Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(a)	Monitoring period	-	1/11/2018-31/12/2018
(b)	Monitoring point No.	-	1
(c)	Parameters	i	$EC_{PJ,i,p}$
(d)	Description of data	Identification number of wire stranding machines	Electricity consumption of project wire stranding machine *i* during the period *p*
(e)	Units	-	MWh/p
(f)	Monitoring option	-	Option C
(g)	Source of data	-	Monitored and calculated data
(h)	Measurement methods and procedures	-	-Data is measured by measuring equipment. The measuring equipment is replaced or calibrated at an interval following the regulations in the country in which the measuring equipment is commonly used or according to the manufacturer's recommendation, unless a type approval, manufacturer's specification, or certification issued by an entity accredited under international/national standards for the measuring equipment has been prepared by the time of installation. - The electricity consumption is measured and recorded electronically by measuring equipment with manufacture's specification with ±5% accuracy level which is required as the instrument error in Joint Crediting Mechanism Guidelines for Developing Project Design Document and Monitoring Report. - Recording data and checking recorded data is carried out in accordance with the monitoring manual. - The measuring equipment is not
(i)	Monitoring frequency	-	Monitored continuously and recorded monthly
(j)	Other comments		

(k)	No.		Monitored Values
	1	ST-1	7.0
	2	ST-2	7.4
	3	ST-3	4.8
	4	ST-4	5.1
	5	ST-5	7.8
	6	ST-6	7.2
	7	ST-7	8.4
	8	ST-8	8.0
	9	ST-9	7.3
	10	ST-10	3.2
	11	ST-11	7.0
	12	ST-12	6.1
	13	ST-13	5.9
	14	ST-14	5.7
	15	ST-15	6.6
	16	ST-16	5.2
	17	ST-17	5.9
	18	ST-18	6.5
	19	ST-19	5.9
	20	ST-20	5.7
	21	ST-21	5.6
	22	ST-22	7.4
	23	ST-23	7.0
	24	ST-24	6.0
	25	ST-25	7.6
	26	ST-26	7.3
	27	ST-27	6.9

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

(a)	Parameters	i	ECR	EF_{elec}
(b)	Description of data	Identification number of wire stranding machines	Electricity consumption ratio per production unit	CO_2 emission factor for consumed electricity
(c)	Units	-	-	tCO_2/kWh
(d)	Source of data	-	Survey results on $EU_{RE}/EU_{P,i}$ of wire stranding machines that have high market share in Vietnam.	Ministry of Natural Resources and Environment of Vietnam (MONRE), Vietnamese DNA for CDM unless otherwise instructed by the Joint Committee. [Captive electricity] For the option a) Specification of the captive power generation system provided by the manufacturer (η elec,CG [%]). CO2 emission factor of the fossil fuel type used in the captive power generation system (EFfuel,CG [tCO2/GJ]) For the option b) Generated and supplied electricity by the captive power generation system (EGPJ,CG,p [MWh/p]). Fuel amount consumed by the captive power generation system (FCPJ,CG,p [mass or volume/p]). Net calorific value (NCVfuel,CG [GJ/mass or volume]) and CO2 emission factor (EFfuel,CG [tCO2/GJ]) of the fuel consumed by the captive power generation system in order of preference: 1) values provided by the fuel supplier; 2) measurement by the project participants; 3) regional or national default values; 4) IPCC default values provided in tables 1.2 and 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied. [Captive electricity with diesel fuel] CDM approved small scale methodology: AMS-I.A. [Captive electricity with natural gas] 2006 IPCC Guidelines on National GHG Inventories for the source of EF of natural gas. CDM Methodological tool "Determining the baseline efficiency of thermal or electric energy generation systems version02.0" for the default efficiency for off-grid power plants.
(e)	Other comments			

(f)	No.			
	1	ST-1	1.51	0.918500
	2	ST-2	1.51	0.918500
	3	ST-3	1.51	0.918500
	4	ST-4	1.51	0.918500
	5	ST-5	1.51	0.918500
	6	ST-6	1.51	0.918500
	7	ST-7	1.51	0.918500
	8	ST-8	1.51	0.918500
	9	ST-9	1.51	0.918500
	10	ST-10	1.51	0.918500
	11	ST-11	1.51	0.918500
	12	ST-12	1.51	0.918500
	13	ST-13	1.51	0.918500
	14	ST-14	1.51	0.918500
	15	ST-15	1.51	0.918500
	16	ST-16	1.51	0.918500
	17	ST-17	1.51	0.918500
	18	ST-18	1.51	0.918500
	19	ST-19	1.51	0.918500
	20	ST-20	1.51	0.918500
	21	ST-21	1.51	0.918500
	22	ST-22	1.51	0.918500
	23	ST-23	1.51	0.918500
	24	ST-24	1.51	0.918500
	25	ST-25	1.51	0.918500
	26	ST-26	1.51	0.918500
	27	ST-27	1.51	0.918500

