Horizon 2020

Call: H2020-LCE-2016-2017
(COMPETITIVE LOW-CARBON ENERGY)

Topic: LCE-30-2017

Type of action: RIA
(Research and Innovation action)

Proposal number: 763965

Proposal acronym: GTKW 5.4 EU CO2 Nuc.

Deadline Id: H2020-LCE-2017-RES-CCS-RIA
Table of contents

Section	*Title*	*Action*
1	General information	
2	Participants & contacts	
3	Budget	
4	Ethics	
5	Call-specific questions	

How to fill in the forms

The administrative forms must be filled in for each proposal using the templates available in the submission system. Some data fields in the administrative forms are pre-filled based on the previous steps in the submission wizard.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.**

1 - General information

Topic	LCE-30-2017
Call Identifier	H2020-LCE-2016-2017
Type of Action	RIA
Deadline Id	H2020-LCE-2017-RES-CCS-RIA

Acronym: GTKW 5.4 EU CO2 Nuc.

Proposal title*: geological CO2 storage within GTKW 5.4 EU CO2 Nuc - general plans are existing - but long term (1 Mio. yrs) thermodynamic calculation research is open, GTKW contains a safe nuclear repository research

Note that for technical reasons, the following characters are not accepted in the Proposal Title and will be removed: < > " &

Duration in months: *24*

Fixed keyword 1: *Carbon capture and sequestration* [Add]

Fixed keyword 2: *Geological engineering, geophysical engineering, mining, geotec* [Add] [Remove]

Free keywords: *GTKW, CO2 capture, CCS, Rocksalt, cavernes, CO2 use, CO2 storage, safe nuclear waste repository, Energy production 540 MWel, circulation system, cooling box, pipes, safe nuclear waste storage*

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.**

Abstract

>>> deep geological CO2 capture - unlike CCS in rocksalt

collect-facility for CO2, CO2 storage, CO2 use, CO2 circle

heat exchanger machine does 540 MWel for 4-5 hours/day

GTKW contains the safe nuclear waste repository for HLW

Deep Borehole Disposal of 2.547 Castor containers within:

a.) concrete pellets (retrievable) and b.) a rocksalt geology.

GTKW does up to 540 MWel for 4-5 hours per day ! There

is no CO2 emmissions - machine runs by geothermal heat

and nuclear waste heat. - It was only 12 years work to get there ...

This GTKW proposal includes GTKW research has free access

to DBHD-DE Technology as the Shaft-Boring-Technology SBT

that is usable to realize safe nuclear castor repository building.

GTKW = Geothermal heat, CO2 pressure, nuclear waste heat

> 540 MWel power for 4-5 hours per day in peak time

> rest-heat is used for greenhouse food production ...

GTKW can be used to store the night-current from the local

numerous wind-turbines. Facility GTKW design by architects.

low carbon Energy system to ensure mankinds Existence on earth.

It will be up to 30 Mio. EUR to get the GTKW Research ready

for building permits application. The full GTKW project has a

building time of 14 years and will cost app. 6 Mrd. EUR DE.

German government is on the way to collect the building money.

and that is all we know about GTKW yet ...

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We have to face the fact that Comsol Multiphysics Software for numeric physical and chemical calculation and visual simulation for the long term calculationes (min. 1 Mio. yrs DE gov. write) is very expensive. We will work on bringing it down from over 2,1 Mio. to a smaller invest. - For the moment the Comsol money is in Budget of Coordinator GmbH - We work to get that better ...

With all respect and responsibility required, best regards from Volker Goebel / Architect / Dipl.-Ing. - 12 year in GTKW now.

After building GTKW for 10 to 14 years - the GTKW earns the investment back within only 6 years ...

Remaining characters 2

Has this proposal (or a very similar one) been submitted in the past 2 years in response to a call for proposals under Horizon 2020 or any other EU programme(s)? ○ Yes ◉ No

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Declarations

1) The coordinator declares to have the explicit consent of all applicants on their participation and on the content of this proposal.	☒
2) The information contained in this proposal is correct and complete.	☒
3) This proposal complies with ethical principles (including the highest standards of research integrity — as set out, for instance, in the European Code of Conduct for Research Integrity — and including, in particular, avoiding fabrication, falsification, plagiarism or other research misconduct).	☒

4) The coordinator confirms:

- to have carried out the self-check of the financial capacity of the organisation on http://ec.europa.eu/research/participants/portal/desktop/en/organisations/lfv.html or to be covered by a financial viability check in an EU project for the last closed financial year. Where the result was "weak" or "insufficient", the coordinator confirms being aware of the measures that may be imposed in accordance with the H2020 Grants Manual (Chapter on Financial capacity check); or	○
- is exempt from the financial capacity check being a public body including international organisations, higher or secondary education establishment or a legal entity, whose viability is guaranteed by a Member State or associated country, as defined in the H2020 Grants Manual (Chapter on Financial capacity check); or	○
- as sole participant in the proposal is exempt from the financial capacity check.	◉

5) The coordinator hereby declares that each applicant has confirmed:

- they are fully eligible in accordance with the criteria set out in the specific call for proposals; and	☒
- they have the financial and operational capacity to carry out the proposed action.	☒

The coordinator is only responsible for the correctness of the information relating to his/her own organisation. Each applicant remains responsible for the correctness of the information related to him/her and declared above. Where the proposal to be retained for EU funding, the coordinator and each beneficiary applicant will be required to present a formal declaration in this respect.

According to Article 131 of the Financial Regulation of 25 October 2012 on the financial rules applicable to the general budget of the Union (Official Journal L 298 of 26.10.2012, p. 1) and Article 145 of its Rules of Application (Official Journal L 362, 31.12.2012, p.1) applicants found guilty of misrepresentation may be subject to administrative and financial penalties under certain conditions.

Personal data protection

The assessment of your grant application will involve the collection and processing of personal data (such as your name, address and CV), which will be performed pursuant to Regulation (EC) No 45/2001 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data. Unless indicated otherwise, your replies to the questions in this form and any personal data requested are required to assess your grant application in accordance with the specifications of the call for proposals and will be processed solely for that purpose. Details concerning the purposes and means of the processing of your personal data as well as information on how to exercise your rights are available in the privacy statement. Applicants may lodge a complaint about the processing of their personal data with the European Data Protection Supervisor at any time.

Your personal data may be registered in the Early Detection and Exclusion system of the European Commission (EDES), the new system established by the Commission to reinforce the protection of the Union's financial interests and to ensure sound financial management, in accordance with the provisions of articles 105a and 108 of the revised EU Financial Regulation (FR) (Regulation (EU, EURATOM) 2015/1929 of the European Parliament and of the Council of 28 October 2015 amending Regulation (EU, EURATOM) No 966/2012) and articles 143 - 144 of the corresponding Rules of Application (RAP) (COMMISSION DELEGATED REGULATION (EU) 2015/2462 of 30 October 2015 amending Delegated Regulation (EU) No 1268/2012) for more information see the Privacy statement for the EDES Database).

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.**

List of participants

#	Participant Legal Name	Country
1	Ingenieur- und Architekturbüro Goebel GmbH	Switzerland
2	TECHNISCHE UNIVERSITAET BERGAKADEMIE FREIBERG	Germany
3	Amphos 21 Consulting S.L.	Spain
4	Comsol Multiphysics GmbH	Germany
5	GESELLSCHAFT FUR ANLAGEN UND REAKTORSICHERHEIT (GRS) MBH	Germany
6	KARLSRUHER INSTITUT FUER TECHNOLOGIE	Germany
7	BUNDESANSTALT FUER GEOWISSENSCHAFTEN UND ROHSTOFFE	Germany
8	TECHNISCHE UNIVERSITAET CLAUSTHAL	Germany
9	Herrenknecht Vertical GmbH	Germany
10	HERRENKNECHT AG	Germany
11	LANDESAMT FUER UMWELT, NATURSCHUTZ UND GEOLOGIE MECKLENBURG-VORPOMMERN	Germany
12	DBE TECHNOLOGY GmbH	Germany
13	GNS MBH GESELLSCHAFT FUR NUMERISCHE SIMULATION MBH	Germany
14	EIDGENOSSISCHES NUKLEARSICHERHEINSPEKTORAT ENSI	Switzerland
15	Deutsche Gesellschaft zum Bau und Betrieb von Endlagern für Abfallstoffe mbH (DBE)	Germany
16	NATIONALE GENOSSENSCHAFT FUER DIE LAGERUNG RADIOAKTIVER ABFAELLE	Switzerland
17	AXPO POWER AG	Switzerland
18	EON Anlagenservice	Germany
19	ENBW ENERGIE BADEN-WURTTEMBERG AG	Germany
20	Paul Scherrer Institut	Switzerland
21	RWE POWER AG	Germany

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#	Participant Legal Name	Country
22	RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN	Germany
23	Fachhochschule Dortmund	Germany
24	OEKO-INSTITUT E.V. - INSTITUT FUER ANGEWANDTE OEKOLOGIE	Germany
25	LINDE GAS GMBH	Austria
26	IHK zu Schwerin	Germany
27	Vattenfall Europe Innovation GmbH	Germany
28	BUNDESANSTALT FUER MATERIALFORSCHUNG UND -PRUEFUNG	Germany
29	KBB UNDERGROUND TECHNOLOGIES	Germany
30	GEOSTOCK SAS	France
31	BUNDESAMT FUER STRAHLENSCHUTZ	Germany
32	K+S Kali GmbH	Germany
33	KUKA ROBOTER GMBH	Germany
34	Institut für Gebirgsmechanik GmbH	Germany
35	AGENCE NATIONALE POUR LA GESTION DES DECHETS RADIOACTIFS	France
36	BUNDESVERBAND GEOTHERMIE EV	Germany
37	GEOTHERMIE NEUBRANDENBURG GMBH	Germany
38	DEUTSCHES INSTITUT FUR WIRTSCHAFTSFORSCHUNG DIW (INSTITUT FUR KONJUNKTURFORSCHUNG) EV	Germany
39	SIEMENS AKTIENGESELLSCHAFT	Germany
40	POSIVA OY	Finland
41	HANSESTADT ROSTOCK	Germany
42	TECHNISCHE UNIVERSITAET DRESDEN	Germany
43	MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN EV	Germany
44	HOCHSCHULE WISMAR	Germany

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45	SOCIETA GESTIONE IMPIANTI NUCLEARI PER AZIONI	Italy
46	Consulimus GmbH	Switzerland
47	Aachen Institute for Nuclear Training GmbH	Germany
48	INTERNATIONAL ATOMIC ENERGY AGENCY	Austria

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Ingenieur- und Architekturbüro Goebel Gm**

2 - Administrative data of participating organisations

PIC	***Legal name***
916423506	*Ingenieur- und Architekturbüro Goebel GmbH*

Short name: Ingenieur- und Architekturbüro Goebel GmbH

Address of the organisation

Street Gersauerstr. 85

Town Brunnen

Postcode 6440

Country Switzerland

Webpage www.ing-goebel.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... unknown
Non-profit ..... unknown
International organisation ..... unknown
International organisation of European interest ..... unknown
Secondary or Higher education establishment ..... unknown
Research organisation ..... unknown

Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown
SME self-assessment ..... unknown
SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Ingenieur- und Architekturbüro Goebel Gm**

Department(s) carrying out the proposed work

Department 1

Department name: Arch.+Eng. / Geot., CO2 capt.&use, safe nuclear repository COMSOL ☐ not applicable

☒ Same as organisation address

Street: Gersauerstr. 85

Town: Brunnen

Postcode: 6440

Country: Switzerland

Dependencies with other proposal participants

Character of dependence	***Participant***	

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Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **Ingenieur- und Architekturbüro Goebel Gm**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. | Sex: (•) Male ( ) Female

First name: **Dipl.-Ing. Volker** | Last name: **GOEBEL**

E-Mail: **info@ing-goebel.de**

Position in org.: Main GTKW scientist for 12 yrs - ATT. BUDGET includes ! COMSOL

Department: Ingenieur- und Architekturbüro Goebel GmbH ☒ Same as organisation

☒ Same as organisation address

Street: Gersauerstr. 85

Town: Brunnen | Post code: 6440

Country: Switzerland

Website: http://www.ing-goebel.de

Phone 1: +41 820 06 58 | Phone 2: +41 79 424 61 48 | Fax: +49 151 588 26 999

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Dipl.-Ing. Erich	Heymer	statics@ing-goebel.de	
Dipl.-Ing. Lutz	Hillebrand	info@ing-goebel.ch	

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **TU BAF**

PIC	***Legal name***
999583934	*TECHNISCHE UNIVERSITAET BERGAKADEMIE FREIBERG*

Short name: TU BAF

Address of the organisation

Street AKADEMIESTRASSE 6

Town FREIBERG

Postcode 09599

Country Germany

Webpage http://tu-freiberg.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... yes

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 27/04/2016 - no

SME self-assessment ..... 27/04/2016 - no

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **TU BAF**

Department(s) carrying out the proposed work

Department 1

Department name: Thermodyn., Deep Drilling Rotary & Shaft Boring, Closure, COMSOL ☐ not applicable

☒ Same as organisation address

Street: AKADEMIESTRASSE 6

Town: FREIBERG

Postcode: 09599

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **TU BAF**

Person in charge of the proposal

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Title: Dr. Sex: (•) Male ( ) Female

First name: **Prof. Dr.-Ing. Matthias** Last name: **Reich**

E-Mail: **reich@mailserver.tu-freiberg.de**

Position in org.: Prof. Dr.-Ing. for Deep Drilling / Advisor to german nuc. commis.

Department: TECHNISCHE UNIVERSITAET BERGAKADEMIE FREIBERG ☒ Same as organisation

☒ Same as organisation address

Street: AKADEMIESTRASSE 6

Town: FREIBERG Post code: 09599

Country: Germany

Website: http://tu-freiberg.de/fakult3/tbt/bsb/prof-reich

Phone 1: +49 373139-2491 Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Prof. Dr.-Ing. Christian	Hasse	christian.hasse@iec.tu-freiberg.de	+493731394820
Dr. Martin	Hofmann	martin.hofmann@mabb.tu-freiberg.de	
Dr. Markus	Reinmöller	markus.reinmoeller@iec.tu-freiberg.de	
Dipl. Ing. Sebastian	Weiss	sebastian.weiss@ttd.tu-freiberg.de	
Dipl-Ing. Doreen	Bayer	doreen.bayer@ttd.tu-freiberg.de	

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Amphos 21 Consulting S.L.**

PIC	***Legal name***
920826142	*Amphos 21 Consulting S.L.*

Short name: Amphos 21 Consulting S.L.

Address of the organisation

Street Passeig Garcia Faria 49

Town Barcelona

Postcode 08019

Country Spain

Webpage www.amphos21.com

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... unknown

Non-profit ..... unknown

International organisation ..... unknown

International organisation of European interest ..... unknown

Secondary or Higher education establishment ..... unknown

Research organisation ..... unknown

Legal person ..... yes

Enterprise Data

SME self-declared status..... 31/12/2014 - yes

SME self-assessment ..... 31/12/2014 - yes

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is an SME (small- and medium-sized enterprise) for the call.

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Amphos 21 Consulting S.L.**

Department(s) carrying out the proposed work

Department 1

Department name: Numeric Simul. of heat, CO2 flow, corrosion nuc. container COMSOL ☐ not applicable

☒ Same as organisation address

Street: Passeig Garcia Faria 49

Town: Barcelona

Postcode: 08019

Country: Spain

Dependencies with other proposal participants

Character of dependence	***Participant***	

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Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **Amphos 21 Consulting S.L.**

Person in charge of the proposal

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Title: Dr. | Sex: (•) Male ( ) Female

First name: **Dr. Jorge** | Last name: **Molinero**

E-Mail: **jorge.molinero@amphos21.com**

Position in org.: Partner / best in numeric simulation (physics & chemistry) COMSOL

Department: Amphos 21 Consulting S.L. ☒ Same as organisation

☒ Same as organisation address

Street: Passeig Garcia Faria 49

Town: Barcelona | Post code: 08019

Country: Spain

Website: http://www.amphos21.com/vistas/

Phone 1: +xxx xxxxxxxxx | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Dr. Lara	Duro	lara.duro@amphos21.com	

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Comsol Multiphysics GmbH**

PIC	***Legal name***
916176835	*Comsol Multiphysics GmbH*

Short name: Comsol Multiphysics GmbH

Address of the organisation

Street Robert-Gernhardt-Platz 1

Town Göttingen

Postcode 37073

Country Germany

Webpage www.comsol.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body	unknown
Non-profit	unknown
International organisation	unknown
International organisation of European interest	unknown
Secondary or Higher education establishment	unknown
Research organisation	unknown
Legal person	yes

Enterprise Data

SME self-declared status unknown

SME self-assessment unknown

SME validation sme unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Comsol Multiphysics GmbH**

Department(s) carrying out the proposed work

Department 1

Department name: COMSO provider for GTKW Teams, Support / People & Modules ☐ not applicable

☒ Same as organisation address

Street: Robert-Gernhardt-Platz 1

Town: Göttingen

Postcode: 37073

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

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Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **Comsol Multiphysics GmbH**

Person in charge of the proposal

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Title: Dr. | Sex: ○ Male ◉ Female

First name: **Dr. Melanie** | Last name: **Pfaffe**

E-Mail: **melanie@comsol.com**

Position in org.: Sales - Comsol provides Software licences and 24 month support

Department: Comsol Multiphysics GmbH ☒ Same as organisation

☒ Same as organisation address

Street: Robert-Gernhardt-Platz 1

Town: Göttingen | Post code: 37073

Country: Germany

Website: https://www.comsol.de/products/specifications/cad/

Phone 1: +49 55199721-0 | Phone 2: +xxx xxxxxxxxx | Fax: +49 55199721-29

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Dr. Phillip	Oberdorfer	phillip.oberdorfer@comsol.de	

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **GESELLSCHAFT FUR ANLAGEN UND REA**

PIC	***Legal name***
999460162	*GESELLSCHAFT FUR ANLAGEN UND REAKTORSICHERHEIT (GRS) MBH*

Short name: GESELLSCHAFT FUR ANLAGEN UND REAKTORSICHERHEIT (GRS) MBH

Address of the organisation

Street SCHWERTNERGASSE 1

Town KOLN

Postcode 50667

Country Germany

Webpage http://www.grs.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Legal person ..... yes

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

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Department(s) carrying out the proposed work

Department 1

Department name: nuclear safety of stations & repos./ Radiation on Rocksalt lab.

☐ not applicable

☒ Same as organisation address

Street: SCHWERTNERGASSE 1

Town: KOLN

Postcode: 50667

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

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Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **GESELLSCHAFT FUR ANLAGEN UND REA**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Dr. Guido** Last name: **Bracke**

E-Mail: **guido.bracke@grs.de**

Position in org.: Emloyee, did DBD expertise f. germ. governm. comm., Director GTKW

Department: GESELLSCHAFT FUR ANLAGEN UND REAKTORSICHERHEIT (GRS) MBH ☒ Same as organisation

☒ Same as organisation address

Street: SCHWERTNERGASSE 1

Town: KOLN Post code: 50667

Country: Germany

Website: https://www.grs.de/

Phone 1: +xxx xxxxxxxxx Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Dr. Joerg	Möning	joerg.moenig@grs.de	

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **KIT**

PIC	***Legal name***
990797674	*KARLSRUHER INSTITUT FUER TECHNOLOGIE*

Short name: KIT

Address of the organisation

Street KAISERSTRASSE 12

Town KARLSRUHE

Postcode 76131

Country Germany

Webpage www.kit.edu

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... yes

Research organisation ..... yes

Legal person ..... yes

Enterprise Data

SME self-declared status..... 01/10/2009 - no

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **KIT**

Department(s) carrying out the proposed work

Department 1

Department name: Physics and Ethics in nuclear and CO2 use / GTKW Director ☐ not applicable

☒ Same as organisation address

Street: KAISERSTRASSE 12

Town: KARLSRUHE

Postcode: 76131

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **KIT**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Prof. Dr. Armin** Last name: **Grunwald**

E-Mail: **armin.grunwald@kit.edu**

Position in org.: Professor Dr. rer. nat - Ethics and Technology

Department: KARLSRUHER INSTITUT FUER TECHNOLOGIE ☒ Same as organisation

☒ Same as organisation address

Street: KAISERSTRASSE 12

Town: KARLSRUHE Post code: 76131

Country: Germany

Website: https://www.kit.edu/

Phone 1: +xxx xxxxxxxxx Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Dr. Peter	Hocke	peter.hocke@kit.edu	
Frank	Schilling	frank.schilling@kit.edu	
Dr. Joachim	Knebel	joachim.knebel@kit.edu	
Prof. Dr. Miranda	Schreurs	miranda.schreurs@fu-berlin.de	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **BGR**

PIC	***Legal name***
999429413	*BUNDESANSTALT FUER GEOWISSENSCHAFTEN UND ROHSTOFFE*

Short name: BGR

Address of the organisation

Street Stilleweg 2

Town HANNOVER

Postcode 30655

Country Germany

Webpage www.bgr.bund.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... yes

Legal person ..... yes

Enterprise Data

SME self-declared status..... 01/12/1958 - no

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **BGR**

Department(s) carrying out the proposed work

Department 1

Department name: CO2 research / Rocksalt research / Comsol required ?

