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CDM Executive Board

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Our / Your Reference	Contact	Direct Dial	Date
CDM No. 2342	Rainer Winter E-Mail: rwinter@tuev-nord.de	Phone: -3329 Fax: -2139	08.09.2010

Request for Revision of Monitoring Plan
"14 MW Wind Power Project in Maharashtra"
CDM Registration No: 2342

Dear Sir/Madam,

Please find below the response of the project participant M/S. SHAH PROMOTERS & DEVELOPERS and the TÜV JI/CDM Certification Program to the clarification relating to the request for revision of Monitoring Plan for the above mentioned project no. 2342.

If you have any questions do not hesitate to contact us.

Best regards,

Rainer Winter

<table>
<tr><th colspan="2">Request for clarification (Question-1)</th></tr>
<tr><td>Questions raised by review team Members / DNA</td><td>The revised monitoring plan only includes parameters which are calculated however the direct monitored parameters used for the calculations (for example, the individual WTG/WEG monitored data) are not included in the monitoring plan;</td></tr>
<tr><td>Response of project participant</td><td>-</td></tr>
<tr><td>Response of DOE</td><td>The Apportioning mechanism requires the monitoring of parameters
1. Electricity generation by WTG/s owned by SPD (either individual or group)
2. Total electricity generation by all the WTGs connected to the common bulk meters and
3. Total net electricity supplied to the grid measured at the substation by common bulk meters (main and check meter).

All the above parameters are monitored with the help of dedicated metering system. Please refer below table with explanation:

<table>
<tr><th>Parameter</th><th>Data type</th><th>Method of determination</th><th>Is it part of monitoring plan (Yes)/ (No)</th></tr>
<tr><td>Electricity generation by WTG/s owned by SPD (either individual or group)</td><td>Calculated based on measured values</td><td>Each WTG of PP is equipped with the dedicated inbuilt control panel meters. These inbuilt control panel meters are connected to CMS of the O & M contractor (in this case Suzlon).

The CMS is recording the generation from each WTG with the help of inbuilt control panel meters. The O & M contractor aggregates the daily generation to monthly figures i.e.</td><td>Yes</td></tr>
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				provides the monitored value of the monthly generation by each WTG or group of WTG to MSEDCL for apportioning and calculating the net electricity exported by the individual WTG or group of WTG in Joint Meter Reading Report issued by MSEDCL. The JMR issued by MSEDCL normally provides the generation on individual WTG basis, however during its course of verification of wind projects, the DOE also found that the MSEDCL could possibly issue the JMR by grouping of WTG's project proponent wise and issue the JMR. Therefore the name of the parameter also includes description as "(either individual or group)".	
		Total electricity generation by all the WTGs connected to the common bulk meters	Calculated based on measured values	Each WTG is equipped with the dedicated inbuilt control panel meters. These inbuilt control panel meters are connected to CMS of the O &	Yes

				M contractor (in this case Suzlon). The CMS is recording the generation from each WTG with the help of inbuilt control panel meters. The O & M contractor aggregates the daily generation to monthly figures i.e. provides the monitored value of the monthly generation by each WTG or group of WTG to MSEDCL for apportioning and calculating the net electricity exported by the individual WTG or group of WTG in Joint Meter Reading Report issued by MSEDCL. The JMR issued by MSEDCL normally provides the generation on individual WTG basis, however during its course of verification of wind projects, the DOE also found that the MSEDCL could possibly issue the JMR by grouping of WTG's project proponent wise and issue the JMR. Therefore	

