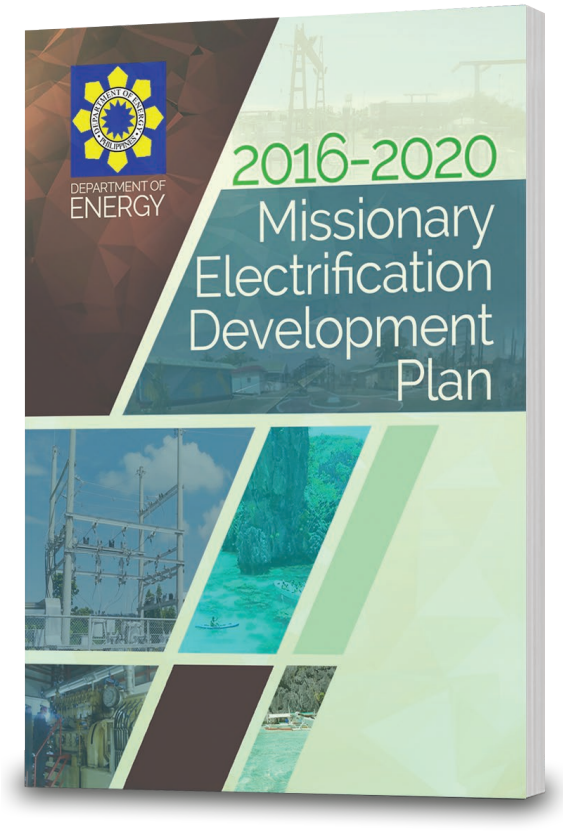
DEPARTMENT OF ENERGY

2016-2020 Missionary Electrification Development Plan

ABOUT THE COVER



ABOUT THE COVER

The cover of the 2016-2020 Missionary Electrification Development Plan highlights the inimitability of off-grid communities characterized by the harmonious co-existence of robust power system facilities and the exceptional landmarks of the country that are often found in off-grid areas.

Thus, we remain cognizant of the importance of these two elements and their effective cultivation and improvement in spurring inclusive socio-economic development in off-grid areas.

As such, the 2016 MEDP reinforces the unwavering commitment of the government, through the Department of Energy, in ensuring that every Filipino, in every part of the country, attains a higher quality of life through access to reliable, secure, quality and affordable electricity services.

The cover also underscores the vast potential of off-grid areas in engaging the private sector that is instrumental in achieving the holistic development agenda of the government for off-grid areas.

2016-2020
MISSIONARY ELECTRIFICATION DEVELOPMENT PLAN

MESSAGE FROM THE SECRETARY

ALFONSO G. CUSI
SECRETARY

The Department of Energy (DOE) is honored to present the 2016-2020 Missionary Electrification Development Plan (2016 MEDP), which outlines the various policies, plans and programs of the government to expand electricity access and improve electricity services in off-grid areas consistent with the national agenda of achieving 100% rural electrification.

In the end of December 2016, the household electrification level of the country already stood at 90.65%. Despite this achievement, however, we cannot rest on our laurels as continued efforts to energize about 1.5 million households in off-grid areas remain.

Looking at the perspective of consumers, we cannot leave anyone behind. The inclusion of communities in the peripheries to the national development agenda is equally important as the programs we have in the urban cities and business districts in our rally towards industrialization-driven economic growth.

Thus, the 2016 MEDP, toiled by dedicated DOE employees and stakeholders, is complementary to President Rodrigo R. Duterte's vision of providing quality life for every Filipino through quality, secure, reliable, and reasonably-priced power supply.

The MEDP is likewise a fundamental part to the creation and implementation of the Power Sector Roadmap. This comprehensive development plan includes essential program frameworks to further advance the Private Sector Participation (PSP) Program, improve operations and services in missionary areas, deliver affordable electricity services and support the inter-island interconnection projects.

Our mindset is to move forward and face the challenges head on. Now more than ever, through the help of government partners and the private sector, we at the DOE are committed to improve the quality of electricity services in both the main grid and off-grid areas. We will continue to formulate responsive development plans and programs for increased access to sustainable energy and instill the efficient utilization of energy in the rural communities.

Let's continue to dream and fulfill our electrification goals for our people. By 2020 and beyond, we are hopeful that this initiative will continuously empower our kababayans through the provision of quality electricity services all over the archipelago.

Lastly, I would like to congratulate and extend my gratitude to all who have labored for the fulfillment of the 2016 MEDP. All your hard work will go a long way in providing hope to our people in missionary areas.

Mula sa Filipino, para sa Filipino. Mabuhay po tayong lahat!

ALFONSO G. CUSI
Secretary

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ABBREVIATIONS

ANTECO	Antique Electric Cooperative, Inc.
ASEP	Access to Sustainable Energy Program
BASELCO	Basilan Electric Cooperative, Inc.
BANELCO	Bantayan Electric Cooperative, Inc.
BATANELCO	Batanes Electric Cooperative, Inc.
BILECO	Biliran Electric Cooperative, Inc.
BISELCO	Busuanga Island Electric Cooperative, Inc.
BLEP	Barangay Line Enhancement Program
BMIP	Batangas Mindoro Interconnection Project
BOHECO I	Bohol I Electric Cooperative, Inc.
BOHECO II	Bohol II Electric Cooperative, Inc.
BOI	Board of Investment
CAGELCO II	Cagayan II Electric Cooperative, Inc.
CAPEX	Capital Expenditure
CASURECO IV	Camarines Sur IV Electric Cooperative, Inc.
CELCO	Camotes Electric Cooperative, Inc.
COE	Certificate of Endorsement
CSP	Competitive Selection Process
DASURECO	Davao Del Sur Electric Cooperative, Inc.
DDP	Distribution Development Plan
DIELCO	Dinagat Islands Electric Cooperative, Inc.
DOE	Department of Energy
DC	Department Circular
DU	Distribution Utility
EC	Electric Cooperative
EPIMB	Electric Power Industry Management Bureau
EPIRA	Electric Power Industry Reform Act
ERC	Energy Regulatory Commission
EU	European Union
FCRR	Full Cost Retail Rate
FICELCO	First Catanduanes Electric Cooperative, Inc.
FWA	First Wave Areas
FR	Fuel Rate
GAA	General Appropriations Act
HEDP	Household Electrification Development Plan
IPO	Investment Promotion Office
IRR	Implementing Rules and Regulations
LGU	Local Government Unit
LUBELCO	Lubang Electric Cooperative, Inc.
MARELCO	Marinduque Electric Cooperative, Inc.

MASELCO	Masbate Electric Cooperative, Inc.
MECO	Mactan Electric Company, Inc.
MEDP	Missionary Electrification Development Plan
MEP	Missionary Electrification Plan
NEA	National Electrification Administration
NONECO	Northern Negros Electric Cooperative, Inc.
NORSAMELCO	Northern Samar Electric Cooperative, Inc.
NG	National Government
NP	National Power
NPC	National Power Corporation
NPC-SPUG	National Power Corporation – Small Power Utilities Group
OMECO	Occidental Mindoro Electric Cooperative, Inc.
ORMECO	Oriental Mindoro Electric Cooperative, Inc.
PALECO	Palawan Electric Cooperative, Inc.
PEP	Philippine Energy Plan
PROSIELCO	Province of Siquijor Electric Cooperative, Inc.
PRES	Philippine Rural Electrification Service
PSA	Power Supply Agreement
PSALM	Power Sector Assets and Liabilities Management
PSP	Private Sector Participation
PSPI	PowerSource Philippines, Inc.
PUAL	Plant Use and Losses
PVM	Photovoltaic Mainstreaming
QTP	Qualified Third Party
RE	Renewable Energy
ROMELCO	Romblon Electric Cooperative, Inc.
SAGR	Subsidized Approved Generation Rate
SARR	Subsidized Approved Retail Rate
SIASELCO	Siasi Electric Cooperative, Inc.
SIIG	Small Islands and Isolated Grids
SREC	Sabang Renewable Energy Corporation
SULECO	Sulu Electric Cooperative, Inc.
SWA	Second Wave Areas
TA	Technical Assistance
TAWELCO	Tawi-Tawi Electric Cooperative, Inc.
TDP	Transmission Development Plan
TIELCO	Tablas Island Electric Cooperative, Inc.
TISELCO	Ticao Island Electric Cooperative, Inc.
TCGR	True Cost Generation Rate
TOR	Terms of Reference
UC	Universal Charge
UC-ME	Universal Charge for Missionary Electrification

Executive Summary

Photo Credit:
Delta P, Inc.
DMCI Power Corporation
Palawan Power Generation, Inc.

13.5 MW Delta P, Inc. Bunker Power Plant in Puerto Princesa City, Palawan
15.0MW DMCI Bunker Power Plant in Calapan City, Oriental Mindoro
8.0MW Palawan Power Generation, Inc. Bunker Power Plant in Puerto Princesa City, Palawan

0. EXECUTIVE SUMMARY

The Department of Energy (DOE), in coordination with the Small Power Utilities Group of the National Power Corporation (NPC-SPUG), the National Electrification Administration (NEA), Distribution Utilities (DUs), New Power Providers (NPP), and Qualified Third Parties (QTP), pursuant to Rule 13 of the Implementing Rules and Regulations (IRR) of Republic Act No. 9136 or the Electric Power Industry Reform Act of 2001 (EPIRA), prepared the 2016-2020 Missionary Electrification Development Plan (MEDP), hereinafter to be referred as the "2016 MEDP." It covers the development plans and programs of the Government to increase access to sustainable energy in off-grid areas in the country and improve the efficiency in the use of energy.

Consistent with the social and development agenda of the government, the 2016 MEDP outlines the various policies, plans and programs to expand electricity access and improve the electricity services in off-grid areas. It gives an update on the condition of missionary electrification and later on delineates the government's plans of action and policy directions to ensure the provision of adequate, reliable, and efficient supply of electricity in the missionary areas.[1] In particular, this MEDP addresses the pressing conditions and needed policies pertaining to the: (1) improvement of the Private Sector Participation (PSP) Program; (2) improvement of operations and services in missionary areas; (3) and the rationalization of Universal Charge for Missionary Electrification (UC-ME).

NPC-SPUG Diesel Power Plant Unit No. 5 in Ticao, Masbate (Photo credit: NPC)

Improvement of the Private Sector Participation (PSP) Program

There are two (2) existing PSP Program in missionary areas: (i) the New Private Power Provider Program or the NPP Program where a private sector takes over the power generation functions of NPC-SPUG; and (ii) the Qualified Third Party Program or the QTP Program, where areas waived by the franchised DUs are served by the private sector providing small-scale generation business and the associated distribution services.

Missionary areas, by virtue of DOE Department Circular No. DC2004-01-001[2] issued on 26 January 2004, were declared open for private investment. This policy is consistent with the direction set forth by the EPIRA to privatize the generation function of NPC-SPUG and to complement and supplement the obligation of NPC-SPUG and DUs

[1]Those which cannot be served in the foreseeable future in a financially feasible way by the extension of TransCo's transmission grid.
[2]SPUG PSP Circular entitled "Prescribing the Rules and Procedures for Private Sector Participation in Existing NPC-SPUG areas pursuant to Rule 13 of the Implementing Rules and Regulations of the Electric Power Industry Reform Act of 2001 (EPIRA-IRR)"

in meeting the electricity demand in missionary areas and increasing the access to electrification in unviable areas.

As of December 2015, there are 287 identified SIIGs across the country with total rated capacity of 406.107 MW being supplied by 321 power plants, 30 by Independent Power Provider/NPP/DU/QTP and 291 by NPC-SPUG.

Similarly, the DOE issued Department Circular No. DC2005-12-011[3] prescribing the guidelines for the entry and qualification of other Qualified Third Parties to serve areas declared by the DOE as unviable. As of 2105, Powersource Philippines, Inc. (PSPI) remains the lone QTP that provides power generation and distribution services in two (2) waived areas, namely Barangay Rio Tuba in Bataraza, Palawan and Malapascua Island in Daanbantayan, Cebu. Other than PSPI, Sabang Renewable Energy Corporation (SREC) has also been recognized by DOE as a QTP.

DMCI Power Plant in Calapan, Oriental Mindoro (Photo credit: DMCI Power)

The 2016 MEDP focuses on actions, policy direction, and institutional arrangements which shall be undertaken to further improve the PSP Program while considering the achievements of its implementation at the advent of DC2004-01-001 and DC2005-12-011. This MEDP assesses the current implementation of the PSP Program and identifies the needed reinforcement that will further encourage private sector investment in missionary areas, especially in small SPUG areas by increasing their commercial viability. This MEDP also gives updates on the status of engagement of various Distribution Utilities (DUs) in the PSP Program including the progress tracking of on-going Competitive Selection Process[4] (CSP). It identifies key areas for improvement of the PSP program based from experiences of ECs and NPPs. This also updates the progress of privatization in large SPUG areas which were initially offered to the private sector in 2004.

[3]QTP Circular entitled "Prescribing the Guidelines for Participation of Qualified Third Parties (QTP) for Provision of Electric Service In Remote and Unviable Areas, Pursuant to Section 59 and 70 of the Electric Power Industry Reform Act of 2001 and its Implementing Rules and Regulations (IRR)"

[4]Department Circular No. 2004-01-001 prescribes that the CSP "shall be designed to ensure that prospective NPPs intending to participate in NPC-SPUG privatization program possess suitable level of financial and technical capability" and that its design "shall give due consideration to achieving the lowest long term cost of power and services, environmental compatibility with local area, and the most advantageous implementation schedule".

The 2016 MEDP cites the support from the European Union – Access to Sustainable Energy Program (EU-ASEP), which will directly benefit the off-grid communities through its Technical Assistance (TA) component that aims to produce, among others, needed simulation tools for investment planning and uniform template for Power Supply Agreement (PSA).

This MEDP considers the following challenges in identifying the amendments to the DC2004-01-001:

1. Handling of unsolicited bidding;
2. Absence of detailed guidelines on Competitive Selection Process;
3. Optimization of SPUG's generation and associated delivery assets after privatization;
4. Qualifications of DUs engaging in power generation to receive UC-ME subsidy; and
5. Power supply contracting after privatization and for new SPUG areas

The succeeding MEDPs will include data on energy resource development, emerging technologies and demand-side management initiatives in order to present a more comprehensive planning tool for the decision makers and the consuming public. It will likewise endeavor to integrate itself to the concepts and policies embodied in the energy plans of the other sectors to be in sync with the Philippine Energy Plan (PEP).

Improvement of Operations and Services in Missionary Areas

The improvement of operations and services in missionary areas program supports the objective of providing adequate, reliable and efficient supply of electricity. It covers all the missionary areas which are needed to be enhanced for the improvement of its commercial viability.

The program includes the following improvement of NPC-SPUG services, but not limited to: (i) extension of service hours; (ii) generation capacity addition; (iii) replacement or refurbishment of de-rated and ageing generating units; (iv) enhancement of the transmission and associated delivery systems; (v) and implementation of comprehensive guidelines for plant use and losses (PUAL) and fuel rate (FR) for generation companies in missionary areas.

In response to the demand for better services from the DUs and their consumers, the government, through NPC-SPUG, supports the initiatives to increase service hours in at least 252 Small Islands and Isolated Grids (SIIGs). Meanwhile, 24-hour service is provided in all 15 large NPC-SPUG islands, the services provided in SPUG's remaining areas ranges from 4 to 20 hours. The provision of 24-hour service to the remaining SIIGs is expected to spur economic activities and to optimize load management in the areas. While this activity will require additional generators to be installed to support longer service hours, the DOE, through NPC-SPUG, will ensure the optimal use of existing generation capacities before pursuing additional generation capacity.

While improving the services of NPC-SPUG is seen as a driver in rendering 24 hours in least served areas, other options will be considered, such as the entry of NPPs or QTPs, interconnection to the main grids and the use of emerging technologies. Strengthening the capacity of Electric Cooperatives (ECs) to build on the appropriate business model to expand and better the services within their respective franchise areas is also emphasized.

The 2016 MEDP presents strategies to facilitate the eventual implementation of the guidelines for the PUAL and FR that shall serve as the benchmark in ensuring optimal operational efficiency and good governance, not only for NPC-SPUG's power plants, but also for the NPPs, QTPs and DUs.

Rationalization of Universal Charge for Missionary Electrification

The 2016 MEDP, in line with the institutionalization of the efficient use of electricity and the preferential focus for the development of marginal rural/ peasant communities, recognizes the need to study the rationalization of the UC-ME. Leading to more affordable electricity for all consumers, the study shall address the following challenges:

1. Preferential attention to rural and peasant communities in the peripheries of small islands and isolated areas due to their prevailing poverty and inequality in rural development;
2. Institutionalization of the efficient use of electricity through reasonable costing;
3. redesigning of the business model of NPC-SPUG for responsible missionary electrification;
4. Promotion of private investment in missionary electrification (generation and distribution);
5. Integrated and inclusive economic development of small islands and isolated areas
6. Emerging technologies; and
7. Demand-side management.

The 2016 MEDP outlines general strategies that may be undertaken to implement this policy of rationalization of UC-ME which include the following:

1. Graduation from UC-ME subsidies;
2. Tariff differentiation among customers and missionary areas;
3. Review of the methodology for determination of the True Cost Generation Rate (TCGR) and Subsidized Approved Generation Rate (SAGR) for the NPP Program;
4. Review of the methodology for determination of the True Cost Retail Rate (TCRR) and Subsidized Approved Retail Rate (SARR) for the QTP Program;
5. Review of the provision of cash generation-based incentive for Renewable Energy Developers in the context of the purpose of UC-ME; and
6. Interconnection of SPUG islands to the main grids of Luzon, Visayas and Mindanao or among adjacent small islands not connected to the main grids.

Status of Missionary Electrification in the Philippines

Photo Credit:
DMCI Power Corporation
National Power Corporation
Catanduanes Power Generation, Inc.

15.0MW DMCI Bunker-Diesel Power Plant in Mobo, Masbate
10.0MW DMCI Bunker Power Plant in Puerto Princesa City, Palawan
3.0MW Catanduanes Power Generation, Inc. Bunker Power Plant in Maniwaya, Catanduanes

1. INTRODUCTION

Missionary electrification, as defined in Section 70 of the Electric Power Industry Reform Act (EPIRA) of 2001 and its Implementing Rules and Regulations (IRR), covers all off-grid areas: Small Island and Isolated Grids (SIIG) which are not connected to the main grids of Luzon, Visayas, and Mindanao, and remote and unviable areas which are not connected to the distribution grid.

In addition, the National Power Corporation (NPC) is mandated by EPIRA (Section 70) to perform missionary electrification function through its Small Power Utilities Group (SPUG) and shall be responsible for providing power generation and associated power delivery systems. The missionary electrification function is being funded from the revenues from sales in missionary areas from the universal charge (UCME) which is being collected from electricity end-users. The private sector, by virtue of Department of Energy (DOE) Department Circulars No. DC2004-01-001 (SPUG PSP Guidelines) and DC2005-12-011 (QTP Participation Guidelines), is encouraged to participate in missionary electrification through provision of power generation and associated delivery services (missionary generation) and universal electricity service in unviable areas (remote area electrification), respectively. These policies are consistent with Section 59 and 70 of the EPIRA and Rule 13 of its IRR mandating DOE to issue specific guidelines in encouraging the inflow of private capital, among others. The DOE, in compliance to Rule 13 of the EPIRA-IRR, prepares the Missionary Electrification Development Plan (MEDP) in coordination with the Small Power Utilities Group (SPUG) of the National Power Corporation (NPC), the National Electrification Administration (NEA), New Power Providers (NPP), Distribution Utilities (DUs) and Qualified Third Parties (QTP).

The 2016-2020 MEDP (2016 MEDP) provides an overview of the current status of missionary electrification in the country and outlines general plan of actions to further improve the delivery of quality, adequate, reliable, affordable and efficient supply of electricity in missionary areas.

Particularly, the plans and programs that will be outlined alongside the status of missionary electrification in the country, are anchored to the general strategies that aim to:

1. Improve the Private Sector Participation (PSP) program in SPUG areas;
2. Improve the operation and services in missionary areas; and
3. Rationalize the Universal Charge for Missionary Electrification (UC-ME);

2. STATUS OF MISSIONARY ELECTRIFICATION IN THE PHILIPPINES

2.1. Missionary Areas

As of December 2015, NPC-SPUG, NPPs, QTPs and DUs supply power in 287 identified missionary

Table 1. 2015 SIIGs per Cluster

Cluster	No. of SIIGs	Ave. Service Hrs.	Peak Demand		Gross Generation	
			MW	%	GWh	%
Large Areas	16	24	173.091	82.63%	942.65	87.71%
Medium Areas	21	22	23.942	11.43%	104.41	9.72%
Small A Areas	63	10	9.798	4.68%	20.627	1.92%
Small B Areas	32	7	0.767	0.37%	0.913	0.08%
PRES Mini-grids	153	5	1.003	0.48%	1.273	0.12%
QTP Mini-Grids	2	24	0.879	0.42%	4.837	0.45%
Total	**287**	**9**	**209.48**	**100%**	**1,074.72**	**100%**

areas in Luzon, Visayas and Mindanao. The SPUG Areas were classified in accordance with the National Power (NP) Board Resolutions and their level of energy consumption. To date, the SPUG Areas are classified as Large Areas, Medium Areas, Small A Areas, Small B Areas, PRES Mini-Grids and QTP Mini-Grids.

shows the total supply and demand for these areas. Consistent with DC2004-01-001, missionary areas are grouped based on their viability level, as discussed in the sections below.

2.1.1. Large NPC-SPUG Areas

The NPC, in accordance to DC2004-01-001, issued NP Board Resolution No. 2004-66 which declared 14 island grids that will be initially offered to the private sector. These areas formed part of 14 First Wave Areas (FWAs) that are herein considered as the "large NPC-SPUG areas". It included Busuanga Island and the FWAs that were clustered together based on their consumption level and allocation from UC-ME.

As shown in Table 2, these areas currently comprise 942.658 GWh or 87.71% of the total Gross Generation and 173.091 MW or 82.63% of the total peak demand in missionary areas. It is worth noting that privatizing the generation services in these "large" areas can significantly reduce the amount of UC-ME. All large areas have 24 hours of electricity services.

To date, 8 out of 15 Large NPC-SPUG areas already have their own NPPs. A separate section will discuss in detail the status of privatization in these areas.

Table 2. 2015 Large NPC-SPUG Areas

#	SIIG	2015 Gross Generation, GWh	2015 Peak Demand, MW	2015 Power Supply Provider
1	Oriental Mindoro	249.111	42.700	NPP/IPP/ DU
2	Palawan Main Grid	213.302	36.900	NPP
3	Mainland Masbate	88.093	15.120	NPP
4	Occidental Mindoro (North and South Grids)	79.842	17.337	NPC
5	Sulu	48.326	7.870	NPC
6	Catanduanes	47.803	9.128	NPP/NPC
7	Mainland Marinduque	42.772	8.460	NPC
8	Basilan	39.370	9.000	NPC/DU
9	Tablas Island	28.175	5.628	NPP/ NPC[5]
10	Bantayan Island	25.098	4.521	NPP
11	Siquijor	20.429	4.559	NPP/ NPC[6]
12	Bongao, Tawi-Tawi	20.158	3.520	NPC
13	Busuanga Island	19.638	3.997	NPP
14	Camotes Island	11.072	2.517	NPC
15	Romblon Island	9.469	1.834	NPC

2.1.2. Medium NPC-SPUG Areas

The "Medium NPC-SPUG areas" was a term defined in the 2012 MEDP as SIIGs with more than 1 GWh of generated energy in 2011. These areas formed part of the Second-Wave Areas (SWAs) as identified by virtue of NP Board Resolution 2007-46 issued on 10 July 2007. It is considered a step forward to further privatize the remaining SPUG areas.

Excluding Rapu-Rapu Island, medium areas cover 8.26% (88.796 GWh) of the total gross generation and 9.46% (19.817 MW) of the total peak demand. Table 3 shows the status of the medium areas identified in the 2012 MEDP. As of 2015, only Roxas is served by an NPP.[7]

Meanwhile, the viability level in seven (7) SIIGs previously classified as Small A Areas in the 2012 MEDP has increased as seen in Table 4. The increase in energy requirements of these areas was brought about by the increase in service hours of NPC-SPUG, as in the case of Culion, Sen. Ninoy Aquino, Pilar and Rizal.

Table 3. 2015 Medium NPC-SPUG Areas

#	SIIG	2015 Gross GWh	2015 Peak Demand, MW	Service Hrs.	2015 Power Supply Provider
1	Lebak-Kalamansig, Sultan Kudarat	14.994	3.048	24	NPC
2	Dinagat Province	14.288	3.063	24	NPC
3	El Nido, Palawan	8.484	1.843	24	NPC
4	Roxas, Palawan	7.839	1.517	24	NPP
5	Ticao Island, Masbate	7.358	1.708	24	NPC
6	Batan Island, Batanes	6.134	1.442	24	NPC
7	Cuyo, Palawan	5.914	1.200	24	NPC
8	Polillo Island, Quezon	4.834	1.313	16	NPC
9	Taytay, Palawan	4.251	0.801	24	NPC
10	DICADIDI,[8] Aurora & Isabela	3.644	1.132	24	NPC
11	Lubang Island, Occidental Mindoro	3.635	0.835	24	NPC
12	Siasi, Sulu	3.233	0.680	24	NPC
13	San Vicente, Palawan	2.618	0.555	24	NPC
14	Tingloy, Batangas	1.570	0.680	12	NPC
15	Rapu-Rapu Island, Albay[9]	0.959	0.380	12	NPC

[5]NPP operated starting in March 2015.
[6]NPP operated starting in February 2015.
[7]DMCI Power Corporation (DPC) was contracted to supply Palawan Main Grid. On 2014, PALECO and DPC amended the PSA to include Roxas in the coverage area without any changes in the contracted capacity/energy and rates.
[8]DICADIDI Grid covers the Municipalities of Dinalungan, Casiguran and Dilasag in Aurora and the Municipality of Dinapigue in Isabela.
[9]Previously classified as Medium Area in the 2012 MEDP.

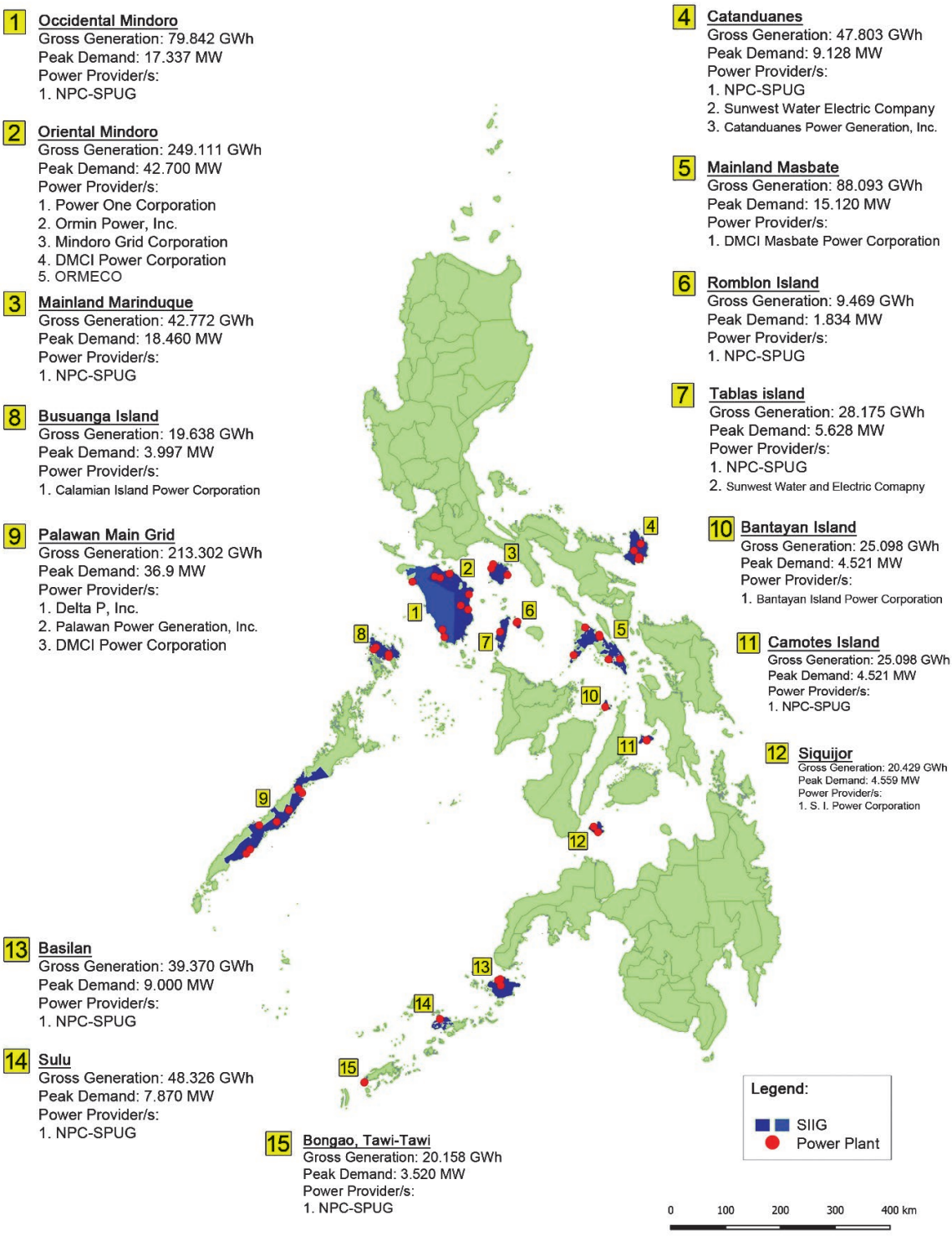


Figure 1. Map of Large NPC-SPUG Areas

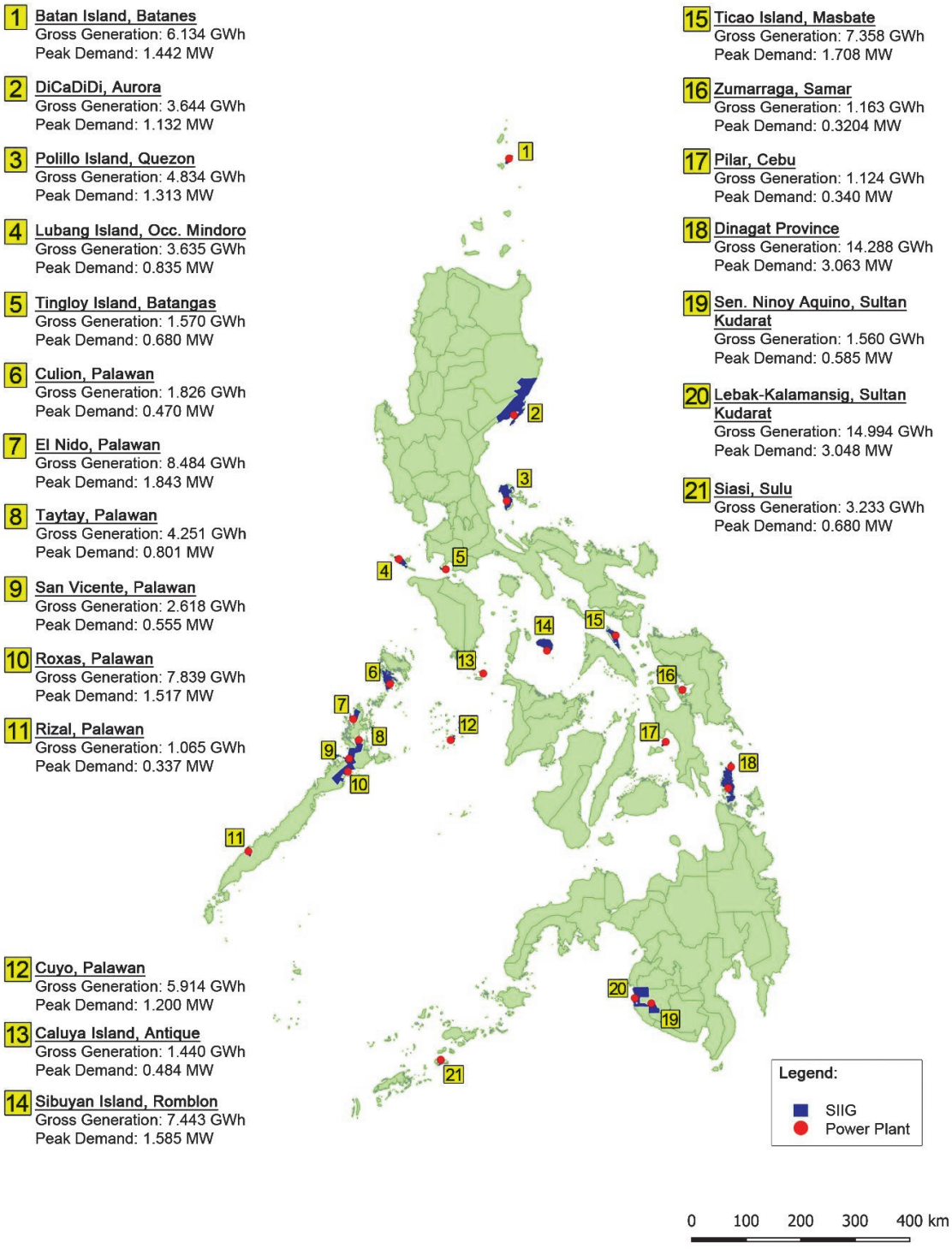


Figure 2. Map of Medium NPC-SPUG Areas

Table 4. 2012 Small A NPC-SPUG Areas with 2015 Gross > 1 GWh

#	SIIG	2015 Gross GWh	2015 Peak Demand, MW	Service Hrs.	2015 Power Supply Provider
1	Sibuyan Island, Romblon	7.443	1.585	24	DU/NPC
2	Culion, Palawan	1.826	0.470	24	NPC
3	Caluya Island, Antique	1.440	0.484	24	NPC
4	Zumarraga, Samar	1.163	0.324	24	NPC
5	Sen. Ninoy Aquino, Sultan Kudarat	1.560	0.585	14	NPC
6	Pilar, Cebu	1.124	0.340	20	NPC
7	Rizal, Palawan	1.065	0.337	16	NPC

These areas, based on the categories defined in the 2012 MEDP, can already be classified as new SWAs. Together with the first SWAs, these areas will be prioritized for PSP.

2.1.3 Small NPC-SPUG Areas

The remaining areas that do not satisfy the definition of the formerly mentioned groups are referred to as small NPC-SPUG areas.

