



Total Electrification by 2020 and its Support Program

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OIC-REAMD

26 June 2018

Department of Energy Audio Visual Room



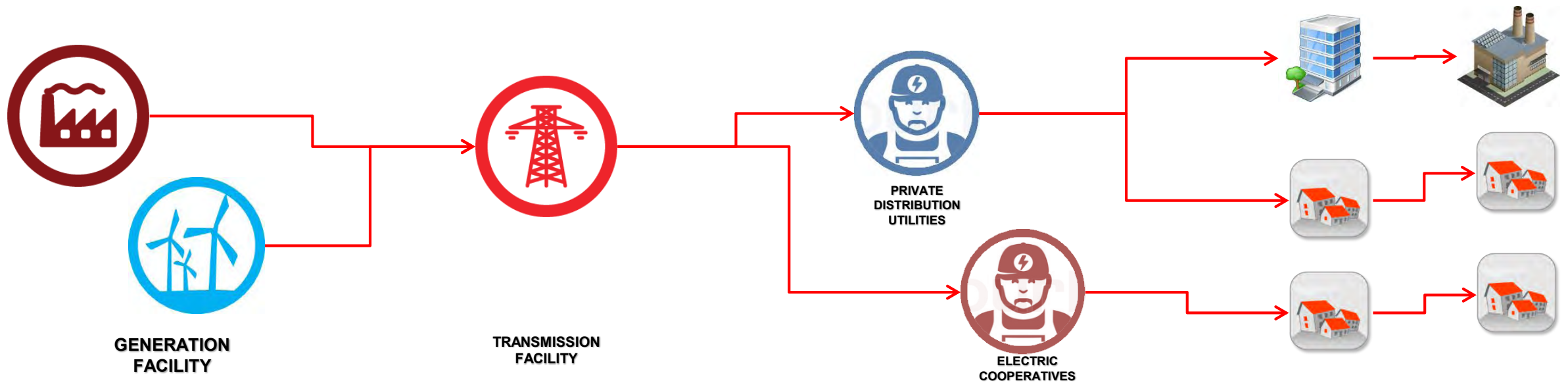
PRESENTATION OUTLINE

- 1** Rural Electrification Catalyst for Growth
- 2** Historical Performances
- 3** Electrification Efforts
- 4** Directives toward Total Electrification
- 5** Needed Support and Way Forward

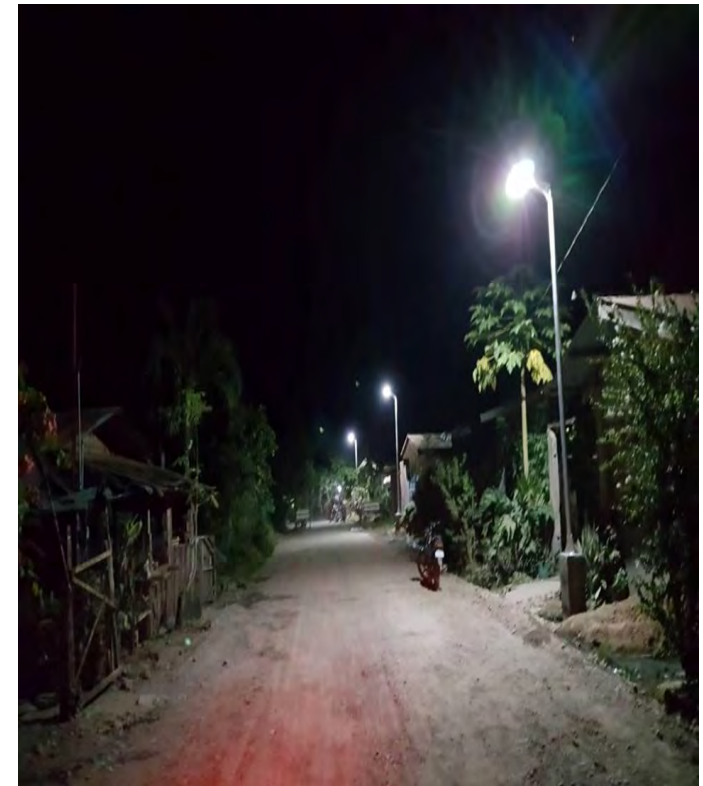


Rural Electrification-Catalyst for Growth

RURAL ELECTRIFICATION, as defined in Sec.4 of RA9136, refers to the delivery of basic electric services



Rural Electrification-Catalyst for Growth



Historical Performance and Program Management

1999

- **Accelerated Barangay Electrification Program (ABEP)**

- Department of Energy
- National Electrification Administration (NEA),
- National Power Corporation through its Small Power Utilities Group (NPC-SPUG), and
- PNOC-Energy Development Corporation (PNOC-EDC).



PNOC ENERGY DEVELOPMENT CORPORATION



Historical Performance and Program Management

2000

• O'ILAW PROGRAM

- Adopt a Barangay Program
- Advance Financing Scheme (Energy Regulation No. 1 -94 Projects)
- **Foundation for Rural Electrification and Economic Development (FREED)**



Nestlé

Good Food, Good Life



Pilipinas Shell
Petroleum
Corporation

CREDIT SUISSE



Historical Performance and Program Management

2003

- **Expanded Rural Electrification Program (ER Program)**
- **100% Barangay Electrification by 2008**
- **90% Household Electrification by 2017**



