

SMALL-SCALE CDM PROGRAMME ACTIVITY DESIGN DOCUMENT FORM
(CDM-SSC-CPA-DD) - Version 01



NAME /TITLE OF THE PoA: Establishment of drain recovery system in Tianjin Economic-Technological Development Area (TEDA), Tianjin, China



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**CLEAN DEVELOPMENT MECHANISM
SMALL-SCALE PROGRAM ACTIVITY DESIGN DOCUMENT FORM (CDM-SSC-CPA-DD)
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NOTE:

- (i) This form is for submission of CPAs that apply a small scale approved methodology using the provision of the proposed small scale CDM PoA.
- (ii) The coordinating/managing entity shall prepare a CDM Small Scale Programme Activity Design Document (CDM-SSC-CPA-DD)^{1,2} that is specified to the proposed PoA by using the provisions stated in the SSC PoA DD. At the time of requesting registration the SSC PoA DD must be accompanied by a CDM-SSC CPA-DD form that has been specified for the proposed SSC PoA, as well as by one completed CDM-SSC CPA-DD (using a real case). After the first CPA, every CPA that is added over time to the SSC PoA must submit a completed CDM-SSC CPA-DD.

¹ The latest version of the template form CDM-CPA-DD is available on the UNFCCC CDM web site in the reference/document section.

² At the time of requesting validation/registration, the coordinating managing entity is required to submit a completed CDM-POA-DD, the PoA specific CDM-CPA-DD, as well as one of such CDM-CPA-DD completed (using a real case).

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SECTION A. General description of small scale CDM programme activity (CPA)

A.1. Title of the small-scale CPA:

>>

Title: Establishment of drain recovery system between [a SSC-CPA implementer - Steam generator], [a SSC-CPA implementer - Steam distributor (if any)] and [a SSC-CPA implementer - Steam consumer] in Tianjin Economic-Technological Development Area (TEDA), Tianjin, China

Version: [xx]

Date: [dd/mm/yyyy]

A.2. Description of the small-scale CPA:

>>

The SSC-SPA is implemented at [name of sub-zone; either of 1) Main Area, 2) West Area, 3) Micro-Electronics Industry Park, 4) Yat-sen Scientific Industry Park, 5) Chemical Industry Park, 6) Tianjin Export Processing Zone] in TEDA. The SSC-SPA aims to construct a functional condensate collection system between [a SSC-CPA implementer - Steam generator], [a SSC-CPA implementer - Steam distributor (if any)] and [a SSC-CPA implementer - Steam consumer] to enhance the efficiency of the boilers at a district heating plant owned by the steam generator thereby reducing the consumption of [type of fuel such as coal, natural gas, diesel oil, etc.] used as fuel.

Because of the following reasons, the condensate generated at the steam consumer is not effectively utilized at present.

- [provide concrete description of (a) investment barrier, (b) technological barrier, (c) barriers due to prevailing practice or (d) other barrier which relevant to the project]
-

The SSC-CPA aims to establish a system where condensate is collected at high temperature and its heat utilized thereby enhancing the boiler efficiency to reduce consumption of [type of fuel such as coal, natural gas, diesel oil, etc.] which would lead to reduction in the annual CO₂ emission. Measures taken by the SSC-CPA includes;

- Establish a financial assistance system for a steam consumer and a steam distributor, which will not get any direct revenue through the recovery of condensate as the collected condensate is send to and utilized at boilers owned by a steam generator. The continuous financial assistance serves as a return to investment. CER revenue generated through SSC-CPAs under the SSC-PoA will become a source of funding.
- Introduction of necessary technologies for drain recovery and utilization at whole SSC-CPA implementers including a steam generator, a steam distributor and a steam consumer, and establish a condensate recovery loop within them.

This project will contribute to sustainable development of China in the following manners:



- The project will reduce the waste of energy resources and promote energy conservation.
- The SSC-CPA will contribute the Chinese Government to achieve energy saving target stipulated at 11th five-year plan, which aiming to reduce energy consumption per GDP by 20%.
- Reduction of fossil fuel consumption at district heating plant will contribute to reduce emission of air pollutants such as SO_x, NO_x and PM and then improve local air quality in Tianjin area.
- TEDA has poor water resource for its location on reclaimed land. Efficient utilization of condensate as boiler feed water will help to save water as well as energy and other resources used for water treatment.
- The project will create employment opportunities for the local community during the construction and operation of the project.
- The CPA would disseminate an advanced mechanism to promote energy conservation potentially applicable to many industrial areas across China.

A.3. Entity/individual responsible for the small-scale CPA:

>> Here the information on the entity/individual responsible of the CPA shall be included, hence forth referred to as CPA implementer(s). CPA implementers can be project participants of the PoA, under which the CPA is submitted, provided their name is included in the registered PoA.

The participant of this SSC-CPA are [a SSC-CPA implementer - Steam generator], [a SSC-CPA implementer - Steam distributor (if any)] and [a SSC-CPA implementer - Steam consumer]. The following table shows details of the SSC-CPA implementers of the proposed project activity. The SSC-CPA implementers under the SSC-PoA are not considered as one of the project participants.

Table A.3-1 SSC-CPA implementers

Type	Name of SSC-CPA implementer(s)	Private or public	Kindly indicate if the SSC-CPA implementers involved wishes to be considered as project participant (Yes/No)
Steam generator	[Name of the company]	[private or public]	No
Steam distributor	[Name of the company]	[private or public]	No
Steam consumer	[Name of the company]	[private or public]	No

The details of the SSC-CPA implementers are shown in Annex 1.

A.4. Technical description of the small-scale CPA:

A.4.1. Identification of the small-scale CPA:

>>

A.4.1.1. Host Party:

>>

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People’s Republic of China

A.4.1.2. Geographic reference or other means of identification allowing the unique identification of the small-scale CPA (maximum one page):

>>Geographic reference or other means of identification³, Name/contact details of the entity/individual responsible for the CPA, e.g. in case of stationary CPA geographic reference, in case of mobile CPAs means such as registration number, GPS devices.

The SSC-CPA will take place in facilities of the SSC-CPA implementers, which located in the [northern, southern, eastern or western part] of [name of sub-zone; either of 1) Main Area, 2) West Area, 3)Micro-Electronics Industry Park, 4) Yat-sen Scientific Industry Park, 5) Chemical Industry Park, 6) Tianjin Export Processing Zone] in TEDA. Details of geographical reference are listed below.