Small NPC-SPUG areas are further subdivided into Small A, Small B and PRES Mini-grids areas.

a. Small A Areas

The term "Small A areas" refers to small areas with gross generation above 50 MWh. There are 63 Small A areas identified by the end of 2015 including Rapu-Rapu Island which was classified as a Medium Area in the 2012 MEDP. The demand in these areas is large enough to be supplied by NPC-SPUG with some degree of economy yet may not be large enough to merit NPP interest.

Table 5. 2015 Small A NPC-SPUG Areas

Area	No. of SIIGs	2015 Gross GWh	2015 Peak Demand, MW	Average Service Hours
Luzon	28	9.758	4.500	10.71
Visayas	21	4.909	2.316	8.86
Mindanao	14	5.960	2.983	8.93
TOTAL	**63**	**20.627**	**9.798**	**9.70**

b. Small B Areas

The term "small B areas" refers to small areas with gross generation below 50 MWh, excluding PRES mini-grids. These are either mini-grids or transferred areas[10] in Luzon and Visayas.

Table 6. 2015 Small B NPC-SPUG Areas

Area	No. of SIIGs	2015 Gross GWh	2015 Peak Demand, MW	Average Service Hours
Luzon	14	0.435	0.313	7.28
Visayas	18	0.478	0.454	6.39
Mindanao	-	-	-	-
TOTAL	**32**	**0.913**	**0.767**	**6.78**

c. PRES Mini-grids

The Philippine Rural Electrification System (PRES) Project was financed by concessional and commercial loans through the Filipino-French protocol. The project involves the electrification of around 18,000 households through 5,129 Solar Home Systems and 154 small generating sets.

PRES mini-grids consist of inland and islet areas within Mainland Masbate and Ticao Island that were placed under the Philippine Rural Electrification Service (PRES) Project. The original 154 mini-grids with 5 hours of electricity services were reduced to 153 with the connection of the PRES mini-grid in Luna, San Jacinto to the Ticao Grid. Other areas are also planned to be interconnected to Masbate and Ticao through the Barangay Line Enhancement Program (BLEP) of NEA in the next five years. Table 7 summarizes the 153 PRES mini-grids.

2.1.4 QTP Areas

DC2005-12-011 defines a QTP as an alternative electric service provider that meets the standards in and is chosen in accordance with the said circular and is duly qualified and authorized by the Energy Regulatory Commission (ERC) to serve Unviable Areas pursuant to Section 59 of the EPIRA and Rule 14 of the EPIRA-IRR.

As seen on Table 8, Powersource Philippines, Inc. (PSPI) remains the lone QTP that currently provides

Table 7. 2015 PRES Mini-Grids

Island	No. of Cities/ Municipalities Covered	No. of Brgys. Covered	No. of SIIGs	2015 Gross, GWh	2015 Peak Demand
Masbate Mainland[11]	14	94	147	1.231	0.969
Ticao Island	4	6	6	0.043	0.034
TOTAL	**18**	**100**	**153**	**1.273**	**1.003**

[10]Areas where the generation function was taken over by NPC-SPUG from DUs or local government units (LGUs).
[11]Includes islets surrounding the mainland.

24-hr power generation and distribution services to two waived areas – Brgy. Rio Tuba in Bataraza, Palawan and Malapascua Island in Daanbantayan, Cebu. Other than PSPI, Sabang Renewable Energy Corporation (SREC) has also been recognized by DOE as a QTP.

Additional proposed QTP projects and other new waived areas for possible QTP services are discussed in the succeeding sections.

Table 8. Unviable Areas Electrified by QTPs as of December 2015

Area	Waiving DU	QTP	2015 Gross GWh	2015 Peak Demand, MW
Brgy. Rio Tuba, Bataraza, Palawan	PALECO	PSPI	3.265	0.574
Malapascua Island, Daanbantayan, Cebu	CEBECO III	PSPI	1.572	0.305

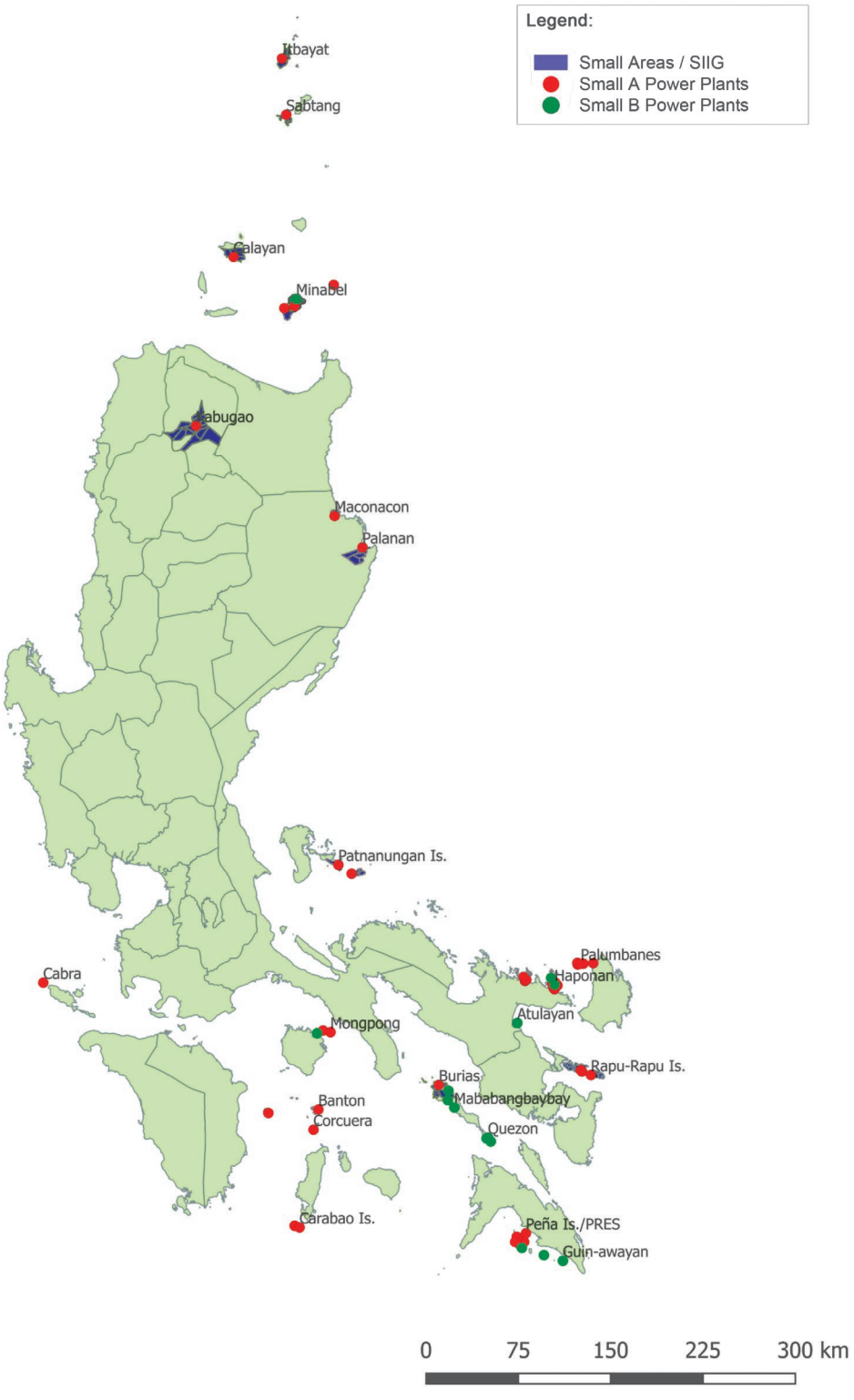


Figure 3. Map of Small Areas and Power Plants in Luzon excluding Palawan

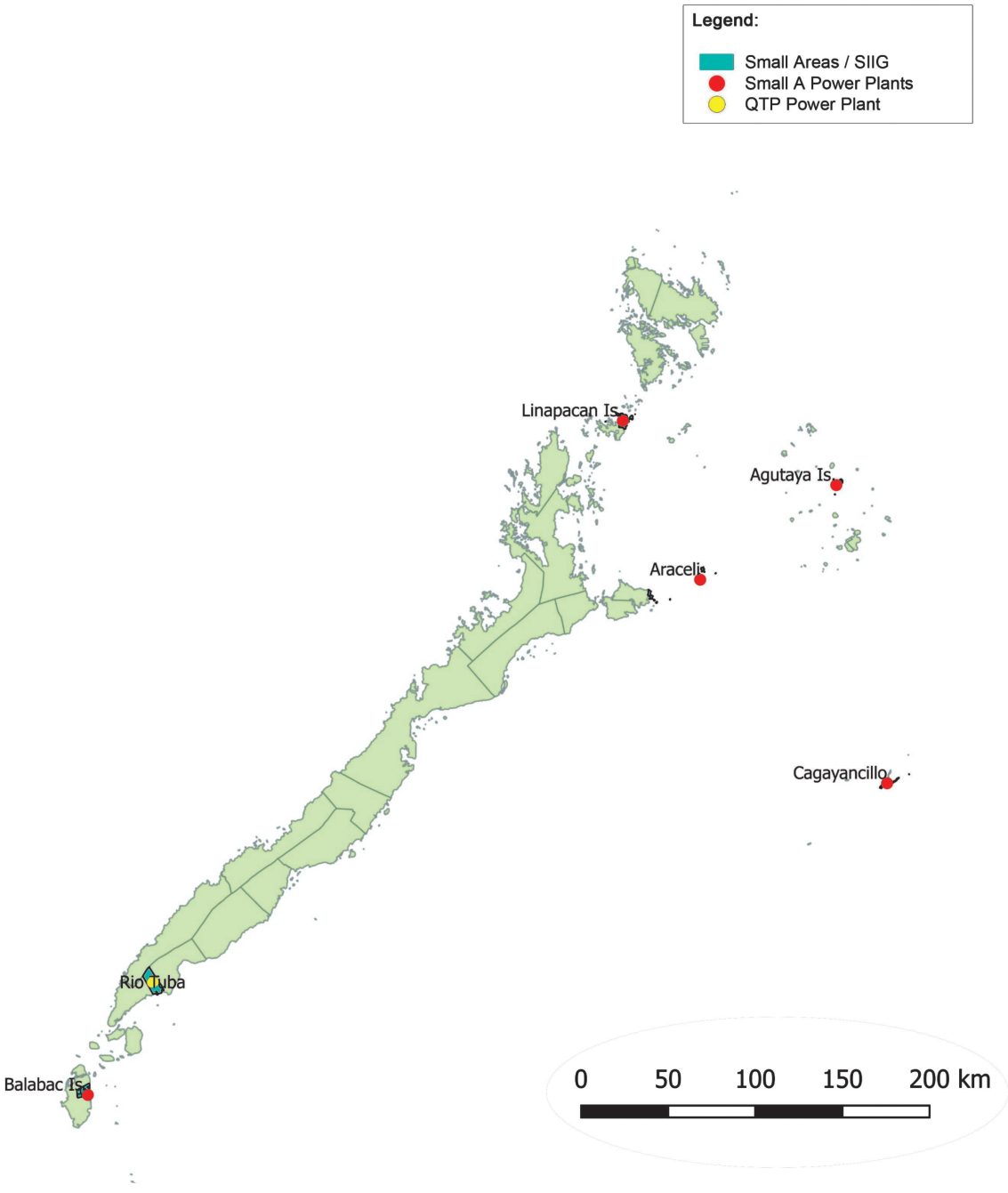


Figure 4. Map of Small and QTP Areas and Power Plants in Palawan

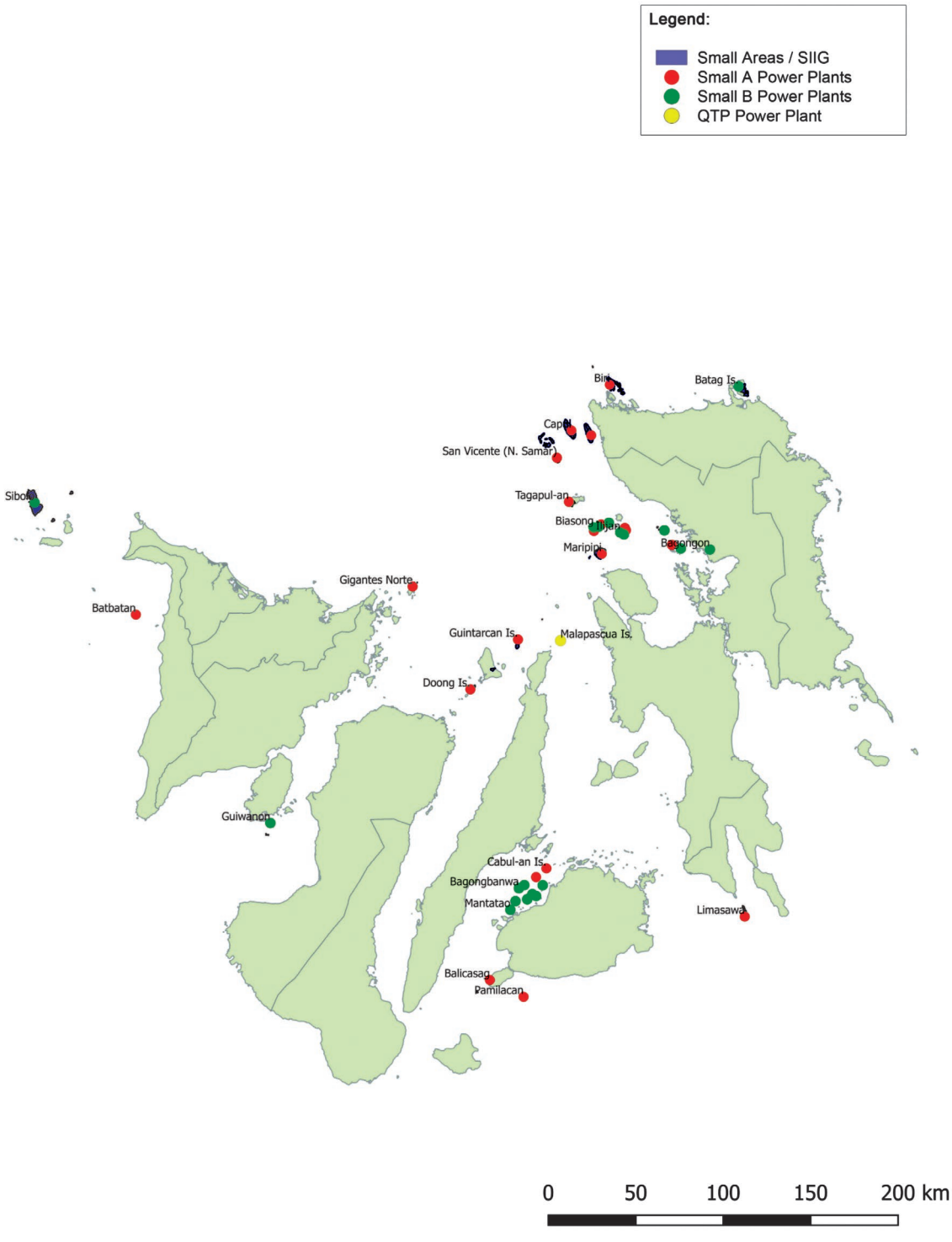


Figure 5. Map of Small and QTP Areas and Power Plants in Visayas

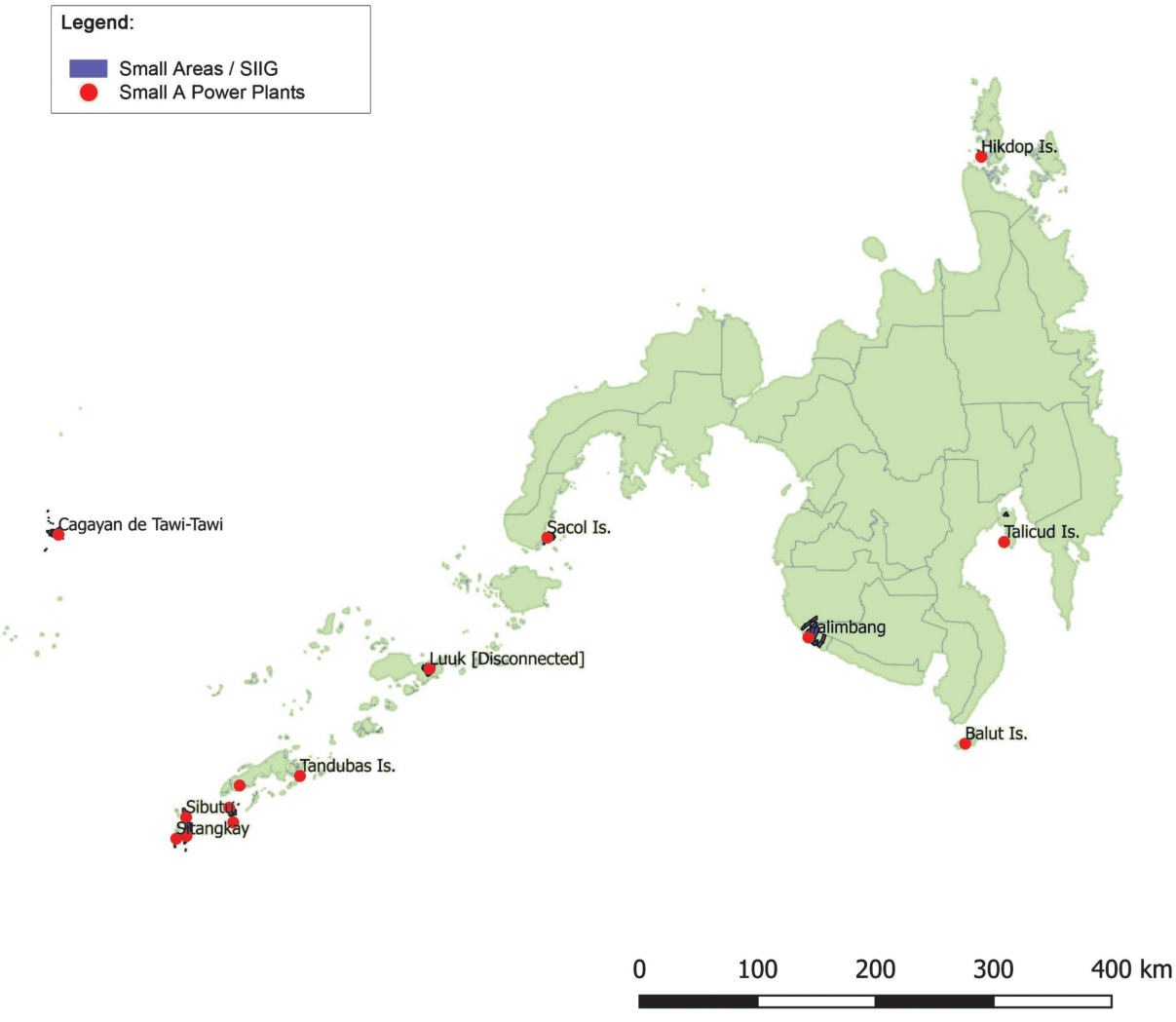


Figure 6. Map of Small Areas and Power Plants in Mindanao

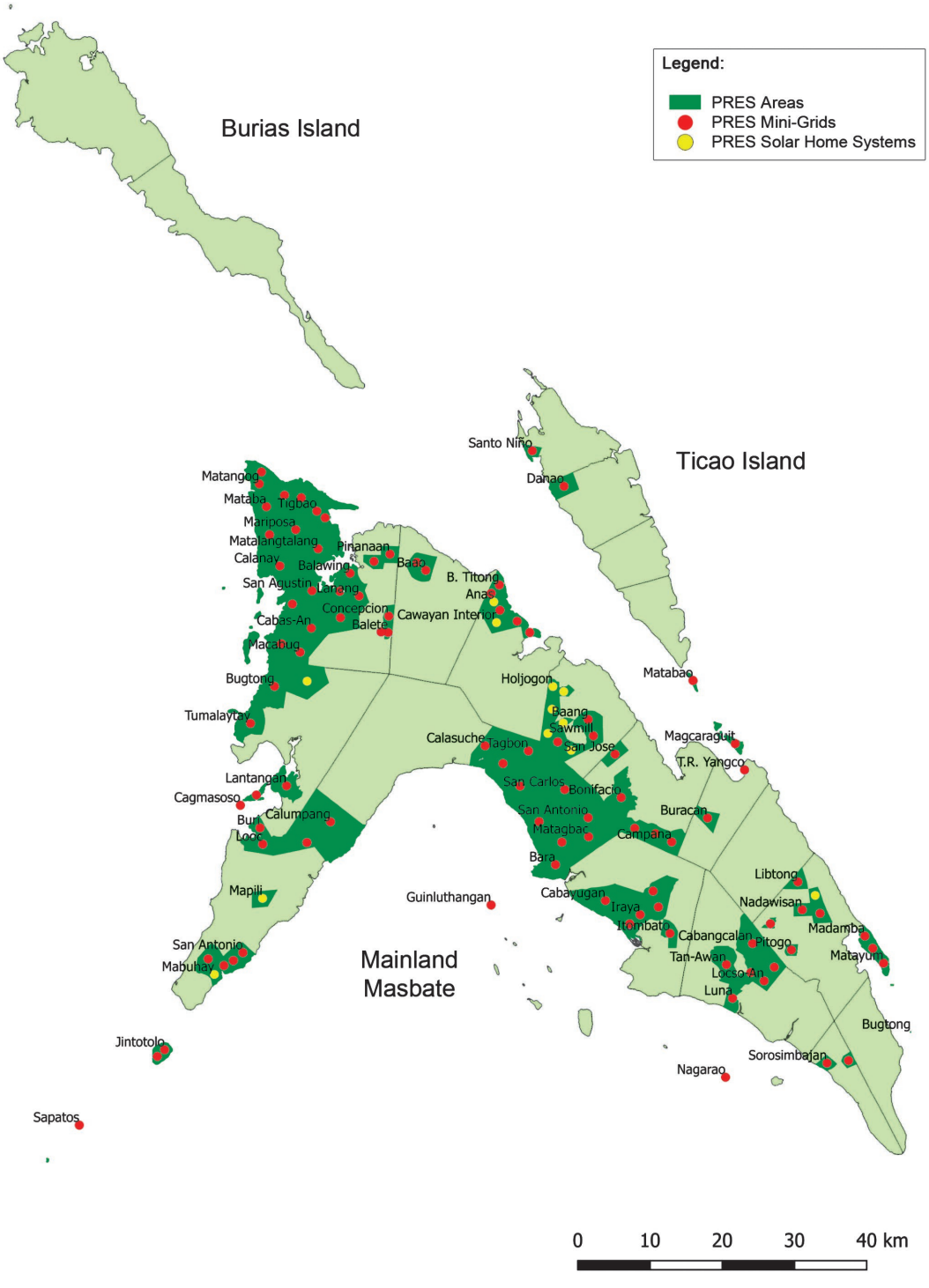


Figure 7. Map of PRES Areas, Mini-Grids and SHS in Masbate

2.1.5 Other Off-Grid Areas

Section 70 of EPIRA mandates NPC-SPUG to provide power generation and associated power delivery services in all areas not connected to the Grid. However, there are still many off-grid areas that are still waiting to be served by NPC-SPUG. In some cases, other entities, including electric cooperatives, are taking the initiative to undertake power generation in off-grid areas in behalf of NPC-SPUG.

In performing the said missionary electrification function of NPC-SPUG, such areas or projects shall also be entitled to avail of the UC-ME subsidy subject to the existing applicable rules of DOE and the ERC.

Specifically, Section 2 of Rule 13 of the EPIRA-IRR defines missionary electrification to be applicable to areas identified in the MEDP. Since DOE DC2004-01-001 is only applicable to areas previously and currently served by NPC-SPUG, there is a need for policy guidance on off-grid areas that were not served by NPC.

Table 9 lists examples of such areas. Some of these areas are programmed for interconnection to existing missionary areas or the national Grid through BLEP.

Table 9. Other Off-grid Areas as of December 2015

SIIG	DU	Power Supply Provider	Operating Hours (2015)	Status / Remarks
Cobrador Island, Romblon, Romblon	ROMELCO	ROMELCO	8	For hybridization of supply to increase operation to 24 hrs.
Alad Island, Romblon, Romblon	ROMELCO	ROMELCO	12	For connection to Mainland Romblon via submarine cable in 2016
Logbon Island, Romblon, Romblon	ROMELCO	ROMELCO	6	For connection to Mainland Romblon via submarine cable in 2016
Olanggo Island, Lapu-Lapu City Cebu	MECO	SPC-Olanggo	24	
Higatangan Island, Biliran	BILECO	BILECO	5	
Sipaway Island, San Carlos City, Negros Occidental	NONECO	NONECO	6	For connection to Visayas Grid via submarine cable in 2016

Table 10. Power Plants in Missionary Areas as of December 2015

	No. of SIIGs	No. of Plants	Installed Capacity, MW	Dependable Capacity, MW	2015 Gross Generation, GWh	2015 Energy Sales, GWh
Luzon		245	314.458	241.687	859.553	814.280
NPC-SPUG	220	220	106.903	76.592	235.480	230.344
Non-NPC		25	207.555	165.095	624.073	583.936
Visayas		51	33.714	23.842	67.286	63.201
NPC-SPUG	46	47	17.362	9.798	22.125	20.783
Non-NPC		4	16.352	14.044	45.161	42.418
Mindanao		25	57.935	40.021	147.888	142.577
NPC-SPUG	21	24	57.265	39.381	147.309	141.998
Non-NPC		1	0.670	0.640	0.579	0.579
Total		**321**	**406.107**	**305.549**	**1,074.726**	**1,020.058**
NPC-SPUG	**287**	**291**	**181.530**	**125.771**	**404.914**	**393.125**
Non-NPC		**30**	**224.577**	**179.779**	**669.812**	**626.933**

2.2 Missionary Generation

As of December 2015, there are at least 321 power plants, mostly operated by NPC-SPUG, that supply 287 identified SIIGs. Table 10 summarizes the power supply in Luzon, Visayas and Mindanao. 1,074.726 GWh of Gross Generation has been recorded in 2015 of which 94.91% has been accounted to Energy Sales.

Electricity supply in missionary areas is dominated by oil-based power plants, as seen in Figure 8 and Figure 9.

Table 12 shows the comparison of the capacities in off-grid areas in 2011 and 2015. The installed power plants have increased due to electrification of new areas.

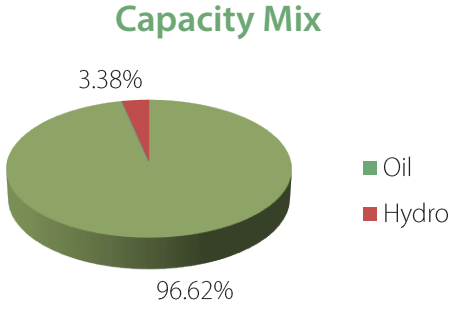


Figure 8. 2015 Capacity Mix

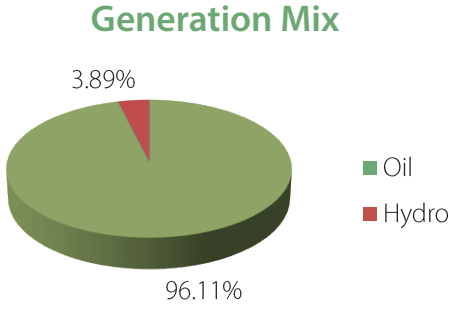


Figure 9. 2015 Energy Mix

Table 11. SPUG Plant Comparison for 2011 and 2015

	No. of Plants		Rated Capacity, MW		Dependable Capacity, MW	
	2011	2015	2011	2015	2011	2015
NPC	287	291	195.954	181.530	148.109	125.771
Non-NPC	10	30	92.823	224.577	73.429	179.778
TOTAL	**297**	**321**	**288.777**	**406.107**	**221.538**	**305.549**

On the other hand, total capacity of NPC-SPUG decreased primarily because of the entry of NPPs in large areas.

2.2.1 NPC-SPUG

NPC-SPUG remains the dominant generation service provider in missionary areas as it currently serves 278[12] out of 287 SIIGs across the country. As seen from Table 12, NPC-SPUG's 2015 total generation stood at 404.914 GWh. Most of the energy produced are from diesel- and bunker C-fueled generators. Balongbong HEPP in Catanduanes is the lone renewable energy-based generating facility of NPC-SPUG.[13]

Table 12. Generation Data of NPC-SPUG as of December 2015

Generation	No. of SIIGs Served	No. of Power Plants	Rated Capacity (MW)	Dependable Capacity (MW)	Gross Generated (MWh)	Energy Sales (MWh)
SPUG (Total)	278	291	181.530	125.771	404,913.856	393,124.898
Luzon	214	220	106.903	76.592	235,479.732	230,344.30 0
Visayas	43	47	17.362	9.798	22,124.730	20,782.729
Mindanao	21	24	57.265	39.381	147,309.394	141,997.870

[12]Count excludes Siquijor since NPC ceases its operation in the area by the end of 2015.
[13]Batanes Wind Turbine is non-operational.

To meet the increasing demand in missionary areas which currently do not have an NPP, NPC continuously undertakes the necessary augmentation of capacity to ensure sufficient supply of power as shown in Table 13. From 2012 to 2015, NPC installed a total of 4.46MW capacity to augment the supply being delivered to over 800,000 households currently being serviced by NPC-SPUG. It has already set out its schedule for succeeding capacity addition as stated in its 2016-2020 Missionary Electrification Plan (MEP) which will be thoroughly discussed in the last chapter of this MEDP. In addition, NPC-SPUG resorts to rental generation as a measure to augment the supply in missionary areas.

Table 13. Capacity Addition of NPC-SPUG, 2012-2015

Area	2012	2013	2014	2015	TOTAL
Luzon	0.220	0.860	0.560	0.900	2.540
Visayas	0.000	1.100	0.560	0.000	1.660
Mindanao	0.000	0.260	0.000	0.000	0.260
TOTAL	**0.220**	**2.220**	**1.120**	**0.900**	**4.460**

NPC-SPUG also increased its operating hours with the end in view of delivering 24-hour service in all areas. In 2015, the percentage of areas receiving 24-hour service has increased. This goes in parallel with the on-going privatization of SPUG areas.

As shown in Table 15, the areas being served by NPC-SPUG reduced from 2012 to 2015 due

Table 14. Operating Hours of NPC-SPUG, 2012-2015

Operating Hours	2011	2012	2013	2014	2015
24	32%	30%	31%	29%	36%
18-20	8%	8%	8%	8%	6%
12-16	21%	20%	21%	22%	21%
8-10	27%	29%	25%	36%	34%
<8	13%	13%	15%	4%	3%
No. of Areas	78	77	75	72	70

to the take-over of generation services in the following SIIGs or interconnection to the main grid.

Table 15. Privatized SIIGs, 2012-2015

	2012	2013	2014	2015
Fully privatized generation system	Mainland Masbate	Palawan Grid	• Oriental Mindoro • Busuanga, Palawan	• Roxas, Palawan • Siquijor
Inter-connection to the grid		Lubuagan, Kalinga	Jose Abad Santos, Davao Occidental	

As delegated to perform the function of missionary electrification, NPC continuously identifies new areas to be electrified. From 2012 to 2015, NPC-SPUG has installed a total of 578kW generating units to provide new generation capacity to at least ten (10) new areas as shown

Table 16. Electrified Areas by NPC, 2012-2015

Area	Distribution Service Provider	Installed Capacity (kW)	Commissioning Date
Malaking Ilog, San Pascual, Masbate	LGU-San Pascual	60	April 9, 2012
Mababang Baybay, Claveria, Masbate	LGU-Claveria	60	April 24, 2012
Dancalan, San Pascual, Masbate	LGU-San Pascual	80	May 27, 2012
Quezon, Claveria, Masbate	LGU-Claveria	60	June 7, 2012
Peñafrancia, Claveria, Masbate	LGU-Claveria	80	June 10, 2012
Osmeña, Claveria, Masbate	LGU-Claveria	80	July 10, 2012
Batag, Laoang, Northern Samar	NORSAMELCO	50	March 19, 2013
Cabul-an, Buenavista, Bohol	BOHECO I	64	November 14, 2013
Atulayan, Sagñay, Camarines Sur	CASURECO IV	22	June 1, 2014
Palumbanes Island, Caramoran, Catanduanes	FICELCO	22	February 1, 2015
TOTAL		**578**	

in Table 16. This is on top of new areas served with mini-grid by NPC-SPUG, which is part of its support to remote area electrification.

2.2.2. New Power Providers

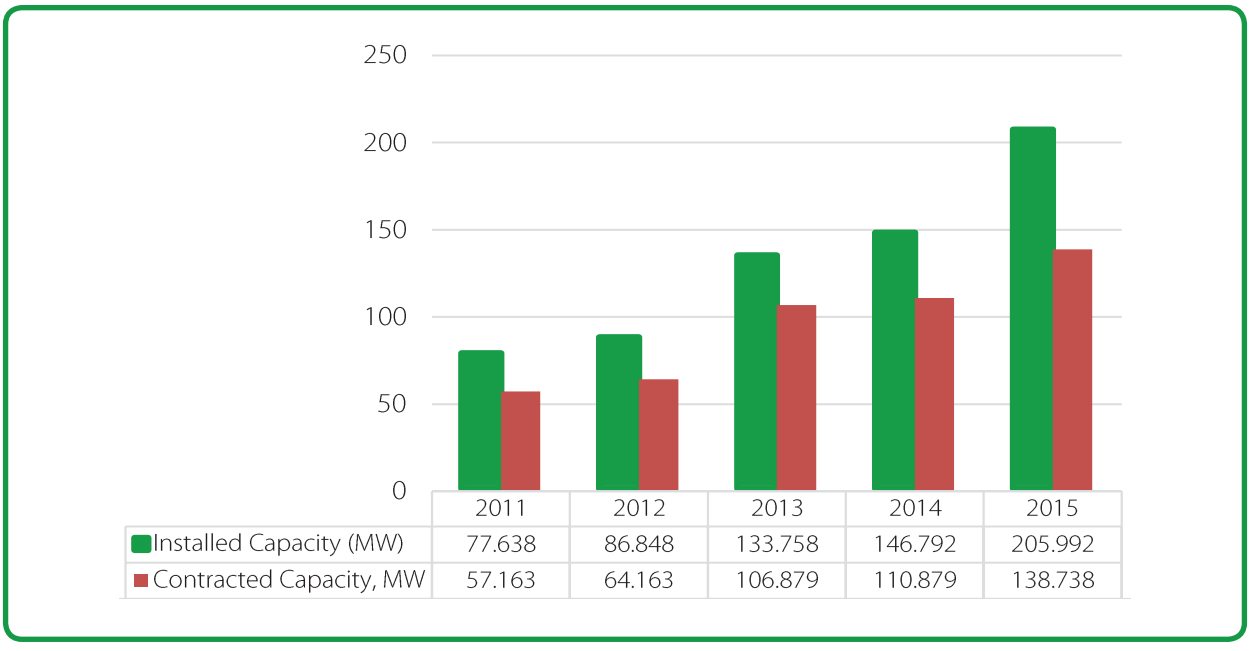
New Power Providers (NPPs) are those who have taken over the function of NPC-SPUG through the mechanism of privatization prescribed in DC2004-01-001. Section 2(b) of the said Circular defines take-over as either outright purchase or lease of existing NPC-SPUG assets, and/or installation of new power generating facilities including associated power deliver systems.

