



Philippine Electricity  
Market Corporation

## Guide in Manually Validating the Renewable Energy Certificates (REC) from Voluntary Generators

Issue Date: 31 January 2023

Version: 1.0

### A. How to Manually Compute Issued RECs from Fully Eligible (*i.e. RE facility came into commercial operations starting 2009 onwards*) Voluntary Generators

#### Steps:

1. Prepare the monthly metered quantity data submitted in the PREMS. Note that only metered quantities with “CONFIRMED” status in the PREMS are processed for REC computation.
2. Get the equivalent REC (*i.e.* 1 MWh= 1 REC) per facility based on the **monthly MQ**.
3. Get the sum of the quarterly carry-over value per facility and add it to the MQ of the first month in the next quarter. Please take note of the following reminders for carry-overs:
  - i. When there is no generation in the first month of the next quarter, the carry-over value should be added to the next month with generation and compute the equivalent RECs thereof (*see sample in Table 3 below*).
  - ii. Always check the carry-over value. If the facility has no carry-over from the last quarter, check if it has a carry-over from the other previous quarters.
4. Refer to Tables 1 to 4 for sample data and REC computation.

5. Abbreviations used:

- NM01- Net-metered facility number 1
- EG01- Non-WESM Registered Embedded Generator number 1
- MQ - Metered Quantity
- REC- Renewable Energy Certificate
- CO- Carry- over

**Table 1: Sample Computation for 1<sup>st</sup> Quarter Per Facility**

Facility Code	201801			201802			201803			Total REC for Q1	CO for Next Quarter
	MQ	REC	CO	MQ	REC	CO	MQ	REC	CO		
NM01	0.8	0	0.8	0.8	0	0.8	0.8	0	0.8	0	2.4
EG01	1,500.8	1,500	0.8	1500.8	1,500	0.8	1,500.8	1,500	0.8	4,500	2.4
										<b>4,500</b>	<b>4.8</b>

**Table 2: Sample Computation for 2<sup>nd</sup> Quarter Per Facility**

Facility Code	Q1 CO	201804				201805			201806			Q2 RECs	CO for Next Quarter
		MQ	Total MQ (+ Q1 CO)	REC	CO	MQ	REC	CO	MQ	REC	CO		
NM01	2.4	0.8	3.2	3	0.2	0.8	0	0.8	0.10	0	0.8	3	1.8
EG01	2.4	1,500.8	1,503.2	1,503	0.2	1,500.8	1,500	0.8	1,500.8	1,500	0.8	4,503	1.8
												<b>4,506</b>	<b>3.6</b>

**Table 3: Sample REC Computation for 3<sup>rd</sup> Quarter Per Facility**

*Assumption: There is no generation in the first month (201807) of the 3<sup>rd</sup> quarter. Add the carry-over in 201808.*

Facility Code	Q2 CO	201807 MQ	201808				201809			Q3 RECs	CO for Next Quarter
			MQ	Total MQ (+ Q2 CO)	REC	CO	MQ	REC	CO		
NM01	1.8	0	0.8	2.6	2	0.6	0.8	0	0.8	2	1.4
EG01	1.8	0	1,500.8	1,502.6	1,502	0.6	1,500.8	1,500	0.8	2,002	1.4
										<b>2,004</b>	<b>2.2</b>

**Table 4: Sample REC Equivalent for 4<sup>th</sup> Quarter Per Facility**

Facility Code	Q3 CO	201810 MQ	Total MQ for 201810	201810		201811			201812			Q4 RECs	CO for Next Quarter
				REC	CO	MQ	REC	CO	MQ	REC	CO		
NM01	1.4	0.8	2.2	2	0.2	0.8	0	0.8	0.8	0	0.8	2	1.8
EG01	1.4	1,500.8	1,502.2	1,502	0.2	1,500.8	1,500	0.8	1,500.8	1,500	0.8	4,502	1.8
												<b>4,504</b>	<b>3.6</b>

Table 5 shows the summary of the quarterly MQ and corresponding RECs per facility.

