Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(a) Monitoring period	(b) Monitoring point No.	(c) Parameters	(d) Description of data	(e) Monitored Values	(f) Units	(g) Monitoring option	(h) Source of data	(i) Measurement methods and procedures	(j) Monitoring frequency	(k) Other comments
	(1)	$EC_{PJ,1,p}$	Power consumption of project air conditioning system 1 during the period *p*	0	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project air conditioning system. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM004. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a
	(2)	$EC_{PJ,2,p}$	Power consumption of project air conditioning system 2 during the period *p*	0	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project air conditioning system. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM004. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a
1 March 2014 - 31 December 2014	(3)	$EC_{PJ,3,p}$	Power consumption of project air conditioning system 3 during the period *p*	45	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project air conditioning system. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM004. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a

	(4)	$EC_{PJ,4,p}$	Power consumption of project air conditioning system 4 during the period *p*	0	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project air conditioning system. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM004. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a

Table 2: Project-specific parameters fixed *ex ante*

(a)	(b)	(c)	(d)	(e)	(f)
Parameters	**Description of data**	**Estimated Values**	**Units**	**Source of data**	**Other comments**
EF_{elec}	CO_2 emission factor for consumed electricity	0.800	tCO_2/MWh	[grid electricity] The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from Updates on Grid Electricity Emission Factors (calculated in year 2013), National Committee on Clean Development Mechanism, Indonesia, unless otherwise instructed by the Joint Committee. [captive electricity] CDM approved small scale methodology AMS-I.A	n/a
$COP_{PJ,1}$	COP of project air conditioning system 1	0.00	-	Specifications of project air conditioning system prepared for the quotation or factory acceptance test data by manufacturer.	n/a
$COP_{PJ,2}$	COP of project air conditioning system 2	0.00	-	Specifications of project air conditioning system prepared for the quotation or factory acceptance test data by manufacturer.	n/a
$COP_{PJ,3}$	COP of project air conditioning system 3	3.32	-	Specifications of project air conditioning system prepared for the quotation or factory acceptance test data by manufacturer.	n/a
$COP_{PJ,4}$	COP of project air conditioning system 4	0.00	-	Specifications of project air conditioning system prepared for the quotation or factory acceptance test data by manufacturer.	n/a
$COP_{RE,1}$	COP of reference air conditioning system 1	4.00	-	Nominal value available on product catalogs, specification documents or websites.	n/a
$COP_{RE,2}$	COP of reference air conditioning system 2	3.59	-	Nominal value available on product catalogs, specification documents or websites.	n/a
$COP_{RE,3}$	COP of reference air conditioning system 3	2.96	-	Nominal value available on product catalogs, specification documents or websites.	n/a
$COP_{RE,4}$	COP of reference air conditioning system 4	2.85	-	Nominal value available on product catalogs, specification documents or websites.	n/a

Table3: *Ex-post* calculation of CO_2 emission reductions

Monitoring Period	CO_2 emission reductions	Units
1 March 2014 - 31 December 2014	4	tCO_2/p

[Monitoring option]

Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Calculation Process Sheet) [For Verification]

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	N/A	4.4	tCO_2/p	ER_p
2. Selected default values, etc.				
COP of reference air conditioning system 1	N/A	4.00	-	$COP_{RE,1}$
COP of reference air conditioning system 2	N/A	3.59	-	$COP_{RE,2}$
COP of reference air conditioning system 3	N/A	2.96	-	$COP_{RE,3}$
COP of reference air conditioning system 4	N/A	2.85	-	$COP_{RE,4}$
3. Calculations for reference emissions				
Reference emissions during the period *p*	N/A	40.5	tCO_2/p	RE_p
Power consumption of project air conditioning system 1 during the period *p*	Electricity	0	MWh/p	$EC_{PJ,1,p}$
Power consumption of project air conditioning system 2 during the period *p*	Electricity	0	MWh/p	$EC_{PJ,2,p}$
Power consumption of project air conditioning system 3 during the period *p*	Electricity	45	MWh/p	$EC_{PJ,3,p}$
Power consumption of project air conditioning system 4 during the period *p*	Electricity	0	MWh/p	$EC_{PJ,4,p}$
COP of project air conditioning system 1	N/A	0.00	-	$COP_{PJ,1}$
COP of reference air conditioning system 1	N/A	4.00	-	$COP_{RE,1}$
COP of project air conditioning system 2	N/A	0.00	-	$COP_{PJ,2}$
COP of reference air conditioning system 2	N/A	3.59	-	$COP_{RE,2}$
COP of project air conditioning system 3	N/A	3.32	-	$COP_{PJ,3}$
COP of reference air conditioning system 3	N/A	2.96	-	$COP_{RE,3}$
COP of project air conditioning system 4	N/A	0.00	-	$COP_{PJ,4}$
COP of reference air conditioning system 4	N/A	2.85	-	$COP_{RE,4}$
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}
4. Calculations of the project emissions				
Project emissions during the period *p*	N/A	36.1	tCO_2/p	PE_p
Sum of power consumption of project air conditioning system *i* during the period *p*	Electricity	45	MWh/p	$\Sigma EC_{PJ,i,p}$
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}

[List of Default Values]

i	Project-specific parameters to be fixed *ex ante*		
1	COP of reference air conditioning system (Cooling capacity 2.5kW < x ≦ 4.1kW)	4.00	-
2	COP of reference air conditioning system (Cooling capacity 4.1kW < x ≦ 5.3kW)	3.59	-
3	COP of reference air conditioning system (Cooling capacity 5.3kW < x ≦ 7.1kW)	2.96	-
4	COP of reference air conditioning system (Cooling capacity 7.1kW < x ≦ 14.2kW)	2.85	-

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(a) Monitoring period	(b) Monitoring point No.	(c) Parameters	(d) Description of data	(e) Monitored Values	(f) Units	(g) Monitoring option	(h) Source of data	(i) Measurement methods and procedures	(j) Monitoring frequency	(k) Other comments
1 March 2014 - 31 December 2014	1	$EC_{PJ,p}$	Total power consumption of project lighting during the period *p*	15.5	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project lighting. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM005. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a

Table 2: Project-specific parameters fixed *ex ante*

(a) Parameters	(b) Description of data	(c) Estimated Values	(d) Units	(e) Source of data	(f) Other comments
EF_{elec}	CO_2 emission factor for consumed electricity	0.800	tCO_2/MWh	[grid electricity] The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from Updates on Grid Electricity Emission Factors (calculated in year 2013), National Committee on Clean Development Mechanism, Indonesia, unless otherwise instructed by the Joint Committee. [captive electricity] CDM approved small scale methodology AMS-I.A	n/a
η_{PJ}	Luminous efficiency of project lighting	133.3	lm/W	Specifications of project lighting prepared for the quotation or factory acceptance test data by manufacturer.	n/a
η_{RE}	Luminous efficiency of reference lighting	110.0	lm/W	Nominal value available on product catalogs, specification documents or websites.	n/a

Table3: *Ex-post* calculation of CO_2 emission reductions

Monitoring Period	CO_2 emission reductions	Units
1 March 2014 - 31 December 2014	2	tCO_2/p

[Monitoring option]

Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Calculation Process Sheet) [For Verification]

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*		2.6	tCO_2/p	ER_p
2. Selected default values, etc.				
Luminous efficiency of reference lighting		110.0	lm/W	η_{RE}
3. Calculations for reference emissions				
Reference emissions during the period *p*		15.0	tCO_2/p	RE_p
Total power consumption of project lighting during the period *p*	Electricity	15.5	MWh/p	$EC_{PJ,p}$
Luminous efficiency of project lighting		133.3	lm/W	η_{PJ}
Luminous efficiency of reference lighting		110.0	lm/W	η_{RE}
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}
4. Calculations of the project emissions				
Project emissions during the period *p*		12.4	tCO_2/p	PE_p
Total power consumption of project lighting during the period *p*	Electricity	15.5	MWh/p	$EC_{PJ,p}$
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}

[List of Default Values]

Luminous efficiency of reference lighting	110.0	lm/W

Monitoring Report Sheet (Input Sheet) [For Verification]

[For fridge showcase]

Table 1: Parameters monitored *ex post*

(a)	Monitoring period	1 March 2014 - 31 December 2014
(b)	Monitoring point No.	1
(c)	Parameters	$EC_{PJ,fridge,i,p}$
(d)	Description of data	Electricity consumption of the project fridge showcase *i* during the period *p*
(f)	Units	MWh/p
(g)	Monitoring option	Option C
(h)	Source of data	Monitored data
(i)	Measurement methods and procedures	Electric meter is installed to measure power consumption of project fridge showcase. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM008. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.
(j)	Monitoring frequency	Monthly
(k)	Other comments	
(e)	Monitored Value of the fridge showcase *i*	
	i=1	48.4
	i=2	48.4
	i=3	
	i=4	
	i=5	
	i=6	
	i=7	
	i=8	
	i=9	
	i=10	
	i=11	
	i=12	
	i=13	
	i=14	
	i=15	
	i=16	
	i=17	
	i=18	
	i=19	
	i=20	
	i=21	
	i=22	
	i=23	
	i=24	
	i=25	
	i=26	
	i=27	
	i=28	
	i=29	
	i=30	
	i=31	
	i=32	
	i=33	
	i=34	
	i=35	
	i=36	
	i=37	
	i=38	
	i=39	
	i=40	
	i=41	
	i=42	
	i=43	
	i=44	
	i=45	
	i=46	
	i=47	
	i=48	
	i=49	
	i=50	