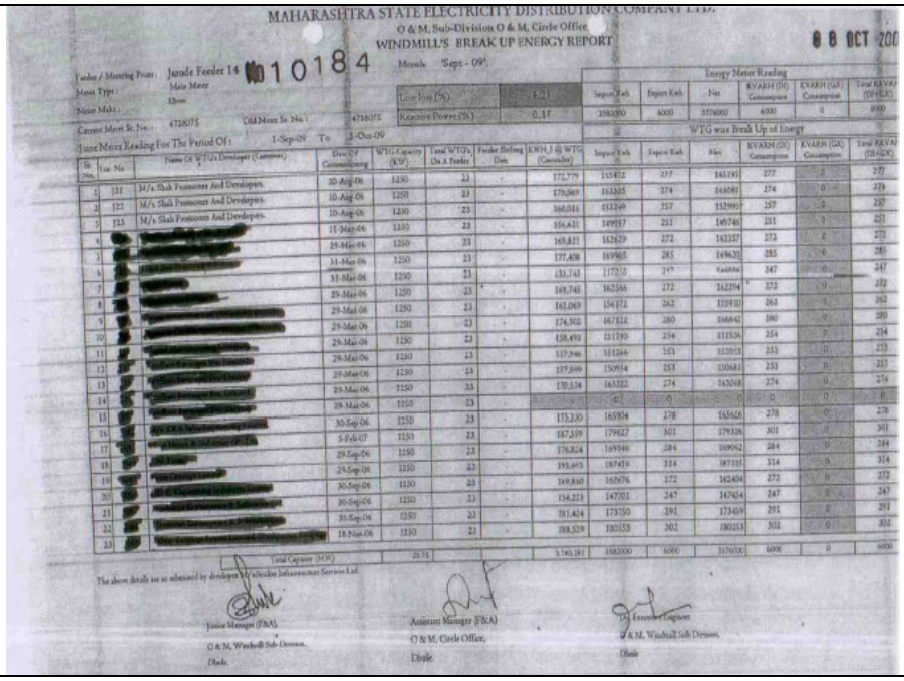
			the name of the parameter also includes description as "(either individual or group)".	
	Total net electricity supplied to the grid measured at the substation by common bulk meters (main and check meter).	Calculated based on measured values	The JMR issued by the MSEDCL clearly defines the WTG's that are connected to the common bulk meter (i.e. main meter and check meter) *(please also refer the table under the clarification ii)*. These Trivector meters are under the custody of the MSEDCL. The Trivector meter is measuring the electricity which is exported by the WTGs to the grid and also the electricity imported from the grid. Therefore the Net export from all the WTGs connected to the common bulk meters is calculated by subtracting import from the export electricity. The readings at the common bulk meter will be taken on a monthly basis, in presence of the representative of MSEDCL & O & M contractor(PP's	Yes

			representative).	

Request for clarification (Question-2)	
Questions raised by review team Members / DNA	Regarding the parameter "Total electricity generation by all the WTGs connected to the common bulk meter", it is not clear how many main/backup meters are involved in the measurements and the location of the same, considering that the PDD/revised monitoring plan refer to two different substations (Jamde and Ghatnadre)
Response of project participant	-
Response of DOE	The monitoring parameter "Total electricity generation by all the WTGs connected to the common bulk meter" is based on the JMR issued by the MSEDCL. Various WTG's are connected to the feeders and every feeder has the dedicated main and check meter. Please find the attached sample JMR for the month of September 2009.

WTG NO.	FEEDER NO.	SUB STATION NAME	Means of Verification
N-04	9	Ghatnandre	JMR issued by MSEDCL, JMR number 8946 for the month of September 2009
N-05	9	Ghatnandre	
N-06	9	Ghatnandre	
N-07	9	Ghatnandre	
N-08	10	Ghatnandre	JMR issued by MSEDCL, JMR number 8947 for the month of September 2009
N-09	10	Ghatnandre	
J-17	13	Jamade	JMR issued by MSEDCL, JMR number 10183 for the month of September 2009
J-21	14	Jamade	JMR issued by MSEDCL, JMR number 10184 for the month of September 2009
J-22	14	Jamade	
J-23	14	Jamade	

Sample JMR for WTG J-21, J-22, J-23:

MAHARASHTRA STATE ELECTRICITY DISTRIBUTION COMPANY LTD.
O & M, Sub-Division O & M, Circle Office
WINDMILL'S BREAK UP ENERGY REPORT
0 8 OCT 200