**Table 5: MQ and REC Summary**

Facility	Q1		Q2		Q3		Q4		Total		CO Next Year (Total MQ- Total REC)
	MQ	REC	MQ	REC	MQ	REC	MQ	REC	MQ	REC	
NM01	2.4	2	2.4	2	1.6	1	2.4	2.0	8.8	7.0	1.8
EG01	4,502.4	4,502	4,502.4	4,502	3,001.6	3,00	4,502.4	4,502.0	16,508.8	16,507.0	1.8
Total	4,504.8	4,504	4,504.8	4,504	3,003.2	4,500	4,504.8	4,500.0	16,517.6	16,514.0	3.6

## B) How to Manually Compute Issued RECs from Partially Eligible Voluntary Generators

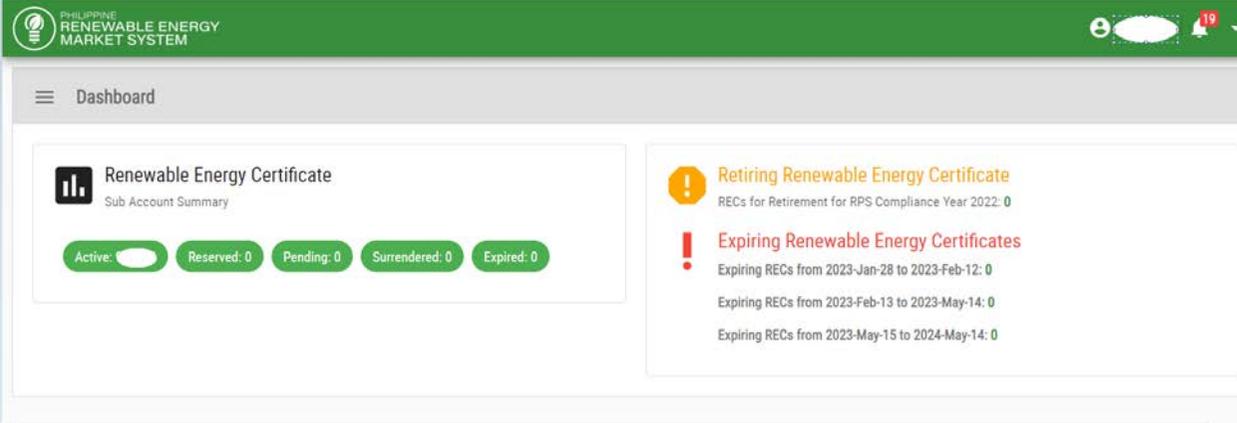
### Steps:

