



# **Annual Programme Report No.2 Norway Grants 2009-2014**

**Programme CZ08 – Pilot studies and surveys on CCS  
technology**

**Reporting period: 1.1.2015– 31.12.2015**

**Programme Operator: Ministry of Finance of the Czech Republic**

**Programme Partner: Ministry of the Environment of the Czech  
Republic**

**Donor Programme Partner: NA**

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## 1. Executive summary

The CZ08 Programme “Pilot studies and surveys on CCS technology”, aimed at increasing knowledge and international cooperation on CCS, is by end of 2015 in the middle of its implementation. The first Annual Programme Report for the period 2013-2014 was completed in April 2015, and the hereby submitted APR No. 2 covers the second implementation year 2015.

The Programme CZ08 is aimed at increasing knowledge and international cooperation on CCS. The scope of CCS themes has been extended and updated by the Climate and Energy Package, approved by the European Council in 2014. The Czech Ministry of the Environment (MoE) in the role of Programme Partner is responsible for transposing the European Directive on the geological storage of carbon dioxide into national legislation and for observance during the practical application. On the basis of Partner Agreement with the PO (MoF) the MoE provides expertise and interlink to the CCS community in CR.

The programme structure consists of management of the programme, of a single open call for project proposals (2014), of the Fund for bilateral relations (measures A and B) for support of deeper cooperation between the Project Promoters and entities in Norway, and of Complementary actions. The programme does not have any donor programme partner.

During 2014 and 2015, the Programme underwent substantial modifications. The Programme Agreement was signed on 13 February 2014, however, after processing of the single Open Call for project proposals in mid 2014, the absorption capacity for CCS in the Czech Republic proved to be significantly lower than expected (about 1/3 of the re-granting allocation was not applied for) and so the total original Programme budget amounting 7 040 000 EUR was reduced to 5 023 623 EUR via reallocation into the CZ09 Research Programme. The reallocation was approved by the FMO on 22 October 2014, followed by adjustment of the Memorandum of Understanding (Dec 2014) and the subsequent administrative steps (Amendment to the PA, national adjustments) followed in early 2015.

In early 2015, there were 4 launched projects and remaining re-granting means mainly from the fifth withdrawn project application (see APR No.1) to had been still allocated. For efficient resolving, the NFP applied the Art. 6.9 of the Regulation and – after FMO approval – managed an addressed call for additional activities in running projects with the allocation of 23 343 161 CZK (880 873 EUR). The call was announced on 8 April and closed on 11 May 2016. Three of the four projects applied for additional grants / additional activities. All three proposals were approved and (after slight modifications) supported. The administration of all necessary steps regarding additional grants via project amendments proceeded step-by-step during the second half of 2015, with respect to harmonization with reporting obligations in the IT system CEDR. As a result, there are still four running projects, three of them now extended by additional activities and budgets.

On 23 July 2015 the FMO approved extension of eligibility of costs in projects till April 2017. In late 2015, the FMO approved the NFP request for extension of eligibility of costs within the programme till 31 December 2017. The PA amendment was set into the DoRIS on 24 November 2015. All the projects are preparing concrete requests for prolongation especially with respect to additional activities, and the proposals are awaited in early 2016.

In its implementation phase, the Programme confirms its potential in bilateral relations between the CR and donor states institutions, as well as between other stakeholders in the CCS research community on international level. The call for the applications for grants from the Fund for bilateral relations on the

Programme level – measure B (for promoters of running projects) - was launched in April 2015 and remains open. So far, 5 applications were submitted and 4 grants awarded and realized, whereby nearly 70% of the BF allocation is spent.

The allocation for Complementary actions (reduced to 25 118 EUR) remains available and a particular proposal for utilization will be formulated during 2016.

The programme management structure proved to be functional and effective. Due to enormous steering activities in 2015 (management of the additional addressed call, amendments in projects as well as in the programme), the Steering Committee met three times (on 1 April, 12 June and 2 November 2015) – the sessions in June and November approved the process and results of the addressed call for additional grants. – Besides this, the NFP is in close contact with the PP (MoE) and consults all matters regarding particular project amendments, public procurements, state aid issues etc. Towards the Project Promoters, a seminar for Project Promoters was organised by the PO in Prague on 12 February 2015.

Regarding publicity, the launch conference of the Programme was held in the National technical library in Prague on 8 April 2015. The PO duly informs about the programme and projects on its web pages <http://www.eeagrants.cz>, specifically designed for the EEA and Norway Grants 2009-14. Information on the programme can be also found on the web pages of the Programme Partner (Ministry of Environment) [http://www.mzp.cz/cz/financni\\_mechanismy\\_ehp\\_norska](http://www.mzp.cz/cz/financni_mechanismy_ehp_norska). Each of projects promoters, in line with the publicity rules, has set up own web pages for the project and is obliged to update and maintain them regularly. Reporting on publicity measures is a part of monitoring and reporting, too. The measures promoting results will be considered and applied later in 2016.

