Summary

No.	Site Name	Grid Type	Estimated Reference Emissions (tCO_2/p)	Estimated Project Emissions (tCO_2/p)	Estimated Emission Reduction (tCO_2/p)
1	Pulau Putri	Off grid	28.71495522	26.44315034	2.271804879
2	Pulau Pantara	Off grid	35.92323616	25.53826935	10.3849668
3	Gunung Kramaian	Off grid	3.66322474	3.118091512	0.545133227
4	Perdau	Off grid	10.87150568	10.00096804	0.87053764
5	Matamanis	Off grid	39.46829235	30.41149683	9.056795525
6	Sei Mayang	Off grid	39.46829235	33.3319059	6.136386459
7	Muara Lesan	Off grid	0	0	0
8	Kota Bangun Empat	Off grid	39.46829235	18.96673655	20.5015558
9	Gunung Kuku	Off grid	43.13151709	35.95321922	7.178297877
10	Pulau Galang Baru	Off grid	43.13151709	19.61808429	23.5134328
11	Pantai Pasir Panjang	Off grid	32.26001142	19.43387463	12.82613679
12	Galang Baru Tengah	Off grid	39.46829235	22.10858915	17.3597032
13	Sungsang	Off grid	43.13151709	28.10422179	15.0272953
14	Karanganyar2	Poor grid	30.25522662	28.16634774	2.088878887
15	Bukit Barapung	Off grid	33.93223466	26.06291309	7.86932157
16	HUT Tanah Merah	Off grid	0	0	0
17	Tirta Agung Mangsang	Off grid	21.74301136	15.93144141	5.81156995
18	Gunung Sari Kampar	Poor grid	12.65611127	11.26369995	1.392411318
19	Kulim2	Poor grid	20.79086295	18.79254943	1.998313522
20	Sukamakmur Kampar Kiri	Poor grid	8.055691561	6.836272395	1.219419166
		Total			146.0519607
					146

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/01-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	22.00	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	1	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	5,832	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/01-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	10,795	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.903	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/01-2018/12/31	2	tCO_2/p

[Monitoring option]

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

Monitoring Spreadsheet: JCM_ID_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	2.27180488	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	28.7149552	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	23	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	22	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	1	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	5,832	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.903	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	26.4431503	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.903	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	10,795	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/01-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	18	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	3	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	7,296	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/01-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	10,426	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.903	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/01-2018/12/31	10	tCO_2/p

[Monitoring option]

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

Monitoring Spreadsheet: JCM_ID_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	10.3849668	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	35.9232362	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	21	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	18	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	3	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	7,296	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.903	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	25.5382694	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.903	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	10,426	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/31-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	4	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	744	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/31-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	1,273	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	1.512	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/31-2018/12/31	0	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_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	0.54513323	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	3.66322474	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	5	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	4	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	744	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	1.512	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	3.11809151	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	1.512	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	1,273	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/01-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	10	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	1	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	2,208	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/01-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	4,083	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.760	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/01-2018/12/31	0	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_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	0.87053764	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	10.8715057	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	11	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	10	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	1	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	2,208	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.760	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	10.000968	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.760	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	4,083	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/01-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	29	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	3	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	8,016	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/01-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	12,415	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.760	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/01-2018/12/31	9	tCO_2/p

[Monitoring option]