Table 2: Project-specific parameters fixed *ex ante*

		$\eta_{PJ,fridge,i}$	$\eta_{RE,fridge,i}$	$\eta_{PJ,fridge,cap,i}$	EF_{elec}	$\eta_{RE,AC}$
(b)	Description of data	Energy efficiency of the volume of the project fridge showcase *i*	Energy efficiency of the volume of the reference fridge showcase *i*	Energy efficiency of the cooling capacity of the project fridge showcase *i*	CO_2 emission factor for consumed electricity	COP of the reference air conditioning system
(d)	Units	L/W	L/W	W/W	tCO_2/MWh	-
(e)	Source of data	The specifications of the project fridge showcase and condensing unit for quotation or the factory acceptance test data by manufacturer.	The default values set in this methodology corresponding to the type and rated volume of the project fridge showcase	The specifications of the project fridge showcase for quotation or the factory acceptance test data by manufacturer.	[For grid electricity] The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism (Indonesian DNA for CDM), based on data obtained by Directorate General of Electricity, Ministry of Energy and Mineral Resources, Indonesia, unless otherwise instructed by the Joint Committee." [For captive electricity] CDM approved small scale methodology AMS-I.A	- logy ID_AM004: * The default COP values may be revised as to the revision of the approved JCM methodology ID_AM004.
(f)	Other comments					
(c)	Estimated Value of the fridge showcase *i*					
	i=1	0.39	0.73	0.71	0.80	3.32
	i=2	1.84	2.24	0.35	0.80	3.32
	i=3					
	i=4					
	i=5					
	i=6					
	i=7					
	i=8					
	i=9					
	i=10					
	i=11					
	i=12					
	i=13					
	i=14					
	i=15					
	i=16					
	i=17					
	i=18					
	i=19					
	i=20					
	i=21					
	i=22					
	i=23					
	i=24					
	i=25					
	i=26					
	i=27					
	i=28					
	i=29					
	i=30					
	i=31					
	i=32					
	i=33					
	i=34					
	i=35					
	i=36					
	i=37					
	i=38					
	i=39					
	i=40					
	i=41					
	i=42					
	i=43					
	i=44					
	i=45					
	i=46					
	i=47					
	i=48					
	i=49	II-4(1)				
	i=50					

Cooling Capacity [kW]	Reference COP
$x \leqq 4.1$	4.00
$4.1 < x \leqq 5.3$	3.59
$5.3 < x \leqq 7.1$	2.96
$7.1 < x \leqq 14.2$	2.85

Table3: *Ex-post* calculation of each CO_2 emission reductions

(a)	Parameters	$RE_{fridge,i,p}$	$RE_{AC,add,fridge,i,p}$	$PE_{fridge,i,p}$
(b)	Description of data	Reference emissions of the fridge showcase *i* during the period *p*	Reference emissions of the air conditioning system caused by the additional electricity consumption due to additional load caused by exhaust heat from the reference fridge showcase *i* during the period *p*	Project emissions of the fridge showcase *i* during the period *p*
(d)	Units	tCO_2/p	tCO_2/p	tCO_2/p
(c)	Estimated Value of the fridge showcase *i*			
	i=1	20.7	14.5	38.7
	i=2	31.8	13.7	38.7
	i=3	0.0	0.0	0.0
	i=4	0.0	0.0	0.0
	i=5	0.0	0.0	0.0
	i=6	0.0	0.0	0.0
	i=7	0.0	0.0	0.0
	i=8	0.0	0.0	0.0
	i=9	0.0	0.0	0.0
	i=10	0.0	0.0	0.0
	i=11	0.0	0.0	0.0
	i=12	0.0	0.0	0.0
	i=13	0.0	0.0	0.0
	i=14	0.0	0.0	0.0
	i=15	0.0	0.0	0.0
	i=16	0.0	0.0	0.0
	i=17	0.0	0.0	0.0
	i=18	0.0	0.0	0.0
	i=19	0.0	0.0	0.0
	i=20	0.0	0.0	0.0
	i=21	0.0	0.0	0.0
	i=22	0.0	0.0	0.0
	i=23	0.0	0.0	0.0
	i=24	0.0	0.0	0.0
	i=25	0.0	0.0	0.0
	i=26	0.0	0.0	0.0
	i=27	0.0	0.0	0.0
	i=28	0.0	0.0	0.0
	i=29	0.0	0.0	0.0
	i=30	0.0	0.0	0.0
	i=31	0.0	0.0	0.0
	i=32	0.0	0.0	0.0
	i=33	0.0	0.0	0.0
	i=34	0.0	0.0	0.0
	i=35	0.0	0.0	0.0
	i=36	0.0	0.0	0.0
	i=37	0.0	0.0	0.0
	i=38	0.0	0.0	0.0
	i=39	0.0	0.0	0.0
	i=40	0.0	0.0	0.0
	i=41	0.0	0.0	0.0
	i=42	0.0	0.0	0.0
	i=43	0.0	0.0	0.0
	i=44	0.0	0.0	0.0
	i=45	0.0	0.0	0.0
	i=46	0.0	0.0	0.0
	i=47	0.0	0.0	0.0
	i=48	0.0	0.0	0.0
	i=49	0.0	0.0	0.0
	i=50	0.0	0.0	0.0

Table4: *Ex-post* calculation of CO_2 emission reductions for fridge showcases

Monitoring Period	CO_2 emission reductions	Units
1 March 2014 - 31 December 2014	3	tCO_2/p

[Monitoring option]

Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Input Sheet) [For Verification]

[For freezer showcase]

Table 1: Parameters monitored *ex post*

(a)	Monitoring period	1 March 2014 - 31 December 2014
(b)	Monitoring point No.	1
(c)	Parameters	$EC_{PJ,freezer,j,p}$
(d)	Description of data	Electricity consumption of the project freezer showcase *j* during the period *p*
(f)	Units	MWh/p
(g)	Monitoring option	Option C
(h)	Source of data	Monitored data
(i)	Measurement methods and procedures	Electric meter is installed to measure power consumption of project freezer showcase. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM008. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.
(j)	Monitoring frequency	Monthly
(k)	Other comments	
(e)	Monitored Value of the freezer showcase *j*	
	j=1	14.0
	j=2	
	j=3	
	j=4	
	j=5	
	j=6	
	j=7	
	j=8	
	j=9	
	j=10	
	j=11	
	j=12	
	j=13	
	j=14	
	j=15	
	j=16	
	j=17	
	j=18	
	j=19	
	j=20	
	j=21	
	j=22	
	j=23	
	j=24	
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	j=26	
	j=27	
	j=28	
	j=29	
	j=30	
	j=31	
	j=32	
	j=33	
	j=34	
	j=35	
	j=36	
	j=37	
	j=38	
	j=39	
	j=40	
	j=41	
	j=42	
	j=43	
	j=44	
	j=45	
	j=46	
	j=47	
	j=48	
	j=49	
	j=50	

Table 2: Project-specific parameters fixed *ex ante*

		$\eta_{PJ,freezer,j}$	$\eta_{RE,freezer,j}$	$\eta_{PJ,freezer,cap,j}$	EF_{elec}	$\eta_{RE,AC}$
(b)	Description of data	Energy efficiency of the volume of the project freezer showcase *j*	Energy efficiency of the volume of the reference freezer showcase *j*	Energy efficiency of the cooling capacity of the project freezer showcase *j*	CO_2 emission factor for consumed electricity	COP of the reference air conditioning system
(d)	Units	L/W	L/W	W/W	tCO_2/MWh	-
(e)	Source of data	The specifications of the project freezer showcase for quotation and condensing unit or the factory acceptance test data by manufacturer	The default values set in this methodology corresponding to the type and rated volume of the project freezer showcase	The specifications of the project freezer showcase for quotation or the factory acceptance test data by manufacturer	[For grid electricity] The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism (Indonesian DNA for CDM), based on data obtained by Directorate General of Electricity, Ministry of Energy and Mineral Resources, Indonesia, unless otherwise instructed by the Joint Committee." [For captive electricity] CDM approved small scale methodology AMS-I.A	- The default values set in this methodology ID_AM004
(f)	Other comments					
(c)	Estimated Value of the freezer showcase *j*					
	j=1	1.18	1.01	1.17	0.800	3.32
	j=2					
	j=3					
	j=4					
	j=5					
	j=6					
	j=7					
	j=8					
	j=9					
	j=10					
	j=11					
	j=12					
	j=13					
	j=14					
	j=15					
	j=16					
	j=17					
	j=18					
	j=19					
	j=20					
	j=21					
	j=22					
	j=23					
	j=24					
	j=25					
	j=26					
	j=27					
	j=28					
	j=29					
	j=30					
	j=31					
	j=32					
	j=33					
	j=34					
	j=35					
	j=36					
	j=37					
	j=38					
	j=39					
	j=40					
	j=41					
	j=42					
	j=43					
	j=44					
	j=45					
	j=46					
	j=47					
	j=48					
	j=49					
	j=50					

Cooling Capacity [kW]	Reference COP
$3.5 < x \leqq 4.1$	4.00
$4.1 < x \leqq 5.3$	3.59
$5.3 < x \leqq 7.1$	2.96
$7.1 < x \leqq 14.2$	2.85

* The default COP values may be revised as to the revision of the approved JCM methodology ID_AM004.