Historical Performance and Program Management

2005

Private Sector Contribution

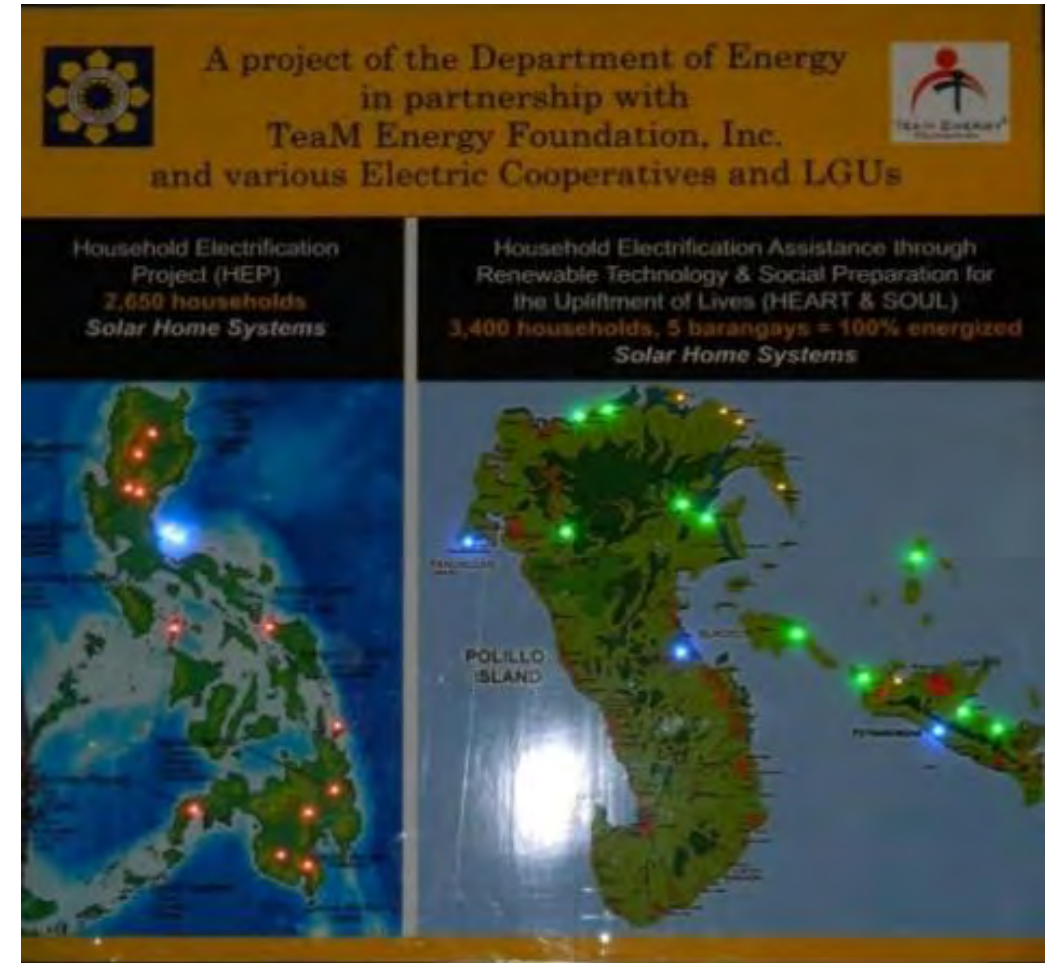
- Marked the implementation of a pilot project in Rio-Tuba, Bataraza, Palawan.
- The design named “Community Energizer Platform” or “CEP,”



Historical Performance and Program Management

Private Sector Contribution

- Team Energy Foundation, Inc. (TEFI) will continue its successful PV SHS electrification project (**HEART and SOUL**) in Polilio Group of Islands, Quezon
- attained 100% HH electrification on off-grid areas.



Historical Performance and Program Management

Foreign-Assisted Projects

- The **Rural Power Project** funded by the **World Bank-Global Environment Facility (WB-GEF)**.
- The **PNOC** implements the Solar Home System (SHS) Distribution Project funded **by Dutch Government**.



Historical Performance and Program Management

Foreign-Assisted Projects

- The **Department of Agrarian Reform (DAR)** undertakes the **Solar Power Technology Supports Project (SPOTS)** in the unenergized and off-grid agrarian reform communities (ARCs) through solar PV applications for agricultural and rural enterprise.



Historical Performance and Program Management

Foreign-Assisted Projects

- The **Alliance for Mindanao Off-grid Rural Electrification (AMORE) Project** is a joint undertaking of **USAID, Mirant Philippines, Autonomous Region of Muslim Mindanao (ARMM), Winrock International and DOE.**



Historical Performance and Program Management

Foreign-Assisted Projects

- The **Philippine Rural Electrification Service Project (PRES)** through the French Filipino Loan Protocol financing amounting to some Euro17.5 Million in Masbate.



Historical Performance and Program Management

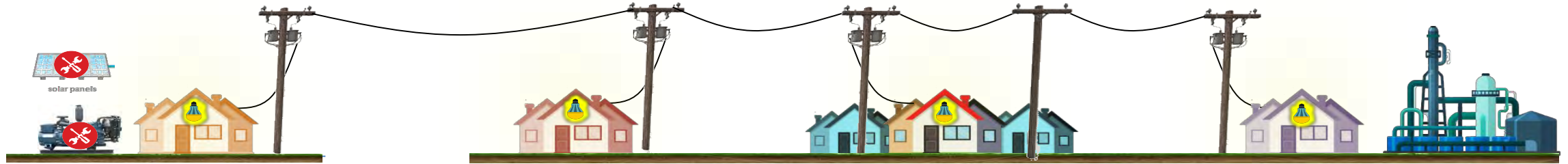
2012

- **Barangay Electrification Program (BEP)** have electrified **41,969 out of 41,975 barangays**
- **Household Electrification Development Plan (HEDP) 2013-2017** lays down the framework to achieve the country's goal of attaining 90 percent HH electrification by 2017



HOUSEHOLD ELECTRIFICATION DEVELOPMENT PLAN (HEDP 2013-2017) PROGRAMS AND PROJECTS

GRID ELECTRIFICATION PROGRAMS



**NEA- Barangay Line
Enhancement Program (BLEP)**

**NEA- Sitio Electrification
Program (SEP)**

**Nationwide Intensification of
Household Electrification (NIHE)**

**ER 1-94 Electrification
Fund Program**

OFF-GRID ELECTRIFICATION PROGRAMS



**DOE-PV Mainstreaming
Program (PVM)**

**Qualified Third Program
(QTP)**

**DOE- Household Electrification
Program using RE System
(HEP)**

**NPC Missionary
Electrification
Program (MEP)**



NEA Sitio Electrification Program (SEP)(2011-2017) and Barangay Line Enhancement Program (BLEP)

GRID ELECTRIFICATION PROGRAMS



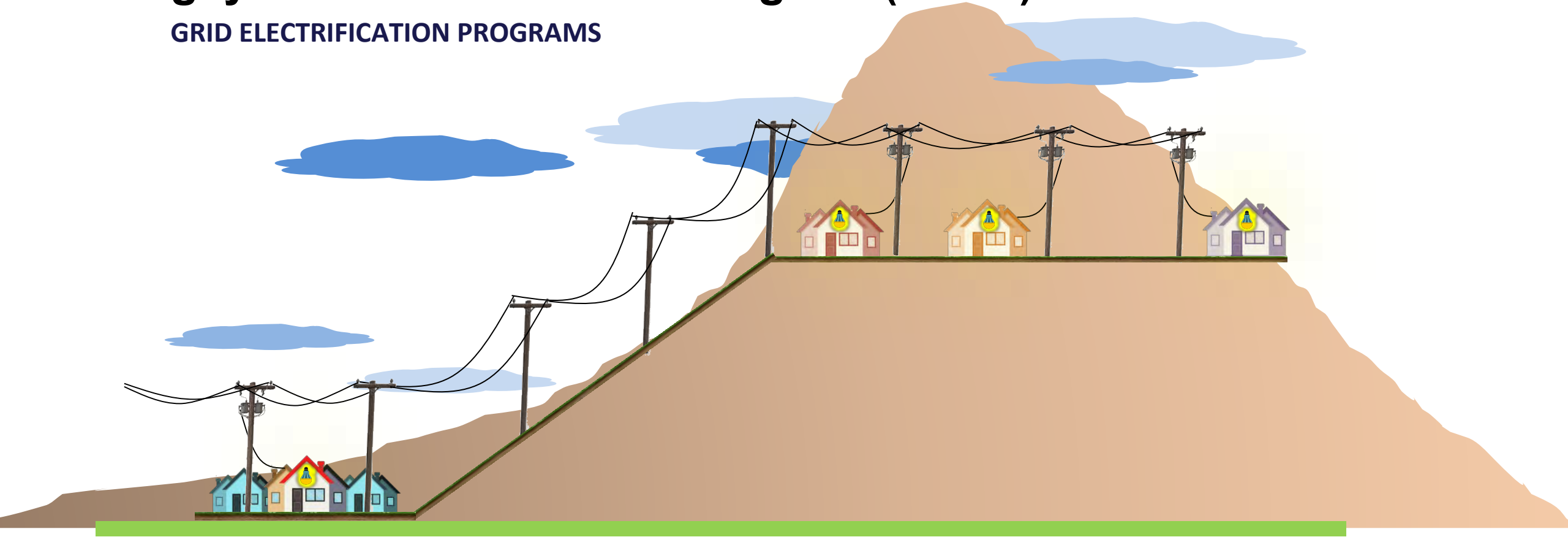
NEA- Barangay Line Enhancement Program (BLEP)

