(a) Monitoring	(b)	itored ex po (c) Parameters	(d)	(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 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 _{PJ2} 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 meters used in the project are 9 - 10 years, indicating that these electric meters not likely to malfunction (including accuracy deterioration) during the above period. Since this exceeds project operation period. Syears, 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 _{PJ3p}	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 are in the project are 9 -10 years, indicating that these electric meters are in the project are 9 -10 years, indicating that these detrioration) 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
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(a)	(b)	(c)	(d)	(e)	(f)
Parameters Description of data		Estimated Values	Units	Source of data	Other comments
∃F _{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
OP _{re,2}	COP of reference air conditioning system 2	3.59	-	Nominal value available on product catalogs, specification documents or websites.	n/a
OP _{RE,3}	COP of reference air conditioning system 3	2.96	-	Nominal value available on product catalogs, specification documents or websites.	n/a
OP _{RE,4}	COP of reference air conditioning system 4	2.85	-	Nominal value available on product catalogs, specification documents or websites.	n/a

 Monitoring Period
 CO2 emission reductions

 1 March 2014 - 31 December 2014
 4

 [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 Spreadsheet: JCM_ID_AM004_ver02.0 Reference Number: ID006

Monitoring Report Sheet (Calculation Process Sheet) [Fo	r Verification]			
. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period p	N/A	4.4	tCO ₂ /p	ER _p
. 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}
. Calculations for reference emissions				
Reference emissions during the period p	N/A	40.5	tCO ₂ /p	REp
Power consumption of project air conditioning system 1 during the period <i>p</i>	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}
. Calculations of the project emissions				
Project emissions during the period p	N/A	36.1	tCO ₂ /p	PEp
Sum of power consumption of project air conditioning system <i>i</i> during the period <i>p</i>	Electricity	45	MWh/p	ΣEC _{PJ,i,p}
CO ₂ emission factor for consumed electricity	Electricity	0.800	tCO ₂ /MWh	EF _{elec}

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

Monitoring Spreadsheet: JCM_ID_AM005_ver02.0

Reference Number: ID006

Monitoring Report Sheet (Input Sheet) [For Verification]

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Monitoring period	Monitoring point No.	Parameters	Description of data	Monitored Values	Units	Monitoring option	Source of data	Measurement methods and procedures	Monitoring frequency	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)	(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	tCO₂/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 _{ΡJ}	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 CO₂ 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 b	y 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 Spreadsheet: JCM_ID_AM005_ver02.0 Reference Number: ID006

Monitoring Report Sheet (Calculation Process Sheet) [For V	/erification]			
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	REp
Total power consumption of project lighting during the period p	Electricity	15.5	MWh/p	$EC_{PJ,\rho}$
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	PEp
Total power consumption of project lighting during the period p	Electricity	15.5	MWh/p	$EC_{PJ,\rho}$
CO ₂ emission factor for consumed electricity	Electricity	0.800	tCO ₂ /MWh	EF_{elec}

