

# APPENDIX 4

## SOLUTION DESCRIPTION

Contract on subsidy for carbon capture, transport,  
and storage

Danish Energy Agency

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### **Instructions for tenderers**

*Appendix 4 shall contain the Tenderer's solution description.*

*The Tenderer shall complete the solution description in accordance with the instructions and guidance text in this Appendix 4 and submit the solution description as a part of the Tenderer's Offer.*

*The solution description shall contain the Tenderer's responses to and description of how the Tenderer complies with the project description and the requirements, as specified in Appendix 3, Requirements specification.*

*The Tenderer should create sub-appendices to the solution description in accordance with the guidance text stated herein and when deemed appropriate by the Tenderer. The sub-appendices to be delivered is specified below.*

*If relevant, the Tenderer should ensure that there is a clearly identifiable and traceable reference to the sub-appendices.*

*The Tenderer should make use of references to relevant standards, certifications, verifications, and similar documentation, as appropriate.*

*The Tenderer's responses to the overall solution description, the Financial Requirements, the Technical Requirements, and the Operational Requirements are included in the evaluation of Offers as specified in Appendix A, Offer evaluation.*

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## Overview of sub-appendices to be delivered

Sub-appendices	Requirement
Sub-appendix 4.A, Overall solution description	
Sub-appendix 4.B, <a href="#">Planning Methodology and Milestone Plan Report</a>	R-1
Sub-appendix 4.C, Authority Approval Plan	R-2
Sub-appendix 4.DD, Risk Management Plan	R-3
Sub-appendix 4.D, Risk assessment plan	R-3
Sub-appendix 4.E, Risk assessment matrix	R-3
Sub-appendix 4.F, Risk log	R-3
Sub-appendix 4.G, QHSE Plan	R-4
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Sub-appendix 4.I, Inspection procedure	R-4
Sub-appendix 4.J, QHSE report	R-4
Sub-appendix 4.K, Knowledge Sharing Plan	R-5
Sub-appendix 4.L, Knowledge sharing summary report	R-5
Sub-appendix 4.M, Public Engagement Plan	R-6
Sub-appendix 4.N, Construction Interface Procedure	R-10
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Sub-appendix 4.R, Business model summary sheet	R-12
Sub-appendix 4.S, Technical Design	R-13
Sub-appendix 4.T, Total design verification plan	R-13
Sub-appendix 4.U, Test and Commissioning Plan	R-14
Sub-appendix 4.UU, Test event log	R-14
Sub-appendix 4.V, Report on CO <sub>2</sub> production (subject to the EU ETS)	R-18
Sub-appendix 4.W, Measurement system for CO <sub>2</sub> storage reporting	R-19
<a href="#">The example of the Report on Delivered Quantity in sub-appendix 4.X, "Report on Delivered Quantity"</a>	<a href="#">R-19</a>
Sub-appendix 4.XY, CO <sub>2</sub> Origin Verification Plan	R-20

## Overall solution description

### **Instruction**

The Tenderer should provide an overall solution description as a complete and collective description of the entire project. The description should include, although not limited to, relevant illustrations, verbal descriptions of the entire value chain, applied technology and systems, operational processes describing how the Tenderer eventually will operate the entire system.

### **Sub-appendices**

The Tenderer should provide:

- The overall solution description in sub-appendix 4.A, "Overall solution description"

## Requirement R-1

### Master Milestone Plan.

### **Instruction**

The Tenderer shall as its answer to R-1 provide the following:

- A draft Master Milestone Plan

The draft Master Milestone Plan shall include what is described in R-1 in Appendix 3, Requirements specification and Appendix 5, Master Milestone Plan~~Time~~ schedules.

The Tenderer should as its answer to R-1 provide the following:

- A draft Detailed Milestone Plan
- An example of the Milestone Plan report

The draft Detailed Milestone Plan and the example of the Milestone plan report should include what is described in R-1 of Appendix 3, Requirement specification

### **Sub-appendices**

The Tenderer shall provide:

- The draft Master Milestone Plan in Appendix 5, ~~Time schedules~~Master Milestone Plan

The Tenderer should provide:

- The draft Detailed Milestone Plan in Appendix 5.A, "Detailed Milestone Plan"
- The example of Milestone Plan report in sub-appendix 4.B, "Milestone Plan Report"

## Requirement R-2

### Authority Approval Plan.

#### **Instruction**

*The Tenderer shall as its answer to R-2 provide the following:*

- A draft Authority Approval Plan.

*The draft Authority Approval Plan shall include what is described in R-2 of Appendix 3, Requirements specification.*

#### **Sub-appendices**

*The Tenderer should provide:*

- The draft Authority Approval Plan in sub-appendix 4.C, "Authority Approval Plan".