The main risk of the Programme reported in the previous APR was the limited time for implementation of projects. During the 2015, the projects were extended by additional activities for additional funds, so the risk became more intensive. Nevertheless, in late 2015 the donor decided to allow extension of period of implementation (eligibility deadline Dec 2017). Requests for project prolongation are under preparation, expected on the NFP in early 2016.

## **2. Programme area specific developments**

Pursuant to the European legislation (the Directive 2009/31/EC of the European Parliament and the Council on the geological storage of carbon dioxide and amending Directives 85/337/EEC, 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC and 2008/1/EC and Regulation (EC) No. 1013/2006, the Czech Republic as a EU member is permanently obliged to explore the options for the geological storage of CO<sub>2</sub> and apply the eco-innovative tools and to implement demonstration pilot projects. The knowledge gained shall help to decide the CR position towards adoption of this new technology.

The CCS technology is quite new topic in the Czech Republic, so the development in the sector is not too dynamic and trends in the sector couldn't been set yet. Despite potential sources from the European NER 300 programme for renewable energy within the Climate and Energy Package approved by the European Council in late 2014, the Norway grants are almost the only financial resources for funding in the area of CCS technology.

The Ministry of the Environment (MoE, the Programme Partner) is responsible for transposing the European Directive 2009/31/EC on the geological storage of carbon dioxide into the national legislation and the law in question - the Act on the storage of carbon dioxide in natural rock structures and

amendments to certain Acts. The amendment to the Act no. 85/2012, on the storage of CO<sub>2</sub>, has been approved in the end of year 2015. This amendment should harmonize the Czech legislation with the EU legislation on geological storage of carbon dioxide. The amendment contains only legislative and technical adjustments. The Act also in the paragraph 24 provides that the storage of carbon dioxide into the natural geological structures in the Czech Republic couldn't be permitted until 1 January 2020. Till that time the risk of the effects of CO<sub>2</sub> on groundwater, influence on the geological environment, economic convenience and safety will be determined. Areas for possible storage of CO<sub>2</sub> in the Czech Republic have been already tipped.

The CZ08 Programme provides significant contribution to research and pilot testing of possibilities in CCS. Four projects are under implementation in CZ08 - three of them focused on research and investigations, one aimed at increasing awareness on CCS in the CR. The MoE has ensured sufficient financial resources for Programme co-financing from the state budget (including pre-financing of management expenditures) and provides expertise and necessary advice during the assessments, reporting and/or evaluation.

### 3. Reporting on outputs

The four projects within the Programme are smoothly running and are estimated to be in the advanced phase of their implementation. The overview includes data reported in current monitoring reports, contributing to particular Outputs and summarized for the Programme.

Programme shall provide increased knowledge and international cooperation on CCS (a single Outcome) through two Outputs – via

- Output 1 - *Completed surveys to explore possibilities of the practical application of the CCS technology in the CR, including methods for the capture, transport and storage of the CCS*
- and Output 2 - *Increased knowledge of staff working in the state and public administration and awareness of the public on CCS technologies .*

Regarding the Output 1, three running projects (003, 005, 006) are contributing. One project (004) is targeted at the Output 2. One of the three supported projects (006) within Output 1 should provide also some contribution to Output 2.

The progress in contribution to programme Outputs is illustrated in the table below. As to Output 1, completion of surveys and studies, as well as introduction of methods is expected in the late phase of projects implementation with respect to the nature of the research work, however, the Output 2 (raising awareness on CCS) indicators have been in good progress in 2015 :

### Achieved Output indicators by projects

Project No./ Promoter	Project name	Output 1		Output 2	
		cummulative TARGET	ACHIEVED	cummulative TARGET	ACHIEVED
		Completed Surveys to explore the possibilities of the practical application of CCS in CR  <b>Indicator:</b> Number of analyses and studies / methods <b>PRG TARGET : 3</b>		Increased knowledge of staff working in state/public administration on CCS  <b>Indicator:</b> Number of awareness campaigns, events, methods and tools for transferring information <b>PRG TARGET : 5</b>	
003 ČVUT	Study of pilot technologies for coal power plants in the CR	2	0	--	--
005 VŠCHT	Research of high temperature CO2 sorption from flue gas using carbonate loop	2	0	--	--
006 ČGS	Preparation of a research Pilot Project on CO2 Geological Storage in the Czech Republic (REPP-CO2)	6	0	4	3
004 MASARYK UNIVERSITY BRNO	Carbon Capture & Storage – Sharing Knowledge and Experience	--	--	4	15
<b>TOTAL</b>		<b>10</b>	<b>0</b>	<b>8</b>	<b>18</b>

The planned and achieved indicators are illustrated by particular projects as follows:

**003- Study of CCS pilot technologies for coal fired power plants in the Czech Republic** (Czech Technical University and partners – ÚJV Řež and SINTEF, Nor.)