Table3: *Ex-post* calculation of each CO_2 emission reductions

(a)	Parameters	$RE_{freezer,j,p}$	$RE_{AC,add,freezer,j,p}$	$PE_{freezer,j,p}$
(b)	Description of data	Reference emissions of the freezer showcase *j* during the period *p*	Reference emissions of the air conditioning system caused by the additional electricity consumption due to additional load caused by exhaust heat from the reference freezer showcase *j* during the period *p*	Project emissions of the freezer showcase *j* during the period *p*
(d)	Units	tCO_2/p	tCO_2/p	tCO_2/p
(c)	Estimated Value of the freezer showcase *j*			
	j=1	13.1	7.9	11.2
	j=2	0.0	0.0	0.0
	j=3	0.0	0.0	0.0
	j=4	0.0	0.0	0.0
	j=5	0.0	0.0	0.0
	j=6	0.0	0.0	0.0
	j=7	0.0	0.0	0.0
	j=8	0.0	0.0	0.0
	j=9	0.0	0.0	0.0
	j=10	0.0	0.0	0.0
	j=11	0.0	0.0	0.0
	j=12	0.0	0.0	0.0
	j=13	0.0	0.0	0.0
	j=14	0.0	0.0	0.0
	j=15	0.0	0.0	0.0
	j=16	0.0	0.0	0.0
	j=17	0.0	0.0	0.0
	j=18	0.0	0.0	0.0
	j=19	0.0	0.0	0.0
	j=20	0.0	0.0	0.0
	j=21	0.0	0.0	0.0
	j=22	0.0	0.0	0.0
	j=23	0.0	0.0	0.0
	j=24	0.0	0.0	0.0
	j=25	0.0	0.0	0.0
	j=26	0.0	0.0	0.0
	j=27	0.0	0.0	0.0
	j=28	0.0	0.0	0.0
	j=29	0.0	0.0	0.0
	j=30	0.0	0.0	0.0
	j=31	0.0	0.0	0.0
	j=32	0.0	0.0	0.0
	j=33	0.0	0.0	0.0
	j=34	0.0	0.0	0.0
	j=35	0.0	0.0	0.0
	j=36	0.0	0.0	0.0
	j=37	0.0	0.0	0.0
	j=38	0.0	0.0	0.0
	j=39	0.0	0.0	0.0
	j=40	0.0	0.0	0.0
	j=41	0.0	0.0	0.0
	j=42	0.0	0.0	0.0
	j=43	0.0	0.0	0.0
	j=44	0.0	0.0	0.0
	j=45	0.0	0.0	0.0
	j=46	0.0	0.0	0.0
	j=47	0.0	0.0	0.0
	j=48	0.0	0.0	0.0
	j=49	0.0	0.0	0.0
	j=50	0.0	0.0	0.0

Table4: *Ex-post* calculation of CO_2 emission reductions for freezer showcases

Monitoring Period	CO_2 emission reductions	Units
1 March 2014 - 31 December 2014	9	tCO_2/p

[Monitoring option]

Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Calculation Process Sheet) [For Verification]

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*		12.0	tCO_2/p	ER_p
Emission reductions of the fridge showcase		3	tCO_2/p	-
Emission reductions of the freezer showcase		9	tCO_2/p	-
2. Selected default values, etc.				
3. Calculations for reference emissions				
Reference emissions during the period *p*		101.7	tCO_2/p	RE_p
Reference emissions of the fridge showcase		52.5	tCO_2/p	$RE_{fridge,p}$
Reference emissions of the freezer showcase		13.1	tCO_2/p	$RE_{freezer,p}$
Reference emissions of the air conditioning system caused by the additional electricity consumption due to additional load caused by exhaust heat from the reference fridge showcase		28.2	tCO_2/p	$RE_{AC,add,fridge,p}$
Reference emissions of the air conditioning system caused by the additional electricity consumption due to additional load caused by exhaust heat from the reference freezer showcase		7.9	tCO_2/p	$RE_{AC,add,freezer,p}$
4. Calculations of the project emissions				
Project emissions during the period *p*		88.6	tCO_2/p	PE_p
Project emissions of the project fridge showcase		77.4	tCO_2/p	$PE_{fridge,p}$
Project emissions of the project freezer showcase		11.2	tCO_2/p	$PE_{freezer,p}$

[List of Default Values]

Energy efficiency of the reference fridge showcase
Type: Reach-in showcase

Range of volume (L)	Energy efficiency
z < 900	1.18
900 ≦ z < 1200	1.07
1200 ≦ z	2.24

Energy efficiency of the reference fridge showcase
Type: Open showcase

Range of volume (L)	Energy efficiency
z < 900	0.50
900 ≦ z	0.65
1200 ≦ z	0.73

Energy efficiency of the reference freezer showcase
Type: Reach-in showcase

Range of volume (L)	Energy efficiency
z < 900	0.70
900 ≦ z	0.70
1200 ≦ z	1.01

COP of the reference air conditioning system

Cooling Capacity (kW)	Reference COP
2.5 < x ≦ 4.1	4.00
4.1 < x ≦ 5.3	3.59
5.3 < x ≦ 7.1	2.96
7.1 < x ≦ 14.2	2.85

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(a) Monitoring period	(b) Monitoring point No.	(c) Parameters	(d) Description of data	(e) Monitored Values	(f) Units	(g) Monitoring option	(h) Source of data	(i) Measurement methods and procedures	(j) Monitoring frequency	(k) Other comments
	(1)	$EC_{PJ,1,p}$	Power consumption of project air conditioning system 1 during the period *p*	0	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project air conditioning system. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM004. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a
	(2)	$EC_{PJ,2,p}$	Power consumption of project air conditioning system 2 during the period *p*	0	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project air conditioning system. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM004. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a
1 January 2015 - 31 December 2015	(3)	$EC_{PJ,3,p}$	Power consumption of project air conditioning system 3 during the period *p*	323	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project air conditioning system. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM004. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a

	(4)	$EC_{PJ,4,p}$	Power consumption of project air conditioning system 4 during the period *p*	0	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project air conditioning system. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM004. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a

Table 2: Project-specific parameters fixed *ex ante*

(a)	(b)	(c)	(d)	(e)	(f)
Parameters	**Description of data**	**Estimated Values**	**Units**	**Source of data**	**Other comments**
EF_{elec}	CO_2 emission factor for consumed electricity	0.800	tCO_2/MWh	[grid electricity] The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from Updates on Grid Electricity Emission Factors (calculated in year 2013), National Committee on Clean Development Mechanism, Indonesia, unless otherwise instructed by the Joint Committee. [captive electricity] CDM approved small scale methodology AMS-I.A	n/a
$COP_{PJ,1}$	COP of project air conditioning system 1	0.00	-	Specifications of project air conditioning system prepared for the quotation or factory acceptance test data by manufacturer.	n/a
$COP_{PJ,2}$	COP of project air conditioning system 2	0.00	-	Specifications of project air conditioning system prepared for the quotation or factory acceptance test data by manufacturer.	n/a
$COP_{PJ,3}$	COP of project air conditioning system 3	3.32	-	Specifications of project air conditioning system prepared for the quotation or factory acceptance test data by manufacturer.	n/a
$COP_{PJ,4}$	COP of project air conditioning system 4	0.00	-	Specifications of project air conditioning system prepared for the quotation or factory acceptance test data by manufacturer.	n/a
$COP_{RE,1}$	COP of reference air conditioning system 1	4.00	-	Nominal value available on product catalogs, specification documents or websites.	n/a
$COP_{RE,2}$	COP of reference air conditioning system 2	3.59	-	Nominal value available on product catalogs, specification documents or websites.	n/a
$COP_{RE,3}$	COP of reference air conditioning system 3	2.96	-	Nominal value available on product catalogs, specification documents or websites.	n/a
$COP_{RE,4}$	COP of reference air conditioning system 4	2.85	-	Nominal value available on product catalogs, specification documents or websites.	n/a

Table3: *Ex-post* calculation of CO_2 emission reductions

Monitoring Period	CO_2 emission reductions	Units
1 January 2015 - 31 December 2015	31	tCO_2/p

[Monitoring option]

Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Calculation Process Sheet) [For Verification]

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	N/A	31.8	tCO_2/p	ER_p
2. Selected default values, etc.				
COP of reference air conditioning system 1	N/A	4.00	-	$COP_{RE,1}$
COP of reference air conditioning system 2	N/A	3.59	-	$COP_{RE,2}$
COP of reference air conditioning system 3	N/A	2.96	-	$COP_{RE,3}$
COP of reference air conditioning system 4	N/A	2.85	-	$COP_{RE,4}$
3. Calculations for reference emissions				
Reference emissions during the period *p*	N/A	290.3	tCO_2/p	RE_p
Power consumption of project air conditioning system 1 during the period *p*	Electricity	0	MWh/p	$EC_{PJ,1,p}$
Power consumption of project air conditioning system 2 during the period *p*	Electricity	0	MWh/p	$EC_{PJ,2,p}$
Power consumption of project air conditioning system 3 during the period *p*	Electricity	323	MWh/p	$EC_{PJ,3,p}$
Power consumption of project air conditioning system 4 during the period *p*	Electricity	0	MWh/p	$EC_{PJ,4,p}$
COP of project air conditioning system 1	N/A	0.00	-	$COP_{PJ,1}$
COP of reference air conditioning system 1	N/A	4.00	-	$COP_{RE,1}$
COP of project air conditioning system 2	N/A	0.00	-	$COP_{PJ,2}$
COP of reference air conditioning system 2	N/A	3.59	-	$COP_{RE,2}$
COP of project air conditioning system 3	N/A	3.32	-	$COP_{PJ,3}$
COP of reference air conditioning system 3	N/A	2.96	-	$COP_{RE,3}$
COP of project air conditioning system 4	N/A	0.00	-	$COP_{PJ,4}$
COP of reference air conditioning system 4	N/A	2.85	-	$COP_{RE,4}$
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}
4. Calculations of the project emissions				
Project emissions during the period *p*	N/A	258.5	tCO_2/p	PE_p
Sum of power consumption of project air conditioning system *i* during the period *p*	Electricity	323	MWh/p	$\Sigma EC_{PJ,i,p}$
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}