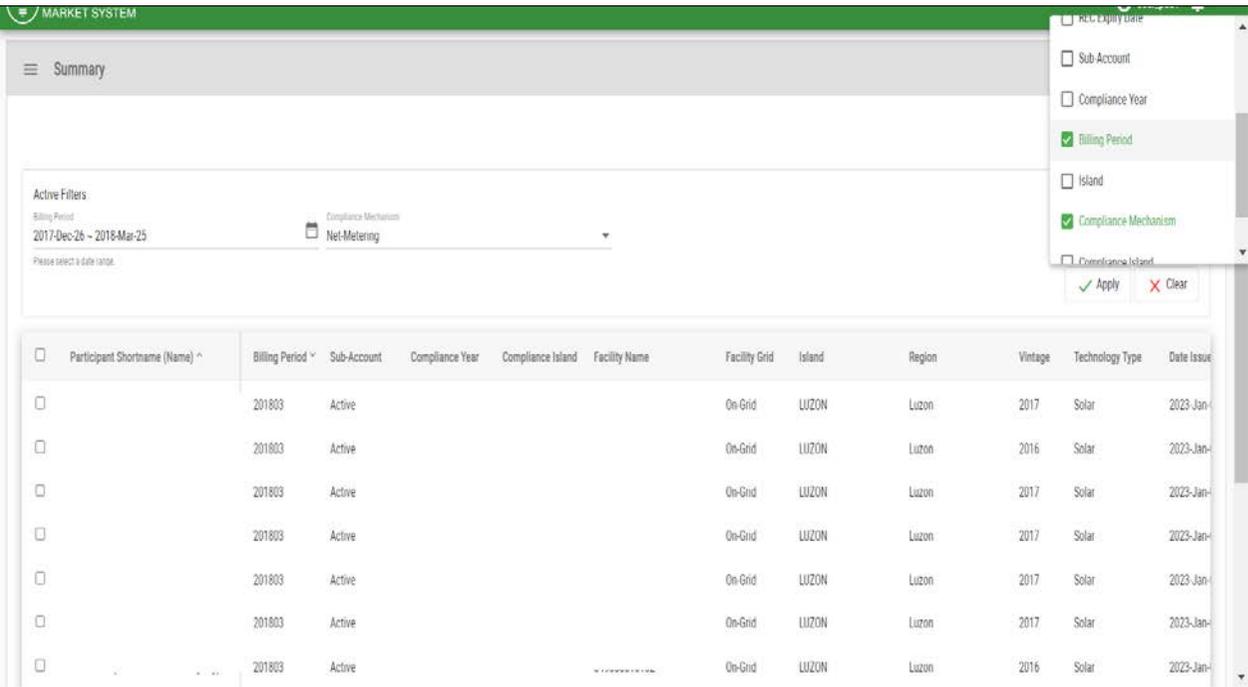
1. Prepare the hourly metered quantity data submitted in the PREMS. Note that only metered quantities with “CONFIRMED” status in the PREMS are processed for REC computation.
2. Determine the hourly eligible MQ of the Partially Eligible Facility  
*Formula: Hourly Eligible MQ = Max (0, Hourly Total MQ \* Eligible Capacity/Registered Capacity)*
3. Get the monthly eligible MQ by adding the hourly eligible MQ
4. Get the total number of REC (i.e. 1 MWh= 1 REC) for the quarter
5. Get the sum of the quarterly carry-over value per facility and add it in the MQ of the first month in the next quarter. Note the following for the carry-overs:
  - i. When there is no generation in the first month of the next quarter, the carry-over value should be added in the next month with generation and compute the equivalent RECs thereof (*see sample in Table 3 below*).
  - ii. Make sure to always check the carry-over value. If the facility has no carry-over from the last quarter, check if it has a carry-over from the other previous quarters.
6. Refer to Table 6 for the Sample Computation

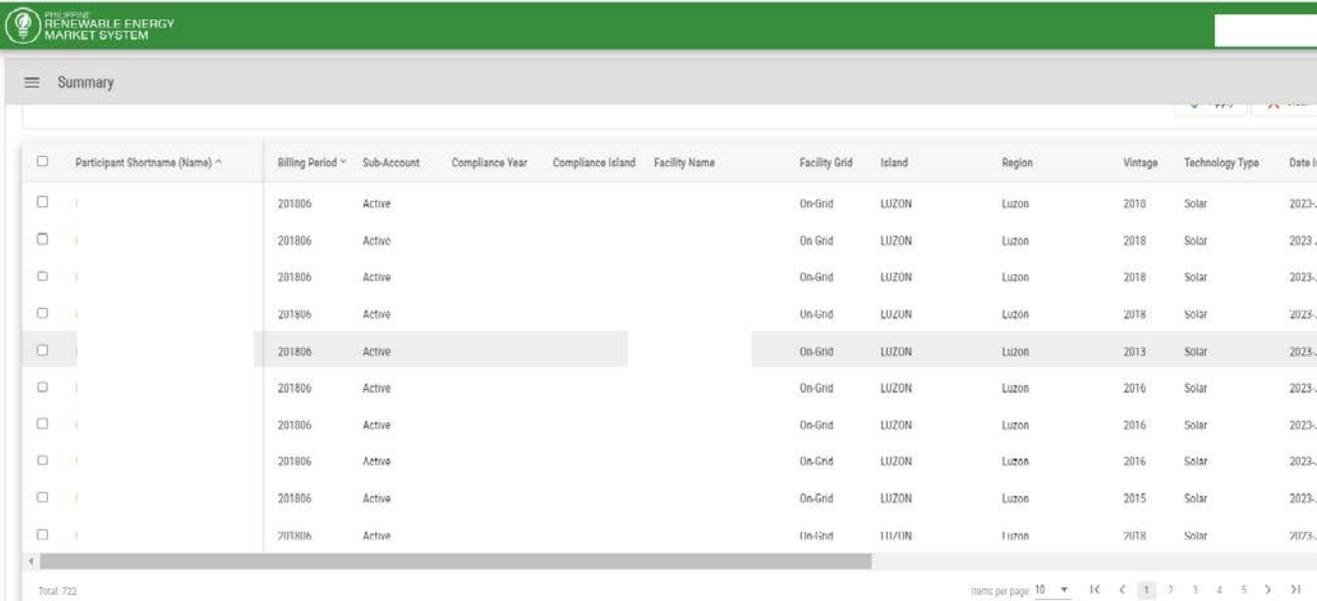
**Table 6: Sample Computation – Partially Eligible Facility**