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

(a)	Parameters	RE_p	PE_p	ER_p
(b)	Description of data	Reference emissions during the period *p*	Project emissions during the period *p*	Emissions reduction during the period *p*
(c)	Units	$[tCO_2/p]$	$[tCO_2/p]$	$[tCO_2/p]$

(d)	No.	Estimated Values		
	1	9.7	6.4	3.3
	2	10.3	6.8	3.5
	3	6.6	4.4	2.2
	4	7.1	4.7	2.4
	5	10.9	7.2	3.7
	6	10.0	6.6	3.4
	7	11.6	7.7	3.9
	8	11.2	7.4	3.8
	9	10.2	6.7	3.4
	10	4.4	2.9	1.5
	11	9.7	6.4	3.3
	12	8.4	5.6	2.8
	13	8.2	5.5	2.8
	14	7.8	5.2	2.6
	15	9.2	6.1	3.1
	16	7.2	4.7	2.4
	17	8.1	5.4	2.7
	18	9.0	5.9	3.0
	19	8.1	5.4	2.8
	20	8.0	5.3	2.7
	21	7.8	5.2	2.6
	22	10.3	6.8	3.5
	23	9.7	6.5	3.3
	24	8.4	5.5	2.8
	25	10.5	7.0	3.5
	26	10.1	6.7	3.4
	27	9.6	6.4	3.2

Monitoring period	CO_2 emission reductions	Units
1/11/2018-31/12/2018	98	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)

28	ST-28		8.1
29	ST-29		7.3
30	ST-30		6.2
31	ST-31		6.5
32	ST-32		7.8
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			

28	ST-28	1.51		0.918500
29	ST-29	1.51		0.918500
30	ST-30	1.51		0.918500
31	ST-31	1.51		0.918500
32	ST-32	1.51		0.918500
33	0	1.51		0.000000
34	0	1.51		0.000000
35	0	1.51		0.000000
36	0	1.51		0.000000
37	0	1.51		0.000000
38	0	1.51		0.000000
39	0	1.51		0.000000
40	0	1.51		0.000000
41	0	1.51		0.000000
42	0	1.51		0.000000
43	0	1.51		0.000000
44	0	1.51		0.000000
45	0	1.51		0.000000
46	0	1.51		0.000000
47	0	1.51		0.000000
48	0	1.51		0.000000
49	0	1.51		0.000000
50	0	1.51		0.000000

28	11.2	7.4	3.8
29	10.1	6.7	3.4
30	8.6	5.7	2.9
31	9.1	6.0	3.1
32	10.9	7.2	3.7
33	0.0	0.0	0.0
34	0.0	0.0	0.0
35	0.0	0.0	0.0
36	0.0	0.0	0.0
37	0.0	0.0	0.0
38	0.0	0.0	0.0
39	0.0	0.0	0.0
40	0.0	0.0	0.0
41	0.0	0.0	0.0
42	0.0	0.0	0.0
43	0.0	0.0	0.0
44	0.0	0.0	0.0
45	0.0	0.0	0.0
46	0.0	0.0	0.0
47	0.0	0.0	0.0
48	0.0	0.0	0.0
49	0.0	0.0	0.0
50	0.0	0.0	0.0

Monitoring Spreadsheet: JCM_VN_AM014_ver01.0

Reference Number: VN014

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	-	98.6	tCO_2/p	ER_p
2. Selected default values, etc.				
ECR	-	1.51	-	ECR
3. Calculations for reference emissions				
Reference emissions during the period *p*	-	291.8	tCO_2/p	RE_p
Reference emissions	Electricity	291.8	tCO_2/p	RE_p
4. Calculations of the project emissions				
Project emissions during the period *p*	-	193.3	tCO_2/p	PE_p
Projecte emissions	Electricity	193.3	tCO_2/p	PE_p

[List of Default Values]