- Extension of DX lines to previous off-grid electrified areas, enhancement of lines and/or submarine cables



NEA Sitio Electrification Program (SEP)(2011-2017) and Barangay Line Enhancement Program (BLEP)

GRID ELECTRIFICATION PROGRAMS



NEA- Sitio Electrification Program (SEP)

- Extension DX lines to far flung areas and sitios



NEA Sitio Electrification Program (SEP)(2011-2017) and Barangay Line Enhancement Program (BLEP)

NEA-SEP

- Completed/Energized a total of 32,668 Sitios
- initial 502,373 consumers
- Php20.088Billion



NEA-BLEP

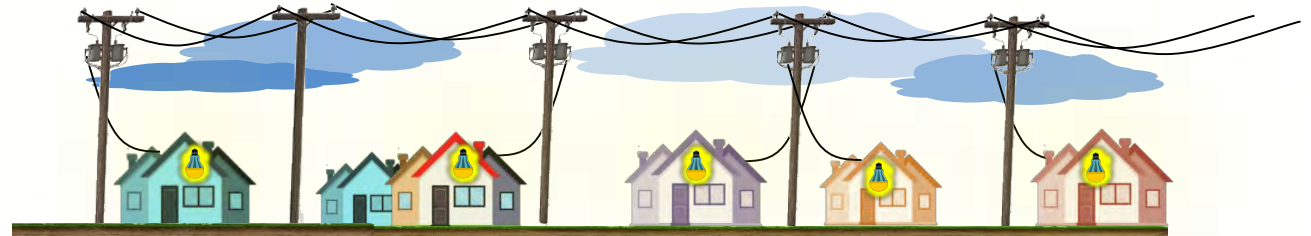
- From 2012-2017, a total of 909 previously energized barangays now connected to grid.
- Php3.168 Million



Nationwide Intensification of Household Electrification (NIHE)

2015-2018

GRID ELECTRIFICATION PROGRAMS



Nationwide Intensification of Household Electrification (NIHE)

- Intensification of Household Electrification through grant house-wiring subsidy



Nationwide Intensification of Household Electrification (NIHE)

2015-2018

-Ongoing implementation of approved 262,320 HHs beneficiaries for years 2015-2017 NIHE Budget Php930.70 million

-As of 28 February 2018, installation of housewiring to 56,753 HHs and energization of KWh Meter to a total of 45,006 HHs.



One of 2000 NIHE beneficiaries of SUKELCO



One of 2000 NIHE beneficiaries of QUEZELCO II

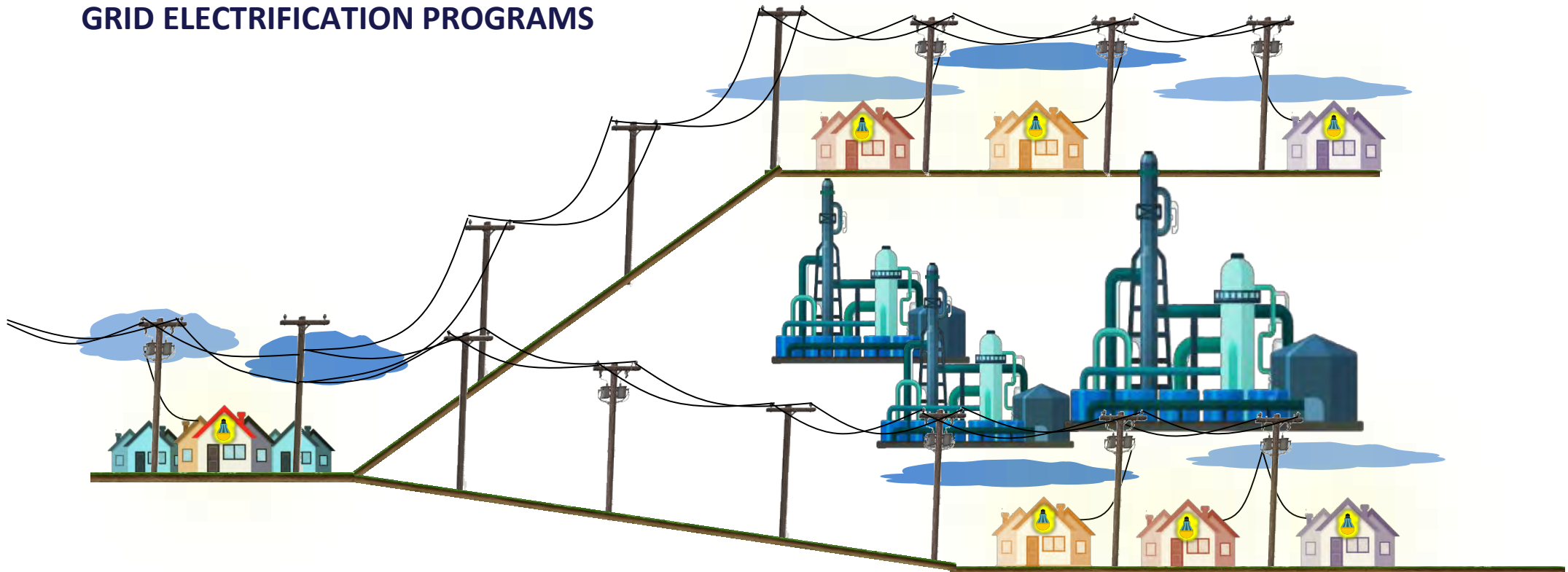


One of 2000 NIHE beneficiaries of COTELCO-PPALMA



ER 1-94 Electrification Projects (Inception- 2017)

GRID ELECTRIFICATION PROGRAMS



ER 1-94 Electrification Fund Program

- ▀ Provision of electrification projects leading to 100% electrification of to Host Communities



ER 1-94 Electrification Projects (Inception- 2017)