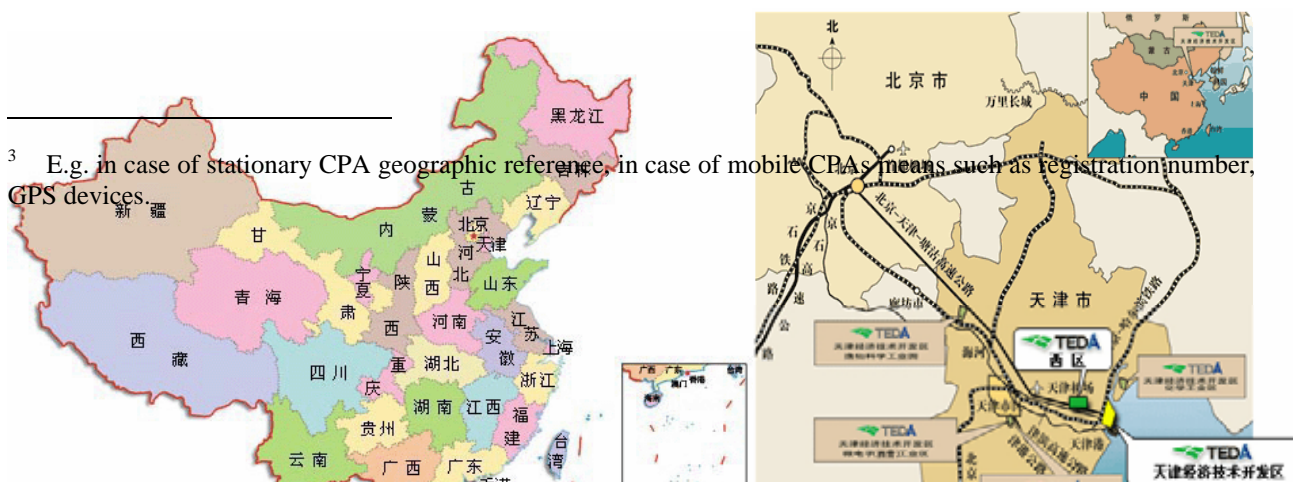
Table A.4-1 Geographical reference of SSC-CPA implementers

Type	Name of SSC-CPA implementer(s)	Name of facility covered by the SSC-CPA	Address of the facility	Approximate longitude and latitude
Steam generator	[Name of the company]	[Name of the district heating plants in which condensate is sent and utilized]	[Address of the district heating plants]	[dd° mm’ ss” N and dd° mm’ ss” E]
Steam distributor	[Name of the company]	N/A	N/A	[dd° mm’ ss” N and dd° mm’ ss” E]
Steam consumer	[Name of the company]	[Name of the plants/facilities in which condensate is generated and recovered]	[Address of the plants/facilities]	[dd° mm’ ss” N and dd° mm’ ss” E]

The map showing location of the SSC-CPA is shown below.

Note: The arrow and the balloon in Figure A.4-1 should point to the location in which the SSC-CPA will be implemented.

³ E.g. in case of stationary CPA geographic reference, in case of mobile CPAs means such as registration number, GPS devices.



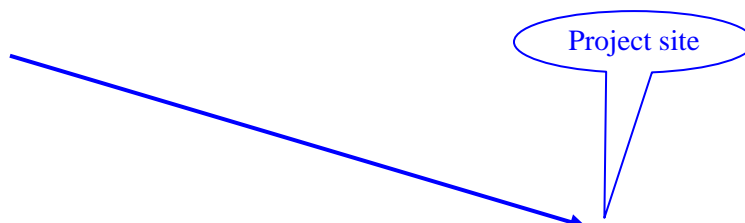


Figure A.4-1 Physical location of the SSC-CPA

A.4.2. Duration of the small-scale CPA:

A.4.2.1. Starting date of the small-scale CPA:

>>

[dd/mm/yyyy]

Note: the starting date of the CPA is the earliest date at which either the implementation or construction or real action of a programme activity begins.

A.4.2.2. Expected operational lifetime of the small-scale CPA:

>>

[xx years]

A.4.3. Choice of the crediting period and related information:

[Renewable crediting period] or [fixed crediting period]

Note: Delete the one that is not applicable.

A.4.3.1. Starting date of the crediting period:

>>

[dd/mm/yyyy]



A.4.3.2. Length of the crediting period, first crediting period if the choice is renewable CP:

>>

[xx years.] The duration of crediting period of the SSC-CPA is before the end date of the PoA.

Note: Please note that the duration of crediting period of any SSC-CPA shall be limited to the end date of the SSC-PoA regardless of when the SSC-CPA was added.

A.4.4. Estimated amount of emission reductions over the chosen crediting period:

>>

The total amount of emission reductions over the [xx] years of crediting period is [yy] tCO₂e. The annual emission reductions are shown in Table A.4-2 below.

Table A.4-2 Estimated amount of emission reductions

Years	Estimation of annual emission reductions in tonnes of CO₂e
Year A	
Year B	
Year C	
Year...	
Total estimated reductions (tonnes of CO₂e)	
Total number of crediting years	
Annual average of the estimated reductions over crediting period (tonnes of CO₂e)	

Note: please fill in the Table A.4-2 based on the estimated amount of emission reductions for the proposed SSC-CPA.

A.4.5. Public funding of the CPA:

>>

No public fund from Annex I Party is involved in this SSC-CPA.

A.4.6. Information to confirm that the proposed small-scale CPA is not a de-bundled component

>>

The guidance for de-bundling for a CPA under a PoA is:

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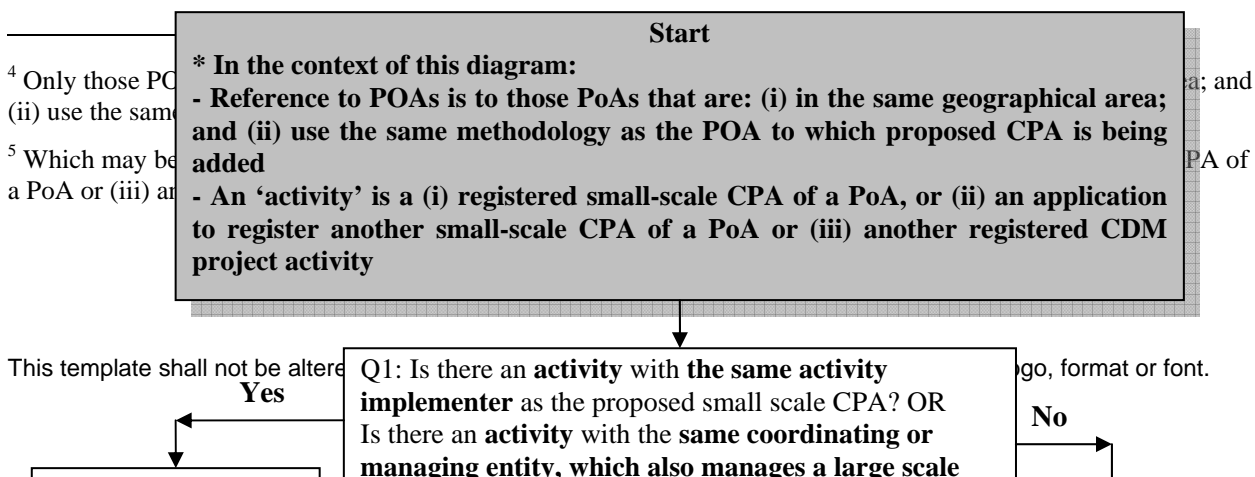
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1. For the purposes of registration of a Programme of Activities (PoA)⁴ a proposed small-scale CPA of a PoA shall be deemed to be a de-bundled component of a large scale activity if there is already an activity⁵, which:
 - (a) Has the same activity implementer as the proposed small scale CPA or has a coordinating or managing entity, which also manages a large scale PoA of the same sectoral scope, and;
 - (b) The boundary is within 1 km of the boundary of the proposed small-scale CPA, at the closest point.

2. If a proposed small-scale CPA of a PoA is deemed to be a debundled component in accordance with paragraph 2 above, but the total size of such a CPA combined with a registered small-scale CPA of a PoA or a registered CDM project activity does not exceed the limits for small-scale CDM and small-scale A/R project activities as set out in Annex II of the decision 4/CMP.1 and 5/CMP.1 respectively, the CPA of a PoA can qualify to use simplified modalities and procedures for small-scale CDM and small-scale A/R CDM project activities.