Luminous efficiency of reference lighting	110.0	lm/W

[For fridge showcase] Table 1: Parameters monitored *ex post*

Units Monitoring option Source of data Measurement methods and procedures	I Electricity consumption of the project fridge showcase <i>i</i> during the period <i>p</i> MWh/p Option C Monitored data 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	(a) (b) (d)	Parameters Description of data Units Source of data	<u>η_{PJ,fridge,i}</u> Energy efficiency of the volume of the project fridge showcase <i>i</i> L/W	η _{RE,fridge,i} Energy efficiency of the volume of the reference fridge showcase <i>i</i> L/W	<u>ηPJ,fridge.cap,i</u> Energy efficiency of the cooling capacity of the project fridge showcase <i>i</i> W/W	tCO ₂ /MWh [For grid electricity] The most recent value available at th validation is applied and fixed for the
Parameters Description of data Units Monitoring option Source of data	Electricity consumption of the project fridge showcase <i>i</i> during the period <i>p</i> MWh/p Option C Monitored data 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 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	(b) (d)	Description of data Units	Energy efficiency of the volume of the project fridge showcase <i>i</i> L/W	Energy efficiency of the volume of the reference fridge showcase <i>i</i> L/W	Energy efficiency of the cooling capacity of the project fridge showcase <i>i</i>	CO ₂ emission factor for consumed el tCO ₂ /MWh [For grid electricity] The most recent value available at th validation is applied and fixed for the
Units Monitoring option Source of data Measurement methods and procedures	Electricity consumption of the project fridge showcase <i>i</i> during the period <i>p</i> MWh/p Option C Monitored data 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 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	(d)	data Units	Energy efficiency of the volume of the project fridge showcase <i>i</i> L/W	Energy efficiency of the volume of the reference fridge showcase <i>i</i> L/W	Energy efficiency of the cooling capacity of the project fridge showcase <i>i</i>	CO ₂ emission factor for consumed ele tCO ₂ /MWh [For grid electricity] The most recent value available at the validation is applied and fixed for the
Monitoring option Source of data Measurement methods and procedures	Option C Monitored data 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			L/W The specifications of the project fridge showcase	LW		[For grid electricity] The most recent value available at the validation is applied and fixed for the l
Monitoring option Source of data Measurement methods and procedures	Option C Monitored data 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		Source of data	project fridge showcase			The most recent value available at the validation is applied and fixed for the
Source of data 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	(e)	Source of data	project fridge showcase			The most recent value available at the validation is applied and fixed for the
Measurement methods and procedures	 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 	(e)	Source of data	project fridge showcase			
				and condensing unit for quotation or the factory acceptance test data by manufacturer.	this methodology	The specifications of the project fridge showcase for quotation or the factory acceptance test data by manufacturer.	period thereafter. The data is sourced "Emission Factors of Electricity Interce Systems", National Committee on Cle Development Mechanism (Indonesiar CDM), based on data obtained by Dir General of Electricity, Ministry of Ener Mineral Resources, Indonesia, unless instructed by the Joint Committee." [For captive electricity]
	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.						CDM approved small scale methodol
onitoring frequency	Monthly	(f)	Other comments				
Other comments onitored Value of the	fridge showcase i	(c)	Estimated Value	of the fridge showcase i			
i=1	48.4	(0)	i=1	0.39	0.73	0.71	0.80
i=2	48.4		i=2	1.84	2.24	0.35	0.80
i=3			i=3				
i=4 i=5			i=4 i=5				
i=6			i=5				
i=7			i=7				
i=8			i=8				
i=9 i=10			i=9 i=10				
i=12			i=12				
i=13			i=13				
i=10			i=10				
i=18			i=18				
i=23			i=23				
i=28			i=28				
i=29			i=29				
i=33			i=33				
i=34			i=34				
i=39			i=39				
i=40			i=40				
i=45			i=45				
i=46			i=46				
			i=47 i=48				
i=47							
	1		i=49	ll-4(1)			
	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=33 i=34 i=35 i=35 i=36 i=37 i=38 i=39 i=40 i=41 i=42 i=45 i=46 i=47 i=48	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=30 i=31 i=32 i=33 i=33 i=34 i=35 i=38 i=41 i=41 i=44 i=44 i=44 i=44	i=12 i=13 i=14 i=15 i=16 i=17 i=18 i=20 i=21 i=22 i=23 i=24 i=25 i=26 i=27 i=28 i=30 i=31 i=33 i=34 i=35 i=36 i=37 i=38 i=40 i=44 i=44 i=44 i=44 i=44 i=44 i=44 i=44	i=12 i=12 i=13 i=12 i=14 i=13 i=15 i=16 i=17 i=16 i=20 i=21 i=22 i=22 i=23 i=24 i=25 i=26 i=27 i=24 i=28 i=26 i=29 i=26 i=30 i=29 i=33 i=34 i=35 i=36 i=33 i=36 i=33 i=36 i=40 i=43 i=41 i=42 i=43 i=44 i=44 i=44 i=45 i=44 i=44 i=45 i=44 i=45 i=45 i=46	i=12 $i=12$ $i=12$ $i=14$ $i=16$ $i=16$ $i=16$ $i=16$ $i=14$ $i=16$ $i=16$ $i=16$ $i=17$ $i=16$ $i=16$ $i=17$ $i=16$ $i=16$ $i=17$ $i=16$ $i=16$ $i=19$ $i=20$ $i=21$ $i=22$ $i=22$ $i=22$ $i=23$ $i=23$ $i=23$ $i=24$ $i=23$ $i=23$ $i=25$ $i=24$ $i=23$ $i=26$ $i=23$ $i=23$ $i=28$ $i=23$ $i=23$ $i=30$ $i=23$ $i=23$ $i=33$ $i=33$ $i=33$ $i=34$ $i=33$ $i=33$ $i=33$ $i=34$ $i=33$ $i=33$ $i=33$ $i=33$ $i=34$ $i=33$ $i=33$ $i=34$ $i=33$ $i=33$ $i=33$ $i=34$ $i=33$ $i=34$ $i=34$ $i=33$ $i=44$ $i=44$ $i=43$	i=12i=12i=13i=14i=14i=13i=13i=13i=16i=13i=14i=14i=16i=14i=16i=16i=17i=16i=16i=16i=19i=16i=17i=18i=20i=18i=18i=18i=21i=21i=18i=12i=22i=23i=12i=18i=24i=24i=22i=23i=25i=26i=24i=24i=26i=27i=28i=28i=29i=28i=28i=28i=30i=36i=33i=33i=34i=34i=33i=33i=35i=36i=34i=34i=38i=38i=36i=33i=39i=38i=34i=34i=44i=44i=44i=45i=46i=46	in12in12in12in12in12in13in14in15in14in16in16in16in16in16in17in17in18in16in16in17in17in18in17in18in17in18in17in20in18in18in18in18in19in21in18in18in18in18in19in22in18in18in19in19in19in23in19in19in19in19in19in24in19in19in19in19in19in25in19in19in19in19in19in26in19in19in19in19in19in27in19in19in19in19in19in28in19in19in19in19in19in29in19in19in19in19in19in29in19in19in19in19in19in29in19in19in19in19in19in29in19in19in19in19in19in29in19in19in19in19in19in29in19in19in19in19in19in29in19in19in19in19in19in31in19in19in19in19in19in32in19in19in19in19in19in33in19in19in19in19in19

	η _{RE,AC}
delectricity	COP of the reference air conditioning system
	-
	Cooling Capacity [kW] Reference COP ogy
t the time of	D_AM0054.≤ x 4.1 4.00
he monitoring	4.1 < x 5.3 3.59
ced from	5.3 < x 7.1 2.96
erconnection	7.1 < x 14.2 2.85
Clean	
sian DNA for	
Directorate	
nergy and	* The default COP values may be revised as to the
less otherwise	revision of the approved JCM methodology
	ID_AM004.
dology AMS-	
	3.32
	3.32

a)	D	DE		
	Parameters	RE _{fridge,i,p}	RE _{AC,add,fridge,i,p}	PE _{fridge,i,p}
)	Description of data	Reference emissions of the fridge showcase <i>i</i> during the period <i>p</i>	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>i</i> during the period <i>p</i>	Project emissions of the fridge showcase <i>i</i> during the period <i>p</i>
)	Units	tCO ₂ /p	tCO ₂ /p	tCO ₂ /p
:)	Estimated Value of the			20.7
	i=1i=2	<u>20.7</u> 31.8	14.5 13.7	38.7 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 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 i=15	0.0	0.0	0.0
	i=15	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 i=22	0.0	0.0	0.0
	i=22	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 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 i=36	0.0	0.0	0.0
	i=36 i=37	0.0	0.0	0.0
		0.0	0.0	0.0
	i=37	0.0		0.0
	i=38 i=39	0.0	0.0	
	i=38 i=39 i=40	0.0 0.0	0.0	0.0
	i=38 i=39 i=40 i=41	0.0 0.0 0.0	0.0	0.0
	i=38 i=39 i=40 i=41 i=42	0.0 0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0
	i=38 i=39 i=40 i=41 i=42 i=43	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0
	i=38 i=39 i=40 i=41 i=42	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0
	i=38 i=39 i=40 i=41 i=42 i=43 i=44 i=45 i=46	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0
	i=38 i=39 i=40 i=41 i=42 i=43 i=44 i=45 i=46 i=47	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	i=38 i=39 i=40 i=41 i=42 i=43 i=44 i=45 i=46	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0

0.0

i=50

0.0

0.0

Table4: <i>Ex-post</i> 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			

nitoring option] on 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) on B Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices) on C Based on the actual measurement using measuring equipments (Data used: measured values)