Quarter	Date & Hour	Hourly MQ (MWh)	Eligible MQ (MWh)	REC
Q1	2017-Dec-26 01:00:00	30	20.00	
	2017-Dec-26 02:00:00	30	20.00	
	<b>Total (Q1)</b>	<b>60</b>	<b>40</b>	<b>40</b>
Q2	2018-Mar-26 01:00:00	30	20.00	
	2018-Mar-26 02:00:00	30	20.00	
	<b>Total (Q2)</b>	<b>60</b>	<b>40</b>	<b>40</b>
Q3	2018-June-26 01:00:00	30	20.00	
	2018-June-26 02:00:00	30	20.00	
	<b>Total (Q3)</b>	<b>60</b>	<b>40</b>	<b>40</b>
Q4	2018-Sep-26 01:00:00	30	20.00	
	2018-Sep-26 02:00:00	30	20.00	
	<b>Total (Q4)</b>	<b>60</b>	<b>40</b>	<b>40</b>
<b>Total RECs for the year</b>				<b>120</b>

### C. How to Check the Issued RECs from Voluntary Generators in the PREMS

Step	Screenshot
<p>1. Open PREMS account at <a href="https://online.premis.pemc.ph/#/">https://online.premis.pemc.ph/#/</a></p>	
<p>2. On the main page, click the <b>Active Sub account.</b></p>	