To assess the proposed SSC-CPA is not a de-bundled component of a large scale activity, an flow chart entitled “II. Guidance for determining the occurrence of de-bundling under a programme of activities (PoA)” included in “Compendium of guidance on the debundling for SSC project activity” (Annex 27; EB36) is used. The flow chart is shown in the figure below.



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Figure A.4-2 Flow chart to assess occurrence of de-bundling of the proposed SSC-CPA

The result of assessment for the proposed SSC-CPA based on the above flow chart is show below.

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Table A.4-3 Result of assessment of occurrence of de-bundling for the proposed SSC-CPA

Question No.	Yes/No	Then go to		Check
Q1	[Yes or No either applicable to the proposed SSC-CPA]	Yes	Q2	[check-mark (✓) if applicable to the proposed SSC-CPA]
		No	C3	[check-mark (✓) if applicable to the proposed SSC-CPA]
Q2	[Yes or No either applicable to the proposed SSC-CPA]	Yes	Q4	[check-mark (✓) if applicable to the proposed SSC-CPA]
		No	Q3	[check-mark (✓) if applicable to the proposed SSC-CPA]
Q3	[Yes or No either applicable to the proposed SSC-CPA]	Yes	Q4	[check-mark (✓) if applicable to the proposed SSC-CPA]
		No	C3	[check-mark (✓) if applicable to the proposed SSC-CPA]
Q4	[Yes or No either applicable to the proposed SSC-CPA]	Yes	C1	[check-mark (✓) if applicable to the proposed SSC-CPA]
		No	C2	[check-mark (✓) if applicable to the proposed SSC-CPA]

From the assessment above, it is concluded that [the proposed small scale CPA of PoA is deemed to be a de-bundled component of a large-scale activity but can qualify to use the simplified modalities and procedures for small-scale project activities (C2)] or [the proposed small scale CPA of a PoA is not deemed to be a de-bundled component of a large-scale activity, therefore is eligible to use the simplified modalities and procedures for small-scale project activities (C3), either applicable]. Therefore, the proposed SSC-CPA is eligible to use the simplified modalities and procedures for small-scale project activities

Note: If is concluded that the proposed SSC-CPA is fall under the category of C1 (the proposed small scale CPA is deemed to be a de-bundled component of a large-scale activity and is not eligible to use the simplified modalities and procedures for small-scale project activities), the proposed project activity cannot be included into the SSC-PoA.

A.4.7. Confirmation that small-scale CPA is neither registered as an individual CDM project activity or is part of another Registered PoA:

>>

According to the UNFCCC CDM website (<http://cdm.unfccc.int/index.html>) and information provided by the SSC-CPA implementers of this SSC-CPA, the proposed SSC-CPA is neither registered as an individual CDM project activity or is part of another Registered PoA. Confirmation letters from the SSC-CPA implementers will be provided to DOE at the time of submission of the CDM-SSC-CPA-DD for validation.

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Note: Every SSC-CPA implementers are required to provide confirmation letters which clearly state that the proposed project activity is neither registered as an individual CDM project activity or is part of another Registered PoA.

SECTION B. Eligibility of small-scale CPA and Estimation of emissions reductions

B.1. Title and reference of the Registered PoA to which small-scale CPA is added:

>>

Establishment of drain recovery system in Tianjin Economic-Technological Development Area (TEDA), Tianjin, China

B.2. Justification of the why the small-scale CPA is eligible to be included in the Registered PoA :

>>

The eligibility criteria for a SSC-CPA to be registered under the PoA of “Establishment of drain recovery system in Tianjin Economic-Technological Development Area (TEDA), Tianjin, China” and if the proposed SSC-CPA is in comply with them, are shown in the following table

Table B.2-1 Assessment of compliance with the eligibility criteria of the PoA

Eligibility criteria for a SSC-CPA to be registered under the PoA	SSC-CPA in accordance with the eligibility criteria
Part or all of the condensate recovered at plants/facilities of a steam consumer shall be used as feed water for fossil fuel fired boilers at district heating plants of a steam generator.	[provide the project specific information which demonstrate that the proposed SSC-CPA is in comply with the eligibility criterion shown in the left column]
Efficiency of boilers in district heating plants of a steam generator is enhanced and thereby fossil fuel consumption is reduced by the use of sensible heat of the condensate.	[provide the project specific information which demonstrate that the proposed SSC-CPA is in comply with the eligibility criterion shown in the left column]
There is no mandatory or systematically enforced local/regional/national regulations which require installation of same kind of system for recovery of condensate with the proposed SSC-CPA	[provide the project specific information which demonstrate that the proposed SSC-CPA is in comply with the eligibility criterion shown in the left column]
All facilities/plants which included in the proposed SSC-CPA should be located within TEDA	[provide the project specific information which demonstrate that the proposed SSC-CPA is in comply with the eligibility criterion shown in the left column]
The SSC-CPA implemented at both new and existing facilities/plants of both new and existing steam consumers/ generators/ distributor are eligible for SSC-CPA under the PoA.	[provide the project specific information which demonstrate that the proposed SSC-CPA is in comply with the eligibility criterion shown in the left column]

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The approved baseline and monitoring methodology entitled “AMS II. B. Supply side energy efficiency improvements – generation (Version 09)” is applicable to a SSC-CPA under the PoA of “Establishment of drain recovery system in Tianjin Economic-Technological Development Area (TEDA), Tianjin, China”. Conditions to apply the approved SSC methodology and if the proposed SSC-CPA is in comply with them are shown in the following table.

Table B.2-2 Assessment of compliance with conditions to apply AMS II. B

Applicability conditions of AMS II. B. for a SSC-CPA	Proposed SSC-CPA in accordance with the applicability conditions
This category comprises technologies or measures to improve the efficiency of fossil fuel generating units that supply an electricity or thermal system by reducing energy or fuel consumption by up to the equivalent of 60 GWh _e per year.	The proposed SSC-SPA aims to construct a functional condensate collection system to enhance the efficiency of the boilers at a district heating plant owned by the steam generator thereby reducing the consumption of fossil fuel.
The technologies or measures may be applied to existing stations or be part of a new facility.	The proposed SSC-SPA is implemented at the [existing] or [new] district heating plant.
A total saving of 60 GWh _e is equivalent to maximal saving of 180 GWh _{th} in the fuel input to the generation unit.	The total saving of the proposed SSC-SPA is [xx] GWh _{th} per year in the fuel input to the district heating plant.

From above, it can be said that the proposed SSC-CPA is eligible as a SSC-CPA under the PoA of “Establishment of drain recovery system in Tianjin Economic-Technological Development Area (TEDA), Tianjin, China”.

Note: If the proposed SSC-CPA does not meet either of the criteria/conditions shown in Table B.2-1 and Table B.2-2, the proposed SSC-CPA cannot be included into the PoA.

B.3. Assessment and demonstration of additionality of the small-scale CPA , as per eligibility criteria listed in the Registered PoA:

>>

SSC-CPAs registered under the PoA of “Establishment of drain recovery system in Tianjin Economic-Technological Development Area (TEDA), Tianjin, China” are required to show that the project activity would not have occurred due to at least one of the following typical barriers for the PoA.

Note: If any SSC-CPA implementer recognizes any barriers which prohibit the occurrence of the proposed SSC-CPA other than below, please add it in the following section under the most relevant category of barriers, namely, investment barrier, technological barrier, barrier due to prevailing practice, or other barrier. Please give them “ID” consist of a barrier type ID (IB: investment barrier, TB: technological barrier, PP: barrier due to prevailing practice and OB: other barrier) and a serial number. For example, ID for a new investment barrier will be “IB4”.