[F

	rreezer snowcasej	ad av naat	Tabl	a 2. Drainat anna	if a noremotore fixed as a			
	e 1: Parameters monitor		Tab	e 2: Project-spec	ific parameters fixed ex a	inte		
(a)		1 March 2014 - 31 December 2014						
(b)		1		_			1	
(c)	Parameters	EC _{PJ,freezer,j,p}	(a)	Parameters	η _{PJ,freezer,j}	η _{RE,freezer,j}	η _{PJ,freezer,cap,j}	EF _{elec}
(d)	Description of data	Electricity consumption of the project freezer showcase j during the period p	(b)	Description of data	Energy efficiency of the volume of the project freezer showcase <i>i</i>	Energy efficiency of the volume of the reference freezer showcase <i>j</i>	Energy efficiency of the cooling capacity of the project freezer showcase <i>j</i>	CO ₂ emission factor for consumed elec
(f)	Units	MWh/p	(d)	Units	L/W	L/W	W/W	tCO ₂ /MWh
(f)		Option C	(d)	Units	L/VV	L/VV		
(g) (h)		Monitored data						
(1)	Measurement	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.	(e)	Source of data	The specifications of the project freezer showcase for quotation and condensing unit or the	The default values set in this methodology corresponding to the type		[For grid electricity] The most recent value available at the tr validation is applied and fixed for the mo- period thereafter. The data is sourced fr "Emission Factors of Electricity Intercon Systems", National Committee on Clear Development Mechanism (Indonesian D CDM), based on data obtained by Direct
(i) (i)	procedures	 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. 			factory acceptance test data by manufacturer	and rated volume of the project freezer showcase	acceptance test data by manufacturer	General of Electricity, Ministry of Energy Mineral Resources, Indonesia, unless of instructed by the Joint Committee." [For captive electricity] CDM approved small scale methodolog I.A
	Monitoring frequency Other comments	Monthly	(f)	Other comments				
(k)			(2)		of the freezer showcase	;		
(e)			(c)		-			0.000
	j=1 j=2	14.0		j=1 j=2	1.18	1.01	1.17	0.800
	j=3			j=3				
	j=4			j=4				
	j=5			j=5				
	j=6			j=6				
	j=7			j=7				
	j=8			j=8				
	j=9			j=9				
	j=10			j=10				
	j=11			j=11				
	j=12			j=12				
	j=13			j=13				
	j=14			j=14				
	j=15			j=15				
	j=16			j=16				
	j=17			j=17				
	j=18			j=18				
	j=19			j=19				
	j=20			j=20				
	j=21			j=21				
	j=22			j=22				
	j=23			j=23				
	j=24			j=24				
	j=25			j=25				
	j=26			j=26				
	j=27			j=27				
	j=28			j=28				
	j=29			j=29				
	j=30			j=30				
	j=31			j=31				
	j=32			j=32				
	j=33			j=33				
	j=34			j=34				
	j=35			j=35				
	j=36			j=36				
	j=37			j=37				
	j=38			j=38				
	j=39			j=39				
	j=40			j=40				
	j=10			j=10				
	j=42			j=42				
	j=43			j=12				
	j=44			j=10				
	j=45			j=11				
	j=10			j=46				
	j=10			j=10				
	j=48			j=48				
	j=49			j=49				
	j=49 i=50			j=49 j=50	-4(2)			
				1-00	[]-4(7)			

	η _{RI}	E,AC
ectricity	COP of the reference air c	onditioning system
cincity	COP of the reference and	onditioning system
	-	
	Cooling Capacity [kW]	Reference COP logy
diama at	ID_AM@04 < x 4.1	4.00
e time of nonitoring	4.1 < x 5.3	3.59
from	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2.96 2.85
onnection	7.1 × X 14.2	2.83
an DNA (co		
DNA for ectorate		
gy and		may be reviewd as to the
otherwise	* The default COP values revision of the approved J0	
	ID_AM004.	
ogy AMS-		
	3.:	32

Table3: Ex-pos	t calculation o	of each CO	emission rec	luctions

Parameters

(a)

RE_{freezer,j,p}

RE_{AC,add,freezer,j,p}

Table4: Ex-post calculation of CO₂ emission reductions for freezer showcases Monitoring Period CO 1 March 2014 - 31 December 2014 CO₂ emission reductions Units tCO₂/p 9 PE_{freezer,j,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)

(b)	Description of data	Reference emissions of the freezer showcase <i>j</i> during the period <i>p</i>	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 <i>j</i> during the period <i>p</i>	Project emissions of the freezer showcase <i>j</i> during the period <i>p</i>
(d)	Units	tCO ₂ /p	tCO ₂ /p	tCO ₂ /p
(c)	Estimated Value of the	freezer showcase i		
(c)	j=1	13.1	7.9	11.2
	j=1	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 j=10	0.0	0.0	0.0
	j=10	0.0	0.0	0.0
	j=11	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 j=19	0.0	0.0	0.0
	j=19 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 j=27	0.0	0.0	0.0
	j=27 j=28	0.0	0.0	0.0
	j=20 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 j=34	0.0	0.0	0.0
	j=34 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 j=40	0.0	0.0	0.0
	j=40 j=41	0.0	0.0	0.0
	j=41	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 i-49	0.0	0.0	0.0
	j=48 j=49	0.0	0.0	0.0
	j=50	0.0	0.0	0.0

Monitoring Spreadsheet: JCM_ID_AM008_ver02.0 Reference Number: ID006

Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period p		12.0	tCO ₂ /p	ERp
Emission reductions of the fridge showcase		3	tCO ₂ /p	-
Emission reductions of the freezer showcase		9	tCO ₂ /p	-
Selected default values, etc.				
Calculations for reference emissions				
Reference emissions during the period p		101.7	tCO ₂ /p	REp
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}
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,freeze}
Calculations of the project emissions				
Project emissions during the period p		88.6	tCO ₂ /p	PEp
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]

[List of Default Values]		
Energy efficiency of the reference fridge showcase	Range of volume (L)	Energy efficiency
Type: Reach-in showcase	z < 900	1.18
	900 ≦ z < 1200	1.07

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

2.24

0.70

0.70

1.01

Energy efficiency

1200 ≦ z

Range of volume (L)

z < 900

900 ≦ z

1200 ≦ z

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

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

Table 1: Para (a) Monitoring	(b) Monitoring	itored <i>ex po</i> (c) Parameters	(d) Description of	(e) Monitored	(f) Units	(g) Monitoring	(h) Source of data	(i) Measurement methods and procedures	(j) Monitoring	(k) Other
period		EC _{PJ,1,p}	Power consumption of project air conditioning system 1 during the period p	Values 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 _{PJ2}	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 C1271-12011. A certificate indicating that the electric meters used in the project are 9 - 10 years, indicating that these electric meters 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 _{PJ3p}	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
--	-----	----------------------	---	---	-------	----------	----------------	--	---------	-----