The scientific project shall contribute to the programme Output 1 with 2 completed surveys on practical use of CCS application in CR which shall be declared as fulfilled by the end of project. However, the qualitative outcome indicator “Increased knowledge of and transnational cooperation in CCS” shall be achieved via 19 planned available documents/deliverables, such as scientific reports on completion of particular research activities, seminars, presentations at conferences, manuscripts/published articles, author SW etc. Up to now, 7 of them have been completed.

**005 - Research of high temperature CO<sub>2</sub> sorption from flue gas using carbonate loop** (VŠCHT and partners – ČVUT, ÚJV Řež)

The scientific project had planned to support the programme Output 1 with 2 outputs consisting of completed protocols from laboratory testing and a Study of a pilot device for testing of CO<sub>2</sub> sorption. These shall be declared as fulfilled by the end of the project. Achievement of the results shall be confirmed by 15 research reports, seminars, a created database etc. During the reported period, 6 project outputs have been achieved (research reports, presentations at conferences/seminars).

**006 - Preparation of a Research Pilot Project on CO<sub>2</sub> Geological Storage in the Czech Republic - REPP-CO<sub>2</sub>** (The Czech Geological Survey ČGS and 5 Czech partners and a Norwegian one – the International Research Institute of Stavanger (IRIS))

Among the research projects within CZ08, the 006 is seen as a flagship in CCS because of its complexity, volume and sustainability. The project is designed to carry out the initial, preparatory phase of a CO<sub>2</sub> storage research pilot project in the Czech Republic, following the rules set by the national law and the EU CCS Directive. The target storage structure is a small depleted hydrocarbon field in South-East Moravia, at ca. 900 m depth.

In course of 2015, the project has delivered numerous of the planned results, and all three principal project milestones were achieved: All important site-related data were gathered; a 3-dimensional static geological model of the reservoir has been created and a project geo-database has been set up. As presumed, the project will need prolongation by ca 7 months, until end of November 2016, which will help to solve delays in public procurement (purchase of new equipment) and also to provide more time to the project team to recuperate unexpected lacks in samples.

The project shall contribute to both programme Outputs – to Output 1 by 4 comprehensive reports and to Output 2 by 6 methods of dissemination and publicity means (brochure, newsletter, seminar, website). Whereas the research reports shall be submitted by the end of project, the particular steps are planned to be supported by 16 results (models, databases, maps) – in fact they will be significantly more, 21 of them have been delivered yet. As to Output 2, 3 of the 4 planned publicity measures have been provided during the implementation.

**004- Carbon Capture and Storage - Sharing Knowledge and Experience** (Masaryk University Brno and NTNU Nor.)

The project is focused mainly on dissemination of public knowledge on the CCS and on potential aspects of its application in the Czech Republic and is being implemented primarily via lectures to students and public and via expert workshops i.a. for ministries and government in order both to highlight the mitigation potential of the CCS technology and to mention the current world situation and actual objective obstacles on way to broader deploy and utilize the technology (also in the Czech Republic). The project shall contribute to programme Output 2 by 4 planned deliverables (an exhibition, seminars, competitions etc) which shall be supported by 106 particular actions. During the period, at least 15 actions (seminars, presentations, series of lectures, exhibitions etc.) have been reported.

#### **4. Reporting on Programme outcome(s)**

The programme outcome was selected with regard to current national priorities and needs while investigating the possibilities of the practical application of CCS technology as an eco-innovative measure in the Czech Republic and the related education of the general and professional public in this area. The single programme outcome is *Increasing knowledge and international cooperation on CCS*. The contribution to this outcome shall be provided by two Outputs – i.e. *Completed surveys to explore possibilities of the practical application of the CCS technology in the CR, including methods for the*

*capture, transport and storage of the CCS, as well as Increased knowledge of staff working in the state and public administration and awareness of the public on CCS technologies (see section 3 above).*

There are two Outcome indicators selected with respect to national priorities, i. e.

- Availability of documentation, data and information allowing a decision to be made on the practical use, capture and storage of CO<sub>2</sub> in accordance with the Directive on CCS, and
- Increased awareness among the general and professional public of CCS, improved knowledge and transnational cooperation in CCS

expressed by their qualitative value ("0 / 1").

With respect to the stage of programme implementation, the progress towards the Outcome can be reported only by means of advancing Outputs so far. The four supported projects were launched in 2015, are contributing via their particular outputs, and the Programme Outcome indicators can be assessed in the closing phase or after completion of the Programme.