☐ not applicable

☒ Same as organisation address

Street: Stilleweg 2

Town: HANNOVER

Postcode: 30655

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **BGR**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. Sex: (•) Male ( ) Female

First name **Dipl.-Ing. Volker** Last name **Goebel**

E-Mail **drafts@ing-goebel.de**

Position in org.: CO2 capture and use / Dr. Franz May - Dr. Johannes Peter Gerling

Department: BUNDESANSTALT FUER GEOWISSENSCHAFTEN UND ROHSTOFFE ☒ Same as organisation

☒ Same as organisation address

Street: Stilleweg 2

Town: HANNOVER Post code: 30655

Country: Germany

Website: http://www.bgr.bund.de/DE/Home/homepage_node.html

Phone 1: Phone 2: +41 418200658 Fax: +xxx xxxxxxxxx

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Dr. Franz	May	franz.may@bgr.de	
Dr. Johannes Peter	Gerling	johannespeter.gerling@bgr.de	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **TUC**

PIC	***Legal name***
999865913	*TECHNISCHE UNIVERSITAET CLAUSTHAL*

Short name: TUC

Address of the organisation

Street ADOLPH-ROEMER-STRASSE 2A

Town CLAUSTHAL-ZELLERFELD

Postcode 38678

Country Germany

Webpage www.tu-clausthal.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... yes

Research organisation ..... yes

Legal person ..... yes

Enterprise Data

SME self-declared status..... 01/01/1900 - no

SME self-assessment ..... unknown

SME validation sme ..... 01/01/1900 - no

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **TUC**

Department(s) carrying out the proposed work

Department 1

Department name: Institute for nuclear repository systems - drilling UNI - Comsol?

☐ not applicable

☒ Same as organisation address

Street: ADOLPH-ROEMER-STRASSE 2A

Town: CLAUSTHAL-ZELLERFELD

Postcode: 38678

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **TUC**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. | Sex: (•) Male ( ) Female

First name: **Prof. Dr.-Ing. Klaus** | Last name: **Röhlig**

E-Mail: **klaus.roehlig@tu-clausthal.de**

Position in org.: Institure for nuc. repos. systems / Casting Magnetit & Deep Drill

Department: TECHNISCHE UNIVERSITAET CLAUSTHAL ☒ Same as organisation

☒ Same as organisation address

Street: ADOLPH-ROEMER-STRASSE 2A

Town: CLAUSTHAL-ZELLERFELD | Post code: 38678

Country: Germany

Website: http://www.tu-clausthal.de/

Phone 1: +xxx xxxxxxxxx | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **HVG**

PIC	***Legal name***
928671211	*Herrenknecht Vertical GmbH*

Short name: HVG

Address of the organisation

Street Im Heidenwinkel 5

Town Schwanau

Postcode 77963

Country Germany

Webpage www.herrenknecht-vertical.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no
Non-profit ..... no
International organisation ..... no
International organisation of European interest ..... no
Secondary or Higher education establishment ..... no
Research organisation ..... no
Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown
SME self-assessment ..... unknown
SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **HVG**

Department(s) carrying out the proposed work

Department 1

Department name: Science and research in deepest shaft boring technolgies ☐ not applicable

☒ Same as organisation address

Street: Im Heidenwinkel 5

Town: Schwanau

Postcode: 77963

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **HVG**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. Sex: (•) Male ( ) Female

First name: **Patrik** Last name: **Rennkamp**

E-Mail: **rennkamp.patrick@herrenknecht.de**

Position in org.: Shaft Boring Technology SBM Diameter 12 Meter

Department: Herrenknecht Vertical GmbH ☒ Same as organisation

☒ Same as organisation address

Street: Im Heidenwinkel 5

Town: Schwanau Post code: 77963

Country: Germany

Website: https://www.herrenknecht.com/de/produkte/kernprodukte/mining/shaf

Phone 1: +49 7824302-9920 Phone 2: *+xxx xxxxxxxxx* Fax: *+xxx xxxxxxxxx*

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **HERRENKNECHT AG**

PIC	***Legal name***
985992488	*HERRENKNECHT AG*

Short name: HERRENKNECHT AG

Address of the organisation

Street SCHLEHENWEG 2

Town SCHWANAU ALLMANNSWEIER

Postcode 77963

Country Germany

Webpage www.herrenknecht.com

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 27/01/1978 - no

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **HERRENKNECHT AG**

Department(s) carrying out the proposed work

Department 1

Department name: Research and Innovation on full diameter cut drilling technologys ☐ not applicable

☒ Same as organisation address

Street: SCHLEHENWEG 2

Town: SCHWANAU ALLMANNSWEIER

Postcode: 77963

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **HERRENKNECHT AG**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Dr. Thomas** Last name: **Edelmann**

E-Mail: **edelmann.thomas@herrenknecht.de**

Position in org.: Research and Innovation / Shaft Boring Technology

Department: HERRENKNECHT AG ☒ Same as organisation

☒ Same as organisation address

Street: SCHLEHENWEG 2

Town: SCHWANAU ALLMANNSWEIER Post code: 77963

Country: Germany

Website: https://www.herrenknecht.com/de/home.html

Phone 1: Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

Other contact persons

First Name	*Last Name*	*E-mail*	*Phone*
Jens	Ischebeck	ischebeck.jens@herrenknecht.de	
Patrik	Rennkamp	rennkamp.patrick@herrenknecht.com	+49 7824302-9920

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **LANDESAMT FUER UMWELT, NATURSCH**

PIC	***Legal name***
919805993	*LANDESAMT FUER UMWELT, NATURSCHUTZ UND GEOLOGIE MECKLENBURG-VORPOMMERN*

Short name: LANDESAMT FUER UMWELT, NATURSCHUTZ UND GEOLOGIE MECKLENBURG-VORPOMMERN

Street GOLDBERGER STRASSE 12

Town GUESTROW

Postcode 18273

Country Germany

Webpage www.lung.mv-regierung.de/

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **LANDESAMT FUER UMWELT, NATURSCH**

Department(s) carrying out the proposed work

Department 1

Department name: Authority of Nature / Air, Water, Soil / + Deep Geology dept. M-V ☐ not applicable

☒ Same as organisation address

Street: GOLDBERGER STRASSE 12

Town: GUESTROW

Postcode: 18273

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **LANDESAMT FUER UMWELT, NATURSCH**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. | Sex: (•) Male ( ) Female

First name: **Dr. Karsten** | Last name: **Obst**

E-Mail: **karsten.obst@lung.mv-regierung.de**

Position in org.: Geologist in Authority Department of MV / Air, water, soil Permit

Department: LANDESAMT FUER UMWELT, NATURSCHUTZ UND GEOLOGIE MECKLE ☒ Same as organisation

☒ Same as organisation address

Street: GOLDBERGER STRASSE 12

Town: GUESTROW | Post code: 18273

Country: Germany

Website: http://www.lung.mv-regierung.de/insite/cms/umwelt/geologie.htm

Phone 1: +49 3843777360 | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **DBE TEC**

PIC	***Legal name***
996845042	*DBE TECHNOLOGY GmbH*

Short name: DBE TEC

Address of the organisation

Street ESCHENSTRASSE 55

Town PEINE

Postcode 31224

Country Germany

Webpage http://www.dbetec.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 08/01/2009 - no

SME self-assessment ..... unknown

SME validation sme ..... 08/01/2009 - no

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **DBE TEC**

Department(s) carrying out the proposed work

Department 1

Department name: Nuclear Repository Building / the official address in Germany !?

☐ not applicable

☒ Same as organisation address

Street: ESCHENSTRASSE 55

Town: PEINE

Postcode: 31224

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **DBE TEC**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Dr. Jürgen** Last name: **Krone**

E-Mail: **krone@dbe.de**

Position in org.: CEO - Doctor in professional DBE GmbH failure over 40 years

Department: DBE TECHNOLOGY GmbH ☒ Same as organisation

☒ Same as organisation address

Street: ESCHENSTRASSE 55

Town: PEINE Post code: 31224

Country: Germany

Website: https://www.dbe-technology.de/index.php?id=3

Phone 1: Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **GNS**

PIC	***Legal name***
935079225	*GNS MBH GESELLSCHAFT FUR NUMERISCHE SIMULATION MBH*

Short name: GNS

Address of the organisation

Street Am Gaußberg 2

Town Braunschweig

Postcode 38114

Country Germany

Webpage www.gns-mbh.com

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 25/11/2014 - yes

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **GNS**

Department(s) carrying out the proposed work

Department 1

Department name: Research and Development in repository containers CASTORs ☐ not applicable

☒ Same as organisation address

Street: Am Gaußberg 2

Town: Braunschweig

Postcode: 38114

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **GNS**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. | Sex: (•) Male ( ) Female

First name: **Dr. Hannes** | Last name: **Wimmer**

E-Mail: **hannes.wimmer@gns.de**

Position in org.: CEO - will write when Castor-X is undercritical in full corrosion

Department: GNS MBH GESELLSCHAFT FUR NUMERISCHE SIMULATION MBH ☒ Same as organisation

☒ Same as organisation address

Street: Am Gaußberg 2

Town: Braunschweig | Post code: 38114

Country: Germany

Website: http://www.gns.de/

Phone 1: | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **EIDGENOSSISCHES NUKLEARSICHERHEI**

PIC	***Legal name***
997829204	*EIDGENOSSISCHES NUKLEARSICHERHEINSPEKTORAT ENSI*

Short name: EIDGENOSSISCHES NUKLEARSICHERHEINSPEKTORAT ENSI

Address of the organisation

Street INDUSTRIESTRASSE 19

Town BRUGG

Postcode 5200

Country Switzerland

Webpage www.ensi.ch

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 28/10/2008 - no

SME self-assessment ..... unknown

SME validation sme ..... 28/10/2008 - no

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **EIDGENOSSISCHES NUKLEARSICHERHEI**

Department(s) carrying out the proposed work

Department 1

Department name: Nuclear Safety Institute CH / Reviewers within GTKW 5.4 research ☐ not applicable

☒ Same as organisation address

Street: INDUSTRIESTRASSE 19

Town: BRUGG

Postcode: 5200

Country: Switzerland

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **EIDGENOSSISCHES NUKLEARSICHERHEI**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. | Sex: (•) Male ( ) Female

First name: **Dr. Hans** | Last name: **Wanner**

E-Mail: **hans.wanner@ensi.ch**

Position in org.: CEO - Independet Reviewer of GTKW 5.4 Research for DE CH

Department: EIDGENOSSISCHES NUKLEARSICHERHEINSPEKTORAT ENSI ☒ Same as organisation

☒ Same as organisation address

Street: INDUSTRIESTRASSE 19

Town: BRUGG | Post code: 5200

Country: Switzerland

Website: https://www.ensi.ch/de/

Phone 1: | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Dr. Michael	Wieser	michael.wieser@ensi.ch	
Dr. phil.-nat. Reiner	Mailänder	reiner.mailaender@ensi.ch	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **DBE GmbH**

PIC	***Legal name***
919206242	*Deutsche Gesellschaft zum Bau und Betrieb von Endlagern für Abfallstoffe mbH (DBE)*

Short name: DBE GmbH

Address of the organisation

Street Eschenstrasse 55

Town Peine

Postcode 31224

Country Germany

Webpage www.dbe.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... unknown

Non-profit ..... unknown

International organisation ..... unknown

International organisation of European interest ..... unknown

Secondary or Higher education establishment ..... unknown

Research organisation ..... unknown

Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **DBE GmbH**

Department(s) carrying out the proposed work

Department 1

Department name: Nuclear repository building / Konrad, Gorleben and other failure ☐ not applicable

☒ Same as organisation address

Street: Eschenstrasse 55

Town: Peine

Postcode: 31224

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **DBE GmbH**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr.

Sex: (•) Male ( ) Female

First name: **Dr. Jürgen**

Last name: **Krone**

E-Mail: **info@dbe.de**

Position in org.: CEO

Department: Deutsche Gesellschaft zum Bau und Betrieb von Endlagern für Abfal

☒ Same as organisation

☒ Same as organisation address

Street: Eschenstrasse 55

Town: Peine

Post code: 31224

Country: Germany

Website: http://www.dbe.de

Phone 1: +xxx xxxxxxxxx

Phone 2: +xxx xxxxxxxxx

Fax: +xxx xxxxxxxxx

Other contact persons

First Name	*Last Name*	*E-mail*	*Phone*
Dr.-Ing. Wilhelm	Bolligerfehr	bollingerfehr@dbe.de	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **NAGRA**

PIC	***Legal name***
999697618	*NATIONALE GENOSSENSCHAFT FUER DIE LAGERUNG RADIOAKTIVER ABFAELLE*

Short name: NAGRA

Address of the organisation

Street Hardstrasse 73

Town WETTINGEN

Postcode 5430

Country Switzerland

Webpage http://www.nagra.ch

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 17/06/2008 - yes

SME self-assessment ..... unknown

SME validation sme ..... 17/06/2008 - yes

Based on the above details of the Beneficiary Registry the organisation is an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **NAGRA**

Department(s) carrying out the proposed work

Department 1

Department name: Nuclear repository beginners / 90 clay in -700 m is them enough ☐ not applicable

☒ Same as organisation address

Street: Hardstrasse 73

Town: WETTINGEN

Postcode: 5430

Country: Switzerland

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **NAGRA**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Dr. Thomas** Last name: **Ernst**

E-Mail: **thomas.ernst@nagra.ch**

Position in org.: CEO - doctor in chemistry - leads Sachplan CH / big national fail

Department: NATIONALE GENOSSENSCHAFT FUER DIE LAGERUNG RADIOAKTIVER ☒ Same as organisation

☒ Same as organisation address

Street: Hardstrasse 73

Town: WETTINGEN Post code: 5430

Country: Switzerland

Website: http://www.nagra.ch/de

Phone 1: Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

Other contact persons

First Name	*Last Name*	*E-mail*	*Phone*
Reto	Beutler	reto.beutler@nagra.ch	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **AXPO POWER AG**

PIC	***Legal name***
952329220	*AXPO POWER AG*

Short name: AXPO POWER AG

Address of the organisation

Street PARKSTRASSE 23

Town BADEN

Postcode 5400

Country Switzerland

Webpage www.axpo.com

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 30/10/2012 - no

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **AXPO POWER AG**

Department(s) carrying out the proposed work

Department 1

Department name: Axpo nuclear energy department / knowledge of high level waste ☐ not applicable

☒ Same as organisation address

Street: PARKSTRASSE 23

Town: BADEN

Postcode: 5400

Country: Switzerland

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **AXPO POWER AG**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Andrew** Last name: **Walo**

E-Mail: **andrew.walo@axpo.com**

Position in org.: CEO - he is lawyer by Doctor

Department: AXPO POWER AG ☒ Same as organisation

☒ Same as organisation address

Street: PARKSTRASSE 23

Town: BADEN Post code: 5400

Country: Switzerland

Website: http://www.axpo.com/axpo/ch/de/home.html

Phone 1: Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

Other contact persons

First Name	*Last Name*	*E-mail*	*Phone*
Rainer	Meier	rainer.meier@axpo.com	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **E.ON Anlagenservice GmbH**

PIC	***Legal name***
928625039	*EON Anlagenservice*

Short name: E.ON Anlagenservice GmbH

Address of the organisation

Street Bergmannsglückstr. 41-43

Town Gelsenkirchen

Postcode 45896

Country Germany

Webpage www.eon-anlagenservice.com

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 16/04/2015 - no

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **E.ON Anlagenservice GmbH**

Department(s) carrying out the proposed work

Department 1

Department name: Nuclear Facility Service / E.ON got knowledge in high level waste ☐ not applicable

☒ Same as organisation address

Street: Bergmannsglückstr. 41-43

Town: Gelsenkirchen

Postcode: 45896

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **E.ON Anlagenservice GmbH**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mrs

Sex: ○ Male ◉ Female

First name: **Almut**

Last name: **Zyweck**

E-Mail: **almut.zyweck@eon.com**

Position in org.: Press speaker / her company owns knowledge of XL high level waste

Department: EON Anlagenservice ☒ Same as organisation

☒ Same as organisation address

Street: Bergmannsglückstr. 41-43

Town: Gelsenkirchen

Post code: 45896

Country: Germany

Website: http://www.eon.com/de.html

Phone 1:

Phone 2: +xxx xxxxxxxxx

Fax: +xxx xxxxxxxxx

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Dr.-Ing. Bernhard	Fischer	bernhard.fischer@eon.com	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **EnBW**

PIC	***Legal name***
993419972	*ENBW ENERGIE BADEN-WURTTEMBERG AG*

Short name: EnBW

Address of the organisation

Street DURLACHER ALLEE 93

Town KARLSRUHE

Postcode 76131

Country Germany

Webpage www.enbw.com

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 22/10/1997 - no

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **EnBW**

Department(s) carrying out the proposed work

Department 1

Department name: Nuclear Energy Company / knowledge of high level waste nuclear ☐ not applicable

☒ Same as organisation address

Street: DURLACHER ALLEE 93

Town: KARLSRUHE

Postcode: 76131

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **EnBW**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Andreas** Last name: **Strohm**

E-Mail: **a.strohm@kk.enbw.com**

Position in org.: Employee - works in a nuclear power plant - knowledge expert

Department: ENBW ENERGIE BADEN-WURTTEMBERG AG ☒ Same as organisation

☒ Same as organisation address

Street: DURLACHER ALLEE 93

Town: KARLSRUHE Post code: 76131

Country: Germany

Website: https://www.enbw.com/unternehmen/index.html

Phone 1: Phone 2: *+xxx xxxxxxxxx* Fax: *+xxx xxxxxxxxx*

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Paul Scherrer Institut**

PIC	***Legal name***
936352738	*Paul Scherrer Institut*

Short name: Paul Scherrer Institut

Address of the organisation

Street Villigen PSI

Town Villigen

Postcode 5232

Country Switzerland

Webpage www.psi.ch

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... yes

Legal person ..... yes

Enterprise Data

SME self-declared status..... 10/09/2014 - no

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Paul Scherrer Institut**

Department(s) carrying out the proposed work

Department 1

Department name: Numeric Res. and Innov. on nuclear waste repositorys COMSOL !

☐ not applicable

☒ Same as organisation address

Street: Villigen PSI

Town: Villigen

Postcode: 5232

Country: Switzerland

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **Paul Scherrer Institut**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. | Sex: (•) Male ( ) Female

First name: **Dr. Thierry** | Last name: **Straessle**

E-Mail: **thierry.straessle@psi.ch**

Position in org.: Employee - Theme leader nuclear waste repositorys - Comsol !

Department: Paul Scherrer Institut ☒ Same as organisation

☒ Same as organisation address

Street: Villigen PSI

Town: Villigen | Post code: 5232

Country: Switzerland

Website: https://www.psi.ch/

Phone 1: | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Ramona	Diener	ramona.diener@psi.ch	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **RWE**

PIC	***Legal name***
999936529	*RWE POWER AG*

Short name: RWE

Address of the organisation

Street Huyssenallee 2

Town ESSEN

Postcode 45128

Country Germany

Webpage www.rwe.com

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Legal person ..... yes

Non-profit ..... unknown

International organisation ..... unknown

International organisation of European interest ..... unknown

Secondary or Higher education establishment ..... unknown

Research organisation ..... unknown

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **RWE**

Department(s) carrying out the proposed work

Department 1

Department name: Nuclear and CO2 material disposal / knowledge in both materials ☐ not applicable

☒ Same as organisation address

Street: Huyssenallee 2

Town: ESSEN

Postcode: 45128

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **RWE**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Prof. Dr.-Ing. Gerd** Last name: **Jäger**

E-Mail: **gerd.jaeger@rwe.com**

Position in org.: Employee of a company that knows the CO2 and nuclear waste HLW

Department: RWE POWER AG ☒ Same as organisation

☒ Same as organisation address

Street: Huyssenallee 2

Town: ESSEN Post code: 45128

Country: Germany

Website: http://www.rwe.com/web/cms/de/105818/rwe/investor-relations/

Phone 1: Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **RWTH AACHEN**

PIC	***Legal name***
999983962	*RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN*

Short name: RWTH AACHEN

Address of the organisation

Street TEMPLERGRABEN 55

Town AACHEN

Postcode 52062

Country Germany

Webpage www.rwth-aachen.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... yes

Research organisation ..... yes

Legal person ..... yes

Enterprise Data

SME self-declared status..... 01/01/1900 - no

SME self-assessment ..... 01/01/1900 - no

SME validation sme ..... 01/01/1900 - no

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **RWTH AACHEN**

Department(s) carrying out the proposed work

Department 1

Department name: Prof. in Nuclear Physics and short t. nuclear repository building ☐ not applicable

☒ Same as organisation address

Street: TEMPLERGRABEN 55

Town: AACHEN

Postcode: 52062

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **RWTH AACHEN**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Prof. Dr. Bruno** Last name: **Thomauske**

E-Mail: **thomauske@net.rwth-aachen.de**

Position in org.: Professor for nuclear physics & experienced i.-repository builder

Department: RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN ☒ Same as organisation

☒ Same as organisation address

Street: TEMPLERGRABEN 55

Town: AACHEN Post code: 52062

Country: Germany

Website: https://www.rwth-aachen.de/

Phone 1: Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Fachhochschule Dortmund**

PIC	***Legal name***
986309678	*Fachhochschule Dortmund*

Short name: Fachhochschule Dortmund

Address of the organisation

Street Sonnenstraße 96

Town Dortmund

Postcode 44139

Country Germany

Webpage www.fh-dortmund.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... yes

Research organisation ..... yes

Legal person ..... yes

Enterprise Data

SME self-declared status..... 05/02/2016 - no

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Fachhochschule Dortmund**

Department(s) carrying out the proposed work

Department 1

Department name: IT - Professor for IT in applied res., planning and building Arch ☐ not applicable

☒ Same as organisation address

Street: Sonnenstraße 96

Town: Dortmund

Postcode: 44139

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Fachhochschule Dortmund**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Dr. Jens** Last name: **Guthoff**

E-Mail: **guthoff@fh-dortmund.de**

Position in org.: IT Know-How for architecture researchers, planners and builders

Department: Fachhochschule Dortmund ☒ Same as organisation

☒ Same as organisation address

Street: Sonnenstraße 96

Town: Dortmund Post code: 44139

Country: Germany

Website: http://www.fh-dortmund.de/de/fb/1/index.php

Phone 1: Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **OEKO-INSTITUT E.V. - INSTITUT FUER ANG**

PIC	***Legal name***
999519817	*OEKO-INSTITUT E.V. - INSTITUT FUER ANGEWANDTE OEKOLOGIE*

Short name: OEKO-INSTITUT E.V. - INSTITUT FUER ANGEWANDTE OEKOLOGIE

Address of the organisation

Street Merzhauser Strasse 173

Town FREIBURG

Postcode 79100

Country Germany

Webpage http://www.oeko.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Legal person ..... yes

Non-profit ..... yes

International organisation ..... unknown

International organisation of European interest ..... unknown

Secondary or Higher education establishment ..... unknown

Research organisation ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **OEKO-INSTITUT E.V. - INSTITUT FUER ANG**

Department(s) carrying out the proposed work

Department 1

Department name: Project Director f. nuclear waste repository building + transport ☐ not applicable

☒ Same as organisation address

Street: Merzhauser Strasse 173

Town: FREIBURG

Postcode: 79100

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **OEKO-INSTITUT E.V. - INSTITUT FUER ANG**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. | Sex: (•) Male ( ) Female

First name: **Dipl.-Chemiker Michael** | Last name: **Sailer**

E-Mail: **m.sailer@oeko.de**

Position in org.: CEO Partner, Expert in nuclear waste criteria & national politics

Department: OEKO-INSTITUT E.V. - INSTITUT FUER ANGEWANDTE OEKOLOGIE ☒ Same as organisation

☒ Same as organisation address

Street: Merzhauser Strasse 173

Town: FREIBURG | Post code: 79100

Country: Germany

Website: https://www.oeko.de/impressum/

Phone 1: | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **LINDE GAS GMBH**

PIC	***Legal name***
924597696	*LINDE GAS GMBH*

Short name: LINDE GAS GMBH

Address of the organisation

Street CARL-VON-LINDE-PLATZ 1

Town STADL-PAURA

Postcode 4651

Country Austria

Webpage www.linde.com

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **LINDE GAS GMBH**

Department(s) carrying out the proposed work

Department 1

Department name: Engineering in the chemistry of technical gases esp. CO2 ☐ not applicable

☒ Same as organisation address

Street: CARL-VON-LINDE-PLATZ 1

Town: STADL-PAURA

Postcode: 4651

Country: Austria

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **LINDE GAS GMBH**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. Sex: (•) Male ( ) Female

First name: **Dipl.-Chemiker Archi** Last name: **Roy**

E-Mail: **archiroy07@gmail.com**

Position in org.: Employee - THE MAIN CO2 DIAGRAMMS ARE FROM HIM - EXPERT !!!