(a)	(b)	(c)	(d)	(e)	(f)	
Parameters	Description of data	Estimated Values	Units	Source of data	Other comments	
∃F _{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	
OP _{RE,2}	COP of reference air conditioning system 2	3.59	-	Nominal value available on product catalogs, specification documents or websites.	n/a	
OP _{RE,3}	COP of reference air conditioning system 3	2.96	-	Nominal value available on product catalogs, specification documents or websites.	n/a	
OP _{RE,4}	COP of reference air conditioning system 4	2.85	-	Nominal value available on product catalogs, specification documents or websites.	n/a	

 Monitoring Period
 CO2 emission reductions
 Units

 1 January 2015 - 31 December 2015
 31
 tCO2/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 Spreadsheet: JCM_ID_AM004_ver02.0 Reference Number: ID006

Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period p	N/A	31.8	tCO ₂ /p	ER _p
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}
Calculations for reference emissions				
Reference emissions during the period p	N/A	290.3	tCO ₂ /p	REp
Power consumption of project air conditioning system 1 during the period <i>p</i>	Electricity	0	MWh/p	$EC_{PJ,1,p}$
Power consumption of project air conditioning system 2 during the period <i>p</i>	Electricity	0	MWh/p	$EC_{PJ,2,p}$
Power consumption of project air conditioning system 3 during the period <i>p</i>	Electricity	323	MWh/p	$EC_{PJ,3,p}$
Power consumption of project air conditioning system 4 during the period <i>p</i>	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}
Calculations of the project emissions				
Project emissions during the period p	N/A	258.5	tCO ₂ /p	PEp
Sum of power consumption of project air conditioning system <i>i</i> during the period <i>p</i>	Electricity	323	MWh/p	ΣEC _{PJ,i,p}
CO ₂ emission factor for consumed electricity	Electricity	0.800	tCO ₂ /MWh	EF_{elec}

i	Project-specific parameters to be fixed ex ante		
1	COP of reference air conditioning system (Cooling capacity 2.5kW < $x \le 4.1kW$)	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 Spreadsheet: JCM_ID_AM005_ver02.0

Reference Number: ID006

Monitoring Report Sheet (Input Sheet) [For Verification]

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Monitoring period	Monitoring point No.	Parameters	Description of data	Monitored Values	Units	Monitoring option	Source of data	Measurement methods and procedures	Monitoring frequency	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)	(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	tCO₂/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 _{ΡJ}	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 CO₂ 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 to	ov entities other than the project partic	cipants (Data used: publicly reco	ognized data such as statistical data and speci	ifications)

 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 Spreadsheet: JCM_ID_AM005_ver02.0 Reference Number: ID006

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	$EC_{PJ,\rho}$					
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	PEp					
Total power consumption of project lighting during the period p	Electricity	20.7	MWh/p	$EC_{PJ,\rho}$					
CO ₂ emission factor for consumed electricity	Electricity	0.800	tCO ₂ /MWh	EF_{elec}					

Luminous efficiency of reference lighting	110.0	lm/W

Monitoring Spreadsheet: JCM_ID_AM005_ver02.0

Reference Number: ID006

Monitoring Report Sheet (Input Sheet) [For Verification]

(a)	(b)	(c)	st (d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Monitoring period	Monitoring point No.	Parameters	Description of data	Monitored Values	Units	Monitoring option	Source of data	, v	Monitoring frequency	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) dwing 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	tCO₂/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 _{ΡJ}	Luminous efficiency of project lighting	137.9	Im/VV	Specifications of project lighting prepared for the quotation or factory acceptance test data by manufacturer.	n/a
η _{<i>RE</i>}	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 CO₂ 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)
0	Option B	Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)
0	Option C	Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Spreadsheet: JCM_ID_AM005_ver02.0 Reference Number: ID006

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	ERp		
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	PEp		
Total power consumption of project lighting during the period	Electricity	55.7	MWh/p	$EC_{PJ,p}$		
CO ₂ emission factor for consumed electricity	Electricity	0.800	tCO ₂ /MWh	EF _{elec}		

Luminous efficiency of reference lighting	110.0	lm/W

Monitoring Report Sheet (Input Sheet) [For Verification] [For fridge showcase]

	Parameters monitore Monitoring period	1 January 2015 - 31 December 2015		_	ific parameters fixed ex a			
· ·	Ionitoring point No.	1						
(c)	Parameters	EC _{PJ,fridge,i,p}	(a)	Parameters	η _{PJ,fridge,i}	η _{RE,fridge,i}	η _{PJ,fridge,cap,i}	EF _{elec}
(d)	Description of data	Electricity consumption of the project fridge showcase i during the period p	(b)	Description of data	Energy efficiency of the volume of the project	Energy efficiency of the volume of the reference	Energy efficiency of the cooling capacity of the	CO ₂ emission factor for consumed ele
(8)			1.0		fridge showcase i	fridge showcase i	project fridge showcase i	
(f)		MWh/p Option C	(d)	Units	L/W	L/W	W/W	tCO ₂ /MWh
(g) (h)		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.	(e)	Source of data	The specifications of the project fridge showcase and condensing unit for quotation or the factory acceptance test data by manufacturer.	this methodology	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 th validation is applied and fixed for the period thereafter. The data is sourced "Emission Factors of Electricity Interc Systems", National Committee on Cle Development Mechanism (Indonesian CDM), based on data obtained by Dir General of Electricity, Ministry of Ene Mineral Resources, Indonesia, unless instructed by the Joint Committee." [For captive electricity] CDM approved small scale methodol I.A
(j) M	onitoring frequency	Other methods where applicable.						
(k)	Other comments			Other comments				
	onitored Value of the		(c)		of the fridge showcase i			
	i=1 i=2	248.2 248.2		i=1 i=2	0.39	0.73	0.71	0.80
	i=2 i=3	240.2		i=2	1.04	2.24	0.35	0.80
	i=4			i=4				
	i=5			i=5				
	i=6 i=7			i=6 i=7				
	i=7 i=8			i=8				
	i=9			i=9				
	i=10			i=10				
	i=11 i=12			i=11 i=12				
	i=13			i=13				
	i=14			i=14				
	i=15 i=16			i=15 i=16				
	i=10			i=10				
	i=18			i=18				
	i=19			i=19				
	i=20 i=21			i=20 i=21				
	i=22			i=22				
	i=23			i=23				
	i=24 i=25			i=24 i=25				
	i=25			i=25				
	i=27			i=27				
	i=28			i=28				
	i=29 i=30			i=29 i=30				
	i=30			i=30				
	i=32			i=32				
	i=33			i=33				
	i=34			i=34				
	i=35 i=36			i=35 i=36				
	i=30 i=37			i=30				
	i=38			i=38				
	i=39			i=39				
	i=40			i=40				
	i=41 i=42			i=41 i=42				
	i=42			i=42				
	i=44			i=44				
	i=45			i=45				
				i=46				
	i=46 i=47							
	i=46 i=47 i=48			i=47 i=48				
	i=47			i=47	ll-4(1)			