#### Outcome indicators

	Outcome	Indicator	Indicator value	
			Target	Actual
1	Increased knowledge of and transnational cooperation in CCS	Availability of documentation, data and information allowing a decision to be made on the practical use, capture and storage of CO <sub>2</sub> in accordance with the Directive on CCS	1	0
		Increased awareness among the general and professional public of CCS, improved knowledge and transnational cooperation in CCS	1	0

The first Outcome indicator is supported by three of the four projects, in total by 35 results values – the 003 project participates by 19 deliverables, the 005 project by 15 pieces of documentation and the 006 project by 1 comprehensive study on CCS application. To the second one, two projects contribute – the 004 project by 4 deliverables and the 006 project by 1 contribution. As evidence of all the indicator values shall be provided by comprehensive and composed parts, the fulfilment can be reported by the end of projects implementation at earliest. However, duly steps in progress at project level have been reported (see Outputs) in the 2015.

As to risks for achievement of the Programme Outcome, the estimated risky factors have been mitigated by successfully finished Open Call, launch of projects and by allocation of further means via an addressed Call to running projects in mid 2015. The Outputs / the Outcome were strengthened by this measure. However, the time risk belongs to the most significant risks of achievement of the Programme Outcome as the Programme has been delayed since its start and additional project activities have put more stress on the timing. The request for possible prolongation of the projects was submitted by the



National Focal Point to the Financial Mechanism Office and approved on 23 July 2015 (the PA amended on 24 November 2015). In case of necessity, the projects can be extended, administration of the extensions especially at projects with additional activities is expected in early 2016.

#### **4.1. Progress on horizontal concerns**

The horizontal concerns *Social inclusion for the Roma* and *Combating gender-based violence*, are not relevant to the programme.

### **5. Project selection**

The single open call was organized in 2014 (launched on 31 March 2014 with the deadline until 16 June 2014), 5 applications were submitted, assessed and suggested by the Selection Committee to grant support, however, 1 applicant withdrew from the grant in December 2014.

The verification process at the PO was longer due to the administrative requirements related to state aid issues and finished in January 2015. The grants awarded to applicants were slightly lower than amounts requested as they reflected reductions related to the state aid rules and recommendations made by the Selection Committee. Due to this fact there was again a saving in the re-granting item amounting 880 873 EUR. Following negotiations with the FMO, it was decided to apply the Art. 6.9 of the Regulation and to launch an addressed call towards promoters of the 4 supported projects for proposals of additional activities.

The call was prepared and launched on 8 April 2015 with the deadline for submission of applications until 11 May 2015. The procedure was administered via the “amendment process” in the CEDR IT system, thus the highest transparency and audit trail has been maintained. The Programme Partner (MoE) participated via nomination of experts/evaluators, providing the assessment and acting in the Selection Committee, too. Three project promoters applied, the applications were assessed and approved (with slight amendments) by the Selection Committee composed of representatives of the PO, PP and external experts at its meeting held on 2 June 2015. This resulted in approval of grants in total amount of 21 492 316 CZK.

In the end, there is still a small remaining balance of 3 071 403 CZK (115 902 EUR) in the re-granting item not allocated yet. The way how to use these funds has not been decided yet, utilization via reallocation to the Fund for bilateral relations is the most effective scenario.

### **6. Progress of bilateral relations**

The CZ08 programme has no programme partner. There are Norwegian project partners involved in three (of four) projects, i.e. namely IRIS Stavanger (project No 007), SINTEF Energi (No 005) and NTNU (No 009). As reported in project monitoring reports, the Norwegian partners are duly collaborating in project activities, delivering high expertise, know-how and mutual knowledge exchange.

The CZ 08 sets aside 1.5% of the total programme budget for the **Fund for bilateral relations at programme level**. After re-allocation to the CZ09 programme, the Fund is amounting 75 283 EUR and supports bilateral activities at programme level (Measure "B") with the aim to strengthen further bilateral relations of project promoters of running projects.

The funds became available via the Open Call to eligible applicants (project promoters) for proposals of bilateral initiatives which has been announced on 11 February 2015 and remains open until spending the allocation (880 873 EUR) or until the Fund deadline. On 4 December 2015, the Guideline for applicants and beneficiaries from the Bilateral fund at programme level – measure "B" as well as the Open Call were updated. Extension of the submission of applications till 31.12.2016, enlargement of the possible eligible activities and eligible expenditures were introduced.

The interest for support of bilateral relations within the CZ08 programme is high – 5 applications have been submitted, 4 of them already supported and realized, nearly 70% of the Fund has been allocated by end of 2015. The most relevant activities include especially mutual visits or participation at international conferences, promoting the project results and sharing knowledge with Norwegian stakeholders. – As an example, the supported initiative No. NF-CZ08-BFB-1-009-2015 is to be mentioned. The visit of 5 members of Masaryk University team (project No. 004) to the "8th Trondheim Conference on CO2 Capture, Transport and Storage TCCS-8" to Norway included participation in several sections and mutual consultations with Norwegian experts. The participants could gain better insight into the deep expert knowledge on geological aspects of CCS storage, and especially – with respect to the aim of the 004 project targeted to increase public awareness on CCS – to share experience on work with broad public, on dissemination and strategies of addressing the political representatives and decision makers on local, regional as well as high level. The Norwegian project partner – the NTNU university of Trondheim – was a co-organizer of the conference, provided several mutual meetings and enabled bilateral consultations with international experts (i.e. with Mr Jensen Jacob Kielland Haug on acceptance of the CCS issues in Norway, Denmark and Sweden, and with Ms Zoe Kapetaki from Brussels on the EC approach).