Investment barriers

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IB1 (for steam distributor) : Condensate collection pipeline between a steam generator and a steam consumer is sometimes unlaidd. Even if there is such pipeline, it requires major repair including removal of rust and seal-up of holes to make it usable when it is left unused for a long time. In both cases, additional investment is needed to implement proposed project activity. Because benefit expected to be achieved through drain recovery solely belongs to a steam generator when there are no capital ties between participating steam distributor, generator and consumer, it is very unlikely the steam distributor invest for laying or improving drain collection pipelines which generate no revenue.

IB2 (for steam consumer) : A steam consumer needs to introduce necessary equipment/facilities to collect and return condensate generated at its plants. Such equipment/facilities includes, but are not limited to, drain transfer pipelines on its property, a water pump, a drain tank, a dissolved oxygen removal device and continuous/potable water quality monitoring equipment. Introduction of such equipment/facilities requires additional investment. Because benefit expected to be achieved through drain recovery solely belongs to a steam generator when there are no capital ties between participating steam distributor, generator and consumer, it is very unlikely a steam consumer invest for drain recovery and return system which generate no revenue.

IB3 (for steam generator) : A steam generator needs to introduce necessary equipment/facilities to effectively utilize condensate returned from steam consumers as feed water to boilers in its district heating plant. Such equipment/facilities includes, but are not limited to, drain transfer pipelines on its property, a water pump, a drain tank, a drain filter and continuous/potable water quality monitoring equipment. Introduction of such equipment/facilities requires additional investment. Although benefit expected to be achieved through drain recovery, without installation of necessary equipment/facilities at participating steam consumer and distributor and tight collaboration with them, it is impossible to gain profits from drain recovery.

Technical barriers

TB1 : Contaminants in boiler feed water may cause problems such as scaling, carry-over and corrosion in boilers which leads to lower boiler efficiency and can lead to larger problems such as blockage and damage in piping to result in boiler burst. From such point of view, use of only de-ionized water produced from raw water is safer and has lower technical risk compared to use of collected condensate. However, such option with lower risk causes the heat of the condensate to be wasted and to result in higher CO₂ emission. In order to achieve effective use of the sensible heat of condensate, continuous water quality management by all steam generator, distributor and consumer is required.

Barrier due to Prevailing Practice

PP1 : Prevailing practice in handling of condensate in TEDA is discharge into sewer or utilization by a steam consumer mainly because of usable drain recovery pipeline. Usage by a steam consumer includes make up water for cooling tower, water for cleaning, hot water for space heating, etc. Condensate recovery and utilization by a steam generator based on the collaboration with a steam consumer and a steam distributor has never been successfully implemented at TEDA. The proposed SSC-CPA will not only create a financial assistance system to emerge a new type of investment by whole steam generator,

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distributor and consumer through creation of return on their investment, but also introduce a robust technological system which enables effective and continuous utilization of sensible heat of recovered condensate. Therefore, the energy saving activity proposed by the SSC-CPA is among the first of its kind in terms of type of investment, technology and geography.

According to the SSC-PoA of “Establishment of drain recovery system in Tianjin Economic-Technological Development Area (TEDA), Tianjin, China”, key criteria assessing if the proposed SSC-CPA faces at least one of the above barriers are discussed in Table B.3-1. Major data and information to demonstrate compliance with such key criteria, which stipulated in the PoA, will be provided to DOE at the time of submission of the CDM-SSC-CPA-DD for validation.

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Table B.3-1 Checklist for assessment and demonstration of additionality of the proposed SSC-CPA

Barrier No.	Key criteria		Barrier existence		Explanation of barrier existence of the proposed SSC-CPA
IB 1	IB1-KC1	No condensate collection pipeline exists between participating steam generator (district heating plant) and participating steam consumer.	Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]	To IB1-KC2	[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column]
			No [give check-mark (✓) if applicable to the proposed SSC-CPA]	To IBc-KC1	
	IB1-KC2	Condensate collection pipeline between participating steam generator (district heating plant) and participating steam consumer is unusable due to problems such as corrosion.	Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]	To IBc-KC1	[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column]
			No [give check-mark (✓) if applicable to the proposed SSC-CPA]	No barrier	
IB 2	IB2-KC3	Additional investment is required to install equipment/facilities to collect and return condensate generated at the plant of the participating steam consumer.	Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]	To IBc-KC1	[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column]
			No [give check-mark (✓) if applicable to the proposed SSC-CPA]	No barrier	
IB 3	IB2-KC4	Additional investment is required to install equipment/facilities to effectively utilize condensate returned from the participating steam consumer as feed water to boilers in the district heating plant of the participating steam generator.	Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]	To IBc-KC1	[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column]
			No [give check-mark (✓) if applicable to the proposed SSC-CPA]	No barrier	
Common for IB 1,	IBc-KC1	There are capital ties between participating steam generator, distributor and consumer.	Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]	To IBc-KC2	[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column]

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Barrier No.	Key criteria		Barrier existence		Explanation of barrier existence of the proposed SSC-CPA
2 and 3			No [give check-mark (✓) if applicable to the proposed SSC-CPA]	Barrier exist	
	IBc-KC2	<p>IRR of the investment project to construct a condensate correction system (includes investment ¹⁾ for all facilities and equipment required by the steam generator, supplier and consumer and revenue achieved by utilization of recovered condensate) exceeds the benchmark IRR ²⁾.</p> <p>1) If the investment is partially subsidised (e.g. grant under TEDA committee directive 119), subsidised amount must be deducted from the investment. 2) Benchmark IRR can be either of; (a) Government bond rates; (b) Estimated of the cost of financing and required return on capital; (c) A company internal benchmark; or (d) Benchmark IRR for “district heating” shown in the latest edition of “Economical assessment and parameters for construction project” (10% after tax at 3rd edition)</p>	<p>Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]</p> <p>No [give check-mark (✓) if applicable to the proposed SSC-CPA]</p>	<p>No barrier</p> <p>Barrier exist</p>	<p>[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column. Benchmark IRR and the IRR for the proposed SSC-CPA should also be shown.]</p>
TB1	TB1-KC1	The participating steam generator has introduced technology for water quality management of returned condensate such as drain filter.	Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]	To TB1-KC2	[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column]
			No [give check-mark (✓) if applicable to the proposed SSC-CPA]	Barrier exist	
	TB1-KC2	The participating steam generator has introduced continuous water quality monitoring system to detect diversion in the water quality and to prevent the	Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]	To TB1-KC3	[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column]

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Barrier No.	Key criteria	Barrier existence		Explanation of barrier existence of the proposed SSC-CPA
	contaminated condensate is fed to boilers.	No [give check-mark (✓) if applicable to the proposed SSC-CPA]	Barrier exist	
TB1-KC3	The participating steam generator has experienced in utilization of condensate collected at and returned from external organization as boiler feed water in its district heating plant and has engineers/specialists with enough knowledge and experience in the field.	Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]	To TB1-KC4	[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column]
		No [give check-mark (✓) if applicable to the proposed SSC-CPA]	Barrier exists	
TB1-KC4	The participating steam consumer has introduced technology for water quality management of the condensate generated at its plant such as dissolved oxygen removal device, etc.	Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]	To TB1-KC5	[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column]
		No [give check-mark (✓) if applicable to the proposed SSC-CPA]	Barrier exist	
TB1-KC5	The participating steam consumer has introduced continuous water quality monitoring system to detect diversion in the water quality and to prevent the contaminated condensate is sent back to the district heating plant.	Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]	To TB1-KC6	[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column]
		No [give check-mark (✓) if applicable to the proposed SSC-CPA]	Barrier exists	
TB1-KC6	The participating steam consumer has experienced in collection of condensate generated at its plant for utilisation as boiler feed water in an external district heating plant and has engineers/specialists with enough knowledge and experience in the field.	Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]	To TB1-KC7	[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column]
		No [give check-mark (✓) if applicable to the proposed SSC-CPA]	Barrier exists	
TB1-	The participating steam generator, distributor and	Yes [give check-mark	No	[State if the proposed SSC-CPA

