



The sole responsibility of this publication lies with the author. The European Union is not responsible for any use that may be made of the information contained therein. This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No [773392 — DG ETIP]