In 2016, the PO considers to transfer the final remaining means from the re-granting item (about 3 MZCK) into the BF and to enable further bilateral activities to the CCS research community which is highly motivated in networking with the donor state institutions.

An **evaluation of bilateral cooperation within the EEA / Norwegian grants** has been launched by the Ministry of Finance in November 2015. The evaluation is carried out by an external contractor. An analysis is carried out via questionnaire survey and interviews with selected stakeholders. The results from the evaluation will be presented in the Czech Republic at the end of February 2016. All involved participants will be informed about the results. The returned feedback from donor state project partners (for all programmes) amounts to 80 %.

## 6.1. Complementary action

The Programme CZ08 budget includes a proportional allocation of 25 118 EUR (after reducing the programme total budget) for complementary action to strengthen cooperation between the relevant Czech bodies (the MoE and its subordinated organisations and environmental institutions) and its

counterparts in the donor states and in other beneficiary states implementing programmes focused on CCS.

With respect to the stage of projects implementation (launch in 2015), there were no complementary actions organised during the reporting period and the means remain available for a future proposal for utilization which shall be formulated in 2016, in relation to partial results and deliverables of the CCS projects.

## **7. Monitoring**

The implementation phase of projects started by January 2015, the first regular monitoring period (4-month cycle) reported in project interim reports was since the projects launch till 30 June 2015. However, due to technical obstacles related to parallel administration of substantial modifications of projects that were awarded additional grants in the IT system CEDR, the first monitoring reports were processed later than planned, in Autumn 2015. Consequently, the second monitoring reports (by October) are to be submitted in January 2016.

Despite this delay, the PO is well aware about the status of implementation of particular projects as the promoters can communicate with the PO via a communication platform in the CEDR IT system on every-day basis, consulting adjustments, setting questions or requesting advice.

Another tool of PO monitoring consists in on-site controls at projects according to the Monitoring plan (see The Monitoring plan 2016 in Annex 2) which is set and updated with respect to current risks or important issues in particular projects. The on-spot controls has been launched in 2015 with the first control at the 004 project (Masaryk University) on 4 November 2015 in Brno. The control team consisted of the leader (the PO representative) and by supporting experts (contracted AQE Co. auditors, specialists). The control was aimed at factual as well as financial matters. As a result, a control protocol was completed, no substantial findings identified. – The next three projects shall be on-spot monitored during the year 2016 – see Annex 2.

At programme level, regular contacts with the PP are maintained and one joint meeting with Promoters of selected projects were organized in February 2015.

The Steering Committee of the CZ08 Programme including the Programme partner (MoE) met three times in 2015 – on 1 April, 12 June and 2 November 2015.

## **8. Need for adjustments**

The Programme underwent significant financial modification in 2014 and consequently further adjustments followed in early 2015. - The supported projects did not utilize all the allocation of the open call, so the reallocation of 2 016 377 EUR from the CZ08 to the CZ09 programme was agreed by donors in October 2014. Consequently, the Memorandum of Understanding was modified (reallocation of the mentioned means between Programme areas 20 and 23) and related amendment of the PA was issued. After completion of the verification process in early 2015, further 880 873 EUR remained unallocated as the requested grants have been reduced due to state aid calculations, and one applicant withdrew from the grant. These funds were made available to the four supported projects via and

addressed call, announced in April 2015 (applying the 6.9 Art. of the Regulation, approved by the FMO). Three of four projects applied for additional grants and their projects were extended by additional activities. The process including subsequent administrative steps was finished in the 2<sup>nd</sup> half of 2015.

In late 2015, the FMO has approved request for prolongation of eligibility of management costs till 31 December 2017 (PA amended on 24 November 2015). – Requests for extension of implementation period till April 2017 from particular projects are expected in early 2016.

For the year 2016, the reallocation of the final rest remaining in the re-granting item (about 3 mil. CZK) to the Fund for bilateral relations is expected and shall be negotiated with the FMO.

On the project level, several modifications proceeded during 2015, most of them of a minor character (such as detailed budgeted items, merging or including new item in the budget, transfers between promoter's and partner's budget parts, administrative changes, etc.). As the additional grants to the three projects (003, 004, 005) were administered via the "amendment process" in the CEDR IT system, approval and implementation of additional activities /grants led to quite substantial modifications of the three mentioned projects. These changes were reflected in the implementation contracts, too.