[List of Default Values]

i	Project-specific parameters to be fixed *ex ante*		
1	COP of reference air conditioning system (Cooling capacity 2.5kW < x ≦ 4.1kW)	4.00	-
2	COP of reference air conditioning system (Cooling capacity 4.1kW < x ≦ 5.3kW)	3.59	-
3	COP of reference air conditioning system (Cooling capacity 5.3kW < x ≦ 7.1kW)	2.96	-
4	COP of reference air conditioning system (Cooling capacity 7.1kW < x ≦ 14.2kW)	2.85	-

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(a) Monitoring period	(b) Monitoring point No.	(c) Parameters	(d) Description of data	(e) Monitored Values	(f) Units	(g) Monitoring option	(h) Source of data	(i) Measurement methods and procedures	(j) Monitoring frequency	(k) Other comments
1 January 2015 - 31 December 2015	1	$EC_{PJ,p}$	Total power consumption of project lighting during the period *p*	20.7	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project lighting. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM005. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a

Table 2: Project-specific parameters fixed *ex ante*

(a) Parameters	(b) Description of data	(c) Estimated Values	(d) Units	(e) Source of data	(f) Other comments
EF_{elec}	CO_2 emission factor for consumed electricity	0.800	tCO_2/MWh	[grid electricity] The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from Updates on Grid Electricity Emission Factors (calculated in year 2013), National Committee on Clean Development Mechanism, Indonesia, unless otherwise instructed by the Joint Committee. [captive electricity] CDM approved small scale methodology AMS-I.A	n/a
η_{PJ}	Luminous efficiency of project lighting	133.3	lm/W	Specifications of project lighting prepared for the quotation or factory acceptance test data by manufacturer.	n/a
η_{RE}	Luminous efficiency of reference lighting	110.0	lm/W	Nominal value available on product catalogs, specification documents or websites.	n/a

Table3: *Ex-post* calculation of CO_2 emission reductions

Monitoring Period	CO_2 emission reductions	Units
1 January 2015 - 31 December 2015	3	tCO_2/p

[Monitoring option]

Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Calculation Process Sheet) [For Verification]

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*		3.5	tCO_2/p	ER_p
2. Selected default values, etc.				
Luminous efficiency of reference lighting		110.0	lm/W	η_{RE}
3. Calculations for reference emissions				
Reference emissions during the period *p*		20.0	tCO_2/p	RE_p
Total power consumption of project lighting during the period *p*	Electricity	20.7	MWh/p	$EC_{PJ,p}$
Luminous efficiency of project lighting		133.3	lm/W	η_{PJ}
Luminous efficiency of reference lighting		110.0	lm/W	η_{RE}
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}
4. Calculations of the project emissions				
Project emissions during the period *p*		16.5	tCO_2/p	PE_p
Total power consumption of project lighting during the period *p*	Electricity	20.7	MWh/p	$EC_{PJ,p}$
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}

[List of Default Values]

Luminous efficiency of reference lighting	110.0	lm/W

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(a) Monitoring period	(b) Monitoring point No.	(c) Parameters	(d) Description of data	(e) Monitored Values	(f) Units	(g) Monitoring option	(h) Source of data	(i) Measurement methods and procedures	(j) Monitoring frequency	(k) Other comments
1 January 2015 - 31 December 2015	1	$EC_{PJ,p}$	Total power consumption of project lighting during the period *p*	55.7	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project lighting. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM005. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a

Table 2: Project-specific parameters fixed *ex ante*

(a) Parameters	(b) Description of data	(c) Estimated Values	(d) Units	(e) Source of data	(f) Other comments
EF_{elec}	CO_2 emission factor for consumed electricity	0.800	tCO_2/MWh	[grid electricity] The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from Updates on Grid Electricity Emission Factors (calculated in year 2013), National Committee on Clean Development Mechanism, Indonesia, unless otherwise instructed by the Joint Committee. [captive electricity] CDM approved small scale methodology AMS-I.A	n/a
η_{PJ}	Luminous efficiency of project lighting	137.9	lm/W	Specifications of project lighting prepared for the quotation or factory acceptance test data by manufacturer.	n/a
η_{RE}	Luminous efficiency of reference lighting	110.0	lm/W	Nominal value available on product catalogs, specification documents or websites.	n/a

Table3: *Ex-post* calculation of CO_2 emission reductions

Monitoring Period	CO_2 emission reductions	Units
1 January 2015 - 31 December 2015	11	tCO_2/p

[Monitoring option]

Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Calculation Process Sheet) [For Verification]

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*		11.3	tCO_2/p	ER_p
2. Selected default values, etc.				
Luminous efficiency of reference lighting		110.0	lm/W	η_{RE}
3. Calculations for reference emissions				
Reference emissions during the period *p*		55.8	tCO_2/p	RE_p
Total power consumption of project lighting during the period *p*	Electricity	55.7	MWh/p	$EC_{PJ,p}$
Luminous efficiency of project lighting		137.9	lm/W	η_{PJ}
Luminous efficiency of reference lighting		110.0	lm/W	η_{RE}
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}
4. Calculations of the project emissions				
Project emissions during the period *p*		44.5	tCO_2/p	PE_p
Total power consumption of project lighting during the period *p*	Electricity	55.7	MWh/p	$EC_{PJ,p}$
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}

[List of Default Values]

Luminous efficiency of reference lighting	110.0	lm/W

Monitoring Report Sheet (Input Sheet) [For Verification]

[For fridge showcase]

Table 1: Parameters monitored *ex post*

(a)	Monitoring period	1 January 2015 - 31 December 2015
(b)	Monitoring point No.	1
(c)	Parameters	$EC_{PJ,fridge,i,p}$
(d)	Description of data	Electricity consumption of the project fridge showcase *i* during the period *p*
(f)	Units	MWh/p
(g)	Monitoring option	Option C
(h)	Source of data	Monitored data
(i)	Measurement methods and procedures	Electric meter is installed to measure power consumption of project fridge showcase. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM008. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.
(j)	Monitoring frequency	Monthly
(k)	Other comments	
(e)	Monitored Value of the fridge showcase *i*	
	i=1	248.2
	i=2	248.2
	i=3	
	i=4	
	i=5	
	i=6	
	i=7	
	i=8	
	i=9	
	i=10	
	i=11	
	i=12	
	i=13	
	i=14	
	i=15	
	i=16	
	i=17	
	i=18	
	i=19	
	i=20	
	i=21	
	i=22	
	i=23	
	i=24	
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	i=26	
	i=27	
	i=28	
	i=29	
	i=30	
	i=31	
	i=32	
	i=33	
	i=34	
	i=35	
	i=36	
	i=37	
	i=38	
	i=39	
	i=40	
	i=41	
	i=42	
	i=43	
	i=44	
	i=45	
	i=46	
	i=47	
	i=48	
	i=49	
	i=50	

Table 2: Project-specific parameters fixed *ex ante*

(a)	Parameters	$\eta_{PJ,fridge,i}$	$\eta_{RE,fridge,i}$	$\eta_{PJ,fridge,cap,i}$	EF_{elec}	$\eta_{RE,AC}$
(b)	Description of data	Energy efficiency of the volume of the project fridge showcase *i*	Energy efficiency of the volume of the reference fridge showcase *i*	Energy efficiency of the cooling capacity of the project fridge showcase *i*	CO_2 emission factor for consumed electricity	COP of the reference air conditioning system
(d)	Units	L/W	L/W	W/W	tCO_2/MWh	-
(e)	Source of data	The specifications of the project fridge showcase and condensing unit for quotation or the factory acceptance test data by manufacturer.	The default values set in this methodology corresponding to the type and rated volume of the project fridge showcase	The specifications of the project fridge showcase for quotation or the factory acceptance test data by manufacturer.	[For grid electricity] The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism (Indonesian DNA for CDM), based on data obtained by Directorate General of Electricity, Ministry of Energy and Mineral Resources, Indonesia, unless otherwise instructed by the Joint Committee." [For captive electricity] CDM approved small scale methodology AMS-I.A	- Methodology ID_AM004: **Cooling Capacity [kW] / Reference COP** $0 < x \leqq 4.1$ / 4.00 $4.1 < x \leqq 5.3$ / 3.59 $5.3 < x \leqq 7.1$ / 2.96 $7.1 < x \leqq 14.2$ / 2.85 * The default COP values may be revised as to the revision of the approved JCM methodology ID_AM004.
(f)	Other comments					
(c)	Estimated Value of the fridge showcase *i*					
	i=1	0.39	0.73	0.71	0.80	3.32
	i=2	1.84	2.24	0.35	0.80	3.32
	i=3					
	i=4					
	i=5					
	i=6					
	i=7					
	i=8					
	i=9					
	i=10					
	i=11					
	i=12					
	i=13					
	i=14					
	i=15					
	i=16					
	i=17					
	i=18					
	i=19					
	i=20					
	i=21					
	i=22					
	i=23					
	i=24					
	i=25					
	i=26					
	i=27					
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	i=29					
	i=30					
	i=31					
	i=32					
	i=33					
	i=34					
	i=35					
	i=36					
	i=37					
	i=38					
	i=39					
	i=40					
	i=41					
	i=42					
	i=43					
	i=44					
	i=45					
	i=46					
	i=47					
	i=48					
	i=49	II-4(1)				
	i=50					