Feeder / Metering Point : Jamde Feeder 1 [redacted] 10184 Months : Sept - 09
Meter Type : Main Meter
Meter Make : Elster
Current Meter Sr. No. : 4736375 Old Meter Sr. No. : 4736375
Joint Meter Reading For The Period Of : 1-Sep-09 To 1-Oct-09

Line loss (%)	8.21
Reactive Power (%)	0.47

Sr. No.	Loc. No.	Name Of WTGs Developer (Customer)	Date Of Commissioning	WTG Capacity (KW)	Total WTGs On A Feeder	Feeder Shifting Date	KWH / @ WTG (Generation)	Energy Meter Reading: Import Kwh	Export Kwh	Net	KVARH (M) Consumption	KVARH (GA) Consumption	Total KVAH (M+GA)
1	121	M/s Shah Promoters And Developers	10-Aug-06	1250	23	-	171,779	165412	277	165135	277	0	277
2	122	M/s Shah Promoters And Developers	10-Aug-06	1250	23	-	170,569	163265	274	162991	274	0	274
3	123	M/s Shah Promoters And Developers	10-Aug-06	1250	23	-	160,014	153249	257	152992	257	0	257
4		[redacted]	11-May-06	1250	23	-	156,621	149917	251	149746	251	0	251
5		[redacted]	29-Mar-06	1250	23	-	169,825	162629	272	162357	272	0	272
6		[redacted]	31-Mar-06	1250	23	-	177,408	169905	285	169620	285	0	285
7		[redacted]	31-Mar-06	1250	23	-	153,741	147210	247	146963	247	0	247
8		[redacted]	29-Mar-06	1250	23	-	169,745	162566	272	162294	272	0	272
9		[redacted]	29-Mar-06	1250	23	-	163,049	156172	262	155910	262	0	262
10		[redacted]	29-Mar-06	1250	23	-	174,502	167122	280	166842	280	0	280
11		[redacted]	29-Mar-06	1250	23	-	158,491	151790	254	151536	254	0	254
12		[redacted]	29-Mar-06	1250	23	-	157,946	151266	253	151013	253	0	253
13		[redacted]	29-Mar-06	1250	23	-	157,699	150914	253	150661	253	0	253
14		[redacted]	29-Mar-06	1250	23	-	170,574	163322	274	163048	274	0	274
15		[redacted]	29-Mar-06	1250	23	-		0	0	0	0	0	0
16		[redacted]	30-Sep-06	1250	23	-	173,230	165804	278	165526	278	0	278
17		[redacted]	5-Feb-07	1250	23	-	187,539	179627	301	179326	301	0	301
18		[redacted]	29-Sep-06	1250	23	-	176,824	169346	284	169062	284	0	284
19		[redacted]	24-Sep-06	1250	23	-	185,695	187429	314	187115	314	0	314
20		[redacted]	30-Sep-06	1250	23	-	169,860	162676	272	162404	272	0	272
21		[redacted]	30-Sep-06	1250	23	-	154,223	147701	247	147454	247	0	247
22		[redacted]	30-Sep-06	1250	23	-	181,454	173750	291	173459	291	0	291
23		[redacted]	18-Nov-06	1250	23	-	188,529	180555	302	180253	302	0	302
		Total Capacity (MW)		28.75			3,740,181	3582000	6000	3576000	6000	0	6000