	η _{RE,AC}
delectricity	COP of the reference air conditioning system
	-
	Cooling Capacity [kW] Reference COP ogy
t the time of	D_AM0054.≤ x 4.1 4.00
he monitoring	4.1 < x 5.3 3.59
ced from	5.3 < x 7.1 2.96
erconnection	7.1 < x 14.2 2.85
Clean	
sian DNA for	
Directorate	
Energy and	* The default COP values may be revised as to the
less otherwise	revision of the approved JCM methodology
	ID_AM004.
dology AMS-	
	3.32
	3.32

a)	Parameters	RE _{fridge,i,p}	RE _{AC,add,fridge,i,p}	PE _{fridge,i,p}
,		niuge,i,p	AC,add,mdge,i,p	inuge,i,p
o)	Description of data	Reference emissions of the fridge showcase <i>i</i> during the period <i>p</i>	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>i</i> during the period <i>p</i>	Project emissions of the fridge showcase <i>i</i> during the period <i>p</i>
d)	Units	tCO ₂ /p	tCO ₂ /p	tCO ₂ /p
c)	Estimated Value of the			
	i=1 i=2	106.3 162.9	74.6	198.6
	i=2 i=3	0.0	70.1	198.6 0.0
	i=3	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 i=10	0.0	0.0	0.0
	i=10	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 i=17	0.0	0.0	0.0
	i=17	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 i=23	0.0 0.0	0.0	0.0
	i=23 i=24	0.0	0.0	0.0
	i=24	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 i=31	0.0 0.0	0.0	0.0
	i=31	0.0	0.0	0.0
	i=32	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
		0.0	0.0	0.0
	i=37	0.0	0.0	
	i=37 i=38	0.0		0.0
	i=37	0.0 0.0 0.0	0.0	0.0
	i=37 i=38 i=39 i=40 i=41	0.0 0.0 0.0	0.0 0.0 0.0	0.0
	i=37 i=38 i=39 i=40 i=41 i=42	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	0.0 0.0 0.0
	i=37 i=38 i=39 i=40 i=41 i=42 i=43	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0
	i=37 i=38 i=39 i=40 i=41 i=42 i=43 i=44	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0
	i=37 i=38 i=39 i=40 i=41 i=42 i=43 i=44 i=45	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0
	i=37 i=38 i=39 i=40 i=41 i=42 i=43 i=44	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0
	i=37 i=38 i=39 i=40 i=41 i=42 i=43 i=44 i=45 i=46 i=47 i=48	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	i=37 i=38 i=39 i=40 i=41 i=42 i=43 i=44 i=45 i=46 i=47	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

0.0

0.0

0.0

i=50

Table4: <i>Ex-post</i> 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				

nitoring option] on 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) on B Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices) on C Based on the actual measurement using measuring equipments (Data used: measured values)

[For freezer showcase]

	reezer snowcasej	ad automatic	T -1-1	0. Decised and a	·····			
	1: Parameters monitor		Tab	e 2: Project-spec	ific parameters fixed ex a	inte		
(a)		1 January 2015 - 31 December 2015						
(b)		1	_	1				
(c)	Parameters	EC _{PJ,freezer,j,p}	(a)	Parameters	η _{PJ,freezer,j}	η _{RE,freezer,j}	η _{PJ,freezer,cap,j}	EF _{elec}
(d)	Description of data	Electricity consumption of the project freezer showcase j during the period p	(b)	Description of data	Energy efficiency of the volume of the project freezer showcase <i>j</i>	Energy efficiency of the volume of the reference freezer showcase <i>j</i>	Energy efficiency of the cooling capacity of the project freezer showcase <i>j</i>	CO ₂ emission factor for consumed elec
(f)	Units	MWh/p	(d)	Units	L/W	L/W	W/W	tCO ₂ /MWh
(f)		· ·	(u)	Units	L/ VV	L/VV		
(g)		Option C Monitored data						
(h)	Source of data	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.	(e)	Source of data	The specifications of the project freezer showcase for quotation and condensing unit or the		project freezer showcase for quotation or the factory	[For grid electricity] The most recent value available at the tr validation is applied and fixed for the mo- period thereafter. The data is sourced fr "Emission Factors of Electricity Intercon Systems", National Committee on Clean Development Mechanism (Indonesian D CDM), based on data obtained by Direc
(i) (i)	methods and procedures	 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. 			factory acceptance test data by manufacturer	and rated volume of the project freezer showcase	acceptance test data by manufacturer	General of Electricity, Ministry of Energy Mineral Resources, Indonesia, unless of instructed by the Joint Committee." [For captive electricity] CDM approved small scale methodolog I.A
() (k)	Monitoring frequency Other comments	Monthiy	(f)	Other comments				
		a franzar showczsa i	(c)	<u> </u>	of the freezer showcase	i		
(e)			(0)				4.47	0.800
	j=1	74.1		j=1	1.18	1.01	1.17	0.800
	j=2			j=2				
	j=3			j=3				
	j=4			j=4				
	j=5			j=5				
	j=6			j=6				
	j=7			j=7				
	j=1 j=8			j=1 j=8				
	j=9			j=9				
	j=10			j=10				
	j=11			j=11				
	j=12			j=12				
	j=13			j=13				
	j=14			j=14				
	j=15			j=15				
	j=16			j=15 j=16				
	j=17			j=17				
	j=18			j=18				
	j=19			j=19				
	j=20			j=20				
	j=21			j=21				
	j=22			j=22				
	j=23			j=23				
	j=24			j=24				
	j=25			j=25				
	j=26			j=26				
	j=20			j=20 j=27				
	j=27			j=27				
	j=28 j=29			j=28 j=29				
	j=29 j=30			j=29 j=30				
	j=31			j=31				
	j=32			j=32				
	j=33			j=33				
	j=34			j=34				
	j=35			j=35				
	j=36			j=36				
	j=37			j=37				
	j=38			j=38				
	j=39			j=39				
	j=00			j=00 j=40				
	j=40			j=40 j=41				
	j=41			j=41				
	j=42 j=43			j=42 j=43				
	j=43 j=44			j=43 j=44				
				j=44 j=45				
	j=45							
	j=46			j=46				
	j=47			j=47				
	j=48			j=48				
	j=49			j=49				
	j=10			j=10 j=50	-4(2)			