Table3: *Ex-post* calculation of each CO_2 emission reductions

(a)	Parameters	$RE_{fridge,i,p}$	$RE_{AC,add,fridge,i,p}$	$PE_{fridge,i,p}$
(b)	Description of data	Reference emissions of the fridge showcase *i* during the period *p*	Reference emissions of the air conditioning system caused by the additional electricity consumption due to additional load caused by exhaust heat from the reference fridge showcase *i* during the period *p*	Project emissions of the fridge showcase *i* during the period *p*
(d)	Units	tCO_2/p	tCO_2/p	tCO_2/p
(c)	Estimated Value of the fridge showcase *i*			
	i=1	106.3	74.6	198.6
	i=2	162.9	70.1	198.6
	i=3	0.0	0.0	0.0
	i=4	0.0	0.0	0.0
	i=5	0.0	0.0	0.0
	i=6	0.0	0.0	0.0
	i=7	0.0	0.0	0.0
	i=8	0.0	0.0	0.0
	i=9	0.0	0.0	0.0
	i=10	0.0	0.0	0.0
	i=11	0.0	0.0	0.0
	i=12	0.0	0.0	0.0
	i=13	0.0	0.0	0.0
	i=14	0.0	0.0	0.0
	i=15	0.0	0.0	0.0
	i=16	0.0	0.0	0.0
	i=17	0.0	0.0	0.0
	i=18	0.0	0.0	0.0
	i=19	0.0	0.0	0.0
	i=20	0.0	0.0	0.0
	i=21	0.0	0.0	0.0
	i=22	0.0	0.0	0.0
	i=23	0.0	0.0	0.0
	i=24	0.0	0.0	0.0
	i=25	0.0	0.0	0.0
	i=26	0.0	0.0	0.0
	i=27	0.0	0.0	0.0
	i=28	0.0	0.0	0.0
	i=29	0.0	0.0	0.0
	i=30	0.0	0.0	0.0
	i=31	0.0	0.0	0.0
	i=32	0.0	0.0	0.0
	i=33	0.0	0.0	0.0
	i=34	0.0	0.0	0.0
	i=35	0.0	0.0	0.0
	i=36	0.0	0.0	0.0
	i=37	0.0	0.0	0.0
	i=38	0.0	0.0	0.0
	i=39	0.0	0.0	0.0
	i=40	0.0	0.0	0.0
	i=41	0.0	0.0	0.0
	i=42	0.0	0.0	0.0
	i=43	0.0	0.0	0.0
	i=44	0.0	0.0	0.0
	i=45	0.0	0.0	0.0
	i=46	0.0	0.0	0.0
	i=47	0.0	0.0	0.0
	i=48	0.0	0.0	0.0
	i=49	0.0	0.0	0.0
	i=50	0.0	0.0	0.0

Table4: *Ex-post* calculation of CO_2 emission reductions for fridge showcases

Monitoring Period	CO_2 emission reductions	Units
1 January 2015 - 31 December 2015	16	tCO_2/p

[Monitoring option]

Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Input Sheet) [For Verification]

[For freezer showcase]

Table 1: Parameters monitored *ex post*

(a)	Monitoring period	1 January 2015 - 31 December 2015
(b)	Monitoring point No.	1
(c)	Parameters	$EC_{PJ,freezer,j,p}$
(d)	Description of data	Electricity consumption of the project freezer showcase *j* during the period *p*
(f)	Units	MWh/p
(g)	Monitoring option	Option C
(h)	Source of data	Monitored data
(i)	Measurement methods and procedures	Electric meter is installed to measure power consumption of project freezer showcase. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM008. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.
(j)	Monitoring frequency	Monthly
(k)	Other comments	
(e)	Monitored Value of the freezer showcase *j*	
	j=1	74.1
	j=2	
	j=3	
	j=4	
	j=5	
	j=6	
	j=7	
	j=8	
	j=9	
	j=10	
	j=11	
	j=12	
	j=13	
	j=14	
	j=15	
	j=16	
	j=17	
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	j=21	
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	j=31	
	j=32	
	j=33	
	j=34	
	j=35	
	j=36	
	j=37	
	j=38	
	j=39	
	j=40	
	j=41	
	j=42	
	j=43	
	j=44	
	j=45	
	j=46	
	j=47	
	j=48	
	j=49	
	j=50	

Table 2: Project-specific parameters fixed *ex ante*

(a)	Parameters	$\eta_{PJ,freezer,j}$	$\eta_{RE,freezer,j}$	$\eta_{PJ,freezer,cap,j}$	EF_{elec}	$\eta_{RE,AC}$
(b)	Description of data	Energy efficiency of the volume of the project freezer showcase *j*	Energy efficiency of the volume of the reference freezer showcase *j*	Energy efficiency of the cooling capacity of the project freezer showcase *j*	CO_2 emission factor for consumed electricity	COP of the reference air conditioning system
(d)	Units	L/W	L/W	W/W	tCO_2/MWh	-
(e)	Source of data	The specifications of the project freezer showcase for quotation and condensing unit or the factory acceptance test data by manufacturer	The default values set in this methodology corresponding to the type and rated volume of the project freezer showcase	The specifications of the project freezer showcase for quotation or the factory acceptance test data by manufacturer	[For grid electricity] The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism (Indonesian DNA for CDM), based on data obtained by Directorate General of Electricity, Ministry of Energy and Mineral Resources, Indonesia, unless otherwise instructed by the Joint Committee." [For captive electricity] CDM approved small scale methodology AMS-I.A	- The default values set in this methodology ID_AM004. | Cooling Capacity [kW] | Reference COP | | 3.2 < x ≦ 4.1 | 4.00 | | 4.1 < x ≦ 5.3 | 3.59 | | 5.3 < x ≦ 7.1 | 2.96 | | 7.1 < x ≦ 14.2 | 2.85 | * The default COP values may be revised as to the revision of the approved JCM methodology ID_AM004.
(f)	Other comments					
(c)	Estimated Value of the freezer showcase *j*					
	j=1	1.18	1.01	1.17	0.800	3.32
	j=2					
	j=3					
	j=4					
	j=5					
	j=6					
	j=7					
	j=8					
	j=9					
	j=10					
	j=11					
	j=12					
	j=13					
	j=14					
	j=15					
	j=16					
	j=17					
	j=18					
	j=19					
	j=20					
	j=21					
	j=22					
	j=23					
	j=24					
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	j=26					
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	j=31					
	j=32					
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	j=34					
	j=35					
	j=36					
	j=37					
	j=38					
	j=39					
	j=40					
	j=41					
	j=42					
	j=43					
	j=44					
	j=45					
	j=46					
	j=47					
	j=48					
	j=49					
	j=50					

Table3: *Ex-post* calculation of each CO_2 emission reductions

(a)	Parameters	$RE_{freezer,j,p}$	$RE_{AC,add,freezer,j,p}$	$PE_{freezer,j,p}$
(b)	Description of data	Reference emissions of the freezer showcase *j* during the period *p*	Reference emissions of the air conditioning system caused by the additional electricity consumption due to additional load caused by exhaust heat from the reference freezer showcase *j* during the period *p*	Project emissions of the freezer showcase *j* during the period *p*
(d)	Units	tCO_2/p	tCO_2/p	tCO_2/p
(c)	Estimated Value of the freezer showcase *j*			
	j=1	69.4	41.8	59.3
	j=2	0.0	0.0	0.0
	j=3	0.0	0.0	0.0
	j=4	0.0	0.0	0.0
	j=5	0.0	0.0	0.0
	j=6	0.0	0.0	0.0
	j=7	0.0	0.0	0.0
	j=8	0.0	0.0	0.0
	j=9	0.0	0.0	0.0
	j=10	0.0	0.0	0.0
	j=11	0.0	0.0	0.0
	j=12	0.0	0.0	0.0
	j=13	0.0	0.0	0.0
	j=14	0.0	0.0	0.0
	j=15	0.0	0.0	0.0
	j=16	0.0	0.0	0.0
	j=17	0.0	0.0	0.0
	j=18	0.0	0.0	0.0
	j=19	0.0	0.0	0.0
	j=20	0.0	0.0	0.0
	j=21	0.0	0.0	0.0
	j=22	0.0	0.0	0.0
	j=23	0.0	0.0	0.0
	j=24	0.0	0.0	0.0
	j=25	0.0	0.0	0.0
	j=26	0.0	0.0	0.0
	j=27	0.0	0.0	0.0
	j=28	0.0	0.0	0.0
	j=29	0.0	0.0	0.0
	j=30	0.0	0.0	0.0
	j=31	0.0	0.0	0.0
	j=32	0.0	0.0	0.0
	j=33	0.0	0.0	0.0
	j=34	0.0	0.0	0.0
	j=35	0.0	0.0	0.0
	j=36	0.0	0.0	0.0
	j=37	0.0	0.0	0.0
	j=38	0.0	0.0	0.0
	j=39	0.0	0.0	0.0
	j=40	0.0	0.0	0.0
	j=41	0.0	0.0	0.0
	j=42	0.0	0.0	0.0
	j=43	0.0	0.0	0.0
	j=44	0.0	0.0	0.0
	j=45	0.0	0.0	0.0
	j=46	0.0	0.0	0.0
	j=47	0.0	0.0	0.0
	j=48	0.0	0.0	0.0
	j=49	0.0	0.0	0.0
	j=50	0.0	0.0	0.0

Table4: *Ex-post* calculation of CO_2 emission reductions for freezer showcases

Monitoring Period	CO_2 emission reductions	Units
1 January 2015 - 31 December 2015	51	tCO_2/p

[Monitoring option]

Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Calculation Process Sheet) [For Verification]