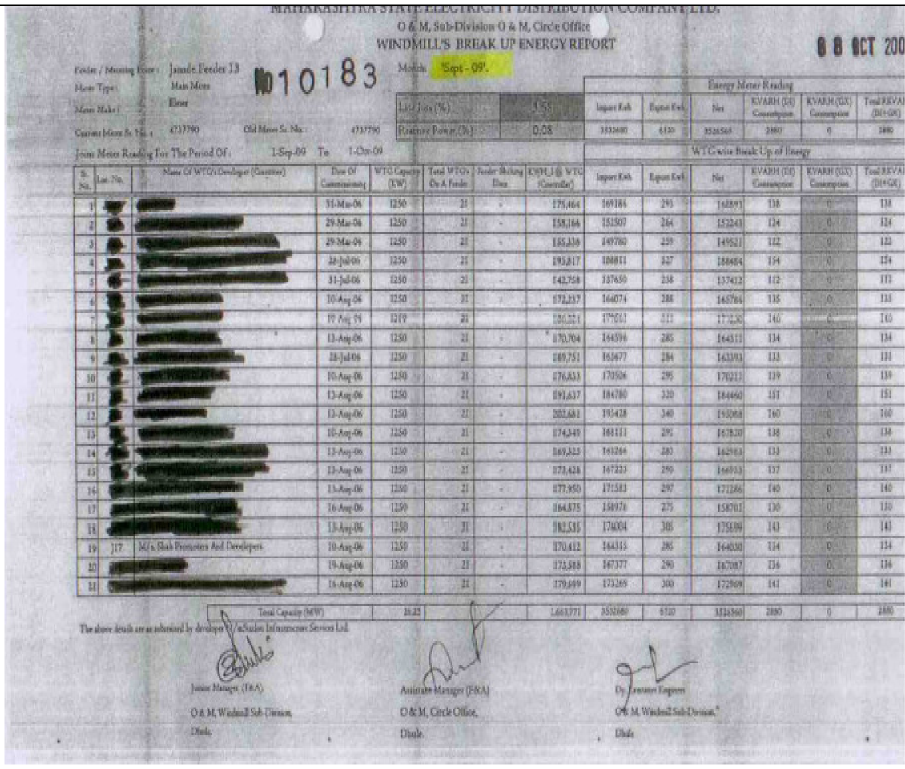
The above details are as submitted by developer M/s Alfanar Infrastructure Services Ltd.

Junior Manager (T&A),
O & M, Windmill Sub-Division,
Dhule

Assistant Manager (T&A)
O & M, Circle Office,
Dhule

Executive Engineer
O & M, Windmill Sub Division,
Dhule

Request for clarification (Question-3)	
Questions raised by review team Members / DNA	For clarity purpose, PP/DOE may include a metering location diagram in the revised monitoring plan if possible, and a description on how the apportioning logic would be applied if the net electricity supplied to the grid is measured separately at two substations.
Response of project participant	The metering diagram is attached to the revised monitoring plan. The PP has also provided the justification that the same logic is applicable even if the WTG's are connected to different sub-stations.
Response of DOE	The DOE accepts the guidance of the UNFCCC. The PP has appropriately included the metering diagram in the revised monitoring plan. It is further confirmed that the "Net Electricity export to the grid by the project activity" is determined at the feeder level and not the substation level (kindly refer above table). Therefore, in case of this project activity the PP is presently obtaining four JMR's in line with the connection of the WTG's with respective feeders. The apportioning logic is the same as provided in the existing monitoring plan (please refer below sample JMR and the demonstration of the apportioning logic). Sample JMR for WTG J-17



MAHARASHTRA STATE ELECTRICITY DISTRIBUTION COMPANY LTD.
O & M, Sub-Division O & M, Circle Office
WINDMILL'S BREAK UP ENERGY REPORT

08 OCT 200

Feeder / Metering Point : Jamde Feeder 13 — 10183 — Month: 'Sept - 09'.
Meter Type : Main Meter
Meter Make : Elster
Current Meter Sr. No. : 4737790 — Old Meter Sr. No. : 4737790
Joint Meter Reading For The Period Of : 1-Sep-09 To 1-Oct-09

Line Loss (%)	3.58
Reactive Power (%)	0.08

Energy Meter Reading					
Import Kwh	Export Kwh	Net	KVARH (DI) Consumption	KVARH (DX) Consumption	Total KVARH (DI+DX)
3532680	6120	3526560	2880	0	2880