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Barrier No.	Key criteria		Barrier existence		Explanation of barrier existence of the proposed SSC-CPA
	KC7	consumer has established an collaborated emergency response plan to conduct prompt investigation to identify contamination sources and take necessary measures for recovery when diversion in the water quality is detected.	(✓) if applicable to the proposed SSC-CPA No [give check-mark (✓) if applicable to the proposed SSC-CPA]	barrier Barrier exists	meets or not meets the key criteria shown in the left column
PP1	PP1-KC1	There are financial assistance systems by governmental or private institutions which intend to emerge investment by all of the steam generator, distributor and consumer for recovery of condensate by means of creation of return on investment other than the SSC-PoA of the proposed SSC-CPA in TEDA	Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]	To PP1-KC2	[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column]
			No [give check-mark (✓) if applicable to the proposed SSC-CPA]	Barrier exists	
	PP1-KC2	The SSC-CPA implementers for the proposed SSC-CPA are eligible for the financial assistance systems identified in PP1-KC1.	Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]	To PP1-KC3	[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column]
			No [give check-mark (✓) if applicable to the proposed SSC-CPA]	Barrier exists	
	PP1-KC3	There are more than 10 projects in the sub-zone of TEDA the proposed SSC-CPA is located which have been successful in recovery of sensible heat of condensate by using it as boiler feed water of district heating plant solely based on the financial assistance systems identified in PP1-KC1, at the time of submission of the CDM-SSC-CPA-DD to the DOE for validation.	Yes [give check-mark (✓) if applicable to the proposed SSC-CPA]	No barrier	[State if the proposed SSC-CPA meets or not meets the key criteria shown in the left column]
			No [give check-mark (✓) if applicable to the proposed SSC-CPA]	Barrier exists	



From the analysis above, it is demonstrated that the proposed SSC-CPA are facing prohibiting barriers including [IB1, IB2, IB3, TB4 or PP1, either applicable]. Therefore, the proposed SSC-CPA is additional as a SSC-CPA under the SSC-PoA of “Establishment of drain recovery system in Tianjin Economic-Technological Development Area (TEDA), Tianjin, China”.

B.4. Description of the sources and gases included in the project boundary and proof that the small-scale CPA is located within the geographical boundary of the registered PoA.

>>

”AMS II. B. Supply side energy efficiency improvements – generation (Version 09)” is applicable to SSC-CPAs under the SSC-PoA of “Establishment of drain recovery system in Tianjin Economic-Technological Development Area (TEDA), Tianjin, China”. The methodology states that the project boundary is the physical, geographical site of the fossil fuel fired power station unit affected by the efficiency measures. According to this, the emission sources included in the project boundary of the proposed SSC-CPA are boilers at [name of the district heating plant], [name of the facility/plant of the steam consumer] where condensate is generated and the condensate pipeline which laid between them.

Project boundary for the SSC-CPA is shown in the simplified system diagram below.

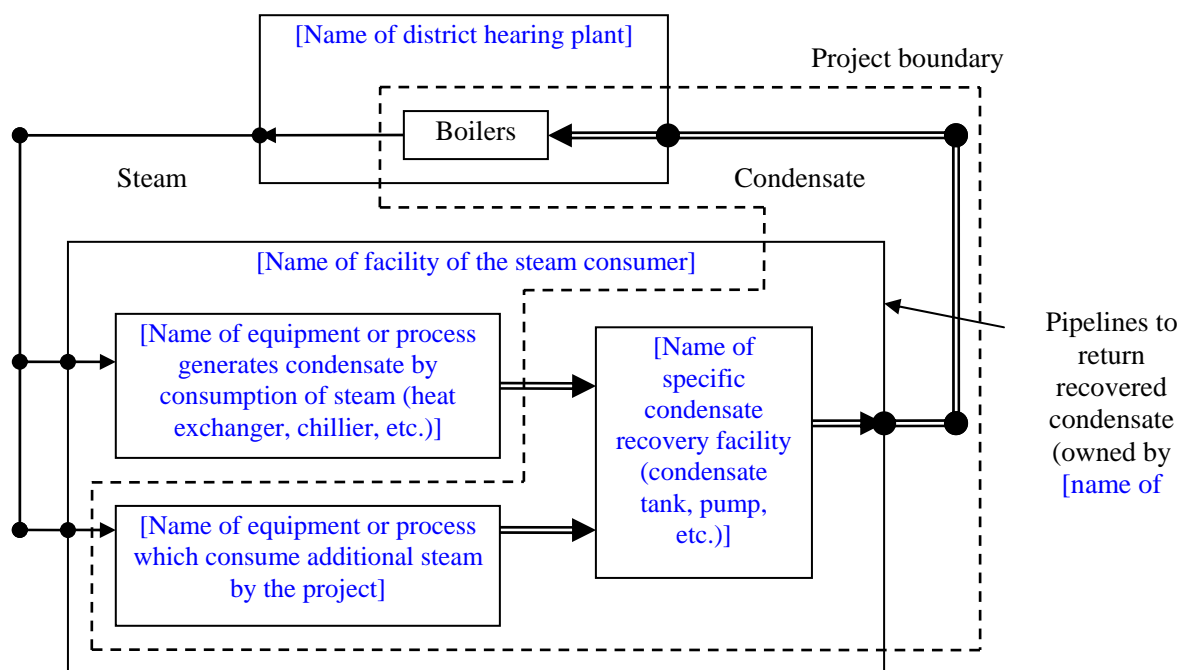


Figure B.4-1 System diagram showing the project boundary

The greenhouse gas reduced by the proposed SSC-CPA is CO₂ derived from the combustion of [type of fuel such as coal, natural gas, diesel oil, etc.] for steam generation by boilers of [name of participating steam generator].

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Note: Delete either 1) or 2) below not applicable to the proposed SSC-CPA.

1) As the plant/facility of [the name of the participating steam consumer] has been recovered and utilized sensible heat of collected condensate for [usage of recovered heat in condensate] by establishing a mechanical system inside its facility prior to the implementation of the proposed SSC-CPA, additional steam consumption to make up the heat demand will occur. Therefore, energy consumption derived from the additional steam consumption is considered to be the project emissions.

2) As the plant/facility of [the name of the participating steam consumer] has not been recovered and utilized sensible heat of collected condensate inside its facility prior to the implementation of the proposed SSC-CPA, additional steam consumption will not occur. Therefore, it is unnecessary to consider project emissions.

Physical/geographical boundary of the SSC-PoA under which the proposed SSC-CPA will be registered is whole TEDA area consist of 6 sub-zones (Main Area, West Area, Micro-Electronics Industry Park, Yat-sen Scientific Industry Park, Chemical Industry Park, and Tianjin Export Processing Zone). The proposed SSC-CPA is located within [name of sub-zone; either of 1) Main Area, 2) West Area, 3) Micro-Electronics Industry Park, 4) Yat-sen Scientific Industry Park, 5) Chemical Industry Park, 6) Tianjin Export Processing Zone] of TEDA and thus included in the project boundary of the SSC-PoA of “Establishment of drain recovery system in Tianjin Economic-Technological Development Area (TEDA), Tianjin, China”.

