



NET-METERING Program for RE

a consumer-based incentive under the RE Act of 2008

CLARITA SY – DE JESUS

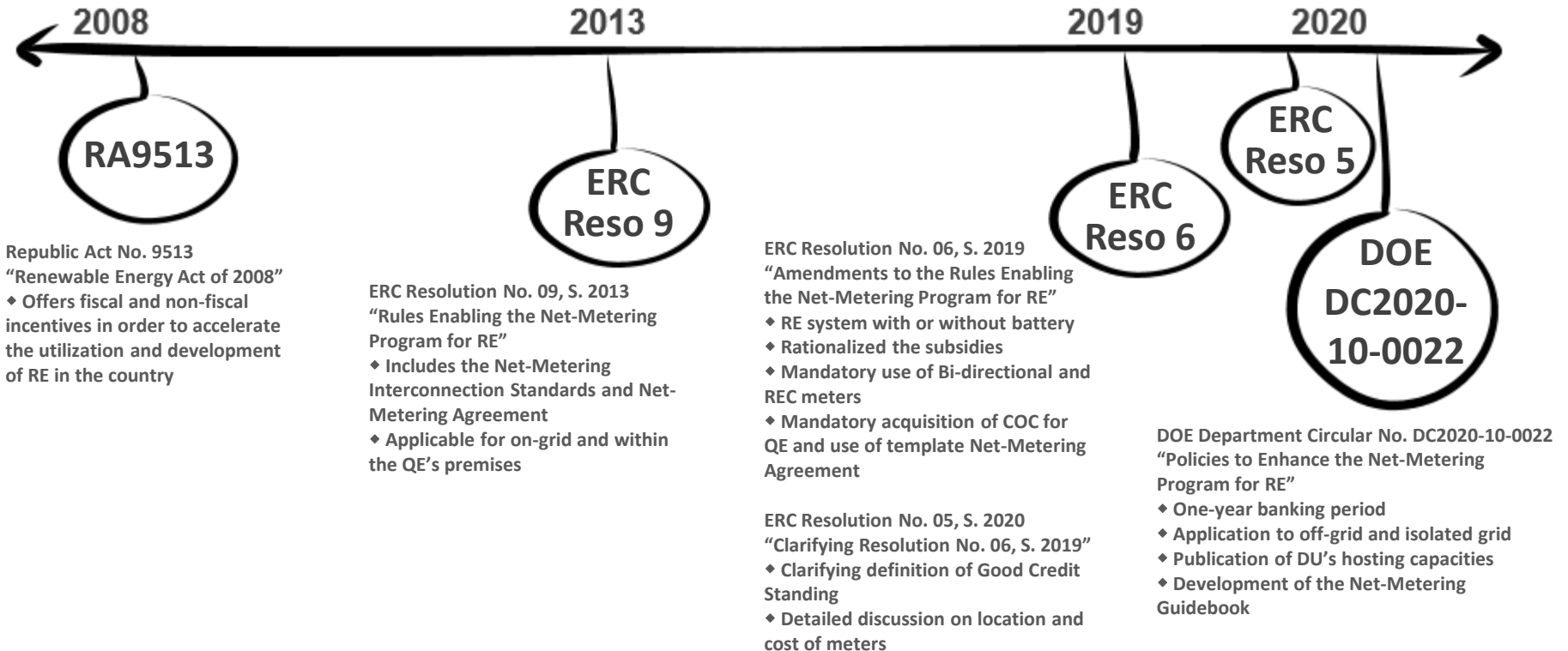
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Manila



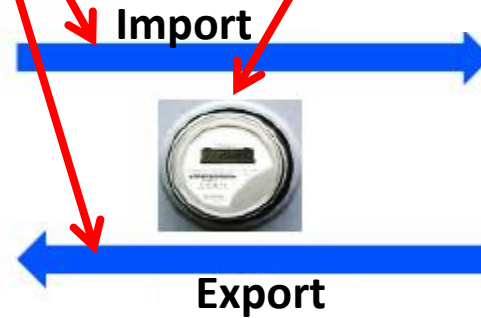
Legal Framework



INTERCONNECTION SET-UP

Two-way connection

Bi-directional meter



Both meters, REC and Bi-directional, shall be located at the connection point or at least near the connection point.

