

Korea East-West Power Dangjin small hydro power plant project Monitoring Plan Revision List

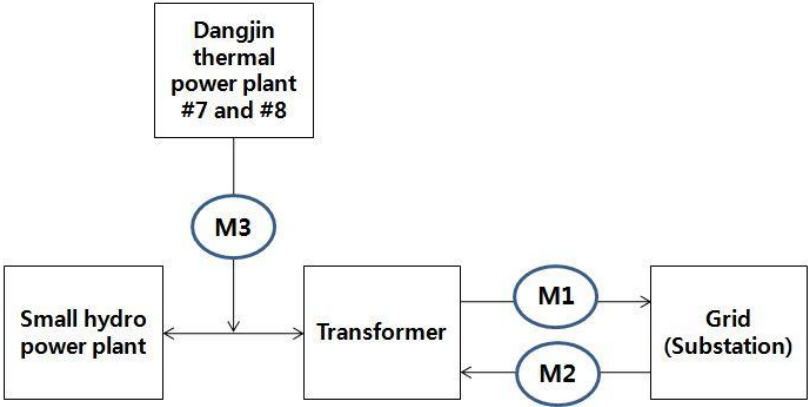
PDD		Monitoring Plan Revision		Page																				
		<table><tr><th colspan="2">B.7.1 Data and parameters monitored:</th></tr><tr><td colspan="2"></td></tr><tr><td>Data / Parameter:</td><td>EG_y</td></tr><tr><td>Data unit:</td><td>MWh</td></tr><tr><td>Description:</td><td>Net Electricity supplied to the grid by the project in year y.</td></tr><tr><td>Source of data to be used:</td><td>The value in the PDD is from the design value, the real value will be monitored as EG_y = EG_{out} – EG_{in,1}</td></tr><tr><td>Value of data</td><td>27,898.81 MWh</td></tr><tr><td>Description of measurement methods and procedures to be applied:</td><td>The proportion of data to be monitored are 100% and the data will be archived and kept at least two years after end of the last crediting period. The watt-hour meters are calculated as stated in B.7.2 of this PDD.</td></tr><tr><td>QA/QC procedures to be applied:</td><td>• The allowable error range for the meters: EG_{out} (M1) : 0.5S (±0.5%) EG_{in,1} (M2) : 1.0S (±1.0%)</td></tr><tr><td>Any comment:</td><td></td></tr></table>		B.7.1 Data and parameters monitored:				Data / Parameter:	EG _y	Data unit:	MWh	Description:	Net Electricity supplied to the grid by the project in year y.	Source of data to be used:	The value in the PDD is from the design value, the real value will be monitored as EG _y = EG _{out} – EG _{in,1}	Value of data	27,898.81 MWh	Description of measurement methods and procedures to be applied:	The proportion of data to be monitored are 100% and the data will be archived and kept at least two years after end of the last crediting period. The watt-hour meters are calculated as stated in B.7.2 of this PDD.	QA/QC procedures to be applied:	• The allowable error range for the meters: EG _{out} (M1) : 0.5S (±0.5%) EG _{in,1} (M2) : 1.0S (±1.0%)	Any comment:		P 23
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B.7.1 Data and parameters monitored:	
Data / Parameter:	EG _y
Data unit:	MWh
Description:	Net Electricity supplied to the grid by the project in year y.
Source of data to be used:	Electrical meters
Value of data	27,898.81 MWh
Description of measurement methods and procedures to be applied:	Directly measured by metering systems installed. The recording frequency will be and monthly recorded. The data will be archived electronically and kept during the crediting period and 2 years after. Double check by receipt of sales.
QA/QC procedures to be applied:	Uncertainty of data is low. Data measured by meters will be cross checked by electricity sales receipt. If the data are different, project participant shall be followed “Act on operation of electricity market”. In case meters are improperly operated equipments, internal audit and correction procedure shall be followed and be certified by the final decision- maker and Korea Power Exchange.
Any comment:	

	Description of measurement methods and procedures to be applied:	Directly measured by watt-hour meter (M1) with accuracy no lower than 0.5s. The transmission electricity data (M1) will be continuously measured and electronically archived hourly by KPX. The transmission electricity data (M1) will be double checked with the electricity sales receipt.	
	QA/QC procedures to be applied:	<p>The allowable error range for the meters: 0.5S(±0.5%). The watt-hour meter will be calibrated every 3 years.</p> <p>Data measured by meters will be cross checked by electricity sales receipt.</p> <p>If the data are different, project participant shall be followed “Act on operation of electricity market”. In case meters are improperly operated equipments, internal audit and correction procedures shall be followed and be certified by the final decision-maker and Korea Power Exchange.</p>	
	Any comment:		
	Data / Parameter:	EGin, 1	
	Data unit:	MWh	
	Description:	Electricity supplied from the grid in year y.	
	Source of data to be used:	The value in the PDD was assumed as 0, the real value will be measured by watt-hour meter (M2)	
	Value of data	0 MWh	
	Description of measurement methods and procedures to be applied:	Directly measured by watt-hour meter (M2) with accuracy no lower than 1.0s. The import electricity data (M2) will be continuously measured and electronically archived monthly by KPX. The import electricity data (M2) will be double checked with the	