B.5. Emission reductions:

B.5.1. Data and parameters that are available at validation:

>>

The following data will be provided for validation.

(Copy this table for each data and parameter)

Data / Parameter:	$EF_{CO_2,i}$
Data unit:	tCO ₂ /GJ
Description:	Carbon emission factor of [type of fuel such as coal, natural gas, diesel oil, etc.]
Source of data used:	2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2 Energy
Value applied:	[value actually applied to the proposed SSC-CPA]
Justification of the choice of data or description of measurement methods and procedures actually applied :	IPCC default value
Any comment:	

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Note: If the proposed SSC-CPA applied method i) to calculate baseline boiler efficiency, the following cell for the parameter η_{BL} should be deleted.

Data / Parameter:	η_{BL}
Data unit:	%
Description:	Baseline boiler efficiency
Source of data used:	[Explanation on data source]
Value applied:	[value actually applied to the proposed SSC-CPA]
Justification of the choice of data or description of measurement methods and procedures actually applied :	<p>According to the SSC-PoA to which the proposed SSC-CPA will be registered, it should be calculated based on either of the following methods:</p> <ul style="list-style-type: none"> i) Value calculated based on a set of newest measurement data taken over at least one year prior to the proposed project activity. This method is applied when measurement data to calculate the boiler efficiency is available. The equation below is used. ii) Highest measured efficiency of a unit with similar specifications, iii) Highest of the efficiency values provided by two or more manufacturers for units with similar specifications, iv) Maximum efficiency of 100% <p>The proposed SSC-CPA applied method of [either ii), iii) or iv)].</p>
Any comment:	None

Note: If the proposed SSC-CPA applied either ii), iii) or iv) to calculate baseline boiler efficiency, the following cells for the parameters including $HG_{j,y}$, $h_{st,j,i}$, $h_{fw,j,i}$, $FC_{i,j,y}$ and $NCV_{i,j,y}$ should be deleted.

Data / Parameter:	$HG_{BL,i,y}$
Data unit:	Tonne
Description:	Mass of steam generated from boiler j, which recovered condensate by the proposed SSC-CPA will be fed to, in year y prior to the project activity.
Source of data used:	Sum of the newest set of data for one year prior to the commencement of the project activity.
Value applied:	[value actually applied to the proposed SSC-CPA]
Justification of the choice of data or description of measurement methods and procedures actually applied :	A set of measurement data for one year with a flow meter that satisfies the Chinese standard.
Any comment:	

Data / Parameter:	$h_{BL,st,j,i}$
Data unit:	TJ/t
Description:	Specific enthalpy of steam generated from boiler j in year y
Source of data used:	[Measured value] or [Value decided according to the boiler specification]

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Value applied:	[value actually applied to the proposed SSC-CPA]
Justification of the choice of data or description of measurement methods and procedures actually applied :	<p>According to the SSC-PoA to which the proposed SSC-CPA will be registered, it should be calculated based on the one of the following methods:</p> <p>i) Determine the specific enthalpy using a steam table from a set of measured data of pressure and/or temperature over one year prior to the project activity that is newest attainable.</p> <p>ii) In case i) is unavailable, determine the enthalpy based on the boiler specifications.</p> <p>The proposed SSC-CPA applied method of [either i) or ii)].</p>
Any comment:	None

Data / Parameter:	$h_{BL,fw,j,i}$
Data unit:	TJ/t
Description:	Enthalpy of boiler feed water of boiler j in year y
Source of data used:	Determined based on past measurement data
Value applied:	[value actually applied to the proposed SSC-CPA]
Justification of the choice of data or description of measurement methods and procedures actually applied :	Determine the specific enthalpy using steam table from a set of measured data of temperature for one year prior to the project activity.
Any comment:	None

Data / Parameter:	$FC_{BL,i,j,y}$
Data unit:	tonne
Description:	Mass of fuel i consumed in boiler j, which recovered condensate by the proposed SSC-CPA will be fed to, in year y.
Source of data used:	Sum of the newest attainable set of measured data for one year prior to the project activity.
Value applied:	[value actually applied to the proposed SSC-CPA]
Justification of the choice of data or description of measurement methods and procedures actually applied :	A set of measured data over one year that is newest attainable prior to the project activity, measured directly by flow meter that satisfies the Chinese standard.
Any comment:	None

Data / Parameter:	$NCV_{i,j,y}$
Data unit:	Kg/GJ
Description:	Net Calorific Value of fuel i used in boiler j, which recovered condensate by the proposed SSC-CPA will be fed to, in year y.

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Source of data used:	[Average value of the set of measured data taken over a one year period] or [2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2 Energy]
Value applied:	[Value actually applied to the proposed SSC-CPA]
Justification of the choice of data or description of measurement methods and procedures actually applied :	<p>According to the SSC-PoA to which the proposed SSC-CPA will be registered, it should be calculated based on the one of the following methods:</p> <ul style="list-style-type: none"> i) Average value of the set of measured data taken over one year prior to the project activities that are newest attainable. ii) In case the data set of 1) is not attainable, refer to the value given in <i>2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2 Energy</i>. <p>The proposed SSC-CPA applied method of [either i) or ii)].</p>
Any comment:	None

Note: If the proposed SSC-CPA applied method i) to calculate project boiler efficiency, the following cell for the parameter $\eta_{PJ,y}$ should be deleted.

Data / Parameter:	$\eta_{PJ,y}$
Data unit:	%
Description:	Project boiler efficiency
Source of data used:	[Explanation on data source]
Value applied:	[value actually applied to the proposed SSC-CPA]
Justification of the choice of data or description of measurement methods and procedures actually applied :	<p>According to the SSC-PoA to which the proposed SSC-CPA will be registered, it should be calculated based on the one of the following methods:</p> <ul style="list-style-type: none"> i) Value calculated based on a set of newest measurement data taken over at least one year prior to the proposed project activity. This method is applied when measurement data to calculate the boiler efficiency is available. The equation below is used. ii) Highest measured efficiency of a unit with similar specifications, iii) Highest of the efficiency values provided by two or more manufacturers for units with similar specifications, iv) Maximum efficiency of 100% <p>The proposed SSC-CPA applied method of [either ii), iii) or iv)].</p>
Any comment:	None

Note: If the proposed SSC-CPA use average value of the set of measured data taken over a one year period to calculate $NCV_{PJi,k,y}$, the following cells for the parameter should be deleted.

Data / Parameter:	$NCV_{PJi,k,y}$
Data unit:	Kg/GJ



Description:	Net Calorific Value of fuel i used in boiler k, which will supply additional steam to the plant/facility of the participating steam consumer, in year y.
Source of data used:	[Latest version of IPCC Guidelines for National Greenhouse Gas Inventories]
Value applied:	[Value actually applied to the proposed SSC-CPA]
Justification of the choice of data or description of measurement methods and procedures actually applied :	<p>According to the SSC-PoA to which the proposed SSC-CPA will be registered, it should be calculated based on the one of the following methods:</p> <p>i) Average value of the set of measured data taken over one year prior to the project activities that are newest attainable.</p> <p>ii) In case the data set of 1) is not attainable, refer to the value given in the latest version of <i>IPCC Guidelines for National Greenhouse Gas Inventories</i>.</p> <p>The proposed SSC-CPA applied method of ii).</p>
Any comment:	None

B.5.2. Ex-ante calculation of emission reductions:

>>

The emission reductions by the proposed SSC-CPA activity are calculated according to the SSC-PoA of “Establishment of drain recovery system in Tianjin Economic-Technological Development Area (TEDA), Tianjin, China”. The data used for the ex-ante calculations of emission reductions are provided in B.6.1., which are based on the data provided by the SSC-CPA implementers and technical performance of the system to be employed by the proposed SSC-CPA.