Sr. No.	Lot. No.	Name Of WTG's Developer (Customer)	Date Of Commissioning	WTG Capacity (KW)	Total WTGs On A Feeder	Feeder Shifting Date	KWH_I @ WTG (Controller)	Import Kwh	Export Kwh	Net	KVARH (DI) Consumption	KVARH (DX) Consumption	Total KVARH (DI+DX)
								WTG wise Break Up of Energy					
1	[redacted]	[redacted]	31-Mar-06	1250	21	-	175,464	169186	295	168891	138	0	138
2	[redacted]	[redacted]	29-Mar-06	1250	21	-	158,164	151507	264	151243	124	0	124
3	[redacted]	[redacted]	29-Mar-06	1250	21	-	155,336	149780	259	149521	122	0	122
4	[redacted]	[redacted]	28-Jul-06	1250	21	-	193,817	188811	327	188484	154	0	154
5	[redacted]	[redacted]	31-Jul-06	1250	21	-	142,758	137650	238	137412	112	0	112
6	[redacted]	[redacted]	10-Aug-06	1250	21	-	172,237	166074	288	165786	135	0	135
7	[redacted]	[redacted]	[illegible]	[illegible]	21		[illegible]	[illegible]	[illegible]	[illegible]	140	0	140
8	[redacted]	[redacted]	13-Aug-06	1250	21	-	170,704	164596	285	164311	134	0	134
9	[redacted]	[redacted]	28-Jul-06	1250	21	-	169,751	163677	284	163393	133	0	133
10	[redacted]	[redacted]	10-Aug-06	1250	21	-	176,833	170506	295	170211	139	0	139
11	[redacted]	[redacted]	13-Aug-06	1250	21	-	191,637	184780	320	184460	151	0	151
12	[redacted]	[redacted]	13-Aug-06	1250	21	-	202,681	195428	340	195088	160	0	160
13	[redacted]	[redacted]	10-Aug-06	1250	21	-	174,349	168111	291	167820	138	0	138
14	[redacted]	[redacted]	13-Aug-06	1250	21	-	169,323	163266	283	162983	133	0	133
15	[redacted]	[redacted]	13-Aug-06	1250	21	-	173,426	167223	290	166933	137	0	137
16	[redacted]	[redacted]	13-Aug-06	1250	21	-	177,950	171583	297	171286	140	0	140
17	[redacted]	[redacted]	16-Aug-06	1250	21	-	164,875	158976	275	158701	130	0	130
18	[redacted]	[redacted]	13-Aug-06	1250	21	-	182,535	176004	305	175699	143	0	143
19	J17	M/s Shah Promoters And Developers	10-Aug-06	1250	21	-	170,412	164335	285	164050	134	0	134
20	[redacted]	[redacted]	19-Aug-06	1250	21	-	173,588	167377	290	167087	136	0	136
21	[redacted]	[redacted]	16-Aug-06	1250	21	-	179,669	173269	300	172969	141	0	141
		Total Capacity (MW)		26.25			3,663,771	3532680	6120	3526560	2880	0	2880

The above details are as submitted by developer M/s Suzlon Infrastructure Services Ltd.

Junior Manager (F&A), O & M, Windmill Sub-Division, Dhule — Assistant Manager (F&A), O & M, Circle Office, Dhule — Dy. Executive Engineer, O & M, Windmill Sub-Division, Dhule

Sep-09

Month	WTG Meter Readings		MSEDCL Meter Readings for Total WTGS connected to the Common bulk meter(main meter & check meter)	MSEDCL JMR Report readings	Demonstration of apportioning logic by SPD	% difference
	Electricity generated by all the WTGs of SPD with the help of inbuilt control panel meters of all the WTGs connected to common bulk meters (i.e. main meter & check meter).	Electricity generated by all the WTGs (including WTGs of SPD) with the help of inbuilt control panel meters of all the WTGs connected to common bulk meters (i.e. main meter & check meter).	Net export from all the WTGs	Net Electricity exported to the grid by the Project Activity (EG_Y)	Net Electricity exported to the grid by the Project Activity demonstrated with the help of application of Apportioning logic	

		$\sum_{0}^{n} EG_{n,y}$	$\sum_{0}^{m} EG_{m,y}$	EG_{MSEDCL}			
	UNIT	**(KWh)**	**(KWh)**	**(KWh)**	**(KWh)**	**(KWh)**	
	J-17	**170,412**	**3,663,771**	3,526,560	164,030	164,030	0.00 %