Department: LINDE GAS GMBH ☒ Same as organisation

☒ Same as organisation address

Street: CARL-VON-LINDE-PLATZ 1

Town: STADL-PAURA Post code: 4651

Country: Austria

Website:

Phone 1: +918424059739 Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **IHK zu Schwerin**

PIC	***Legal name***
919915603	*IHK zu Schwerin*

Short name: IHK zu Schwerin

Address of the organisation

Street Ludwig-Bölkow-Haus 12

Town Schwerin

Postcode 19053

Country Germany

Webpage www.schwerin.ihk.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... unknown

Non-profit ..... unknown

International organisation ..... unknown

International organisation of European interest ..... unknown

Secondary or Higher education establishment ..... unknown

Research organisation ..... unknown

Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **IHK zu Schwerin**

Department(s) carrying out the proposed work

Department 1

Department name: Chamber of commmerce M-V (Location) with own TBI Institute ☐ not applicable

☒ Same as organisation address

Street: Ludwig-Bölkow-Haus 12

Town: Schwerin

Postcode: 19053

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **IHK zu Schwerin**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. Sex: (•) Male ( ) Female

First name: **Dipl.-Ing. Ralf** Last name: **Blank**

E-Mail: **info@tbi-mv.de**

Position in org.: CEO - main development officer - TBI hard questions giving man

Department: IHK zu Schwerin ☒ Same as organisation

☒ Same as organisation address

Street: Ludwig-Bölkow-Haus 12

Town: Schwerin Post code: 19053

Country: Germany

Website: http://www.tbi-mv.net

Phone 1: Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

Other contact persons

First Name	*Last Name*	*E-mail*	*Phone*
Dipl.-Ing. Frank	Morgenroth	f.morgenroth@tbi-mv.net	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Vattenfall Europe Innovation GmbH**

PIC	***Legal name***
984426229	*Vattenfall Europe Innovation GmbH*

Short name: Vattenfall Europe Innovation GmbH

Address of the organisation

Street Uberseering 12

Town Hamburg

Postcode 22297

Country Germany

Webpage

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 09/03/2010 - no

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **Vattenfall Europe Innovation GmbH**

Department(s) carrying out the proposed work

Department 1

Department name: Public Relations Dept. / Strong interest in nuc. repositorys ☐ not applicable

☒ Same as organisation address

Street: Uberseering 12

Town: Hamburg

Postcode: 22297

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **Vattenfall Europe Innovation GmbH**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. | Sex: (•) Male ( ) Female

First name: **Christian** | Last name: **Seyfert**

E-Mail: **christian.seyfert@vattenfall.de**

Position in org.: Leader in company communication / knowledge link to nuc. material

Department: Vattenfall Europe Innovation GmbH ☒ Same as organisation

☒ Same as organisation address

Street: Uberseering 12

Town: Hamburg | Post code: 22297

Country: Germany

Website: https://corporate.vattenfall.de/energie-im-fokus/energieproduktio

Phone 1: | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **BAM**

PIC	***Legal name***
999507692	*BUNDESANSTALT FUER MATERIALFORSCHUNG UND -PRUEFUNG*

Short name: BAM

Address of the organisation

Street Unter den Eichen 87

Town BERLIN

Postcode 12205

Country Germany

Webpage www.bam.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... yes

International organisation ..... unknown

International organisation of European interest ..... unknown

Secondary or Higher education establishment ..... unknown

Research organisation ..... yes

Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **BAM**

Department(s) carrying out the proposed work

Department 1

Department name: Testing on safe nuclear waste containers / opt. Castors ☐ not applicable

☒ Same as organisation address

Street: Unter den Eichen 87

Town: BERLIN

Postcode: 12205

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **BAM**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. Sex: (•) Male ( ) Female

First name: **Dipl.-Ing. Christian** Last name: **Keller**

E-Mail: **christian.keller@bam.de**

Position in org.: Empoyee, Dipl.-Ing. in charge with nuclear container crashtesting

Department: BUNDESANSTALT FUER MATERIALFORSCHUNG UND -PRUEFUNG ☒ Same as organisation

☒ Same as organisation address

Street: Unter den Eichen 87

Town: BERLIN Post code: 12205

Country: Germany

Website: https://www.bam.de/Content/DE/Standardartikel/Themen/Energie/cras

Phone 1: Phone 2: *+xxx xxxxxxxxx* Fax: *+xxx xxxxxxxxx*

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **KBB UT**

PIC	***Legal name***
962830440	*KBB UNDERGROUND TECHNOLOGIES*

Short name: KBB UT

Address of the organisation

Street BAUMSCHULENALLEE 16

Town HANNOVER

Postcode 30625

Country Germany

Webpage www.kbbnet.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 09/12/2004 - yes

SME self-assessment ..... unknown

SME validation sme ..... 09/12/2004 - yes

Based on the above details of the Beneficiary Registry the organisation is an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **KBB UT**

Department(s) carrying out the proposed work

Department 1

Department name: Caverne-Planning, Kavernen Solen / Cavernes in rocksalt 460x DE ☐ not applicable

☒ Same as organisation address

Street: BAUMSCHULENALLEE 16

Town: HANNOVER

Postcode: 30625

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **KBB UT**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. Sex: (•) Male ( ) Female

First name: **Fritz** Last name: **Crotogino**

E-Mail: **frcrotogino@kbbnet.de**

Position in org.: Employee - THE Research planner in caverne building KKB Germany

Department: KBB UNDERGROUND TECHNOLOGIES ☒ Same as organisation

☒ Same as organisation address

Street: BAUMSCHULENALLEE 16

Town: HANNOVER Post code: 30625

Country: Germany

Website: http://www.kbbnet.de

Phone 1: Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Barbara	Koepping	koepping@kbbnet.de	
Fritz	Hellmann	hellberg@kbbnet.de	
Dipl.-Ing. Michael	Rembe	michael.rembe@rembe-consulting.de	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **GEOSTOCK SAS**

PIC	***Legal name***
997430437	*GEOSTOCK SAS*

Short name: GEOSTOCK SAS

Address of the organisation

Street Rue Eugene et Armand Peugeot 7

Town RUEIL MALMAISON

Postcode 92500

Country France

Webpage http://geostockgroup.com

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... unknown

International organisation of European interest ..... unknown

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 01/12/2008 - yes

SME self-assessment ..... unknown

SME validation sme ..... 01/12/2008 - yes

Based on the above details of the Beneficiary Registry the organisation is an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **GEOSTOCK SAS**

Department(s) carrying out the proposed work

Department 1

Department name: Cavernes in Rocksalt / Reseach and Innovation Planning ☐ not applicable

☒ Same as organisation address

Street: Rue Eugene et Armand Peugeot 7

Town: RUEIL MALMAISON

Postcode: 92500

Country: France

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **GEOSTOCK SAS**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Jean-Michel** Last name: **Noe**

E-Mail: **infogroup@geostock.fr**

Position in org.: CEO - Head of cavernes in rocksalt geology & geol. CO2 storage

Department: GEOSTOCK SAS ☒ Same as organisation

☒ Same as organisation address

Street: Rue Eugene et Armand Peugeot 7

Town: RUEIL MALMAISON Post code: 92500

Country: France

Website: http://www.geostockgroup.com/contacts/

Phone 1: Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

Other contact persons

First Name	*Last Name*	*E-mail*	*Phone*
Carlos Gomez	Montalvo	infocom@ugsnet.de	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **BUNDESAMT FUER STRAHLENSCHUTZ**

PIC	***Legal name***
999517877	*BUNDESAMT FUER STRAHLENSCHUTZ*

Short name: BUNDESAMT FUER STRAHLENSCHUTZ

Address of the organisation

Street Willy-Brandt-Strasse 5

Town SALZGITTER

Postcode 38226

Country Germany

Webpage http://www.bfs.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **BUNDESAMT FUER STRAHLENSCHUTZ**

Department(s) carrying out the proposed work

Department 1

Department name: Bundesamt für Strahlenschutz BfS Salzgitter / DE Authority ☐ not applicable

☒ Same as organisation address

Street: Willy-Brandt-Strasse 5

Town: SALZGITTER

Postcode: 38226

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **BUNDESAMT FUER STRAHLENSCHUTZ**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. | Sex: (•) Male ( ) Female

First name: **Dipl.-Ing. Wolfram** | Last name: **König**

E-Mail: **crummler@bfs.de**

Position in org.: CEO - Amtsleiter einer Prüf- und Genehmigungsbehörde / Authority

Department: BUNDESAMT FUER STRAHLENSCHUTZ ☒ Same as organisation

☒ Same as organisation address

Street: Willy-Brandt-Strasse 5

Town: SALZGITTER | Post code: 38226

Country: Germany

Website: http://www.bfs.de/DE/themen/ne/ne_node.html

Phone 1: | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Michael	Müller	mimueller@bfs.de	
Adolf	Jansen	ajansen@bfs.de	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **K+S Kali GmbH**

PIC	***Legal name***
958112360	*K+S Kali GmbH*

Short name: K+S Kali GmbH

Address of the organisation

Street Bertha-von-Suttner Straße 7

Town Kassel

Postcode 34131

Country Germany

Webpage http://www.kali-gmbh.com

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **K+S Kali GmbH**

Department(s) carrying out the proposed work

Department 1

Department name: K & S / European Rocksalt Map / they got all the EU geo-data ☐ not applicable

☒ Same as organisation address

Street: Bertha-von-Suttner Straße 7

Town: Kassel

Postcode: 34131

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **K+S Kali GmbH**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. Sex: (•) Male ( ) Female

First name **Thorsten** Last name **Boeckers**

E-Mail **thorsten.boeckers@k-plus-s.com**

Position in org.: Employee - Sales and Marketing Person - Distribution of rocksalt

Department: K+S Kali GmbH ☒ Same as organisation

☒ Same as organisation address

Street: Bertha-von-Suttner Straße 7

Town: Kassel Post code: 34131

Country: Germany

Website: http://www.k-plus-s.com/de/wissen/rohstoffe/salzvorkommen.html

Phone 1: Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

Other contact persons

First Name	*Last Name*	*E-mail*	*Phone*
Laura	Schumbera	laura.schumbera@k-plus-s.com	
Martin	Heistermann	martin.heistermann@k-plus-s.com	
Frank	Blecher	frankblecher7@gmail.com	015259688207

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **KUKA Roboter GmbH**

PIC	***Legal name***
998007975	*KUKA ROBOTER GMBH*

Short name: KUKA Roboter GmbH

Address of the organisation

Street ZUGSPITZSTRASSE 140

Town AUGSBURG

Postcode 86165

Country Germany

Webpage www.kuka-robotics.com

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 02/02/1982 - no

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **KUKA Roboter GmbH**

Department(s) carrying out the proposed work

Department 1

Department name: KUKA UK and DE for robotic remote lids (3) opening on Castors ☐ not applicable

☒ Same as organisation address

Street: ZUGSPITZSTRASSE 140

Town: AUGSBURG

Postcode: 86165

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **KUKA Roboter GmbH**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. Sex: (•) Male ( ) Female

First name: **John** Last name: **Dilworth**

E-Mail: **john.dilworth@kuka-systems.co.uk**

Position in org.: Operations Manager Research and Development

Department: Research and Development ☐ Same as organisation

☐ Same as organisation address

Street: Hereward Rise

Town: Halesowen Post code: B62 8AN

Country: United Kingdom

Website: http://www.kuka-systems.co.uk

Phone 1: +044 1215850888 Phone 2: +044 1215853358 Fax: +044 1215850810

Other contact persons

First Name	*Last Name*	*E-mail*	*Phone*
Markus	Schmid	markus.schmid@kuka.de	
Neal	Owen	neal.owen@kuka-systems.co.uk	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Institut für Gebirgsmechanik GmbH**

PIC	***Legal name***
998341655	*Institut für Gebirgsmechanik GmbH*

Short name: Institut für Gebirgsmechanik GmbH

Address of the organisation

Street Friederikenstr. 60

Town Leipzig

Postcode 04279

Country Germany

Webpage www.ifg-leipzig.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... unknown

International organisation of European interest ..... unknown

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 24/09/2008 - yes

SME self-assessment ..... unknown

SME validation sme ..... 24/09/2008 - yes

Based on the above details of the Beneficiary Registry the organisation is an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Institut für Gebirgsmechanik GmbH**

Department(s) carrying out the proposed work

Department 1

Department name: Research, Innovation and Consulting on saltrock based cavernes ☐ not applicable

☒ Same as organisation address

Street: Friederikenstr. 60

Town: Leipzig

Postcode: 04279

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **Institut für Gebirgsmechanik GmbH**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. | Sex: (•) Male ( ) Female

First name: **Wolfgang** | Last name: **Minkley**

E-Mail: **wolfgang.minkley@ifg-leipzig.de**

Position in org.: Advisors in cavern making and "characterisation of rocksalt"

Department: Institut für Gebirgsmechanik GmbH ☒ Same as organisation

☒ Same as organisation address

Street: Friederikenstr. 60

Town: Leipzig | Post code: 04279

Country: Germany

Website:

Phone 1: | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **ANDRA**

PIC	***Legal name***
999454730	*AGENCE NATIONALE POUR LA GESTION DES DECHETS RADIOACTIFS*

Short name: ANDRA

Address of the organisation

Street 1-7 rue Jean Monnet - Parc de la Croix Blanche

Town CHATENAY MALABRY

Postcode 92298

Country France

Webpage http://www.andra.fr

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... yes

Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **ANDRA**

Department(s) carrying out the proposed work

Department 1

Department name: International relations concerning safe nuclear repository plans ☐ not applicable

☒ Same as organisation address

Street: 1-7 rue Jean Monnet - Parc de la Croix B

Town: CHATENAY MALABRY

Postcode: 92298

Country: France

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **ANDRA**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. Sex: (•) Male ( ) Female

First name: **Jean-Paul** Last name: **Belmonda**

E-Mail: **webcom@andra.fr**

Position in org.: Andra national failure / not interim ! eternal repositorys please

Department: AGENCE NATIONALE POUR LA GESTION DES DECHETS RADIOACTIFS ☒ Same as organisation

☒ Same as organisation address

Street: 1-7 rue Jean Monnet - Parc de la Croix Blanche

Town: CHATENAY MALABRY Post code: 92298

Country: France

Website:

Phone 1: Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **BUNDESVERBAND GEOTHERMIE EV**

PIC	***Legal name***
920845736	*BUNDESVERBAND GEOTHERMIE EV*

Short name: BUNDESVERBAND GEOTHERMIE EV

Address of the organisation

Street ALBRECHTSTRASSE 22A

Town BERLIN

Postcode 10117

Country Germany

Webpage www.geothermie.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **BUNDESVERBAND GEOTHERMIE EV**

Department(s) carrying out the proposed work

Department 1

Department name: CEO - Learning to develop CO in Geothermal safer and bigger ☐ not applicable

☒ Same as organisation address

Street: ALBRECHTSTRASSE 22A

Town: BERLIN

Postcode: 10117

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **BUNDESVERBAND GEOTHERMIE EV**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. | Sex: (•) Male ( ) Female

First name: **Prof. Dr.-Ing. Horst** | Last name: **Kreuter**

E-Mail: **kreuter@geo-t.de**

Position in org.: Master of Geothermal / has given often very good advice in years

Department: BUNDESVERBAND GEOTHERMIE EV ☒ Same as organisation

☒ Same as organisation address

Street: ALBRECHTSTRASSE 22A

Town: BERLIN | Post code: 10117

Country: Germany

Website:

Phone 1: | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **GEOTHERMIE NEUBRANDENBURG GMBH**

PIC	***Legal name***
928406886	*GEOTHERMIE NEUBRANDENBURG GMBH*

Short name: GEOTHERMIE NEUBRANDENBURG GMBH

Address of the organisation

Street SEESTRASSE 7A

Town NEUBRANDENBURG

Postcode 17033

Country Germany

Webpage www.gtn-online.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 23/04/2015 - no

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **GEOTHERMIE NEUBRANDENBURG GMBH**

Department(s) carrying out the proposed work

Department 1

Department name: Partner / main scientific geot. competence of GTN GmbH ☐ not applicable

☒ Same as organisation address

Street: SEESTRASSE 7A

Town: NEUBRANDENBURG

Postcode: 17033

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **GEOTHERMIE NEUBRANDENBURG GMBH**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. | Sex: (•) Male ( ) Female

First name: **Dr. Jörn** | Last name: **Bartels**

E-Mail: **bartels@gtn-online.de**

Position in org.: Local Knowledge holder in Geothermal for Heat - Not for Power yet

Department: GEOTHERMIE NEUBRANDENBURG GMBH ☒ Same as organisation

☒ Same as organisation address

Street: SEESTRASSE 7A

Town: NEUBRANDENBURG | Post code: 17033

Country: Germany

Website:

Phone 1: | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **GERMAN INSTITUTE FOR ECONOMIC RES**

PIC	***Legal name***
999508953	*DEUTSCHES INSTITUT FUR WIRTSCHAFTSFORSCHUNG DIW (INSTITUT FUR KONJUNKTURFO*

Short name: GERMAN INSTITUTE FOR ECONOMIC RESEARCH

Address of the organisation

Street MOHRENSTRASSE 58

Town BERLIN

Postcode 10117

Country Germany

Webpage www.diw.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Legal person ..... yes

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **GERMAN INSTITUTE FOR ECONOMIC RES**

Department(s) carrying out the proposed work

Department 1

Department name: System analytics to consumer prices / innovation cluster Berlin ☐ not applicable

☒ Same as organisation address

Street: MOHRENSTRASSE 58

Town: BERLIN

Postcode: 10117

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **GERMAN INSTITUTE FOR ECONOMIC RES**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. | Sex: ○ Male ◉ Female

First name: **Dr. Claudia** | Last name: **Kempfert**

E-Mail: **ckempfert@diw.de**

Position in org.: Speaker Energy Questions Germany / independent institute Berlin

Department: DEUTSCHES INSTITUT FUR WIRTSCHAFTSFORSCHUNG DIW (INSTITU ☒ Same as organisation

☒ Same as organisation address

Street: MOHRENSTRASSE 58

Town: BERLIN | Post code: 10117

Country: Germany

Website:

Phone 1: | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **SIEMENS AKTIENGESELLSCHAFT**

PIC	***Legal name***
999987260	*SIEMENS AKTIENGESELLSCHAFT*

Short name: SIEMENS AKTIENGESELLSCHAFT

Address of the organisation

Street WITTELSBACHERPLATZ 2

Town MUNCHEN

Postcode 80333

Country Germany

Webpage www.siemens.com

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 31/12/2013 - no

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **SIEMENS AKTIENGESELLSCHAFT**

Department(s) carrying out the proposed work

Department 1

Department name: Research on CO2 pressure turbines / flow after 1 year dry ☐ not applicable

☒ Same as organisation address

Street: WITTELSBACHERPLATZ 2

Town: MUNCHEN

Postcode: 80333

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **SIEMENS AKTIENGESELLSCHAFT**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. | Sex: (•) Male ( ) Female

First name: **Uwe** | Last name: **Beyermann**

E-Mail: **uwe.beyermann@siemens.com**

Position in org.: Sales Ing. for Siemens Turbo Machinery / Turbines for GTKW CO2

Department: SIEMENS AKTIENGESELLSCHAFT ☒ Same as organisation

☒ Same as organisation address

Street: WITTELSBACHERPLATZ 2

Town: MUNCHEN | Post code: 80333

Country: Germany

Website:

Phone 1: | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Carina	Graf	carina.graf@siemens.com	
Cornelia	Liebmann	cornelia.liebmann@siemens.com	

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **POSIVA OY**

PIC	***Legal name***
999715854	*POSIVA OY*

Short name: POSIVA OY

Address of the organisation

Street OLKILUOTO

Town EURAJOKI

Postcode 27160

Country Finland

Webpage

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **POSIVA OY**

Department(s) carrying out the proposed work

Department 1

Department name: Department of penetration the rockhost 358x before using it !!! ☐ not applicable

☒ Same as organisation address

Street: OLKILUOTO

Town: EURAJOKI

Postcode: 27160

Country: Finland

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **POSIVA OY**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mrs

Sex: ○ Male ◉ Female

First name: **Susan** Last name: **Pietilä**

E-Mail: **etunimi.sukunimi@posiva.fi**

Position in org.: Posiva Finland failure in nuc. rep. planning, EU Knowhow Exchange

Department: POSIVA OY ☒ Same as organisation

☒ Same as organisation address

Street: OLKILUOTO

Town: EURAJOKI Post code: 27160

Country: Finland

Website:

Phone 1: +xxx xxxxxxxxx Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Hansestadt Rostock**

PIC	***Legal name***
951590953	*HANSESTADT ROSTOCK*

Short name: Hansestadt Rostock

Address of the organisation

Street NEUER MARKT 1 RATHAUS 65

Town ROSTOCK

Postcode 18055

Country Germany

Webpage www.rostock.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... 04/12/2012 - no

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Hansestadt Rostock**

Department(s) carrying out the proposed work

Department 1

Department name: Office of Mayer of the biggest citycenter near GTKW Location ☐ not applicable

☒ Same as organisation address

Street: NEUER MARKT 1 RATHAUS 65

Town: ROSTOCK

Postcode: 18055

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965**	*Acronym* **GTKW 5.4 EU CO2 Nuc.**	*Short name* **Hansestadt Rostock**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. | Sex: (•) Male ( ) Female

First name: **Ulrich office of town mayor** | Last name: **Kunze**

E-Mail: **ulrich.kunze@rostock.de**

Position in org.: Secretary to the Mayer of Hanse Town near GTKW Location M-V

Department: HANSESTADT ROSTOCK ☒ Same as organisation

☒ Same as organisation address

Street: NEUER MARKT 1 RATHAUS 65

Town: ROSTOCK | Post code: 18055

Country: Germany

Website:

Phone 1: +xxx xxxxxxxxx | Phone 2: +xxx xxxxxxxxx | Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **TUD**

PIC	***Legal name***
999897729	*TECHNISCHE UNIVERSITAET DRESDEN*

Short name: TUD

Address of the organisation

Street HELMHOLTZSTRASSE 10

Town DRESDEN

Postcode 01069

Country Germany

Webpage http://www.tu-dresden.de/

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes
Non-profit ..... yes
International organisation ..... no
International organisation of European interest ..... no
Secondary or Higher education establishment ..... yes
Research organisation ..... no
Legal person ..... yes

Enterprise Data

SME self-declared status..... 23/07/2014 - no
SME self-assessment ..... unknown
SME validation sme ..... 11/06/1999 - no

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **TUD**

Department(s) carrying out the proposed work

Department 1

Department name: Carbon Concrete innovation and Mass Production Research ☐ not applicable

☒ Same as organisation address

Street: HELMHOLTZSTRASSE 10

Town: DRESDEN

Postcode: 01069

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **TUD**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. Sex: (•) Male ( ) Female

First name: **Manfred** Last name: **Curbach**

E-Mail: **manfred.curbach@tu-dresden.de**

Position in org.: Institute speaker carbon concrete innovation / cooling box GTKW

Department: TECHNISCHE UNIVERSITAET DRESDEN ☒ Same as organisation

☒ Same as organisation address

Street: HELMHOLTZSTRASSE 10

Town: DRESDEN Post code: 01069

Country: Germany

Website: https://tu-dresden.de/tu-dresden/newsportal/news/dresdner-carbonb

Phone 1: Phone 2: *+xxx xxxxxxxxx* Fax: *+xxx xxxxxxxxx*

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Sandra	Kranich	sandra.kranich@tu-dresden.de	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **MPG**

PIC	***Legal name***
999990267	*MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN EV*

Short name: MPG

Address of the organisation

Street HOFGARTENSTRASSE 8

Town MUENCHEN

Postcode 80539

Country Germany

Webpage www.mpg.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... yes

Legal person ..... yes

Enterprise Data

SME self-declared status..... 05/04/2016 - no

SME self-assessment ..... 05/04/2016 - no

SME validation sme ..... 31/10/2008 - no

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **MPG**

Department(s) carrying out the proposed work

Department 1

Department name: Ingenieur- und Arch.büro Goebel GmbH i. L. / ART-TEL Ing. for WX ☐ not applicable

☒ Same as organisation address

Street: HOFGARTENSTRASSE 8

Town: MUENCHEN

Postcode: 80539

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **MPG**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Dr. Thomas** Last name: **Klinger**

E-Mail: **info@ipp.mpg.de**

Position in org.: Fusion Reactor Greifswald / next Plastest within ART-TEL Moeckow

Department: MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFT ☒ Same as organisation

☒ Same as organisation address

Street: HOFGARTENSTRASSE 8

Town: MUENCHEN Post code: 80539

Country: Germany

Website: http://www.ipp.mpg.de/32861/anfahrt_hgw

Phone 1: +049383488-1000 Phone 2: +049893299-01 Fax: *+xxx xxxxxxxxx*

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **HSW**

PIC	***Legal name***
972468457	*HOCHSCHULE WISMAR*

Short name: HSW

Address of the organisation

Street PHILIPP MUELLER STRASSE 14

Town WISMAR

Postcode 23966

Country Germany

Webpage www.hs-wismar.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... yes

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... yes

Research organisation ..... yes

Legal person ..... yes

Enterprise Data

SME self-declared status..... 23/06/1992 - no

SME self-assessment ..... unknown

SME validation sme ..... 23/06/1992 - no

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **HSW**

Department(s) carrying out the proposed work

Department 1

Department name: University Wismar / Dept. of building engineering / Concrete Mat.

☐ not applicable

☒ Same as organisation address

Street: PHILIPP MUELLER STRASSE 14

Town: WISMAR

Postcode: 23966

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **HSW**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Prof. Dr.-Ing. Ulrich** Last name: **Diederichs**

E-Mail: **ulrich.diederichs@uni-rostock.de**

Position in org.: Prof. for material research (esp. concrete) building engineering

Department: HOCHSCHULE WISMAR ☒ Same as organisation

☒ Same as organisation address

Street: PHILIPP MUELLER STRASSE 14

Town: WISMAR Post code: 23966

Country: Germany

Website: https://biw.fiw.hs-wismar.de/diederichs.html

Phone 1: Phone 2: + 49 1799224189 Fax: +xxx xxxxxxxxx

Other contact persons

First Name	*Last Name*	*E-mail*	*Phone*
Dipl.-Ing. Bärbel	Hollatz	baerbel.hollatz@hs-wismar.de	+49 3841753743
Dipl.-Ing. TU Erich	Heymer	erich.heymer@eheymer.de	

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **SOGIN**

PIC	***Legal name***
960338316	*SOCIETA GESTIONE IMPIANTI NUCLEARI PER AZIONI*

Short name: SOGIN

Address of the organisation

Street VIA TORINO 6

Town ROMA

Postcode 00184

Country Italy

Webpage www.sogin.it

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no

Non-profit ..... no

International organisation ..... no

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **SOGIN**

Department(s) carrying out the proposed work

Department 1

Department name: CEO in deep nuclear waste repository buildings Italy or DE ?

☐ not applicable

☒ Same as organisation address

Street: VIA TORINO 6

Town: ROMA

Postcode: 00184

Country: Italy

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **SOGIN**

Person in charge of the proposal

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Title: Dr. Sex: (•) Male ( ) Female

First name: **Pietor** Last name: **Voci**

E-Mail: **ufficiostampa@sogin.it**

Position in org.: CEO - always interested to see what other countrys plan in nwrpb

Department: SOCIETA GESTIONE IMPIANTI NUCLEARI PER AZIONI ☒ Same as organisation

☒ Same as organisation address

Street: VIA TORINO 6

Town: ROMA Post code: 00184

Country: Italy

Website: http://www.sogin.it/en/organization/organization.html

Phone 1: +39 6830401 Phone 2: *+xxx xxxxxxxxx* Fax: *+xxx xxxxxxxxx*

Other contact persons

First Name	***Last Name***	***E-mail***	***Phone***
Luca	Turchi	luca.turchi@sogin.it	+39 6830401

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Consulimus GmbH**

PIC	***Legal name***
916129208	*Consulimus GmbH*

Short name: Consulimus GmbH

Address of the organisation

Street Gersauerstrasse 76

Town Brunnen

Postcode 6440

Country Switzerland

Webpage www.consulimus.ch

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... unknown

Non-profit ..... unknown

International organisation ..... unknown

International organisation of European interest ..... unknown

Secondary or Higher education establishment ..... unknown

Research organisation ..... unknown

Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Consulimus GmbH**

Department(s) carrying out the proposed work

Department 1

Department name: IT Consulting and Program Management (IT consultant Ing. Goebel) ☐ not applicable

☒ Same as organisation address

Street: Gersauerstrasse 76

Town: Brunnen

Postcode: 6440

Country: Switzerland

Dependencies with other proposal participants

Character of dependence	***Participant***	

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **Consulimus GmbH**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Mr. Sex: (•) Male ( ) Female

First name: **Dipl.-Inf. TH Frank** Last name: **Gassan**

E-Mail: **frank.gassan@consulimus.ch**

Position in org.: CEO - Project Man., IT Consulting, Website-Support, Programming,

Department: Consulimus GmbH ☒ Same as organisation

☒ Same as organisation address

Street: Gersauerstrasse 76

Town: Brunnen Post code: 6440

Country: Switzerland

Website:

Phone 1: Phone 2: +xxx xxxxxxxxx Fax: +xxx xxxxxxxxx

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **AiNT**

PIC	***Legal name***
917656473	*Aachen Institute for Nuclear Training GmbH*

Short name: AiNT

Address of the organisation

Street Cockerillstraße 100

Town Stolberg (Rhld.)

Postcode 52222

Country Germany

Webpage www.nuclear-training.de

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... no
Non-profit ..... no
International organisation ..... no
International organisation of European interest ..... no
Secondary or Higher education establishment ..... no
Research organisation ..... no
Legal person ..... yes

Enterprise Data

SME self-declared status..... 31/12/2015 - yes
SME self-assessment ..... 31/12/2015 - yes
SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is an SME (small- and medium-sized enterprise) for the call.

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **AiNT**

Department(s) carrying out the proposed work

Department 1

Department name: Handling of nuclear waste ☐ not applicable

☒ Same as organisation address

Street: Cockerillstraße 100

Town: Stolberg (Rhld.)

Postcode: 52222

Country: Germany

Dependencies with other proposal participants

Character of dependence	***Participant***	

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **AiNT**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Dr. Andreas** Last name: **Havenith**

E-Mail: **havenith@nuclear-training.de**

Position in org.: Leading employee for nuclear training

Department: Aachen Institute for Nuclear Training GmbH ☒ Same as organisation

☒ Same as organisation address

Street: Cockerillstraße 100

Town: Stolberg (Rhld.) Post code: 52222

Country: Germany

Website:

Phone 1: Phone 2: *+xxx xxxxxxxxx* Fax: *+xxx xxxxxxxxx*

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **IAEA**

PIC	***Legal name***
990463994	*INTERNATIONAL ATOMIC ENERGY AGENCY*

Short name: IAEA

Address of the organisation

Street Wagramer Strasse 5

Town VIENNA

Postcode 1400

Country Austria

Webpage www.iaea.org

Legal Status of your organisation

Research and Innovation legal statuses

Public body ..... yes

Non-profit ..... yes

International organisation ..... yes

International organisation of European interest ..... no

Secondary or Higher education establishment ..... no

Research organisation ..... no

Legal person ..... yes

Enterprise Data

SME self-declared status..... unknown

SME self-assessment ..... unknown

SME validation sme ..... unknown

Based on the above details of the Beneficiary Registry the organisation is not an SME (small- and medium-sized enterprise) for the call.

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **IAEA**

Department(s) carrying out the proposed work

Department 1

Department name: Deep Borehole Disposal Research ☐ not applicable

☒ Same as organisation address

Street: Wagramer Strasse 5

Town: VIENNA

Postcode: 1400

Country: Austria

Dependencies with other proposal participants

Character of dependence	***Participant***	

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.** *Short name* **IAEA**

Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title: Dr. Sex: (•) Male ( ) Female

First name: **Dr. Andrew** Last name: **Orrell**

E-Mail: **andrew.orrell@iaea.org**

Position in org.: Expert for Deep Borehole Disposal IAEA Vienna

Department: INTERNATIONAL ATOMIC ENERGY AGENCY ☒ Same as organisation

☒ Same as organisation address

Street: Wagramer Strasse 5

Town: VIENNA Post code: 1400

Country: Austria

Website:

Phone 1: Phone 2: *+xxx xxxxxxxxx* Fax: *+xxx xxxxxxxxx*

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.**

3 - Budget for the proposal

No	Participant	Country	(A) Direct personnel costs/€	(B) Other direct costs/€	(C) Direct costs of sub-contracting/€	(D) Direct costs of providing financial support to third parties/€	(E) Costs of inkind contributions not used on the beneficiary's premises/€	(F) Indirect Costs / € (=0.25(A+B-E))	(G) Special unit costs covering direct & indirect costs / €	(H) Total estimated eligible costs / € (=A+B+C+D+F+G)	(I) Reimburse-ment rate (%)	(J) Max.EU Contribution / € (=H*I)	(K) Requested EU Contribution/ €
1	Ingenieur- Und Architekturbüro Goebel	CH	600000	2200000	50000	0	0	700000,00	0	3550000,00	100	3550000,00	3550000,00
2	Tu Baf	DE	1100000	100000	80000	0	0	300000,00	0	1580000,00	100	1580000,00	1580000,00
3	Amphos 21 Consulting S.l.	ES	700000	250000	75000	0	0	237500,00	0	1262500,00	100	1262500,00	1262500,00
4	Comsol Multiphysics Gmbh	DE	0	1	0	0	0	0,25	0	1,25	100	1,25	1,25
5	Gesellschaft Fur Anlagen Und	DE	200000	800000	200000	0	0	250000,00	0	1450000,00	100	1450000,00	1450000,00
6	Kit	DE	200000	10000	20000	0	0	52500,00	0	282500,00	100	282500,00	282500,00
7	Bgr	DE	100000	300000	20000	0	0	100000,00	0	520000,00	100	520000,00	520000,00
8	Tuc	DE	250000	50000	150000	0	0	75000,00	0	525000,00	100	525000,00	525000,00
9	Hvg	DE	250000	800000	0	0	0	262500,00	0	1312500,00	100	1312500,00	1312500,00
10	Herrenknecht Ag	DE	100000	30000	10000	0	0	32500,00	0	172500,00	100	172500,00	172500,00

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

11	Landesamt Fuer Umwelt, Naturschutz	DE	0	1	0	0	0	0,25	0	1,25	100	1,25	1,25
12	Dbe Tec	DE	100000	100000	0	0	0	50000,00	0	250000,00	100	250000,00	250000,00
13	Gns	DE	100000	300000	50000	0	0	100000,00	0	550000,00	100	550000,00	550000,00
14	Eidgenossisches Nuklearsicher	CH	150000	10000	10000	0	0	40000,00	0	210000,00	100	210000,00	210000,00
15	Dbe Gmbh	DE	100000	100000	0	0	0	50000,00	0	250000,00	100	250000,00	250000,00
16	Nagra	CH	100000	0	0	0	0	25000,00	0	125000,00	100	125000,00	125000,00
17	Axpo Power Ag	CH	100000	0	0	0	0	25000,00	0	125000,00	100	125000,00	125000,00
18	E.on Anlagenservice Gmbh	DE	100000	0	0	0	0	25000,00	0	125000,00	100	125000,00	125000,00
19	Enbw	DE	100000	0	0	0	0	25000,00	0	125000,00	100	125000,00	125000,00
20	Paul Scherrer Institut	CH	300000	250000	50000	0	0	137500,00	0	737500,00	100	737500,00	737500,00
21	Rwe	DE	100000	0	0	0	0	25000,00	0	125000,00	100	125000,00	125000,00
22	Rwth Aachen	DE	100000	50000	10000	0	0	37500,00	0	197500,00	100	197500,00	197500,00
23	Fachhochschule Dortmund	DE	100000	50000	20000	0	0	37500,00	0	207500,00	100	207500,00	207500,00
24	Oeko-institut E.v. - Institut Fuer	DE	200000	30000	50000	0	0	57500,00	0	337500,00	100	337500,00	337500,00
25	Linde Gas Gmbh	AT	100000	10000	0	0	0	27500,00	0	137500,00	100	137500,00	137500,00

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26	Ihk Zu Schwerin	DE	75000	25000	10000	0	0	25000,00	0	135000,00	100	135000,00	135000,00
27	Vattenfall Europe Innovation	DE	120000	0	0	0	0	30000,00	0	150000,00	100	150000,00	150000,00
28	Bam	DE	240000	50000	120000	0	0	72500,00	0	482500,00	100	482500,00	482500,00
29	Kbb Ut	DE	250000	50000	100000	0	0	75000,00	0	475000,00	100	475000,00	475000,00
30	Geostock Sas	FR	250000	50000	100000	0	0	75000,00	0	475000,00	100	475000,00	475000,00
31	Bundesamt Fuer Strahlenschutz	DE	100000	20000	30000	0	0	30000,00	0	180000,00	100	180000,00	180000,00
32	K+s Kali Gmbh	DE	150000	10000	0	0	0	40000,00	0	200000,00	100	200000,00	200000,00
33	Kuka Roboter Gmbh	DE	120000	12000	0	0	0	33000,00	0	165000,00	100	165000,00	165000,00
34	Institut Für Gebirgsmechanik Gmbh	DE	100000	10000	0	0	0	27500,00	0	137500,00	100	137500,00	137500,00
35	Andra	FR	1	1000	0	0	0	250,25	0	1251,25	100	1251,25	1251,25
36	Bundesverband Geothermie Ev	DE	50000	10000	0	0	0	15000,00	0	75000,00	100	75000,00	75000,00
37	Geothermie Neubrandenburg Gmbh	DE	10000	5000	0	0	0	3750,00	0	18750,00	100	18750,00	18750,00
38	German Institute For Economic	DE	1000	5000	0	0	0	1500,00	0	7500,00	100	7500,00	7500,00
39	Siemens Aktiengesellschaft	DE	40000	75000	0	0	0	28750,00	0	143750,00	100	143750,00	143750,00
40	Posiva Oy	FI	1	10000	0	0	0	2500,25	0	12501,25	100	12501,25	12501,25

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

41	Hansestadt Rostock	DE	100000	500	0	0	0	25125,00	0	125625,00	100	125625,00	125625,00
42	Tud	DE	300000	50000	20000	0	0	87500,00	0	457500,00	100	457500,00	457500,00
43	Mpg	DE	1	1	0	0	0	0,50	0	2,50	100	2,50	2,50
44	Hsw	DE	200000	50000	60000	0	0	62500,00	0	372500,00	100	372500,00	372500,00
45	Sogin	IT	1	10000	0	0	0	2500,25	0	12501,25	100	12501,25	12501,25
46	Consulimus Gmbh	CH	100000	35000	20000	0	0	33750,00	0	188750,00	100	188750,00	188750,00
47	Aint	DE	0	10000	0	0	0	2500,00	0	12500,00	100	12500,00	12500,00
48	Iaea	AT	0	10000	0	0	0	2500,00	0	12500,00	100	12500,00	12500,00
	Total		7456004	5938503	1255000	0	0	3348626,75	0	17998133,75		17998133,75	17998133,75

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.**

4 - Ethics issues table

1. HUMAN EMBRYOS/FOETUSES		Page
Does your research involve Human Embryonic Stem Cells (hESCs)?	○ Yes ◉ No	
Does your research involve the use of human embryos?	○ Yes ◉ No	
Does your research involve the use of human foetal tissues / cells?	○ Yes ◉ No	
2. HUMANS		**Page**
Does your research involve human participants?	○ Yes ◉ No	
Does your research involve physical interventions on the study participants?	○ Yes ◉ No	
3. HUMAN CELLS / TISSUES		**Page**
Does your research involve human cells or tissues (other than from Human Embryos/ Foetuses, i.e. section 1)?	○ Yes ◉ No	
4. PERSONAL DATA		**Page**
Does your research involve personal data collection and/or processing?	○ Yes ◉ No	
Does your research involve further processing of previously collected personal data (secondary use)?	○ Yes ◉ No	
5. ANIMALS		**Page**
Does your research involve animals?	○ Yes ◉ No	
6. THIRD COUNTRIES		**Page**
In case non-EU countries are involved, do the research related activities undertaken in these countries raise potential ethics issues?	○ Yes ◉ No	
Do you plan to use local resources (e.g. animal and/or human tissue samples, genetic material, live animals, human remains, materials of historical value, endangered fauna or flora samples, etc.)?	○ Yes ◉ No	
Do you plan to import any material - including personal data - from non-EU countries into the EU?	○ Yes ◉ No	
Do you plan to export any material - including personal data - from the EU to non-EU countries?	○ Yes ◉ No	
In case your research involves low and/or lower middle income countries, are any benefits-sharing actions planned?	○ Yes ◉ No	
Could the situation in the country put the individuals taking part in the research at risk?	○ Yes ◉ No	

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.**

7. ENVIRONMENT & HEALTH and SAFETY		Page
Does your research involve the use of elements that may cause harm to the environment, to animals or plants?	(•) Yes ( ) No	3
Does your research deal with endangered fauna and/or flora and/or protected areas?	( ) Yes (•) No	
Does your research involve the use of elements that may cause harm to humans, including research staff?	(•) Yes ( ) No	3
8. DUAL USE		**Page**
Does your research involve dual-use items in the sense of Regulation 428/2009, or other items for which an authorisation is required?	( ) Yes (•) No	
9. EXCLUSIVE FOCUS ON CIVIL APPLICATIONS		**Page**
Could your research raise concerns regarding the exclusive focus on civil applications?	( ) Yes (•) No	
10. MISUSE		**Page**
Does your research have the potential for misuse of research results?	( ) Yes (•) No	
11. OTHER ETHICS ISSUES		**Page**
Are there any other ethics issues that should be taken into consideration? Please specify	(•) Yes ( ) No	3

Safe nuclear waste repository research, planning, building - Ethic Question too

Massive possible system leak in GTKW CO2 - We plan it for that we all survive

With have 2 professional professors in ethics within the participants + public o.