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*		67.0	tCO_2/p	ER_p
Emission reductions of the fridge showcase		16	tCO_2/p	-
Emission reductions of the freezer showcase		51	tCO_2/p	-
2. Selected default values, etc.				
3. Calculations for reference emissions				
Reference emissions during the period *p*		525.1	tCO_2/p	RE_p
Reference emissions of the fridge showcase		269.2	tCO_2/p	$RE_{fridge,p}$
Reference emissions of the freezer showcase		69.4	tCO_2/p	$RE_{freezer,p}$
Reference emissions of the air conditioning system caused by the additional electricity consumption due to additional load caused by exhaust heat from the reference fridge showcase		144.7	tCO_2/p	$RE_{AC,add,fridge,p}$
Reference emissions of the air conditioning system caused by the additional electricity consumption due to additional load caused by exhaust heat from the reference freezer showcase		41.8	tCO_2/p	$RE_{AC,add,freezer,p}$
4. Calculations of the project emissions				
Project emissions during the period *p*		456.5	tCO_2/p	PE_p
Project emissions of the project fridge showcase		397.1	tCO_2/p	$PE_{fridge,p}$
Project emissions of the project freezer showcase		59.3	tCO_2/p	$PE_{freezer,p}$

[List of Default Values]

Energy efficiency of the reference fridge showcase
Type: Reach-in showcase

Range of volume (L)	Energy efficiency
z < 900	1.18
900 ≦ z < 1200	1.07
1200 ≦ z	2.24

Energy efficiency of the reference fridge showcase
Type: Open showcase

Range of volume (L)	Energy efficiency
z < 900	0.50
900 ≦ z	0.65
1200 ≦ z	0.73

Energy efficiency of the reference freezer showcase
Type: Reach-in showcase

Range of volume (L)	Energy efficiency
z < 900	0.70
900 ≦ z	0.70
1200 ≦ z	1.01

COP of the reference air conditioning system

Cooling Capacity (kW)	Reference COP
2.5 < x ≦ 4.1	4.00
4.1 < x ≦ 5.3	3.59
5.3 < x ≦ 7.1	2.96
7.1 < x ≦ 14.2	2.85

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(a) Monitoring period	(b) Monitoring point No.	(c) Parameters	(d) Description of data	(e) Monitored Values	(f) Units	(g) Monitoring option	(h) Source of data	(i) Measurement methods and procedures	(j) Monitoring frequency	(k) Other comments
	(1)	$EC_{PJ,1,p}$	Power consumption of project air conditioning system 1 during the period *p*	0	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project air conditioning system. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM004. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a
	(2)	$EC_{PJ,2,p}$	Power consumption of project air conditioning system 2 during the period *p*	0	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project air conditioning system. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM004. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a
1 January 2016 - 31 May 2016	(3)	$EC_{PJ,3,p}$	Power consumption of project air conditioning system 3 during the period *p*	183	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project air conditioning system. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM004. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a

	(4)	$EC_{PJ,4,p}$	Power consumption of project air conditioning system 4 during the period *p*	0	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project air conditioning system. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM004. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a

Table 2: Project-specific parameters fixed *ex ante*

(a)	(b)	(c)	(d)	(e)	(f)
Parameters	**Description of data**	**Estimated Values**	**Units**	**Source of data**	**Other comments**
EF_{elec}	CO_2 emission factor for consumed electricity	0.800	tCO_2/MWh	[grid electricity] The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from Updates on Grid Electricity Emission Factors (calculated in year 2013), National Committee on Clean Development Mechanism, Indonesia, unless otherwise instructed by the Joint Committee. [captive electricity] CDM approved small scale methodology AMS-I.A	n/a
$COP_{PJ,1}$	COP of project air conditioning system 1	0.00	-	Specifications of project air conditioning system prepared for the quotation or factory acceptance test data by manufacturer.	n/a
$COP_{PJ,2}$	COP of project air conditioning system 2	0.00	-	Specifications of project air conditioning system prepared for the quotation or factory acceptance test data by manufacturer.	n/a
$COP_{PJ,3}$	COP of project air conditioning system 3	3.32	-	Specifications of project air conditioning system prepared for the quotation or factory acceptance test data by manufacturer.	n/a
$COP_{PJ,4}$	COP of project air conditioning system 4	0.00	-	Specifications of project air conditioning system prepared for the quotation or factory acceptance test data by manufacturer.	n/a
$COP_{RE,1}$	COP of reference air conditioning system 1	4.00	-	Nominal value available on product catalogs, specification documents or websites.	n/a
$COP_{RE,2}$	COP of reference air conditioning system 2	3.59	-	Nominal value available on product catalogs, specification documents or websites.	n/a
$COP_{RE,3}$	COP of reference air conditioning system 3	2.96	-	Nominal value available on product catalogs, specification documents or websites.	n/a
$COP_{RE,4}$	COP of reference air conditioning system 4	2.85	-	Nominal value available on product catalogs, specification documents or websites.	n/a

Table3: *Ex-post* calculation of CO_2 emission reductions

Monitoring Period	CO_2 emission reductions	Units
1 January 2016 - 31 May 2016	17	tCO_2/p

[Monitoring option]

Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Calculation Process Sheet) [For Verification]

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	N/A	18.0	tCO_2/p	ER_p
2. Selected default values, etc.				
COP of reference air conditioning system 1	N/A	4.00	-	$COP_{RE,1}$
COP of reference air conditioning system 2	N/A	3.59	-	$COP_{RE,2}$
COP of reference air conditioning system 3	N/A	2.96	-	$COP_{RE,3}$
COP of reference air conditioning system 4	N/A	2.85	-	$COP_{RE,4}$
3. Calculations for reference emissions				
Reference emissions during the period *p*	N/A	164.1	tCO_2/p	RE_p
Power consumption of project air conditioning system 1 during the period *p*	Electricity	0	MWh/p	$EC_{PJ,1,p}$
Power consumption of project air conditioning system 2 during the period *p*	Electricity	0	MWh/p	$EC_{PJ,2,p}$
Power consumption of project air conditioning system 3 during the period *p*	Electricity	183	MWh/p	$EC_{PJ,3,p}$
Power consumption of project air conditioning system 4 during the period *p*	Electricity	0	MWh/p	$EC_{PJ,4,p}$
COP of project air conditioning system 1	N/A	0.00	-	$COP_{PJ,1}$
COP of reference air conditioning system 1	N/A	4.00	-	$COP_{RE,1}$
COP of project air conditioning system 2	N/A	0.00	-	$COP_{PJ,2}$
COP of reference air conditioning system 2	N/A	3.59	-	$COP_{RE,2}$
COP of project air conditioning system 3	N/A	3.32	-	$COP_{PJ,3}$
COP of reference air conditioning system 3	N/A	2.96	-	$COP_{RE,3}$
COP of project air conditioning system 4	N/A	0.00	-	$COP_{PJ,4}$
COP of reference air conditioning system 4	N/A	2.85	-	$COP_{RE,4}$
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}
4. Calculations of the project emissions				
Project emissions during the period *p*	N/A	146.1	tCO_2/p	PE_p
Sum of power consumption of project air conditioning system *i* during the period *p*	Electricity	183	MWh/p	$\Sigma EC_{PJ,i,p}$
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}

[List of Default Values]

i	Project-specific parameters to be fixed *ex ante*		
1	COP of reference air conditioning system (Cooling capacity 2.5kW < x ≦ 4.1kW)	4.00	-
2	COP of reference air conditioning system (Cooling capacity 4.1kW < x ≦ 5.3kW)	3.59	-
3	COP of reference air conditioning system (Cooling capacity 5.3kW < x ≦ 7.1kW)	2.96	-
4	COP of reference air conditioning system (Cooling capacity 7.1kW < x ≦ 14.2kW)	2.85	-

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(a) Monitoring period	(b) Monitoring point No.	(c) Parameters	(d) Description of data	(e) Monitored Values	(f) Units	(g) Monitoring option	(h) Source of data	(i) Measurement methods and procedures	(j) Monitoring frequency	(k) Other comments
1 January 2016 - 31 May 2016	1	$EC_{PJ,p}$	Total power consumption of project lighting during the period *p*	7.4	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project lighting. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM005. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a

Table 2: Project-specific parameters fixed *ex ante*

(a) Parameters	(b) Description of data	(c) Estimated Values	(d) Units	(e) Source of data	(f) Other comments
EF_{elec}	CO_2 emission factor for consumed electricity	0.800	tCO_2/MWh	[grid electricity] The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from Updates on Grid Electricity Emission Factors (calculated in year 2013), National Committee on Clean Development Mechanism, Indonesia, unless otherwise instructed by the Joint Committee. [captive electricity] CDM approved small scale methodology AMS-I.A	n/a
η_{PJ}	Luminous efficiency of project lighting	133.3	lm/W	Specifications of project lighting prepared for the quotation or factory acceptance test data by manufacturer.	n/a
η_{RE}	Luminous efficiency of reference lighting	110.0	lm/W	Nominal value available on product catalogs, specification documents or websites.	n/a

Table3: *Ex-post* calculation of CO_2 emission reductions

Monitoring Period	CO_2 emission reductions	Units
1 January 2016 - 31 May 2016	1	tCO_2/p

[Monitoring option]

Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Calculation Process Sheet) [For Verification]

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*		1.3	tCO_2/p	ER_p
2. Selected default values, etc.				
Luminous efficiency of reference lighting		110.0	lm/W	η_{RE}
3. Calculations for reference emissions				
Reference emissions during the period *p*		7.2	tCO_2/p	RE_p
Total power consumption of project lighting during the period *p*	Electricity	7.4	MWh/p	$EC_{PJ,p}$
Luminous efficiency of project lighting		133.3	lm/W	η_{PJ}
Luminous efficiency of reference lighting		110.0	lm/W	η_{RE}
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}
4. Calculations of the project emissions				
Project emissions during the period *p*		5.9	tCO_2/p	PE_p
Total power consumption of project lighting during the period *p*	Electricity	7.4	MWh/p	$EC_{PJ,p}$
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}