The result of ex-ante calculation of emission reductions is provided below;

(1) Baseline emissions

According to the SSC-PoA, the baseline emissions for the year y shall be determined as follows;

$$BE_y = \frac{\sum_{m=1}^{12} [(h_{dr,m} - h_{fw,m}) * Q_{dr,m}]}{\eta_{BL}} * EF_{CO2,i}$$

Where:

BE_y : Total emissions reductions during the year y (tCO₂)

$h_{dr,m}$: Monthly average enthalpy of recovered and utilized condensate in month m (TJ/t)

$h_{fw,m}$: Monthly average enthalpy of boiler feed water in month m (TJ/t)

$Q_{dr,m}$: Mass of condensate collected in month m (t/month)

η_{BL} : Baseline boiler efficiency (%)

$EF_{CO2,i}$: CO₂ emission factor for fuel i (CO₂e /TJ)

Therefore, baseline emissions for the proposed SSC-CPA are;



BE_y = [provide equation and result of calculation]

(2) Project emissions

According to the SSC-PoA, the project emissions for the year y shall be determined as follows;

$$PE_y = \frac{h_{as,y} * Q_{as,y}}{\eta_{PJ,y}} * EF_{CO2,i}$$

Where:

ER_y: Total emissions reductions during the year y (tCO₂)

Q_{as,y}: Mass of additional steam consumption by the plant/facility of the participating steam consumer if it has been recovered and utilized sensible heat of collected drain by establishing mechanical system inside its facility prior to the implementation of the proposed SSC-CPA, and additional steam consumption to make up such heat demand will occur.

h_{as,y}: Enthalpy of additional steam consumed in year y (t/yr)

η_{PJ,y}: Project boiler efficiency in year y (%)

EF_{CO2,i}: CO₂ emission factor for fuel i (CO₂e /TJ)

Therefore, baseline emissions for the proposed SSC-CPA are;

BE_y = [provide equation and result of calculation]

(3) Leakage

According to the SSC-PoA, no leakage is applicable.

(4) Emission Reductions

According to the SSC-PoA, emission reductions due to SSC-CPAs under the SSC-PoA during the year y are calculated as follows;

$$ER_y = BE_y - PE_y$$

Where:

ER_y: Total emission reductions during the year y in tons of CO₂

BE_y: Baseline emissions during the year y in tons of CO₂

PE_y: Project emissions during the year y in tons of CO₂

Ex-ante calculations of emission reductions for the proposed SSC-CPA are provided below.

Therefore, baseline emissions for the proposed SSC-CPA are;

ER_y = BE_y - PE_y = [provide equation and result of calculation]

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B.5.3. Summary of the ex-ante estimation of emission reductions:

>>

Year	Estimation of project activity emissions (tonnes of CO ₂ e)	Estimation of baseline emissions (tonnes of CO ₂ e)	Estimation of leakage (tonnes of CO ₂ e)	Estimation of overall emission reductions (tonnes of CO ₂ e)
Year A				
Year B				
Year C				
Year ...				
Total (tonnes of CO ₂ e)				

B.6. Application of the monitoring methodology and description of the monitoring plan:

B.6.1. Description of the monitoring plan:

>>

Monitoring parameters for this SSC-CPA based on the SSC-PoA of “Establishment of drain recovery system in Tianjin Economic-Technological Development Area (TEDA), Tianjin, China” are listed below.

(Copy this table for each data and parameter)

Data / Parameter:	$h_{dr,m}$
Data unit:	kcal/kg
Description:	Monthly average enthalpy of recovered and utilized condensate in month m
Source of data to be used:	Determined by a steam table and measured data by thermometer
Value of data applied for the purpose of calculating expected emission reductions in section B.5.2.	[Estimated value for the proposed SSC-CPA]
Monitoring frequency	[Frequency applicable to the proposed SSC-CPA; continuous or periodical at least once a month]
Description of measurement methods and procedures to be applied:	Water temperature is measured with thermometer with precision as specified in the Chinese standard.
QA/QC procedures to be applied:	Calibrated with the method and frequency specified in the Chinese standard.
Any comment:	None

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Data / Parameter:	$h_{fw,m}$
Data unit:	kcal/kg
Description:	Monthly average enthalpy of boiler feed water in month m
Source of data to be used:	Determined by a steam table and measured data by thermometer
Value of data applied for the purpose of calculating expected emission reductions in section B.5.2.	[Estimated value for the proposed SSC-CPA]
Monitoring frequency	[Frequency applicable to the proposed SSC-CPA; continuous or periodical at least once a month]
Description of measurement methods and procedures to be applied:	Water temperature is measured with thermometer with precision as specified in the Chinese standard.
QA/QC procedures to be applied:	Calibrated with the method and frequency specified in the Chinese standard.
Any comment:	None

Data / Parameter:	$Q_{dr,m}$
Data unit:	Tonnes
Description:	Mass of condensate collected in month m
Source of data to be used:	Measured data by an integrating flow meter
Value of data applied for the purpose of calculating expected emission reductions in section B.5.2.	[Estimated value for the proposed SSC-CPA]
Monitoring frequency	[Frequency applicable to the proposed SSC-CPA; continuous or periodical at least once a month]
Description of measurement methods and procedures to be applied:	Mass of condensate is measured with an integrating flow meter with precision as specified in the Chinese standard.
QA/QC procedures to be applied:	Calibrated with the method and frequency specified in the Chinese standard.
Any comment:	None

Data / Parameter:	$Q_{as,v}$
Data unit:	Tonnes
Description:	Mass of additional steam consumption
Source of data to be	Measured data by an integrating flow meter

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used:	
Value of data applied for the purpose of calculating expected emission reductions in section B.5.2.	[Estimated value for the proposed SSC-CPA]
Monitoring frequency	[Frequency applicable to the proposed SSC-CPA; continuously or periodically twice a year or more]
Description of measurement methods and procedures to be applied:	Mass of condensate is measured with an integrating flow meter with precision as specified in the Chinese standard.
QA/QC procedures to be applied:	Calibrated with the method and frequency specified in the Chinese standard.
Any comment:	

Data / Parameter:	$h_{as,y}$
Data unit:	kcal/kg
Description:	Enthalpy of additional steam
Source of data to be used:	[Determined by a steam table and measured data by thermometer] or [Value decided according to the boiler specification]
Value of data applied for the purpose of calculating expected emission reductions in section B.5.2.	[Estimated value for the proposed SSC-CPA]
Monitoring frequency	[Frequency applicable to the proposed SSC-CPA; continuously or periodically twice a year or more]
Description of measurement methods and procedures to be applied:	Water temperature is measured with thermometer with precision as specified in the Chinese standard.
QA/QC procedures to be applied:	Calibrated with the method and frequency specified in the Chinese standard.
Any comment:	None

Note: If the proposed SSC-CPA applied either ii), iii) or iv) to calculate baseline boiler efficiency, the following cells for the parameters including $HG_{PJ,y}$, $h_{PJst,j,i}$, $h_{PJfw,j,i}$, $FC_{i,j,y}$ and $NCV_{PJ,i,j,y}$ should be deleted.