I confirm that I have taken into account all ethics issues described above and that, if any ethics issues apply, I will complete the ethics self-assessment and attach the required documents. [x]

How to Complete your Ethics Self-Assessment

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Proposal ID **763965** *Acronym* **GTKW 5.4 EU CO2 Nuc.**

5 - Call specific questions

Extended Open Research Data Pilot in Horizon 2020

If selected, applicants will by default participate in the Pilot on Open Research Data in Horizon 2020[1] , which aims to improve and maximise access to and re-use of research data generated by actions.

However, participation in the Pilot is flexible in the sense that it does not mean that all research data needs to be open. After the action has started, participants will formulate a Data Management Plan (DMP), which should address the relevant aspects of making data FAIR – findable, accessible, interoperable and re-usable, including what data the project will generate, whether and how it will be made accessible for verification and re-use, and how it will be curated and preserved. Through this DMP projects can define certain datasets to remain closed according to the principle "as open as possible, as closed as necessary". A Data Management Plan does not have to be submitted at the proposal stage.

Furthermore, applicants also have the possibility to opt out of this Pilot completely at any stage (before or after the grant signature). In this case, applicants must indicate a reason for this choice (see options below).

Please note that participation in this Pilot does not constitute part of the evaluation process. Proposals will not be penalised for opting out.

We wish to opt out of the Pilot on Open Research Data in Horizon 2020.	○ Yes	◉ No

Further guidance on open access and research data management is available on the participant portal: http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-dissemination_en.htm and in general annex L of the Work Programme.

[1] *According to article 43.2 of Regulation (EU) No 1290/2013 of the European Parliament and of the Council, of 11 December 2013, laying down the rules for participation and dissemination in "Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)" and repealing Regulation (EC) No 1906/2006.*

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

Volume-Relations :

One Caverne 400.000 m³
Cooling Box 6.750.000 m³

1 zu 16.8

Cut S01 - S01

Volumenverhältnisse :

1. Kaverne 400.000 m³
Kühlung 6.750.000 m³

1 zu 16.8

Kavernenvolumen :
r² x 3,14 x h = m³
20² x 3.14 x 350 =
439.600 m³ = rund
- Kavernensumpf

400.000 m³ = Kavernenvolumen

Cut S03 - S03

Bau-stelle

Volumen Kühlstrecke :
Fünf Kühlkästen sind
13.671 m2 x 495 m =
6.767.145 m³ = rund
(genaue Abmessung)

6.750.000 m³ Kühlstreckenvolumen

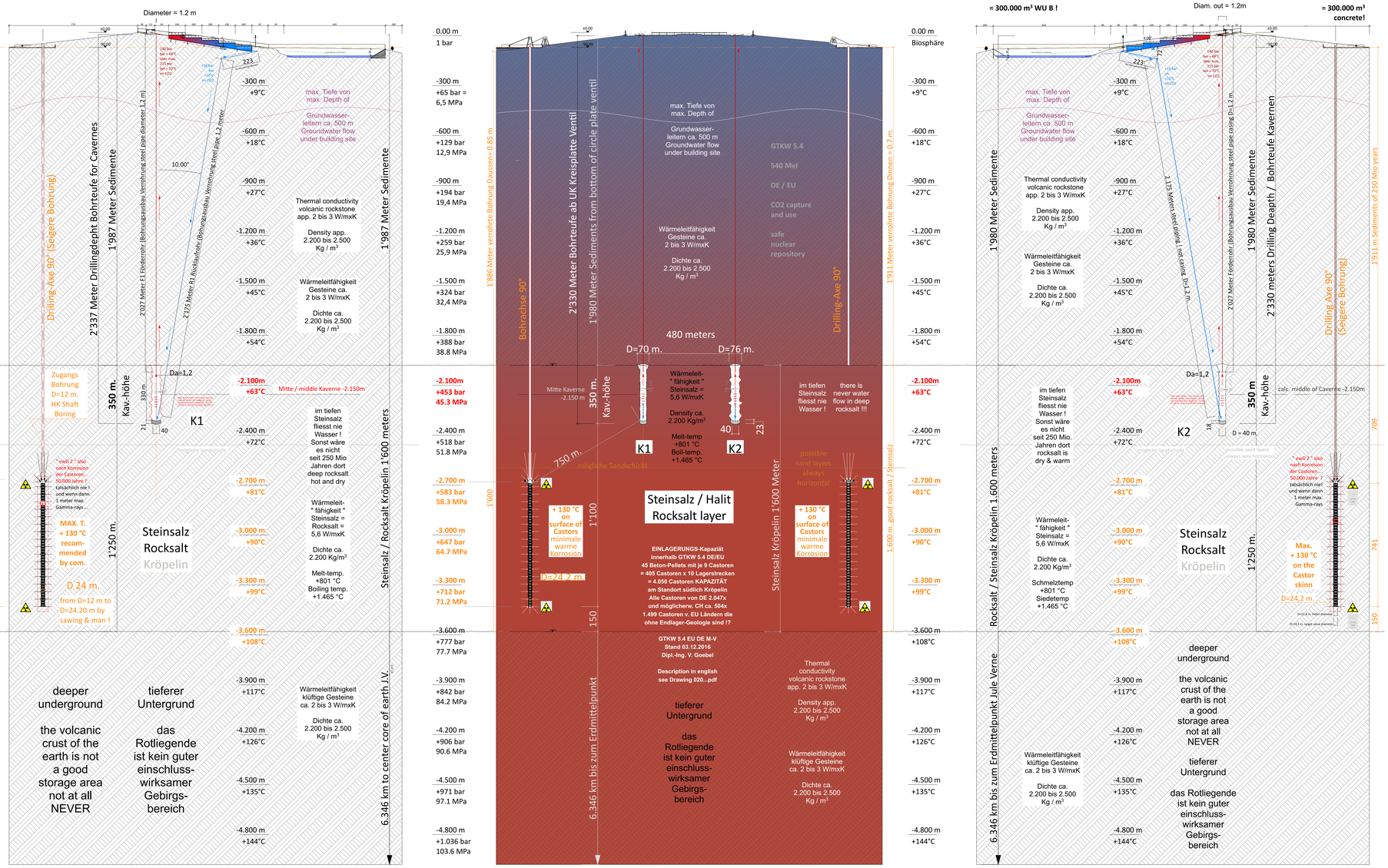
= 300.000 m³ WU B !

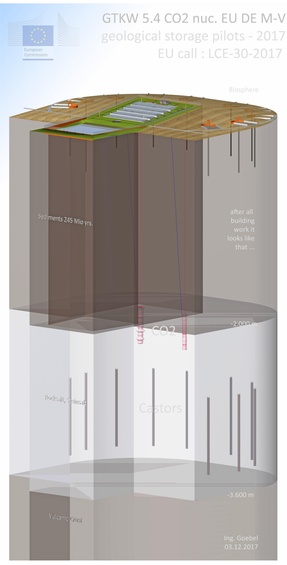
Cut S02 - S02

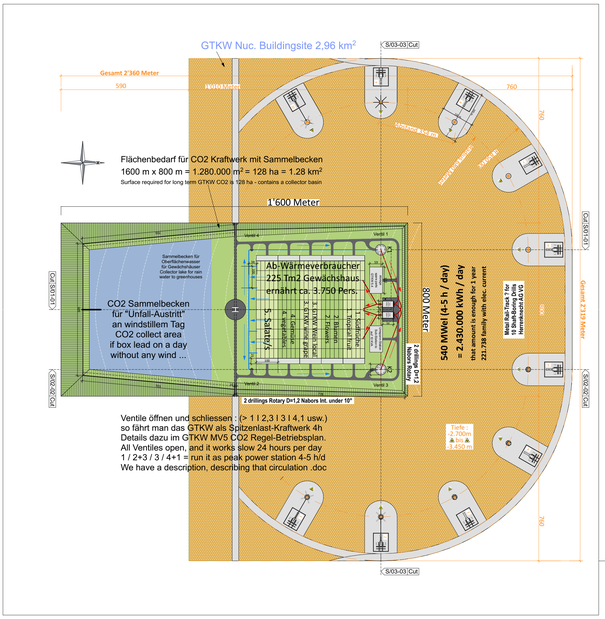
Volume Cooling-Boxes :
5 Cooling Boxes are
13.671 m2 x 495 m =
6.767.145 m³ = 1 st.
Dimensioning in 2014

6.750.000 m³ Cooling-Box-Volume

= 300.000 m³ concrete!







Temperatur core earth app. + 5.500 °C
Pressure core earth app. + 3,64 Mio. bar
Diameter of earth app. + 12.742 km
Gravity in center core is +/- 0,00 m/s2
State of the scientific knowledge today
Record in deep drilling -14.000 metes
(Russian world record, Kola Drilling)

Gravitational forcea arise from the "change interaction" of mass and pressure and the temperature caused by that - it's a slightly exothermic and still a constant process ...
See pressing out "rest energy" from mass (1st thought, described by Albert Einstein)

Basic knowledge for deepest buildings :
Rocksalt is pressed salt, that has now a density of app. 2.200 kg / m3 and the hard gamma radiation goes max. 30 cm Rocksalt is 245 Mio. years old, dry and warm and capture all gases safely tight. Undisturbed Rocksalt layers never have any flowing water, Rocksalt is "creeping" very slow - it is a self healing material ! "Rocksalt is warm, dry, old and safest."

> DG Research and Innovation
EU Advisors to EU commission

Deutscher Bundestag

We are expecting to win EU Call LCE-30-2017

These " general technical draft - plans " show the finished, already build GTKW construction. To achieve this state of art building it needs a lot of highest level scientific research and on site construction plans to build this innovation.

Thema ENDLAGER Tiefst-bohrungen:

" 10x World-Record "

Die Herrenknecht SBM wurde für -2.000 Meter konzipiert. Tatsächlich sind die Schacht-Bohr-Maschine viel tiefer bohren können.... Herrenknecht wollte nur nicht so angeben.

Die 10 Schachtbohrungen sind wahrscheinlich vom Start weg Welt-Rekord in der Durchmesser 12 m zu -3.000 Meter Klasse.

Durch viel Rückbau und eine gute Kombination von Materialen wird die Bohrung wieder verschliessbar sein

Endlager muss dicht sein. Deep Borehole Disposal

Die Aufgabe, für die nur durch neu gebautes Rotary Drill Rig zu bohrenden Förderleitungen des CO2 GTKW ist auch schwierig.

Es sind Mono-Diameter Bohrungen von Dausen 1,2 Meter. Allein das Handling der Vernohr-rung wird eine Aufgabe

Die Rigs baut Nabors Int. Houston / USA - darin haben die den Weltrekord.

Glück auf - wir sind seit 12 Jahren unfallfrei ...

MfG - Ing Goebel

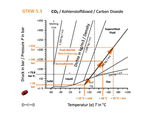
Boyle-Mariotte Gesetz (gilt hier nur in etwa)

Thermische Zustandsgleichung idealer Gase

Vol 1	Pres 2		X m³	=	215 bar
Vol 2	Pres 1		400.000 m³		18 bar

X = 4.777.778 m³ (Anzatz ist 6.750.000 m3)

Volumen für die Kühlstrecke notwendig "um beide Seiten auf 18 bar zu füllen ..." (Verhältnis also rund. **1:12**, ist z_Z. 1:16,8) **damit der gesamte heisse Kavernen-Inhalt sofort in die Kühlstrecke passt. Tiefer als 18 bar wird das CO2 im GTKW nicht sein.**



Physik und Betriebsplan

Für diesen beiden Themen gibt es separate Texte die auf der Website zu finden sind. Die Physik im GTKW und der Regel Betriebsplan.

further information you find :

https://www.ing-goebel.de/gtkw-in-eu-lce-30-2017/
https://www.ing-goebel.de/gmbh-co2-nuclear-waste/
https://www.ing-goebel.de/gtkw-5-4-co2-nuc-eu/

Leistungen eines ENDLAGER GTKW MV5 CO2 540 MW

- **Stromerzeugung** 540 MW (Leistung)
- diese Leistung liegt 4 h pro Tag an
- das macht 2.160.000 kWh pro Tag
- das reicht um 221.738 Haushalte mit Strom zu versorgen (4.000 kWh / J.)
- ein Unternehmen in Toronto Kanada hat das rechnerisch nachgewiesen

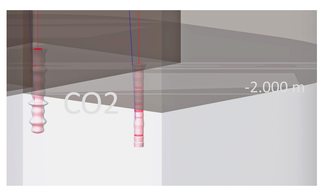
- sehr grosse Ab - **Wärmeleitung** des Kühlkastens. Das reicht für eine 225.000 m² Gewächshaus-Struktur die ca. 3.750 Personen mit Gemüse, Obst und Blumen versorgen wird.

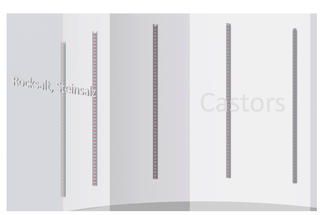
Eine jede Stadt mit GTKW ENDLAGER befindet sich in einer guten Situation. Wir werden die langkettigen Polymere der Kohlenwasserstoffe (Erdöl) noch für folgende Generationen benötigen und es ist ratsam sparsam damit umzugehen. Einige von uns haben Kinder.

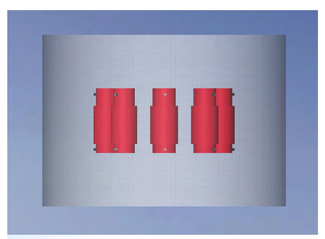
Vom GTKW soll man klugerweise erst einmal ein 1.200 Modell bauen um das mit dem CO2 genau nachzuweisen bitte.

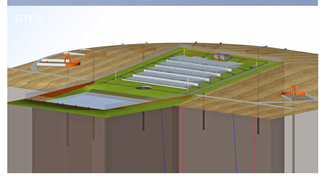
Er erfolgt eine CO2 - Nutzung - es wird kein CO2 in die Atmosphäre ausgeblasen. - Antrieb nur aus Erdwärme und wärmeentwickelnden Abfallstoffen **Es wird nichts Fossiles verbrannt ...**

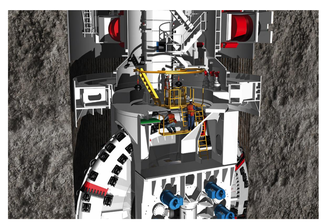
Leistungen eines GTKW 5. Generation

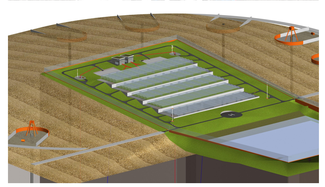












Architect / Ing. : Dipl.-Ing. FH Volker Goebel / Architect CH, DE

1. EU DE Reviewer Team GTKW Part CO2 :

1. EU DE Reviewer Team GTKW Repository :

Mountain Authority Bergamt M-V Stralsund :

City Kröpelin M-V : "800 Mio. EUR redliche Kompensationen"

Country Level M-V / Schwerin / SN :

State Level Germany BRE / BMUB :

HEIGHT, LOCATION, GEOLOGY:
± 0.00 = 50 meters above sea l. (54°02'55.82" North / 11°49'58.18" East) "south of Kröpelin"
Top Rocksaat -2.000 meters, Thickness 1.600 meters / geol. deepstep +3.0 °C / 100 meters

BUILDING:
GTKW 5.4 EU DE / CO2 capture and use up to 540 MWel.
Safe nuclear waste repository with heat exchanger unit
Pressure Medium : Carbon Dioxide from exhaust fumes RO
Heat : Geothermal and long term nuclear waste heat 16 MW

Ingenieur- und Architekturbüro Goebel
Mecklenburg Vorpommern
MV tut gut.

CLIENTS:
EU commission / DG research and innovation, EU countries, DE Bundestag, "Kommission Lagerung hoch radioaktiver Abfallstoffe"

PROJECT-NUMBER: Project Nr. 05 Version 5.4

PLANAUTHOR:
Ingenieur- und Architekturbüro Goebel / Dept. of Geo. CO2 HLW
Gersauerstr. 85, 6440 Brunnen, Switzerland / Ratsteich 15, 19057 SN

DRAFTSMAN: Dipl.-Ing. Volker Goebel

DATE: Beginning with project 5 drawing 02. September 2014

PLANNINGPHASE:
Draft-Drawings of GTKW 5 CO2 540 MWel for scientific group research & implementation

LAST EDIT: 10. December 2016

PLANNUMBER: 018

PLANTITEL: GTKW_5.4_EU_DE_Cuts_01_02_03

SCALES: **many - but all " to scale "**

PLANSIZE: 1.189 x 841 mm / DIN A0

imac/volkergoebel/Folder_GTKW_DBHD_ART-TEL_TTEL_2/Folder_001_AAA_GTKW_5.4_Finale_2016_2017/GTKW_5.4_EU_Original.pln

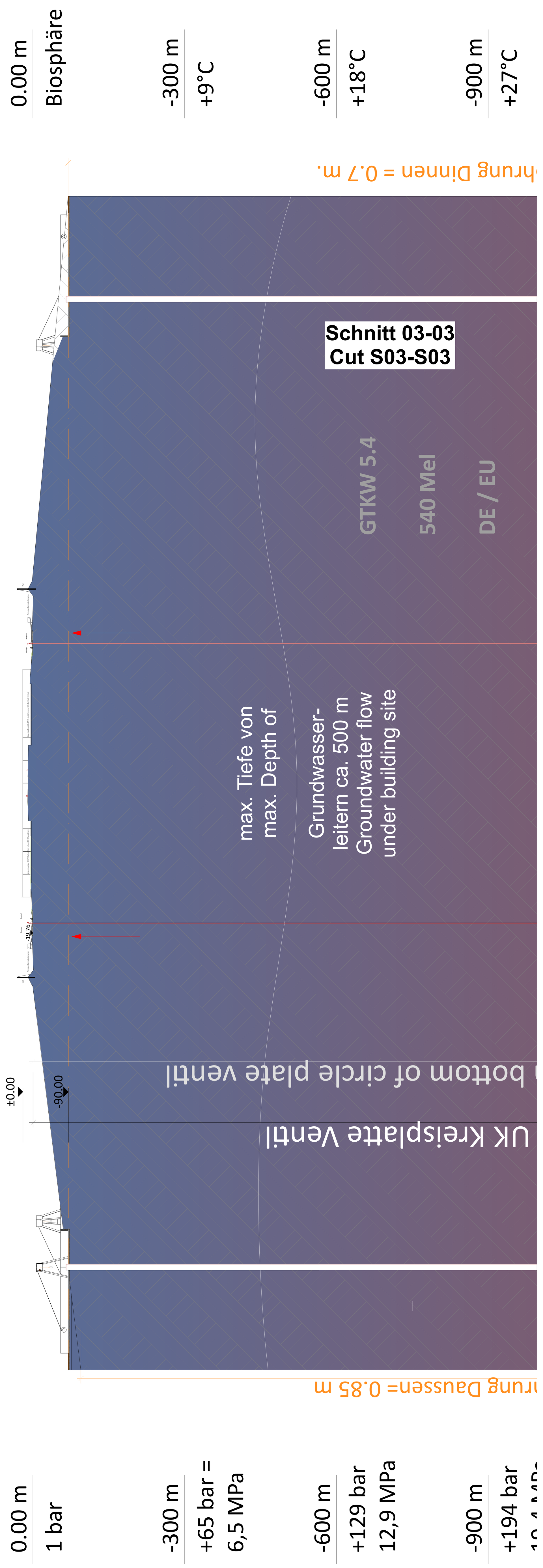
This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

further information you find under :

https://www.ing-goebel.de/gtkw-in-eu-lce-30-2017/
https://www.ing-goebel.de/gmbh-co2-nuclear-waste/
https://www.ing-goebel.de/gtkw-5-4-co2-nuc-eu/

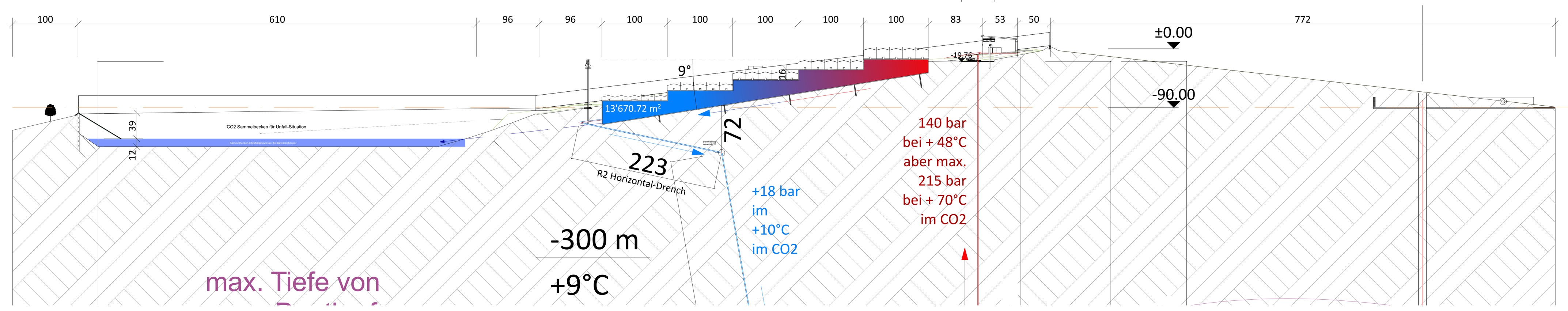
Zoom in and find out :

Bitte machen Sie von der " Möglichkeit " gebrauch in der .pdf Datei bis zu 6.400 % "reinzuzoomen", denn hier befinden sich "Berg und Mensch innerhalb einer Zeichnung. - Es wurde auch nur das wirklich notwendige gezeichnet. Einfach mal ranzoomen.