[List of Default Values]

Luminous efficiency of reference lighting	110.0	lm/W

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(a) Monitoring period	(b) Monitoring point No.	(c) Parameters	(d) Description of data	(e) Monitored Values	(f) Units	(g) Monitoring option	(h) Source of data	(i) Measurement methods and procedures	(j) Monitoring frequency	(k) Other comments
1 January 2016 - 31 May 2016	1	$EC_{PJ,p}$	Total power consumption of project lighting during the period *p*	37.7	MWh/p	Option C	Monitored data	Electric meter is installed to measure power consumption of project lighting. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM005. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a

Table 2: Project-specific parameters fixed *ex ante*

(a) Parameters	(b) Description of data	(c) Estimated Values	(d) Units	(e) Source of data	(f) Other comments
EF_{elec}	CO_2 emission factor for consumed electricity	0.800	tCO_2/MWh	[grid electricity] The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from Updates on Grid Electricity Emission Factors (calculated in year 2013), National Committee on Clean Development Mechanism, Indonesia, unless otherwise instructed by the Joint Committee. [captive electricity] CDM approved small scale methodology AMS-I.A	n/a
η_{PJ}	Luminous efficiency of project lighting	137.9	lm/W	Specifications of project lighting prepared for the quotation or factory acceptance test data by manufacturer.	n/a
η_{RE}	Luminous efficiency of reference lighting	110.0	lm/W	Nominal value available on product catalogs, specification documents or websites.	n/a

Table3: *Ex-post* calculation of CO_2 emission reductions

Monitoring Period	CO_2 emission reductions	Units
1 January 2016 - 31 May 2016	7	tCO_2/p

[Monitoring option]

Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Calculation Process Sheet) [For Verification]

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*		7.7	tCO_2/p	ER_p
2. Selected default values, etc.				
Luminous efficiency of reference lighting		110.0	lm/W	η_{RE}
3. Calculations for reference emissions				
Reference emissions during the period *p*		37.8	tCO_2/p	RE_p
Total power consumption of project lighting during the period *p*	Electricity	37.7	MWh/p	$EC_{PJ,p}$
Luminous efficiency of project lighting		137.9	lm/W	η_{PJ}
Luminous efficiency of reference lighting		110.0	lm/W	η_{RE}
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}
4. Calculations of the project emissions				
Project emissions during the period *p*		30.2	tCO_2/p	PE_p
Total power consumption of project lighting during the period *p*	Electricity	37.7	MWh/p	$EC_{PJ,p}$
CO_2 emission factor for consumed electricity	Electricity	0.800	tCO_2/MWh	EF_{elec}

[List of Default Values]

Luminous efficiency of reference lighting	110.0	lm/W

Monitoring Report Sheet (Input Sheet) [For Verification]

[For fridge showcase]

Table 1: Parameters monitored *ex post*

(a)	Monitoring period	1 January 2016 - 31 May 2016
(b)	Monitoring point No.	1
(c)	Parameters	$EC_{PJ,fridge,i,p}$
(d)	Description of data	Electricity consumption of the project fridge showcase *i* during the period *p*
(f)	Units	MWh/p
(g)	Monitoring option	Option C
(h)	Source of data	Monitored data
(i)	Measurement methods and procedures	Electric meter is installed to measure power consumption of project fridge showcase. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM008. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.
(j)	Monitoring frequency	Monthly
(k)	Other comments	
(e)	Monitored Value of the fridge showcase *i*	
	i=1	148.8
	i=2	148.8
	i=3	
	i=4	
	i=5	
	i=6	
	i=7	
	i=8	
	i=9	
	i=10	
	i=11	
	i=12	
	i=13	
	i=14	
	i=15	
	i=16	
	i=17	
	i=18	
	i=19	
	i=20	
	i=21	
	i=22	
	i=23	
	i=24	
	i=25	
	i=26	
	i=27	
	i=28	
	i=29	
	i=30	
	i=31	
	i=32	
	i=33	
	i=34	
	i=35	
	i=36	
	i=37	
	i=38	
	i=39	
	i=40	
	i=41	
	i=42	
	i=43	
	i=44	
	i=45	
	i=46	
	i=47	
	i=48	
	i=49	
	i=50	

Table 2: Project-specific parameters fixed *ex ante*

(a)	Parameters	$\eta_{PJ,fridge,i}$	$\eta_{RE,fridge,i}$	$\eta_{PJ,fridge,cap,i}$	EF_{elec}	$\eta_{RE,AC}$
(b)	Description of data	Energy efficiency of the volume of the project fridge showcase *i*	Energy efficiency of the volume of the reference fridge showcase *i*	Energy efficiency of the cooling capacity of the project fridge showcase *i*	CO_2 emission factor for consumed electricity	COP of the reference air conditioning system
(d)	Units	L/W	L/W	W/W	tCO_2/MWh	-
(e)	Source of data	The specifications of the project fridge showcase and condensing unit for quotation or the factory acceptance test data by manufacturer.	The default values set in this methodology corresponding to the type and rated volume of the project fridge showcase	The specifications of the project fridge showcase for quotation or the factory acceptance test data by manufacturer.	[For grid electricity] The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism (Indonesian DNA for CDM), based on data obtained by Directorate General of Electricity, Ministry of Energy and Mineral Resources, Indonesia, unless otherwise instructed by the Joint Committee." [For captive electricity] CDM approved small scale methodology AMS-I.A	- logy ID_AM004. | Cooling Capacity [kW] | Reference COP | | 4.1 < x ≦ 4.1 | 4.00 | | 4.1 < x ≦ 5.3 | 3.59 | | 5.3 < x ≦ 7.1 | 2.96 | | 7.1 < x ≦ 14.2 | 2.85 | * The default COP values may be revised as to the revision of the approved JCM methodology ID_AM004.
(f)	Other comments					
(c)	Estimated Value of the fridge showcase *i*					
	i=1	0.39	0.73	0.71	0.80	3.32
	i=2	1.84	2.24	0.35	0.80	3.32
	i=3					
	i=4					
	i=5					
	i=6					
	i=7					
	i=8					
	i=9					
	i=10					
	i=11					
	i=12					
	i=13					
	i=14					
	i=15					
	i=16					
	i=17					
	i=18					
	i=19					
	i=20					
	i=21					
	i=22					
	i=23					
	i=24					
	i=25					
	i=26					
	i=27					
	i=28					
	i=29					
	i=30					
	i=31					
	i=32					
	i=33					
	i=34					
	i=35					
	i=36					
	i=37					
	i=38					
	i=39					
	i=40					
	i=41					
	i=42					
	i=43					
	i=44					
	i=45					
	i=46					
	i=47					
	i=48					
	i=49	II-4(1)				
	i=50					

Table3: *Ex-post* calculation of each CO_2 emission reductions

(a)	Parameters	$RE_{fridge,i,p}$	$RE_{AC,add,fridge,i,p}$	$PE_{fridge,i,p}$
(b)	Description of data	Reference emissions of the fridge showcase *i* during the period *p*	Reference emissions of the air conditioning system caused by the additional electricity consumption due to additional load caused by exhaust heat from the reference fridge showcase *i* during the period *p*	Project emissions of the fridge showcase *i* during the period *p*
(d)	Units	tCO_2/p	tCO_2/p	tCO_2/p
(c)	Estimated Value of the fridge showcase *i*			
	i=1	63.7	44.7	119.1
	i=2	97.7	42.1	119.1
	i=3	0.0	0.0	0.0
	i=4	0.0	0.0	0.0
	i=5	0.0	0.0	0.0
	i=6	0.0	0.0	0.0
	i=7	0.0	0.0	0.0
	i=8	0.0	0.0	0.0
	i=9	0.0	0.0	0.0
	i=10	0.0	0.0	0.0
	i=11	0.0	0.0	0.0
	i=12	0.0	0.0	0.0
	i=13	0.0	0.0	0.0
	i=14	0.0	0.0	0.0
	i=15	0.0	0.0	0.0
	i=16	0.0	0.0	0.0
	i=17	0.0	0.0	0.0
	i=18	0.0	0.0	0.0
	i=19	0.0	0.0	0.0
	i=20	0.0	0.0	0.0
	i=21	0.0	0.0	0.0
	i=22	0.0	0.0	0.0
	i=23	0.0	0.0	0.0
	i=24	0.0	0.0	0.0
	i=25	0.0	0.0	0.0
	i=26	0.0	0.0	0.0
	i=27	0.0	0.0	0.0
	i=28	0.0	0.0	0.0
	i=29	0.0	0.0	0.0
	i=30	0.0	0.0	0.0
	i=31	0.0	0.0	0.0
	i=32	0.0	0.0	0.0
	i=33	0.0	0.0	0.0
	i=34	0.0	0.0	0.0
	i=35	0.0	0.0	0.0
	i=36	0.0	0.0	0.0
	i=37	0.0	0.0	0.0
	i=38	0.0	0.0	0.0
	i=39	0.0	0.0	0.0
	i=40	0.0	0.0	0.0
	i=41	0.0	0.0	0.0
	i=42	0.0	0.0	0.0
	i=43	0.0	0.0	0.0
	i=44	0.0	0.0	0.0
	i=45	0.0	0.0	0.0
	i=46	0.0	0.0	0.0
	i=47	0.0	0.0	0.0
	i=48	0.0	0.0	0.0
	i=49	0.0	0.0	0.0
	i=50	0.0	0.0	0.0

Table4: *Ex-post* calculation of CO_2 emission reductions for fridge showcases

Monitoring Period	CO_2 emission reductions	Units
1 January 2016 - 31 May 2016	10	tCO_2/p

[Monitoring option]

Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Input Sheet) [For Verification]