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<p data-bbox="271 276 712 451"><b>3. It will direct you to the Summary Page. Under the summary page, select FILTER by COMPLIANCE MECHANISM.</b></p> <p data-bbox="320 496 707 600">Choose the applicable compliance mechanism, as follows:</p> <ul data-bbox="320 608 703 791" style="list-style-type: none"> <li>• <b>Net- Metering</b></li> <li>• <b>RE for Own use</b></li> <li>• <b>Others for Non-WESM Embedded RE Generation</b></li> </ul> <p data-bbox="250 834 714 978">You may also use other filter option like billing period should you wish to check the number of issued RECs per quarter.</p> <p data-bbox="250 1019 450 1051">Click <b>APPLY</b>.</p> <p data-bbox="250 1094 736 1163">The list of RECs issued based on the applied filter will then show up.</p>	 <p>The screenshot shows the 'MARKET SYSTEM' interface. At the top, there is a 'Summary' page header. Below this, there are 'Active Filters' for 'Billing Period' (2017-Dec-26 - 2018-Mar-25) and 'Compliance Mechanism' (Net-Metering). A dropdown menu is open, showing options for 'REC Equity Issue', 'Sub Account', 'Compliance Year', 'Billing Period', 'Island', 'Compliance Mechanism', and 'Compliance Island'. The 'Billing Period' and 'Compliance Mechanism' options are checked. Below the filters is a table with columns: Participant Shortname (Name), Billing Period, Sub-Account, Compliance Year, Compliance Island, Facility Name, Facility Grid, Island, Region, Vintage, Technology Type, and Date Issued. The table contains 8 rows of data, all with 'Active' status and 'Net-Metering' compliance mechanism.</p> <table border="1" data-bbox="792 603 1984 948"> <thead> <tr> <th>Participant Shortname (Name)</th> <th>Billing Period</th> <th>Sub-Account</th> <th>Compliance Year</th> <th>Compliance Island</th> <th>Facility Name</th> <th>Facility Grid</th> <th>Island</th> <th>Region</th> <th>Vintage</th> <th>Technology Type</th> <th>Date Issued</th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/></td><td>201803</td><td>Active</td><td></td><td></td><td></td><td>On-Grid</td><td>LUZON</td><td>Luzon</td><td>2017</td><td>Solar</td><td>2023-Jan-</td></tr> <tr><td><input type="checkbox"/></td><td>201803</td><td>Active</td><td></td><td></td><td></td><td>On-Grid</td><td>LUZON</td><td>Luzon</td><td>2016</td><td>Solar</td><td>2023-Jan-</td></tr> <tr><td><input type="checkbox"/></td><td>201803</td><td>Active</td><td></td><td></td><td></td><td>On-Grid</td><td>LUZON</td><td>Luzon</td><td>2017</td><td>Solar</td><td>2023-Jan-</td></tr> <tr><td><input type="checkbox"/></td><td>201803</td><td>Active</td><td></td><td></td><td></td><td>On-Grid</td><td>LUZON</td><td>Luzon</td><td>2017</td><td>Solar</td><td>2023-Jan-</td></tr> <tr><td><input type="checkbox"/></td><td>201803</td><td>Active</td><td></td><td></td><td></td><td>On-Grid</td><td>LUZON</td><td>Luzon</td><td>2017</td><td>Solar</td><td>2023-Jan-</td></tr> <tr><td><input type="checkbox"/></td><td>201803</td><td>Active</td><td></td><td></td><td></td><td>On-Grid</td><td>LUZON</td><td>Luzon</td><td>2017</td><td>Solar</td><td>2023-Jan-</td></tr> <tr><td><input type="checkbox"/></td><td>201803</td><td>Active</td><td></td><td></td><td></td><td>On-Grid</td><td>LUZON</td><td>Luzon</td><td>2017</td><td>Solar</td><td>2023-Jan-</td></tr> <tr><td><input type="checkbox"/></td><td>201803</td><td>Active</td><td></td><td></td><td></td><td>On-Grid</td><td>LUZON</td><td>Luzon</td><td>2016</td><td>Solar</td><td>2023-Jan-</td></tr> </tbody> </table>	Participant Shortname (Name)	Billing Period	Sub-Account	Compliance Year	Compliance Island	Facility Name	Facility Grid	Island	Region	Vintage	Technology Type	Date Issued	<input type="checkbox"/>	201803	Active				On-Grid	LUZON	Luzon	2017	Solar	2023-Jan-	<input type="checkbox"/>	201803	Active				On-Grid	LUZON	Luzon	2016	Solar	2023-Jan-	<input type="checkbox"/>	201803	Active				On-Grid	LUZON	Luzon	2017	Solar	2023-Jan-	<input type="checkbox"/>	201803	Active				On-Grid	LUZON	Luzon	2017	Solar	2023-Jan-	<input type="checkbox"/>	201803	Active				On-Grid	LUZON	Luzon	2017	Solar	2023-Jan-	<input type="checkbox"/>	201803	Active				On-Grid	LUZON	Luzon	2017	Solar	2023-Jan-	<input type="checkbox"/>	201803	Active				On-Grid	LUZON	Luzon	2017	Solar	2023-Jan-	<input type="checkbox"/>	201803	Active				On-Grid	LUZON	Luzon	2016	Solar	2023-Jan-