Schnitt / Cut S02 - S02

Diam. out = 1.2m



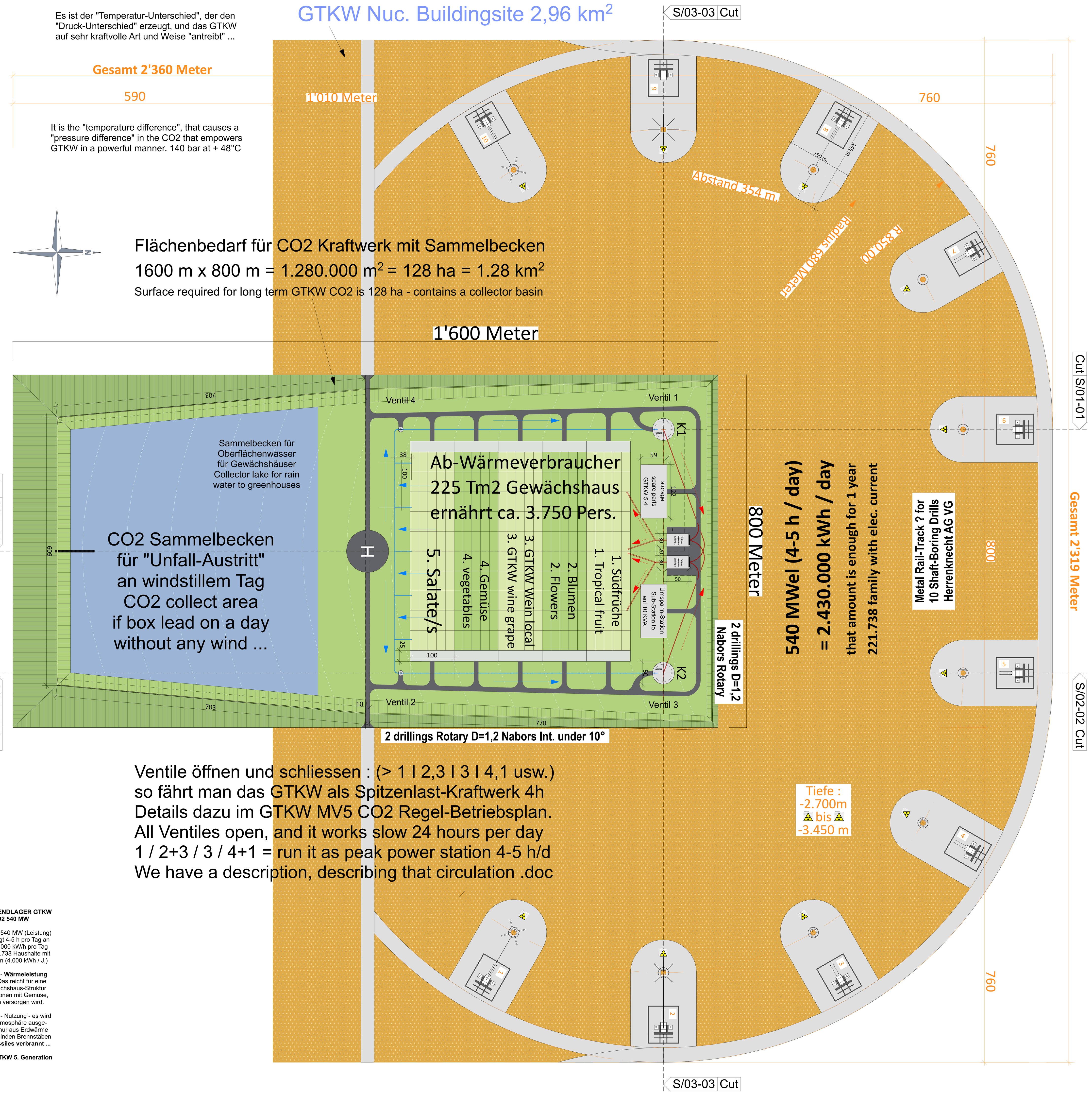
Es ist der "Temperatur-Unterschied", der den "Druck-Unterschied" erzeugt, und das GTKW auf sehr kraftvolle Art und Weise "antreibt" ...

It is the "temperature difference", that causes a "pressure difference" in the CO2 that empowers GTKW in a powerful manner. 140 bar at + 48°C

Flächenbedarf für CO2 Kraftwerk mit Sammelbecken

1600 m x 800 m = 1.280.000 m^2 = 128 ha = 1.28 km^2

Surface required for long term GTKW CO2 is 128 ha - contains a collector basin



Ventile öffnen und schliessen : (> 1 I 2,3 I 3 I 4,1 usw.)
so fährt man das GTKW als Spitzenlast-Kraftwerk 4h
Details dazu im GTKW MV5 CO2 Regel-Betriebsplan.
All Ventiles open, and it works slow 24 hours per day
1 / 2+3 / 3 / 4+1 = run it as peak power station 4-5 h/d
We have a description, describing that circulation .doc

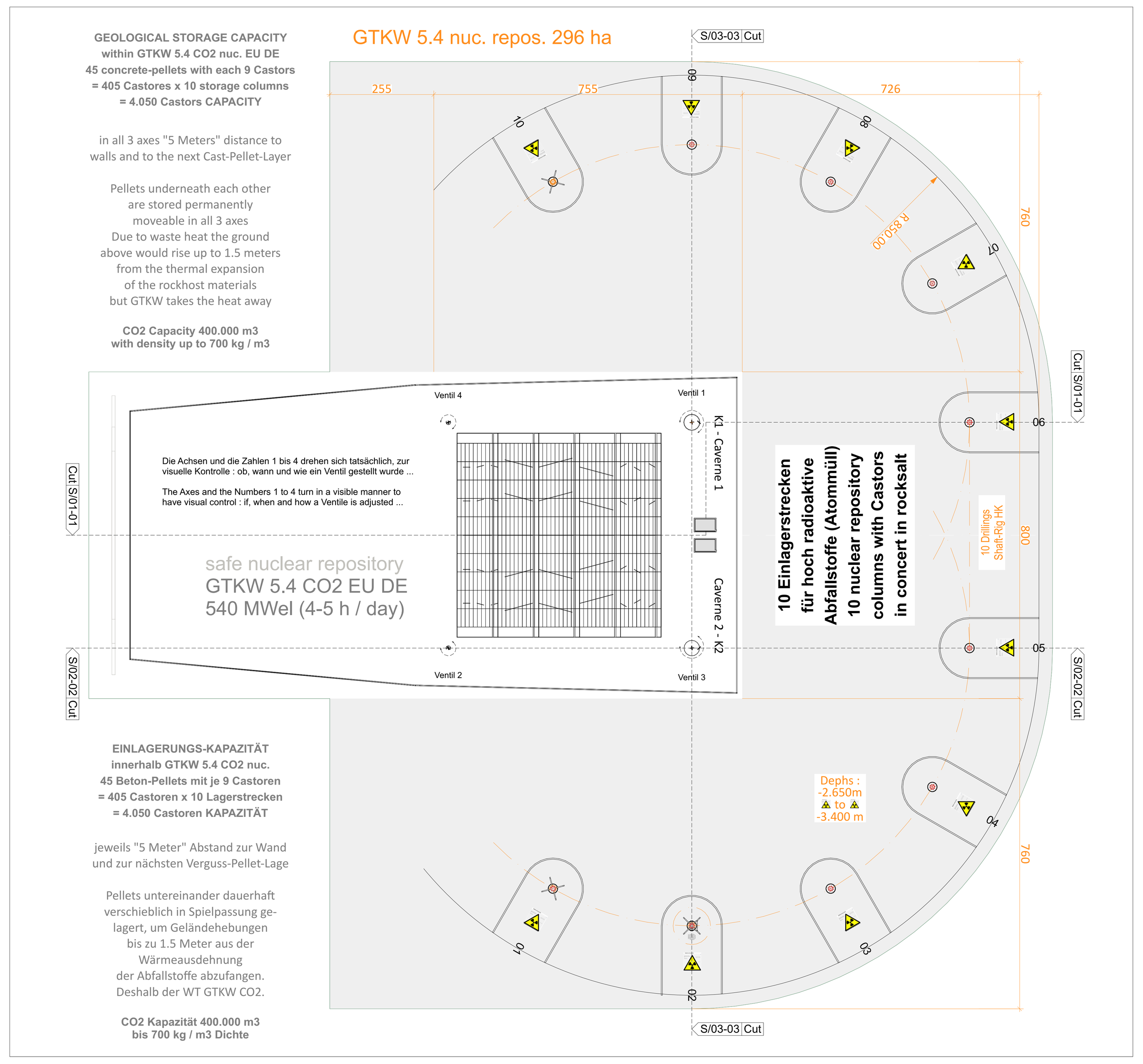
Leistungen eines ENDLAGER GTKW M-V 5.4 CO2 540 MW

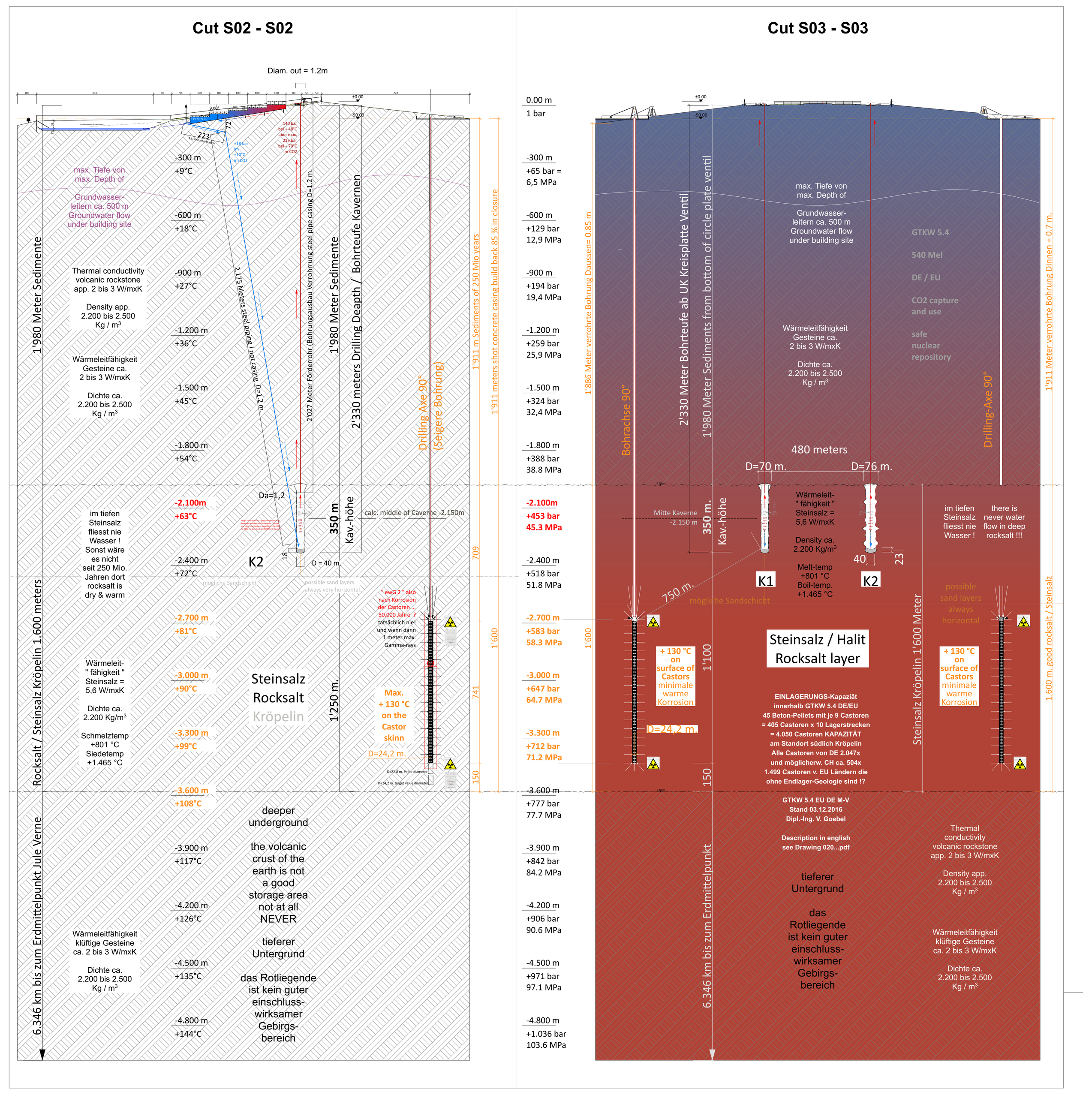
- **Stromerzeugung** 540 MW (Leistung)
- diese Leistung liegt 4-5 h pro Tag an
- das macht 2.430.000 kWh pro Tag
- das reicht um 221.738 Haushalte mit Strom zu versorgen (4.000 kWh / J.)

- ganz enorme Ab - **Wärmeleistung** der Kühlstrecke. Das reicht für eine 225.000 m^2 Gewächshaus-Struktur die ca. 3.750 Personen mit Gemüse, Obst und Blumen versorgen wird.

Er erfolgt eine CO2 - Nutzung - es wird kein CO2 in die Atmosphäre ausgestossen. - Antrieb nur aus Erdwärme und wärmeentwickelnden Brennstäben **Es wird nichts Fossiles verbrannt ...**

Leitungen eines GTKW 5. Generation





Temperatur im Erdkern ca. 5.500 °C
Druck im Erdinnern ca. 3,64 Mio. bar
Durchmesser d. Erde ca. 12.742 km
Gravitation im Erdkern ca. 0,00 m/s2
Stand heutige wissenschaftl. Theorie
tiefste Tiefbohrung ca. 14.000 Meter
(Russischer Weltrekord, Kola Bohrung)

Die Gravitationskraft entsteht aus einer Wechselwirkung von Masse, Druck und Temperatur - ein leicht exothermer Vorgang - siehe Auspressen von Ruhe-Energie aus Materie (A.E.)

Basiswissen zum Tiefbau ist für das Verständnis der Planung notwendig. Steinsalz ist gepresstes Salz das eine Dichte von ca. 2.200 kg / m3 hat und harte nukleare Strahlung max. 30 cm weit durchlässt. - Steinsalz schliesst alle Gase für 250 Millionen Jahre ein. Ungestörte tiefe Steinsalz-Schichten enthalten kein Wasser. Steinsalz ist selbstheilend da es langsam kriecht. Tief-Salz ist warm und trocken ...

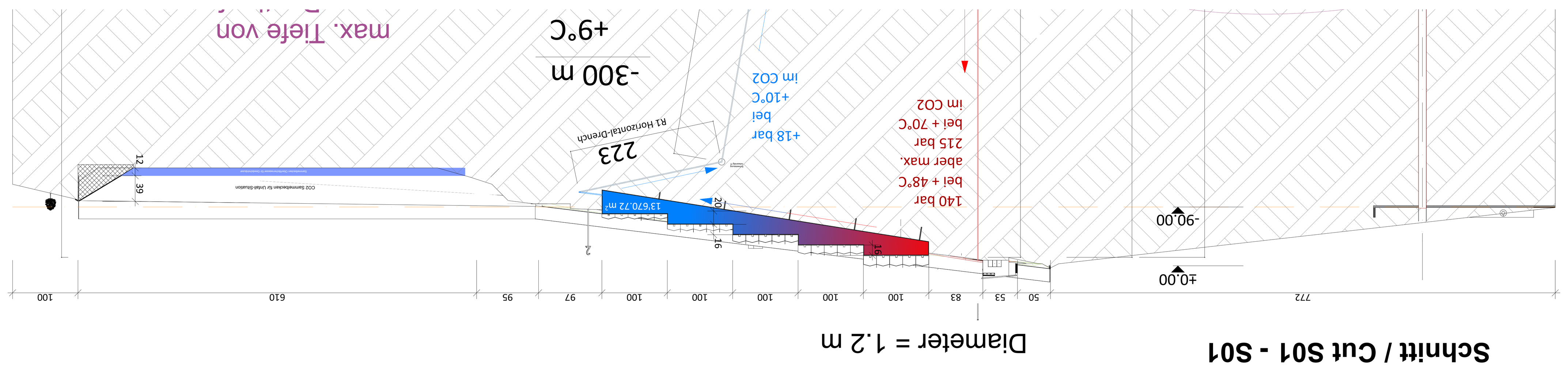
European Commission

> DG Research and Innovation
EU Advisors to EU commission

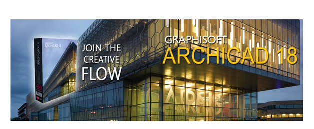
Deutscher Bundestag

We are expecting to win EU Call LCE-30-2017

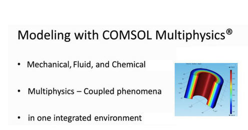
These " general technical draft - plans " show the finished, already build GTKW construction. To achieve this state of art building it needs a lot of highest level scientific research and on site construction plans to build this innovation.



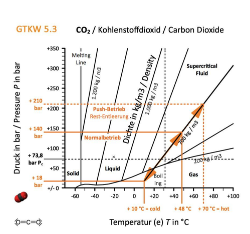
um in diesen Massstäben zu planen braucht man die beste CAD Sofware ArchiCAD von Graphisoft (Nemetschek AG München) sehr zuverlässige CAD kann Geometrie 3d .dxf und .ifc für die Wissenschaftler exportieren ... Vorschaubilder Architektur Konstruktionspläne etc. ...



um Temperaturen, Bergdrücke und CO2 flow, und Korrosion für eine 3D Knoten-Kanten Geometrie zu berechnen braucht es die beste Multiphysis Multichemics Software. Numeric Calculation on the nature element laws. Including flow Simulation based on propper math.



CO2 Chart Tabelle aus einem englischen Lehrbuch ein wenig bekanntes Diagramm in Deutschland



Architect / Ing. : Dipl.-Ing. FH Volker Goebel / Architect CH, DE

1. EU DE Reviewer Team GTKW Part CO2 :

1. EU DE Reviewer Team GTKW Repository :

Mountain Authority Bergamt M-V Stralsund :

City Kröpelin M-V : "600 Mio. EUR redliche Kompensationen"

Country Level M-V / Schwerin / SN :

State Level Germany BFE / BMUB :

HEIGHT, LOCATION, GEOLOGY:
± 0.00 = 50 meters above sea l. (54°02'55.82" North / 11°49'58.18" East) "south of Kröpelin"
Top Rocksaat -2.000 meters, Thickness 1.600 meters / geol. deepstep +3.0 °C / 100 meters

BUILDING:
GTKW 5.4 EU DE / CO2 capture and use up to 540 MWel.
Safe nuclear waste repository with heat exchanger unit
Pressure Medium : Carbon Dioxide from exhaust fumes RO
Heat : Geothermal and long term nuclear waste heat 16 MW

Ingenieur- und Architekturbüro Goebel
Mecklenburg Vorpommern
MV tut gut.

CLIENTs:
EU commission / DG research and innovation, EU countries, DE
Bundestag, "Kommission Lagerung hoch radioaktiver Abfallstoffe"

PROJECT-NUMBER: Project Nr. 05 Version 5.4

DRAFTSMAN: Dipl.-Ing. Volker Goebel

PLANAUTHOR:
Ingenieur- und Architekturbüro Goebel / Dept. of Geo. CO2 HLW
Gersauerstr. 85, 6440 Brunnen, Switzerland / Ratsteich 15, 19057 SN

DATE: Beginning with project 5 drawing: 02. September 2014

PLANNIINGPHASE:
Draft-Drawings of GTKW 5 CO2 540 MWel for scientific group research & implementation

LAST EDIT: 10. December 2016

PLANNUMBER: 019

PLANTITEL: GTKW_5.4_Ground_Plan_Biosphere

SCALES: **many - but all " to scale "**

PLANSIZE: 1.189 x 841 mm / DIN A0

imac/volkergoebel/Folder_GTKW_DBHD_ART-TEL_TTEL_2/Folder_001_AAA_GTKW_5.4_Finale_2016_2017/GTKW_5.4_EU_Original.pln

nuclear repository planner

Ingenieur- und Architekturbüro Goebel GmbH

Ingenieur- und Architekturbüro Goebel GmbH · Gersauerstrasse 85 · CH-6440 Brunnen

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Mobile (DE): +49 (0) 151 588 26 999
eMail: info@ing-goebel.ch
Internet: www.ing-goebel.ch

The European Commission
Pres. Junker and full EU Parliament
activated by Research & Innovation

B-1047 Brussels / Europe

GTKW
DBHD
ART-TEL
TTEL

ETHICS in CO2 and nuclear waste reposity research GTKW

Dear Ladies and Gentleman of the EU Commission, 20.12.2016

As far as we can see the CO2 problem really exists.
As far as we can see the nuclear waste problem still exists.

Concerning CO2 the geological storage seems to be the only option.
Concerning HLW the geological storage seems to be the only option.

That is already half of the answer to all ETHICAL GTKW questions.

