

6th Just Transition Platform Meeting - Coal Regions in Transition and Carbon-Intensive Regions

Innovative clean energy technologies for coal regions

Monday, 24th October 2022, 16:00-17:00 (CET)

Charlemagne Conference Centre – Rue de la Loi 170, 1040 Brussels, Belgium

Context:

There have been several events on technology options for the coal regions at JTP meetings (e.g. on district heating, hydrogen, energy-intensive industry, and re-purposing of coal-fired power plants). With this session, we would like to address some specific technologies which are just emerging - there are first good practice examples in some places, but they are not yet widely used and established - but which, in our view, have a high future potential, specifically for coal regions:

- **Use of geothermal heat from closed (underground) coal mines and green district heating networks.** Although several successful projects have been implemented in the past, it is not a general approach yet. But when moving to a genuinely climate-neutral energy system, the demand for zero carbon heat will increase. Using the geothermal energy of coal mines - possibly in combination with heat pumps and smart district heating systems - can be an attractive option for the coal regions.
- **Energy Storage.** In addition to long-term energy storage options, the increasing share of renewables in the electricity grid also calls for short-term grid stability sup and port. Gravitation energy storage could be an unconventional and so far not yet exploited option, which builds explicitly on the infrastructure of underground mines (shafts). But plans should already be made to explore it efficiently before mine closure.

The session will feature a presentation on the status quo of these technologies and experiences in implementation projects (wherever possible from coal regions) and discuss the transferability to other coal regions in the EU.

Main target audience:

The target audience is all the stakeholders of the JTP, incl. all JTF regions, focusing on coal, peat and oil shale regions.

Objectives:

- To give an overview of emerging / innovative clean energy technologies that may complement classic RES solutions in coal regions and potentially ways to make use of existing infrastructures;
- To learn about the possibilities and challenges of those technologies and how they can be applied in coal regions;
- To give inspiration to the stakeholders about how to add on existing infrastructures and industries with new clean solutions.

The session will be held **physically** in the chosen room on European Commission premises. The audience will either join in the same room or watch the event online in Swapcard through web streaming.

Draft agenda

Time	Description
16:30-16:35	Introduction by the moderator Timon Wehnert, CRiT Secretariat
16:35-16:40	<i>Scene setting presentation</i> Overview of uptake of clean energy technologies By Felicia Aminoff, Energy Transitions Analyst (BloombergNEF)
16:40-17:15	<i>Presentations of innovative clean energy projects</i> <ul style="list-style-type: none">- Project Energy storage Gravitricity: Charlie Blair (Gravitricity)- Project District Heating Barredo Colliery: Noel Canto (Hunosa)- Project Solar thermal heat: Nicolas Graveline (Newheat)
17:15-17:25	<i>QnA - Discussion between speakers and audience</i>
17:25-17:30	<i>Closing of the session</i> <ul style="list-style-type: none">- Outlook on upcoming toolkit on district heating- Closing words by the moderator

Project Energy storage Gravitricity

<https://gravitricity.com/>

“Barredo Colliery” Geothermal District Heating / Mieres, Asturias, Spain

The actual project that has now been completed involves the development of a District Heating with a Generation Plant in the own facilities of Barredo Colliery. The heat pumps benefit the temperature of the water pumped at 23°. Subsequently, it feeds, using an underground pipe network, two public buildings and a total of 245 dwellings. The network has a power capacity of about 2,2 MW, supplying energy to the heating systems and domestic water. It usually keeps the previous natural gas boilers out of service. The new facilities are GHG-free and reach an annual CO2 emission reduction of 653 tons. These facilities have also provided the renovation of the industrial heritage of the region. The facilities have become the great geothermal district heating in Spain and a starting point for future projects. Barredo Colliery Heating District was co-financed by FEDER funds for the “2017-18 call for subsidies and co-financed by the UE through the European Regional Development Fund (ERDF).

<https://www.districtenergyaward.org/barredo-collery-district-heating-mieres-asturias-spain/>

The solution for green district heating networks

<https://newheat.com>