## Requirement R-3

### Risk Management Plan.

#### **Instruction**

*The Tenderer shall as its answer to R-3 provide the following:*

- A draft Risk Management Plan
- A draft Risk assessment plan
- A draft Risk assessment matrix
- A draft Risk log

*The draft Risk Management Plan shall include a description of a chosen risk management framework and approach.*

*The Tenderer's draft Risk Management Plan, draft Risk assessment plan, draft Risk assessment matrix, and draft Risk log shall include what is described in R-3 of Appendix 3, Requirements specification.*

#### **Sub-appendices**

*The Tenderer should provide:*

- The draft Risk Management Plan in sub-appendix 4.DD, "Risk Management Plan"
- The draft Risk assessment plan in sub-appendix 4.D, "Risk assessment plan"
- The draft risk assessment matrix in sub-appendix 4.E, "Risk assessment matrix"
- The draft Risk log in sub-appendix 4.F, "Risk log"

## Requirement R-4

### QHSE Plan.

### **Instruction**

The Tenderer shall as its answer to R-4 provide the following:

- A draft QHSE Plan

The draft QHSE Plan shall include what is described in R-4 of Appendix 3, Requirements specification.

The tenderer should as its answer to R-4 provide the following:

- A draft QHSE log
- A draft Inspection Procedure
- Headlines for the QHSE report

The draft QHSE log, draft Inspection Procedure, and headlines for the QHSE report should include what is described in R-4 of Appendix 3, Requirements specification.

The Tenderer should provide documentation of relevant management system in the form of certificates, if relevant.

### **Sub-appendices**

The Tenderer should provide:

- The draft QHSE Plan in sub-appendix 4.G, "QHSE Plan"
- The draft QHSE log in sub-appendix 4.H, "QHSE log"
- The draft Inspection Procedure in sub-appendix 4.I, "Inspection Procedure"
- The headlines for the QHSE report in sub-appendix 4.J, "QHSE report"

## Requirement R-5

### Knowledge Sharing Plan.

### **Instruction**

The Tenderer shall as its answer to R-5 provide the following:

- A draft Knowledge Sharing Plan

The draft Knowledge Sharing Plan shall include what is described in R-5 of Appendix 3, Requirements specification.

The Tenderer should as its answer to R-5 provide the following:

- An example of the Knowledge sharing summary report specifically headlines and KPI's.

The Tenderer's example of the Knowledge sharing summary report should include what is described in R-5 of Appendix 3, Requirements specification.

### **Sub-appendices**

The Tenderer should provide:

- *The draft Knowledge Sharing Plan in sub-appendix 4.K, “Knowledge Sharing Plan”*
- *The example of the Knowledge sharing summary report in sub-appendix 4.L, “Knowledge sharing summary report”.*

## Requirement R-6

### Public Engagement Plan.

#### **Instruction**

*The Tenderer shall as its answer to R-6 provide the following:*

- *A draft Public Engagement Plan.*

*The draft Public Engagement Plan shall include what is described in R-6 of Appendix 3, Requirements specification.*

#### **Sub-appendices**

*The Tenderer should provide:*

- *The draft Public Engagement Plan in sub-appendix 4.M, “Public Engagement Plan”.*

## Requirement R-10

### Construction Interface Procedure.

#### **Instruction**

*The Tenderer shall as its answer to R-10 provide the following:*

- *A draft Construction Interface Procedure*

*The draft Construction Interface Procedure shall include what is described in R-10 of Appendix 3, Requirements specification.*

#### **Sub-appendices**

*The Tenderer should provide:*

- *The draft Construction Interface Procedure in sub-appendix 4.N, “Construction Interface Procedure”.*

## Requirement R-11

### Financing Plan.

#### **Instruction**

*The Tenderer shall as its answer to R-11 provide the following:*

- *A draft Financing Plan*
- *A draft Financing model summary sheet (only to be provided in case of external financing, i.e. not parent company financing)*



The draft Financing Plan and if relevant, the draft Financing model summary sheet shall include what is described in R-11 of Appendix 3, Requirements specification.

The Financing Plan shall be a written description of the input data and cost calculations provided in the excel sheet of the Financing model summary sheet, if relevant.

The Financing Plan shall, ~~if relevant~~, provide ~~documentation~~ a description of the expected investments and funding sources.

If the Tenderer has obtained third-party validation, the Tenderer should describe the basis and scope of such validation.

#### **Sub-appendices**

The Tenderer should provide:

- The draft Financing Plan in sub-appendix 4.O, "Financing Plan"
- The draft Financing model summary sheet in sub-appendix 4.P, "Financing model summary sheet"

## Requirement R-12

### Business Plan.

#### **Instruction**

The Tenderer shall as its answer to R-12 provide the following:

- A draft Business Plan
- A draft Business model summary sheet

The draft Business Plan and draft Business model summary sheet shall include what is described in R-12 of Appendix 3, Requirements specification.

