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
01/08/2017-31/12/2017	(1)	$EG_{i,p}$	Quantity of the electricity generated by the project solar PV system *i* during the period *p*	6,082	MWh/p	Option C	Measured data	AC output of the inverters is measured to determine the amount of net electricity generation by the solar PV system. The reading is taken from an electricity meter. The reading is taken electronically using the SCADA system or manual recording when electronic recording is not available. The electricity meter used is certified for the assurance of electricity measurements by the relevant Mongolian government department or manufacturer's test report. The electricity meter's accuracy level is class 0.2S and it is attached with a calibration certificate that is valid from 27 February 2014 until 27 February 2022. It is to be calibrated every 8 years.	Monthly recording	Input on "MRS(input_separate)" sheet

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

(a)	(b)	(c)	(d)	(e)	(f)
Parameters	Description of data	Estimated Values	Units	Source of data	Other comments
$EF_{RE,i}$	Reference CO_2 emission factor for the project solar PV system *i*	-	tCO_2/MWh	EFREgrid, 0.797 tCO2/MWh is applied based on the applied methodology as the PV system in a proposed project activity which is connected to Central Electricity System, part of the national grid including through internal grid which is not connected to a captive power generator.	Input on "MPS(input_separate)" sheet

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

Monitoring Period	CO_2 emission reductions	Units
01/08/2017-31/12/2017	4,846	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_MN_AM003_ver02.0
Reference Number: MN004

	Parameters monitored *ex post*	Project-specific parameters fixed *ex ante*
i	$EG_{i,p}$	$EF_{RE,i}$
Solar PV system number	Quantity of the electricity generated by the project solar PV system *i* during the period *p*	Reference CO_2 emission factor for the project solar PV system *i*
	MWh/p	tCO_2/MWh
1	6,082	0.797
2		0.000
3		0.000
4		0.000
5		0.000
6		0.000
7		0.000
8		0.000
9		0.000
10		0.000
11		0.000
12		0.000
13		0.000
14		0.000
15		0.000
16		0.000
17		0.000
18		0.000
19		0.000
20		0.000
21		0.000
22		0.000
23		0.000
24		0.000
25		0.000
26		0.000
27		0.000
28		0.000
29		0.000
30		0.000
31		0.000
32		0.000
33		0.000
34		0.000
35		0.000
36		0.000
37		0.000
38		0.000
39		0.000
40		0.000
41		0.000
42		0.000
43		0.000
44		0.000
45		0.000
46		0.000
47		0.000
48		0.000
49		0.000
50		0.000

51		0.000
52		0.000
53		0.000
54		0.000
55		0.000
56		0.000
57		0.000
58		0.000
59		0.000
60		0.000
61		0.000
62		0.000
63		0.000
64		0.000
65		0.000
66		0.000
67		0.000
68		0.000
69		0.000
70		0.000
71		0.000
72		0.000
73		0.000
74		0.000
75		0.000
76		0.000
77		0.000
78		0.000
79		0.000
80		0.000
81		0.000
82		0.000
83		0.000
84		0.000
85		0.000
86		0.000
87		0.000
88		0.000
89		0.000
90		0.000
91		0.000
92		0.000
93		0.000
94		0.000
95		0.000
96		0.000
97		0.000
98		0.000
99		0.000
100		0.000

Monitoring Spreadsheet: JCM_MN_AM003_ver02.0
Reference Number: MN004

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	4846.95869	tCO_2/p	ER_p
2. Selected default values, etc.				
The reference CO_2 emission factor of electricity				
The reference CO_2 emission factor based on the national grid	Mixed	0.797	tCO_2/MWh	$EF_{RE,grid}$
The reference CO_2 emission factor based on the captive power generator	Diesel	0.533	tCO_2/MWh	$EF_{RE,cap}$
3. Calculations for reference emissions				
Reference emissions during the period *p*	N/A	4846.95869	tCO_2/p	RE_p
4. Calculations of the project emissions				
Project emissions during the period *p*	N/A	0	tCO_2/p	PE_p

[List of Default Values]

The reference CO_2 emission factor based on the national grid (CES, WES, AUES, EES, SES)	Mixed	0.797
The reference CO_2 emission factor based on the captive power generator	Diesel	0.533