Max. Capacity = 100 kWp
Situating within the premises of the QE

REC meter



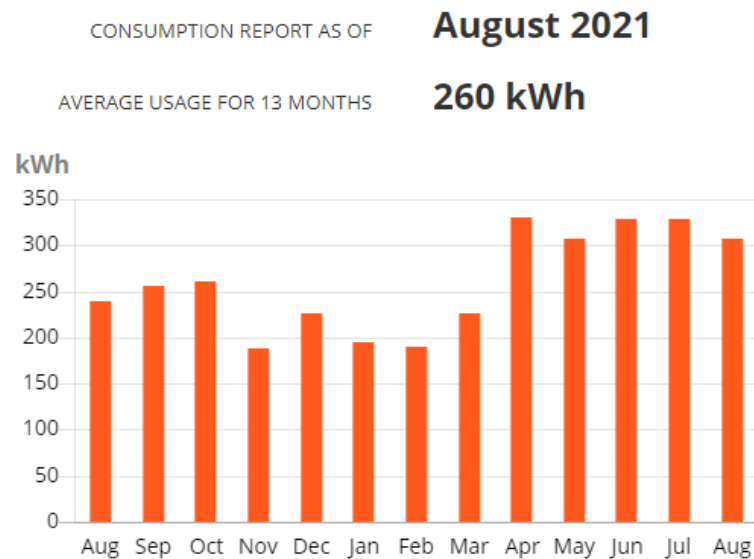
Pricing Methodology



If net electricity bill is negative, the unused Net-Metering Credit shall be credited on the succeeding bill. If the net electricity bill is still negative at the end of Calendar Year, the unused Net-Metering Credit shall be forfeited.



Threshold Capacity



Daily kWh = $260 \text{ kWh/month} \div 30 \text{ days} =$
8.67 kWh per day

Capacity Factor for solar = **16%**

Size of the system = $8.67 \text{ kWh/day} \div (24 \text{ hours/day} \times 0.16) =$
2.26 kWp