## 9. Risk management

The main risk in the CZ08 programme consists in the time delay. The programme has been delayed at its start, thus the implementation period for research activities is very tight and the threat of non-achievement of all objectives is identified. Moreover, the effort for effective utilization of all re-granting funds via additional activities / results in the projects, which were approved in mid 2015 and started only in 3-4Q 2015, has put stress on this time risk.

The awaited decision of the Donors to allow an extension of the implementation period within the CZ08 Programme (from **24 November 2015**) reduced the time risk. It was agreed on, that in any exceptional case in the projects justifying the need, an extension of the period of the eligibility of expenditures to 30 April 2017 is possible, as allowed for under Article 7.14 of the Regulation. Such an extension has significantly increased the likelihood of achieving the project results and regular spending the granted funds. – Taking the signals from current project monitoring reports into account, the requests for prolongation of projects by several months (4-7) are to be awaited in early 2016.

Summarized, the most significant risks, which were monitored in 2015, included

- the time risk,
- non-fulfilment of the outcome and outputs indicators absorption capacity

The progress of implementation allows to re-assess the risks as follows:

- the time risk is slightly lower as the FMO approved extension of the eligibility till Apr 2017– however, the stress has increased due to additional activities,
- fulfilment of the outcome/output indicators seems not to be very threatened – the reported interim results in projects are very promising, and only the tense time deadlines can compromise the results (see the risk above)
- the lack of absorption capacity has been partly resolved by reallocation to the CZ09 programme and further by application of Art. 6:9 of the Regulation and organizing an addressed call to running projects for additional activities / grants. There is also a final plan for reallocation of the final balance (about 3 mil. CZK) from re-granting to the BF where the absorption capacity proved to be high

The specific PRG risk – i.e. the fact, that the projects contribute to quite different Outputs (raising awareness, research in capture, transport and storage of CCS) - is minimized as projects contributing proportionally to these Outputs had been supported. However, monitoring the outputs indicators is still more demanding, especially with respect to different budget allocations to particular Outputs.

## 10. Information and publicity

Regarding publicity, the Programme Operator, the Ministry of Finance, informs about the programme and activities connected to it on its web pages <http://www.eeagrants.cz>, specifically designed for the EEA and Norway Grants 2009-14. Information on the programme can be also found at web pages of the Programme Partner (Ministry of Environment) [http://www.mzp.cz/cz/financni\\_mechanismy\\_ehp\\_norska](http://www.mzp.cz/cz/financni_mechanismy_ehp_norska)

The Facebook pages are introduced as a less formal communication to those who prefer more familiar approach to the rather complicated scientific issue.

Each of projects operators, in line with the publicity rules, set up web pages for his project:

Preparation of a Research Pilot Project on CO<sub>2</sub> Geological Storage in the Czech Republic <http://www.geology.cz/repp-co2>

Carbon Capture & Storage - Sharing Knowledge and Experience <http://shake.sci.muni.cz/cs>

Research of high temperature CO<sub>2</sub> sorption from flue gas using carbonate loop <http://hitecarlo.vscht.cz/>

Study of CCS Pilot Technologies for Coal Fired Power Plants in the Czech Republic <http://czech-norway-pilotccs.cz/>

The launch conference of the Programme was held in the National technical library in Prague on 8 April 2015. The conference had about 100 participants, was opened by the Deputy Ambassador of the Embassy of Kingdom of Norway and the representatives of the PO and the PP. Among speakers there was also the representative of the Research Council of Norway and representatives of each of approved 4 projects.

On the project level, the 004 project CCS - Sharing Knowledge and Experience is to be highlighted - the lectures and expert workshops in order both to highlight the mitigation potential of the CCS technology and to mention the current world situation and actual objective obstacles on way to broader deploy and utilize the technology were organized. One of such workshops was held at the Ministry of the Environment in November 2015.

As the publicity measures foreseen on the level of the PO and the PP are concerned, some measures expected within the initial stages, from the launch of the Programme until the start of implementation of selected projects were implemented (web sites, launch conference, launch of the call, seminars for applicants, seminar for project promoters). Other measures, foreseen in later stages of the implementation of the Programme, as for example Programme information leaflets will be considered by the PO and Programme Partner in 2016/2017. The PO and the PP discussed this issue at the 5<sup>th</sup> meeting of the Steering Committee and the PO expects to get the information which measures will be ensured by the PP in early 2016.

## 11. Cross - cutting issues

### Environmental considerations

The Programme CZ08 itself is focused on protection of the environment by studying the possibilities of the CCS capture, transport and storage. Activities relating to the projects are implemented in compliance with the applicable legal and administrative standards of the European Union and the Czech Republic. The aim of CCS technology is to reduce the burden of emissions, which has a clearly positive environmental impact..