	η _{RE,AC}
ectricity	COP of the reference air conditioning system
cincity	COP of the relefence an conditioning system
	-
	Cooling Capacity [kW] Reference COP
	Cooling Capacity [kW] Reference COP Iogy ID_AM@64 x 4.1 4.00
e time of	-4.1 < x 5.3 3.59
nonitoring from	5.3 < x 7.1 2.96
onnection	7.1 < x 14.2 2.85
an	
DNA for	
ectorate gy and	
otherwise	* The default COP values may be revised as to the
	revision of the approved JCM methodology ID_AM004.
ogy AMS-	
3,0	
	3.32
	3.32

(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 <i>j</i> during the period <i>p</i>	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 <i>j</i> during the period <i>p</i>	Project emissions of the freezer showcase <i>j</i> during the period <i>p</i>
(d)	Units	tCO ₂ /p	tCO ₂ /p	tCO ₂ /p
(c)	Estimated Value of the	e 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 j=8	0.0	0.0	0.0
	j=8 j=9	0.0	0.0	0.0
	j=3 j=10	0.0	0.0	0.0
	j=10 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 j=22	0.0	0.0	0.0
	j=22 j=23	0.0	0.0	0.0
	j=23	0.0	0.0	0.0
	j=24 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 j=34	0.0	0.0	0.0
	j=34 j=35	0.0	0.0	0.0
	j=35 j=36	0.0	0.0	0.0
	j=30	0.0	0.0	0.0
	j=38	0.0	0.0	0.0
	j=39	0.0	0.0	0.0
	j=30 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
		0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0

Table3: Ex-post calculation of each CO₂ emission reductions

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 Spreadsheet: JCM_ID_AM008_ver02.0 Reference Number: ID006

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	-
Selected default values, etc.				
Calculations for reference emissions				
Reference emissions during the period p		525.1	tCO ₂ /p	REp
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}
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,freeze}
Calculations of the project emissions				
Project emissions during the period p		456.5	tCO ₂ /p	PEp
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]

[List of Default values]		
Energy efficiency of the reference fridge showcase	Range of volume (L)	Energy efficiency
Type: Reach-in showcase	z < 900	1.18
	900 ≦ z < 1200	1.07

1200 ≦ z

Range of volume (L)

z < 900

900 ≦ z

1200 ≦ z

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

2.24

0.70

0.70

1.01

Energy efficiency

Energy efficiency of the reference freezer showcase

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

Table 1: Para (a) Monitoring	(b)	hitored ex po (c) Parameters	(d)	(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 operiod. Prediced for 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.	Monthly	n/a
	(2)	EC _{PJ2p}	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 C1271-12011. A certificate indicating that the electric meters used in the project are 9 -10 years, indicating that these electric meters and upipment 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 _{PJ3,p}	Power consumption of project air conditioning system 3 during the period p	183	MW h/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
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(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
OP _{re,2}	COP of reference air conditioning system 2	3.59	-	Nominal value available on product catalogs, specification documents or websites.	n/a
OP _{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

 Monitoring Period
 CO2 emission reductions

 1 January 2016 - 31 May 2016
 17

 [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 Spreadsheet: JCM_ID_AM004_ver02.0 Reference Number: ID006

Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period p	N/A	18.0	tCO ₂ /p	ER _p
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}
Calculations for reference emissions				
Reference emissions during the period <i>p</i>	N/A	164.1	tCO ₂ /p	REp
Power consumption of project air conditioning system 1 during the period <i>p</i>	Electricity	0	MWh/p	$EC_{PJ,1,p}$
Power consumption of project air conditioning system 2 during the period <i>p</i>	Electricity	0	MWh/p	$EC_{PJ,2,p}$
Power consumption of project air conditioning system 3 during the period <i>p</i>	Electricity	183	MWh/p	$EC_{PJ,3,p}$
Power consumption of project air conditioning system 4 during the period <i>p</i>	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}
Calculations of the project emissions				
Project emissions during the period p	N/A	146.1	tCO ₂ /p	PEp
Sum of power consumption of project air conditioning system <i>i</i> during the period <i>p</i>	Electricity	183	MWh/p	ΣEC _{PJ,i,p}
CO ₂ emission factor for consumed electricity	Electricity	0.800	tCO ₂ /MWh	EF _{elec}

i	Project-specific parameters to be fixed ex ante		
1	COP of reference air conditioning system (Cooling capacity 2.5kW < $x \le 4.1kW$)	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 Spreadsheet: JCM_ID_AM005_ver02.0

Reference Number: ID006

Monitoring Report Sheet (Input Sheet) [For Verification]

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Monitoring period	Monitoring point No.	Parameters	Description of data	Monitored Values	Units	Monitoring option	Source of data	Measurement methods and procedures	Monitoring frequency	Other comments
1 January 2016 - 31 May 2016	1		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)	(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	tCO₂/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 _{ΡJ}	Luminous efficiency of project lighting	133.3	Im////	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 CO₂ 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 Spreadsheet: JCM_ID_AM005_ver02.0 Reference Number: ID006

Monitoring Report Sheet (Calculation Process Sheet) [For V	/erification]			
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 <i>p</i>		7.2	tCO ₂ /p	RE _p
Total power consumption of project lighting during the period p	Electricity	7.4	MWh/p	$EC_{PJ,\rho}$
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	PEp
Total power consumption of project lighting during the period p	Electricity	7.4	MWh/p	$EC_{PJ,\rho}$
CO ₂ emission factor for consumed electricity	Electricity	0.800	tCO ₂ /MWh	EF _{elec}

Luminous efficiency of reference lighting	110.0	lm/W

Monitoring Spreadsheet: JCM_ID_AM005_ver02.0

Reference Number: ID006

Monitoring Report Sheet (Input Sheet) [For Verification]