The size of the solar PV for net metering then should be lower than 2.26 kWp



Return of Investment

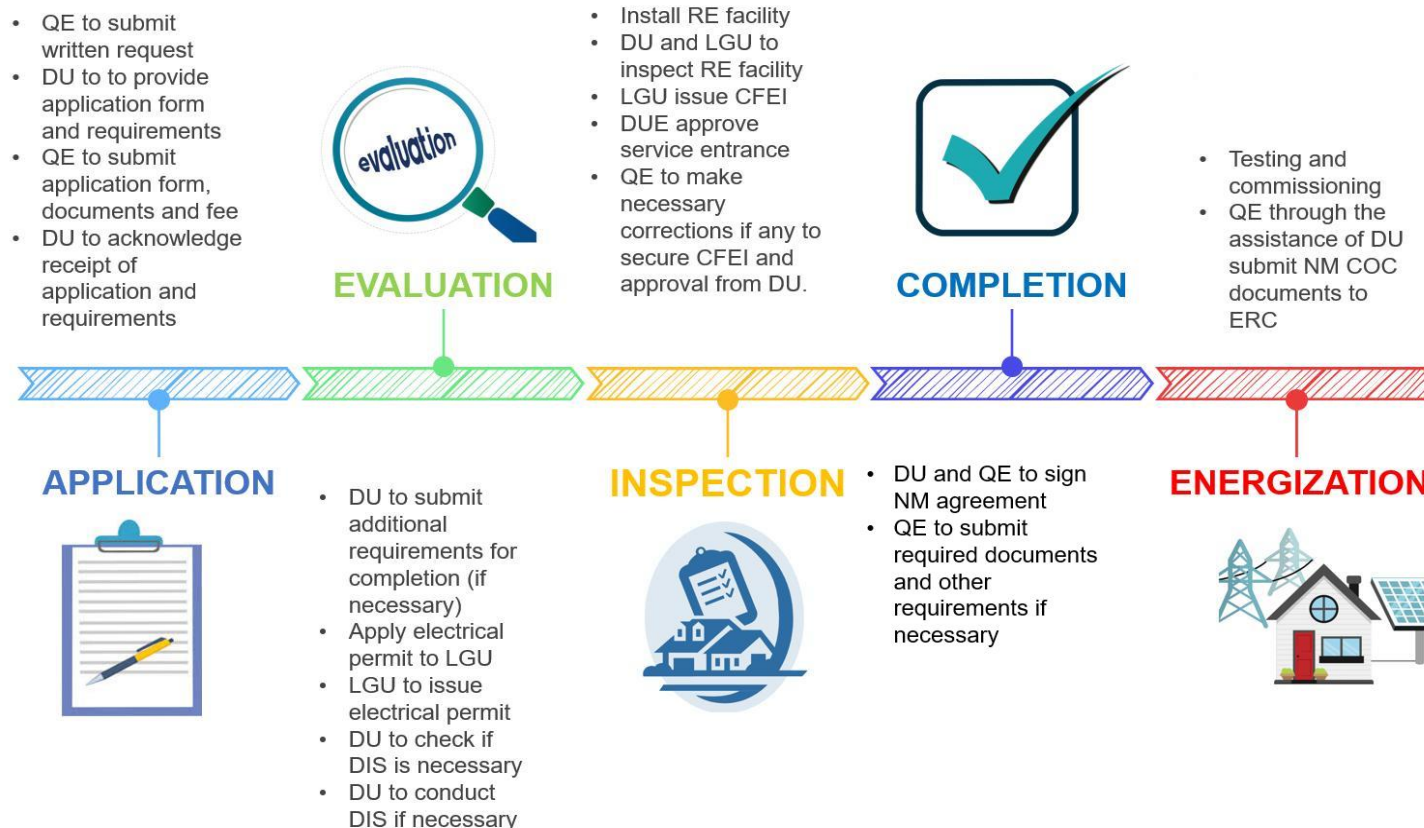
Assumptions	Values
PV Capacity (kWp)	2.26
Cost per kWp (Php)	65,000.00
PV generation per kWp (kWh)	116.00
ERC - COC (Php)	1,500.00
DENR EMB (Php)	1,500.00
LGU permit (Php per kVA)	-
Blended Rate (Php/kWh)	9.6781
Generation Rate (Php/kWh)	4.9322

For typical household,
ROI ranges from **6 to 8 years**

Percent Export	0%	30%	50%	70%	100%
Consumed Energy Generation per Year	3,146	2,202	1,573	944	-
Energy Export per Year	-	944	1,573	2,202	3,146
Annual Cost of Consumed Energy Generation	30,446.53	21,312.57	15,223.26	9,133.96	-
Annual Cost Energy Export	-	4,654.89	7,758.15	10,861.41	15,516.31
Total Annual Savings	30,446.53	25,967.46	22,981.42	19,995.37	15,516.31
Cost of Investment	149,900.00	149,900.00	149,900.00	149,900.00	149,900.00
Return of Investment	4.92	5.77	6.52	7.50	9.66



Steps in applying for a Net-Metering



Source: GIZ, Draft Guidebook on Net-Metering, 2021

Net-Metering Update

	DISTRIBUTION UTILITY (DU)	CAPACITY (kWp)	QUALIFIED END-USERS (QE)
LUZON			
1	AEC	921.72	77
2	BATELEC I	128.24	4
3	BATELEC II	290.81	41
4	CAGELCO I	4.08	1
5	CEDC	174.26	6
6	CELCOR	155.25	34
7	DECORP	330.73	31
8	ISECO	1.68	1
9	LUECO	219.93	20
10	LUFELCO	44.36	4
11	MERALCO	19,705.93	2871
12	NEECO I	14.08	3
13	OEDC	36.89	8
14	PANELCO I	21.11	8
15	PANELCO II	93.12	11
16	PELCO I	67.44	13
17	PELCO II	48.22	6
18	PELCO III	4.24	1
19	PENELCO	225.49	29
20	PRESKO	12.58	2
21	SEZ	53.21	11
22	SFELAPCO	1,214.36	100
23	TARELCO I	212.90	22
24	TARELCO II	50.59	5
25	TEI	488.11	34
26	ZAMECO I	173.52	6
27	ZAMECO II	36.42	4
	TOTAL	24,729.27	3,353