7,000 ckt-kms of
lines and 6,992 PV
SHS



From 2011 to 2017, DOE
Approved a total of **1,450**
Project Areas with total of
potential 36,147 HHs.
Php1,063 Million



PV Mainstreaming Projects 2011-2013

OFF-GRID ELECTRIFICATION PROGRAMS



DOE-PV Mainstreaming Program (PVM)

- Provision of individual PV SHS to off-grid/unviable areas



PV Mainstreaming Projects 2011-2013

PILOT-TESTING OF THE PV MAINSTREAMING PROJECT THROUGH THE “FEE-FOR-SERVICE” MODEL WITH THE SIX (6) ECS IN THE VISAYAS FROM 2011-2013 To A Total of 3002 Hhs

BANELCO, Bantayan, Cebu

- 75 Wp SHS to 482 HHS

BOHECO II, Bohol

- 50 Wp SHS to 528 HHS

CEBECO II, Cebu

- 50 Wp SHS to 300 HHS

NOCECO, Negros Occidental

- 75/50 Wp SHS to 544 HHS

VRESCO, Negros Occidental

- 50 Wp SHS to 773 HHS

NORECO I, Negros Oriental

- 50/75 Wp SHS to 375 HHS



Household Electrification Program (HEP) using Renewable Energy System

OFF-GRID ELECTRIFICATION PROGRAMS



DOE- Household Electrification Program using RE System (HEP)

-Provision of individual PV SHS or a minihydro system if a hydropower resource is available within a reasonable distance from the clustered household beneficiaries.



Household Electrification Program (HEP) using Renewable Energy System

-From 2011 to 2017, a total of **56,900 PV SHS units (10Wp/30Wp)** were provided to household situated to off-grid areas. **440 units of 75Wp** for communal facilities and **1,505 units of 75Wp Streetlight** facilities.



30-Wp Solar Home System



10-Wp Solar Home System



QUALIFIED THIRD PARTIES

OFF-GRID ELECTRIFICATION PROGRAMS



Qualified Third Party (QTP) Program

-Provision of Generation to Distribution services to areas deemed unviable and waived by the DUs



QUALIFIED THIRD PARTIES

EXISTING QTPs

-Have implemented program to 3 areas:

1. Rio Tuba, Bataraza, Palawan

- 1.05 MW Diesel – Biomass
- Operational, Authority to Operate (ATO) issued by ERC , 2010
- Implemented by PSPI and served 1744HHs

2. Malapascua, Daan-Bantayan, Cebu

- 750 kW Diesel
- Operational, Permanent ATO issued by ERC, 2016
- Implemented by PSPI and serve 771 HHs

3. Sabang, Puerto Princesa City, Palawan

- Hybrid : 1.4 MW Solar + 1.2 MW Diesel + 2.3 MWh Battery
- ERC approved Authority to Operate (ATO) issued on January 2017
- Operated by SREC and served 683 HHs