### Good governance

During programme implementation, including support and monitoring of individual projects, compliance with the principles of good governance is being taken into account. The grant awarding process continued by awarding additional grants to running projects and the procedure was highly transparent thanks to the operation of the CEDR IT system . The state aid issues were thoroughly analysed and reflected in all project documents. – In 2015, the on-spot monitoring visits were launched, as a tool of PO control feedback providing recommendations to quality improvement of project management.

### Economic sustainability

The projects focus on the area of exploration, research or educational/promo activities, which in themselves cannot generate future economic profit to finance their subsequent implementation. The successful completion shall raise awareness of CCS technology and thus the demand for information on this issue from the general and professional public. At the same time, analyses and technical surveys enable the necessary data to be gathered to enable the evaluation of the practical application of CCS technology in the Czech Republic. This creates an environment for the potential self-financing of projects through the economic assessment of the application of CCS technology or through new grant programmes to support its application. The implementation of projects will enable the maintenance or creation of new jobs at project promoters or suppliers of materials and services, which will have a positive impact on economic development at a national, regional and local level.

### Social sustainability

The implementation of individual projects assumes the involvement of various stakeholders, which necessarily entails constructive communication regarding the form and outcomes of the projects. Programme implementation may therefore indirectly also affect social dialogue between individual social actors. During project preparation/implementation, emphasis was/is put on cooperation at international level with subjects of Norway, which have extensive experience of using the technology in question, as well as to the other beneficiary countries implementing CCS programmes. This will deepen cooperation among the different entities not only at a national, but also at a European level.

### Gender equality

The participation in the programme respects fully the gender equality. The projects are focused on research where the common principles of gender equality are duly applied.

During the course of the programme preparation and its implementation, equal access is given to all its participants to apply their job skills and expertise, regardless of differences in gender, ethnicity or age. The basic premise for staff participation in the programme is therefore their professional experience in the area, regardless of their gender. In the individual project applications, applicants demonstrated how they had ensured equality between women and men involved in projects, in terms of the type of activities making up the project and its main objectives.

The programme does not focus on projects that directly support activities to improve equality between women and men in society. Despite this, the implementation of individual projects that take account of equal access will contribute to a gender-positive society.

The sustainability of results (either further research or introduction of results in the industry) depends on future funding. This cannot be guaranteed, however it is expected that further funds may be provided by the European research programmes or domestic funding.

## 12. Attachments to the Annual Programme Report

**Annex 1: Risk assessment of the programme**

**Annex 2: Monitoring plan 2016**

**Annex 3: List of projects for communication purposes or as examples of best practices**

### SIGNATURE:

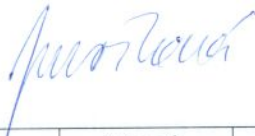
#### For Programme Operator

*I certify that I am duly authorised to sign this Annual programme report and that I have thoroughly reviewed the progress of the programme, reporting on outcomes and outputs, risk management provided in this report and the information are correct and accurate.*

				<i>Optional second signature</i>		
<b>Name</b>	Zuzana Kudelová			Martina Bečvářová		
<b>Position</b>	Head of the Department of International Relations			Head of the Monitoring Unit		
<b>Organisation</b>	Ministry of Finance of the Czech Republic			Ministry of Finance of the Czech Republic		
<b>Signature</b>						
<b>Date</b>	Day	Month	Year	Day	Month	Year
	09	02	2016	09	02	2016

#### For the National Focal Point

The National Focal Point certifies that the status of reporting of the programme described above is accurate.

				<i>Optional second signature</i>		
<b>Name</b>	JUDr. Ing. Lenka Jurošková, Ph.D					
<b>Position</b>	Deputy Minister of Finance					
<b>Organisation</b>	Ministry of Finance of the Czech Republic					
<b>Signature</b>						
<b>Date</b>	Day	Month	Year	Day	Month	Year
	12.	2.	2016			



Annex 1: Risk assessment of the programme

Programme	Type of objective <sup>1</sup>	Description of risk	Likelihood <sup>2</sup>	Consequence <sup>3</sup>	Mitigation planned/done
CZ08	Programme absorption capacity	Low interest at applicants, the applications may not cover both the programme Outcomes	low	high	Clear description of both Outputs in the Open Call, promotion and networking. The 4 supported projects cover proportionally both the Outcomes – the risk is no more relevant. The absorption capacity proved to be low, the funds were reallocated from CZ08 to CZ09.
	Legislation changes	The programme is not directly related to any current legislative measure, no one is in process, however, in the future some measures regarding the CCS are to be expected.	low	middle	Proper tracking changes in legislation on CCS, evaluation of their impact on CZ08.
	Time risk - delay in commitment and disbursement of funds	The delay of the programme launch led to delay at the start of projects. The research nature of the projects provides risk of ability to reach all outputs /indicators in time.	middle	high	All stakeholders involved shall speed the administrative processes support of projects /the procedures were speeden, the next addressed call for additional grants was processed via simple procedure (Art. 6.9, Reg.). The deadline for projects implementation was

<sup>1</sup> The risks should be categorised in one of 3 ways, depending on whether it poses a risk to the cohesion objective, the bilateral objective, or is more of an operational issue.