As of December 2015, there are already 15 NPPs with a total of 205.992 MW rated capacity serving 9 SIIGs with 24-hour electricity service.

Table 17 summarizes the list of NPPs that were operational as of December 2015.

Table 17. New Power Providers as of December 2015

SIIG	New Power Provider	Rated Capacity, MW	Contracted Capacity, MW
Oriental Mindoro	Power One Corporation	15.3	9.0
	Ormin Power, Inc.	9.6	6.4
	Mindoro Grid Corporation	26.866	10.0
	DMCI Power Corporation	15.5	15.0
Palawan Main-Grid	Delta P, Inc.	16.0	13.5
	Palawan Power Generation, Inc.	19.0	15.2
	DMCI Power Corporation	33.13	23.0
Roxas (Palawan)	DMCI Power Corporation	3.63	2.0
Busuanga Is. (Palawan)	Calamian Island Power Corporation	8.644	7.716
Tablas Island (Romblon)	Sunwest Water and Electric Company	8.96	7.5
Catanduanes	Sunwest Water and Electric Company	3.6	Energy-based Contract
	Catanduanes Power Generation, Inc.	3.6	3.0
Masbate	DMCI Masbate Power Corporation	26.86	15.0
Bantayan Island (Cebu)	Bantayan Island Power Corporation	8.838	4.892
Siquijor	S.I. Power Corporation	6.464	Energy-based Contract



	2011	2012	2013	2014	2015
Installed Capacity (MW)	77.638	86.848	133.758	146.792	205.992
Contracted Capacity, MW	57.163	64.163	106.879	110.879	138.738

Figure 10. Installed Capacity of NPPs from 2011 to 2015

Figure 10 shows the growth in installed and contracted capacities of NPPs from 2011 to 2015 as a result of the privatization program.

In 2015, five EC-owned mini-hydro power plants (MHPPs) with a total installed capacity of 8.345 MW were operational in three SIIGs as seen in Table 18.

2.2.3. EC Generation

The passage of RA 10531 or the NEA Reform Act empowers electric cooperatives to engage in power generation within their franchise area via the following means:

a. Construction of an embedded generating facility;
b. Acquisition of an existing private- or government-owned generating facility; and
c. Generation of electricity through lease/ rental of a generating facility.

ROMELCO-Owned 900KW Cantingas Mini-Hydro in Sibuyan Island, Romblon

Table 18. EC-owned Power Plants as of December 2015

SIIG	EC	Power Plant	Installed Capacity, MW	Dependable Capacity, MW	Rate (PhP/ kWh)	Status / Remarks
Oriental Mindoro	ORMECO	Dulangan MHPPP	1.6	1.6	1.9635	Operational since 1989; damaged by Typhoon Nona on 15 December 2015
		Linao-Cawayan MHPP (Lower Cascade)	2.175	2.1	5.9000	Operational since 2012
		Linao-Cawayan MHPP (Upper Cascade)	3.0	3.0	5.6404	Operational since February 2015
Sibuyan Island (Romblon)	ROMELCO (Cantingas Minihydro Power Corporation)	Cantingas MHPP	0.9	0.9	5.4000	Operational since; For addition of 450-kW unit in 2016
Basilan	BASELCO	Kumalarang MHPP	0.67	0.64		

2.3. Private Sector Participation Program

DC2004-01-001 prescribes the general guidelines for the selection of a New Power Provider (NPP) that will take-over the function of NPC-SPUG at the onset of the privatization of generation services in a missionary area. On the other hand, Department Circular DC2005-12-011 prescribes the guidelines and qualifications for the Qualified Third Parties (QTPs).

These circulars were issued to encourage the inflow of private capital to missionary electrification activities including provision of power generation and associated delivery services (missionary generation) and universal electricity service in unviable areas (remote area electrification).

2.3.1. Status of Privatization of Missionary Areas

As mentioned in the previous section, there are already 15 NPPs supplying a total of 9 SIIGs as of December 2015. Table 19 presents the status of privatization of the FWAs. These areas, as mentioned in the previous sections, were the first areas to be offered to the private sector in 2004.

Table 19. Status of PSP in First Wave Areas as of December 2015

FWA	DU	No. of existing NPP/s	NPP Contracted Capacity, MW	Status (Dec. 2015)
Bantayan Island	BANELCO	1	4.892	Privatized in 2006
Oriental Mindoro	ORMECO	4	40.4	Privatized in 2014
Mainland Palawan	PALECO	3	53.7	Privatized in 2013
Catanduanes	FICELCO	2	Energy-based	NPC still operates three power plants
Marinduque	MARELCO	None	None	On-going CSP through Swiss Challenge
Tablas Island	TIELCO	1	7.5	NPP operational in 2015; On-going Phase In - Phase Out
Romblon	ROMELCO	None	None	No plans for CSP
Occidental Mindoro	OMECO	None	None	NPP to operate starting 2017
Masbate Main Grid	MASELCO	1	13.0	Privatized in 2010
Basilan	BASELCO	None	None	No plans for CSP
Jolo, Sulu	SULECO	None	None	No plans for CSP
Bongao, Tawi-Tawi	TAWELCO	None	None	On-going CSP through Swiss Challenge
Camotes Island	CELCO	None	None	Selected Original Proponent; for conduct of CSP through Swiss Challenge
Siquijor	PROSIELCO	1	Energy-based	Privatized in 2015
Busuanga Island	BISELCO	1	7.716	Privatized in 2014

Six (6) large areas and one (1) medium area have attained full privatization of their generation services. NPC remains operational in Catanduanes and Tablas Island pending the full privatization of power generation in these areas. Occidental Mindoro Electric Cooperative, Inc., on the other hand, already has one committed NPP with two power projects: the San Jose Bunker-fired Power Plant of Occidental Mindoro Consolidated Power Corporation and the Montelago Geothermal Power Plant of Mindoro Geothermal Power Corporation which are expected to commence their operations by 2017 and 2018, respectively. Marinduque Electric Cooperative, Inc. and Camotes Electric Cooperative, Inc. have accepted unsolicited proposals and are now preparing for the conduct of CSP.

Cognizant of the present state of the PSP program in large areas, DOE continues to coordinate with NEA in capacitating the ECs in engaging in the PSP program to prepare them in conducting their own CSP. The 2016 MEDP also recognizes the need to enhance private sector investment in missionary areas in order to cater the medium and small areas. In medium areas, only Quezon II Electric Cooperative, Inc. (Polillo Island) and Lubang Electric Cooperative, Inc. (Lubang and Cabra Island) expressed their interest to engage in the PSP program.

2.3.2. Process of Application for New Power Providers

By virtue of DC2004-01-001, NPC-SPUG areas have been declared open for private sector participation. However, the ownership, operation and maintenance of all transmission lines in missionary areas remained with NPC-SPUG.

When a DU intends to privatize its generation services, it launches a CSP and publishes a Term of Reference (TOR) that is tailored-fit to the energy requirements of its franchise area. This will then be published for at least two (2) weeks in general circulations in order to invite interested bidders.

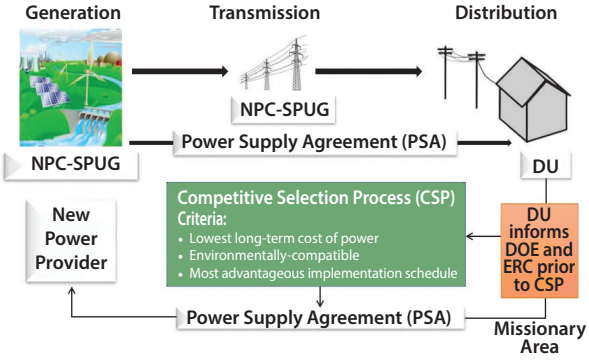


Figure 11. Framework of Stakeholders in SPUG Areas

NEA, as the mandated supervising agency, implements standard procurement procedures in order to guide and capacitate the ECs in conducting the bidding proper and ensure the transparency, integrity and eventual success of its CSP consonant to the provisions provided for in DC2004-01-001 and ERC Resolution No. 21 Series of 2011.

When a CSP succeeded and an NPP has already been selected, prior to the awarding of the Power Supply Agreement (PSA), the EC will now request for a CSP Certification from DOE which is being handled by the Electric Power Industry

Management Bureau (EPIMB) and issued by the DOE Secretary. As an initiative for good governance as well as to ensure the participation of NEA and NPC in the decision making of DOE in its certification on the conduct of the CSP by the EC, the EPIMB has institutionalized the joint endorsement from NEA and NPC which also serves as a requirement in securing a CSP Certification from DOE.

The DOE's issuance of CSP Certification is a prerequisite for the Energy Regulatory Commission's (ERC) approval of an NPP's True Cost Generation Rate (TCGR) and subsequent availment of the UC-ME as provided for in ERC Resolution No. 21 Series of 2011 and for the approval of the PSA itself. The CSP Certification is also a requirement for the DOE Endorsement to the Board of Investments (BOI) that is being handled by the Investment Promotion Office (IPO) and is also issued by the DOE Secretary.

Figure 12 shows the general process flow of the NPP program from the conduct of CSP by EC to the application for PSA approval before the ERC. From the expression of an EC's interest to privatize its generation services to the application of its PSA with an NPP before the ERC, it shows that the participation of DOE, NEA, NPC and ERC remain critical in ensuring the success of the program.

The 2016 MEDP recognizes the need to revisit the rules and regulations that govern the said process flow and the privatization program as a whole.

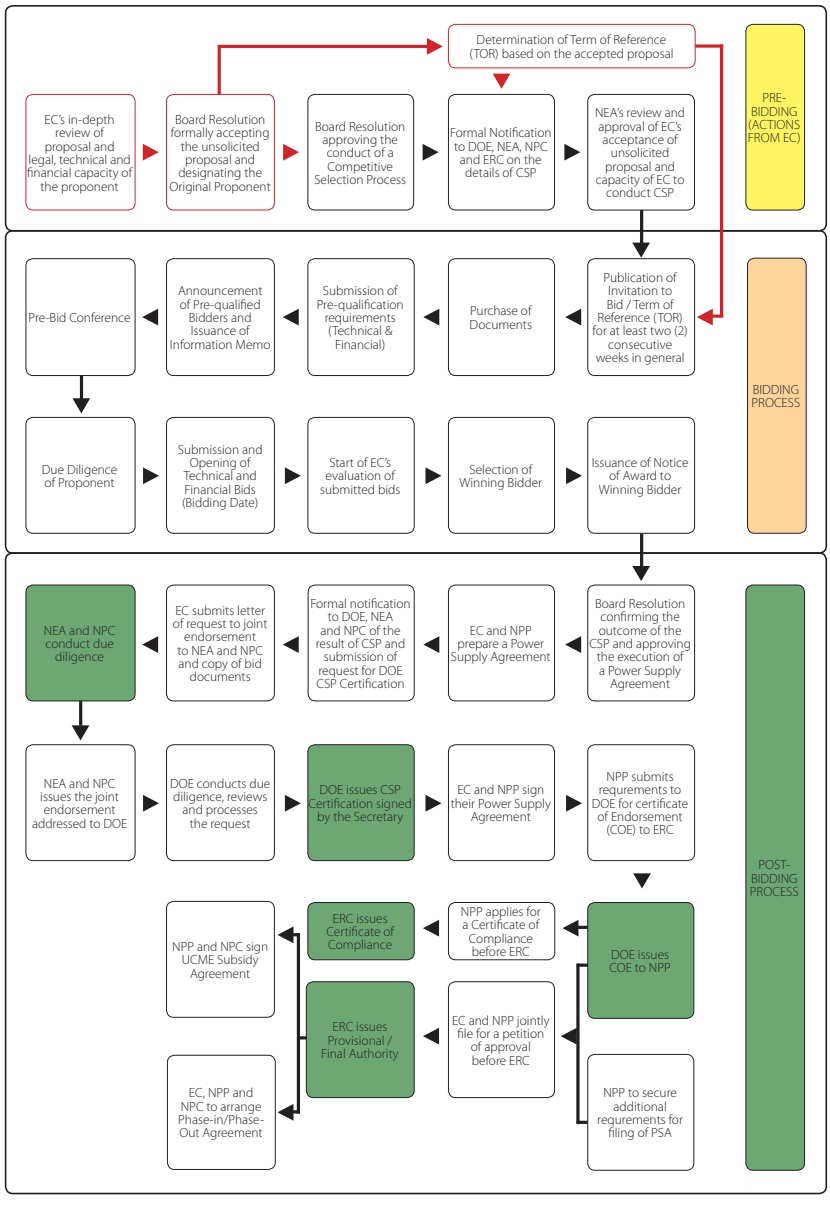


Figure 12. CSP Process Flow for Off-Grid Areas

Based from the previous experiences that have surfaced at the advent of DC2004-01-001, various transparency and governance issues continue to hound the conduct of CSP by ECs. Chapter 5 of this MEDP outlines the general strategies that the DOE will undertake to improve the PSP Program particularly the competitive selection process for an NPP.

2.4. Performance Assessment

In general, performance of providing electricity services in missionary areas are focused on reducing plant uses and losses, promoting efficient generation with lesser fuel consumption rate, and improvement in reliability.

Reducing Plant Use and Losses

One of the mechanisms being implemented to monitor the operational efficiency of NPC-SPUG power plants is the implementation of the allowable Plant Use and Losses (PUAL). For each power plant, the effective PUAL shall be computed as follows:

PUAL = 1 – (MWh Sales / Gross MWh Generation)

The formula above tells us that the lower the PUAL is, the better the plant is operating in context of delivering its generated energy to its intended customers.

In September 2012, DOE issued the "Transitory Technical Guidelines for Allowable Fuel Rates and Plant Use and Losses" for NPC-SPUG Power Plants pending the issuance of a comprehensive technical policy on PUAL. The transitory guidelines included a list of allowable PUAL per power plant of NPC-SPUG. This also serves as an effort to implement mechanisms that will redound to the efficient utilization of UC-ME.

Table 20. 2015 Average PUAL per SIIG Cluster

Area	No. of Areas	No. of Plants	Ave. Service Hrs.	Gross Generation, MWh	Energy Sales, MWh	Ave. PUAL
Large (FWAs)	10[15]	22	24	290,401.029	284,134.07	2.16%
Medium (>>1 GWh)	20	21	22	91,699.953	87,182.074	4.93%
Small A (50 MWh-1 GWh)	63	63	10	20,626.783	19,671.92	4.63%
Small B (< 1 MWh)	32	32	7	912.778	863.508	5.40%
PRES	153	153	5	1,273.313	1,273.313	0.00%
TOTAL (w/ PRES)	**278**	**291**	**9**	**404,913.85**	**393,124.89**	**2.91%**
TOTAL (w/o PRES)	**125**	**138**	**12**	**403,640.54**	**391,851.58**	**2.92%**

[15]Count excludes Siquijor.

The plant's frequency of being dispatched also serves as a primary indicator of PUAL. If a plant generates a specific amount of energy but only a small portion of it gets dispatched to the end-users, a higher value of PUAL is more likely to be exhibited. Observed reasons as to why power plants have higher PUAL include the deteriorating plant condition and the increase in station use.

Power Barge 116 in Occidental Mindoro after being evaluated as already derated and incapable to support the operation of Pulang Lupa Diesel Power Plant exhibited a PUAL of 34.76% in 2015 which only has an allowable PUAL of 8.98%.

On the other hand, Jolo Diesel Power Plant which has an allowable PUAL of 1.34% exhibited 2.01% in 2015 after having an increase in station use due to line faults that eventually resulted in frequent start-up of auxiliary loads.

Average PUAL is seen to be higher on areas that have smaller energy requirements. Therefore, increasing the viability on these areas is a must to improve the overall efficiency of NPC-SPUG.

Another condition of SPUG power plants that should be given attention to is their plant age. It is apparent that numerous power plants have already been operating for nearly a decade thus to ensure that the power plants have optimal efficiency, regular maintenance should be conducted. This also serves as an effort to avoid any unnecessary cost in the future.

Table 21. SPUG Power Plants per Age Bracket as of December 2015

Plant age*, years	No. of plants**
0-5	107
5-10	22
10-15	4
15-20	5
Total	**138**

*Approximate number of years based on accumulated running hours
**Excludes PRES Mini-grids

Efficient Fuel Consumption

Another provision under the 2012 Transitory Technical Guidelines is the limit on the allowable Fuel Rate (FR) of SPUG power plants, which can be obtained using the formula:

$$FR\ (in\ L/kWh) = \frac{kL\ Fuel\ Consumption}{Gross\ MWh\ Generation}$$

A high FR indicates that a plant is not operating efficiently due to factors such as aging generating units, low demand factor, or frequent start-up of generators.

Eighteen (18) of the forty-two (42) power plants that were prescribed limits on the fuel rate have exceeded the corresponding allowable values in 2015. Sibuyan DPP has an FR of 0.296 L/kWh which is beyond the 0.278 L/kWh allowed FR due to its nature of operation as a back-up/peaking power plant for the EC-owned Cantingas Mini-hydro Power Plant.

It can be seen from Table 22 that power plants with higher generation incur a lower fuel rate, with the exception of those from PRES mini-grids.

Table 22. Average FR per SIIG Cluster

Area	No. of Areas	No. of Plants	Gross Generation, MWh	FR (L/kWh)	
				Group Ave.	Weighted Ave.
Large (FWAs)	10	21[16]	290,401.029	0.296	0.290
Medium (>>1 GWh)	20	21	91,699.953	0.296	0.288
Small A (50 MWh - 1 GWh)	63	63	20,626.783	0.354	0.334
Small B (< 1 MWh)	32	32	912.778	0.496	0.465
PRES	153	153	1,273.313	0.460	0.443
TOTAL (w/ PRES)	**278**	**290**	**404,913.856**	**0.426**	**0.293**
TOTAL (w/o PRES)	**125**	**137**	**403,640.543**	**0.373**	**0.292**

A separate section of this MEDP outlines the forward steps in improving the operational efficiency of SPUG power plants.

Maximizing Utilization of Existing Generation Units and Proper Sizing of New Units

NPC-SPUG made efforts to improve its planning for the appropriate sizing of generator to serve urgent request for services and long-term demand needs in areas with no interested NPP or QTP services.

[16]Excludes Balongbong HEPP

Key measures undertaken by NPC-SPUG during the period were:

- Close coordination with the ECs especially in handling request for extension of service hours in existing areas;
- On-side validation of available electricity demand to ascertain the right size of generator in serving new areas with urgent request from communities; and,
- Adoption of smaller size of generation units as least-cost approach to serve new areas with very small demand; and,
- Re-fleeting of generation units displaced by the entry of NPPs and QTPs to serve new remote, off-grid areas.

In addition, NPC-SPUG intends to undertake an annual series of workshops with client DUs and LGUs to harmonize their respective capacity plans and targets. This will avoid the need for emergency power especially in areas that are already being served by NPPs and ECs, including the use of rentals.

Improving Efficiency and Better Electricity Services

In general, SPUG and ECs in missionary areas must continue to improve their operations, especially in terms of enhancing efficiency and improving electricity services to the consumers. NPC-SPUG management took the lead in devising new strategies towards efficiency improvements.

It identified quick response to emergencies, fuel pilferage, delay in fuel deliveries, frequent brownouts, system protection, low collection efficiency in Mindanao areas and under-utilized assets as priority problems that must be addressed immediately. Table 23 summarizes the various measures implemented by NPC-SPUG in 2015 based on its corporate strategies defined in 2014.

Table 23. SPUG Strategies to Improve Efficiency and Better Electricity Services in 2015

Measure	Description	Problem being Addressed	Accomplishments
Installation of Fuel Oil Storage Tank	Standby capacity based 30-day fuel inventory before fuel runs out	Delay in Fuel Deliveries Quick response during emergencies	Procurement was completed in 2014. Installation and testing of the fifteen (15) storage tanks in various SPUG areas were completed in 2015.
Fuel Operations Manual	Standard procedure for the use of fuel in SPUG operations including hauling of fuel to small and remote islands served by SPUG;	Fuel Pilferage and Losses	FOM was formulated in 2014 and was fully implemented in 2015 by SPUG area managers in their respective plant.
Installation of Flow meters	Accurate measurement of fuel consumed included monitoring of fuel rate consumption for each plant.	Fuel Pilferage and Losses	Procurement was completed in 2014. Installation and testing of 20 units were deployed and installed in all SPUG plants in 2015.
Installation of Auto Reclosers	Protection of generation units from excessive mechanical stress induced by frequent line faults and trippings.	System Protection	Procurement was completed in 2014. Installation of 86 units of auto reclosers in various SPUG plants areas were completed in 2015.
Monitoring of Distribution Lines of ECs	Coordination with ECs for regular monitoring and inspection of distribution lines as first line of precaution against occurrence of line faults	Brownouts System Protection	Started in 2014, SPUG continues its active coordination with the ECs in monitoring of distribution lines for immediate remedies and avoiding line faults and trippings.
Weekly Power Situation Monitoring	Regular reporting of operation of SPUG plants to review plant outages and closely monitor restoration activities	Brownouts	SPUG continued to implement in 2015 the monitoring of power plants on weekly basis.
Fast-track Procurement of Spare Parts	Authorizing SPUG area managers to sign and approve small value procurement	Brownouts	In 2015, SPUG plant managers took advantage of the policy to shorten procurement of spare parts that are especially needed for minor repairs of equipment, thus avoiding delays in restoration of units.

2.5. Universal Charge for Missionary Electrification

To enable NPC-SPUG to continue performing its mandate of missionary electrification, the EPIRA introduced a mechanism of subsidy through the Universal Charge for Missionary Electrification (UC-ME) which will be applied to all kWh sold.

NPC applies for an amount of UC-ME before the ERC for the next fiscal year based on its projections with necessary allowance for cost adjustments. Section 70 of EPIRA rules that SPUG shall be the sole petitioner for UC-ME functions. This means that NPC-SPUG is the only entity recognized to file a petition to the ERC for the subsidy required to support the missionary electrification activities of SPUG and other accredited electricity service providers such as the NPPs and the QTPs. This amount is then recovered from all consumers that will be duly reflected in their respective electricity bill.

Table 24 summarizes the allocation of UC-ME per category for the years 2011-15. It can be observed from the table that there are other components significant enough to increase the amount of UC-ME despite the on-going privatization program in NPC-SPUG areas.

Table 24 also shows that the total subsidy is affected by the cost of fuel oil and entry of renewable energy. Hence, there is a need to reduce fuel consumption through enhancing the efficiency of oil-fired power plants as well as thorough study and plan of the renewable energy

Table 24. UC-ME Subsidy, 2011-2015

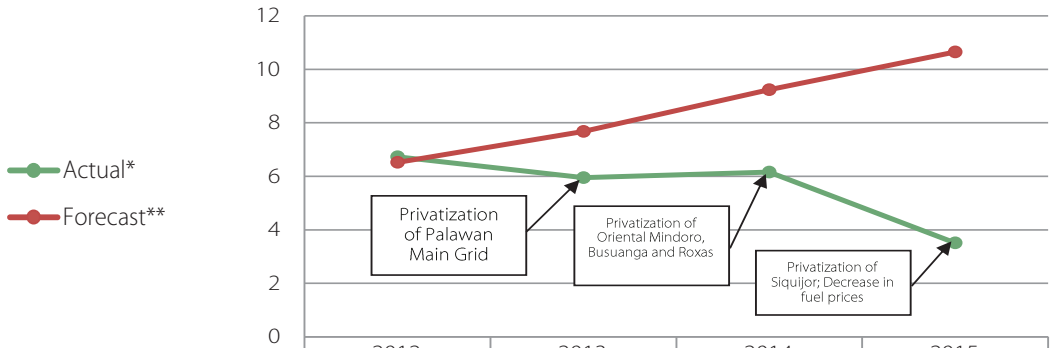
	UC-ME Subsidy, in Million Pesos				
	2011	2012	2013	2014	2015
NPC	6,833.31	6,737.76	5,951.04	6,160.32	3,506.06
NPP/ QTP	928.73	1,619.37	2,340.24	3,017.47	3,702.43
RE Cash Incentive	22.45	31.89	34.53	27.78	23.90
TOTAL	**7,784.49**	**8,389.02**	**8,325.81**	**9,205.57**	**7,232.39**

penetration in missionary areas to rationalize the UC-ME subsidy.

UC-ME is generally affected by total and 24/7 electricity access, increase in demand and capacity in off-grid areas and expenses for NPC's stranded assets.

While the amount of UC-ME may continue to increase due to mentioned components, DOE concludes that the privatization program, particularly on large areas, as well as interconnection of missionary areas to the Grid, resulted to the gradual reduction of UC-ME allocated to NPC as shown in Figure 13.

While privatization of SPUG's electricity generation service and assets are expected to result in reduction of costs and increase in operational efficiency, these savings to date are not yet sufficient to allow generation subsidies to be removed. Said areas are still considered missionary and socio-



	2012	2013	2014	2015
Actual*	6.73	5.95	6.16	3.51
Forecast**	6.52	7.68	9.24	10.65

Figure 13. NPC-SPUG UC-ME Subsidy, 2012-2015

economic conditions of these areas are still not conducive for full cost payment by consumers. Thus, NPC-SPUG also petitions before ERC to set a Subsidized Approved Generation Rate (SAGR) for each of the fourteen (14) FWAs and other parts of Luzon, Visayas and Mindanao shown in figure 14**.** The NPPs will then sell electricity to the ECs at the ERC-approved SAGRs.

AREAS	EFFECTIVE RATES FOR ELEC. COOPS. AND LGU CUSTOMERS					ERC-APPROVED UC-ME RATES*				
	Existing SAGR	Deferred Accounting Adjustments (DAA)			TOTAL PhP/ KWh	Universal Charge for Missionary Electrification (UCME)				
		3rd GRAM	3rd ICERA	Total		BASIC	CASH INCENTIVE FOR RE	TRUE-UP 2011	TRUE-UP 2010	TOTAL
Mindoro Area	5.6404	0.5585	0.0000	0.5585	6.1989	0.1163	0.0017	0.0000	0.0381	0.1561
Marinduque	5.6404	0.5585	0.0000	0.5585	6.1989	0.1163	0.0017	0.0000	0.0381	0.1561
Mainland Palawan	5.6404	0.5585	0.0000	0.5585	6.1989	0.1163	0.0017	0.0000	0.0381	0.1561
Catanduanes	5.6404	0.5585	0.0000	0.5585	6.1989	0.1163	0.0017	0.0000	0.0381	0.1561
Masbate	5.1167	0.5585	0.0000	0.5585	5.6752	0.1163	0.0017	0.0000	0.0381	0.1561
Tablas	5.6404	0.5585	0.0000	0.5585	6.1989	0.1163	0.0017	0.0000	0.0381	0.1561
Romblon	5.6404	0.5585	0.0000	0.5585	6.1989	0.1163	0.0017	0.0000	0.0381	0.1561
Bantayan	6.2553	0.8043	0.0000	0.8043	7.0596	0.1163	0.0017	0.0000	0.0381	0.1561
Camotes	6.2553	0.8043	0.0000	0.8043	7.0596	0.1163	0.0017	0.0000	0.0381	0.1561
Siquijor	6.2553	0.8043	0.0000	0.8043	7.0596	0.1163	0.0017	0.0000	0.0381	0.1561
Tawi-Tawi	5.1167	0.0000	0.0000	0.0000	5.1167	0.1163	0.0017	0.0000	0.0381	0.1561
Basilan	5.1167	0.0000	0.0000	0.0000	5.1167	0.1163	0.0017	0.0000	0.0381	0.1561
Sulu	5.1167	0.0000	0.0000	0.0000	5.1167	0.1163	0.0017	0.0000	0.0381	0.1561
Other Luzon										
Group 1	4.8024	0.5585	0.0000	0.5585	5.3906	0.1163	0.0017	0.0000	0.0381	0.1561
Group 2	5.6404	0.5585	0.0000	0.5585	6.1989	0.1163	0.0017	0.0000	0.0381	0.1561
Other Visayas	5.6404	0.8043	0.0000	0.8043	6.4447	0.1163	0.0017	0.0000	0.0381	0.1561
Other Mindanao	4.8024	0.0000	0.0000	0.0000	4.8024	0.1163	0.0017	0.0000	0.0381	0.1561

Figure 14. Approved Generation Rates as of January 2016

Table 25. UC-ME Allocation, 2016-2020

	UC-ME Subsidy, in Million Pesos				
	2016	2017	2018	2019	2020
NPC	8,293.87	9,514.49	10,937.9	12,350.93	14,133.71
NPP/QTP	3,242.96	3,682.85	4,031.51	4,395.42	4,761.19
RE Cash Incentive	274.41	313.98	360.18	405.01	462.03
TOTAL	**11,811.24**	**13,511.32**	**15,329.59**	**17,151.36**	**19,356.93**

The difference between the SAGR and the NPP's contracted True Cost Generation Rate (TCGR) will constitute the subsidy to an NPP to be sourced from UC-ME. Table 25 provides the general breakdown of the projected UC-ME allocation from 2016 to 2020.

Table 25 emphasizes the need to improve the PSP Program as it will eventually redound to the reduction of the government's subsidy for missionary electrification and rationalization of UC-ME.

Table 26 summarizes the UC-ME requirements including the required subsidy from the government for the planning horizon 2016 - 2020.

Table 26. UC-ME Requirements, 2016-2020

	Missionary Electrification Subsidy, in Million Pesos				
	2017	2018	2019	2020	2021
NPC	8,293.87	9,514.49	10,937.9	12,350.93	14,133.71
NPP/QTP	3,242.96	3,682.85	4,031.51	4,395.42	4,761.19
RE Cash Incentive	274.41	313.98	360.18	405.01	462.03
TOTAL UC-ME	11,811.24	13,511.32	15,329.59	17,151.36	19,356.93
CAPEX	5,815.97	6,339.84	7,165.50	7,926.47	9,016.66
TOTAL	**17,627.21**	**19,851.16**	**22,495.09**	**25,077.8**	**28,373.59**

Remote and Unviable Area Electrification

Photo Credit:
PowerSource Philippines, Inc.
http://www.oceanislandtravel.com

1.05 MW Diesel Power Plant and Distribution Pole of PowerSource Philippines, Inc. in Malapascua Island, Cebu
Local boatman in Malapascua Island, Cebu (http://www.oceanislandtravel.com)

3. REMOTE AND UNVIABLE AREA ELECTRIFICATION

Pursuant to Sec. 2(a) of EPIRA, the overarching policy of the Government is to ensure and accelerate the total electrification of the country. The attainment of this policy is the electrification of remote and unviable areas. The 2016 MEDP outlines the plans and programs of the Government to implement remote area electrification which cover unviable areas and unenergized households in the small islands and isolated grids. On the other hand, the Household Electrification Development Plan (HEDP) encompasses the electrification of remote areas and focuses primarily on the coordination of various electrification programs in missionary or off-grid areas to support the achievement of the overall objective of 90% household electrification in 2017.

3.1. Status of Electrification

To date, all cities and municipalities of the country have already been energized. Previous programs and activities of the government resulted to 100% barangay electrification, with only six (6) barangays remaining as unserved due to geographical and security reasons. The current thrust of the government is to achieve 90% household electrification by 2017 based on the 2010 census.

Under the program, electrification at the household level increased from 79.7 percent in 2010 to 89.0 percent in December 2015. This represents 20.36 million energized households out of the total 22.72 million households in the country. The remaining unenergized households are pegged at about 2.3 million, which are located in the remotest areas of the countryside and are deemed most difficult to serve.

MEDP covers all barangays in the SIIGs as well as other remote and unviable areas nominated by the DUs in their respective Distribution Development Plans. These include 21 ECs, 3 LGU-owned utilities and one multi-purpose cooperative with completely off-grid franchise areas, 25 ECs with partially off-grid areas[17], as well as other remote and unviable areas in the country.

These off-grid areas consist of at least 3,556 barangays with 1.54 million potential households with an energization level of 49.6 percent only, which is still too low compared to the national average. Also, the figures indicate that there are about 761,746 unserved households at the last mile, which are deemed most difficult to serve due to their geographic and economic circumstances.

Table 27. HH Electrification Level in Off-Grid Areas as of December 2015

	No. of Barangays*	Total Potential HHs **	Served Households	Energization Level
Luzon	2,550	1,000,048	602,641	60.26%
Visayas	410	123,212	84,218	68.35%
Mlndanao	596	420,256	74,887	17.82%
Total	**3,556**	**1,543,516**	**761,746**	**49.35%**

*includes all barangays not connected to the grid and barangays with sitios waived by ECs for QTP participation.

**based on reported potential households in the DDPs of ECs; in case of unreported/missing data, estimated households reported by Philippine Statistical Administration as of August 2015 was adopted instead.

[17]Includes BILECO and NONECO with off-grid areas not classified as SPUG areas.

It is noted that the figures are still preliminary and the establishment of a comprehensive database will provide a more accurate picture of electrification status in off-grid barangays and other remote and unviable areas of the country.

3.2. Programs and Activities Supporting Remote Area Electrification

3.2.1. NPC-SPUG Support to Unviable Area Electrification

NPC-SPUG also undertook the electrification using mini-grid systems of areas waived by the ECs with urgent request by the communities for electricity service. NPC-SPUG has installed a total of 260kW generating units to serve four (4) unviable areas as shown in Table 28. In the future, said areas may be offered to interested QTPs.

