Total Electrification by 2020 and its Support Program

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OIC-REAMD

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Department of Energy Audio Visual Room
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, as defined in Sec. 4 of RA 9136, refers to the delivery of basic electric services.
Rural Electrification—Catalyst for Growth
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).
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)
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.
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.
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.
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)

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

Php1,063 Million

7,000 ckt-kms of lines and 6,992 PV SHS
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.
Qualified Third Party (QTP) Program
-Provision of Generation to Distribution services to areas deemed unviable and waived by the DUs
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

**TOTAL ELECTRIFICATION ROADMAP**

**Short-Term (2017-2018)**
- Ongoing completion of the Last Mile Electrification Program
- Establishment of a Total Electrification Database Management System
- Accelerate execution of TEP in the attainment of 100% electrification of targeted and identified households by 2022 (based on 2015 census)
- NPC Electrification efforts
- Establish Total Electrification Database Management System (Realtime)
- Conduct of FGDs/ProCos/ESOs
- Strengthened coordination with ERC, NIA, NPC
- Monitoring of OUs that contribute to the attainment of rural electrification
- NEA BLEP projects (listed in the Support Projects for DoNER and PMMERF)

**Medium-Term (2019-2022)**
- Accelerate execution of TEP in the attainment of 100% electrification of targeted and identified households by 2022 (based on 2015 census)
- NEA BLEP and SEP.
- NPC Electrification efforts
- Support electrification projects from GOCOs, LGUs, DUs

**Long-Term (2023-2040)**
- Electrification of all targeted and identified households (households identified beyond 2015 census)
- NEA BLEP and SEP.
- NPC Electrification efforts
- Support electrification projects from GOCOs, LGUs, DUs
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)
## 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 Masterplan 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)

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

Note: Red texts indicate electrification level below 80%

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

- Provision of PV SHS
- Mini-Grid with 4 Hrs Service
- Mini-Grid with 8-16 Hrs Service
- Mini-Grid with 16>24 Hrs Service
- Interconnection to the Grid
- Implementation of CAPEX Projects Toward Reliable 24Hrs Electricity Services

No Electricity
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