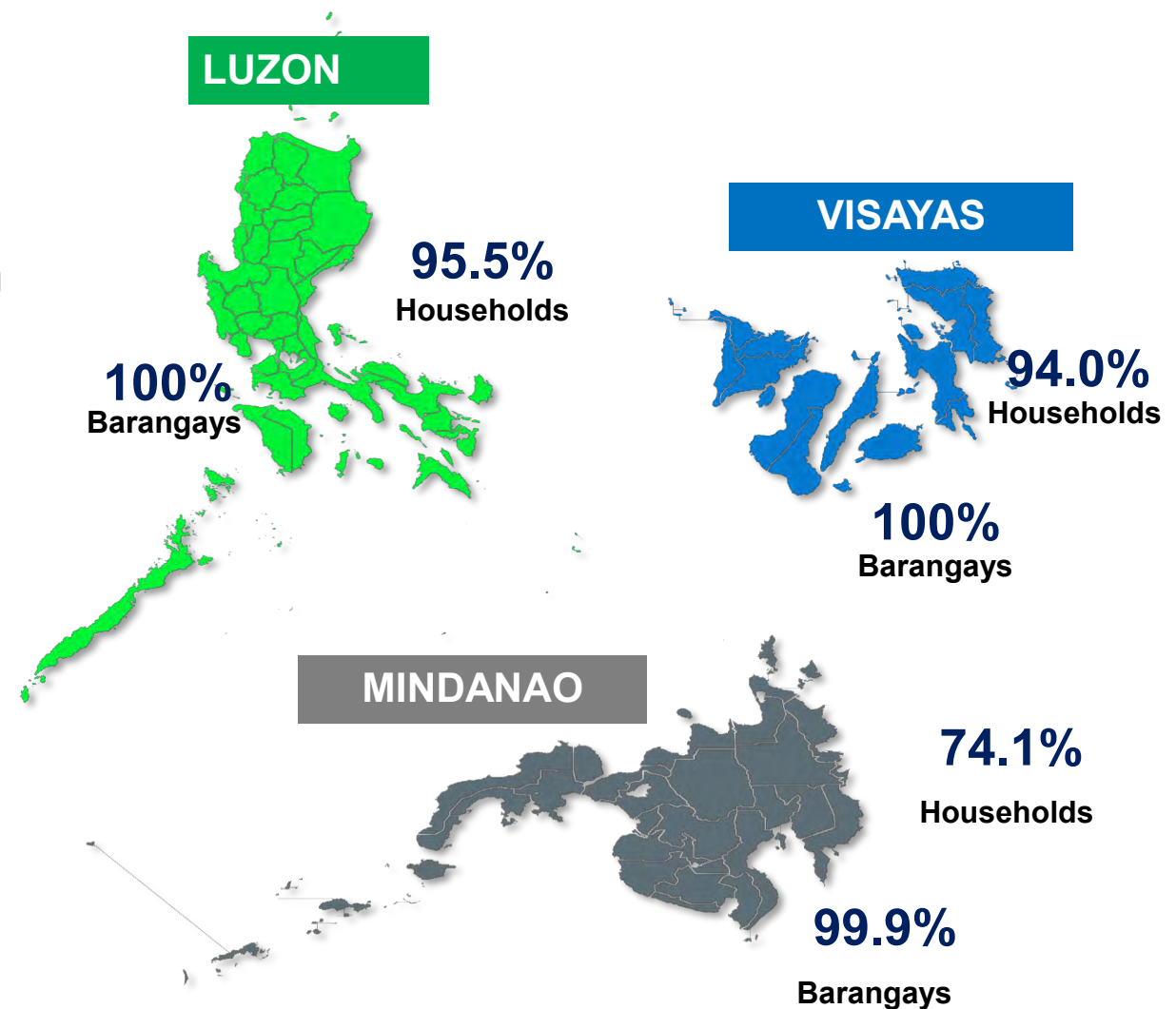
Status of Household Electrification

As of 31 December 2016



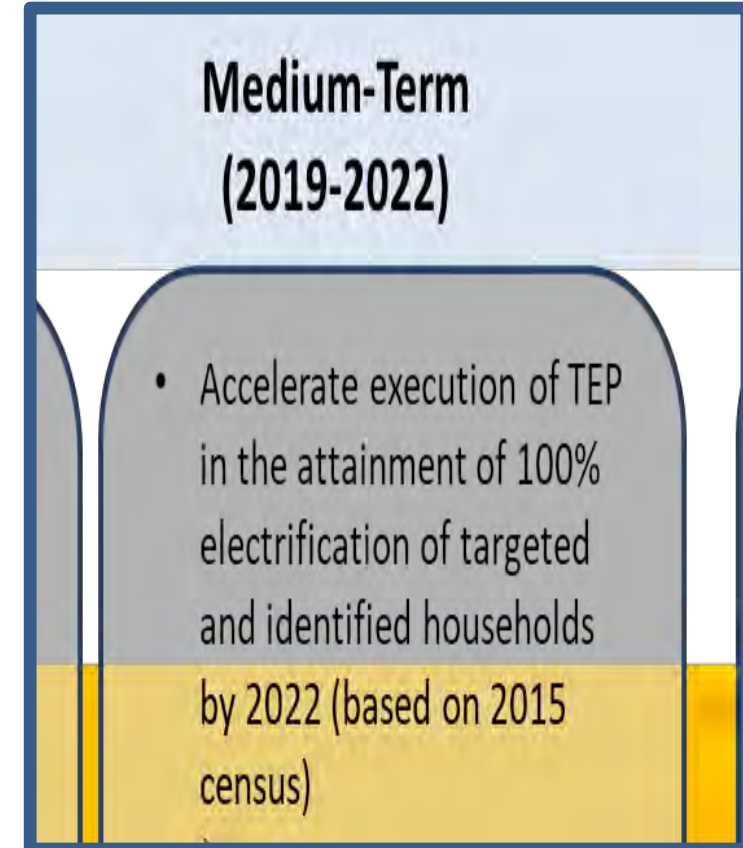
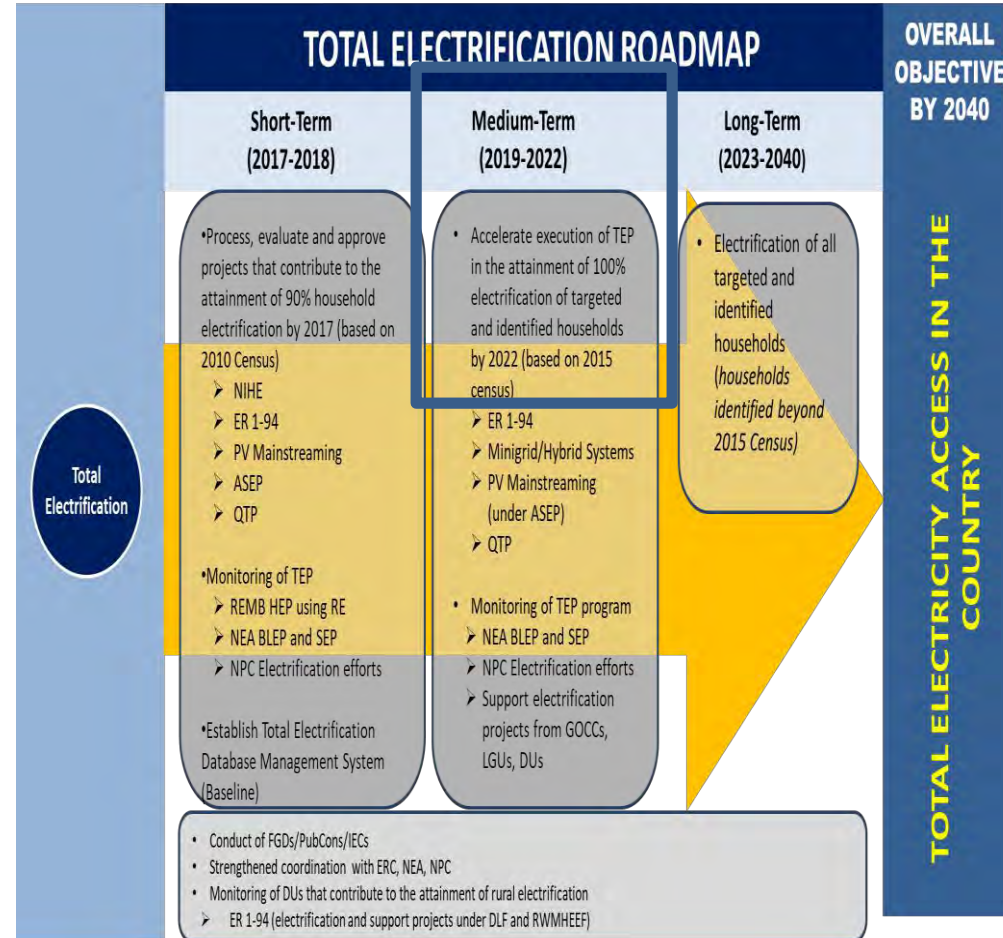
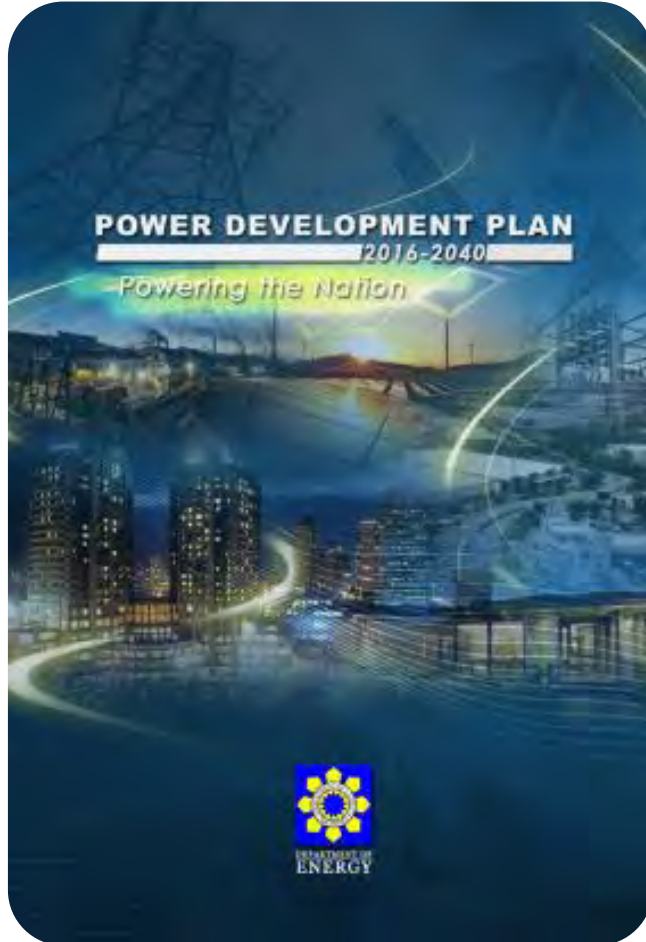
20.6 Million Households have electricity out of **22.7 Million Households** in the country
(Based on 2010 Census)