Table 28. New Areas Electrified by NPC-SPUG through Mini-Grid, 2012-2015

Area	Installed Capacity (kW)	Commissioning Date
Kiri-kite, Almagro, Samar	60	May 2, 2012
Bagongon, Catbalogan City, Samar	60	May 7, 2012
Brgys. Cinco and Rama,Catbalogan City, Samar	100	May 8, 2012
Buluan, Catbalogan City, Samar	40	May 9, 2012
TOTAL	**260**	

3.2.2. Qualified Third Party (QTP) Program

In compliance with Section 59 of EPIRA and Rule 14 of EPIRA IRR, all areas that have been declared remote and unviable by the DOE shall be open for participation by entities to be known as QTPs. To operationalize the participation and investment by the QTPs, the DOE has issued Circular No. 2004-06-006 on 18 June 2004 that prescribed the qualification criteria for QTPs. The DOE Department Circular No. 2005-12-011 dated December 2005 outlined the guidelines for the participation of QTPs in unviable areas. Likewise, ERC Resolution 23 series of 2006 defined the framework for the regulation of QTP operation. The QTP is responsible for generation of power and its distribution to the community.

Currently, the operating QTP in the country is PowerSource Philippines Inc. (PSPI) in Brgy. Rio-Tuba, Palawan providing 24/7 electricity services to 1,744 households. Meanwhile, PSPI's Malapascua's QTP Project in Malapascua Island, Logon, DaanBantayan, Cebu was granted by the ERC with a provisional authority to operate as QTP in the island. It started operation in 2014 and is servicing 771 households.

DOE and NEA continue to process the waiver applications of the ECs as well as the corresponding expressions of interest and project proposals by prospective QTPs to provide electricity services in unviable areas. Table 29 summarizes the areas that have been declared open to QTPs and/or areas with existing proposals for QTP services.

Panoramic view of Powersource Philippines' Power Plant Facility (Photo Credit: PowerSource Philippines Inc.)

Table 29. Unviable Areas Opened for QTP as of December 2015

Area	Waiving DU	QTP	Proposed Capacity	Status/Remarks
Brgy. Liminangcong, Taytay, Palawan	PALECO	PSPI	395 kW (total)	With Provisional Authority To Operate (ATO) from ERC on 22 February 2016
Brgy. Cabayugan, Puerto Princesa City, Palawan	PALECO	SREC	1.404MW (PV) + 2.363 MWh Battery + 1.28MW Genset	With final ATO from ERC on 5 October 2016
Brgys, Candawaga and Culasian, Rizal, Palawan	PALECO	PSPI	308 kW (total)	Awaiting ATO from ERC
Balut Island, Sarangani, Davao Occidental	DASURECO	PSPI	690 Kw (total)	Awaiting ATO from ERC.
Luna, Pudtol and Flora, Apayao (33 sitios)	CAGELCO II	N/A	N/A	Awaiting for proposals from Prospective QTPs
Lahuy Island, Caramoan, Camarines Sur (Bgys. Gata, Oring, Daraga, and Gogon)	CASURECO IV	N/A	N/A	Awaiting for proposals from Prospective QTPs
Haponan Island, Caramoan, Camarines Sur	CASURECO IV	N/A	N/A	Awaiting for proposals from Prospective QTPs
Quinalasag Island, Garchitorena, Camarines Sur (Bgys. Dangla, Binagasbasan, Burabod, Cagamutan, Mansangat, Tamiawon, Cagnipa, and Sumaoy)	CASURECO IV	N/A	N/A	Awaiting for proposals from Prospective QTPs
Semirara Island, Caluya, Antique	ANTECO	DMCI	N/A	Awaiting for Detailed Technical and Financial proposals from Prospective QTPs

3.2.3. Solar PV Mainstreaming (PVM) Program under the EU-assisted Access to Sustainable Energy Program (ASEP)

The PVM program aims to encourage DUs in implementing SHS mainstreaming/fee-for-service approach for dispersed households and highly remote areas in their franchise areas. It serves as another innovative service delivery mechanism that the DUs can execute in providing electricity access to remote, sparse and dispersed households. In support to this, the issuance of Department Circular (DC) No. 2014-007-0012 in 3 July 2014 entitled Accelerating Household Electrification in Off-Grid and Isolated Areas through Electricity Supply by Regulated Solar Home Systems prescribed the policies for DUs provision of electric service.

Based on the pilot implementation of the Project in 2010-2014 which yielded positive results, the DOE pursued the scaled-up implementation of the program through the "Philippines: Access to Sustainable Energy Program (ASEP)" with funding assistance from the European Union. For the next 4 years (2016-2019) the PVM program will be assisted by ASEP funding to implement a total of 51,400 household using the PV SHS. The Window "A" of PVM Projects (Table 30) under ASEP is expected to be implemented by the second semester of 2017 with a total of 10,233 HHs.

Table 30. Target Areas for PV Mainstreaming Window A

Cluster No.	Electric Cooperative	No. of HHs
1	COTELCO	2,576
2	DASURECO	2,524
3	SOCOTECO II	2,502
4	SUKELCO	2,631
TOTAL		**10,233**

3.3. Program Management

The successful formulation and implementation of various programs and activities under the HEDP will require a systematic and strategic approach in managing and coordinating the different the activities of all partners. The DOE continuously endeavors to bring together all manpower and financial resources needed by the program and must ensure a significant level of coordination among stakeholders involved in household electrification program.

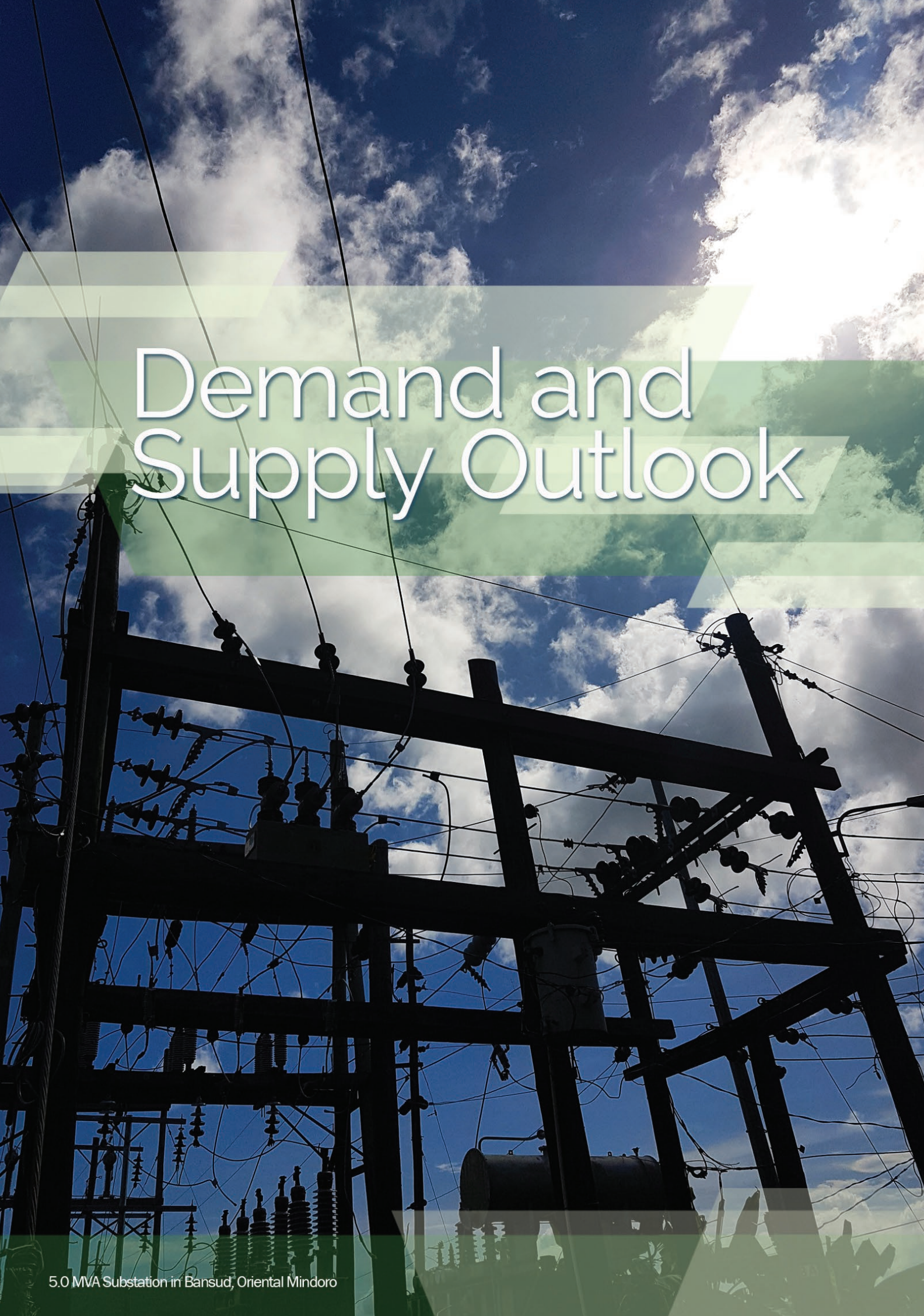
Furthermore, a more comprehensive database system of all off-grid barangays and other remote and unviable areas in the country shall be developed to monitor the status of electrification in said areas and to support project planning.

3.4. Way Forward

Clearly, the goal of achieving total off-grid electrification is not a walk in the park. The challenge of providing electricity to additional 800,000 Filipino households in remote and unviable areas is a multi-faceted task requiring new strategies and approaches in terms of technology applications, financing, institutional strengthening and program management. Effective planning, sound decision making in

terms of project selection and design, ring-fencing of funds, appropriate application of subsidies, and cooperation among stakeholders will surely reduce the burdens and risks of implementing such vast program in the next 5 years.

Demand and Supply Outlook



5.0 MVA Substation in Bansud, Oriental Mindoro

4. DEMAND AND SUPPLY OUTLOOK

4.1. Historical Data on Capacity vs. Peak Demand

Figure 15 shows the comparison of the historical annual data of the total installed and dependable capacity with the peak demand from 2011 to 2015 in SIIGs. It can be seen in said figure that the growth in peak demand was accompanied by an increase in dependable capacity.

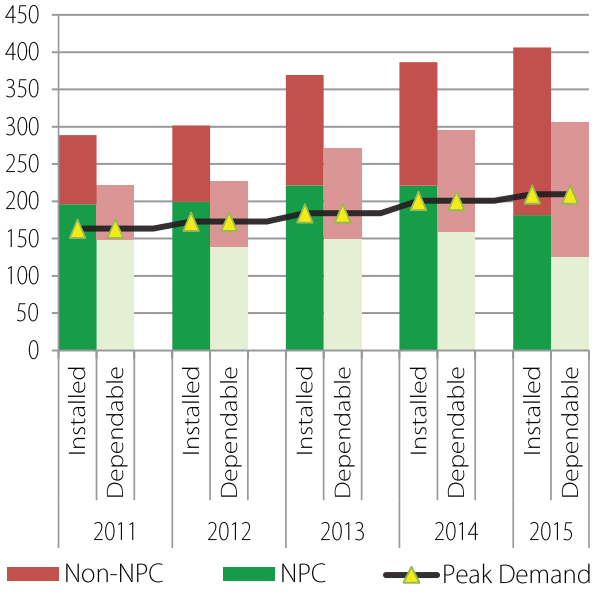


Figure 15. Supply and Demand, 2011-2015

In areas where it continues to operate, NPC-SPUG usually leases generator sets to augment the shortfall in supply since this is the easiest and fastest way to accommodate the gap in the capacity versus the demand.

Table 31. Capacity Addition of NPC-SPUG, 2016-2020[18]

Area	2016	2017	2018	2019	2020
Luzon	15.300	4.440	1.325	5.145	1.450
Visayas	8.790	0.720	-	1.560	0.650
Mindanao	3.150	20.000	3.600	6.000	-
TOTAL	**37.240**	**25.160**	**4.925**	**12.705**	**2.100**

Source: NPC-SPUG (2016 MEP)

4.2. Supply-side Management

From 2016 to 2020, NPC already scheduled corresponding capacity additions to address the anticipated demand growth of its off-taker DUs. Table 31 summarizes the capacity addition in existing NPC-SPUG areas from 2016 to 2020.

With the foreseen increase in power demand in the SIIGs, proportional dependable capacity is necessary to sustain the appropriate level of electricity service that will support the modernization of the areas through its coordinated development with other infrastructure. In areas served by NPPs, the ECs consider and plan the future requirements for additional capacity through the conduct of a CSP and the corresponding signing of new Power Supply Agreements (PSAs).

As an overview, Table 32 lists the NPPs contracted by DUs to supply their present and future power requirements.

[18]Excludes capacity addition in Siquijor which was programmed in the 2016-2020 MEP.

Table 32. Existing and Committed NPPs as of December 2015

Area	New Power Provider	Plant Technology	Rated Capacity, MW	Contracted Capacity, MW	Status
Oriental Mindoro	Power One Corporation	Bunker	15.3	9.0	Operational
	Ormin Power Inc.	Bunker	9.6	6.4	Operational
		Hydro	10.0	6.0	Target date: 2016
	Mindoro Grid Corporation	Diesel	26.87	10.0	Operational
	DMCI Power Corporation	Diesel	15.5	15.0	Operational Since July 2014
	Sta. Clara Power Corporation	Hydro	8.0	4.4	Target date: 2017
	Philippine Hybrid Energy Systems, Inc.	Wind	16.0	6.0	Target date: 2017
	Mindoro Geothermal Power Corporation	Geothermal	44.0	20.0	Target date: 2017
Occidental Mindoro	Occidental Mindoro Consolidated Power Corporation	Bunker	24	20.0	Target date: 2017
Palawan Main-Grid	Delta P, Inc.	Bunker	16.0	13.5	Operational
	Palawan Power Generation, Inc.	Bunker	19.0	15.2	Operational
	DMCI Power Corporation	Diesel	41.004	22.0	Operational
Roxas Palawan	DMCI Power Corporation	Diesel	3.688	3.0	Operational
Busuanga Is. (Palawan)	Calamian Island Power Corporation	Bunker	8.82	7.716	Operational
Culion (Palawan)	Calamian Island Power Corporation	PV-Diesel w/ Storage		3.0	Target date: 2016
Linapacan (Palawan)	Calamian Island Power Corporation	PV-Diesel		0.35	Target date: 2016
Tablas Island (Romblon)	Sunwest Water and Electric Company	Diesel	8.96	7.5	Operational as of June 2015
		Hydro-Bunker[19]	15.92		For Application to ERC
Catanduanes	Sunwest Water and Electric Company	Hydro	3.6	Energy-based Contract	Operational
		Diesel	6.0	5.0	For ERC Approval
	Catanduanes Power Generation, Inc.	Bunker	3.6	3.0	Operational
Masbate	DMCI Masbate Power Corporation	Bunker and Diesel	24.4	15.0	Operational
Bantayan Island (Cebu)	Bantayan Island Power Corporation	Bunker	8.338	4.892	Operational
Siquijor	S.I. Power Corporation	Diesel	6.464	Energy-based Contract	Operational as of February 2015

[19]Winning bid of SUWECO involves a hybrid hydro-bunker power supply. However, SUWECO and TIELCO executed a 2nd Supplemental Agreement to the PSA modifying the plant technology to hybrid PV-bunker.

4.3. Supply-Demand Outlook

At the end of 2020, a total of 174.045 MW contracted capacity will be contributed by existing and committed NPPs to supply missionary areas. Figure 16, on an aggregated basis, presents the need for additional capacity to be offered to the private sector. This will prompt ECs to consider conducting a CSP to privatize its generation services and further ensure the quality, sufficiency and reliability of power supply in their respective franchise area.

The improvement of missionary generation through private sector participation will translate to a total installed capacity of 337.232 MW by 2020 given the above-mentioned scenario. In the absence of NPPs in missionary areas, NPC will endeavor to extend their PSAs with the respective DUs.

While the above-mentioned additional capacity is expected to augment the power supply in various areas, the possible implication of the impending expiration of PSAs of ECs with NPC should also be anticipated. Table 33 summarizes the expiration year of PSA of SPUG DUs with NPC.

While extension of NPC's generation services is often considered, the conduct of CSP should be given greater consideration by ECs because it is a concrete step to further ensure the quality and reliability of their generation services. This is also the basic premise of DC2004-01-001.

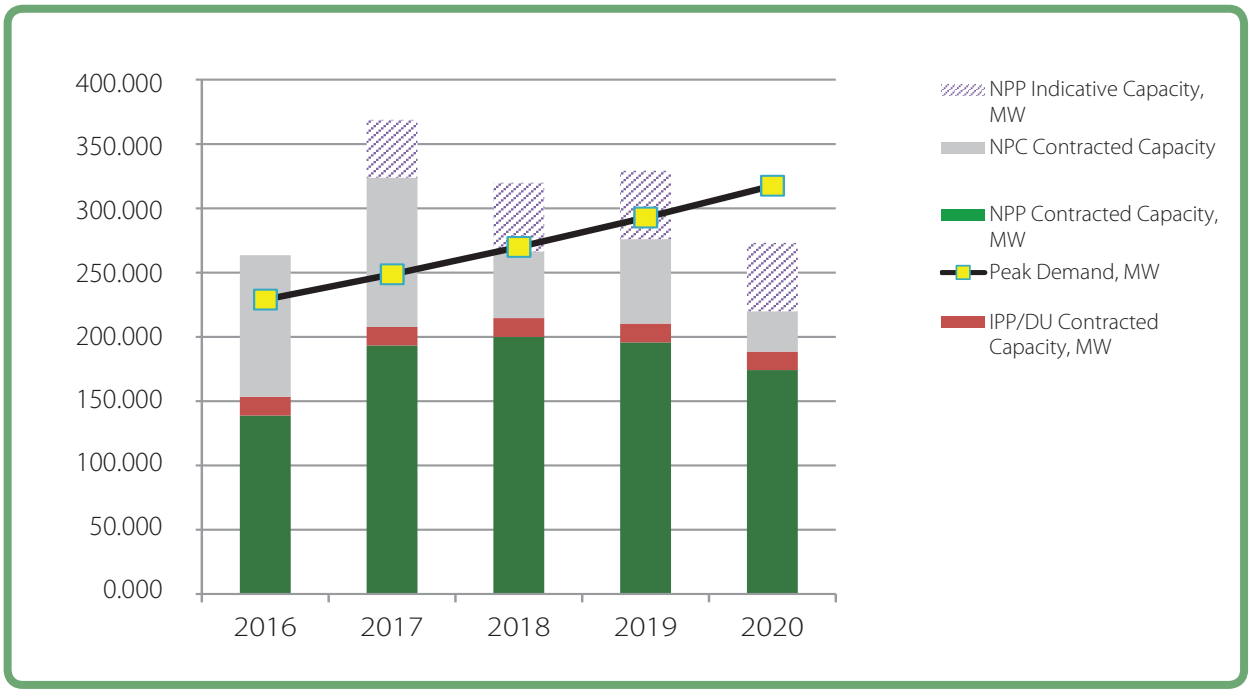


Figure 16. Contracted Capacity in Missionary Areas, 2016-2020

Table 33. Expiration of Power Supply Agreements between NPC and SPUG DUs

YEAR OF PSA EXPIRATION	2017	2018	2019	2020
ELECTRIC COOPERATIVE	BATANELCO CELCO DIELCO SIASELCO LUBELCO BANELCO[21] SULECO TAWELCO	PALECO[22] FICELCO TISELCO SIASELCO	MARELCO OMECO ROMELCO	TIELCO[23]
LGU-OWNED UTILITIES AND MULTI-PURPOSE COOPERATIVES			BANTON	CORCUERA MMPC

4.4. Demand-side Management

In relation to this, the ECs are directed to plot their future demand while taking into consideration various factors that may significantly affect the trend of their demand growth such as entry of industrial customers, aftermath of natural calamity, and the other factors affecting demand growth.

Table 34 shows the uncontracted demand of ECs from 2017-2020 should the PSAs of ECs with NPC and some NPPs be concluded as scheduled.

Hence, the DUs and the consumers need to undergo the necessary information education campaigns to introduce the emerging technologies on renewable and energy efficiency which includes the smart-grids, mini-grids, integration with information communication technology to address the enhancement of the forecasting made under their respective Distribution Development Plans.

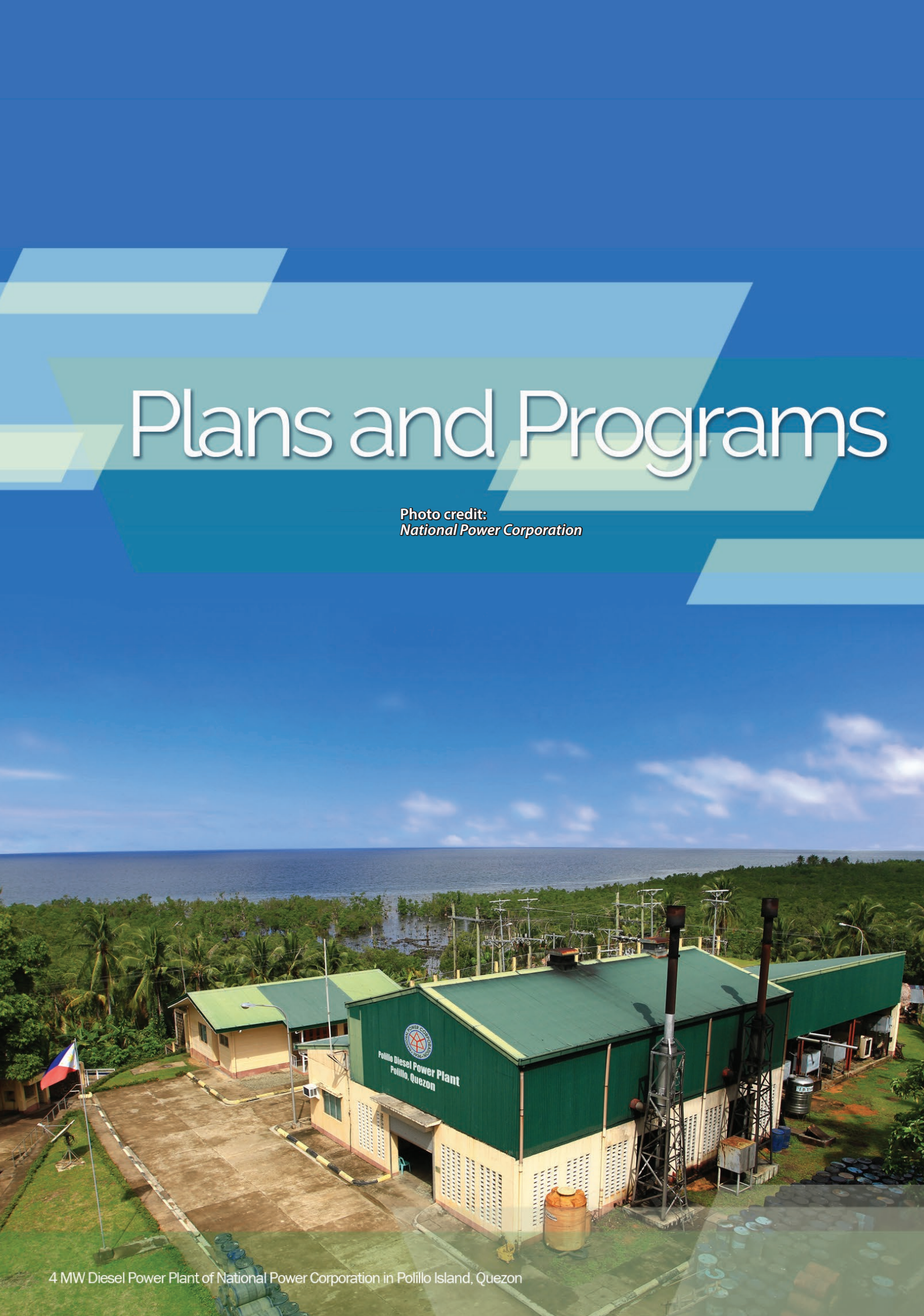
Table 34. Uncontracted Demand of SPUG Electric Cooperatives, 2017-2020

EC	Uncontracted Demand, MW			
	2017	2018	2019	2020
BATANELCO	0.240	2.374	2.597	2.821
OMECO				3.695
ORMECO				
LUBELCO	0.600	0.875	0.850	0.850
ROMELCO				
TIELCO			0.074	0.600
MARELCO			0.145	10.953
FICELCO		3.525	6.011	8.818
MASELCO	4.574	7.289	10.593	14.547
TISELCO	0.240	1.917	1.967	2.011
BANELCO				
CELCO	0.935	4.617	5.242	5.889
DIELCO	2.039	3.646	3.926	4.232
TAWELCO	0.660	1.089	1.613	2.247
SIASELCO	0.200	0.900.	0.950	0.970
SULECO	0.200	0.100		
BASELCO		7.824	8.580	9.465
TOTAL	**9.688**	**33.256**	**42.548**	**67.098**

[21] For Doong and Kinatarkan Islands.
[22] For the remaining NPC-SPUG areas under PALECO franchise.
[23] For Carabao Island.

Plans and Programs

Photo credit:
National Power Corporation



4 MW Diesel Power Plant of National Power Corporation in Polillo Island, Quezon

5. PLANS AND PROGRAMS

The DOE continues to take cognizance of the prevailing condition of missionary electrification. In spite of the increase in the amount of subsidy from the Universal Charge and other government appropriation throughout the years, upholding efficiency and reliability in missionary electrification (generation, transmission and distribution) and improving the PSP program remains a challenge.

The recurring incidence of outages due to either or both power supply shortage caused by lack of fuel, engine failures and incidents of line fault continue to hamper the economic progress of off-grid areas. Such inability of electricity service to become commercially viable prevents the reduction and graduation from dependency from subsidy.

The 2016 MEDP recognizes that there is a need to reinforce existing policies and implement new strategies to advance the progress made and achieved in the past.

There is also a need to enhance and institutionalize the preparation of MEDP to include the inputs from the NPC-SPUG, NPPs, QTPs and the other stakeholders. They shall be required to submit their development plans to DOE to include capital investments and operations, among others.

Additionally, an inventory of energy resource from conventional and renewable energy shall be conducted in the missionary service areas. An analysis of the demand-side data shall also be made to determine the type of generation facility that will deliver the supply. Thereafter, the stakeholders shall identify the areas of concern, the general strategies and the specific activities to meet the ultimate goal of ensuring quality, reliable, secure and affordable supply for the consumers.

To provide a concise process flow through which pressing concerns will be addressed, 2016 MEDP will utilize the following policy framework:

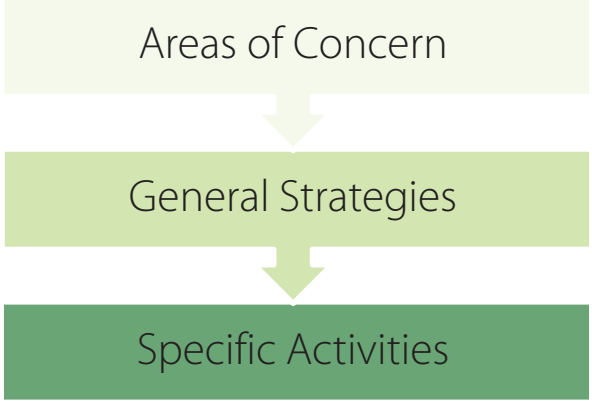


Figure 17. MEDP Policy Framework

This MEDP takes the opportunity to maximize the potential of the Technical Assistance component of the European Union's Access to Sustainable Energy Program (EU-ASEP TA) which outlines major activities that will directly benefit missionary electrification.

ASEP is a commitment of the EU to the Philippine government with a grant of Php3 billion to help the country reach its electrification objectives. The TA component aims to provide advice on policy and strategy, develop planning tools and business

models and provide target support for the implementation of the investment component of ASEP. The TA specifically intends to accelerate private sector participation in off-grid areas, rationalize UC-ME, and increase the Renewable Energy capacity in missionary areas by hybridizing SPUG and NPP power plants.

The MEDP will be utilized as the main reference material for the EU-ASEP TA Team in conducting relevant studies to reach the objectives of ASEP.

The undertakings include:

a. Identification of appropriate schemes to promote and improve the PSP Program;
b. Review of DOE Department Circular DC2004-01-001 to enhance its suitability and applicability to the present development of PSP program;
c. Improvements in the operational efficiency of NPPs, NPC-SPUG (generation and transmission) and Electric Cooperatives; and
d. Rationalization of the utilization of UC-ME.

To address these concerns, DOE affirms the following policies and strategies:

5.1. Creation of a new business model for NPC-SPUG that will result in responsible missionary electrification

NPC-SPUG has remained as the predominant national government-owned and controlled corporation that will perform missionary electrification.

However, problems like economies of scale in NPC-SPUG power plants operating in missionary areas where there are profit losses arise because of the inverse relationship between the supply of power/operating hours and the demand of power in missionary areas.

SIIGs that have low demand resulted into high operations cost. On the other hand, being the residual power generation group of NPC and having high dependence from public fund to finance its operation, NPC-SPUG has to transform itself and adopt a new business model that will redound to cost-efficient missionary electrification.

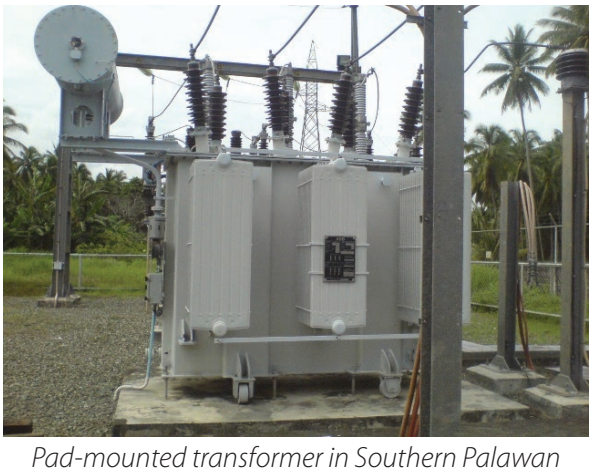
The business model will take into consideration the complementary and support role in encouraging private sector participation in power generation and in institutionalizing structural reforms to the ECs that are prescribed by Republic Act No. 10531. Thus, SPUG's function on missionary electrification, as a business with a social responsibility, will be designed based on the following objectives:

a. Promote Efficiency of its Power Plants, Transmission and Distribution Facilities

The unreliable power supply caused by aging generator sets and distribution lines affects entirely the true cost of generation in SIIGs. From the plant age profile given by the NPC-SPUG, 77% percent

of their currently operating generators aged more than 5 years. Aging generator sets produce high fuel rate and in some areas, dilapidated distribution lines produce losses in power efficiency that can also affect the reliability of the power system.

However, hauling of fuels for generators in remote island grid and upland mini grids is one big task that is needed by power producers. Certain changes in weather and peace & order situation may cause delays in fuel delivery in missionary areas.



Pad-mounted transformer in Southern Palawan substation of NPC-SPUG

The DOE, as previously mentioned, issued in September 2012 the "Transitory Technical Guidelines for Allowable Fuel Rates and Plant Use and Losses for National Power Corporation – Small Power Utilities Group (NPC-SPUG) Plants". NPC-SPUG will adopt the guidelines and modify or improve its operations to enable itself provide power generation at par with the operations of private sector.

The DOE, in promoting efficiency for power plants operating in SIIGs, and in accordance with the Philippine Small Grid Guidelines (PSGG), will impose reportorial requirements for NPPs/ QTPs and NPC-SPUG such as, but not limited to, technical reports, accomplishments, utilization reports and other statistics.

The performance assessment and audit of all power plants both in grid and off-grid areas as a concrete action to assess the true level of their operational efficiency will support the enhancement of the MEDP and the other energy plans under the DOE.

b. Bring the Operations of All Existing Service Areas to Commercial Viability

NPC-SPUG has to develop a program that will bring the operations in all its existing service areas to commercial viability in order to rationalize the utilization and allocation of the subsidy among all the areas. Such program will include the reduction of subsidy for each area through an improvement in efficiency to reduce the true cost of generation and the gradual increase in the subsidized generation rate corresponding to the economic progress of the area.

Coordination with concerned local governments is crucial in this program as they are expected to lead the socio-economic improvement of their respective areas.

The adoption of the MEDP into the regional and other local development plans or regional

Area of Concern
Current Status of SPUG Operations and Services

General Strategies

1. Creation of a new business model for NPC-SPUG that will result in responsible missionary electrification
2. Improvement of SPUG's opaerational efficiency
3. Improve the commercial viability of SPUG areas

Specific Activities

1. Required submission of development plans from NPC-SPUG, NPP and QTPs in preparation for the MEDP.
2. Implementation of a comprehensive policy on allowable Plant Use and Losses (PUAL) and Fuel Rate (FR)
3. Implementation of reportorial requirements for NPC-SPUG, NPP and QTP
4. Conduct of Performance Audit for all Power Plants in SPUG areas
5. Synchronization of MEDP with LGU Development Plans (regional, provincial, municipality or city)
6. Rendering of 24- hour electricity service in all Large, Medium and Small A NPC-SPUG areas

Figure 18. 2016 MEDP Policy Framework for Program 1

development shall be considered for the improvement of the commercial viability of off-grid areas.

Furthermore, NPC-SPUG shall consider the tourism pathways in missionary areas in line with the improvement of its services (capacity addition and increase of operating hours) to help the local industry in encouraging the private sector to invest in their area.

This leads to the increase of the commercial viability of these areas and results in the improvement of generation services. In ther end, it will redound to the reduction of UC-ME.

Rapu-Rapu Island, Albay by Byahero Snapshots©

Increasing its operating hours in relatively bigger areas should also be prioritized by NPC. By 2018, NPC-SPUG should increase its service hours in the remaining Medium NPC-SPUG areas that include: Rapu-Rapu Island, Albay and Tingloy, Batangas rendering 24 hours in all 15 Large Areas and 15 Medium Areas.

From 2019-2021, the remaining Small A areas should correspondingly receive 24-hour electricity service to also help spur socio-economic development in these areas. These areas include Senator Ninoy Aquino, Sultan Kudarat; Pilar, Cebu; and Rizal, Palawan.

5.2. Improvement of the PSP Program

5.2.1 New Power Provider (NPP) Program

On the NPP Program, the recent complications on the conduct of unsolicited bidding or "Swiss Challenge" which brought transparency and governance issues posed a strong argument to improve the prescription for the procedures for PSP in power generation. Hence, the DOE is keen on enjoining NEA and NPC to implement alternative measures to address the various issues brought about the continued practice of the Swiss Challenge system, to wit:

NEA

1. Assess the supply-demand of each EC based on its Distribution Development Plan (DDP);
2. Based on the assessment, identify which ECs need additional supply and recommend CSP for the additional capacities;
3. Direct the concerned EC that is still served by the Small Power Utilities Group (SPUG) to submit with a supporting board resolution a timetable on the implementation of the PSP program, including its choice of managing the CSP as prescribed in DOE DC2004-01-001 by either requesting the DOE to secure or engage the services of a transaction advisor at its own cost, allowing NPC-SPUG to assign its existing Power Supply Agreement (PSA) to a New Private Provider (NPP), or managing by itself the CSP;

4. Assess the capability of an EC in handling the transaction based on its choice of managing the CSP, approve such choice and provide the appropriate intervention

in constant collaboration, and transparent and in-depth deliberation with NPC-SPUG;
5. Consult with NPC in developing the parameters and indicators to be used in assessing such capability of an EC;
6. Determine the validity of the basis of accepting an unsolicited proposal, if there is indeed a basis;
7. Assert the authority to review the draft of the PSA and other bid documents and bidding procedures; and
8. Monitor the CSP, through a requirement of submission of necessary documents and physical participation or witness in critical component activities of the bid process.