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<p>4. Scroll down to determine the total number of RECs for the year, as shown in the <b>bottom left of the page (example: 722 RECs in 2018 for Net-Metering Facilities)</b></p> <ul style="list-style-type: none"> <li>Filter another Compliance Mechanism if you have RE for Own Use or Non-WESM RE Generator facility</li> </ul> <p>5. Compare the PREMS issued RECs versus the manual computation results.</p>	 <p>The screenshot displays the PREMS interface with a table of Renewable Energy Certificates (RECs) for 2018. The table has the following columns: Participant Shortname (Name), Billing Period, Sub-Account, Compliance Year, Compliance Island, Facility Name, Facility Grid, Island, Region, Vintage, Technology Type, and Date Issued. The table shows multiple rows of data, with the total number of RECs listed as 722 at the bottom left. The interface also includes a search bar and a navigation menu.</p> <table border="1"> <thead> <tr> <th>Participant Shortname (Name)</th> <th>Billing Period</th> <th>Sub-Account</th> <th>Compliance Year</th> <th>Compliance Island</th> <th>Facility Name</th> <th>Facility Grid</th> <th>Island</th> <th>Region</th> <th>Vintage</th> <th>Technology Type</th> <th>Date Issued</th> </tr> </thead> <tbody> <tr> <td></td> <td>201806</td> <td>Active</td> <td></td> <td></td> <td></td> <td>On-Grid</td> <td>LUZON</td> <td>Luzon</td> <td>2018</td> <td>Solar</td> <td>2023-J</td> </tr> <tr> <td></td> <td>201806</td> <td>Active</td> <td></td> <td></td> <td></td> <td>On-Grid</td> <td>LUZON</td> <td>Luzon</td> <td>2018</td> <td>Solar</td> <td>2023-J</td> </tr> <tr> <td></td> <td>201806</td> <td>Active</td> <td></td> <td></td> <td></td> <td>On-Grid</td> <td>LUZON</td> <td>Luzon</td> <td>2018</td> <td>Solar</td> <td>2023-J</td> </tr> <tr> <td></td> <td>201806</td> <td>Active</td> <td></td> <td></td> <td></td> <td>On-Grid</td> <td>LUZON</td> <td>Luzon</td> <td>2018</td> <td>Solar</td> <td>2023-J</td> </tr> <tr> <td></td> <td>201806</td> <td>Active</td> <td></td> <td></td> <td></td> <td>On-Grid</td> <td>LUZON</td> <td>Luzon</td> <td>2013</td> <td>Solar</td> <td>2023-J</td> </tr> <tr> <td></td> <td>201806</td> <td>Active</td> <td></td> <td></td> <td></td> <td>On-Grid</td> <td>LUZON</td> <td>Luzon</td> <td>2016</td> <td>Solar</td> <td>2023-J</td> </tr> <tr> <td></td> <td>201806</td> <td>Active</td> <td></td> <td></td> <td></td> <td>On-Grid</td> <td>LUZON</td> <td>Luzon</td> <td>2016</td> <td>Solar</td> <td>2023-J</td> </tr> <tr> <td></td> <td>201806</td> <td>Active</td> <td></td> <td></td> <td></td> <td>On-Grid</td> <td>LUZON</td> <td>Luzon</td> <td>2016</td> <td>Solar</td> <td>2023-J</td> </tr> <tr> <td></td> <td>201806</td> <td>Active</td> <td></td> <td></td> <td></td> <td>On-Grid</td> <td>LUZON</td> <td>Luzon</td> <td>2015</td> <td>Solar</td> <td>2023-J</td> </tr> <tr> <td></td> <td>201806</td> <td>Active</td> <td></td> <td></td> <td></td> <td>On-Grid</td> <td>LUZON</td> <td>Luzon</td> <td>2018</td> <td>Solar</td> <td>2023-J</td> </tr> </tbody> </table>	Participant Shortname (Name)	Billing Period	Sub-Account	Compliance Year	Compliance Island	Facility Name	Facility Grid	Island	Region	Vintage	Technology Type	Date Issued		201806	Active				On-Grid	LUZON	Luzon	2018	Solar	2023-J		201806	Active				On-Grid	LUZON	Luzon	2018	Solar	2023-J		201806	Active				On-Grid	LUZON	Luzon	2018	Solar	2023-J		201806	Active				On-Grid	LUZON	Luzon	2018	Solar	2023-J		201806	Active				On-Grid	LUZON	Luzon	2013	Solar	2023-J		201806	Active				On-Grid	LUZON	Luzon	2016	Solar	2023-J		201806	Active				On-Grid	LUZON	Luzon	2016	Solar	2023-J		201806	Active				On-Grid	LUZON	Luzon	2016	Solar	2023-J		201806	Active				On-Grid	LUZON	Luzon	2015	Solar	2023-J		201806	Active				On-Grid	LUZON	Luzon	2018	Solar	2023-J
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