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

Monitoring Spreadsheet: JCM_ID_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	9.05679553	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	39.4682924	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	32	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	29	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	3	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	8,016	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.760	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	30.4114968	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.760	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	12,415	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/31-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	22	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	2	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	8,016	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/31-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	13,607	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.760	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/31-2018/12/31	6	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_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	6.13638646	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	39.4682924	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	25	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	22	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	2	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	8,016	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.760	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	33.3319059	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.760	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	13,607	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/31-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
'2018/01/31-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
'2018/01/31-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
'2018/01/31-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
'2018/01/31-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	0	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
'2018/01/31-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	0	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.760	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/31-2018/12/31	0	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_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	0	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	0	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	0	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.760	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	0	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.760	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	0	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/31-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	12	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	3	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	8,016	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/31-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	7,743	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.760	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/31-2018/12/31	20	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_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	20.5015558	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	39.4682924	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	15	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	12	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	3	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	8,016	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.760	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	18.9667366	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.760	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	7,743	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/01-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	18	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	1	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	8,760	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/01-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	14,677	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.760	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/01-2018/12/31	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_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	7.17829788	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	43.1315171	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	19	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	18	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	1	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	8,760	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.760	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	35.9532192	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.760	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	14,677	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/01-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	15	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	1	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	8,760	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/01-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	8,009	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.953	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/01-2018/12/31	23	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_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	23.5134328	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	43.1315171	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	17	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	15	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	1	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	8,760	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.953	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	19.6180843	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.953	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	8,009	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/31-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	13	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	1	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	6,552	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/31-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	7,934	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.953	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/31-2018/12/31	12	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_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	12.8261368	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	32.2600114	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	14	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	13	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	1	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	6,552	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.953	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	19.4338746	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.953	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	7,934	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/31-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	15	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	2	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	8,016	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/31-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	9,025	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.953	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/31-2018/12/31	17	tCO_2/p

[Monitoring option]

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

Monitoring Spreadsheet: JCM_ID_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	17.3597032	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	39.4682924	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	16	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	15	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	2	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	8,016	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.953	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	22.1085892	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.953	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	9,025	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/01-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	13	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	2	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	8,760	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/01-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	11,473	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.855	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/01-2018/12/31	15	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_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	15.0272953	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	43.1315171	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	15	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	13	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	2	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	8,760	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	28.1042218	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	11,473	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/01-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	33	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	2	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	7,898	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	7,992	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/01-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	30	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.855	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/01-2018/12/31	2	tCO_2/p

[Monitoring option]

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

Monitoring Spreadsheet: JCM_ID_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	2.08887889	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	30.2552266	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	35	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	33	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	2	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	7,898	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	7,992	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	28.1663477	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	33	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	30	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/01-2081/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	24	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2081/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	7	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2081/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	4	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2081/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	6,518	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2081/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	8,760	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/01-2081/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	2,149	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.855	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/01-2081/12/31	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_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	7.86932157	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	33.9322347	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	36	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	24	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	7	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	4	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	6,518	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	8,760	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	26.0629131	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	24	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	2,149	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/01-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	0	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/01-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	0	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.855	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/01-2018/12/31	0	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_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	0	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	0	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	0	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	0	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	0	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/01-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	10	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	1	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	0	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/01-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	4,416	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/01-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	6,504	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.855	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/01-2018/12/31	5	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_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	5.81156995	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	21.7430114	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	11	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	10	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	1	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	0	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	4,416	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	15.9314414	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	0	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	6,504	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/31-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	13	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	1	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	5,685	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	5,856	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/31-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	62	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.855	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/31-2018/12/31	1	tCO_2/p

[Monitoring option]