NPC

1. Ensure the harmonization of the power supply requirement that is identified in the Distribution Development Plan of EC with the Missionary Electrification Plan (MEP) of SPUG, specifically on least-cost generation planning and the timetable of the PSP program;

2. Develop a PSA Assignment Plan which will be included in the MEP for ECs which opt to allow NPC to assign their PSA to an NPP;

3. Collaborate with the EC for the inclusion in the terms of the bid the option to purchase or lease SPUG's existing power generation facilities and associated power delivery systems to facilitate the efficient disposal and preservation of value of such assets; Rationalize the Phase In-Phase Out Agreement with the NPP to facilitate the assumption of the NPP of its responsibility in generation of power supply and the efficient optimization of assets and financial operations of SPUG; and

4. Improve the service of SPUG in order to provide a benchmark of service that can be considered in the development of the terms of the bid.

On the other hand, ECs have been advised to conduct a thorough self-assessment on their preparedness to implement the PSP Program with the assistance of NEA and NPC-SPUG. NEA, in its review and analysis of the Distribution Development Plan (DDP) of ECs, can assist in firming the information that will be used in the bidding of the power supply. On the other hand, NPC-SPUG can assist in least-cost generation planning in line with the rationalization of the missionary electrification subsidy from the UC-ME.

Moreover, the ECs with the assistance of NEA, should also indicate their intention to pursue the PSP program and the timeline of its implementation so that NPC-SPUG can properly plan the addition, phase-out and redeployment of its generation capacity in SIIGs. The intention will be formalized in the DDP and in a contract with NPC-SPUG.

Within the planning horizon, the DOE will facilitate the modification in the selection of the NPP after

due consultations with the DUs in missionary areas, including NPC-SPUG, PSALM, ERC and other relevant agencies and units of the government.

One specific action that will be undertaken is the creation of a Technical Working Group that will propose specific policy-level solutions to further improve the NPP program through either amendment of DC2004-01-001 and/or introduction of a new policy. This will also go hand-in-hand in the implementation of the activities of the EU-ASEP TA.

Specifically, the TWG shall endeavor to study identify appropriate programs and/or policy actions that will:

i. Clarify the coverage of DC2004-01-001 (to include privatized SPUG areas and missionary areas with no existing SPUG services);
ii. Mainstream the privatization of existing generating assets of NPC-SPUG;
iii. Mainstream PSP in small SPUG areas;
iv. Allow UC-ME availment for Electric Cooperatives engaging in power generation; and
v. Facilitate competency building of DUs on power supply contracting with the private sector and strategic planning for least cost and technology-neutral generation development

EU-ASEP TA also intends to produce a GIS-based least-cost off-grid simulation tool for area-based investment planning of ECs. This tool aims to aid ECs in determining the best setup to provide electricity service to marginal communities in their franchise areas.

Furthermore, one of the outputs of EU-ASEP TA includes the recommendation of a template Power Supply Agreement (PSA) that has been formulated based on both international and local standards and past experiences of ECs which have entered into agreements with NPPs. This will in turn facilitate succeeding legal agreements that are mutually beneficial to both parties.

Table 35. Privatization turnout of existing generating assets of NPC-SPUG

Electric Cooperatives	New Power Providers	No. of PSAs with existing Power Plants	No. of Lease Agreement	% Turnout*
25	18	15	3	26.67%

**computed as no. of lease agreements over no. of existing PSAs*

The progress of the privatization of NPC-SPUG's existing generating assets will also be assessed. Based on latest data, it has been observed that majority of existing NPPs have opted to either build an entirely new facility or lease NPC-SPUG's generating assets instead of purchasing them.

Area of Concern
Private Sector Participation (PSP) Program in Missionary Areas

General Strategies

1. Strengthening of institutional cooperation among government agencies and stakeholders
2. Reinforcement of existing policies on PSP and formulation of needed additional policy
3. Assistance to Electric Cooperatives in properly conducting energy planning and power contracting

Specific Activities

1. Creation of Technical Working Group for the Amendment of DC2004-01-001 and other relevant policies
2. Continuation of the review of DOE Circular on QTP Participation
3. Facilitation of capacity-building for ECs on power supply contracint in coordination with NPC and NEA

Figure 19. 2016 MEDP Policy Framework for Program 2

Out of 15 existing NPPs, only 4 of them entered into a lease or sub-lease agreement. According to the insights from various NPPs, while leasing or purchasing existing assets of NPC-SPUG may result in a more advantageous schedule of operation for them, it will in turn cost them an equivalent cost in terms of rehabilitating and recalibrating the generator sets of NPC-SPUG which most are already aging and/or operating at minimum efficiency.

5.2.2 Qualified Third Party (QTP) Program

For the QTP Program, the DOE will continue the review of the DOE Circular on the QTP participation guidelines that will streamline the procedures in the pre-qualification of private firms to serve as QTPs in order to facilitate the electrification of waived unviable areas.

The proposed amendment shall also look into recent policy developments related to Republic

Act No. 9513 or Renewable Energy Act of 2008 and NEA Reform Act of 2013. It is expected that amendments to the complementary rules on the QTP regulations by the ERC will follow.

There is also the need to review the subsidy approvals to arrest the unwarranted power consumptions by the rural households. Towards this end, the DOE shall enjoin NPC-SPUG to file application to ERC for the setting of the Subsidized Approved Retail Rate (SARR) which the consumers will pay in QTP service areas as provided for under the ERC Regulatory Rules for QTP.

The 2016 MEDP reaffirms the policy under EPIRA and its IRR that unviable areas which are waived by the ECs in spite of the instruments provided by the NEA Reform Act of 2013 shall be opened to QTPs. For this reason, the DOE shall pursue and enhance the promotion of the QTP program.

5.3 Rationalization of the Missionary Electrification Subsidy from Universal Charge

The DOE, in coordination with concerned government agencies, will study the rationalization of the missionary electrification subsidy from the Universal Charge that will address the following challenges:

a. preferential focus to rural and peasant communities in the peripheries of small islands and isolated areas due to their prevailing poverty and inequality in rural development;
b. institutionalization of the efficient use of electricity through reasonable costing;
c. redesigning of the business model of SPUG for responsible missionary electrification;
d. harmonization of existing PSP programs with NPC's effort in electrifying new areas;
e. promotion of private investment in missionary electrification (generation and distribution); and
f. integrated and inclusive economic development of small islands and isolated areas

To implement this policy of rationalization of subsidy, possible strategies include:

1. Graduation Policy. Consistent with Rule 13 of EPIRA-IRR, NPC-SPUG shall submit to DOE its assessment and prospects of all existing areas towards meeting commercial viability and recommendation for graduation from the UC-ME.

2. Tariff Differentiation among Customers and Missionary Areas. It is recognized that small islands and isolated grids have common and also distinctive characteristics and load and service profile. Having a tariff differential among customers will enable the rationalization of the subsidy by allocating the subsidy principally to those areas which would need it most, notably that the subsidy will benefit the local communities,

Area of Concern
Utilization of the Universal Charge for Missionary Electrification

General Strategies

1. Rationalization of UC-ME
2. Implementation of Graduation Policy
3. Review of the computation for electricity rates in SPUG areas

Specific Activities

1. Conduct of Study for Grid Interconnection of Island Grids in coordination with NPC, NGCP and TRANSCO
2. Commence Focus Group Discussions with ERC in reviewing the computation for TCGR, SAGR, FCRR and SARR
3. Guidelines for Effective Targeting of New Areas for NPC-SPUG
4. Review of the availment scheme of Cash Incentive for RE in coordination with PSALM
5. Itemization of UC-ME to ensure greater transparency

Figure 20. 2016 MEDP Policy Framework for Program 3

economic activities and services. This may involve the determination of a cap on electricity consumption that will qualify from a graduated subsidy which is similar to the concept of life-line rate on electricity consumption where large commercial and industrial consumers like upmarket resorts and shopping malls in Palawan and Oriental Mindoro may have to pay a higher Subsidized Approved Generation Rate than that of the small consuming residential sector. Moreover, local resource-extractive industries such as logging, mining and quarrying will not be qualified to receive the subsidy.

3. Review of the methodology for determination of the True Cost Generation

Rate (TCGR) and Subsidized Approved Generation Rate (SAGR) for the NPP Program. NPC, together with the member-agencies of the National Power Board, shall review the current computation of SAGR and assess the current rates if they are still reflective of the level of commercial and economic viability of an area and eventually determine if there is already a need to make necessary cost adjustments that will be tailored-fit to the present economic development in SPUG areas.

4. Review of the methodology for determination of the Full Cost Retail Rate (FCRR) and Subsidized Approved Retail Rate (SARR) for the QTP Program. In line with the on-going review of the QTP Circular (DC2005-12-011), NPC and DOE, in coordination and consultation with ERC, will commence a review of the current computation scheme of the FCRR and SARR to identify acceptable benchmarks with the end in view of reducing the burden on UC-ME.

5. Review of the manner of implementation of cash generation-based incentive for Renewable Energy Developers as provided for in Republic Act No. 9513 in the context of the purpose of UC-ME as a subsidy to consumers in off-grid areas. In coordination with ERC and PSALM, DOE will commence a review in order to recommend improvements in the implementation scheme of RE Cash Incentive in missionary areas which is chargeable to the UC-ME.

6. Interconnection of SPUG islands to the main grids of Luzon, Visayas and Mindanao or among adjacent island grids. NPC, National Transmission Corporation (Transco) and National Grid Corporation of the Philippines (NGCP) will conduct a joint study that will determine the feasibility of the grid interconnection of SPUG islands (either to the main grids or among island grids). The Power Sector Assets and Liabilities Management (PSALM) will be consulted on the possible use of UC-ME to finance such interconnection or subsidize a portion of its required cost. This study will also consider projects that were already included and to be included in the Transmission Development Plan of NGCP.

7. Effective Targeting of New Areas to be served or taken over by NPC-SPUG. As policy, areas waived by the EC are best served by the QTPs to avoid the additional capital expenditure to be borne by the Government if served by NPC-SPUG. Thus, the DOE, in coordination with NEA and NPC-SPUG, shall develop the necessary guidelines in targeting new areas that are best served by NPC-SPUG which shall only include those waived areas with no interested QTP and other possible interventions.

To ensure greater transparency of rates and charges in Missionary Areas, the ERC is also enjoined to itemize the UC-ME, broken down into NPC-SPUG operations, expansions and subsidies for NPPs and QTPs.

5.4. Missionary Electrification Plan

NPC-SPUG annually updates its Missionary Electrification Plan where it outlines corresponding schedules for capacity addition, increase in operating hours, and transmission line and substation projects. It also lists down new areas that will be supplied by NPC-SPUG as well as information on the utilization and future requirements of UC-ME.

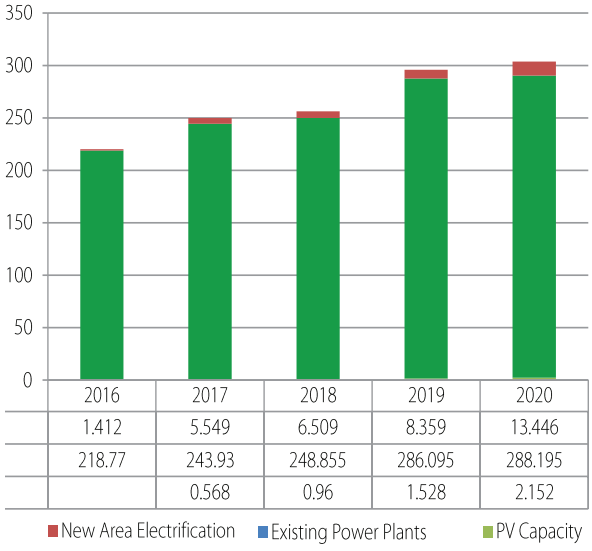


Figure 21. NPC-SPUG Installed Capacity, 2016-2020

Table 36. Capacity Addition of Existing NPC-SPUG Power Plants, 2016-2020

Area	2016	2017	2018	2019	2020
Luzon	**15.30**	**4.440**	**1.33**	**5.145**	**1.45**
Northern and Central Luzon	2.10	-	-	1.265	-
CALABARZON	3.70	-	-	1.20	-
MIMAROPA	9.00	4.30	0.90	2.10	0.50
Bicol Area	0.50	0.14	0.43	0.58	0.95
Visayas	**8.79**	**0.72**	**-**	**1.56**	**0.65**
Eastern Visayas	5.21	-	-	0.72	0.50
Central Visayas	2.23	0.72	-	0.76	0.12
Western Visayas	1.35	-	-	0.08	0.03
Mindanao	**13.15**	**20.00**	**3.60**	**6.00**	**-**
Eastern and Central Mindanao	5.30	6.00	-	1.00	-
Western Mindanao	7.85	14.00	3.60	5.00	-
TOTAL	**7.24**	**25.16**	**4.93**	**12.71**	**2.10**

5.4.1.Capacity Addition

Figure 21 shows the total cumulative installed capacity of NPC-SPUG power plants for 2016 to 2020. The increase in capacity is affected by capacity additions in existing areas, installation of solar power resources and electrification of new areas.

a. Existing NPC-SPUG Areas

For 2016-2020, NPC-SPUG has scheduled the necessary capacity addition to meet the increasing demand of its existing service areas as well as to replace inefficient generating units.

As shown in Table 36, a total of 37.25 MW is scheduled to be added in 2016. At the

end of 2020, a grand total of 82.13 MW is expected to be installed to augment the capacity of NPC.

b. Renewable Energy Resources

Utilization of renewable energy resources is seen to be a possible means to lower the subsidy level in missionary areas. Also, RE penetration may also increase the operating hours in certain areas. NPC will endeavor to hybridize the power supply of at least 27 existing SIIGs between 2017 and 2021.

Table 37. NPC Renewable Energy Projects, 2017-2021

Area	No. of SIIGs	PV Capacity Addition, kW				
		2017	2018	2019	2020	2021
Luzon	10	-	104	296	128	544
Visayas	9	568	216	72	128	-
Mindanao	8	-	72	200	368	-
Total	**27**	**568**	**392**	**568**	**624**	**544**

c. Electrification of New Areas

As stated in Section 5(c) of DOE DC2004-01-001, NPC-SPUG should ensure that new missionary areas are served effectively in the event that no QTP is willing to serve the area. In view of this, NPC-SPUG continues to extend its services in line with its function to support missionary electrification.

Table 38. NPC-SPUG New Areas, 2017-2021

Area	No. of New Areas	Capacity Addition, MW				
		2016	2017	2018	2019	2020
New Areas for 2016						
Luzon	1	0.090	-	-	0.100	-
Visayas	14	0.990	-	-	0.600	0.140
Mindanao	6	0.332	-	-	0.020	0.140
New Areas for 2017						
Luzon	26		3.205	-	-	3.210
Visayas	14		0.452	-	-	0.450
Mindanao	5		0.480	-	-	0.380
New Areas for 2018						
Luzon	9			0.640	-	-
Visayas	4			0.320	-	-
Mindanao	0			-	-	-
New Areas for 2019						
Luzon	10				0.670	-
Visayas	10				0.460	-
Mindanao	0				-	-
New Areas for 2020						
Luzon	12					0.590
Visayas	5					0.130
Mindanao	0					-

Table 38 summarizes the number of new areas identified by NPC-SPUG for corresponding capacity addition.

5.4.2. Increase in Operating Hours

To gradually achieve its objective of rendering 24-hour service in existing SIIGs, NPC-SPUG has already scheduled corresponding increase in

operating hours from 2016 to 2020. Table 39 shows the percentage breakdown of NPC-SPUG's service by operating hours from 2016 to 2020, including the proposed new areas.

Table 39. NPC-SPUG Operating Hours, 2016-2010

Operating Hours	2016	2017	2018	2019	2020
17-24	33	33	33	67	67
9-16	34	34	34	58	58
4-8	237	280	293	255	272
No. of Plants	302	347	360	380	397

5.4.3. Investment Requirements

Under Section 70 of the EPIRA, the missionary electrification function of NPC is funded from the revenues from sales in missionary areas from the universal charge (UCME). It is collected from electricity end-users. Aside from UC-ME, NPC also utilizes its Internal Cash Generated (ICG) and allocated budget from the General Appropriations Act (GAA) to undertake necessary operational improvements and capital outlay.

From the 2016-2020 MEP of the NPC, it has estimated that the required generation capacity addition/replacement to meet the projected demand in all missionary areas covered by NPC-SPUG for the total of those 5 years will require an investment cost of P10.759 billion.

On the other hand, 69KV transmission line and substation projects and other improvements on existing facilities still for the total of those 5 years will require an estimated total investment of P12.565 billion.

Table 43 further breaks down the Capitalized Expenses of NPC-SPUG for 2016 which will be funded through its ICG and National Government (NG) subsidy.

All in all, the total CAPEX requirement of NPC-SPUG is estimated at P5.815 billion for 2016.

On the other hand, the UC-ME application for 2016-2020 of NPC-SPUG will include the projected subsidy requirements of NPC-SPUG plants, NPPs, QTPs, and the incentive for NPP-renewable energy (RE) developer.

Table 40. 2016 Capitalized Expenses of NPC-SPUG

Particular	Estimated Cost, In Million Pesos
Capacity Addition	1,534.61
Transmission Line and Substation Projects	2,319.24
Other Improvements (Plant Operations, Existing Facilities, General Plant Equipment)	1,949.95
ROW Acquisition	12.15
TOTAL	**5,815.97**

Table 41. Missionary Electrification Subsidy Requirements, 2016-2020

PARTICULAR	In Million Pesos (PHP)					
	2016	2017	2018	2019	2020	2016-2020 (TOTAL)
UCME for SPUG (Operating Subsidy)	8,293.87	9,514.49	10,937.9	12,350.93	14,133.71	55,230.90
Total UCME for NPP / QTP (Delegated NPC-SPUG Areas)	3,242.96	3,682.85	4,031.51	4,395.42	4,761.19	20,113.93
RE Incentives	274.41	313.98	360.18	405.01	462.03	1,815.61
Total UC-ME Requirement	11,811.24	13,511.32	15,329.59	17,151.36	19,356.93	77,160.44
Capital Subsidy Requirements	5,815.97	6,339.84	7,165.50	7,926.47	9,016.66	36,264.44
TOTAL	**17,627.21**	**19,851.16**	**22,495.09**	**25,077.8**	**28,373.59**	**113,424.85**

Table 42. UC-ME Requirements Per Area Cluster, 2016-2020

Area	In Million Pesos (PHP)					
	2016	2017	2018	2019	2020	TOTAL
Large Areas	7,874.40	9,285.15	10,124.20	11,655.93	13,070.45	**52,010.12**
Medium Areas	2,053.42	1,899.97	2,374.88	2,853.58	3,282.49	**12,464.34**
Small A Areas	1,096.90	1,333.86	1,622.16	1,333.35	1,517.54	**6,903.81**
Small B Areas	128.64	140.67	157.62	137.65	154.06	**718.64**
PRES Mini-Grids	213.49	269.03	363.37	321.72	347.72	**1,515.33**
QTP Areas	127.78	149.72	174.32	248.73	276.00	**976.56**
New Areas	42.20	118.94	152.87	195.39	246.63	**756.03**
Areas with RE Investor	274.41	313.98	360.18	405.01	462.03	**1,815.61**
TOTAL	**11,811.24**	**13,511.32**	**15,329.59**	**17,151.36**	**19,356.93**	**77,160.44**

5.4.4. Transmission Projects

One of the functions that remained with NPC at the advent of the EPIRA is the ownership, operations and maintenance of the transmission lines in SPUG areas. To date, NPC-SPUG continues to undertake rehabilitation and/or extension of its transmission lines to help improve the efficiency of the delivery of power supply in SPUG areas.

Table 43. NPC-SPUG Transmission Line Projects as of December 2016

PROJECT NAME	PROVINCE	CKT. KMS.	ESTIMATED COST	CURRENT STATUS AS OF DECEMBER 31, 2016
CATANDUANES				
Virac - San Miguel (SC/ST) 69kV T/L	Catanduanes	15.15	170,570,000.00	On-going ROW Activities 48.94% Accomplishment as December 2016
Codon - Virac 69kV T/L	Catanduanes	31.28	318,767,000.00	100% Accomplishment as of December 2016. But some part of the transmission lines was damaged by Typhoon Nina.
MASBATE				
Rehabilitation of Mobo - Aroroy "1" and "2" 69 kV T/L Project	Masbate	32.59	105,986,000.00	91.52% Accomplishment as of December 2016.
Extension of Mobo- Aroroy 69kV T/L	Masbate	3.17	25,540,000.00	88.16% Accomplishment as of December 2016.
Mobo - Cataingan 69kV T/L SCH. 1	Masbate	34.00	121,056,000.00	99.05% Accomplishment as of December 2016.
Mobo - Cataingan 69kV T/L SCH. 2	Masbate	42.00	130,569,000.00	96.60% Accomplishment as of December 2016.
MINDORO				
Bansud - Mansalay (SC/SP-CP) 69kV T/L	Oriental Mindoro	64.53	384,135,000.00	80.09% Accomplishment as of December 2016. Under work suspension due to expropriation case and additional concrete and steel poles for rerouting of the transmission lines.
Mansalay - San Jose (SC/SP-CP) 69kV T/L	Oriental & Occidental Mindoro	57.47	465,595,000.00	On-going ROW Activities 67.63% Accomplishment as December 2016
Rehab. Of Calapan -Bansud 69kV T/L Sch. 1	Oriental Mindoro	44.00	318,733,000.00	For Contract Award as of December 2016
Rehab. Of Calapan -Bansud 69kV T/L Sch. 2	Oriental Mindoro	42.00	284,080,000.00	On-going review/updating of Tender Documents
Rehab. of Calapan - Minolo, Puerto Galera 69 kV T/L	Oriental Mindoro	41.00	354,828,000.00	For Contract Award as of December 2016
Rehab. of Minolo - Mamburao 69 kV T/L	Oriental Mindoro	40.00	272,000,000.00	For Submission of As Built Plan to commence Pre-Construction Activity
PALAWAN				
Roxas - Taytay (SC/SP) 69kV T/L Sch. 1	Palawan	35.1	303,074,000.00	On-going ROW Activities 37.50% and Parcellary Survey 98.78% Accomplishment as December 2016
Roxas - Taytay (SC/SP) 69kV T/L Sch.2	Palawan	36.2	300,536,000.00	On-going Parcellary Survey 98.78% Accomplishment as of December 2016
Taytay - El Nido 69kV T/L (SC/SP)	Palawan	60.9	693,000,000.00	On-going Investigation (route)/Parcellary Survey 99% Accomplishment as December 2016
Abo-Abo Switching Stn. - Quezon 69kV T/L (SC/SP)	Palawan	18.00	209,000,000.00	On-going Investigation (route)/Parcellary Survey 97.68% Accomplishment as December 2016
Quezon - Rizal 69kV T/L	Palawan	60.00	627,000,000.00	On-going Investigation (route)/Parcellary Survey 97.68% Accomplishment as December 2016
Alimanguan Switching Stn.- New Agutaya, San Vicente 69kV T/L	Palawan	20.00	231,000,000.00	On-going Investigation (route)/Parcellary Survey 70.87% Accomplishment as December 2016
Brooke's Pt. - Bataraza 69kV T/L (SC/SP)	Palawan	28.00	352,000,000.00	Pre-Construction Activities to commence CY2018

5.5. Transmission Development Plan

The Transmission Development Plan (TDP) is prepared by the National Grid Corporation of the Philippines (NGCP) and submitted to DOE for approval and integration in the Power Development Plan (PDP) and Philippine Energy Plan (PEP). The 2014-2015 TDP serves as the reference plan in the Fourth Regulatory Period (2016-2020) reset application of NGCP. It outlines the planned projects which are required to address the system needs for 2016-2025.

Project Prioritization of the TDP is generally based on the ranking of its identified project drivers which include Island Interconnection which refers to new interconnection facilities to link island and isolated grids. The projects which will graduate certain areas from missionary electrification are Batangas-Mindoro Interconnection Project which is targeted to be completed in 2022 and Tacurong-Kalamansig Interconnection project which is targeted to be completed in 2019.

The importance of putting these projects into radar directly relates to the planning being conducted by NPC-SPUG in determining its UC-ME requirements and rationalization of the allocation of its resources. In the event that an Island grid becomes connected to the main grid wherein NGCP is currently the System Operator, NPC-SPUG will reflect the changes it will incur in the allocation of UC-ME.

While existing regulations imply that once a missionary area graduates from receiving government subsidy once it becomes connected to the main grid, it is appropriate for NPC-SPUG to have commenced the necessary study and adjustments in preparation of the implementation of any proposed island interconnection project provided in the TDP.

5.5.1. Batangas-Mindoro Interconnection Project (BMIP)

According to the 2014-2015 TDP, further generation capacity additions within Mindoro Island would still be required to satisfy the short and medium-term power supply requirements of the area. This is in line with the 2014-2015 TDP which provides the timeline for the implementation of BMIP.

In the 2015-15 TDP, the NGCP conducted a transmission line route investigation including the identification of the possible cable terminal stations (CTS) at Batangas and Mindoro side. The investigation showed that the substation in Luzon Grid that may usher the connection point given the proposed interconnection profile is the Batangas Substation in Barangay Mahabang Para, Batangas City currently serving both the Batangas II Electric Cooperative, Inc. (BATELEC II) and Manila Electric Company (MERALCO).

Based from assessment, the 230 KV receiving-end substation (RES) of the interconnection project in Mindoro should be situated adjacent to the 69

kV substation in barangay Canubing (Simaron), Calapan City. This has been identified given the consideration that the NPC-owned Calapan 69 kV substation is the major bulk power delivery point

Reference: 2014-2015 Transmission Development Plan

to Mindoro Island.

A thorough hydrographic survey is yet to be conducted but NGCP identified routes where the submarine power cables can be laid from. Initial assessment shows that the cables may be laid from Barangay Soloc, Lobo in Batangas City to Barangay Mahal na Pangalan, Calapan in Oriental Mindoro across the Isla Verde that is located in the Sulu-Sulaweso Seascape, a Marine Biodiversity Conservation Corridor.

Retaining the in-land generators is deemed necessary to continuously provide voltage regulation support. In the long run, a 230 kV backbone system is envisioned to be developed within Mindoro Island and a loop to Panay Island that will provide another route for the Luzon and Visayas connection.

Major Project Components:

- Batangas–Lobo CTS 230 kV T/L, ST-DC 1-795 MCM ACSR, 45 km;
- Lobo CTS-Mahal na Pangalan CTS 230 kV Submarine Cable, 4-1000 mm2 XLPE, 25 km;
- Mahal na Pangalan CTS-Calapan 230 kV T/L, ST-DC 1-795 MCM ACSR, 6 km;
- Batangas S/S Expansion: 1-138 kV PCB and associated equipment;
- Lobo CTS: 3-230 kV PCB, 2-30 MVAR 230 kV Shunt Reactors and associated protection equipment;
- Mahal na Pangalan CTS: 3-230 kV PCB, 2-30 MVAR 230 kV Shunt Reactors and associated protection equipment; and
- Calapan 230 kV S/S: 2-100 MVA, 230/69-13.8 kV Power Transformers, 7-230 kV PCB and 4-69 kV PCB and associated equipment and a 25 MVAR 230 kV Shunt Reactor.

5.5.2. Tacurong-Kalamansig 69kV Transmission Line

According to the 2014-15 TDP, the The Tacurong-Kalamansig Transmission Line project aims to provide grid connection to the to the off-grid municipalities of Bagumbayan, Ninoy Aquino, Lebak and Kalamansig. It gives these municipalities access to a more secured, reliable and efficient power delivery services. This project is expected to be completed in 2019.

Major Project Components:

- **Tacurong-Kalamansig 69kV T/L**, ST-SC, 1-336.4MCM ACSR, 80 km transmission line including Communication System System;
- **Tacurong 69kV S/S**, 1-69kV PCB and associated equipment;
- **Kalamansig 69kV SS**, 1-7.5MVAR 69kV capacitor.

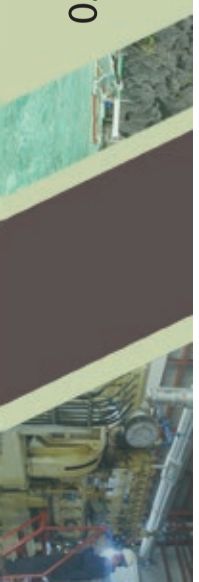
Annexes

Photo Credit:
National Power Corporation

NPC Switching Station in Mansalay, Oriental Mindoro
8.1 MW NPC Diesel Power Plant in Boac, Marinduque

Annex A.
2015 Power Statistics of Small Islands and Isolated Grids (SIIGs)

No.	SIIG	Distribution Service Provider	Service Hrs.	Rated Cap., MW	Dependable Cap., MW	2015 Peak Demand, MW	CLUSTER	Energy Consumption, MWh
LUZON				314.458	241.687	162.911		738,435.493
MARINDUQUE/ QUEZON/ NORTHERN LUZON AREA				***25.022***	***18.874***	***13.911***		***58,792.006***
	MARINDUQUE			**14.723**	**11.594**	**8.595**		**42,850.176**
1	Mainland Marinduque	MARELCO	24	14.422	11.310	8.460	LARGE	42,655.727
2	Maniwaya		8	0.104	0.098	0.044	SMALL A	78.570
3	Mongpong		8	0.104	0.098	0.057	SMALL A	69.878
4	Polo		8	0.092	0.088	0.035	SMALL B	46.001
	QUEZON			**3.206**	**2.084**	**1.704**		**4,408.675**
5	Polilio Island	QUEZELCO II	16	2.360	1.294	1.313	MEDIUM	3,832.806
6	Jomalig		8	0.423	0.390	0.175	SMALL A	242.502
7	Patnanungan		8	0.423	0.400	0.216	SMALL A	333.366
	AURORA/ISABELA			**1.935**	**1.540**	**1.132**		**3,741.496**
8	DICADIDI	AURELCO	24	1.935	1.540	1.132	MEDIUM	3,741.496
	BATANES			**3.097**	**1.880**	**1.710**		**6,637.170**
9	Batan Island	BATANELCO	24	2.445	1.450	1.442	MEDIUM	5,706.258
10	Sabtang		18	0.326	0.130	0.118	SMALL A	415.997
11	Itbayat		18	0.326	0.300	0.150	SMALL A	514.915
	CAGAYAN			**0.655**	**0.450**	**0.276**		**477.149**
12	Calayan	LGU-Calayan	12	0.426	0.240	0.178	SMALL A	357.616
13	Balatubat	NPC	8	0.120	0.110	0.071	SMALL A	77.261
14	Minabel		8	0.109	0.100	0.027	SMALL A	42.272
	APAYAO			**0.643**	**0.600**	**0.190**		**535.176**
15	Kabugao	KAELCO	24	0.643	0.600	0.190	SMALL A	535.176
	ISABELA			**0.763**	**0.726**	**0.304**		**142.164**
16	Maconacon	NPC	8	0.240	0.236	0.104	SMALL A	142.164
17	Palanan	ISELCO II	12	0.523	0.490	0.200	SMALL A	431.870
CATANDUANES/ MASBATE AREA				***53.359***	***43.563***	***28.362***		***116,760.029***
	CATANDUANES			**18.482**	**14.648**	**9.147**		**40,007.425**
18	Catanduanes Grid	FICELCO	24	18.460	14.630	9.128	LARGE	39,984.599
19	Palumbanes		8	0.022	0.018	0.019	SMALL B	22.826
	ALBAY			**2.052**	**1.076**	**0.653**		**987.327**
20	Rapu-Rapu	ALECO/APEC	12	1.426	0.806	0.380	SMALL A	712.246
21	Batan Island		8	0.626	0.270	0.273	SMALL A	275.082



Annex A.
2015 Power Statistics of Small Islands and Isolated Grids (SIIGs) Continued...

No.	SIIG	Distribution Service Provider	Service Hrs.	Rated Cap., MW	Dependable Cap., MW	2015 Peak Demand, MW	CLUSTER	Energy Consumption, MWh
MASBATE				**32.498**	**27.575**	**18.421**		**75,674.276**
22	Masbate Grid	MASELCO	24	26.860	23.200	15.120	LARGE	67,518.174
23	Ticao Island	TISELCO	24	2.100	1.700	1.708	MEDIUM	5,877.558
24	Guinawayan	LGU-Placer	8	0.035	0.035	0.021	SMALL B	37.986
25	Gilotongan	LGU-Cawayan	8	0.090	0.090	0.075	SMALL A	133.979
26	Nabuctot	LGU-Placer	8	0.025	0.025	0.017	SMALL B	40.240
27	Peña	LGU-Cawayan	8	0.090	0.090	0.043	SMALL A	87.665
28	Chico	LGU-Cawayan	8	0.035	0.035	0.023	SMALL B	32.567
29	Burias/San Pascual	LGU-San Pascual	12	1.283	0.630	0.269	SMALL A	487.346
30	Dancalan	LGU-San Pascual	8	0.080	0.065	0.025	SMALL B	27.355
31	Mababangbaybay	LGU-Claveria	8	0.060	0.050	0.022	SMALL B	25.471
32	Malaking Ilog	LGU-San Pascual	8	0.060	0.050	0.023	SMALL B	36.182
33	Osmeña	LGU-Claveria	8	0.080	0.065	0.030	SMALL B	45.964
34	Peñafrancia	LGU-Claveria	8	0.080	0.065	0.027	SMALL B	41.695
35	Quezon	LGU-Claveria	8	0.060	0.050	0.015	SMALL B	21.620
36-188 (153 MGs)	PRES Mini-Grids	NPC	5	1.560	1.425	1.003	PRES	1,260.475
CAMARINES SUR				**0.327**	**0.264**	**0.141**		**91.000**
189	Lahuy	CASURECO IV	4	0.120	0.096	0.048	SMALL B	4.991
190	Haponan		4	0.035	0.030	0.000		0.000
191	Quinalasag		8	0.150	0.120	0.085	SMALL A	30.981
192	Atulayan		6	0.022	0.018	0.008	SMALL A	55.028
MINDORO/ ROMBLON AREA				***141.890***	***106.985***	***71.793***		***334,634.141***
OCCIDENTAL MINDORO				**30.344**	**20.150**	**18.224**		**78,961.820**
193	SAMARICA	OMECO	24	22.500	13.500	17.337	LARGE	75,898.581
194	MAPSA			5.960	5.100		LARGE	
195	Lubang	LUBELCO	24	1.704	1.400	0.835	MEDIUM	3,004.143
196	Cabra		8	0.180	0.150	0.052	SMALL A	59.096
ORIENTAL MINDORO				**81.541**	**66.450**	**42.700**		**199,363.684**
197	Oriental Mindoro Grid	ORMECO	24	81.541	66.450	42.700	LARGE	199,363.684
BATANGAS				**1.183**	**0.675**	**0.680**		**1,197.931**
198	Tingloy	BATELEC II	12	1.183	0.675	0.680	MEDIUM	1,197.931

Annex A.
2015 Power Statistics of Small Islands and Isolated Grids (SIIGs) Continued...