ECR	1.51	-

Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

(a)	Monitoring period	-	1/1/2019-30/6/2019
(b)	Monitoring point No.	-	1
(c)	Parameters	i	$EC_{PJ,i,p}$
(d)	Description of data	Identification number of wire stranding machines	Electricity consumption of project wire stranding machine *i* during the period *p*
(e)	Units	-	MWh/p
(f)	Monitoring option	-	Option C
(g)	Source of data	-	Monitored and calculated data
(h)	Measurement methods and procedures	-	-Data is measured by measuring equipment. The measuring equipment is replaced or calibrated at an interval following the regulations in the country in which the measuring equipment is commonly used or according to the manufacturer's recommendation, unless a type approval, manufacturer's specification, or certification issued by an entity accredited under international/national standards for the measuring equipment has been prepared by the time of installation. - The electricity consumption is measured and recorded electronically by measuring equipment with manufacture's specification with ±5% accuracy level which is required as the instrument error in Joint Crediting Mechanism Guidelines for Developing Project Design Document and Monitoring Report. - Recording data and checking recorded data is carried out in accordance with the monitoring manual. - The measuring equipment is not
(i)	Monitoring frequency	-	Monitored continuously and recorded monthly
(j)	Other comments		

(k)	No.		Monitored Values
	1	ST-1	20.0
	2	ST-2	20.4
	3	ST-3	19.3
	4	ST-4	20.3
	5	ST-5	20.2
	6	ST-6	19.7
	7	ST-7	21.8
	8	ST-8	18.2
	9	ST-9	0.0
	10	ST-10	19.3
	11	ST-11	22.0
	12	ST-12	20.7
	13	ST-13	16.7
	14	ST-14	16.8
	15	ST-15	16.5
	16	ST-16	16.2
	17	ST-17	17.1
	18	ST-18	17.6
	19	ST-19	18.0
	20	ST-20	17.4
	21	ST-21	17.7
	22	ST-22	19.0
	23	ST-23	19.6
	24	ST-24	19.7
	25	ST-25	21.8
	26	ST-26	22.0
	27	ST-27	19.9

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

(a)	Parameters	i	ECR	EF_{elec}
(b)	Description of data	Identification number of wire stranding machines	Electricity consumption ratio per production unit	CO_2 emission factor for consumed electricity
(c)	Units	-	-	tCO_2/kWh
(d)	Source of data	-	Survey results on $EU_{RE}/EU_{P,i}$ of wire stranding machines that have high market share in Vietnam.	Ministry of Natural Resources and Environment of Vietnam (MONRE), Vietnamese DNA for CDM unless otherwise instructed by the Joint Committee. [Captive electricity] For the option a) Specification of the captive power generation system provided by the manufacturer (η elec,CG [%]). CO2 emission factor of the fossil fuel type used in the captive power generation system (EFfuel,CG [tCO2/GJ]) For the option b) Generated and supplied electricity by the captive power generation system (EGPJ,CG,p [MWh/p]). Fuel amount consumed by the captive power generation system (FCPJ,CG,p [mass or volume/p]). Net calorific value (NCVfuel,CG [GJ/mass or volume]) and CO2 emission factor (EFfuel,CG [tCO2/GJ]) of the fuel consumed by the captive power generation system in order of preference: 1) values provided by the fuel supplier; 2) measurement by the project participants; 3) regional or national default values; 4) IPCC default values provided in tables 1.2 and 1.4 of Ch.1 Vol.2 of 2006 IPCC Guidelines on National GHG Inventories. Lower value is applied. [Captive electricity with diesel fuel] CDM approved small scale methodology: AMS-I.A. [Captive electricity with natural gas] 2006 IPCC Guidelines on National GHG Inventories for the source of EF of natural gas. CDM Methodological tool "Determining the baseline efficiency of thermal or electric energy generation systems version02.0" for the default efficiency for off-grid power plants.
(e)	Other comments			

(f)	No.			
	1	ST-1	1.51	0.918500
	2	ST-2	1.51	0.918500
	3	ST-3	1.51	0.918500
	4	ST-4	1.51	0.918500
	5	ST-5	1.51	0.918500
	6	ST-6	1.51	0.918500
	7	ST-7	1.51	0.918500
	8	ST-8	1.51	0.918500
	9	ST-9	1.51	0.918500
	10	ST-10	1.51	0.918500
	11	ST-11	1.51	0.918500
	12	ST-12	1.51	0.918500
	13	ST-13	1.51	0.918500
	14	ST-14	1.51	0.918500
	15	ST-15	1.51	0.918500
	16	ST-16	1.51	0.918500
	17	ST-17	1.51	0.918500
	18	ST-18	1.51	0.918500
	19	ST-19	1.51	0.918500
	20	ST-20	1.51	0.918500
	21	ST-21	1.51	0.918500
	22	ST-22	1.51	0.918500
	23	ST-23	1.51	0.918500
	24	ST-24	1.51	0.918500
	25	ST-25	1.51	0.918500
	26	ST-26	1.51	0.918500
	27	ST-27	1.51	0.918500