		electricity bill.		
	QA/QC procedures to be applied:	The allowable error range for the meters: 1.0S(±1.0%). The watt-hour meter will be calibrated by KEPCO. (The import watt-hour meter is under KEPCO's control) Data measured by meters will be cross checked by electricity bills.		
	Any comment:			
	Data / Parameter:	EGin, 2		
	Data unit:	MWh		
	Description:	Electricity supplied from the Dangjin thermal #7 and #8 power plant in year y.		
	Source of data to be used:	The value in the PDD was assumed as 0, the real value will be measured by watt-hour meter (M3)		
	Value of data	0 MWh		
	Description of measurement methods and procedures to be applied:	Directly measured by watt-hour meter (M3) with accuracy no lower than 1.0s. The import electricity data (M3) will be continuously measured and electronically archived monthly by PP. The expected annual emissions associated with EGin, 2 (M3) in emergency is much less than 1 % of the total expected annual emission reductions and are therefore considered negligible. If emission exceeds 1%, it will be considered as project emission with emission factor defined as EFCO ₂ , thermal power below.		
	QA/QC procedures to be applied:	The allowable error range for the meters: 1.0S(±1.0%). The watt-hour meter will be calibrated every 3 years.		
	Any comment:	EGin, 2 will be supplied from thermal power during emergency (black out from KEPCO grid). If the		

		emission from EGIN, 2 (M3) is less than 1% of total annual emission reductions, the emission from EGIN, 2 (M3) will not be considered.	
	Data Parameter:	EFCO2, thermal power	
	Data unit:	tCO2e/MWh	
	Description:	CO2 emission factor from Dangin #7 & #8 thermal power plant in year y.	
	Source of data to be used:	The value in the PDD is from “Methodological tool (Tool to calculate baseline, project and/or leakage emissions from electricity consumption),	
	Value of data	1.3 tCO2/MWh	
	Description of measurement methods and procedures to be applied:	The project activity can be supplied the electricity consumption sources from Dangjin #7 & #8 thermal power plants. These thermal power plants are also connected to the electricity grid. As per scenario C of the “Tool to calculate baseline, project and/or leakage emissions from electricity consumption”, the project activity applies to an emission factor of 1.3 tCO2/MWh which used to project electricity consumption sources.	
	QA/QC procedures to be applied:		
	Any comment:		
1. Installation of Monitoring equipment Electricity measuring meters shall be set up transparently in accordance with “Law regarding measurement” and “Act on operation of electricity market” and shall be sealed after affirmation of Korea Power Exchange. The meters shall be authorized through the due formal certifying process (the valid period for the authorized certification: 7 years). The meters shall	1. Installation of Monitoring equipment Electricity measuring meters shall be set up transparently in accordance with “Law regarding measurement” and “Act on operation of electricity market” and shall be sealed after affirmation of Korea Power Exchange. The meters shall be authorized through the due formal certifying process (the valid period for the authorized certification: 7 years). Export watt-hour-meter (M1)		P 24

<p>be calibrated them they are installed, and re-calibrated within 3 years 6 months \pm 6months after installation.</p>	<p>and import watt-hour-meter (M3) shall be re-calibrated within 3 years after installed or calibrated as per paragraph 17 (c) of "General guidelines to SSC CDM methodologies". Another import watt-hour-meter (M2) will be re-calibrated by KEPCO as per national regulation</p>	
<p>2. Monitoring data</p> <p>Electricity supplied to the grid will be monitored by metering devices installed. The electricity sale receipt will be provided by Korea Power Exchange for the project owner's double check of the amount of electricity supplied and accepted by Korea Power Exchange. And the participant will monitor the imported electricity by metering device.</p>	<p>2. Monitoring data</p> <p>Electricity supplied to the grid will be monitored by metering devices installed. The electricity sale receipt will be provided by Korea Power Exchange for the project owner's double check of the amount of electricity supplied and accepted by Korea Power Exchange. And the participant will monitor the imported electricity by metering device.</p>  <pre> graph TD A[Dangjin thermal power plant #7 and #8] --> M3((M3)) M3 --> B[Transformer] B <--> C[Small hydro power plant] B --> M1((M1)) B --> M2((M2)) M1 --> D[Grid Substation] M2 --> D </pre> <p>M1 : Watt-hour meter for electricity supplied to the grid M2 : Watt-hour meter for electricity imported from the grid M3 : Watt-hour meter for electricity imported from Dangjin thermal power plant #7 & #8</p> <p><Figure B-3> Diagram of electricity flow</p>	<p>P 24</p>