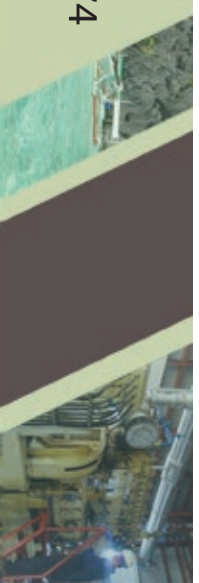
No.	SIIG	Distribution Service Provider	Service Hrs.	Rated Cap., MW	Dependable Cap., MW	2015 Peak Demand, MW	CLUSTER	Energy Consumption, MWh
	ROMBLON			**28.822**	**19.710**	**10.189**		**55,110.706**
199	Tablas Island	TIELCO	24	18.570	13.040	5.628	LARGE	26,117.508
200	San Jose/Carabao Island		12	0.554	0.410	0.321	SMALL A	748.087
201	Romblon Island	ROMELCO	24	5.200	2.820	1.834	LARGE	7,524.786
202	Sibuyan Island		24	3.183	2.410	1.585	MEDIUM	6,126.717
203	Banton	LGU-Banton	8	0.326	0.290	0.216	SMALL A	218.170
204	Corcuera	LGU-Corcuera	16	0.663	0.450	0.380	SMALL A	502.024
205	Concepcion	LGU-Concepcion	8	0.326	0.290	0.225	SMALL A	221.911
PALAWAN AREA				***94.187***	***72.265***	***48.845***		***228,249.317***
	PALAWAN			**94.187**	**72.265**	**48.845**		**228,249.317**
206	Palawan Main Grid	3	24	68.130	50.475	36.900	LARGE	181,129.899
207	Roxas		24	3.630	1.900	1.517	MEDIUM	7,034.746
208	El Nido		24	3.675	3.185	1.843	MEDIUM	7,348.473
209	Taytay		24	1.670	1.480	0.801	MEDIUM	3,704.386
210	San Vicente		24	1.223	0.990	0.555	MEDIUM	2,127.058
211	Rizal		24	0.679	0.570	0.337	MEDIUM	892.038
212	Cuyo		24	2.000	1.600	1.200	MEDIUM	4,712.535
213	Araceli		16	0.586	0.550	0.158	SMALL A	395.482
214	Balabac		8	0.326	0.300	0.170	SMALL A	312.006
215	Cagayancillo		8	0.163	0.160	0.120	SMALL A	170.366
216	Agutaya		8	0.326	0.300	0.098	SMALL A	168.548
217	Busuanga		24	8.644	8.300	3.997	LARGE	15,707.152
218	Culion	BISELCO	24	1.123	0.870	0.470	MEDIUM	1,544.076
219	Linapacan		12	0.322	0.195	0.105	SMALL A	213.167
220	Rio Tuba	PSPI	24	1.690	1.390	0.574	QTP	2,789.385
VISAYAS				**33.714**	**23.842**	**15.738**		**60,678.742**
WESTERN VISAYAS				***28.930***	***19.740***	***13.514***		***56,450.457***
	CEBU			**16.401**	**12.704**	**7.943**		**34,361.439**
221	Guintarcan	BANELCO	8	0.263	0.240	0.089	SMALL A	274.111
222	Doong		8	0.326	0.320	0.171	SMALL A	146.071
223	Bantayan		24	8.838	7.954	4.521	LARGE	22,032.969
224	Camotes Grid	CELCO	24	5.348	2.800	2.517	LARGE	9,400.928
225	Pilar		20	0.576	0.460	0.340	MEDIUM	1,006.562
226	Malapascua	PSPI	24	1.050	0.930	0.305	QTP	1,500.798
	SIQUIJOR			**10.244**	**5.160**	**4.559**		**17,799.810**
227	Siquijor Grid	PROSIELCO	24	10.244	5.160	4.559	LARGE	17,799.810

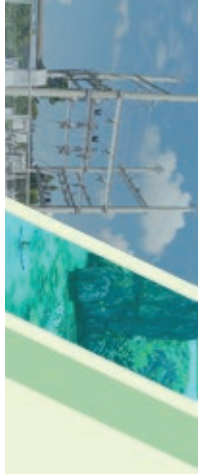
Annex A.
2015 Power Statistics of Small Islands and Isolated Grids (SIIGs) Continued...

No.	SIIG	Distribution Service Provider	Service Hrs.	Rated Cap., MW	Dependable Cap., MW	2015 Peak Demand, MW	CLUSTER	Energy Consumption, MWh
	ILOILO			**0.326**	**0.319**	**0.152**		**231.000**
228	Gigantes	ILECO III	8	0.326	0.319	0.152	SMALL A	231.000
	ANTIQUE			**1.460**	**1.074**	**0.543**		**3,651.416**
229	Caluya	ANTECO	24	1.330	0.947	0.484	MEDIUM	3,582.442
230	Batbatan	NPC	8	0.100	0.098	0.043	SMALL A	51.490
231	Sibolo		6	0.030	0.029	0.016	SMALL B	17.484
	GUIMARAS			**0.036**	**0.035**	**0.023**		**34.843**
232	Guiwanon	NPC	8	0.036	0.035	0.023	SMALL B	34.843
	BOHOL			**0.463**	**0.448**	**0.294**		**371.949**
EASTERN VISAYAS				**4.784**	**4.102**	**2.224**		**4,228.285**
	BILIRAN			**0.476**	**0.466**	**0.211**		**478.743**
245	Maripipi	MMPC	12	0.476	0.466	0.211	SMALL A	478.743
	LEYTE			**0.326**	**0.300**	**0.110**		**342.006**
246	Limasawa	SOLECO	12	0.326	0.300	0.110	SMALL A	342.006
	SAMAR			**2.278**	**1.891**	**0.998**		**1,793.783**
247	Zumarraga	SAMELCO II	24	0.589	0.548	0.324	MEDIUM	915.314
248	Tagapul-an	SAMELCO I	8	0.263	0.160	0.093	SMALL A	128.136
249	Almagro		8	0.263	0.258	0.084	SMALL A	114.099
250	Sto. Niño		8	0.263	0.160	0.098	SMALL A	155.540
251	Costa Rica	NPC	8	0.120	0.118	0.062	SMALL A	82.489
252	Lunang		8	0.180	0.059	0.040	SMALL A	50.396
253	Biasong		8	0.060	0.059	0.023	SMALL B	27.375
254	Cabungaan		8	0.040	0.039	0.024	SMALL B	37.657
255	Ilijan		8	0.040	0.039	0.018	SMALL B	19.096
256	Takut		8	0.100	0.098	0.066	SMALL A	102.651
257	Kirikite		8	0.060	0.059	0.022	SMALL B	27.461
258	Libucan Dacu		6	0.100	0.098	0.065	SMALL B	42.373
259	Bagongon		8	0.060	0.059	0.015	SMALL B	16.739
260	Buluan		6	0.040	0.039	0.009	SMALL B	11.778
261	Cinco Rama		8	0.100	0.098	0.055	SMALL A	62.679
	NORTHERN SAMAR			**1.704**	**1.445**	**0.905**		**1,613.753**
262	Capul	NORSAMELCO	8	0.326	0.319	0.253	SMALL A	331.698
263	San Antonio		18	0.576	0.340	0.265	SMALL A	623.044
264	San Vicente		8	0.263	0.258	0.098	SMALL A	137.329
265	Biri		12	0.489	0.479	0.248	SMALL A	481.997
266	Batag		6	0.050	0.049	0.041	SMALL B	39.685

Annex A.
2015 Power Statistics of Small Islands and Isolated Grids (SIIGs) Continued...

No.	SIIG	Distribution Service Provider	Service Hrs.	Rated Cap., MW	Dependable Cap., MW	2015 Peak Demand, MW	CLUSTER	Energy Consumption, MWh
MINDANAO				57.935	40.021	30.749		108,416.750
WESTERN MINDANAO				***42.923***	***29.380***	***22.985***		***78,733.393***
	BASILAN			**14.029**	**9.740**	**9.000**		**25,918.032**
267	Basilan Grid	BASELCO	24	14.029	9.740	9.000	LARGE	25,918.032
	SULU			**15.985**	**11.910**	**8.615**		**35,240.588**
268	Jolo/Mainland Sulu	SULECO	24	13.800	10.410	7.870	LARGE	32,684.764
269	Luuk		8	0.325	0.140	0.065	SMALL A	
270	Siasi	SIASELCO	24	1.860	1.360	0.680	MEDIUM	2,555.824
	TAWI-TAWI			**12.759**	**7.595**	**5.278**		**17,440.984**
271	Bongao	TAWELCO	24	8.442	4.300	3.520	LARGE	14,369.066
272	Balimbing		16	0.726	0.665	0.155	SMALL A	467.946
273	Tandubas		8	0.150	0.145	0.141	SMALL A	248.600
274	Sibutu		8	0.326	0.140	0.250	SMALL A	304.866
275	Sitangkay		8	0.824	0.650	0.204	SMALL A	297.354
276	Manuk-Mankaw		6	0.163	0.150	0.090	SMALL A	142.447
277	West Simunul		8	0.673	0.615	0.295	SMALL A	465.405
279	Tandubanak		8	0.435	0.290	0.193	SMALL A	248.600
278	Cagayan de Tawi-tawi	CASELCO	8	1.020	0.640	0.430	SMALL A	896.700
	ZAMBOANGA			**0.150**	**0.135**	**0.092**		**133.789**
280	Sacol	ZAMCELCO	8	0.150	0.135	0.092	SMALL A	133.789
EASTERN MINDANAO				***15.012***	***10.641***	***7.764***		***29,683.357***
	DINAGAT			**6.290**	**4.770**	**3.063**		**13,119.326**
281	Dinagat	DIELCO	24	6.290	4.770	3.063	MEDIUM	13,119.326
	SURIGAO DEL NORTE			**0.283**	**0.261**	**0.113**		**380.646**
282	Hikdop	SURNECO	7	0.283	0.261	0.113	SMALL A	380.646
	SULTAN KUDARAT			**7.364**	**4.640**	**4.126**		**15,290.854**
283	Kalamansig	SUKELCO	24	5.820	3.700	3.048	MEDIUM	13,352.442
284	Ninoy Aquino		14	0.846	0.650	0.585	MEDIUM	1,428.914
285	Palimbang		8	0.698	0.290	0.493	SMALL A	509.498
	DAVAO OCCIDENTAL			**0.489**	**0.480**	**0.195**		**351.000**
286	Balut	DASURECO	8	0.489	0.480	0.195	SMALL A	351.000
	DAVAO DEL NORTE			**0.586**	**0.490**	**0.267**		**541.531**
287	Talicud	DANECO	16	0.586	0.490	0.267	SMALL A	541.531
TOTAL				406.107	305.549	209.399		907,530.986



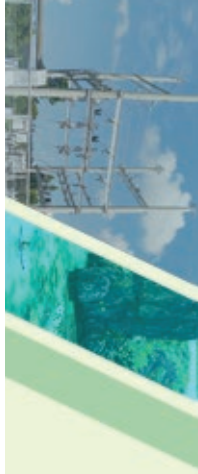


Annex B.1
NPC-SPUG POWER PLANTS as of December 2015

No.	Region	Province	SIIG	Power Plant	Plant Technology	Operating Hours	Rated Cap., MW	Dependable Cap., MW	2015 Gross Generation, MWh	2015 Energy Sales, MWh
1	CAR	Apayao	Kabugao	Kabugao DPP	Oil	24	0.643	0.600	733.594	696.570
2	II	Batanes	Batan Island	Basco DPP	Oil	24	2.445	1.450	6,134.000	5,929.098
3	II	Batanes	Itbayat	Itbayat DPP	Oil	18	0.326	0.300	581.396	545.334
4	II	Batanes	Sabtang	Sabtang DPP	Oil	18	0.326	0.130	457.249	433.759
5	II	Cagayan	Calayan Island	Calayan DPP	Oil	12	0.426	0.240	418.211	357.616
6	II	Cagayan	Balatubat	Balatubat DPP	Oil	8	0.120	0.110	88.239	77.261
7	II	Cagayan	Minabel	Minabel DPP	Oil	8	0.109	0.100	50.184	42.272
8	II	Isabela	Maconacon	Maconacon DPP	Oil	8	0.240	0.236	173.054	142.164
9	II	Isabela	Palanan	Palanan DPP	Oil	12	0.523	0.490	447.879	431.866
10	II/III	Aurora/ Isabela	DiCaDiDi	Casiguran DPP	Oil	24	1.935	1.540	3,644.571	3,238.536
11	IV-A	Batangas	Tingloy	Tingloy DPP	Oil	12	1.183	0.675	1,570.472	1,419.600
12	IV-A	Quezon	Jomalig Island	Jomalig DPP	Oil	8	0.423	0.390	270.475	266.633
13	IV-A	Quezon	Patnanungan Island	Patnanungan DPP	Oil	8	0.423	0.400	372.155	359.874
14	IV-A	Quezon	Polilio Island	Polilio DPP	Oil	16	2.360	1.294	4,834.317	4,439.990
15	IV-B	Occidental Mindoro	Cabra	Cabra DPP	Oil	8	0.180	0.150	67.743	65.758
16	IV-B	Occidental Mindoro	Lubang Island	Lubang DPP	Oil	24	1.704	1.400	3,634.836	3,342.822
17	IV-B	Occidental Mindoro	MAPSA	Mamburao DPP	Oil	24	5.960	5.100	16,323.252	16,178.537
18	IV-B	Occidental Mindoro	SAMARICA	PB 106	Oil	24	7.200	1.000	887.480	571.648
19	IV-B	Occidental Mindoro		Pulang Lupa DPP	Oil	24	15.300	12.500	62,631.426	62,518.638
20	IV-B	Marinduque	Mainland Marinduque	Boac DPP	Oil	24	13.922	10.850	42,735.897	42,623.392
21	IV-B	Marinduque		PB 120	Oil	not operational	0.000	0.000	0.000	0.000
22	IV-B	Marinduque		Torrijos DPP	Oil	24	0.500	0.460	35.885	32.606
23	IV-B	Marinduque	Maniwaya	Maniwaya DPP	Oil	8	0.104	0.098	79.020	78.534
24	IV-B	Marinduque	Mongpong	Mongpong DPP	Oil	8	0.104	0.098	70.137	69.878
25	IV-B	Marinduque	Polo	Polo DPP	Oil	8	0.092	0.088	46.239	46.001
26	IV-B	Palawan	El Nido	El Nido DPP	Oil	24	3.675	3.185	8,484.285	8,186.850

Annex B.1
NPC-SPUG POWER PLANTS as of December 2015 (Continued...)

No.	Region	Province	SIIG	Power Plant	Plant Technology	Operating Hours	Rated Cap., MW	Dependable Cap., MW	2015 Gross Generation, MWh	2015 Energy Sales, MWh
27	IV-B	Palawan	Rizal	Rizal DPP	Oil	16	0.679	0.570	1,064.809	1,032.450
28	IV-B	Palawan	San Vicente	San Vicente DPP	Oil	24	1.223	0.990	2,618.467	2,419.732
29	IV-B	Palawan	Taytay	Taytay DPP	Oil	24	1.670	1.480	4,250.895	4,039.112
30	IV-B	Palawan	Agutaya	Agutaya DPP	Oil	8	0.326	0.300	192.977	187.963
31	IV-B	Palawan	Araceli	Araceli DPP	Oil	16	0.586	0.550	442.626	436.240
32	IV-B	Palawan	Balabac	Balabac DPP	Oil	8	0.326	0.300	351.236	341.720
33	IV-B	Palawan	Cagayancillo	Cagayancillo DPP	Oil	8	0.163	0.160	206.773	200.613
34	IV-B	Palawan	Cuyo Island	Cuyo DPP	Oil	24	2.000	1.600	5,913.590	5,246.780
35	IV-B	Palawan	Culion Island	Culion DPP	Oil	24	1.123	0.870	1,826.844	1,775.913
36	IV-B	Palawan	Linapacan Island	Linapacan DPP	Oil	12	0.322	0.195	285.304	282.653
37	IV-B	Romblon	Romblon Island	Romblon DPP	Oil	24	3.900	2.420	8,396.225	8,302.896
39	IV-B	Romblon		PB 114	Oil	24	1.300	0.400	1,073.166	1,059.386
38	IV-B	Romblon	Sibuyan Island	Sibuyan DPP	Oil	24	2.283	1.510	2,564.540	2,298.744
40	IV-B	Romblon	Banton	Banton DPP	Oil	8	0.326	0.290	265.170	255.472
41	IV-B	Romblon	Concepcion	Concepcion DPP	Oil	8	0.326	0.290	360.710	343.608
42	IV-B	Romblon	Corcuera	Corcuera DPP	Oil	16	0.663	0.450	894.257	817.015
43	IV-B	Romblon	Tablas Island	Tablas DPP	Oil	24	7.870	4.600	18,516.042	18,179.666
44	IV-B	Romblon		PB 109	Oil	24	1.740	1.400	1,882.840	1,863.002
45	IV-B	Romblon	San Jose/Carabao Island	San Jose DPP	Oil	12	0.554	0.410	846.798	821.394
46	V	Albay	Batan Island	Batan DPP	Oil	8	0.626	0.270	351.471	337.161
47	V	Albay	Rapu-Rapu Island	Rapu-Rapu DPP	Oil	12	1.426	0.806	959.276	872.983
48	V	Camarines Sur	Haponan Island	Haponan DPP	Oil	4	0.035	0.030	0.000	0.000
49	V	Camarines Sur	Lahuy Island	Lahuy DPP	Oil	4	0.120	0.096	41.300	40.954
50	V	Camarines Sur	Quinasalag Island	Quinalasag DPP	Oil	8	0.150	0.120	73.300	72.741
51	V	Camarines Sur	Atulayan Island	Atulayan DPP	Oil	6	0.022	0.018	7.245	6.598
52	V	Catanduanes	Mainland Catanduanes	Balongbong MHPP	Hydro	24	1.800	1.800	4,659.382	4,606.988
53	V	Catanduanes		Marinawa DPP	Oil	24	7.340	5.880	11,933.418	11,845.019
54	V	Catanduanes		Viga DPP	Oil	24	2.120	1.510	1,039.311	1,024.396

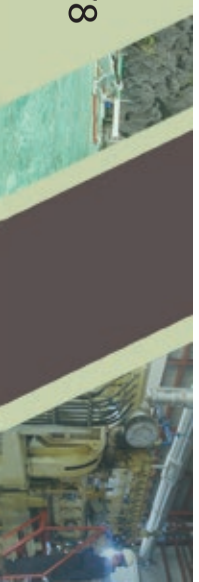


Annex B.1
NPC-SPUG POWER PLANTS as of December 2015 (Continued...)

No.	Region	Province	SIIG	Power Plant	Plant Technology	Operating Hours	Rated Cap., MW	Dependable Cap., MW	2015 Gross Generation, MWh	2015 Energy Sales, MWh
55	V	Catanduanes	Palumbanes Island	Palumbanes DPP	Oil	8	0.022	0.018	23.374	22.826
56	V	Masbate	Burias/San Pascual	Burias DPP	Oil	12	1.283	0.630	496.400	487.346
57	V	Masbate	Dancalan	Dancalan DPP	Oil	8	0.080	0.065	28.259	27.355
58	V	Masbate	Mababangbaybay	Mababangbaybay DPP	Oil	8	0.060	0.050	25.932	25.471
59	V	Masbate	Malaking Ilog	Malaking Ilog DPP	Oil	8	0.060	0.050	37.324	36.182
60	V	Masbate	Osmeña	Osmeña DPP	Oil	8	0.080	0.065	47.226	45.964
61	V	Masbate	Peñafrancia	Penafrancia DPP	Oil	8	0.080	0.065	43.416	41.695
62	V	Masbate	Quezon	Quezon DPP	Oil	8	0.060	0.050	23.079	21.620
63	V	Masbate	Chico Island	Chico DPP	Oil	8	0.035	0.035	32.800	32.567
64	V	Masbate	Gilotongan Island	Gilotongan DPP	Oil	8	0.090	0.090	134.280	133.979
65	V	Masbate	Guin-awayan Island	Guinawayan DPP	Oil	8	0.035	0.035	38.240	37.986
66	V	Masbate	Nabuctot Island	Nabuctot DPP	Oil	8	0.025	0.025	40.442	40.240
67	V	Masbate	Pena Island	Pena DPP	Oil	8	0.090	0.090	87.864	87.665
68	V	Masbate	Aguada (PRES MG)	Aguada	Oil	5	0.012	0.011	12.838	12.838
69	V	Masbate	Alta Vista (PRES MG)	Alta Vista	Oil	5	0.012	0.011	5.936	5.936
70	V	Masbate	Amutag MG1 (PRES MG)	Amutag MG1	Oil	5	0.012	0.012	13.228	13.228
71	V	Masbate	Amutag MG2 (PRES MG)	Amutag MG2	Oil	5	0.012	0.011	7.982	7.982
72	V	Masbate	Baang (PRES MG)	Baang	Oil	5	0.006	0.005	4.370	4.370
73	V	Masbate	Baao (PRES MG)	Baao	Oil	5	0.006	0.005	3.526	3.526
74	V	Masbate	Bacolod/Jamorawon MG3 (PRES MG)	Jamorawon/ Bacolod MG3	Oil	5	0.012	0.011	12.328	12.328
75	V	Masbate	Balawing (PRES MG)	Balawing	Oil	5	0.006	0.005	4.658	4.658
76	V	Masbate	Balete (PRES MG)	Balete	Oil	5	0.012	0.011	10.954	10.954
77	V	Masbate	Bara MG1 (PRES MG)	Bara MG1	Oil	5	0.012	0.011	13.188	13.188
78	V	Masbate	Bara MG2 (PRES MG)	Bara MG2	Oil	5	0.012	0.011	14.503	14.503
79	V	Masbate	Bara MG3 (PRES MG)	Bara MG3	Oil	5	0.012	0.011	12.017	12.017
80	V	Masbate	Bolo MG1 (PRES MG)	Bolo MG1	Oil	5	0.012	0.012	15.681	15.681
81	V	Masbate	Bolo MG2 (PRES MG)	Bolo MG2	Oil	5	0.012	0.011	13.160	13.160

Annex B.1
NPC-SPUG POWER PLANTS as of December 2015 (Continued...)

No.	Region	Province	SIIG	Power Plant	Plant Technology	Operating Hours	Rated Cap., MW	Dependable Cap., MW	2015 Gross Generation, MWh	2015 Energy Sales, MWh
82	V	Masbate	Bolo MG3 (PRES MG)	Bolo MG3	Oil	5	0.012	0.012	17.494	17.494
83	V	Masbate	Bonifacio MG1 (PRES MG)	Bonifacio MG1	Oil	5	0.012	0.011	10.959	10.959
84	V	Masbate	Bonifacio MG2 (PRES MG)	Bonifacio MG2	Oil	5	0.006	0.005	2.334	2.334
85	V	Masbate	Bugtong (Mandaon) (PRES MG)	Bugtong (Mandaon)	Oil	5	0.012	0.011	11.271	11.271
86	V	Masbate	Bugtong (Pio Corpus) (PRES MG)	Bugtong (Pio Corpus)	Oil	5	0.012	0.012	12.806	12.806
87	V	Masbate	Buracan (PRES MG)	Buracan	Oil	5	0.012	0.011	3.753	3.753
88	V	Masbate	Buri (PRES MG)	Buri	Oil	5	0.012	0.011	12.225	12.225
89	V	Masbate	Cabangcalan (Aroroy) (PRES MG)	Cabangcalan (Aroroy)	Oil	5	0.012	0.011	11.976	11.976
90	V	Masbate	Cabangcalan (Placer) (PRES MG)	Cabangcalan (Placer)	Oil	5	0.012	0.011	5.616	5.616
91	V	Masbate	Cabas-an (PRES MG)	Cabas-an	Oil	5	0.006	0.006	6.938	6.938
92	V	Masbate	Cabayugan MG1 (PRES MG)	Cabayugan MG1	Oil	5	0.012	0.011	7.530	7.530
93	V	Masbate	Cabayugan MG2 (PRES MG)	Cabayugan MG2	Oil	5	0.006	0.005	4.870	4.870
94	V	Masbate	Cagmasoso MG1 (PRES MG)	Cagmasoso MG1	Oil	5	0.012	0.011	12.616	12.616
95	V	Masbate	Calanay MG1 (PRES MG)	Calanay MG1	Oil	5	0.012	0.012	11.439	11.439
96	V	Masbate	Calanay MG2 (PRES MG)	Calanay MG2	Oil	5	0.006	0.000	0.000	0.000
97	V	Masbate	Calasuche (PRES MG)	Calasuche	Oil	5	0.012	0.011	11.492	11.492
98	V	Masbate	Calumpang (Cawayan) (PRES MG)	Calumpang (Cawayan)	Oil	5	0.006	0.005	5.711	5.711
99	V	Masbate	Calumpang (Milagros) (PRES MG)	Calumpang (Milagros)	Oil	5	0.012	0.011	10.775	10.775
100	V	Masbate	Calumpang (Placer) (PRES MG)	Calumpang (Placer)	Oil	5	0.006	0.005	4.905	4.905
101	V	Masbate	Campana (PRES MG)	Campana	Oil	5	0.006	0.000	0.000	0.000
102	V	Masbate	Candelaria MG1 (PRES MG)	Candelaria MG1	Oil	5	0.012	0.011	6.555	6.555
103	V	Masbate	Candelaria MG2 (PRES MG)	Candelaria MG2	Oil	5	0.012	0.011	8.547	8.547
104	V	Masbate	Cantil MG1 (PRES MG)	Cantil MG1	Oil	5	0.012	0.012	17.047	17.047
105	V	Masbate	Cantil MG2 (PRES MG)	Cantil MG2	Oil	5	0.006	0.006	6.491	6.491
106	V	Masbate	Cantil MG3 (PRES MG)	Cantil MG3	Oil	5	0.006	0.006	8.013	8.013
107	V	Masbate	Cantil MG4 (PRES MG)	Cantil MG4	Oil	5	0.006	0.006	7.126	7.126

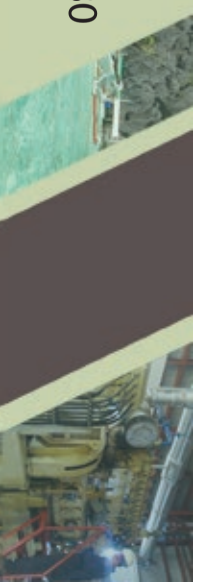


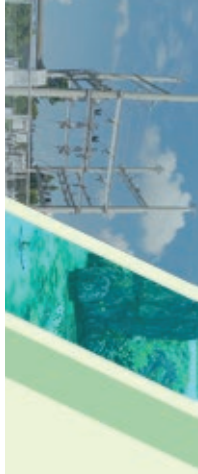
Annex B.1
NPC-SPUG POWER PLANTS as of December 2015 (Continued...)

No.	Region	Province	SIIG	Power Plant	Plant Technology	Operating Hours	Rated Cap., MW	Dependable Cap., MW	2015 Gross Generation, MWh	2015 Energy Sales, MWh
108	V	Masbate	Cawayan Ext. (Bel-at) (PRES MG)	Cawayan Ext. (Bel-at)	Oil	5	0.012	0.011	6.447	6.447
109	V	Masbate	Cawayan Ext. (Pob.) (PRES MG)	Cawayan Ext. (Pob.)	Oil	5	0.012	0.011	10.426	10.426
110	V	Masbate	Concepcion (PRES MG)	Concepcion	Oil	5	0.012	0.011	11.317	11.317
111	V	Masbate	Costa Rica (PRES MG)	Costa Rica	Oil	5	0.012	0.011	11.677	11.677
112	V	Masbate	Danao MG2 (PRES MG)	Danao MG2	Oil	5	0.012	0.011	5.021	5.021
113	V	Masbate	Dayhagan MG1 (PRES MG)	Dayhagan MG1	Oil	5	0.012	0.011	8.433	8.433
114	V	Masbate	Dayhagan MG2 (PRES MG)	Dayhagan MG2	Oil	5	0.006	0.005	0.486	0.486
115	V	Masbate	Diotay (PRES MG)	Diotay	Oil	5	0.012	0.012	15.591	15.591
116	V	Masbate	Docol (PRES MG)	Docol	Oil	5	0.006	0.000	0.000	0.000
117	V	Masbate	Don Pablo (PRES MG)	Don Pablo	Oil	5	0.012	0.011	11.834	11.834
118	V	Masbate	Guiluthangan MG1 (PRES MG)	Guiluthangan MG1	Oil	5	0.012	0.012	14.975	14.975
119	V	Masbate	Guiluthangan MG2 (PRES MG)	Guiluthangan MG2	Oil	5	0.006	0.005	6.216	6.216
120	V	Masbate	Gumahang MG1 (PRES MG)	Gumahang MG1	Oil	5	0.012	0.011	12.733	12.733
121	V	Masbate	Gumahang MG2 (PRES MG)	Gumahang MG2	Oil	5	0.012	0.011	7.467	7.467
122	V	Masbate	Gumahang MG3 (PRES MG)	Gumahang MG3	Oil	5	0.012	0.011	4.213	4.213
123	V	Masbate	Iraya (PRES MG)	Iraya	Oil	5	0.012	0.011	6.663	6.663
124	V	Masbate	Itombato (PRES MG)	Itombato	Oil	5	0.012	0.011	6.252	6.252
125	V	Masbate	Jintotolo MG1 (PRES MG)	Jintotolo MG1	Oil	5	0.012	0.012	17.003	17.003
126	V	Masbate	Jintotolo MG2 (PRES MG)	Jintotolo MG2	Oil	5	0.012	0.011	11.852	11.852
127	V	Masbate	Jintotolo MG3 (PRES MG)	Jintotolo MG3	Oil	5	0.006	0.006	6.708	6.708
128	V	Masbate	Lanang (PRES MG)	Lanang	Oil	5	0.012	0.011	8.552	8.552
129	V	Masbate	Lantangan MG1 (PRES MG)	Lantangan MG1	Oil	5	0.012	0.011	10.156	10.156
130	V	Masbate	Lantangan MG2 (PRES MG)	Lantangan MG2	Oil	5	0.006	0.006	6.367	6.367
131	V	Masbate	Libtong (PRES MG)	Libtong	Oil	5	0.006	0.005	0.733	0.733
132	V	Masbate	Locsoan (PRES MG)	Locsoan	Oil	5	0.012	0.011	13.227	13.227
133	V	Masbate	Looc (PRES MG)	Looc	Oil	5	0.012	0.011	12.133	12.133
134	V	Masbate	Luna MG1 (PRES MG)	Luna MG1	Oil	5	0.012	0.012	13.972	13.972

Annex B.1
NPC-SPUG POWER PLANTS as of December 2015 (Continued...)

No.	Region	Province	SIIG	Power Plant	Plant Technology	Operating Hours	Rated Cap., MW	Dependable Cap., MW	2015 Gross Generation, MWh	2015 Energy Sales, MWh
135	V	Masbate	Luna MG2 (PRES MG)	Luna MG2	Oil	5	0.012	0.011	9.240	9.240
136	V	Masbate	Luna MG3 (PRES MG)	Luna MG3	Oil	5	0.012	0.011	9.527	9.527
137	V	Masbate	Mabuhay (PRES MG)	Mabuhay	Oil	5	0.012	0.011	6.186	6.186
138	V	Masbate	Macabug (PRES MG)	Macabug	Oil	5	0.012	0.011	5.981	5.981
139	V	Masbate	Madamba MG1 (PRES MG)	Madamba MG1	Oil	5	0.012	0.011	10.305	10.305
140	V	Masbate	Madamba MG2 (PRES MG)	Madamba MG2	Oil	5	0.006	0.005	2.450	2.450
141	V	Masbate	Magbalon (PRES MG)	Magbalon	Oil	5	0.012	0.011	8.130	8.130
142	V	Masbate	Magcaraguit MG1 (PRES MG)	Magcaraguit MG1	Oil	5	0.012	0.011	3.150	3.150
143	V	Masbate	Magcaraguit MG2 (PRES MG)	Magcaraguit MG2	Oil	5	0.012	0.011	5.474	5.474
144	V	Masbate	Magcaraguit MG3 (PRES MG)	Magcaraguit MG3	Oil	5	0.012	0.011	6.094	6.094
145	V	Masbate	Magsalangi (PRES MG)	Magsalangi	Oil	5	0.006	0.005	5.233	5.233
146	V	Masbate	Mahayahay (PRES MG)	Mahayahay	Oil	5	0.006	0.005	4.588	4.588
147	V	Masbate	Mariposa (PRES MG)	Mariposa	Oil	5	0.012	0.011	8.121	8.121
148	V	Masbate	Mataba (PRES MG)	Mataba	Oil	5	0.012	0.012	13.747	13.747
149	V	Masbate	Matabao (PRES MG)	Matabao	Oil	5	0.012	0.011	5.346	5.346
150	V	Masbate	Matagbak (PRES MG)	Matagbak	Oil	5	0.012	0.011	10.585	10.585
151	V	Masbate	Matalangtalang (PRES MG)	Matalangtalang	Oil	5	0.012	0.011	12.576	12.576
152	V	Masbate	Matayum MG1 (PRES MG)	Matayum MG1	Oil	5	0.012	0.012	12.762	12.762
153	V	Masbate	Matayum MG2 (PRES MG)	Matayum MG2	Oil	5	0.012	0.011	8.650	8.650
154	V	Masbate	Matayum MG3 (PRES MG)	Matayum MG3	Oil	5	0.006	0.005	4.133	4.133
155	V	Masbate	Matongog MG1 (PRES MG)	Matongog MG1	Oil	5	0.012	0.011	9.635	9.635
156	V	Masbate	Matongog MG2 (PRES MG)	Matongog MG2	Oil	5	0.006	0.005	4.954	4.954
157	V	Masbate	Nadawisan (PRES MG)	Nadawisan	Oil	5	0.006	0.005	3.753	3.753
158	V	Masbate	Nagarao (PRES MG)	Nagarao	Oil	5	0.012	0.011	10.977	10.977
159	V	Masbate	Osmena (PRES MG)	Osmena	Oil	5	0.006	0.005	3.878	3.878
160	V	Masbate	Pamangpangon (PRES MG)	Pamangpangon	Oil	5	0.012	0.011	9.162	9.162
161	V	Masbate	Pananawan MG1 (PRES MG)	Pananawan MG1	Oil	5	0.012	0.011	9.550	9.550
162	V	Masbate	Pananawan MG2 (PRES MG)	Pananawan MG2	Oil	5	0.012	0.011	3.885	3.885



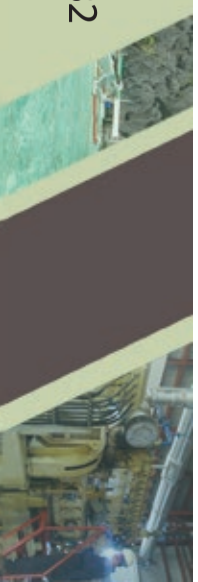


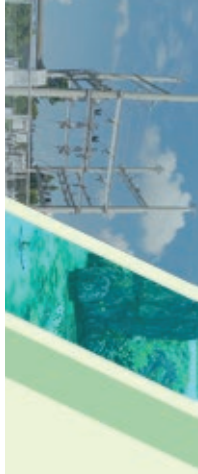
Annex B.1
NPC-SPUG POWER PLANTS as of December 2015 (Continued...)