Data / Parameter:	$HG_{PJ,k,y}$
Data unit:	tonne
Description:	Mass of steam generated from boiler k which supply additional steam in year y after implementation of the proposed project activity
Source of data to be	Measured data by an integrating flow meter

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used:	
Value of data applied for the purpose of calculating expected emission reductions in section B.5.2.	[Estimated value for the proposed SSC-CPA]
Monitoring frequency	[Frequency applicable to the proposed SSC-CPA; continuously or periodically twice a year or more]
Description of measurement methods and procedures to be applied:	Mass of condensate is measured with an integrating flow meter with precision as specified in the Chinese standard.
QA/QC procedures to be applied:	Calibrated with the method and frequency specified in the Chinese standard.
Any comment:	None

Data / Parameter:	$h_{PJ, st, k, i}$
Data unit:	TJ/t
Description:	Specific enthalpy of steam generated in boiler k which supply additional steam in year y
Source of data to be used:	[Determined by a steam table and measured data by thermometer] or [Value decided according to the boiler specification]
Value of data applied for the purpose of calculating expected emission reductions in section B.5.2.	[Estimated value for the proposed SSC-CPA]
Monitoring frequency	[Frequency applicable to the proposed SSC-CPA; continuously or periodically twice a year or more]
Description of measurement methods and procedures to be applied:	Water temperature is measured with thermometer with precision as specified in the Chinese standard.
QA/QC procedures to be applied:	Calibrated with the method and frequency specified in the Chinese standard.
Any comment:	None

Data / Parameter:	$h_{PJ, fw, k, i}$
Data unit:	TJ/t
Description:	Specific enthalpy of feed water fed into boiler k which supply additional steam in year y
Source of data to be used:	[Determined by a steam table and measured data by thermometer] or [Value decided according to the boiler specification]
Value of data applied for the purpose of	[Estimated value for the proposed SSC-CPA]

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NAME /TITLE OF THE PoA: Establishment of drain recovery system in Tianjin Economic-Technological Development Area (TEDA), Tianjin, China



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calculating expected emission reductions in section B.5.2.	
Monitoring frequency	[Frequency applicable to the proposed SSC-CPA; continuously or periodically twice a year or more]
Description of measurement methods and procedures to be applied:	Water temperature is measured with thermometer with precision as specified in the Chinese standard.
QA/QC procedures to be applied:	Calibrated with the method and frequency specified in the Chinese standard.
Any comment:	None

Data / Parameter:	$FC_{PJ,i,k,y}$
Data unit:	tonne
Description:	Mass of fuel i consumed in boiler k which supply additional steam in year y.
Source of data to be used:	Measured data by an integrating flow meter
Value of data applied for the purpose of calculating expected emission reductions in section B.5.2.	[Estimated value for the proposed SSC-CPA]
Monitoring frequency	[Frequency applicable to the proposed SSC-CPA; continuously or periodically twice a year or more]
Description of measurement methods and procedures to be applied:	Mass of condensate is measured with an integrating flow meter with precision as specified in the Chinese standard.
QA/QC procedures to be applied:	Calibrated with the method and frequency specified in the Chinese standard.
Any comment:	None

Note: If the proposed SSC-CPA use the value stated in the latest version of IPCC Guidelines for National Greenhouse Gas Inventories for the parameter of $NCV_{PL,i,k,y}$, the following cell should be deleted.

Data / Parameter:	$NCV_{PL,i,k,y}$
Data unit:	Kg/GJ
Description:	Net Calorific Value of fuel i used in boiler k which supply additional steam in year y.
Source of data to be used:	Average value of test results provided by fuel supplier
Value of data applied for the purpose of calculating expected emission reductions in	[Estimated value for the proposed SSC-CPA]

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section B.5.2.	
Monitoring frequency	[Frequency applicable to the proposed SSC-CPA; continuously or periodically]
Description of measurement methods and procedures to be applied:	It is sampled and measured according to the Chinese standard.
QA/QC procedures to be applied:	In case the test data is unavailable, values shown in the latest version of IPCC is used.
Any comment:	None

Data / Parameter:	N_{pe}
Data unit:	Unit
Description:	Number of new energy consuming equipment installed by replaced existing equipment for the proposed project activity.
Source of data to be used:	Recorded by the SSC-CPA implementers
Value of data applied for the purpose of calculating expected emission reductions in section B.5.2.	N/A
Monitoring frequency	Once when the energy consuming equipment is replaced by the project activity.
Description of measurement methods and procedures to be applied:	SSC-CPA implementers record the number, specifications the serial numbers and the date of installation of the new equipments when it installed ones.
QA/QC procedures to be applied:	Monitoring by plural persons and cross-check of data
Any comment:	Monitoring record is submitted to the coordinating/managing entity without a delay. Then the coordinating/managing entity visits the subject facility to confirm if N_{pe} is equal to N_{se} . For this purpose scrapped equipment should be stored until such correspondence has been checked.

Data / Parameter:	N_{se}
Data unit:	Unit
Description:	Number of equipment scrapped by installation of the new equipment by the project activity.
Source of data to be used:	Recorded by the SSC-CPA implementers
Value of data applied for the purpose of calculating expected emission reductions in section B.5.2.	N/A

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Monitoring frequency	Once when the equipment is renewed for the project activity
Description of measurement methods and procedures to be applied:	SSC-CPA implementers are to record the number of equipment scrapped and their specifications, serial numbers as soon as new equipment is installed.
QA/QC procedures to be applied:	Monitoring by plural persons and cross-check of data
Any comment:	Monitoring record is submitted to the coordinating/managing entity without a delay. Then the coordinating/managing entity visits the subject facility to confirm if N_{pe} is equal to N_{se} . For this purpose scrapped equipment should be stored until such correspondence has been checked.

C.1. Please indicate the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken. Justify the choice of level at which the environmental analysis is undertaken:

Please tick if this information is provided at the PoA level. In this case sections C.2. and C.3. need not be completed in this form.

C.2. Documentation on the analysis of the environmental impacts, including transboundary impacts:

>>
N/A

C.3. Please state whether an environmental impact assessment is required for a typical CPA, included in the programme of activities (PoA), in accordance with the host Party laws/regulations:

>>
N/A

SECTION D. Stakeholders' comments

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D.1. Please indicate the level at which local stakeholder comments are invited. Justify the choice:

Please tick if this information is provided at the PoA level. In this case sections D.2. to D.4. need not be completed in this form.

D.2. Brief description how comments by local stakeholders have been invited and compiled:

>>
N/A

D.3. Summary of the comments received:

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N/A

D.4. Report on how due account was taken of any comments received:

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N/A

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Annex 1

CONTACT INFORMATION ON ENTITY/INDIVIDUAL RESPONSIBLE FOR THE SMALL-SCALE CPA

Organization:	
Street/P.O.Box:	
Building:	
City:	
State/Region:	
Postfix/ZIP:	
Country:	
Telephone:	
FAX:	
E-Mail:	
URL:	
Represented by:	
Title:	
Salutation:	
Last Name:	
Middle Name:	
First Name:	
Department:	
Mobile:	
Direct FAX:	
Direct tel:	
Personal E-Mail:	

Annex 2

INFORMATION REGARDING PUBLIC FUNDING

Annex 3

BASELINE INFORMATION

Annex 4

MONITORING INFORMATION