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
01/01/2018-31/12/2018	(1)	$EG_{i,p}$	Quantity of the electricity generated by the project solar PV system *i* during the period *p*	16,847	MWh/p	Option C	Measured data	AC output of the inverters is measured to determine the amount of net electricity generation by the solar PV system. The reading is taken from an electricity meter. The reading is taken electronically using the SCADA system or manual recording when electronic recording is not available. The electricity meter used is certified for the assurance of electricity measurements by the relevant Mongolian government department or manufacturer's test report. The electricity meter's accuracy level is class 0.2S and it is attached with a calibration certificate that is valid from 27 February 2014 until 27 February 2022. It is to be calibrated every 8 years.	Monthly recording	Input on "MRS(input_separate)" sheet

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

(a)	(b)	(c)	(d)	(e)	(f)
Parameters	Description of data	Estimated Values	Units	Source of data	Other comments
$EF_{RE,i}$	Reference CO_2 emission factor for the project solar PV system *i*	-	tCO_2/MWh	EFREgrid, 0.797 tCO2/MWh is applied based on the applied methodology as the PV system in a proposed project activity which is connected to Central Electricity System, part of the national grid including through internal grid which is not connected to a captive power generator.	Input on "MPS(input_separate)" sheet

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

Monitoring Period	CO_2 emission reductions	Units
01/01/2018-31/12/2018	13,427	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_MN_AM003_ver02.0
Reference Number: MN004

	Parameters monitored *ex post*	Project-specific parameters fixed *ex ante*
i	$EG_{i,p}$	$EF_{RE,i}$
Solar PV system number	Quantity of the electricity generated by the project solar PV system *i* during the period *p*	Reference CO_2 emission factor for the project solar PV system *i*
	MWh/p	tCO_2/MWh
1	16,847	0.797
2		0.000
3		0.000
4		0.000
5		0.000
6		0.000
7		0.000
8		0.000
9		0.000
10		0.000
11		0.000
12		0.000
13		0.000
14		0.000
15		0.000
16		0.000
17		0.000
18		0.000
19		0.000
20		0.000
21		0.000
22		0.000
23		0.000
24		0.000
25		0.000
26		0.000
27		0.000
28		0.000
29		0.000
30		0.000
31		0.000
32		0.000
33		0.000
34		0.000
35		0.000
36		0.000
37		0.000
38		0.000
39		0.000
40		0.000
41		0.000
42		0.000
43		0.000
44		0.000
45		0.000
46		0.000
47		0.000
48		0.000
49		0.000
50		0.000

51		0.000
52		0.000
53		0.000
54		0.000
55		0.000
56		0.000
57		0.000
58		0.000
59		0.000
60		0.000
61		0.000
62		0.000
63		0.000
64		0.000
65		0.000
66		0.000
67		0.000
68		0.000
69		0.000
70		0.000
71		0.000
72		0.000
73		0.000
74		0.000
75		0.000
76		0.000
77		0.000
78		0.000
79		0.000
80		0.000
81		0.000
82		0.000
83		0.000
84		0.000
85		0.000
86		0.000
87		0.000
88		0.000
89		0.000
90		0.000
91		0.000
92		0.000
93		0.000
94		0.000
95		0.000
96		0.000
97		0.000
98		0.000
99		0.000
100		0.000

Monitoring Spreadsheet: JCM_MN_AM003_ver02.0
Reference Number: MN004

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	13427.1515	tCO_2/p	ER_p
2. Selected default values, etc.				
The reference CO_2 emission factor of electricity				
The reference CO_2 emission factor based on the national grid	Mixed	0.797	tCO_2/MWh	$EF_{RE,grid}$
The reference CO_2 emission factor based on the captive power generator	Diesel	0.533	tCO_2/MWh	$EF_{RE,cap}$
3. Calculations for reference emissions				
Reference emissions during the period *p*	N/A	13427.1515	tCO_2/p	RE_p
4. Calculations of the project emissions				
Project emissions during the period *p*	N/A	0	tCO_2/p	PE_p

[List of Default Values]

The reference CO_2 emission factor based on the national grid (CES, WES, AUES, EES, SES)	Mixed	0.797
The reference CO_2 emission factor based on the captive power generator	Diesel	0.533