No.	Region	Province	SIIG	Power Plant	Plant Technology	Operating Hours	Rated Cap., MW	Dependable Cap., MW	2015 Gross Generation, MWh	2015 Energy Sales, MWh
163	V	Masbate	Pangle (PRES MG)	Pangle	Oil	5	0.012	0.011	10.711	10.711
164	V	Masbate	Peña/Cobre Island (PRES MG)	Pena	Oil	5	0.012	0.011	4.967	4.967
165	V	Masbate	Pinanaan (PRES MG)	Pinanaan	Oil	5	0.012	0.011	9.825	9.825
166	V	Masbate	Pitogo MG1 (PRES MG)	Pitogo MG1	Oil	5	0.006	0.005	4.541	4.541
167	V	Masbate	Pitogo MG2 (PRES MG)	Pitogo MG2	Oil	5	0.006	0.005	3.871	3.871
168	V	Masbate	Poblacion/Jamorawon MG1 (PRES MG)	Jamorawon/ Poblacion MG1	Oil	5	0.006	0.005	6.035	6.035
169	V	Masbate	Polo Dacu (PRES MG)	Polo Dacu	Oil	5	0.012	0.011	11.400	11.400
170	V	Masbate	Rizal (PRES MG)	Rizal	Oil	5	0.006	0.006	5.812	5.812
171	V	Masbate	San Agustin MG1 (PRES MG)	San Agustin MG1	Oil	5	0.012	0.012	11.309	11.309
172	V	Masbate	San Agustin MG2 (PRES MG)	San Agustin MG2	Oil	5	0.006	0.005	6.595	6.595
173	V	Masbate	San Andres (PRES MG)	San Andres	Oil	5	0.006	0.006	6.309	6.309
174	V	Masbate	San Antonio MG1 (PRES MG)	San Antonio MG1	Oil	5	0.012	0.011	13.265	13.265
175	V	Masbate	San Antonio MG2 (PRES MG)	San Antonio MG2	Oil	5	0.006	0.006	6.703	6.703
176	V	Masbate	San Antonio (Milagros) (PRES MG)	San Antonio (Milagros)	Oil	5	0.006	0.005	0.449	0.449
177	V	Masbate	San Carlos (PRES MG)	San Carlos	Oil	5	0.012	0.011	3.812	3.812
178	V	Masbate	San Isidro (PRES MG)	San Isidro	Oil	5	0.012	0.011	8.058	8.058
179	V	Masbate	San Jose (PRES MG)	San Jose	Oil	5	0.012	0.011	10.438	10.438
180	V	Masbate	San Rafael (PRES MG)	San Rafael	Oil	5	0.012	0.011	5.122	5.122
181	V	Masbate	San Roque (PRES MG)	San Roque	Oil	5	0.006	0.006	0.181	0.181
182	V	Masbate	San Vicente (PRES MG)	San Vicente	Oil	5	0.012	0.011	7.799	7.799
183	V	Masbate	Sapatos Island (PRES MG)	Sapatos	Oil	5	0.012	0.011	9.673	9.673
184	V	Masbate	Sawang MG1 (PRES MG)	Sawang MG1	Oil	5	0.012	0.011	6.025	6.025
185	V	Masbate	Sawang MG2 (PRES MG)	Sawang MG2	Oil	5	0.006	0.005	6.366	6.366
186	V	Masbate	Sawmill MG1 (PRES MG)	Sawmill MG1	Oil	5	0.006	0.006	7.187	7.187
187	V	Masbate	Sawmill MG2 (PRES MG)	Sawmill MG2	Oil	5	0.006	0.005	5.703	5.703
188	V	Masbate	Sawmill (Mobo) (PRES MG)	Sawmill (Mobo)	Oil	5	0.012	0.011	5.260	5.260
189	V	Masbate	Sorosimbajan MG1 (PRES MG)	Sorosimbajan MG1	Oil	5	0.006	0.006	6.475	6.475

Annex B.1
NPC-SPUG POWER PLANTS as of December 2015 (Continued...)

No.	Region	Province	SIIG	Power Plant	Plant Technology	Operating Hours	Rated Cap., MW	Dependable Cap., MW	2015 Gross Generation, MWh	2015 Energy Sales, MWh
190	V	Masbate	Sorosimbajan MG2 (PRES MG)	Sorosimbajan MG2	Oil	5	0.012	0.011	0.000	0.000
191	V	Masbate	Sto Niño (PRES MG)	Sto Niño	Oil	5	0.012	0.011	8.915	8.915
192	V	Masbate	Syndicate (PRES MG)	Syndicate	Oil	5	0.012	0.012	16.847	16.847
193	V	Masbate	Tagbon (PRES MG)	Tagbon	Oil	5	0.012	0.011	11.517	11.517
194	V	Masbate	Talib MG1 (PRES MG)	Talib MG1	Oil	5	0.012	0.011	7.213	7.213
195	V	Masbate	Talib MG2 (PRES MG)	Talib MG2	Oil	5	0.012	0.011	9.144	9.144
196	V	Masbate	Tan-awan (PRES MG)	Tan-awan	Oil	5	0.012	0.011	8.913	8.913
197	V	Masbate	Tigbao MG1 (Aroroy) (PRES MG)	Tigbao MG1 (Aroroy)	Oil	5	0.012	0.011	12.101	12.101
198	V	Masbate	Tigbao MG1 (Milagros) (PRES MG)	Tigbao MG1 (Milagros)	Oil	5	0.012	0.011	7.493	7.493
199	V	Masbate	Tigbao MG2 (Aroroy) (PRES MG)	Tigbao MG2 (Aroroy)	Oil	5	0.006	0.005	4.535	4.535
200	V	Masbate	Tigbao MG2 (Milagros) (PRES MG)	Tigbao MG2 (Milagros)	Oil	5	0.012	0.012	13.294	13.294
201	V	Masbate	Tigbao MG3 (Aroroy) (PRES MG)	Tigbao MG3 (Aroroy)	Oil	5	0.012	0.011	5.943	5.943
202	V	Masbate	Tigbao MG3 (Milagros) (PRES MG)	Tigbao MG3 (Milagros)	Oil	5	0.006	0.006	6.825	6.825
203	V	Masbate	Tigbao MG4 (Aroroy) (PRES MG)	Tigbao MG4 (Aroroy)	Oil	5	0.006	0.005	4.623	4.623
204	V	Masbate	Tigbao MG4 (Milagros) (PRES MG)	Tigbao MG4 (Milagros)	Oil	5	0.006	0.005	6.416	6.416
205	V	Masbate	Tigbao MG5 (Milagros) (PRES MG)	Tigbao MG5 (Milagros)	Oil	5	0.006	0.005	4.241	4.241
206	V	Masbate	Tinigban MG1 (PRES MG)	Tinigban MG1	Oil	5	0.012	0.011	12.259	12.259
207	V	Masbate	Tinigban MG2 (PRES MG)	Tinigban MG2	Oil	5	0.012	0.012	12.481	12.481
208	V	Masbate	Tinigban MG3 (PRES MG)	Tinigban MG3	Oil	5	0.012	0.012	15.221	15.221
209	V	Masbate	Tinigban MG4 (PRES MG)	Tinigban MG4	Oil	5	0.012	0.011	3.863	3.863
210	V	Masbate	Titong MG1 (PRES MG)	Titong MG1	Oil	5	0.012	0.012	12.837	12.837
211	V	Masbate	Titong MG2 (PRES MG)	Titong MG2	Oil	5	0.012	0.011	10.916	10.916
212	V	Masbate	Tonga (PRES MG)	Tonga	Oil	5	0.012	0.011	6.779	6.779
213	V	Masbate	Tubod/Jamorawon MG4 (PRES MG)	Jamorawon/ Tubod MG4	Oil	5	0.006	0.006	9.446	9.446
214	V	Masbate	Tugbongan/Jamorawon MG2 (PRES MG)	Jamorawon/ Tugbongan MG2	Oil	5	0.012	0.011	8.705	8.705





Annex B.1
NPC-SPUG POWER PLANTS as of December 2015 (Continued...)

No.	Region	Province	SIIG	Power Plant	Plant Technology	Operating Hours	Rated Cap., MW	Dependable Cap., MW	2015 Gross Generation, MWh	2015 Energy Sales, MWh
215	V	Masbate	Tumalaytay MG1 (PRES MG)	Tumalaytay MG1	Oil	5	0.012	0.011	11.575	11.575
216	V	Masbate	Tumalaytay MG2 (PRES MG)	Tumalaytay MG2	Oil	5	0.012	0.011	8.093	8.093
217	V	Masbate	Tumalaytay MG3 (PRES MG)	Tumalaytay MG3	Oil	5	0.006	0.005	5.011	5.011
218	V	Masbate	Ubongan Dacu (PRES MG)	Ubongan Dacu	Oil	5	0.012	0.011	9.124	9.124
219	V	Masbate	Yangco (PRES MG)	Yangco	Oil	5	0.012	0.011	8.865	8.865
220	V	Masbate	Bantigue/Tinago (PRES MG)	Tinago/ Bantigue	Oil	5	0.012	0.012	14.843	14.843
221	V	Masbate	Ticao Island	Ticao DPP	Oil	24	2.100	1.700	7,357.816	7,223.657
222	VI	Antique	Caluya Island	Caluya DPP	Oil	24	1.330	0.947	1,439.578	1,376.365
223	VI	Antique	Batbatan Island	Batbatan DPP	Oil	8	0.100	0.098	57.083	51.490
224	VI	Antique	Sibolo Island	Sibolo DPP	Oil	6	0.030	0.029	19.379	17.484
225	VI	Guimaras	Guiwanon Island	Guiwanon DPP	Oil	8	0.036	0.035	38.668	34.843
226	VI	Iloilo	Gigantes Norte	Gigantes DPP	Oil	8	0.326	0.319	270.192	269.088
227	VII	Bohol	Bagongbanwa Island	Bagongbanwa DPP	Oil	8	0.038	0.037	45.916	45.563
228	VII	Bohol	Balicasag Island	Balicasag DPP	Oil	6	0.038	0.037	50.320	50.044
229	VII	Bohol	Batasan Island	Batasan DPP	Oil	8	0.056	0.055	31.196	30.639
230	VII	Bohol	Bilangbilangan Island	Bilangbilangan DPP	Oil	4	0.020	0.020	8.016	7.961
231	VII	Bohol	Cuaming Island	Cuaming DPP	Oil	8	0.086	0.084	95.162	94.992
232	VII	Bohol	Hambongan Island	Hambongan DPP	Oil	4	0.020	0.020	13.253	13.118
233	VII	Bohol	Mantatao Island	Mantatao DPP	Oil	4	0.038	0.037	21.232	21.125
234	VII	Bohol	Mocaboc Island	Mocaboc DPP	Oil	5	0.020	0.020	15.847	15.581
235	VII	Bohol	Pamilacan Island	Pamilacan DPP	Oil	8	0.056	0.055	71.070	70.972
236	VII	Bohol	Pangapasan Island	Pangapasan DPP	Oil	5	0.015	0.015	16.003	15.922
237	VII	Bohol	Ubay Island	Ubay DPP	Oil	5	0.012	0.012	6.047	5.964
238	VII	Bohol	Cabul-an Island	Cabul-an DPP	Oil	6	0.064	0.056	83.283	82.643
239	VII	Cebu	Camotes Main Grid	Camotes DPP	Oil	24	3.248	1.550	8,547.014	7,849.340
240	VII	Cebu		PB 113	Oil	24	2.100	1.250	2,525.301	2,322.455
241	VII	Cebu	Pilar	Pilar DPP	Oil	20	0.576	0.460	1,123.648	1,089.430
242	VII	Cebu	Doong Island	Doong DPP	Oil	8	0.326	0.320	312.456	295.720

Annex B.1
NPC-SPUG POWER PLANTS as of December 2015 (Continued...)

No.	Region	Province	SIIG	Power Plant	Plant Technology	Operating Hours	Rated Cap., MW	Dependable Cap., MW	2015 Gross Generation, MWh	2015 Energy Sales, MWh
243	VII	Cebu	Kinatarkan Island	Guintarcan DPP	Oil	8	0.263	0.240	182.197	180.177
244	VII	Siquijor	Siquijor	PB 116	Oil	generation taken-over by NPP	2.280	0.000	158.312	152.188
245	VII	Siquijor		Siquijor DPP	Oil		1.500	0.000	1,780.838	1,724.622
246	VIII	Biliran	Maripipi	Maripipi DPP	Oil	12	0.476	0.466	543.616	525.042
247	VIII	Samar	Almagro Island	Almagro DPP	Oil	8	0.263	0.258	157.435	156.741
248	VIII	Northern Samar	Biri	Biri DPP	Oil	12	0.489	0.479	596.928	577.892
249	VIII	Northern Samar	Capul	Capul DPP	Oil	8	0.326	0.319	410.791	394.977
250	VIII	Northern Samar	San Antonio	San Antonio DPP	Oil	18	0.576	0.340	771.608	733.110
251	VIII	Northern Samar	San Vicente	San Vicente DPP	Oil	8	0.263	0.258	170.075	167.078
252	VIII	Northern Samar	Batag Island	Batag DPP	Oil	6	0.050	0.049	49.148	47.370
253	VIII	Samar	Sto. Niño Island	Sto. Niño DPP	Oil	8	0.263	0.160	225.852	224.031
254	VIII	Samar	Tagapul-an Island	Tagapul-an DPP	Oil	8	0.263	0.160	167.088	163.909
255	VIII	Samar	Biasong	Biasong DPP	Oil	8	0.060	0.059	33.844	27.375
256	VIII	Samar	Costa Rica	Costa Rica DPP	Oil	8	0.120	0.118	102.222	82.489
257	VIII	Samar	Kirikite Island	Kirikite DPP	Oil	8	0.060	0.059	33.927	27.461
258	VIII	Samar	Lunang	Lunang DPP	Oil	8	0.180	0.059	62.264	50.396
259	VIII	Samar	Bagongon	Bagongon DPP	Oil	8	0.060	0.059	19.221	16.739
260	VIII	Samar	Buluan	Buluan DPP	Oil	6	0.040	0.039	13.494	11.778
261	VIII	Samar	Cinco Rama	Cinco Rama DPP	Oil	8	0.100	0.098	72.210	62.679
262	VIII	Samar	Ilijan	Ilijan DPP	Oil	8	0.040	0.039	21.477	19.096
263	VIII	Samar	Takut	Takut DPP	Oil	8	0.100	0.098	116.591	102.651
264	VIII	Samar	Cabungaan	Cabungaan DPP	Oil	8	0.040	0.039	42.497	37.657
265	VIII	Samar	Libucan Dacu	Libucan Dacu DPP	Oil	6	0.100	0.098	48.737	42.373
266	VIII	Samar	Zumarraga	Zumarraga DPP	Oil	24	0.589	0.548	1,163.527	1,113.738
267	VIII	Southern Leyte	Limasawa	Limasawa DPP	Oil	12	0.326	0.300	390.166	380.417
268	IX	Zamboanga City	Sacol Island	Sacol DPP	Oil	8	0.150	0.135	174.272	166.941

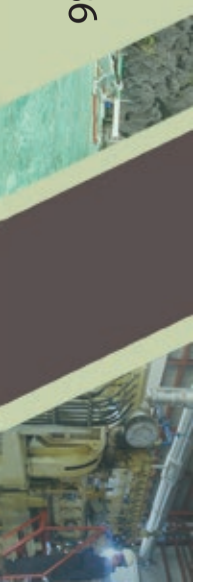
Annex B.1
NPC-SPUG POWER PLANTS as of December 2015 (Continued...)

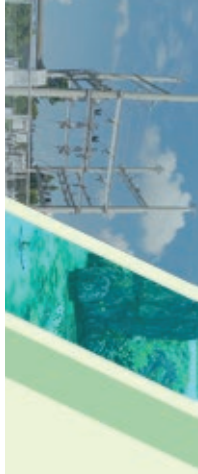
No.	Region	Province	SIIG	Power Plant	Plant Technology	Operating Hours	Rated Cap., MW	Dependable Cap., MW	2015 Gross Generation, MWh	2015 Energy Sales, MWh
269	XI	Davao Occidental	Balut Island	Balut DPP	Oil	8	0.489	0.480	395.211	388.965
270	XI	Davao del Norte	Talicud Island	Talicud DPP	Oil	16	0.586	0.490	683.540	670.523
271	XII	Sultan Kudarat	Lebak-Kalamansig	Kalamansig DPP	Oil	24	5.820	3.700	14,993.721	14,805.798
272	XII	Sultan Kudarat	Sen. Ninoy Aquino	Ninoy Aquino DPP	Oil	14	0.846	0.650	1,559.746	1,503.264
273	XII	Sultan Kudarat	Palimbang	Palimbang DPP	Oil	8	0.698	0.290	566.154	547.770
274	XIII	Dinagat	Dinagat Island	Dinagat DPP	Oil	24	5.790	4.390	14,218.694	13,834.950
275	XIII	Dinagat		Loreto DPP	Oil	24	0.500	0.380	68.823	19.745
276	XIII	Surigao del Norte	Hikdop Island	Hikdop DPP	Oil	7	0.283	0.261	190.547	188.053
277	ARMM	Basilan	Basilan	Basilan DPP	Oil	24	7.959	5.200	21,463.751	21,074.818
278	ARMM	Basilan		PB 119	Oil	24	5.400	3.900	17,327.440	15,885.182
279	ARMM	Sulu	Mainland Sulu/Jolo Island	Jolo DPP	Oil	24	13.800	10.410	48,325.784	47,352.480
280	ARMM	Sulu	Luuk	Luuk DPP	Oil	8	0.325	0.140	56.420	52.956
281	ARMM	Sulu	Siasi Island	Siasi DPP	Oil	24	1.860	1.360	3,232.774	2,845.500
282	ARMM	Tawi-Tawi	Bongao	Bongao DPP	Oil	24	3.042	1.900	10,683.465	10,459.577
283	ARMM	Tawi-Tawi		PB 108	Oil	24	5.400	2.400	9,474.800	8,507.240
284	ARMM	Tawi-Tawi	Cagayan de Tawi-Tawi	Cagayan de Tawi-tawi DPP	Oil	8	1.020	0.640	990.290	896.700
285	ARMM	Tawi-Tawi	Manuk Mankaw Island	Manuk-Mankaw DPP	Oil	6	0.163	0.150	192.880	188.027
286	ARMM	Tawi-Tawi	Panglima Sugala	Balimbing DPP	Oil	16	0.726	0.665	659.907	617.677
287	ARMM	Tawi-Tawi	Sibutu	Sibutu DPP	Oil	8	0.326	0.140	417.700	402.416
288	ARMM	Tawi-Tawi	Sitangkai Island	Sitangkay DPP	Oil	8	0.824	0.650	402.983	392.500
289	ARMM	Tawi-Tawi	Tandu Banak	Tandubanak DPP	Oil	8	0.435	0.290	335.400	328.146
290	ARMM	Tawi-Tawi	Tandubas Island	Tandubas DPP	Oil	8	0.150	0.145	259.995	254.318
291	ARMM	Tawi-Tawi	West Simunul	West Simunul DPP	Oil	8	0.673	0.615	635.097	614.323
TOTAL							**181.530**	**125.771**	**404,913.856**	**393,124.896**

Annex B.2
NPP/IPP Power Plants as of December 2015

No.	Region	Province	SIIG	Power Provider	Plant Technology	Rated Cap., MW	Dependable Cap., MW	2015 Gross Generation, MWh	2015 Energy Sales, MWh
1	IV-B	Oriental Mindoro	Oriental Mindoro	Power One Corporation	Oil	15.300	12.400	52,335.319	48,702.024
2	IV-B	Oriental Mindoro	Oriental Mindoro	Ormin Power, Inc.	Oil	9.600	8.400	45,031.441	43,365.420
3	IV-B	Oriental Mindoro	Oriental Mindoro	GBH Power Resources, Inc.	Oil	7.500	5.500	33,344.690	28,851.420
4	IV-B	Oriental Mindoro	Oriental Mindoro	Mindoro Grid Corporation (Bansud)	Oil	15.000	10.200	27,016.991	25,502.601
5	IV-B	Oriental Mindoro	Oriental Mindoro	Mindoro Grid Corporation (Bongabong)	Oil	11.866	7.750	24,901.390	23,175.400
6	IV-B	Oriental Mindoro	Oriental Mindoro	DMCI Power Corporation	Oil	15.500	15.500	46,007.703	33,388.456
7	IV-B	Palawan	Palawan Main Grid	Palawan Power Generation, Inc. (Puerto Princesa)	Oil	14.000	9.000	45,199.975	41,896.641
8	IV-B	Palawan	Palawan Main Grid	Palawan Power Generation, Inc. (Narra)	Oil	5.000	4.500	29,929.200	27,688.970
9	IV-B	Palawan	Palawan Main Grid	Delta P, Inc.	Oil	16.000	12.460	67,865.180	65,380.672
10	IV-B	Palawan	Palawan Main Grid	DMCI Power Corporation (Irawan)	Oil	27.190	20.115	63,338.142	63,319.942
11	IV-B	Palawan	Palawan Main Grid	DMCI Power Corporation (Brooke's Point)*	Oil	2.190	1.850	188.440	187.600
12	IV-B	Palawan	Palawan Main Grid	DMCI Power Corporation (Aborlan)*	Oil	2.510	1.700	3,596.600	3,572.800
13	IV-B	Palawan	Palawan Main Grid	DMCI Power Corporation (Quezon)*	Oil	1.240	0.850	3,184.650	3,155.250
14	IV-B	Palawan	Roxas	DMCI Power Corporation (Roxas)	Oil	3.630	1.900	7,838.950	7,838.950
15	IV-B	Palawan	Busuanga Island	Calamian Island Power Corporation (Coron)	Oil	7.734	7.500	18,420.366	16,917.921
16	IV-B	Palawan	Busuanga Island	Calamian Island Power Corporation (Busuanga)	Oil	0.910	0.800	1,217.294	1,193.006
17	IV-B	Romblon	Tablas Island	SUWECO Tablas Energy Corporation	Oil	8.960	7.040	7,776.171	7,574.830
18	V	Catanduanes	Catanduanes Grid	Catanduanes Power Generation, Inc.	Oil	3.600	2.880	18,935.448	17,802.848
19	V	Catanduanes	Catanduanes Grid	Sunwest Water and Electric Company, Inc. (Hitoma 01)	Hydro	1.500	0.800	4,797.695	4,721.305
20	V	Catanduanes	Catanduanes Grid	Sunwest Water and Electric Company, Inc. (Solong)	Hydro	2.100	1.760	6,437.400	6,302.800
21	V	Masbate	Masbate Main Grid	DMCI Masbate Power Corporation	Oil	26.860	23.200	88,092.684	85,571.507
22	VII	Cebu	Bantayan Island	Bantayan Island Power Corporation	Oil	8.838	7.954	25,097.972	24,070.940
23	VII	Siquijor	Siquijor	S.I. Power Corporation (Siquijor)	Oil	3.232	2.580	10,546.155	9,703.560
24	VII	Siquijor	Siquijor	S.I. Power Corporation (Lazi)	Oil	3.232	2.580	7,944.103	7,143.131
TOTAL						**213.492**	**169.219**	**639,043.959**	**597,027.994**

* satellite plant





Annex B.3
Utility-Owned Power Plants

No.	Region	Province	SIIG	Distribution Utility	Power Plant	Plant Technology	Rated Cap., MW	Dependable Cap., MW	2015 Gross Generation, MWh	2015 Energy Sales, MWh
1	IV-B	Oriental Mindoro	Oriental Mindoro	Oriental Mindoro Electric Cooperative, Inc.	Dulangan MHPP (damaged by Typhoon Nona)	Hydro	1.6	1.6	8,490.65	8,453.10
2	IV-B	Oriental Mindoro	Oriental Mindoro	Oriental Mindoro Electric Cooperative, Inc.	Linao-Cawayan MHPP (Lower Cascade)	Hydro	2.175	2.1	5,627.68	5,626.02
3	IV-B	Oriental Mindoro	Oriental Mindoro	Oriental Mindoro Electric Cooperative, Inc.	Linao-Cawayan MHPP (Upper Cascade)	Hydro	3	3	6,354.99	6,244.86
4	IV-B	Romblon	Sibuyan Island	Romblon Electric Cooperative, Inc. / Cantingas Mini-hydro Power Corporation	Cantingas MHPP	Hydro	0.9	0.9	4,878.72	4,712.48
5	ARMM	Basilan	Basilan	Basilan Electric Cooperative, Inc.	Kumalarang MHPP	Hydro	0.67	0.64	578.989	578.989
TOTAL							**8.345**	**8.240**	**25,931.022**	**25,615.448**

Annex B.4
QTP Power Plants

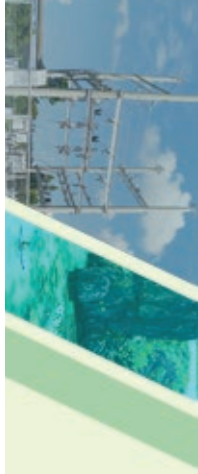
No.	Region	Province	SIIG	QTP	Plant Technology	Rated Cap., MW	Dependable Cap., MW	2015 Gross Generation, MWh	2015 Energy Sales, MWh
1	IV-B	Palawan	Rio Tuba	Powersource Philippines, Inc.	Oil	1.69	1.39	3,264.90	2,789.39
2	VII	Cebu	Malapascua Island	Powersource Philippines, Inc.	Oil	1.05	0.93	1,572.57	1,500.80
TOTAL						**2.740**	**2.320**	**4,837.467**	**4,290.183**

Annex C
NPC-SPUG Plant Use and Losses (PUAL) and Fuel Rate (FR) as of December 2015

Region	Province	SIIG	Power Plant	Plant Technology	PUAL		FR	
					2015 PUAL	Allowable PUAL	2015 FR	Allowable FR
CAR	Apayao	Kabugao	Kabugao DPP	Oil	5.05%	7.43%	0.368	0.332
II	Batanes	Batan Island	Basco DPP	Oil	3.34%	5.30%	0.259	0.300
II	Batanes	Itbayat Island	Itbayat DPP	Oil	6.20%		0.326	
II	Batanes	Sabtang Island	Sabtang DPP	Oil	5.14%		0.352	
II	Cagayan	Calayan Island	Calayan DPP	Oil	14.49%		0.320	
II	Cagayan	Balatubat	Balatubat DPP	Oil	12.44%		0.418	
II	Cagayan	Minabel	Minabel DPP	Oil	15.77%		0.412	
II	Isabela	Maconacon	Maconacon DPP	Oil	17.85%		0.335	
II	Isabela	Palanan	Palanan DPP	Oil	3.58%		0.330	
II/III	Aurora/Isabela	DiCaDiDi	Casiguran DPP	Oil	11.14%	12.84%	0.318	0.300
IV-A	Batangas	Tingloy	Tingloy DPP	Oil	9.61%	10.76%	0.299	0.300
IV-A	Quezon	Jomalig Island	Jomalig DPP	Oil	1.42%		0.335	
IV-A	Quezon	Patnanungan Island	Patnanungan DPP	Oil	3.30%		0.319	
IV-A	Quezon	Polilio Island	Polilio DPP	Oil	8.16%	9.61%	0.301	0.295
IV-B	Occidental Mindoro	Cabra	Cabra DPP	Oil	2.93%		0.460	
IV-B	Occidental Mindoro	Lubang Island	Lubang DPP	Oil	8.03%	10.11%	0.316	0.299
IV-B	Occidental Mindoro	MAPSA	Mamburao DPP	Oil	0.89%	0.26%	0.268	0.289
IV-B	Occidental Mindoro	SAMARICA	PB 106	Oil	35.59%	8.98%	0.293	0.300
IV-B	Occidental Mindoro		Pulang Lupa DPP	Oil	0.18%	0.41%	0.273	0.299
IV-B	Marinduque	Mainland Marinduque	Boac DPP	Oil	0.26%	3.85%	0.274	0.285
IV-B	Marinduque		PB 120	Oil	N/A	6.78%	N/A	0.273
IV-B	Marinduque		Torrijos DPP	Oil	9.14%		0.281	
IV-B	Marinduque	Maniwaya	Maniwaya DPP	Oil	0.62%		0.343	
IV-B	Marinduque	Mongpong	Mongpong DPP	Oil	0.37%		0.342	
IV-B	Marinduque	Polo	Polo DPP	Oil	0.51%		0.388	
IV-B	Palawan	El Nido	El Nido DPP	Oil	3.51%	5.91%	0.283	0.296

Annex C
NPC-SPUG Plant Use and Losses (PUAL) and Fuel Rate (FR) as of December 2015 (Continued...)

Region	Province	SIIG	Power Plant	Plant Technology	PUAL		FR	
					2015 PUAL	Allowable PUAL	2015 FR	Allowable FR
IV-B	Palawan	Rizal	Rizal DPP	Oil	3.04%		0.322	
IV-B	Palawan	San Vicente	San Vicente DPP	Oil	7.59%	8.87%	0.296	0.297
IV-B	Palawan	Taytay	Taytay DPP	Oil	4.98%	9.44%	0.278	0.300
IV-B	Palawan	Agutaya	Agutaya DPP	Oil	2.60%		0.387	
IV-B	Palawan	Araceli	Araceli DPP	Oil	1.44%		0.319	
IV-B	Palawan	Balabac	Balabac DPP	Oil	2.71%		0.325	
IV-B	Palawan	Cagayancillo	Cagayancillo DPP	Oil	2.98%		0.325	
IV-B	Palawan	Cuyo Island	Cuyo DPP	Oil	11.28%	10.59%	0.295	0.300
IV-B	Palawan	Culion Island	Culion DPP	Oil	2.79%	2.64%	0.317	0.300
IV-B	Palawan	Linapacan Island	Linapacan DPP	Oil	0.93%		0.362	
IV-B	Romblon	Romblon Island	Romblon DPP	Oil	1.11%	2.93%	0.274	0.300
IV-B	Romblon		PB 114	Oil	1.28%	1.64%	0.273	0.300
IV-B	Romblon	Sibuyan Island	Sibuyan DPP	Oil	10.36%	14.26%	0.296	0.278
IV-B	Romblon	Banton	Banton DPP	Oil	3.66%		0.369	
IV-B	Romblon	Concepcion	Concepcion DPP	Oil	4.74%		0.359	
IV-B	Romblon	Corcuera	Corcuera DPP	Oil	8.64%	11.05%	0.319	0.300
IV-B	Romblon	Tablas Island	Tablas DPP	Oil	1.82%	3.30%	0.356	0.300
IV-B	Romblon		PB 109	Oil	1.05%	1.59%	0.350	0.300
IV-B	Romblon	San Jose/Carabao Island	San Jose DPP	Oil	3.00%		0.326	
V	Albay	Batan Island	Batan DPP	Oil	4.07%		0.311	
V	Albay	Rapu-Rapu Island	Rapu-Rapu DPP	Oil	9.00%	12.84%	0.312	0.300
V	Camarines Sur	Haponan Island	Haponan DPP	Oil	N/A		N/A	
V	Camarines Sur	Lahuy Island	Lahuy DPP	Oil	0.84%		0.352	
V	Camarines Sur	Quinasalag Island	Quinalasag DPP	Oil	0.76%		0.386	
V	Camarines Sur	Atulayan Island	Atulayan DPP	Oil	8.93%		1.029	
V	Masbate	Burias/San Pascual	Burias DPP	Oil	1.82%		0.304	
V	Masbate	Dancalan	Dancalan DPP	Oil	3.20%		0.516	
V	Masbate	Mababangbaybay	Mababangbaybay DPP	Oil	1.78%		0.424	



Annex C
NPC-SPUG Plant Use and Losses (PUAL) and Fuel Rate (FR) as of December 2015 (Continued...)