	DISTRIBUTION UTILITY (DU)	CAPACITY (kWp)	QUALIFIED END-USERS (QE)
VISAYAS			
28	AKELCO	191.45	8
29	ANTECO	7.40	2
30	BOHECO I	233.33	34
31	BOHECO II	8.30	2
32	CEBECO I	207.13	34
33	CEBECO II	78.72	8
34	CENECO	2,806.30	197
35	DORELCO	4.32	2
36	GUIMELCO	7.28	3
37	ILECO I	181.62	25
38	ILECO II	72.48	12
39	ILECO III	3.62	2
40	LEYECO V	22.66	6
41	MECO	184.51	19
42	NORECO II	726.57	64
43	MORE Power	12.29	1
44	VECO	1,313.34	113
	TOTAL	6,061.32	532

	DISTRIBUTION UTILITY (DU)	CAPACITY (kWp)	QUALIFIED END-USERS (QE)
MINDANAO			
45	ANECO	13.80	4
46	CLPI	76.86	2
47	DASURACO	35.00	2
48	DLPC	937.97	86
49	ILPI	128.52	14
50	MOELCI II	32.23	2
51	SOCOTECO I	47.44	3
52	SOCOTECO II	19.56	2
53	ZAMCELCO	94.86	1
	TOTAL	1,386.24	116
	GRAND TOTAL	32,176.83	4,001.00

Average capacity is 8.0422 kWp/system



Benefits of the Net-Metering

Qualified End-Users (Investors/Developers)	Distribution Utilities (Host)
Ability to export excess energy.	May increase the DU system's reliability and minimize the system losses.
Electricity bill reduction.	The gross generation of the RE System shall be entitled to RE Certificate and shall be credited as compliance of the DU's obligation under the the RPS.
Green energy, minimal maintenance	Minimize the requirement of energy supply during sun-hours, which is the peak hours of Luzon and Metro Manila.



Government Initiatives



DISTRIBUTED PHOTOVOLTAIC ECONOMIC AND TECHNICAL IMPACT ANALYSIS IN THE PHILIPPINES

A partnership between USAID and the Philippines' Department of Energy

May 29, 2019

This report was produced for review by the United States Agency for International Development (USAID) by Abt Associates, the National Renewable Energy Laboratory (NREL), and Lawrence Berkeley National Laboratory (LBNL).

- ✓ Published in 2019 the **“Distributed Photovoltaic Economic and Technical Impact Analysis in the Philippines”** – a partnership between USAID and DOE;
- ✓ Conducted in 2020 the series of virtual training for Distribution Utilities entitled as **“A Technical Guide to Conducting Impact Studies and Hosting Capacity Analysis for the Net-Metering Program”** through the assistance of USAID, NREL, and Hawaii Natural Energy Institute;
- ✓ On-going review on the draft **“Guidebook on Net-Metering in the Philippines”** in cooperation with and assistance from the GIZ; and
- ✓ Issuance of **DILG-DOE Joint Memorandum Circular No. 2020-01.**




WAY FORWARD

- Continues **capacity building** and assistance for our Distribution Utilities;
- Close coordination with the Energy Regulatory Commission for the issuance of **regulatory supports/resolutions** on the (1) disbursements of all outstanding peso credits to QEs, (2) amendment of the Net-Metering Interconnection Standard to facilitate the safe and effective implementation of Net-Metering in Off-Grid areas, and (3) possible consideration to the proposed Classical Net-Metering under DOE DC2020-10-0022; and
- Harmonization of application requirements, processes, and fees required by each **Local Government Units** in the country, thru coordination with the Department of Interior and Local Government.




Thank you!

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