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
01/01/2019-31/12/2019	(1)	$EG_{i,p}$	Quantity of the electricity generated by the project solar PV system *i* during the period *p*	17,383	MWh/p	Option C	Measured data	AC output of the inverters is measured to determine the amount of net electricity generation by the solar PV system. The reading is taken from an electricity meter. The reading is taken electronically using the SCADA system or manual recording when electronic recording is not available. The electricity meter used is certified for the assurance of electricity measurements by the relevant Mongolian government department or manufacturer's test report. The electricity meter's accuracy level is class 0.2S and it is attached with a calibration certificate that is valid from 27 February 2014 until 27 February 2022. It is to be calibrated every 8 years.	Monthly recording	Input on "MRS(input_separate)" sheet

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

(a)	(b)	(c)	(d)	(e)	(f)
Parameters	Description of data	Estimated Values	Units	Source of data	Other comments
$EF_{RE,i}$	Reference CO_2 emission factor for the project solar PV system *i*	-	tCO_2/MWh	EFREgrid, 0.797 tCO2/MWh is applied based on the applied methodology as the PV system in a proposed project activity which is connected to Central Electricity System, part of the national grid including through internal grid which is not connected to a captive power generator.	Input on "MPS(input_separate)" sheet

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

Monitoring Period	CO_2 emission reductions	Units
01/01/2019-31/12/2019	13,853	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_MN_AM003_ver02.0
Reference Number: MN004

	Parameters monitored *ex post*	Project-specific parameters fixed *ex ante*
i	$EG_{i,p}$	$EF_{RE,i}$
Solar PV system number	Quantity of the electricity generated by the project solar PV system *i* during the period *p*	Reference CO_2 emission factor for the project solar PV system *i*
	MWh/p	tCO_2/MWh
1	17,383	0.797
2		0.000
3		0.000
4		0.000
5		0.000
6		0.000
7		0.000
8		0.000
9		0.000
10		0.000
11		0.000
12		0.000
13		0.000
14		0.000
15		0.000
16		0.000
17		0.000
18		0.000
19		0.000
20		0.000
21		0.000
22		0.000
23		0.000
24		0.000
25		0.000
26		0.000
27		0.000
28		0.000
29		0.000
30		0.000
31		0.000
32		0.000
33		0.000
34		0.000
35		0.000
36		0.000
37		0.000
38		0.000
39		0.000
40		0.000
41		0.000
42		0.000
43		0.000
44		0.000
45		0.000
46		0.000
47		0.000
48		0.000
49		0.000
50		0.000

51		0.000
52		0.000
53		0.000
54		0.000
55		0.000
56		0.000
57		0.000
58		0.000
59		0.000
60		0.000
61		0.000
62		0.000
63		0.000
64		0.000
65		0.000
66		0.000
67		0.000
68		0.000
69		0.000
70		0.000
71		0.000
72		0.000
73		0.000
74		0.000
75		0.000
76		0.000
77		0.000
78		0.000
79		0.000
80		0.000
81		0.000
82		0.000
83		0.000
84		0.000
85		0.000
86		0.000
87		0.000
88		0.000
89		0.000
90		0.000
91		0.000
92		0.000
93		0.000
94		0.000
95		0.000
96		0.000
97		0.000
98		0.000
99		0.000
100		0.000

Monitoring Spreadsheet: JCM_MN_AM003_ver02.0

Reference Number: MN004

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	13853.929	tCO_2/p	ER_p
2. Selected default values, etc.				
The reference CO_2 emission factor of electricity				
The reference CO_2 emission factor based on the national grid	Mixed	0.797	tCO_2/MWh	$EF_{RE,grid}$
The reference CO_2 emission factor based on the captive power generator	Diesel	0.533	tCO_2/MWh	$EF_{RE,cap}$
3. Calculations for reference emissions				
Reference emissions during the period *p*	N/A	13853.929	tCO_2/p	RE_p
4. Calculations of the project emissions				
Project emissions during the period *p*	N/A	0	tCO_2/p	PE_p

[List of Default Values]

The reference CO_2 emission factor based on the national grid (CES, WES, AUES, EES, SES)	Mixed	0.797
The reference CO_2 emission factor based on the captive power generator	Diesel	0.533