Distribution Utilities (in Millions HH)	HH Population Projected C2010	Served HH	Unserved HH	HH Electrification Level (%)
119 Electric Cooperatives	13.34	11.72	1.61	87.92%
MERALCO	7.09	6.92	0.17	97.64%
Other Distribution Utilities	2.29	1.95	0.34	85.05%
Philippines	22.72	20.59	2.12	90.65%



Power Development Plan 2016-2040

<https://www.doe.gov.ph/electric-power/power-development-plan-2016-2040>



Directives

SAGC issued Department Order last 24 May 2018 entitled:

“CREATION OF TASK FORCE TO ENSURE ACCESS TO ELECTRICITY FOR THE COMMUNITIES THAT REMAIN UNSERVED AND UNDERSERVED BY THE DISTRIBUTION UTILITIES”



TASK FORCE E-POWER MO (TFEM)



COMPOSITION OF THE TASK FORCE E-POWER MO (TFEM)

RESPONSIBILITIES

- Oversee the implementation of the total electrification program of the Government
- Require all the DUs to submit a comprehensive masterplan for total electrification plan within their respective franchise area.
- Review and assess the submitted comprehensive Mastepplan and recommend to DOE Secretary appropriate policies, plan and program, projects and activities;
- Coordinate closely and establish cooperation with other government agencies concerned
- Get support and Assistance of concern security agencies for the TFEM implementation.

COMPOSITION

CHAIRMAN:

DOE Senior Usec. Jesus Cristino P. Posadas

VICE-CHAIRMAN:

DOE Used. Alexander S. Lopez
DOE Asec. Redentor E. Delola

MEMBERS:

- 1) DOE Asec. Leonilo J. Pulido III**
- 2) NPC Pres. Pio J. Benavidez**
- 3) NEA Adm. Edgardo S. Masongsong**

Status of Household Electrification

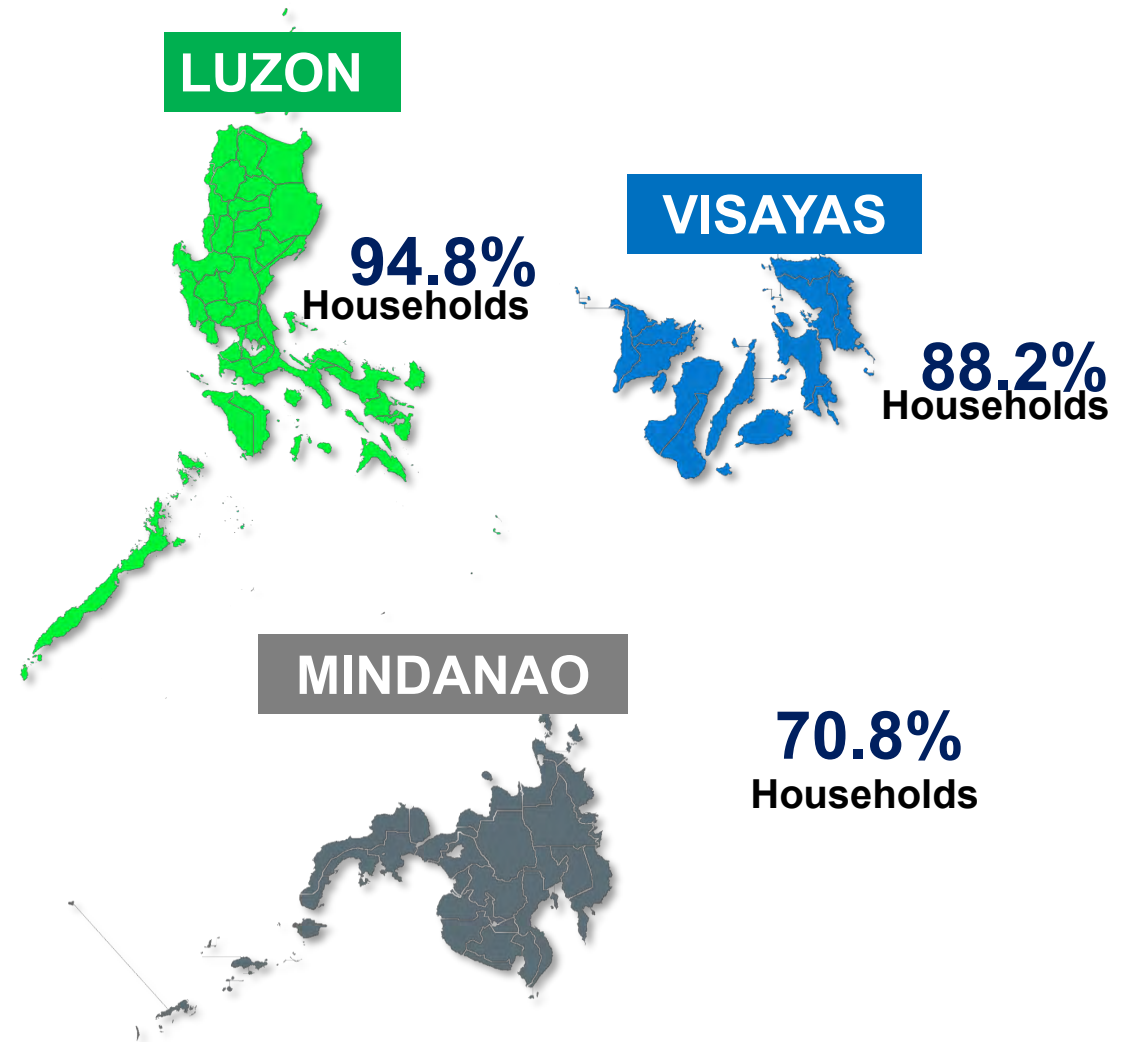
Initial Estimate as of 31 December 2017

20.936 Million
Households have
electricity out of
23.716 Million
Households in the
country



(Based on DDP 2018-2027 by DUs)