To make it safe is the first priority. Dealing with such serious matters as CO2 and HLW (High Level Waste nuc.) **SAFETY** it what it needs.

Making use of the CO2 is **not mainly** for profit, as the nuclear waste produces and pumps 9 to 16 MW heat per second into the mountain, the GTKW is the only heat XL exchanger, that is able to take the heat away from the nuclear repository – otherwise the landscape above is lifted 1,5 Meters by thermal expansion. That leads to many problems. For years the GTKW was criticized for the CO2 heat exchange AND in the end, it turned out to be the only possible solution ! GTKW won.

The GTKW plant is equiped with walls and a huge huge area for the accident case of a serious CO2 leak on a day without wind. **SAFETY**

The GTKW nuclear repository is by far the safest ever designed in a worldwide competition. - 2.700 Meters deep and made of CASTORS, 5 meter concrete around in a dry and warm rocksalt evironment. And that is all we can say about it is : **SAFETY, SAFETY and SAFETY .**

It is the ETHICS of building GTKW 5.4 in a SAFE manner for ever.

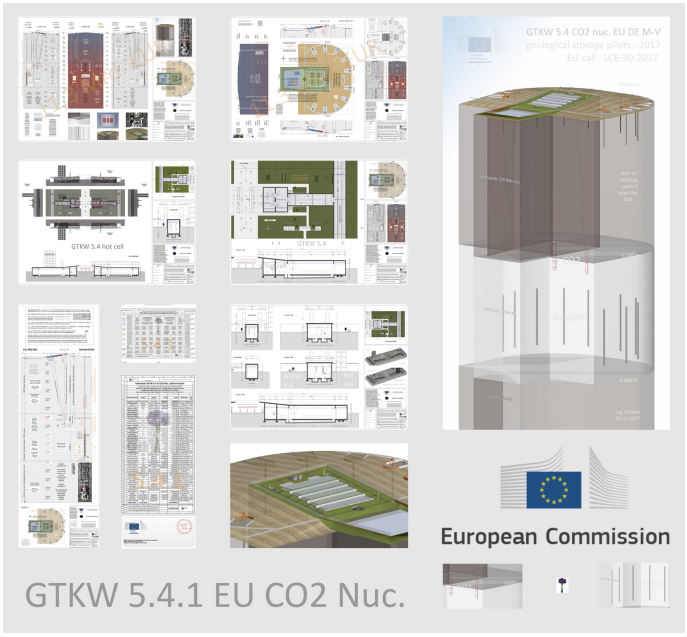
Best regards from

48 EU companies, EU institutes, EU universities and DE government.

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

GTKW 5.4 EU CO2 Nuc.

Research & Innovation



Cover page

Geological carbon capture in use as heat exchanger for a safe geological nuclear repository.

5.4 is the actual version number, after 12 years German government wants to see results in high level research and science for that parliament can decide. (50 % capacity DE, 50 % EU)

List of participants >>> that is 48 companies, institutes, universities and gov. agencies !

Participant No *	Participant organisation name	Country
1 (Coordinator) Dipl.-Ing. Volker Goebel	Ingenieur- und Archit. Goebel GmbH	**CH** / DE
2 Freiberg "Mountain" University TuBAF	Prof. Dr.-Ing. Matthias Reich + 5 other	DE
3 Amphos 21 Consulting S.L.	Dr. Jorge Molinero	ES
4 Comsol Multiphysics GmbH	Dr. Melanie Pfaffe, Dr. P. Oberdorfer	DE / US
30 Geostock SAS / UGS	Dr. Carlos Gomez Montalvo	FR / DE
33 Kuka Robot Systems UK Ltd.	John Dilworth, Neal Owen,	UK / DE
48 Dr. Andrew Orrell	International Atomic Energy Agency	AT

* Same participant numbering as that used in the administrative proposal form already. (48 participants)

GTKW 5.4 EU CO2 Nuc. = CO2 capture and use as heat exchanger for safe nuclear repository (GTKW does also 540 MWel power for 4-5 hours per day by the ESSENTIAL heat exchanger!)

https://www.ing-goebel.de/gtkw-in-eu-lce-30-2017/ > https://www.ing-goebel.de/gtkw-5-4-co2-nuc-eu/

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

1. Excellence

The GTKW proposal addresses a tough 24 month work programme for LCE-30-2017 It is strongly related to the topics "geological storage pilots" and "low carbon energy" We have to achieve the maximum possible excellence ! XL money and a wicked task.

1.1 Objectives

- During the 24 month we do the required research and science to be able to build the GTKW. > Research and building applications 24 month. Parliament decision. > Building.
- It is about a collection facility for CO2. The CO2 is used within a giant heat exchanger to produce 540 MW electric energy. The giant heat exchanger is essentially needed for that the earth above the safest possible nuclear waste repository does not rise by thermal expansion caused by the nuclear waste heat of 4.050 Castor Containers. – We have plans!

1.2 Relation to the work programme

- The EU work program looks for "geological storage pilots" – GTKW offers that within rocksalt geology with sediments above. By latest shaft boring technology we manage to store the Castors in Concrete in Rocksalt, and we manage to store the CO2 in huge caverns. Germany has a wide experience in making caverns. GTKW does 2 cavernes 440.000 m3.
- The EU work program looks for "low carbon energy" that is supplied by the CO2 stream over the 2 generators in an amount of 540 MWel for 4-5 hours a day (a peak power plant) In GTKW we use high densities of CO2, that deliver + 140 bar pressure at only + 48 °C

1.3 Concept and methodology of research, science and innovation

(a) Concept

- The main tasks are to verify the by 12 years of work existing plans, by calculations that are undertaken in Comsol Multiphysics Software in connection with Multichemics. – We have 3 teams to calculate the 3D system concerning : heat, flow, geomechanics, corrosion. Please notice that the Comsol Budged of 2,2 Mio. EUR is within the Coordinators budget because Comsol fears that the EU only grants them a percentage of what it really needs !
- The GTKW is well known to the scientific world for years now on low budget level. The GTKW is well known to the deciding members of german parliament for 2 years now but they want us to do all scientific research possible before they decide for invest & location.
- There is a lot of national and international research within the project already, but as we need to proof everything on scientific level, we need the tools and the time to do that. As we also have to build a working 1:200 model and a calculation up to 1 million years by law, we have to work with a team on it. Within 12 years 48 participants showed interest.

(b) Methodology

- For more then 45 years there has been no more safe nuclear waste repository concepts on the market. German commission made all data public and GTKW is a full public approach to build a repository, by the quality of innovation, by the integration of all sciences and by an open door to the public. It is a big approach carried by many participants of all sides.

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1.4 Ambition

- The first working safe geological CO2 repository (collecting, storing and using CO2)
- The first safe geological nuclear waste repository (collection and using the waste heat)
- The innovation potential is in fact massive. All countries with rocksalt geologies in Europe and other parts of the world can make use of the GTKW/DBHD technology. The CO2 emission free electric energy generation, and heat use will enable even a 20 Mrd. people population to survive on earth. The time of burning fossil energy will be the past then …

2. Impact

2.1 Expected impacts

- Mankind can stop burning the limited fossil energy carriers – and save them for the chemical industry and for flying planes where Kerosin still will be needed for a long time.
  - No more pollution of atmosphere and biosphere with CO2 and other fumes of all kind
  - No more risk of potential corrosion leaks of (gamma ray emitting) radioactive waste
  - No more risk of potential corrosion leaks of fission products (also a chemical waste)
  - Decentral production of electric energy and food production by the rest heat amounts
- The biggest barriers/obstacles are to explain the public and the politicians the real character of CO2 and nuclear waste and rocksalt. Once it is explained and understood by a wide rage of public, public opinion carriers and parliament politicians we can go into this green technology. For the case of a CO2 leak the engineers have cared already. Even you experts have to look into the 2 attached plans, printed out in DIN A0, to understand GTKW. Although the plans are public for 2 years and there was only little criticize that we already managed to get out by changing the plans again and again it is still a long way to go. GTKW build time is between 10-14 years. DE government collects 23,6 Mrd. EUR. We have nearly 80 positive letters from : local to parliament members nationwide to EU.

2.2 Measures to maximise impact

a) Dissemination and exploitation of results

- The government of Germany wants to build GTKW mainly for the reason to have a safe nuclear waste repository. German government started collecting the double amount of money, because the price of 11.3 Mrd. EUR is without VAT, without the Castors and railway transports. (these elements are not science) Goverm. collects 23.55 Mrd. EUR.
- As all research and science results are going to be public on the internet in real time with full information given the branch, the public and the reviewers will see the work and the results and can give additional information
- GTKW team will hire EU staff for that the building plans can reach every country that got the required rocksalt geology – and official maps show that this is a lot of countries.

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- We do not have a business plan yet in the early stage. But we have technical plan in .pdf, an organigram with all companies and institutes and building companies in and we have a 3rd rough calculation to becomes more and more precise with the month. All that is fully public and the project got many followers in EU countries and countries around the world.

- As relevant, include information on how the participants will manage the research data generated and/or collected during the project, in particular addressing the following issues:

    - Thermodynamic calculations and visible simulations on scientific level

    - The standards of todays and tomorrows science and technology are applied

    - The group of peer review government agencies and peer review institutes is already defined and some of them are already participants while others have to stay completely independent for that their reviews are fully independent.

    - All data will be fully accessible on the internet and office of german chancler is doing archive for 2 years now. They just started with it because minister of chancler office used to be the german minister of environment before.

    - The costs for data curation and preservation are in fact very little and are payed in advance form the research funds we get from the EU.

b) Communication activities[1]

- As written before, project development happens anyway in full public and we have 2 highly ranked professors within the participant group that cares for the public with public events and workshops in bigger cities and especially around the proposed GTKW location south of the village of Kröpelin / in Mecklenburg-Vorpommern / in Germany / in Europe.

3. Implementation

3.1 Work plan — Work packages, deliverables

Please provide the following:

- Based on the technical drawings we do research and science to find out more about the GTKW by numerical calculations and simulations – we also have a deep look into how to build it – how to operate it in as safe manner and how to communicate it to public and decisions makers in parliament. The technical plans have to be changed every time it is necessary. 48 participants with different work packages !

- The main thermodynamic calculation in Multiphysics and Multichemics is done by 3 independently researching team. Other subjects like the drilling jobs are researched and worked out by 2 independent teams. Many other subjects are in fact researched by companies in competition to each other. So we stay away from making detailed work packages and use the competition to find best solutions that lead to the defined target of GTKW. (CO2 capture, nuclear repository, making 540 MW electric current, using rest heat to operate greenhouses for food production)

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3.2 Management structure, milestones and procedures

- During the 24 month research and science phase we have a board of 3 directors that we call the senators. They decide what the coordinator has to change in the technical drawings because only the technical drawing are binding to all 48 participants.

- We chose to have 3 directors / senators because the coordinator is only a Dipl.-Ing. FH while many of the participants involved have a much higher academic qualification.

- Our main objective is that the scientists can think GTKW the way they see it in competition with other scientific groups. What we want is originally work out solutions and to targets that they have to achieve. Scientist need the freedom of science.

- The main critical risk is that we get very different science results. For example there might be groups saying / writing that GTKW will not work because of this and that. And there will be also groups saying / writing it will work because of this and that. If the results of free science on the GTKW are different it will be difficult to find out about the truth.

- One Milestone will be the 1:200 working model to prove the GTKW system. Another milestone will be the work in the CO2 laboratory, rocksalt laboratory and carbon concrete laboratory. Concerning these 3 subjects there is still a lot of tests and science to do.

3.3 Consortium as a whole

- The board of directors / senators (what you call consortium) is made up of Mr. Michael Sailer who had the main scientific role in German parliament commission on nuclear waste repositories (a Dipl.-Ing. in chemics) The second director is Prof. Dr. rer. nat. Armin Grunwald that is the leading German scientist in ethics in technology. And we also have Dr. Bracke who spend his whole life on CO2, nuclear waste and rocksalt. These 3 well known personalities ensure that Dipl.-Ing. Goebel does not do things on his own.

- The 3 Senators have a life long approved experience in the theme and they have given advice to public and government many times in the past. They are the technical and ethical authorities to control where the group of 48 participants is going within 24 month.

- As the GTKW CO2 Nuc. will be a massive investment of at least 11.3 Mrd. EUR mainly coming from energy consumers there will be a heavy impact in several markets. For example the building industry, the container industry, the salt market, the market for advanced shaft boring and rotary drilling industry and many other markets in Europe.

- **Other countries and international organisations**: 5 of the participants come from Switzerland – we have to have them because they represent the highest knowledge within their fields of science and research. Some of them are independent peer review parties. Many participants come from Spain, Sweden, Austria, France, Italy, Norway the UK and other European countries. The goal is to have an international group of people from other nations involved so that the GTKW knowledge (based on German scientific and technological start knowledge) spreads out by the time into other EU countries and some other countries like the US, Australia and Russia that have huge rocksalt geologies more then 250 Mio. Years old. – Remember, the repository is a geology – not a building. All we do is to create “Entrance buildings and spaces” into very old rocksalt geologies.

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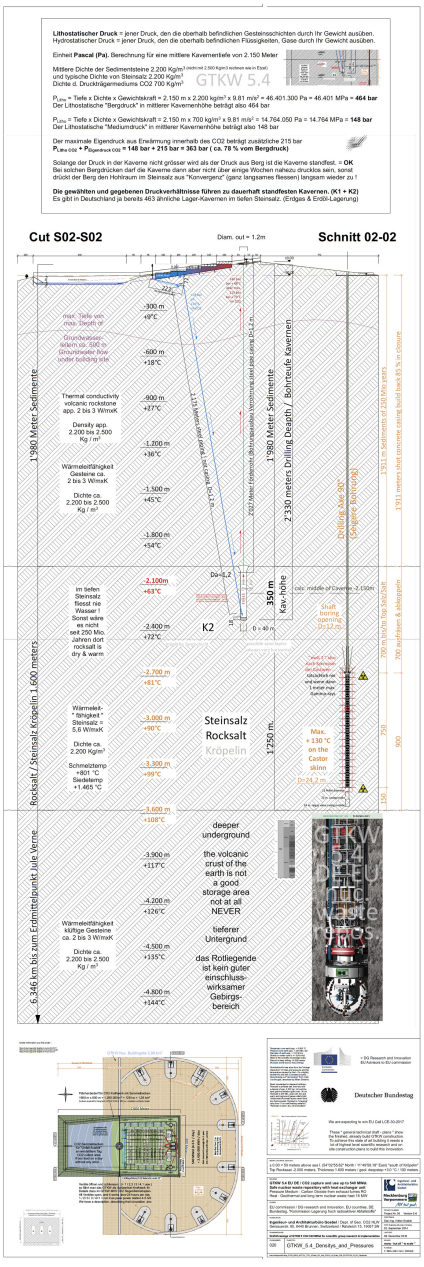
3.4 Resources to be committed

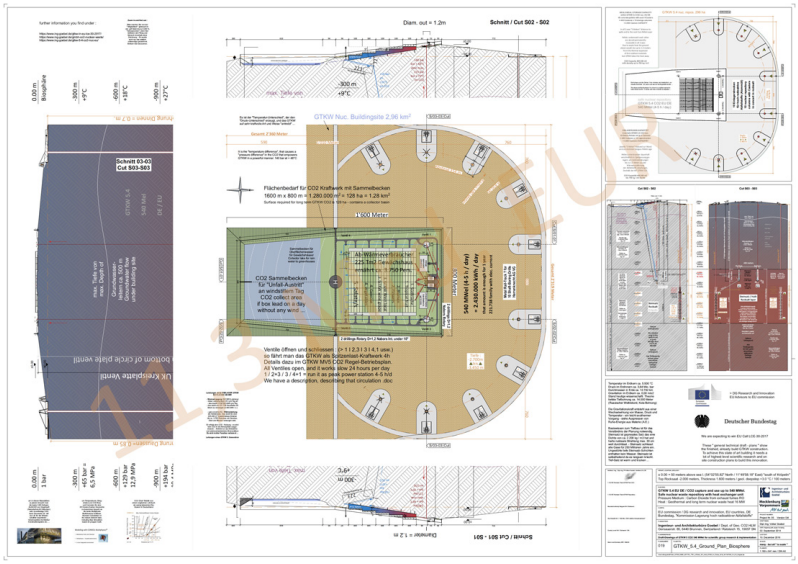
Please provide the following:

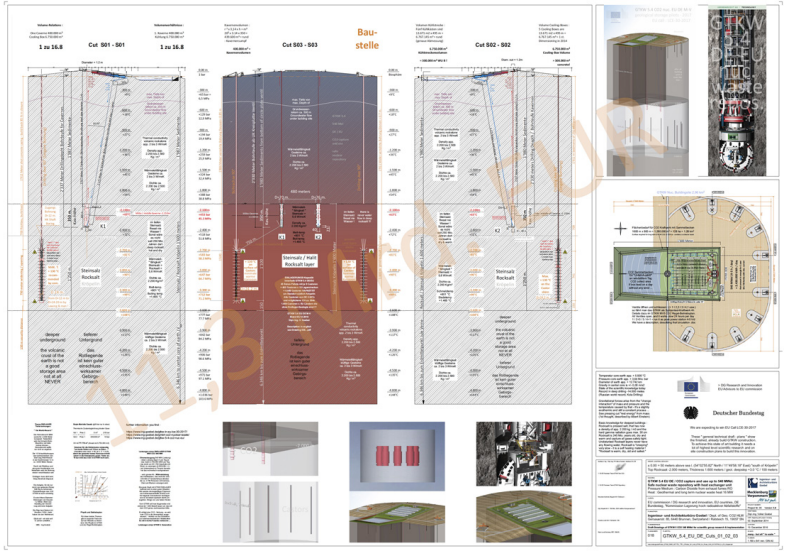
- a table showing number of person months required >>> see EU List of 159 pages
- a table showing the proposed members in building >>> see GTKW Organigram
- **we apply for a 100 % funding** – no participant would be able to do it alone and all research & science work goes into government projects by the end of the day

DIN A0 plans, - use Acrobat reader to look + 3.600 % into the .pdf or print them on DIN A0

Price 11,3 Mrd. EUR + VAT + Containers + transports (> DE gov. collects 23,55 Mrd. EUR)







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Tables for section 3.1

Table 3.1a: Work package description (but only ONE explicit example possible here)

For each work package: IMPOSSIBLE – we have 48 participants, its all in the website https://www.ing-goebel.de/gtkw-in-eu-lce-30-2017/ and https://www.ing-goebel.de/gtkw-5-4-co2-nuc-eu/ and in the list 159 pages d886df50-99e0-485d-b050-15dd2036d011.pdf on the EU server

Work package number	2 TuBaf	**Lead beneficiary Tu BAFreiberg DE**			**University**	
Work package title	Thermodynamics, Comsol, Drilling Shaft, Rotary, Closing plan					
Participant number	2	2	2	2	2	2	2
Short name of participant	Dr. MR	Dr. CH	Dr. MH	Dr. MR	SW	DB	etc.
Person months per participant:	9 month within 24 m.	9 month within 24 m.	3 month within 24 m.	9 month within 24 m.	9 month within 24 m.	3 month within 24 m.	3 month within 24 m.
Start month	By EU decision app. June 2017			**End month**	By Senator decision app. May 2019		

Objectives (remember it is not only staff cost – it is also very expensive soft and hardware + travel
Thermodynamic calc. Heat, Flow, Geomechanic, Corrosion – 2x Deep drilling – Closing holes plan

Description of work (where appropriate, broken down into tasks), lead partner and role of participants

Prof. Dr.-Ing. Matthias Reich – planning of 7 exploration drilling (rotary core drillings)
Planning of 10 "world record" shaft bore drillings, Planning of 4 big diam. Rotary drills

Prof. Dr.-Ing. Christian Hasse – numeric physical calculation and simulation of heat, flow geomechanics and corrosion over 500 years and 1 Mio. years (is required by German law)

Dr. Martin Hofmann – research and planning of the safe closure of 10 holes procedure

plus several scientific assistants and administration staff

Deliverables (brief description and month of delivery)

The professors and doctors and engineers do science and research that lead into planning for the reason that such building work has never been undertaken before and very critical materials are involved. Many of the required technologies only exist in planning stage yet.