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
01/01/2020-31/12/2020	(1)	$EG_{i,p}$	Quantity of the electricity generated by the project solar PV system *i* during the period *p*	15,924	MWh/p	Option C	Measured data	AC output of the inverters is measured to determine the amount of net electricity generation by the solar PV system. The reading is taken from an electricity meter. The reading is taken electronically using the SCADA system or manual recording when electronic recording is not available. The electricity meter used is certified for the assurance of electricity measurements by the relevant Mongolian government department or manufacturer's test report. The electricity meter's accuracy level is class 0.2S and it is attached with a calibration certificate that is valid from 27 February 2014 until 27 February 2022. It is to be calibrated every 8 years.	Monthly recording	Input on "MRS(input_separate)" sheet

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

(a)	(b)	(c)	(d)	(e)	(f)
Parameters	Description of data	Estimated Values	Units	Source of data	Other comments
$EF_{RE,i}$	Reference CO_2 emission factor for the project solar PV system *i*	-	tCO_2/MWh	EFREgrid, 0.797 tCO2/MWh is applied based on the applied methodology as the PV system in a proposed project activity which is connected to Central Electricity System, part of the national grid including through internal grid which is not connected to a captive power generator.	Input on "MPS(input_separate)" sheet

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

Monitoring Period	CO_2 emission reductions	Units
01/01/2020-31/12/2020	12,691	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_MN_AM003_ver02.0
Reference Number: MN004

	Parameters monitored *ex post*	Project-specific parameters fixed *ex ante*
i	$EG_{i,p}$	$EF_{RE,i}$
Solar PV system number	Quantity of the electricity generated by the project solar PV system *i* during the period *p*	Reference CO_2 emission factor for the project solar PV system *i*
	MWh/p	tCO_2/MWh
1	15,924	0.797
2		0.000
3		0.000
4		0.000
5		0.000
6		0.000
7		0.000
8		0.000
9		0.000
10		0.000
11		0.000
12		0.000
13		0.000
14		0.000
15		0.000
16		0.000
17		0.000
18		0.000
19		0.000
20		0.000
21		0.000
22		0.000
23		0.000
24		0.000
25		0.000
26		0.000
27		0.000
28		0.000
29		0.000
30		0.000
31		0.000
32		0.000
33		0.000
34		0.000
35		0.000
36		0.000
37		0.000
38		0.000
39		0.000
40		0.000
41		0.000
42		0.000
43		0.000
44		0.000
45		0.000
46		0.000
47		0.000
48		0.000
49		0.000
50		0.000

51		0.000
52		0.000
53		0.000
54		0.000
55		0.000
56		0.000
57		0.000
58		0.000
59		0.000
60		0.000
61		0.000
62		0.000
63		0.000
64		0.000
65		0.000
66		0.000
67		0.000
68		0.000
69		0.000
70		0.000
71		0.000
72		0.000
73		0.000
74		0.000
75		0.000
76		0.000
77		0.000
78		0.000
79		0.000
80		0.000
81		0.000
82		0.000
83		0.000
84		0.000
85		0.000
86		0.000
87		0.000
88		0.000
89		0.000
90		0.000
91		0.000
92		0.000
93		0.000
94		0.000
95		0.000
96		0.000
97		0.000
98		0.000
99		0.000
100		0.000

Monitoring Spreadsheet: JCM_MN_AM003_ver02.0
Reference Number: MN004

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	12691.4949	tCO_2/p	ER_p
2. Selected default values, etc.				
The reference CO_2 emission factor of electricity				
The reference CO_2 emission factor based on the national grid	Mixed	0.797	tCO_2/MWh	$EF_{RE,grid}$
The reference CO_2 emission factor based on the captive power generator	Diesel	0.533	tCO_2/MWh	$EF_{RE,cap}$
3. Calculations for reference emissions				
Reference emissions during the period *p*	N/A	12691.4949	tCO_2/p	RE_p
4. Calculations of the project emissions				
Project emissions during the period *p*	N/A	0	tCO_2/p	PE_p

[List of Default Values]

The reference CO_2 emission factor based on the national grid (CES, WES, AUES, EES, SES)	Mixed	0.797
The reference CO_2 emission factor based on the captive power generator	Diesel	0.533