<sup>2</sup> Likelihood is described as Low, Middle or High according to its scoring gained in the risk analysis. (Low: 1-2, Middle:3-4, High:5)

<sup>3</sup> Impact is described as Low, Middle or High according to its scoring gained in the risk analysis. (Low: 1-2, Middle:3-4, High:5)

Programme	Type of objective <sup>1</sup>	Description of risk	Likelihood <sup>2</sup>	Consequence <sup>3</sup>	Mitigation planned/done
					prolonged till Apr 2017, particular requests for prolongation of projects shall be approved in 2016.
	Specific programme risk (risk identified in PP relating to PRG outcomes)	The content of projects in combination with the time pressure – the projects should contribute to two Outputs (CCS research and public awareness) . The research projects require longer implementation period which is not available.	low	high	No more relevant – the selected projects cover both Outcomes. / Well designed time schedule in the projects. Proper planning of additional activities.
	<b>Bilateral outcome(s):</b>	The research activities will require mutual expert cooperation between Czech and donor states institutions. – Three of four supported projects will be implemented in partnership with Norwegian partners.	middle	low	Support to international cooperation, availability of additional funds dedicated to bilateral relation via the fund for bilateral relations (NFB) and for complementary actions initiated by the programme partner (MoE)/Increasing the BF allocation for future activities in 2016 .
	<b>Operational issues:</b>	The Control system to be duly incorporated into the PO Manual. Particular processes shall be designed in relation to implementation needs.	low	high	The control system and management system are well designed and incorporated into the PO Manual. The Manual of the Programme Operator was issued on 13 March 2014./Observing the rules and control at on-spot

Programme	Type of objective <sup>1</sup>	Description of risk	Likelihood <sup>2</sup>	Consequence <sup>3</sup>	Mitigation planned/done
	Programme implementation set up	All the manuals and guidelines are elaborated and regularly checked and updated.	low	middle	monitoring visits. Check and update of manuals and guidelines.
	Reports and irregularities within programme	No irregularities have been reported.	low	high	Consistent verification of monitoring reports and on-the-spot controls.
	Programme audits/controls	The CZ08 underwent the AO audit in August 2014 – no findings identified, and in August 2015 the management costs were audited	middle	middle	Regular monitoring, on-the-spot visits and audits.
	Information system	The information and monitoring system CEDR is in service. Adjustments are ongoing.	middle	middle	Adjustments of the system are solved with the contractor. Breakdowns and failures will be minimized by intensive cooperation with the contractor.
	Management and control structures, programme management	The Control system to be duly incorporated into the PO Manual. Particular processes shall be designed in relation to implementation needs.	low	high	The control system and management system are well designed and incorporated into the PO Manual.

## Annex 2: Monitoring plan

Project no.	Name of the project	Planned date of on-site monitoring visit /review	Note
NF-CZ08-OV-1-003-2015	Study of pilot technologies for coal power plants in the CR	3 Q 2016	Promoter: ČVUT Praha Partners: ÚVJ Řež, a.s; SINTEF Energi AS (SINTEF Energy Research)
NF-CZ08-OV-1-005-2015	Research of high temperature CO <sub>2</sub> sorption from flue gas using carbonate loop	3Q 2016	Promoter: VŠCHT Partners: ČVUT Praha, ÚVJ Řež, a.s;
NF-CZ08-OV-1-006-2015	Preparation of a research Pilot Project on CO <sub>2</sub> Geological Storage in the Czech Republic (REPP-CO <sub>2</sub> )	4 Q 2016	Promoter: ČGS Partners: Centrum výzkumu Řež, s.r.o.; International Research Institute of Stavanger; Masarykova univerzita – Ústav fyziky Země, Miligal s.r.o; ÚVJ Řež, a.s; Vysoká škola báňská – Technická univerzita Ostrava.

### Annex 3: List of projects for communication purposes or as examples of best practices

Project no.	Name of the project	Note
NF-CZ08-OV-1-006-2015	Preparation of a research Pilot Project on CO2 Geological Storage in the Czech Republic (REPP-CO2)	<p><b>Output 1</b></p> <p>Promoter: ČGS</p> <p>Partners: Centrum výzkumu Řež, s.r.o.; International Research Institute of Stavanger; Masarykova univerzita –Ústav fyziky Země, Miligal s.r.o; ÚVJ Řež, a.s; Vysoká škola báňská – Technická univerzita Ostrava</p>
NF-CZ08-OV-1-004-2015	Carbon Capture & Storage – Sharing Knowledge and Experience	<p><b>Output 2</b></p> <p>Promoter: Masarykova univerzita v Brně</p> <p>Partner: Norges Teknikk - Naturvitenskapelige Universitet (NTNU)</p>