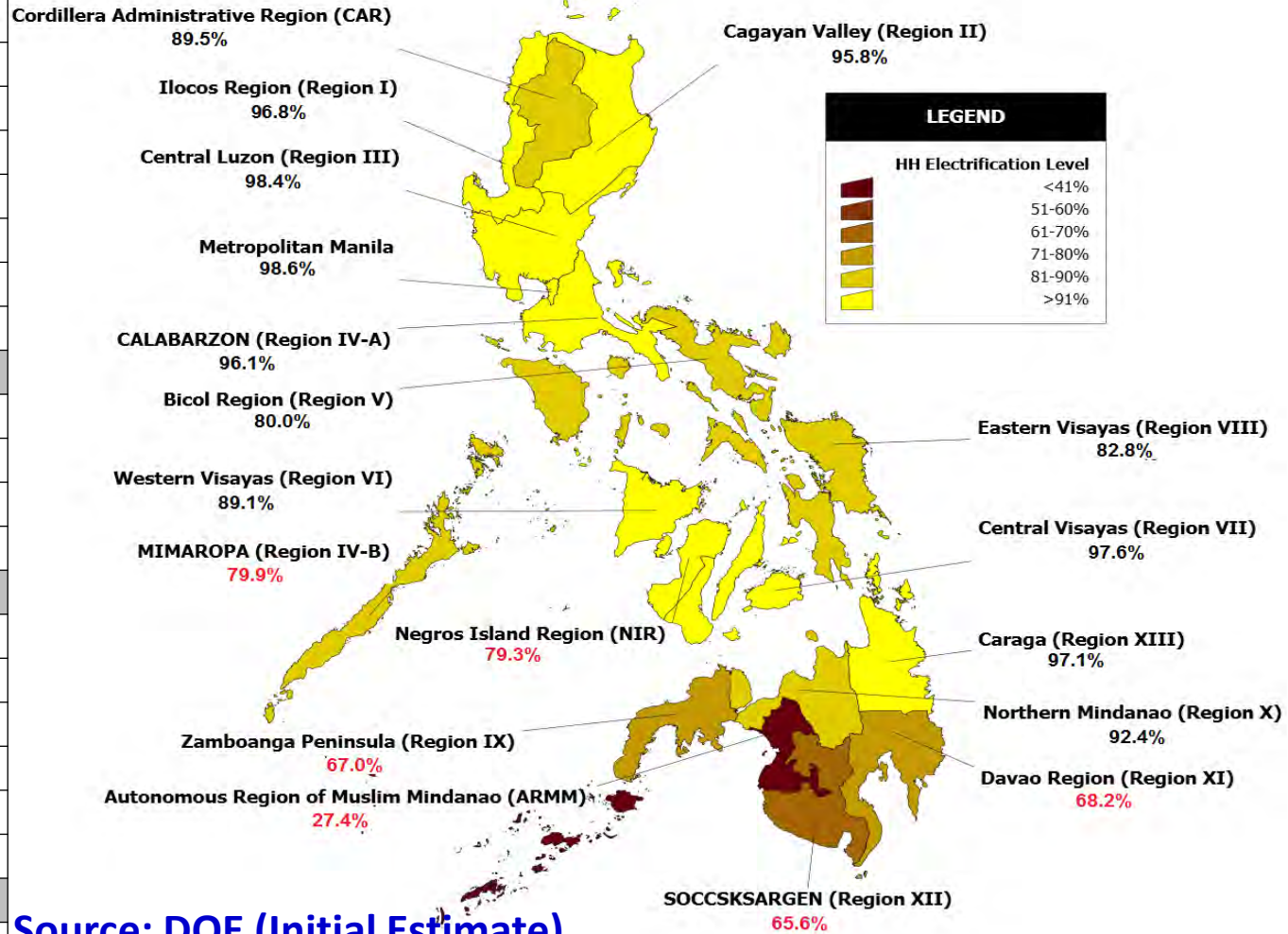
Distribution Utilities (in Millions HH)	HH Population	Served HH	Unserved HH	HH Electrification Level (%)
119 Electric Cooperatives	14.59	12.19	2.39	83.6%
MERALCO	6.98	6.82	0.16	97.7%
Other Distribution Utilities	2.14	1.92	0.22	89.07%
Philippines	23.72	20.94	2.78	88.3%



REGIONAL ELECTRIFICATION LEVEL (DEC 2017)

Note: Red texts indicate electrification level below 80%

Region	Total HH*	Served HH	Unserved HH	HH Elect'n Level %
CAR	409,100	365,999	43,101	89.5%
I	1,179,133	1,141,887	37,246	96.8%
II	795,800	762,314	33,486	95.8%
III	2,793,456	2,748,334	45,122	98.4%
IV-A	3,718,758	3,572,657	146,101	96.1%
IV-B	708,077	566,065	142,012	79.9%
NCR	3,233,605	3,189,357	44,248	98.6%
V	1,197,558	957,954	239,604	80.0%
Luzon	14,035,487	13,304,568	730,920	94.8%
VI	1,019,375	908,244	111,131	89.1%
VII	1,426,286	1,391,344	34,942	97.6%
VIII	1,003,543	831,235	172,308	82.8%
NIR	1,016,400	806,494	209,906	79.3%
Visayas	4,465,604	3,937,317	528,287	88.2%
ARMM	618,600	169,190	449,410	27.4%
CARAGA	633,700	615,515	18,185	97.1%
IX	754,300	505,444	248,856	67.0%
X	1,004,722	927,878	76,844	92.4%
XI	1,177,596	803,588	374,008	68.2%
XII	1,026,019	672,999	353,020	65.6%
Mindanao	5,214,937	3,694,614	1,520,323	70.8%
Philippines	23,716,028	20,936,499	2,779,530	88.3%



Source: DOE (Initial Estimate)

Understanding and Agreements of Parameter

Unserved Areas Definition

Areas without electricity access

- **No distribution lines**
- **No PV SHS / Mini-Grid**

Underserved Areas Definition

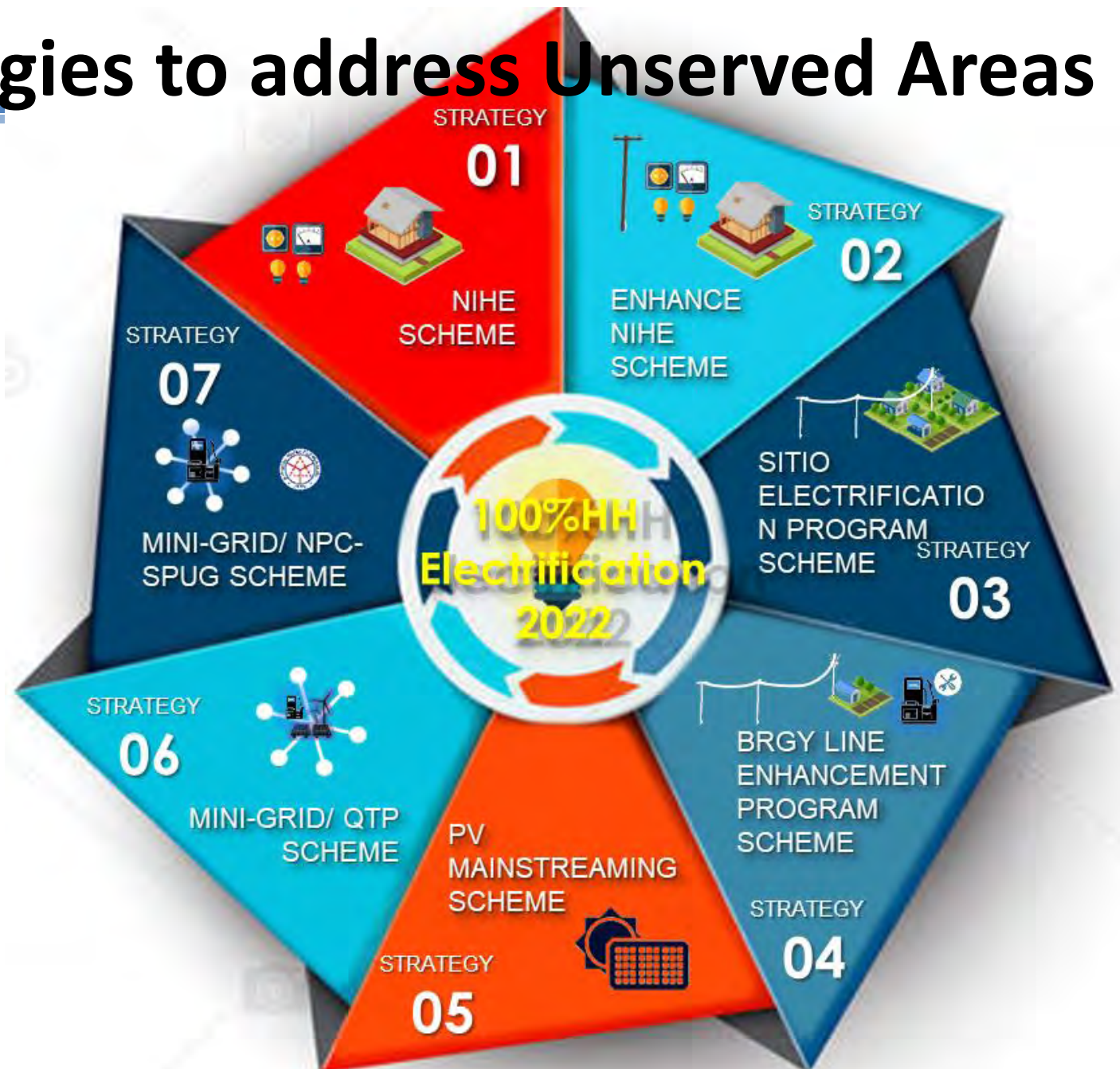
Areas whose electricity services:

- **Less than 24 hrs service**
- **With Service Parameters non-compliant with PDC**
- **Currently served with Individual PV Solar Home System (SHS)**

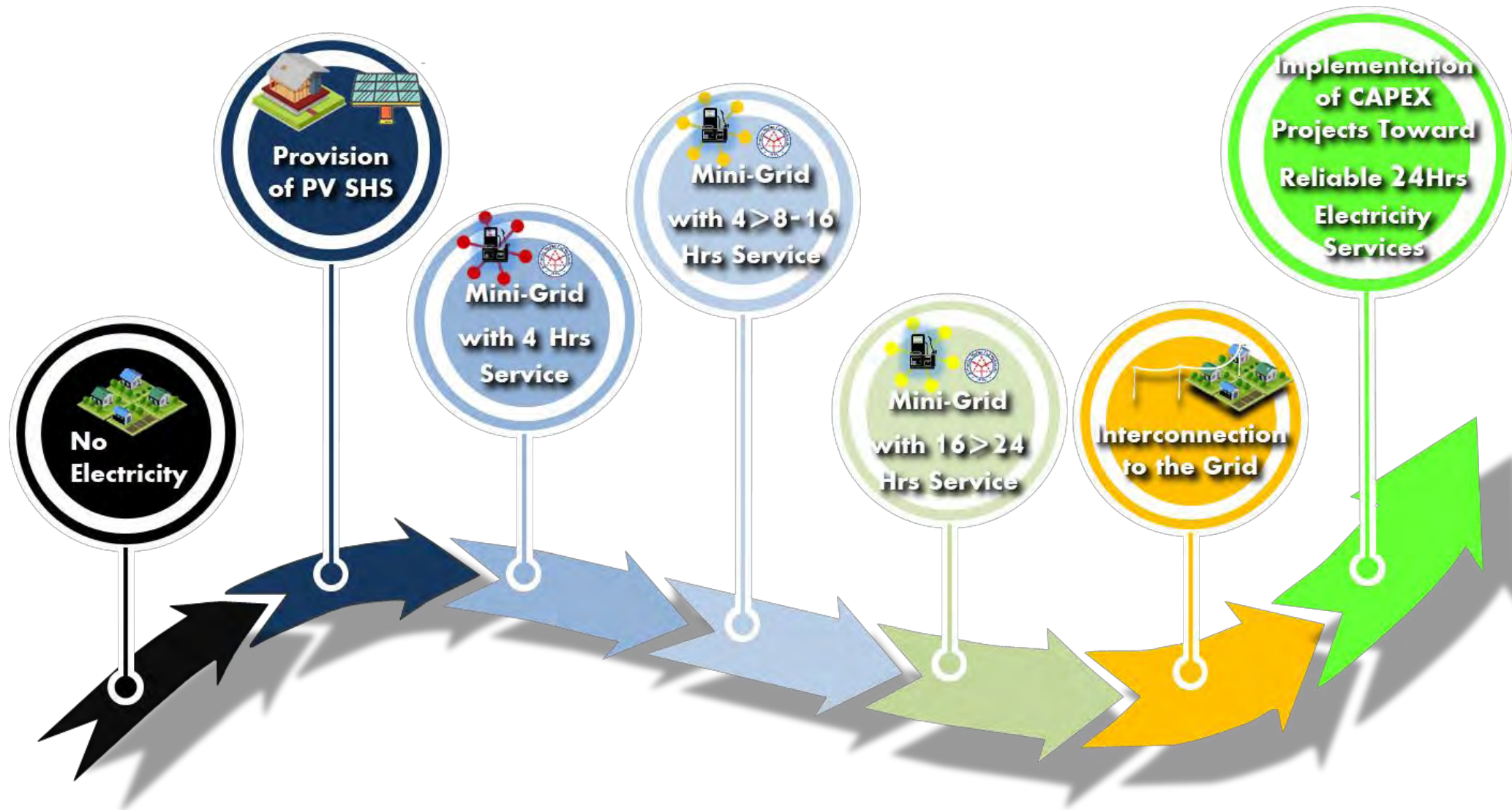


Electrification Strategies to address Unserved Areas

- Taking into consideration the specific type of area: contiguous, island, isolated, etc. vis-à-vis the viability of the areas



Strategy Handling Underserved Areas



Needed Support and Way Forward

From ERC

- DOE is working on a Memorandum of Agreement with ERC regarding their support to total electrification efforts of the Department thru **“special prioritization”** on processing of electrification related applications.



Needed Support and Way Forward

From LGU and DILG

- **Waiving of LGU's imposed fees for the permits and required documents for service application**
- **DOE had initial discussion with DILG and working on a Memorandum of Agreement between the DILG regarding support to total electrification efforts of the Department**



Needed Support and Way Forward

From GENCONS

- **Continuous support** thru provision of **Corporate Social Responsibility (CSR) Programs** aside from Support from implementation of ER 1-94 DLF and RWMHEEF Projects





E-SECURE MO! E-SECURE NATIN!

*Mas Maganda at Mabilis na
Serbisyo para sa lahat ng
Sambayanang Pilipino*