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

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	1.39241132	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	12.6561113	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	14	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	13	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	1	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	5,685	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	5,856	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	11.2636999	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	13	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	62	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/31-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	22	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	2	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	5,833	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	5,856	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/31-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	39	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.855	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/31-2018/12/31	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_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	1.99831352	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	20.790863	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	24	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	22	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	2	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	5,833	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	5,856	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	18.7925494	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	22	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	39	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(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
2018/01/31-2018/12/31	(1)	$EC_{i,grid,p}$	The amount of grid electricity consumed at *BTSi* during the period *p*	8	MWh/p	Option C	monitored data	Measuring equipment is installed to measure grid electricity consumption at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(2)	$EC_{i,diesel,p}$	The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	0	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by the project diesel generator at project BTS_i. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(3)	$EC_{i,solar,p}$	The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	1	MWh/p	Option C	monitored data	Measuring equipment is installed to measure electricity generated by solar PV system at project BTSi. The manufacturer's specification for the measuring equipment has been prepared by the time of installation. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(4)	$\tau_{i,p}$	Hours for which electricity is available from grid at *BTSi* during the period *p*	4,748	h/p	Option C	monitored data	Sensor logger is installed to measure hours for which of electricity is available from grid. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored continuously and recorded monthly	n/a
2018/01/31-2018/12/31	(5)	$T_{i,p}$	Total hours of operation of *BTSi* during the period *p*	4,872	h/p	Option C	monitored data	Total hours of operation of BTS_i is determined based on the following calculation result: $T_{i,p} = D_{i,p} * 24$ Where, $D_{i,p}$ = Days of operation of *BTSi* during the period *p* $D_{i,p}$ is counted as the actual number of days between starting date (DD/MM/YYYY) and end date (DD/MM/YYYY) of the monitoring period. If there are days on which BTS_i is not operating, the number of days should be subtracted from the total number of days monitored. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Monitored daily and recorded monthly	n/a
2018/01/31-2018/12/31	(6)	$FC_{i,diesel,p}$	The quantity of diesel consumed at *BTSi* during the period *p*	49	L/p	Option C	monitored data	Diesel consumption is determined by recording the quantity of the filled fuel which is refilled to fill up the tank at the project BTS_i. The data monitored is kept and archived electronically for two years after the final issuance of credits.	Recorded at every filling time	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
φ_i	Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at BTS_i	2	L/h	Specification of generator. Manufacturer's data. If more than one diesel generators are equipped at the project BTS, the most efficient value among the design efficiency of the equipped diesel generators is adopted for the calculation of the reference emissions.	n/a
EF_{grid}	Grid CO_2 emission factor	0.855	tCO_2/MWh	The most recent value available at the time of validation is applied and fixed for the monitoring period thereafter. The data is sourced from "Emission Factors of Electricity Interconnection Systems", National Committee on Clean Development Mechanism Indonesian DNA for CDM unless otherwise instructed by the Joint Committee.	n/a
ρ_{diesel}	Weighted average density of diesel	1	kg/L	a) Values provided by the fuel supplier in invoices, or b) Regional or national default value.	n/a
NCV_{diesel}	Net calorific value of diesel	41.4	TJ/Gg	IPCC default values provided in table 1.2 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a
EF_{diesel}	Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$	IPCC default values provided in table 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied.	n/a

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

Monitoring Period	CO_2 emission reductions	Units
2018/01/31-2018/12/31	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_AM014_ver01.0

Reference Number: ID016

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	n/a	1.21941917	tCO_2/p	ER_p
2. Selected default values, etc.				
Net calorific value of diesel	Diesel	41.4	TJ/Gg	NCV_{diesel}
Diesel CO_2 emission factor	Diesel	72,600	$kgCO_2/TJ$	EF_{diesel}
3. Calculations for reference emissions				
Reference emissions during the period *p*	n/a	8.05569156	tCO_2/p	RE_p
Total electricity consumption at *BTSi* during the period *p*	Electricity	9	MWh/p	$EC_{i,p}$
The amount of grid electricity consumed at *BTSi* during the period *p*	Electricity	8	MWh/p	$EC_{i,grid,p}$
The amount of electricity generated by the project diesel generator at *BTSi* during the period *p*	Electricity	0	MWh/p	$EC_{i,diesel,p}$
The amount of electricity generated by the project solar PV system at *BTSi* during the period *p*	Electricity	1	MWh/p	$EC_{i,solar,p}$
Hours for which electricity is available from grid at *BTSi* during the period *p*	n/a	4,748	h/p	$\tau_{i,p}$
Total hours of operation of *BTSi* during the period *p*	n/a	4,872	h/p	$T_{i,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
Design efficiency of diesel generator operated at the project BTS at the time of validation at 25% load to be installed at *BTSi*	n/a	2	L/h	φ_i
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}
4. Calculations of the project emissions				
Project emissions during the period *p*	n/a	6.83627239	tCO_2/p	PE_p
The amount of grid electricity consumed at BTS_i during the period *p*	Electricity	8	MWh/p	$EC_{i,grid,p}$
Grid CO_2 emission factor	Electricity	0.855	tCO_2/MWh	EF_{grid}
The quantity of diesel consumed at BTS_i during the period *p*	Diesel	49	L/p	$FC_{i,diesel,p}$
Weighted average density of diesel	Diesel	1	kg/L	ρ_{diesel}

[List of Default Values]

Net calorific value of diesel	41.4	TJ/Gg
Diesel CO_2 emission factor	72,600	$kgCO_2/TJ$