European Commission

EC Research Fund For Coal and Steel Projects on AMM

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Research Fund for Coal & Steel

Research and Innovation

European Commission

The RFCS Programme

- A research fund with a budget of **~ 30-40 M€ / year**
- no taxpayer money : ECSC assets (originally paid by industry; now ~ 2,0 billion €) transferred in 2002 to the EC RFCS to utilise the generated interests for research funding
- Promoting **industrial research** in the field of *Coal and Steel*
- **Yearly call** with deadline 15 September for proposals for
  - Research projects (60% funding)
  - Pilot & Demonstration projects (50% funding)
  - Accompanying measures (100% funding)
- **Outside the H2020** … yet closely co-ordinated & complementary (e.g. paperless Grant Agreements, use of EU Participant Portal,…)

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Coal Mine Methane under RFCS

- Multiple CMM projects have been funded in RFCS under Technical Group 1 "*Coal mining operation, mine infrastructure and management, unconventional use of coal deposits*"

- Most projects focused though on methane release pre- and during mining in the area's of:
  - Safety: Methane detection & Explosion prevention (SAFETECH, GasDrain, EXPRO, AVENTO, MapROC)
  - Methane for fuel production (COALSWAD,CARBOLAB)

- So far only few RFCS projects on AMM (Abandoned Mine Methane), but

- Post mining topics (rehabiliation, alternative uses of abandoned mines (e.g. thermal energy)) is gaining importance in the RFCS Programme, as also reflected in the annual priorities.

Methane monitoring in Abandoned Mines

RFCR-CT-2015-00004 MERIDA *Management of Environmental RIsks During and After mine closure*

Includes a task on Laboratory experiments to evaluate long term gas flow after mine flooding

Earlier results obtained showed that under high hydrostatic pressure a significant release of CH4 from coal to water took place and that methane migration was possible after a few days of flooding.

In MERIDA, the amount of CH4 released will be related to parameters such as coal pore size and water pressure, in order to predict the intensity of the phenomena for different kinds of coals and mines (to be used as input in the gaseous emissions modelling).

Methane monitoring in Abandoned Mines

RFCR-CT-2015-00002 STAMS *Long-term STability Assessment and Monitoring of flooded Shafts*

To assess the long term stability of flooded shafts, the evolution of gaseous atmospheres as measured as an indicator of mine shaft degradation

-> technology transfer to measure AMM possible

AMM for fuel production

RFCS 2017 METHENERGY+ *Methane recovery and harnessing for energy and chemical uses at coal mine site*

- The scope of this project is to develop an integrated approach for upgrading this methane from ventilation emissions of working shafts (VAM) as well as those emissions coming from abandoned mines (AMM).
- The key idea of the project is to **use methane from mine ventilation to produce methanol**, which can then later on be upgraded into synfuels or other products
- Main challenge will be the business model, largely depending on the cost to purify the AMM

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Coal Regions in Transition Initiative

Under ***Clean Energy for All Europeans*** package action

- **Objective:** support Member States and Regions in their efforts to modernise their economies and prepare them to deal with the structure and technological transition in coal regions

- **Measures:** Develop long-term strategies in coal and carbon intensive regions regarding socio-economic development by investing in social fairness, new skills and alternative economic activities

- **RFCS role:** provide expertise in clean coal technologies and post-mining research and innovation

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For more information:

RFCS web site:
http://ec.europa.eu/research/industrial_technologies/rfcs_en.html

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Thank you!