(a)	(b)	itored ex pos (c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
(a) Monitoring period	Monitoring point No.	(C) Parameters	Description of data	(e) Monitored Values	(I) Units	(9) Monitoring option	(II) Source of data	N.	()) Monitoring frequency	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)	(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	tCO₂/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 _{ΡJ}	Luminous efficiency of project lighting	137.9	Im/VV	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 CO₂ 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 Spreadsheet: JCM_ID_AM005_ver02.0 Reference Number: ID006

Monitoring Report Sheet (Calculation Process Sheet) [For \	/erification]			
1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period p		7.7	tCO ₂ /p	ERp
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	REp
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	PEp
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}

Luminous efficiency of reference lighting	110.0	lm/W

[For fridge showcase]

able 1	: Parameters monitore	d ex post	Tab	le 2: Project-spec	ific parameters fixed ex a	ante		
(a)		1 January 2016 - 31 May 2016						
	Monitoring point No.	1		Barrantara		-	-	FF
(c) (d)	Parameters Description of data	$EC_{PJ,fridge,i,p}$ Electricity consumption of the project fridge showcase <i>i</i> during the period <i>p</i>	(a) (b)	Parameters Description of data	<u>η_{PJ,fridge,i}</u> Energy efficiency of the volume of the project	η _{RE,fridge,i} Energy efficiency of the volume of the reference	η _{PJ,fridge,cap,i} Energy efficiency of the cooling capacity of the	EF _{elec}
(5)	Units	MWh/p	(d)		fridge showcase i	fridge showcase i	project fridge showcase <i>i</i>	tCO ₂ /MWh
(f) (g)		Option C	(d)	Units				
(b)	Source of data	Monitored data 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:						[For grid electricity] The most recent value available at t validation is applied and fixed for th period thereafter. The data is source
(i)	Measurement methods and procedures	 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. 	(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.	"Emission Factors of Electricity Inte Systems", National Committee on C Development Mechanism (Indonesi CDM), based on data obtained by D General of Electricity, Ministry of Er Mineral Resources, Indonesia, unle instructed by the Joint Committee." [For captive electricity] CDM approved small scale method I.A
(j)	Monitoring frequency	Monthly	(f)	Other comments				
(k)	Other comments							
(e)	Monitored Value of the		(c)		of the fridge showcase i		0.71	0.80
	i=1 i=2	148.8		i=1 i=2	0.39	0.73	0.71	0.80
		148.8			1.84	2.24	0.35	0.80
	i=3			i=3				
	i=4			i=4				
	i=5			i=5				
	i=6			i=6				
	i=7			i=7				
	i=8			i=8				
	i=9			i=9				
	i=10			i=10				
	i=11			i=11				
	i=12			i=12				
	i=13			i=13				
	i=14			i=14				
	i=15			i=15				
	i=16			i=16				
	i=17			i=17				
	i=18			i=18				
	i=10			i=10				
	i=13			i=10				
	i=21			i=20				
	i=22			i=22		1		
	i=23			i=22		1		
	i=24			i=24		1		
	i=24			i=24				
	i=26			i=25				
	i=27			i=20				
	i=28			i=28				
	i=29			i=29				
	i=30			i=30				
	i=31			i=30				
	i=32			i=31		1		
	i=33			i=32		1		
	i=34			i=33		1		
	i=34			i=34				
	i=35			i=35				
	i=37 i=38			i=37 i=38				
	i=39			i=39				
	i=40			i=40				
				i=41				
	i=41			i=42				
	i=42			- 42				
	i=42 i=43			i=43				
	i=42 i=43 i=44			i=44				
	i=42 i=43 i=44 i=45			i=44 i=45				
	i=42 i=43 i=44 i=45 i=46			i=44 i=45 i=46				
	i=42 i=43 i=44 i=45 i=46 i=47			i=44 i=45 i=46 i=47				
	i=42 i=43 i=44 i=45 i=46 i=47 i=48			i=44 i=45 i=46 i=47 i=48				
	i=42 i=43 i=44 i=45 i=46 i=47			i=44 i=45 i=46 i=47	-4(1)			

	η _{RE,AC}
delectricity	COP of the reference air conditioning system
	-
	Cooling Capacity [kW] Reference COP ogy
t the time of	D_AM0054.≤ x 4.1 4.00
he monitoring	4.1 < x 5.3 3.59
ced from	5.3 < x 7.1 2.96
erconnection	7.1 < x 14.2 2.85
Clean	
sian DNA for	
Directorate	
Energy and	* The default COP values may be revised as to the
less otherwise	revision of the approved JCM methodology
	ID_AM004.
dology AMS-	
	3.32
	3.32

(a)	Parameters	RE _{fridge,i,p}	RE _{AC,add,fridge,i,p}	PE _{fridge,i,p}
5)	Description of data	Reference emissions of the fridge showcase <i>i</i> during the period <i>p</i>	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>i</i> during the period <i>p</i>	Project emissions of the fridge showcase <i>i</i> during the period <i>p</i>
d)	Units	tCO ₂ /p	tCO ₂ /p	tCO ₂ /p
(c)	Estimated Value of the			
	i=1 i=2	<u>63.7</u> 97.7	44.7	119.1 119.1
	i=2	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 i=13	0.0	0.0	0.0
	i=13	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 i=23	0.0	0.0	0.0
		0.0	0.0	0.0
			00	
	i=24 i-25	0.0		0.0
	i=25	0.0	0.0	0.0
				0.0 0.0 0.0
	i=25 i=26	0.0 0.0	0.0 0.0	0.0
	i=25 i=26 i=27 i=28 i=29	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0	0.0 0.0
	i=25 i=26 i=27 i=28 i=29 i=30	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0
	i=25 i=26 i=27 i=28 i=29 i=30 i=31	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0
	i=25 i=26 i=27 i=28 i=29 i=30 i=31 i=31 i=32	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	i=25 i=26 i=27 i=28 i=29 i=30 i=31 i=32 i=33	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	i=25 i=26 i=27 i=28 i=29 i=30 i=31 i=32 i=33 i=34	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	i=25 i=26 i=27 i=28 i=29 i=30 i=31 i=32 i=33 i=34 i=35	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	i=25 i=26 i=27 i=28 i=29 i=30 i=31 i=31 i=32 i=33 i=34 i=35 i=36	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	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	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	i=25 i=26 i=27 i=28 i=29 i=30 i=31 i=32 i=33 i=34 i=34 i=35 i=36 i=37 i=38	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	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	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	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	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	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	0.0 0.0	0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	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	0.0 0.0	0.0 0.0	0.0 0.0
	i=25 i=26 i=27 i=28 i=29 i=30 i=31 i=32 i=33 i=34 i=34 i=35 i=36 i=37 i=38 i=39 i=40 i=41 i=42 i=43 i=44	0.0 0.0	0.0 0.0	0.0 0.0
	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=41 i=42 i=43 i=44 i=45	0.0 0.0	0.0 0.0	0.0 0.0
	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=41 i=42 i=43 i=44 i=45 i=46	0.0 0.0	0.0 0.0	0.0 0.0
	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	0.0 0.0	0.0 0.0	0.0 0.0
	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=41 i=42 i=43 i=44 i=45 i=46	0.0 0.0	0.0 0.0	0.0 0.0