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

(a)	Parameters	RE_p	PE_p	ER_p
(b)	Description of data	Reference emissions during the period *p*	Project emissions during the period *p*	Emissions reduction during the period *p*
(c)	Units	$[tCO_2/p]$	$[tCO_2/p]$	$[tCO_2/p]$

(d)	No.	Estimated Values		
	1	27.7	18.3	9.4
	2	28.4	18.8	9.6
	3	26.7	17.7	9.0
	4	28.1	18.6	9.5
	5	28.0	18.5	9.5
	6	27.3	18.1	9.2
	7	30.2	20.0	10.2
	8	25.2	16.7	8.5
	9	0.0	0.0	0.0
	10	26.7	17.7	9.0
	11	30.5	20.2	10.3
	12	28.7	19.0	9.7
	13	23.1	15.3	7.8
	14	23.3	15.4	7.9
	15	22.9	15.2	7.7
	16	22.5	14.9	7.6
	17	23.7	15.7	8.0
	18	24.4	16.2	8.3
	19	24.9	16.5	8.4
	20	24.1	16.0	8.1
	21	24.6	16.3	8.3
	22	26.3	17.4	8.9
	23	27.2	18.0	9.2
	24	27.3	18.1	9.2
	25	30.3	20.1	10.2
	26	30.5	20.2	10.3
	27	27.5	18.2	9.3

Monitoring period	CO_2 emission reductions	Units
1/1/2019-30/6/2019	281	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)

28	ST-28		20.9
29	ST-29		23.1
30	ST-30		20.8
31	ST-31		20.2
32	ST-32		19.1
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			

28	ST-28		1.51	0.918500
29	ST-29		1.51	0.918500
30	ST-30		1.51	0.918500
31	ST-31		1.51	0.918500
32	ST-32		1.51	0.918500
33		0	1.51	0.000000
34		0	1.51	0.000000
35		0	1.51	0.000000
36		0	1.51	0.000000
37		0	1.51	0.000000
38		0	1.51	0.000000
39		0	1.51	0.000000
40		0	1.51	0.000000
41		0	1.51	0.000000
42		0	1.51	0.000000
43		0	1.51	0.000000
44		0	1.51	0.000000
45		0	1.51	0.000000
46		0	1.51	0.000000
47		0	1.51	0.000000
48		0	1.51	0.000000
49		0	1.51	0.000000
50		0	1.51	0.000000

28	28.9	19.2	9.8
29	32.0	21.2	10.8
30	28.8	19.1	9.7
31	28.0	18.5	9.5
32	26.5	17.6	9.0
33	0.0	0.0	0.0
34	0.0	0.0	0.0
35	0.0	0.0	0.0
36	0.0	0.0	0.0
37	0.0	0.0	0.0
38	0.0	0.0	0.0
39	0.0	0.0	0.0
40	0.0	0.0	0.0
41	0.0	0.0	0.0
42	0.0	0.0	0.0
43	0.0	0.0	0.0
44	0.0	0.0	0.0
45	0.0	0.0	0.0
46	0.0	0.0	0.0
47	0.0	0.0	0.0
48	0.0	0.0	0.0
49	0.0	0.0	0.0
50	0.0	0.0	0.0

Monitoring Spreadsheet: JCM_VN_AM014_ver01.0

Reference Number: VN014

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

1. Calculations for emission reductions	Fuel type	Value	Units	Parameter
Emission reductions during the period *p*	-	281.9	tCO_2/p	ER_p
2. Selected default values, etc.				
ECR	-	1.51	-	ECR
3. Calculations for reference emissions				
Reference emissions during the period *p*	-	834.8	tCO_2/p	RE_p
Reference emissions	Electricity	834.8	tCO_2/p	RE_p
4. Calculations of the project emissions				
Project emissions during the period *p*	-	552.8	tCO_2/p	PE_p
Projecte emissions	Electricity	552.8	tCO_2/p	PE_p

[List of Default Values]

ECR	1.51	-