The Tenderer should describe the method for calculation and the validation of the consistency of the data used in the Business Plan with the input data used in the relevant cost calculation sheets in the draft Business model summary sheet.

If the Tenderer has obtained third-party validation, the Tenderer should describe the basis and scope of such validation.

#### **Sub-appendices**

The Tenderer should provide:

- the draft Business Plan in sub-appendix 4.Q, "Business Plan"
- The draft Business model summary sheet in sub-appendix 4.R, "Business model summary sheet"

## Requirement R-13

### Technical Design.

**Instruction**

The Tenderer shall as its answer to R-13 provide the following:

- A draft Technical Design
- A draft Total design verification plan

The draft Technical Design and draft Total design verification plan shall include what is described in R-13 of Appendix 3, Requirements specification.

**Sub-appendices**

The Tenderer should provide:

- The draft Technical Design in sub-appendix 4.S, "Technical Design"
- The draft Total design verification plan in sub-appendix 4.T, "Total design verification plan"

## Requirement R-14

Test and Commissioning Plan.

**Instruction**

The Tenderer shall as its answer to R-14 provide the following:

- A draft Test and Commissioning Plan

The draft Test and Commissioning Plan shall include what is described in R-14 of Appendix 3, Requirements specification.

The Tenderer should as its answer to R-14 provide the following:

- A draft Test event log

The draft Test event log should include what is described in R-14 of Appendix 3, Requirements specification.

**Sub-appendices**

The Tenderer should provide:

- The draft Test and Commissioning Plan in sub-appendix 4.U, "Test and Commissioning Plan"
- The draft Test event log in sub-appendix 4.UU, "Test event Log"

## Requirement R-18

Report on CO<sub>2</sub> production (subject to the EU ETS)

**Instruction**

If the CO<sub>2</sub> production is subject to the EU ETS, the Tenderer shall answer R-18, otherwise not.

The Tenderer's shall as its answer to R-18 provide the following:

- An example of the Report on CO<sub>2</sub> production (subject to the EU ETS)

*The example of the Report on CO<sub>2</sub> production (subject to the EU ETS) shall include what is described in R-18 of Appendix 3, Requirements specification.*

*The example of the Report on CO<sub>2</sub> production (subject to the EU ETS) shall include a verified CO<sub>2</sub> emission report (In Danish: CO<sub>2</sub>-udledningsrapport), documenting the actual Fraction of CO<sub>2</sub> production subject to the EU ETS. The verification of the CO<sub>2</sub> emission report shall also be included.*

*The example of the Report on CO<sub>2</sub> production shall also include a forecasted Fraction of CO<sub>2</sub> production (subject to the EU ETS).*

#### **Sub-appendices**

*The Tenderer should provide:*

- *The example of the Report on CO<sub>2</sub> production (subject to the EU ETS) in sub-appendix 4.V, "Report on CO<sub>2</sub> production (subject to the EU ETS)".*

## Requirement R-19

Description of the measurement system for CO<sub>2</sub> storage reporting.

#### **Instruction**

*The Tenderer shall as its answer to R-19 provide the following:*

- *A description of the Measurement system for CO<sub>2</sub> storage reporting*
- *An example of the Report of Delivered Quantity*

*The description of the measurement system for CO<sub>2</sub> storage reporting and the example of the Report on Delivered Quantity shall include what is described in R-19 of Appendix 3, Requirements specification.*

*The description of the measurement system for CO<sub>2</sub> storage reporting ~~shall~~ should include documentation of any validation and verification of the proposed measurement system for CO<sub>2</sub> storage reporting.*

#### **Sub-appendices**

*The Tenderer should provide:*

- *The description of the Measurement system for CO<sub>2</sub> storage reporting in sub-appendix 4.W "Measurement system for CO<sub>2</sub> storage reporting"*
- *The example of the Report on Delivered Quantity in sub-appendix 4.X, "Report on Delivered Quantity"*

## Requirement R-20

CO<sub>2</sub> Origin Verification Plan and Verification of origin of stored quantity of CO<sub>2</sub>.

#### **Instruction**

*The Tenderer shall as its answer to R-20 provide the following:*

- *A draft CO<sub>2</sub> Origin Verification Plan.*

*The draft CO<sub>2</sub> Origin Verification shall include what is described in R-20 of Appendix 3, Requirements specification.*

***Sub-appendices***

*The Tenderer should provide:*

- *The CO<sub>2</sub> Origin Verification Plan in sub-appendix 4.Y, CO<sub>2</sub> Origin Verification Plan”*