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Table 3.1b: List of work packages >>> **(Attention : Comsol soft-and hardware for 2.2 Mio. EUR is in coordinator companies account)**

No	Work Package Title Names in Submission form list, only work package content here	Lead Participant No	Lead Participant Short Name	Person-Months	Start month or earlier dep. EU	End month
1	Coordination, Lead, (COMSOL)	1	VG	202	07.2017	06.2019
2	Thermodyn., Drilling, Closing	2	MR	63	07.2017	06.2019
3	Thermodynamic Calc. & Simul.	3	JM	67	07.2017	06.2019
4	COMSOL budged in account 1	4	MP	3	07.2017	06.2019
5	CO2, Rocksalt Lab., Knowledge	5	GB	202	07.2017	06.2019
6	Ethics in science, Public Comm.	6	AG	39	07.2017	06.2019
7	CO2, Geology, Nuclear waste	7	FM	73	07.2017	06.2019
8	Casting Techn., Deep Drilling	8	KR	76	07.2017	06.2019
9	Deep Drilling by Shaft Boring	9	PR	176	07.2017	06.2019
10	World record shaft bore Drilling	10	TE	25	07.2017	06.2019
11	Government Review Authority	11	CO	34	07.2017	06.2019
12	Research by repository Builders	12	JK	34	07.2017	06.2019
13	Research undercritical Castors	13	HW	76	07.2017	06.2019
14	Government Review Authority	14	HW	34	07.2017	06.2019
15	Research by repository Builders	15	JK	34	07.2017	06.2019
16	Government Review Authority	16	TE	17	07.2017	06.2019
17	Nuclear waste knowledge Axpo	17	AW	17	07.2017	06.2019
18	Nuclear waste knowledge E.ON	18	BF	17	07.2017	06.2019
19	Nucl. waste knowledge Enbw	19	AS	17	07.2017	06.2019
20	Thermodyn. Calc. and Simul.	20	TS	101	07.2017	06.2019
21	Nuclear waste knowledge RWE	21	GJ	17	07.2017	06.2019
22	Research in repository building	22	BT	34	07.2017	06.2019
23	CAD Support different systems	23	JG	34	07.2017	06.2019
24	Lead, knowledge de ch politics	24	MS	48	07.2017	06.2019

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25	CO2 Laboratory, Knowledge	25	AR	34	07.2017	06.2019
26	Political trade knowl. M-V DE	26	RB	34	07.2017	06.2019
27	Nuc. waste knowl. Vattenfall	27	CS	17	07.2017	06.2019
28	Castor Container Testing Res.	28	CK	70	07.2017	06.2019
29	Research of cavern planning DE	29	FC	67	07.2017	06.2019
30	Research of cavern planning FR	30	JMN	67	07.2017	06.2019
31	Government Review Authority	31	WK	25	07.2017	06.2019
32	Rocksalt knowledge experts lab.	32	TB	34	07.2017	06.2019
33	Robotic remote Castor opening	33	JD	22	07.2017	06.2019
34	Research Rocksalt & Cavernes	34	WM	20	07.2017	06.2019
35	Andra Knowledge on nuc. waste	35	JPB	1	07.2017	06.2019
36	Geothermal heat knowledge	36	HK	11	07.2017	06.2019
37	Geothermal heat use knowledge	37	JB	1	07.2017	06.2019
38	Public Relations in Energy Q.	38	CK	1	07.2017	06.2019
39	CO2 Turbine Eng. Research	39	UB	20	07.2017	06.2019
40	Posiva Knowledge nuc. waste	40	SP	1	07.2017	06.2019
41	Local political knowledge	41	UK	17	07.2017	06.2019
42	carbon concrete prod.knowledge	42	MC	62	07.2017	06.2019
43	High level knowledge in physics	43	TK	1	07.2017	06.2019
44	Research cooling box construc.	44	UD	53	07.2017	06.2019
45	Sogin Knowledge on nuc. waste	45	PV	1	07.2017	06.2019
46	IT knowledge communication	46	FG	28	07.2017	06.2019
47	Knowledge on nuclear waste	47	AH	1	07.2017	06.2019
48	International Review Authority	48	AO	1	07.2017	06.2019
	The list is “unreal” it is not only about staff / person month ! It also got huge invests for soft- & hardware & workmodels 1:200		Total person-months	2.026	07.2017 or earlier EU dec.	06.2019

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Table 3.1c: List of Deliverables

As the GTKW science, research and innovation team work live and all results are published online we do not want a list of Deliverables. The development has to be able to react instantly on new results and most of the participants we work with we know for years now. They know exactly what they want and what they have to do. For getting honest results we do NOT do a list of Deliverables.

Tables for section 3.2

Table 3.2a: List of milestones

Milestone number	Milestone name	Related work package(s)	Due date (in month)	Means of verification
A	Proving CO2 circulation Heat exchanger for the Safe Nuclear repository	1,2,3,4,5,6,7,11,14, 16,20,23,24,25,26, 29,30,31,32,34,36, 37,38,39,41,42,44	8	Successful Calculation and Simulation and Model 1:200
B	Proving nuc. repository safety for 1 Mio years	1,2,3,4,5,6,7,8,9,10, 11,12,13,14,15,16, 17,18,19,20,21,22, 23,24,25,26,27,28, 31,32,33,34,35,38, 49,41,43,45,46,47,48	14 to 24	Successful Calculation & very long term Simulation
C	Proving building ability	1 to 48	8-12	Offers from builders
D	Doing building application	1 to 48	2 -12	Application documents

Table 3.2b: Critical risks for implementation

Description of risk (indicate level of likelihood: Low/Medium/High)	Work package(s) involved	Proposed risk-mitigation measures
Possible faults in planning / Low	1 to 48	Doing honest research and science
Poss. problems in public / Low	1 to 48	Doing honest comm., Answ. Quest.
Poss. problems in parliament / Low	1 to 48	Doing honest reseach, Answ. Quest.
Possible problems in building / Low	1 to 48	Doing solid reseach and planning

As we work on GTKW on lowest budget for years now with many people we already had our problems. The project has been dead 4 times already by technical problems – but we managed to find solutions. Constantly we work on acceptance by explaining it again and again to all levels of branch and society and politics and public. We also publish every step on a website and in social networks. - GTKW 5.0 has been already in the newspaper and it took ages to answer every question. – There will be always risks on the way to implement-tation – and as before we will manage to find real and honest solutions. And if not one day we might stop it.

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Tables for section 3.4

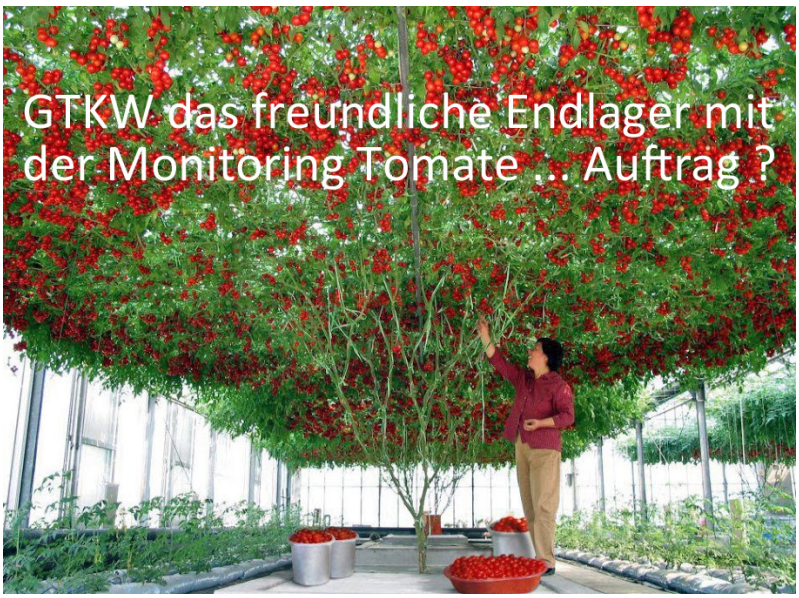
Table 3.4a: Summary of staff effort

The summary of staff effort in "person-month" is indicated with relation to work package in the table number 3.1b above. – We have staff cost with office and lab environment in the area of 16 Mio. EUR plus the 2,2 Mio. EUR for Comsol Soft- and Hardware for 3 independent teams. The huge amount of the Comsol invest is in budget of coordinator because Comsol only wants to be paid be the coordinating company and not by the EU. Comsol fears to get less then 100 % being usual participant, and Comsol also wants to stay independent because they are also involved in projects that can be a potential completion to GTKW. – We have to accept that.

Table 3.4b: 'Other direct cost' items (travel, equipment, other goods and services, large research infrastructure)

Participant Number/Short Name	Cost (€)	Justification
Travel	Please see the **P**roposal **S**ubmission	a group with 48 participants have to meet from time to time and we want to enforce "interactions between different science disciplines" We mainly used column "C" in proposal submission form for travel costs as we hardly have any subcontracting costs planned.
Equipment	**F**orm from	CO2 Lab. LINDE, Rocksalt Lab. GRS, Carbon concrete lab. UNI D.
Other goods and services	the EU Server	"No works are undertaken outside the participant group." As we do research and science we need no goods apart from the 1:200 model
Total	18 Mio. €	

In the end of a very, very long way, we will "also" have a proving "monitoring cherry tomato"



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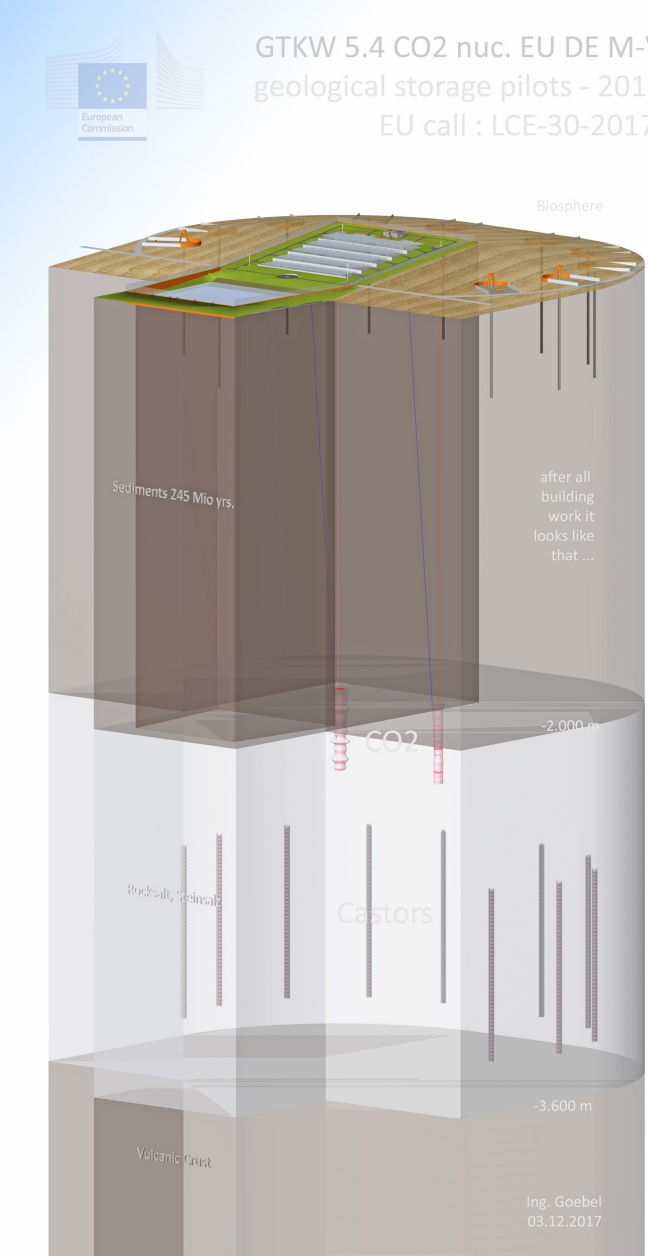

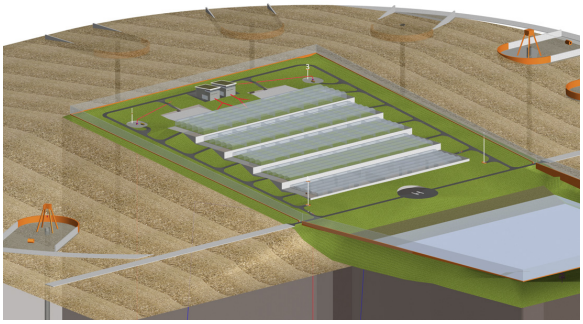

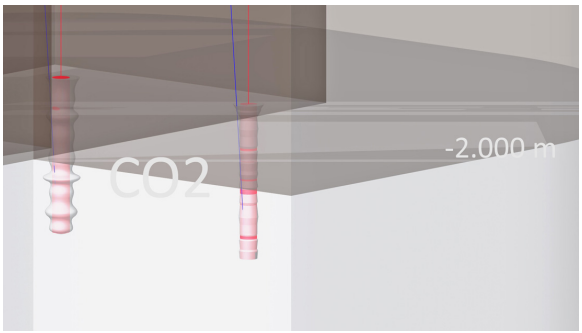

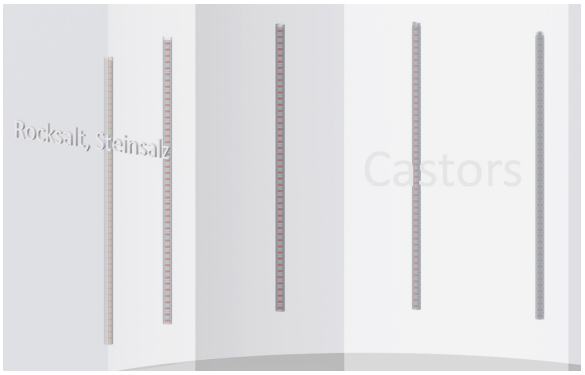

Dear honourable scientific judges of EU departm. research & innovation,

GTKW 5.4 makes sense. It looks so simple, but it is very hard to achieve.

Will you please grant the applied funds a 100 % please. - Will you please print out the technical .pdf plans 018 and 019 on DIN A0 please to understand GTKW 5.4 – Will you please give good advice to EU commission.

With best regards and sincerely yours

a scientific group of 48 participants from DE, FR, UK, CH, ES, FI, IT, AT

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	A	B	C	D	E	F	G	H	I
1		Ingenieur- und Architekturbüro Goebel	Version 0.2.3		https://www.ing-goebel.de/gtkw-5-4-co2-nuc-eu/				
2		**Kalkulation GKTW 5.4 EU CO2 Nuc. südlich Kröpelin**							
3		Bauort M-V / BRD - Stand 13. Dez. 2016 / Dipl.-Ing. FH V. Goebel / Architekt							
4		**Kapazität : 4.050 Stück Endlager-Castoren / ca. 40.000 Mg. hoch radioaktive Stoffe**							
5		**Einlagerungs-Teufen-Vertikal : von -2.700 Meter bis -3.450 Meter**							
6		Basis : Bauantrags Zeichnungen Masstäblich / Planung 2014 - 2016 z. Z. Version 5.4.1							
7				Teufen = Tiefen		40 Mg = 40 Tonnen			
8									
9		**Kostenart / Invest**	**Menge**	**Angebot**	**Faktor**	**Summe**	**Bemerkung**	**Zng.**	
10				oder Hinweis von				Belege	
11		Planungsbüro bis jetzt	(10 J) + 2,5 Jahre	Ing. Goebel	**1'500'000 €**	**1'500'000 €**	10+2.5 J. Leistung	vorh.	
12		**Probebohrungen**	10 Stück	Prof. Dr.-Ing. Reich	9'000'000 €	90'000'000 €	Kerne bis -3.750m	vorh.	
13		Landkauf	5,4 km2	BRD oder GmbH	Verhandlungssache	70'000'000 €	530 Hektar	vorh.	
14		externe Strassen	20 km	Anfahrt z. Bauort	400'000 €	6'000'000 €	Neu / ertüchigen	z.T.	
15		**interne Strassen**	8 km	Schwerlastverkehr	2'025'000 €	17'000'000 €	Baustelle & Fertig	vorh.	
16		**DB Gleisanschluss**	1	Deutsche Bahn		9'000'000 €	Doppelgleisig	z.T.	
17		**Stromanschluss**	2	Vattenfall GmbH		5'500'000 €	10 kV Mittelsp.		
18		**Wasseranschluss**	2	Lokal + Anlieger		14'500'000 €	10 bar DN 200		
19		**Tube House Office**	1	Ing. Goebel + FB		3'500'000 €	vor Ort Office Hab.	vorh.	
20		**Vergusshalle, 3 Deckel**	2x550.000 m3 BV	Erfahrungswerte	1.500 €/m3	1'650'000'000 €	100 Castoren/Mo	vorh.	
21		Krananlagen	12 Stück	GmbH	120'000 €	1'440'000 €	je 1 Typ Reserve	z.T.	
22		Robotertechnik	8 Stück	Kuka UK/DE	1'100'000 €	8'800'000 €	Titan Roboter-Sets	z.T.	
23		Verguss Magnetit	81.000 Tonnen	Rio Tinto, Billiton	600 €	48'600'000 €	pro Tonne AU, SE	Irak	
24		Verguss-Vorgänge	4'050	Prof. Dr.-Ing. Röhlig	8'700 €	35'235'000 €	TU Clausthal	z.T.	
25		**interne Logistik**	div. Transporte	GTKW GmbH		48'000'000 €	Baustelle & Fertig	vorh.	
26		**Shaft BM D=12m**	2	Herrenknecht AG	75'000'000 €	150'000'000 €	Nutzung 15 J.	z.T.	
27		**Stahlseile**	12	Fatzer AG CH	11'100'000 €	133'200'000 €	D = 72 cm/3.500m		
28		**Bohrplatzplatten**	12	2x Cav. / 10x DBHD	600'000 €	7'200'000 €	Platte, Rand. Loch	vorh.	
29		**Windenhaus**	10	Stahl- Betonbau	3'000'000 €	30'000'000 €	Winde sehr gross !		
30		**Stahlseil-Galgen**	5	Stahlbau	4'000'000 €	20'000'000 €	Seildurchm. 80 cm	z.T.	
31		**Abfindungen M-V**	20000 Stück	RA in Kröpelin	30'000 €	600'000'000 €	redliche Komp.		
32		**Start-Gerüst SBM**	2	Stahlbau / HK AG	11'000'000 €	22'000'000 €	SBM arb. vertikal	z.T.	
33		**Schachtvortrieb**	10 x 3.650 m	Herrenknecht AG	38'000 €	1'387'000'000 €	10 x Weltrekord	vorh.	
34		**Schachtausbau**	10 x 2.900 m	Züblin / HK AG	13'000 €	377'000'000 €	Spritzbeton SBM		
35		**Sägen > D=24,2 m.**	10 x 345.000 m3	Zübin AG	210 €	724'500'000 €	Männer mit Stihl		
36		**Beton für Pellets**	450 x 7.235 m3	BRD, Holcim	350 €	1'139'512'500 €	das kostet was !		
37		**Schachtrückbau**	10 x 2.600 m	Züblin AG	15'000 €	390'000'000 €	Verbau gtkw 72 m		
38		Verfüllungen	10 x 305.208 m3	Züblin AG	270 €	824'061'600 €	z. T. Ortsmaterial	z.T.	
39		**GTKW Bohrungen**	4	Nabors Intern.	24'000'000 €	96'000'000 €	D aussen 1,2 m	vorh.	
40		dickw. Rohre	12 km	Eisenbau Krämer	625'000 €	7'500'000 €	bis 1,5 T. pro M.		
41		Horizontal-Rohre	2	Züblin AG	8'000'000 €	16'000'000 €	Graben-Verlegung	vorh.	
42		Verrohrungs-Arb.	15 km	Züblin AG	5'000'000 €	75'000'000 €	schwere XL-Rohre	z.T.	
43		ZuW.-Versorgung	7 km	Hochtief AG	671 €	4'700'000 €	Kavernensolung	z.T.	
44		W-Recycling-Anl.	2	Wasser-Recycling	2'500'000 €	5'000'000 €	Kavernensolung	N.N.	
45		AbW.-Pipeline	7 km	Hochtief AG	500'000 €	3'500'000 €	Kavernensolung	z.T.	
46		Kavernensolung	2 Stück	KBB und/oderUGS	50'000'000 €	100'000'000 €	je Stück ca. 1 Jahr	vorh.	
47		Salztrocknung	3 Eindampfer	K-UTEC	30'000'000 €	90'000'000 €	Salz und Wasser	vorh.	
48		F.-Planungsbüros	diverse	siehe Listen, Orga.		120'000'000 €	über 10-14 Jahre		
49		Genehmigungsgeb.	diverse	BRD, M-V, B.-Amt		50'000'000 €	Gebühren		
50		GTKW Hügel 77m	50.000.000 m3	KKW Betonteile	60 €/m3	-3'000'000'000 €	freigemessenes		
51		**Kühlkastenbau**	6.700.000 m3 BV	Hochtief AG	450 €/m3	3'015'000'000 €	Preis der Freiheit	z. T.	
52		Turbinenhaus	m3 BV	Hochtief AG	2'000'000 €	4'000'000 €	mit Steuerstand	vorh.	
53		Gener.-Turbinen	3	Siemens, o. Ä.	2'100'000 €	6'300'000 €	1 in Reserve	N.N.	
54		Lagerplätze	2	Hochtief AG	130'000 €	260'000 €	Gener. und Rohre	z.T.	
55		Ventil-Schieber	8		50'000 €	400'000 €	1 Satz in Reserve	N.N.	
56		W-Sammelteich	1	Züblin AG		1'700'000 €	mit Lehmboden	z. T.	
57		Loop Center	1	Hochtief AG		15'000'000 €	Besucherzentrum		
58		CO2, tiefkalt	400.000 m3	aus Abscheidung	1.200 €/m3	480'000'000 €	700 kg/m3		
59		Tankwagenanl.		E.ON und Andere			frei Baustelle		
60		Gewächshauser	225.000 m2		2.000 €/m2	450'000'000 €	für 3.750 M./GJ	z.T.	
61		Erdkabel	4 km			1'600'000 €	hin zur Stadt Krö.		
62		Sockelmauer	2,6 km / 30 m h.	78.000 m2	450 €/m3	3'510'000 €	Züblin AG	z. T.	
63		Glasrand	2,6 km / 30 m h.	78.000 m2	300 €/m2	23'400'000 €	wg. Sicherheit	z.T.	
64		Salzverkauf	10 x 345.000 m3	GTKW GmbH	110 €/m3	-379'500'000 €	Asse BfS /Gorleben	DBE	
65		Unvorhersehbares	25%	Rückgabe Pos.		2'250'729'775 €	ist kein Flughafen		
66		**Summe Stand**	**13. Dez. 2016**			**11'253'648'875 €**			
67	Kopie von 010_Calkulation_0.2.3_GTKW_5.4_CO2_heatexchanger_nuclear_waste_heat_south_of_Kroepelin_Ing_Goebel.xlsx								
68		m3 BV = Kubikmeter Bauvolumen d.h. (Räume, mit Böden, Wände und Decken)							
69		Für den Einbau von freigemessenen Betonelementen				**11,3 Mrd. EUR**	Ingenieur- und Architekturbüro Goebel		
70		in den GTKW Hügel zahlen die Anlieferer 60 EUR / m3							
71									

This proposal version was submitted by **Volker GOEBEL** on **03/01/2017 17:17:38** Brussels Local Time. Issued by the Participant Portal Submission Service.

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