[For freezer showcase]

Table 1: Parameters monitored *ex post*

(a)	Monitoring period	1 January 2016 - 31 May 2016
(b)	Monitoring point No.	1
(c)	Parameters	$EC_{PJ,freezer,j,p}$
(d)	Description of data	Electricity consumption of the project freezer showcase *j* during the period *p*
(f)	Units	MWh/p
(g)	Monitoring option	Option C
(h)	Source of data	Monitored data
(i)	Measurement methods and procedures	Electric meter is installed to measure power consumption of project freezer showcase. Measurement is conducted with [Method 1: Automated monitoring system] indicated in applied methodology ID_AM008. Details of the method is as follows: - Measured data is automatically transmitted through internet to the remote server for recording. - Data recorded in the remote server is compiled and reported by engineer stationed in Japan, and double-checked by person-in-charge of the project on a monthly basis to prevent missing data. Accuracy of electric meter is ensured using methods such as below: - Accuracy of each electric meter is examined through factory test, in accordance to Japanese standard JIS C1271-1:2011. A certificate indicating that the electric meter is calibrated within accepted range of accuracy is issued at the end of factory test. - The Mean Time Between Failures (MTBF, predicted timing of an equipment to malfunction) of electric meters used in the project are 9 -10 years, indicating that these electric meters are not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.
(j)	Monitoring frequency	Monthly
(k)	Other comments	
(e)	Monitored Value of the freezer showcase *j*	
	j=1	43.5
	j=2	
	j=3	
	j=4	
	j=5	
	j=6	
	j=7	
	j=8	
	j=9	
	j=10	
	j=11	
	j=12	
	j=13	
	j=14	
	j=15	
	j=16	
	j=17	
	j=18	
	j=19	
	j=20	
	j=21	
	j=22	
	j=23	
	j=24	
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	j=31	
	j=32	
	j=33	
	j=34	
	j=35	
	j=36	
	j=37	
	j=38	
	j=39	
	j=40	
	j=41	
	j=42	
	j=43	
	j=44	
	j=45	
	j=46	
	j=47	
	j=48	
	j=49	
	j=50	

Table 2: Project-specific parameters fixed *ex ante*

		$\eta_{PJ,freezer,j}$	$\eta_{RE,freezer,j}$	$\eta_{PJ,freezer,cap,j}$	EF_{elec}	$\eta_{RE,AC}$
(a)	Parameters					
(b)	Description of data	Energy efficiency of the volume of the project freezer showcase *j*	Energy efficiency of the volume of the reference freezer showcase *j*	Energy efficiency of the cooling capacity of the project freezer showcase *j*	CO_2 emission factor for consumed electricity	COP of the reference air conditioning system
(d)	Units	L/W	L/W	W/W	tCO_2/MWh	-
(e)	Source of data	The specifications of the project freezer showcase for quotation and condensing unit or the factory acceptance test data by manufacturer	The default values set in this methodology corresponding to the type and rated volume of the project freezer showcase	The specifications of the project freezer showcase for quotation or the factory acceptance test data by manufacturer	[For grid electricity] The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism (Indonesian DNA for CDM), based on data obtained by Directorate General of Electricity, Ministry of Energy and Mineral Resources, Indonesia, unless otherwise instructed by the Joint Committee." [For captive electricity] CDM approved small scale methodology AMS-I.A	- The default values set in applied methodology ID_AM004. * The default COP values may be revised as to the revision of the approved JCM methodology ID_AM004.
(f)	Other comments					
(c)	Estimated Value of the freezer showcase *j*					
	j=1	1.18	1.01	1.17	0.800	3.32
	j=2					
	j=3					
	j=4					
	j=5					
	j=6					
	j=7					
	j=8					
	j=9					
	j=10					
	j=11					
	j=12					
	j=13					
	j=14					
	j=15					
	j=16					
	j=17					
	j=18					
	j=19					
	j=20					
	j=21					
	j=22					
	j=23					
	j=24					
	j=25					
	j=26					
	j=27					
	j=28					
	j=29					
	j=30					
	j=31					
	j=32					
	j=33					
	j=34					
	j=35					
	j=36					
	j=37					
	j=38					
	j=39					
	j=40					
	j=41					
	j=42					
	j=43					
	j=44					
	j=45					
	j=46					
	j=47					
	j=48					
	j=49					
	j=50					

Cooling Capacity [kW]	Reference COP
$3.5 < x \leqq 4.1$	4.00
$4.1 < x \leqq 5.3$	3.59
$5.3 < x \leqq 7.1$	2.96
$7.1 < x \leqq 14.2$	2.85

Table3: *Ex-post* calculation of each CO_2 emission reductions

(a)	Parameters	$RE_{freezer,j,p}$	$RE_{AC,add,freezer,j,p}$	$PE_{freezer,j,p}$
(b)	Description of data	Reference emissions of the freezer showcase *j* during the period *p*	Reference emissions of the air conditioning system caused by the additional electricity consumption due to additional load caused by exhaust heat from the reference freezer showcase *j* during the period *p*	Project emissions of the freezer showcase *j* during the period *p*
(d)	Units	tCO_2/p	tCO_2/p	tCO_2/p
(c)	Estimated Value of the freezer showcase *j*			
	j=1	40.7	24.5	34.8
	j=2	0.0	0.0	0.0
	j=3	0.0	0.0	0.0
	j=4	0.0	0.0	0.0
	j=5	0.0	0.0	0.0
	j=6	0.0	0.0	0.0
	j=7	0.0	0.0	0.0
	j=8	0.0	0.0	0.0
	j=9	0.0	0.0	0.0
	j=10	0.0	0.0	0.0
	j=11	0.0	0.0	0.0
	j=12	0.0	0.0	0.0
	j=13	0.0	0.0	0.0
	j=14	0.0	0.0	0.0
	j=15	0.0	0.0	0.0
	j=16	0.0	0.0	0.0
	j=17	0.0	0.0	0.0
	j=18	0.0	0.0	0.0
	j=19	0.0	0.0	0.0
	j=20	0.0	0.0	0.0
	j=21	0.0	0.0	0.0
	j=22	0.0	0.0	0.0
	j=23	0.0	0.0	0.0
	j=24	0.0	0.0	0.0
	j=25	0.0	0.0	0.0
	j=26	0.0	0.0	0.0
	j=27	0.0	0.0	0.0
	j=28	0.0	0.0	0.0
	j=29	0.0	0.0	0.0
	j=30	0.0	0.0	0.0
	j=31	0.0	0.0	0.0
	j=32	0.0	0.0	0.0
	j=33	0.0	0.0	0.0
	j=34	0.0	0.0	0.0
	j=35	0.0	0.0	0.0
	j=36	0.0	0.0	0.0
	j=37	0.0	0.0	0.0
	j=38	0.0	0.0	0.0
	j=39	0.0	0.0	0.0
	j=40	0.0	0.0	0.0
	j=41	0.0	0.0	0.0
	j=42	0.0	0.0	0.0
	j=43	0.0	0.0	0.0
	j=44	0.0	0.0	0.0
	j=45	0.0	0.0	0.0
	j=46	0.0	0.0	0.0
	j=47	0.0	0.0	0.0
	j=48	0.0	0.0	0.0
	j=49	0.0	0.0	0.0
	j=50	0.0	0.0	0.0

Table4: *Ex-post* calculation of CO_2 emission reductions for freezer showcases

Monitoring Period	CO_2 emission reductions	Units
1 January 2016 - 31 May 2016	30	tCO_2/p

[Monitoring option]

Option A	Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications)
Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Calculation Process Sheet) [For Verification]

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*		40.0	tCO_2/p	ER_p
Emission reductions of the fridge showcase		10	tCO_2/p	-
Emission reductions of the freezer showcase		30	tCO_2/p	-
2. Selected default values, etc.				
3. Calculations for reference emissions				
Reference emissions during the period *p*		313.4	tCO_2/p	RE_p
Reference emissions of the fridge showcase		161.4	tCO_2/p	$RE_{fridge,p}$
Reference emissions of the freezer showcase		40.7	tCO_2/p	$RE_{freezer,p}$
Reference emissions of the air conditioning system caused by the additional electricity consumption due to additional load caused by exhaust heat from the reference fridge showcase		86.8	tCO_2/p	$RE_{AC,add,fridge,p}$
Reference emissions of the air conditioning system caused by the additional electricity consumption due to additional load caused by exhaust heat from the reference freezer showcase		24.5	tCO_2/p	$RE_{AC,add,freezer,p}$
4. Calculations of the project emissions				
Project emissions during the period *p*		272.9	tCO_2/p	PE_p
Project emissions of the project fridge showcase		238.1	tCO_2/p	$PE_{fridge,p}$
Project emissions of the project freezer showcase		34.8	tCO_2/p	$PE_{freezer,p}$

[List of Default Values]

Energy efficiency of the reference fridge showcase
Type: Reach-in showcase

Range of volume (L)	Energy efficiency
z < 900	1.18
900 ≦ z < 1200	1.07
1200 ≦ z	2.24

Energy efficiency of the reference fridge showcase
Type: Open showcase

Range of volume (L)	Energy efficiency
z < 900	0.50
900 ≦ z	0.65
1200 ≦ z	0.73

Energy efficiency of the reference freezer showcase
Type: Reach-in showcase

Range of volume (L)	Energy efficiency
z < 900	0.70
900 ≦ z	0.70
1200 ≦ z	1.01

COP of the reference air conditioning system

Cooling Capacity (kW)	Reference COP
2.5 < x ≦ 4.1	4.00
4.1 < x ≦ 5.3	3.59
5.3 < x ≦ 7.1	2.96
7.1 < x ≦ 14.2	2.85