0.0

i=50

0.0

0.0

Table4: <i>Ex-post</i> 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		

onitoring option]

ion 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) ion B Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices) ion C Based on the actual measurement using measuring equipments (Data used: measured values)

Monitoring Report Sheet (Input Sheet) [For Verification] [For freezer showcase]

-		r showcase]		_						
Table 1: Parameters monitored ex post Table 2: Project-specific parameters fixed ex ante										
<u>`</u>	·		1 January 2016 - 31 May 2016							
(b (c		nitoring point No. Parameters	1 EC _{PJ,freezer,j,p}	(a) F	Parameters	n	n	n	EF _{elec}	N == + =
(0	,	Farameters	E OPJ,treezer,j,p			η _{PJ,freezer,j} Energy efficiency of the	η _{RE,freezer,j} Energy efficiency of the	η _{PJ,freezer,cap,j} Energy efficiency of the		η _{RE,AC}
(d) De	scription of data	Electricity consumption of the project freezer showcase <i>j</i> during the period <i>p</i>	(b) De	escription of data	volume of the project freezer showcase <i>j</i>	volume of the reference freezer showcase <i>j</i>	cooling capacity of the project freezer showcase <i>j</i>		COP of the reference air conditioning system
(f		Units	MWh/p	(d)	Units	L/W	L/W	W/W	tCO ₂ /MWh	-
(g (h		Source of data	Option C Monitored data 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:						[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	Cooling Capacity [kW] Reference COP logy $D_{\underline{AMGG4} < x}$ 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
(i)		Measurement methods and procedures	 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 	(e) So	ource of data	The specifications of the project freezer showcase for quotation and condensing unit or the factory acceptance test data by manufacturer	this methodology	The specifications of the project freezer showcase for quotation or the factory acceptance test data by manufacturer	"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 Jait Committee "	* The default COP values may be revised as to the revision of the approved JCM methodology ID_AM004.
			project operation period of 8 years, there is no need to calibrate or exchange the electric meters. - Other methods where applicable.							
(j		nitoring frequency	Monthly	(f)	Other					
(k	·	ther comments	e freezer showcase j		comments	of the freezer showcase	 ;			
(e) won	j=1	43.5	(C) Est	j=1	1.18	1.01	1.17	0.800	3.32
		j=2			j=2					
		j=3 j=4			j=3					
		j=4 j=5			j=4 j=5					
		j=6			j=6					
		j=7			j=7					
		j=8 j=9			j=8 j=9					
		j=10			j=0 j=10					
		j=11			j=11					
		j=12 j=13			j=12 j=13					
		j=14			j=14					
		j=15			j=15					
		j=16 j=17			j=16 j=17					
		j=17 j=18			j=18					
		j=19			i=19					
		j=20 j=21			j=20 j=21 j=22					
		j=22			j=22					
		j=23			j=23 j=24					
		j=24 j=25			j=24 i-25					
		j=26			j=25 j=26					
		j=27			i=27					
		j=28 j=29			j=28 j=29 j=30 j=31 j=32					
		j=29 j=30			j=25 j=30					
		j=31			j=31					
		j=32 j=33			j=32 j=33					
		j=34			j=33 j=34					
		j=35			j=34 j=35 j=36					
		j=36 j=37			j=36 i=37					
		j=38			j=37 j=38					
		j=39			j=37 j=38 j=39 j=40					
		j=40 j=41			j=40 j=41					
		j=42			j=42					
		j=43			j=43					
		j=44 j=45			j=44 j=45					
		j=45 j=46			j=45 j=46					
		j=47			j=47					
		j=48 j=49			j=48 i=49					
		j=49 j=50			j=49 j=50	II-4(2)				
						(<u>+</u>)				

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}
í				
b)	Description of data	Reference emissions of the freezer showcase <i>j</i> during the period <i>p</i>	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 <i>j</i> during the period <i>p</i>	Project emissions of the freezer showcase <i>j</i> during the period <i>p</i>
d)	Units	tCO ₂ /p	tCO ₂ /p	tCO ₂ /p
c)	Estimated Value of the			
	j=1	40.7	24.5	34.8
	j=2 i-2	0.0	0.0	0.0
	j=3 j=4	0.0	0.0	0.0
	j=4 j=5	0.0	0.0	0.0
	j=5 j=6	0.0	0.0	0.0
	j=0	0.0	0.0	0.0
	j=7 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 i=15	0.0	0.0	0.0
	j=15 j=16	0.0	0.0	0.0
	j=16 j=17	0.0	0.0	0.0
	j=17	0.0	0.0	0.0
	j=10 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 i=20	0.0	0.0	0.0
	j=29 j=30	0.0	0.0	0.0
	j=30 j=31	0.0	0.0	0.0
	j=31	0.0	0.0	0.0
	j=32	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
		0.0	0.0	0.0
	j=46	~ ~		
	j=47	0.0	0.0	0.0
		0.0 0.0 0.0	0.0 0.0 0.0	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 Spreadsheet: JCM_ID_AM008_ver02.0 Reference Number: ID006

Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period p		40.0	tCO ₂ /p	ERp
Emission reductions of the fridge showcase		10	tCO ₂ /p	-
Emission reductions of the freezer showcase		30	tCO ₂ /p	-
Selected default values, etc.				
Calculations for reference emissions				
Reference emissions during the period <i>p</i>		313.4	tCO ₂ /p	REp
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}
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,freeze}
Calculations of the project emissions				
Project emissions during the period p		272.9	tCO ₂ /p	PEp
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]

[List of Default values]		
Energy efficiency of the reference fridge showcase	Range of volume (L)	Energy efficiency
Type: Reach-in showcase	z < 900	1.18
	900 ≦ z < 1200	1.07

1200 ≦ z

Range of volume (L)

z < 900

900 ≦ z

1200 ≦ z

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

2.24

0.70

0.70

1.01

Energy efficiency

Energy efficiency of the reference freezer showcase

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