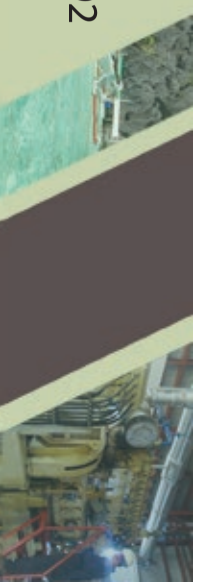
Region	Province	SIIG	Power Plant	Plant Technology	PUAL		FR	
					2015 PUAL	Allowable PUAL	2015 FR	Allowable FR
V	Masbate	Malaking Ilog	Malaking Ilog DPP	Oil	3.06%		0.403	
V	Masbate	Osmeña	Osmeña DPP	Oil	2.67%		0.409	
V	Masbate	Peñafrancia	Penafrancia DPP	Oil	3.96%		0.432	
V	Masbate	Quezon	Quezon DPP	Oil	6.32%		0.590	
V	Masbate	Mainland Catanduanes	Balongbong MHPP	Hydro	1.12%	1.18%	N/A	N/A
V	Masbate		Marinawa DPP	Oil	0.74%	1.38%	0.274	0.283
V	Masbate		Viga DPP	Oil	1.44%		0.295	
V	Masbate	Palumbanes Island	Palumbanes DPP	Oil	2.34%		0.479	
V	Masbate	Chico Island	Chico DPP	Oil	0.71%		0.495	
V	Masbate	Gilotongan Island	Gilotongan DPP	Oil	0.22%		0.342	
V	Masbate	Guin-awayan Island	Guinawayan DPP	Oil	0.66%		0.471	
V	Masbate	Nabuctot Island	Nabuctot DPP	Oil	0.50%		0.289	
V	Masbate	Pena Island	Pena DPP	Oil	0.23%		0.329	
V	Masbate	Ticao Island	Ticao DPP	Oil	1.82%	2.16%	0.266	0.300
VI	Antique	Caluya Island	Caluya DPP	Oil	4.39%	6.00%	0.304	0.300
VI	Antique	Batbatan Island	Batbatan DPP	Oil	9.80%		0.416	
VI	Antique	Sibolo Island	Sibolo DPP	Oil	9.78%		0.484	
VI	Guimaras	Guiwanon Island	Guiwanon DPP	Oil	9.89%		0.402	
VI	Iloilo	Gigantes Norte	Gigantes DPP	Oil	0.41%		0.329	
VII	Bohol	Bagongbanwa Island	Bagongbanwa DPP	Oil	0.77%		0.405	
VII	Bohol	Balicasag Island	Balicasag DPP	Oil	0.55%		0.351	
VII	Bohol	Batasan Island	Batasan DPP	Oil	1.79%		0.554	
VII	Bohol	Bilangbilangan Island	Bilangbilangan DPP	Oil	0.69%		0.590	
VII	Bohol	Cuaming Island	Cuaming DPP	Oil	0.18%		0.690	
VII	Bohol	Hambongan Island	Hambongan DPP	Oil	1.02%		0.493	
VII	Bohol	Mantatao Island	Mantatao DPP	Oil	0.50%		0.446	
VII	Bohol	Mocaboc Island	Mocaboc DPP	Oil	1.68%		0.559	
VII	Bohol	Pamilacan Island	Pamilacan DPP	Oil	0.14%		0.403	

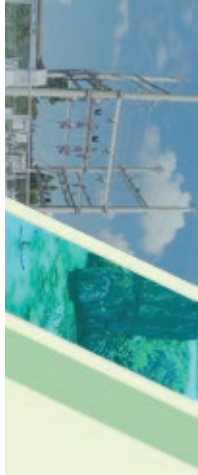
Annex C
NPC-SPUG Plant Use and Losses (PUAL) and Fuel Rate (FR) as of December 2015 (Continued...)

Region	Province	SIIG	Power Plant	Plant Technology	PUAL		FR	
					2015 PUAL	Allowable PUAL	2015 FR	Allowable FR
VII	Bohol	Pangapasan Island	Pangapasan DPP	Oil	0.51%		0.470	
VII	Bohol	Ubay Island	Ubay DPP	Oil	1.37%		0.743	
VII	Bohol	Cabul-an Island	Cabul-an DPP	Oil	0.77%		0.384	
VII	Cebu	Camotes Main Grid	Camotes DPP	Oil	8.16%	7.16%	0.309	0.300
VII	Cebu		PB 113	Oil	8.03%	1.94%	0.319	0.311
VII	Cebu	Pilar	Pilar DPP	Oil	3.05%	5.31%	0.307	0.300
VII	Cebu	Doong Island	Doong DPP	Oil	5.36%		0.343	
VII	Cebu	Kinatarkan Island	Guintarcan DPP	Oil	1.11%		0.323	
VIII	Biliran	Maripipi	Maripipi DPP	Oil	3.42%		0.328	
VIII	Samar	Almagro Island	Almagro DPP	Oil	0.44%		0.328	
VIII	Northern Samar	Biri	Biri DPP	Oil	3.19%		0.379	
VIII	Northern Samar	Capul	Capul DPP	Oil	3.85%		0.328	
VIII	Northern Samar	San Antonio	San Antonio DPP	Oil	4.99%	5.40%	0.316	0.300
VIII	Northern Samar	San Vicente	San Vicente DPP	Oil	7.59%		0.296	
VIII	Northern Samar	Batag Island	Batag DPP	Oil	3.62%		0.371	
VIII	Samar	Sto. Niño Island	Sto. Niño DPP	Oil	0.81%		0.326	
VIII	Samar	Tagapul-an Island	Tagapul-an DPP	Oil	1.90%		0.369	
VIII	Samar	Biasong	Biasong DPP	Oil	19.11%		0.561	
VIII	Samar	Costa Rica	Costa Rica DPP	Oil	19.30%		0.521	
VIII	Samar	Lunang	Lunang DPP	Oil	19.06%		0.474	
VIII	Samar	Kirikite Island	Kirikite DPP	Oil	19.06%		0.766	
VIII	Samar	Bagongon	Bagongon DPP	Oil	12.91%		0.665	
VIII	Samar	Buluan	Buluan DPP	Oil	12.72%		0.714	
VIII	Samar	Cinco Rama	Cinco Rama DPP	Oil	13.20%		0.352	
VIII	Samar	Ilijan	Ilijan DPP	Oil	11.09%		0.646	
VIII	Samar	Takut	Takut DPP	Oil	11.96%		0.391	
VIII	Samar	Cabungaan	Cabungaan DPP	Oil	11.39%		0.430	
VIII	Samar	Libucan Dacu	Libucan Dacu DPP	Oil	13.06%		0.311	

Annex C
NPC-SPUG Plant Use and Losses (PUAL) and Fuel Rate (FR) as of December 2015 (Continued...)

Region	Province	SIIG	Power Plant	Plant Technology	PUAL		FR	
					2015 PUAL	Allowable PUAL	2015 FR	Allowable FR
VIII	Samar	Zumarraga	Zumarraga DPP	Oil	4.28%	3.87%	0.325	0.300
VIII	Southern Leyte	Limasawa	Limasawa DPP	Oil	2.50%		0.326	
IX	Zamboanga City	Sacol Island	Sacol DPP	Oil	4.21%		0.406	
XI	Davao Occidental	Balut Island	Balut DPP	Oil	1.58%		0.307	
XI	Davao del Norte	Talicud Island	Talicud DPP	Oil	1.90%		0.301	
XII	Sultan Kudarat	Lebak-Kalamansig	Kalamansig DPP	Oil	1.25%	12.53%	0.289	0.300
XII	Sultan Kudarat	Sen. Ninoy Aquino	Ninoy Aquino DPP	Oil	3.62%	1.61%	0.309	0.300
XII	Sultan Kudarat	Palimbang	Palimbang DPP	Oil	3.25%		0.343	
XIII	Dinagat	Dinagat Island	Dinagat DPP	Oil	2.70%	6.46%	0.272	0.300
XIII	Dinagat		Loreto DPP	Oil	71.31%	10.63%	0.272	0.300
XIII	Surigao del Norte	Hikdop Island	Hikdop DPP	Oil	1.31%		0.325	
ARMM	Basilan	Basilan	Basilan DPP	Oil	1.81%	0.70%	0.281	0.293
ARMM	Basilan		PB 119	Oil	8.32%	9.85%	0.329	0.300
ARMM	Sulu	Mainland Sulu/Jolo Island	Jolo DPP	Oil	2.01%	1.34%	0.297	0.300
ARMM	Sulu	Luuk	Luuk DPP	Oil	6.14%		0.363	
ARMM	Sulu	Siasi Island	Siasi DPP	Oil	11.98%	7.91%	0.295	0.300
ARMM	Tawi-Tawi	Bongao	Bongao DPP	Oil	2.10%	5.47%	0.280	0.295
ARMM	Tawi-Tawi		PB 108	Oil	10.21%	10.60%	0.309	0.291
ARMM	Tawi-Tawi	Cagayan de Tawi-Tawi	Cagayan de Tawi-tawi DPP	Oil	9.45%		0.310	
ARMM	Tawi-Tawi	Manuk Mankaw Island	Manuk-Mankaw DPP	Oil	2.52%		0.328	
ARMM	Tawi-Tawi	Panglima Sugala	Balimbing DPP	Oil	6.40%		0.295	
ARMM	Tawi-Tawi	Sibutu	Sibutu DPP	Oil	3.66%		0.320	
ARMM	Tawi-Tawi	Sitangkai Island	Sitangkay DPP	Oil	2.60%		0.347	
ARMM	Tawi-Tawi	Tandu Banak	Tandubanak DPP	Oil	2.16%		0.315	
ARMM	Tawi-Tawi	Tandubas Island	Tandubas DPP	Oil	2.18%		0.313	
ARMM	Tawi-Tawi	West Simunul	West Simunul DPP	Oil	3.27%		0.307	





Annex D.1
2015 UC-ME Disbursement to NPPs

No.	Region	Province	SIIG	Power Provider	Plant Technology	2015 Energy Sales, MWh	UC-ME Subsidy, PhP
1	IV-B	Oriental Mindoro	Oriental Mindoro	Power One Corporation	Oil	48,702.024	109,945,637.69
2	IV-B	Oriental Mindoro	Oriental Mindoro	Ormin Power, Inc.	Oil	43,365.420	83,417,054.59
4	IV-B	Oriental Mindoro	Oriental Mindoro	Mindoro Grid Corporation (Calapan/Bansud)	Oil	25,502.601	158,579,637.86
5	IV-B	Oriental Mindoro	Oriental Mindoro	Mindoro Grid Corporation (Bongabong)	Oil	23,175.400	
6	IV-B	Oriental Mindoro	Oriental Mindoro	DMCI Power Corporation	Oil	33,388.456	169,202,145.74
7	IV-B	Palawan	Palawan Main Grid	Palawan Power Generation, Inc. (Puerto Princesa)	Oil	41,896.641	105,942,376.97
8	IV-B	Palawan	Palawan Main Grid	Palawan Power Generation, Inc. (Narra)	Oil	27,688.970	
9	IV-B	Palawan	Palawan Main Grid	Delta P, Inc.	Oil	65,380.672	233,350,584.66
10	IV-B	Palawan	Palawan Main Grid	DMCI Power Corporation (Irawan)	Oil	63,319.942	239,467,993.99
11	IV-B	Palawan	Palawan Main Grid	DMCI Power Corporation (Brooke's Point)*	Oil	187.600	
12	IV-B	Palawan	Palawan Main Grid	DMCI Power Corporation (Aborlan)*	Oil	3,572.800	
13	IV-B	Palawan	Palawan Main Grid	DMCI Power Corporation (Quezon)*	Oil	3,155.250	
14	IV-B	Palawan	Roxas	DMCI Power Corporation (Roxas)	Oil	7,838.950	
15	IV-B	Palawan	Busuanga Island	Calamian Island Power Corporation (Coron)	Oil	16,917.921	151,730,241.57
16	IV-B	Palawan	Busuanga Island	Calamian Island Power Corporation (Busuanga)	Oil	1,193.006	
17	IV-B	Romblon	Tablas Island	SUWECO Tablas Energy Corporation	Oil	7,574.830	27,251,035.94
18	V	Catanduanes	Catanduanes Grid	Catanduanes Power Generation, Inc.	Oil	17,802.848	60,005,817.88
21	V	Masbate	Masbate Main Grid	DMCI Masbate Power Corporation	Oil	85,571.507	533,166,764.55
22	VII	Cebu	Bantayan Island	Bantayan Island Power Corporation	Oil	24,070.940	26,474,231.64
23	VII	Siquijor	Siquijor	S.I. Power Corporation (Siquijor)	Oil	9,703.560	75,077,584.91
24	VII	Siquijor	Siquijor	S.I. Power Corporation (Lazi)	Oil	7,143.131	
						557,152.469	**1,973,611,107.99**

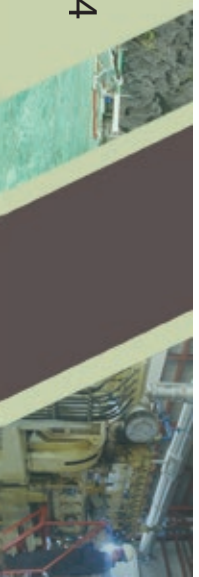
Annex D.2
2015 UC-ME Disbursement to QTPs

No.	Region	Province	SIIG	QTP	Plant Technology	2015 Energy Sales, MWh	UC-ME Subsidy, PhP
1	IV-B	Palawan	Rio Tuba	Powersource Philippines, Inc.	Oil	2,789.39	41,609,067.17
2	VII	Cebu	Malapascua Island	Powersource Philippines, Inc.	Oil	1,500.80	0*
						4,290.183	**41,609,067.17**

Annex D.3
2015 Renewable Energy Cash Incentives Availed by RE Developers

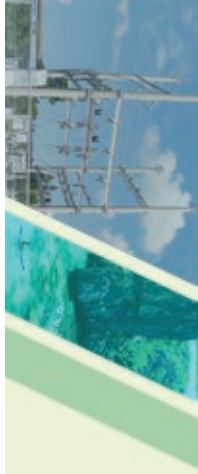
No.	Region	Province	SIIG	Power Provider	Power Plant	Plant Technology	2015 Energy Sales, MWh	RECI, PHP
1	IV-B	Oriental Mindoro	Oriental Mindoro	ORMECO	Linao-Cawayan MHPP (Lower Cascade)	Hydro	5,626.019	no submission of RECI claim
2	IV-B	Oriental Mindoro	Oriental Mindoro	ORMECO	Linao-Cawayan MHPP (Upper Cascade)	Hydro	6,244.864	
3	IV-B	Oriental Mindoro	Romblon	ROMELCO/Cantingas Minihydropower Corporation	Cantingas MHPP	Hydro	4,712.477	5,555,539.14
4	IV-B	Oriental Mindoro	Oriental Mindoro	Sunwest Water and Electric Company, Inc.	Hitoma 01 MHPP	Hydro	4,721.305	18,345,841.72
5	IV-B	Oriental Mindoro	Oriental Mindoro	Sunwest Water and Electric Company, Inc.	Solong MHPP	Hydro	6,302.800	
							27,607.465	**23,901,380.855**

Note:
SUWECO's CI rate was increased from PHP1.1789/kWh to PHP 2.1007/kWh starting June 2015 pursuant to ERC Order on Case No. 2012-085RC dated 22 June 2015.



Annex E
ER 1-94 Accrued and Available Financial Benefits as of December 2016

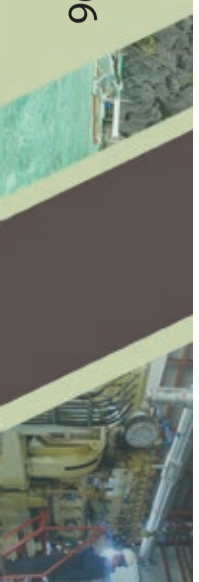
Region	Plant Location	Power Plant/ Power Provider	Accrued Funds (PhP)			Available Funds (PhP)		
			EF	DLF	RWMHEEF	EF	DLF	RWMHEEF
IV-B	Calangatan, San Teodoro, Oriental Mindoro	ORMECO Linao-Cawayan MHPP (Lower Cascade)	176,458.64	88,229.32	88,229.32	176,458.64	88,229.32	88,229.32
IV-B	Sta. Isabel, Calapan City, Oriental Mindoro	Ormin Power, Inc.	892,572.46	470,458.70	470,458.70	892,572.46	470,458.70	470,458.70
IV-B	Sta. Isabel, Calapan City, Oriental Mindoro	Power One Corporation	824,793.48	412,396.74	412,396.74	824,793.48	412,396.74	412,396.74
IV-B	Sta. Isabel, Calapan City, Oriental Mindoro	DMCI Power Corporation (Calapan)	372,597.00	186,298.52	186,298.52	372,597.00	186,298.52	186,298.52
IV-B	Sta. Isabel, Calapan City, Oriental Mindoro	Mindoro Grid Corporation (Calapan*)	418,605.94	209,302.98	209,302.98	418,605.94	209,302.98	209,302.98
IV-B	Conrazon, Bansud, Oriental Mindoro	Mindoro Grid Corporation (Bansud*)	0.00	0.00	0.00	0.00	0.00	0.00
IV-B	Labasan, Bongabong, Oriental Mindoro	Mindoro Grid Corporation (Bongabong)	362,895.85	181,447.97	181,447.97	362,895.85	181,447.97	181,447.97
IV-B	Papandayan, Pinamalayan, Oriental Mindoro	GBH Power Resources, Inc.	2,433,717.32	1,216,858.01	1,216,858.01	1,828,184.03	1,216,858.01	1,216,858.01
IV-B	Taclobo, San Fernando, Romblon	ROMELCO Cantingas MHPP	146,348.51	73,174.58	73,174.58	146,348.51	73,174.58	73,174.58
IV-B	Tiniguiban, Puerto Princesa City, Palawan	Delta P, Inc.	5,901,018.37	1,553,142.87	1,553,142.87	3,278,966.46	1,179,909.22	1,553,142.87
IV-B	Tiniguiban, Puerto Princesa City, Palawan	Palawan Power Generation, Inc. (Puerto Princesa)	838,700.00	419,350.00	419,350.00	838,700.00	419,350.00	419,350.00
IV-B	Malinao, Narra, Palawan	Palawan Power Generation, Inc. (Narra)	1,518,520.00	759,260.00	759,260.00	1,518,520.00	759,260.00	759,260.00
IV-B	Iraan, Aborlan, Palawan	DMCI Power Corporation (Aborlan)	39,088.00	19,544.00	19,544.00	39,088.00	19,544.00	19,544.00
IV-B	Irawan, Puerto Princesa City, Palawan	DMCI Power Corporation (Irawan)	388,599.34	194,299.67	194,299.67	388,599.34	194,299.67	194,299.67
IV-B	Tabon, Quezon, Palawan	DMCI Power Corporation (Quezon)	16,416.82	8,208.41	8,208.41	16,416.82	8,208.41	8,208.41
IV-B	Ipilan, Brooke's Point, Palawan	DMCI Power Corporation (Brooke's Point)	28,026.22	14,013.14	14,013.14	28,026.22	14,013.14	14,013.14
IV-B	Poblacion, Roxas, Palawan	DMCI Power Corporation (Roxas)	86,308.00	43,154.00	43,154.00	86,308.00	43,154.00	43,154.00



Annex E
ER 1-94 Accrued and Available Financial Benefits as of December 2016 (Continued...)

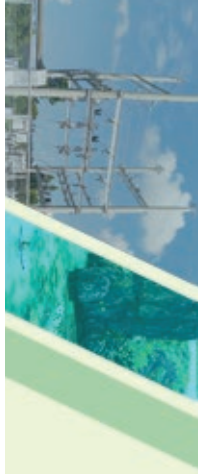
Region	Plant Location	Power Plant/ Power Provider	Accrued Funds (PhP)			Available Funds (PhP)		
			EF	DLF	RWMHEEF	EF	DLF	RWMHEEF
IV-B	Guadalupe, Coron, Palawan	Calamian Island Power Corporation (Coron)	184,289.34	92,144.71	92,144.71	184,289.34	92,144.71	92,144.71
IV-B	Salvacion, Busuanga, Palawan	Calamian Island Power Corporation (Busuanga)	21,203.70	10,601.90	10,601.90	21,203.70	10,601.90	10,601.90
IV-B	Rio Tuba, Bataraza, Palawan	Powersource Philippines, Inc. (Rio Tuba)	45,066.14	22,532.95	22,532.95	45,066.14	22,532.95	22,532.95
V	Marinawa, Bato, Catanduanes	Catanduanes Power Generation, Inc.	512,452.59	254,120.45	254,120.45	512,452.59	254,120.45	254,120.45
V	Obi, Caramoran, Catanduanes	SUWECO - Hitoma 01 MHPP	164,930.37	82,450.28	82,450.28	164,930.37	82,450.28	82,450.28
V	Solong, San Miguel,Catanduanes	SUWECO - Solong MHPP	184,752.90	92,376.15	92,376.15	184,752.90	92,376.15	92,376.15
V	Tugbo, Mobo, Masbate	DMCI Masbate Power Corporation (Mobo)	1,701,143.86	850,569.00	850,569.00	1,701,143.86	850,569.00	850,569.00
V	Bangon, Aroroy, Masbate	DMCI Masbate Power Corporation (Aroroy)	168,026.24	84,012.32	84,012.32	168,026.24	84,012.32	84,012.32
V	Kurdava, Cataingan, Masbate	DMCI Masbate Power Corporation (Cataingan)	185,968.21	92,983.80	92,983.80	185,968.21	92,983.80	92,983.80
VII	Bantigue, Bantayan, Cebu	Bantayan Island Power Corporation	951,608.06	475,894.01	475,894.01	951,608.06	475,894.01	475,894.01
VII	Tignao, Lazi, Siquijor	S.I. Power Corporation (Lazi)	61,573.07	30,786.53	30,786.53	61,573.07	30,786.53	30,786.53
VII	Candanay, Siquijor, Siquijor	S.I. Power Corporation (Siquijor)	78,839.58	39,419.81	39,419.81	78,839.58	39,419.81	39,419.81
VII	Logon, Daanbantayan, Cebu	Powersource Philippines, Inc. (Malapascua)	33,611.31	16,805.55	16,805.55	33,611.31	16,805.55	16,805.55
Various Regions	Various areas	National Power Corporation - Small Power Utilities Group	18,111,480.99	9,040,110.31	9,040,110.31	18,111,480.99	9,040,110.31	9,040,110.31
TOTAL			**36,849,612.31**	**17,033,946.68**	**17,033,946.68**	**33,622,027.11**	**16,660,713.03**	**17,033,946.68**

Legends:
EF: Electrification Fund
DLF: Development and Livelihood Fund
RWMHEEF: Reforestation, Watershed Management, Health and/or Environment Enhancement Fund



Annex F
Electrification of New Areas

Region	Area	Installed Capacity, MW 2016	2017	2018	2019	2020
V	Calaguas Island, Vinzons, Camarines Norte	0.090			0.100	
VIII	Tikling, Dolores, Eastern Samar	0.020			0.020	
VIII	Hilabaan Island, Dolores, Eastern Samar	0.050			0.040	
VIII	Sta. Monica, Oras, Eastern Samar	0.050			0.040	
VIII	Bitaugan, Cagusuran, Culasi, Pagbabanan and Canawayon, Homonhon Island, Guiuan, Eastern Samar	0.070			0.080	
VIII	Cagusu-an, Homonhon Island, Guiuan, Eastern Samar	0.020			0.020	
VIII	Inapulangan, Homonhon Island, Guiuan, Eastern Samar	0.020				0.020
VIII	Habag, Homonhon Island, Guiuan, Eastern Samar	0.020				0.020
VIII	Tarnate, Aguada Island, San Vicente, Northern Samar	0.050			0.040	
NIR	Sipaway Island, San Carlos, Negros Occidental	0.040			0.020	
VIII	Suluan Island, Guiuan, Eastern Samar	0.050			0.100	
VII	Pandanon Island, Jetafe, Bohol	0.080			0.040	
VI	Calagnaan Island, Carles, Iloilo	0.200			0.100	
VI	Tagubanhan Island, Concepcion and Ajuy, Iloilo	0.160				0.100
VIII	Camandag Island, Sto. Niño, Samar	0.160			0.100	
IX	Pangapuyan Island, Zamboanga City	0.010				
IX	Great Sta. Cruz Island, Zamboanga City	0.070				0.000
IX	Tumalutab Island, Zamboanga City	0.032				
IX	Manalipa Island, Zamboanga City	0.035				0.040
IX	Tigtabon Island, Zamboanga City	0.085				0.100
CARAGA	Hibusong Island, Dinagat	0.100			0.020	
IV-B	Galoc Island, Culion, Palawan		0.075			0.075
IV-B	Paly Island, Taytay, Palawan		0.150			0.150
IV-B	Beton Island, Taytay, Palawan		0.120			0.120
IV-B	Maroyogroyog, Linapacan, Palawan		0.070			0.070
IV-B	Pical Island, Linapacan, Palawan		0.075			0.075
IV-B	Nangalao, Linapacan, Palawan		0.120			0.120
IV-B	Panlaitan, Busuanga, Palawan		0.400			0.400
IV-B	Tara, Coron, Palawan		0.075			0.075
IV-B	Bulalacao Island, Coron, Palawan		0.150			0.150
IV-B	Cabugao, Coron Island, Coron, Palawan		0.120			0.120
IV-B	Lajala Island, Coron, Palawan		0.080			0.080

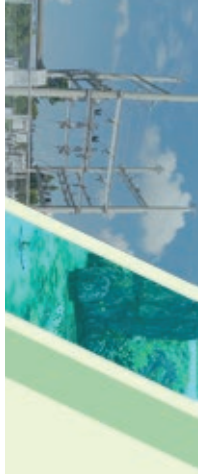


Annex F
Electrification of New Areas (Continued...)

Region	Area	Potential Brgys.	Potential HHs (PSA)	Installed Capacity, MW 2016	2017	2018	2019	2020
IV-B	Bancalaan 1, Balabac, Palawan			0.300				0.300
IV-B	Bancalaan 2, Balabac, Palawan			0.250				0.250
IV-B	Ramos Island, Balabac, Palawan			0.120				0.120
IV-B	Concepcion, Agutaya, Palawan			0.160				0.160
IV-B	Casian Island, Taytay, Palawan			0.120				0.120
IV-B	San, Isidro, Busuanga, Palawan			0.060				0.060
IV-B	Maracanao, Agutaya, Palawan			0.015				0.015
IV-B	Ambil 1, Looc, Occidental Mindoro			0.055				0.055
IV-B	Ambil 2, Looc, Occidental Mindoro			0.060				0.060
IV-B	Golo Island, Looc, Occidental Mindoro			0.150				0.150
II	Dibay - Dilam, Calayan Island, Calayan, Cagayan			0.150				0.150
II	Fuga, Aparri, Cagayan			0.080				0.080
II	Dalupiri Island, Calayan, Cagayan			0.030				0.030
II	Babuyan Claro, Babuyan Island, Calayan, Cagayan			0.060				0.060
V	Naro Island, Cawayan, Masbate			0.160				0.160
VIII	Dawahon Island, Bato, Leyte			0.160				0.160
VII	Bilang-bilang Dako, Bilangbilangan Island, Bien Unido, Bohol			0.030				0.030
VII	Bilang-bilang Diyot, Bilangbilangan Island, Bien Unido, Bohol			0.015				0.015
VII	Hingotanan East, Hingotanan Island, Bien Unido, Bohol			0.035				0.035
VII	Hingotanan West, Hingotanan Island, Bien Unido, Bohol			0.025				0.025
VII	Malingin Island, Bien Unido, Bohol			0.030				0.030
VII	Maomaoan Island, Bien Unido, Bohol			0.020				0.020
VII	Sagasa Island, Bien Unido, Bohol			0.020				0.020
VII	Pinamgo, Jao Island, Bien Unido, Bohol			0.030				0.030
VII	Butan Island, Pres. Carlos P. Garcia, Bohol			0.012				0.012
VII	Gaus Island, Pres. Carlos P. Garcia, Bohol			0.020				0.020
VII	Tilmobo Island, Pres. Carlos P. Garcia, Bohol			0.005				0.005
VII	Cataban Island, Talibon, Bohol			0.020				0.005
VII	Nocnocan Island, Talibon, Bohol			0.030				0.005
ARMM	Tapiantana Island, Tabuan Lasa, Basilan			0.110				0.110
ARMM	Bubuan Island, Tabuan Lasa, Basilan			0.075				0.075
ARMM	Saluping Island, Tabuan Lasa, Basilan			0.120				0.120

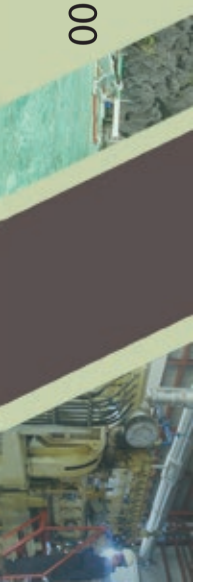
Annex F
Electrification of New Areas (Continued...)

Region	Area	Potential Brgys.	Potential HHs (PSA)	Installed Capacity, MW 2016	2017	2018	2019	2020
ARMM	Lanawan Island, Tabuan Lasa, Basilan			0.075				0.075
CARAGA	Sibanac Island, Basilisa, Dinagat Islands			0.100				0.050
IV-B	Tumbod, Tularan Island, Taytay, Palawan				0.080			
IV-B	Caponayan Island, Cuyo, Palawan				0.075			
IV-B	Maglalambay, Popotan Island,Busuanga, Palawan				0.070			
IV-B	Canipo Island, Magsaysay, Palawan				0.075			
IV-B	Pandanan, Balabac, Palawan				0.060			
IV-B	Diit Island, Agutaya, Palawan				0.060			
IV-B	Edopoy, Algeciras, Agutaya, Palawan				0.100			
IV-B	Centro, Algeciras, Agutaya, Palawan				0.060			
IV-B	New Culaylayan, Linapacan, Palawan				0.060			
VI	Panobolon Island, Nueva Valencia, Guimaras				0.060			
VI	San Fernando, Sicogon Island, Carles, Iloilo				0.135			
VI	Tinigban, Calagnaan Island, Carles, Iloilo				0.080			
VIII	Himokilan Island, Hindang, Leyte				0.045			
IV-B	Depla, Taytay, Palawan						0.080	
IV-B	Bugsuk, Balabac, Palawan						0.055	
IV-B	Meytegued, Taytay, Palawan						0.060	
IV-B	Debangan Island, Taytay, Palawan						0.075	
IV-B	Banuang Daan, Coron Island, Coron, Palawan						0.065	
IV-B	Batas,Taytay, Palawan						0.080	
IV-B	Cocoro Island, Magsaysay, Palawan						0.070	
IV-B	Lubid Island, Cuyo, Palawan						0.065	
IV-B	Calibangbangan, Linapacan, Palawan						0.065	
IV-B	Sebaring, Bugsuk Island, Balabac, Palawan						0.055	
VI	Guibonyugan, Calinog, Iloilo						0.035	
VI	Hilwan, Calinog, Iloilo						0.030	
VI	Caratagan, Calinog, Iloilo						0.040	
VI	Aglonok, Calinog, Iloilo						0.040	
VI	Binolosan Grande, Calinog, Iloilo						0.060	
VI	Manaripay, Calinog, Iloilo						0.030	
VI	Supanga, Calinog, Iloilo						0.045	



Annex F
Electrification of New Areas (Continued...)

Region	Area	Potential Brgys.	Potential HHs (PSA)	Installed Capacity, MW 2016	2017	2018	2019	2020
VI	Tigbayog, Calinog, Iloilo						0.035	
VI	Marindig, Calinog, Iloilo						0.065	
VI	Binolosan Pequeno, Calinog, Iloilo						0.080	
IV-B	Poblacion VI, Johnson Island, Roxas, Palawan							0.040
IV-B	Rabor, Balabac, Palawan							0.025
IV-B	Alcoba Island, Magsaysay, Palawan							0.045
IV-B	San Nicolas, Linapacan, Palawan							0.060
IV-B	Cabunlawan Island, Linapacan, Palawan							0.045
IV-B	Barangonan Island, Linapacan, Palawan							0.065
IV-B	Minapla, Taytay, Palawan							0.050
IV-B	Lumacad, Dumaran Island, Araceli, Palawan							0.060
IV-B	Culasian, Dumaran, Palawan							0.065
IV-B	Catep, Dumaran, Palawan							0.055
IV-B	Malitub, Bataraza, Palawan							0.040
II	San Antonio, Baggao, Cagayan							0.040
VI	Naborot Island, San Dionisio, Iloilo							0.015
VI	Manipulon Island, Estancia, Iloilo							0.030
VI	Botlog Island, Concepcion, Iloilo							0.030
VIII	Apid Island, Inopacan, Leyte							0.040
VI	Inampologan Island, Sibunag, Guimaras							0.015
			1.412	4.137	0.960	1.850		5.047



Annex G
Oriental Mindoro

ORIENTAL MINDORO

Oriental Mindoro Electric Cooperative, Inc. (ORMECO)

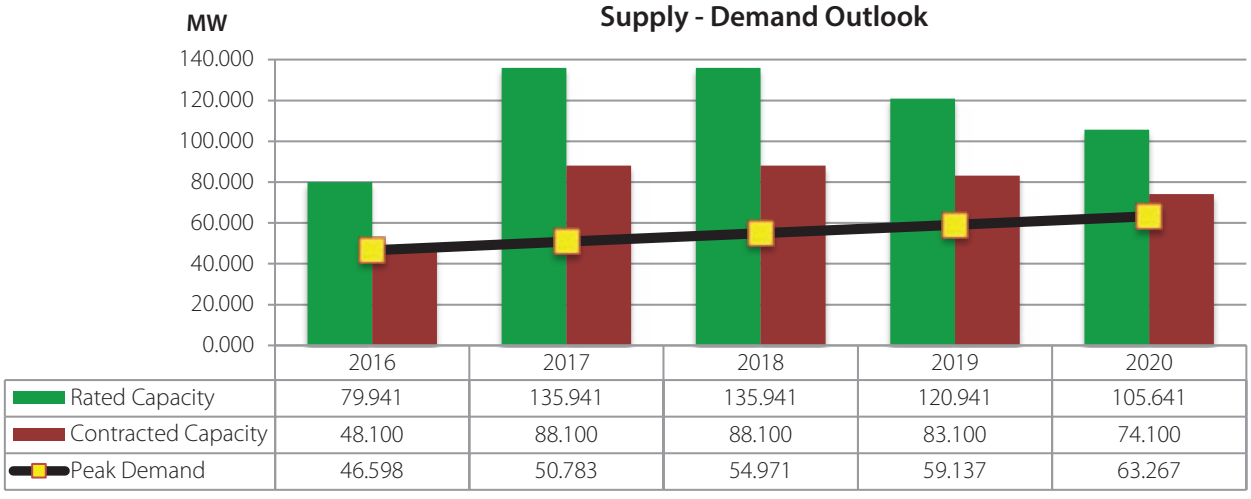
As of December 2015	
Coverage Area :	Oriental Mindoro (Calapan City and Municipalities of Puerto Galera, San Teodoro, Baco, Naujan, Victoria, Socorro, Pola, Pinamalayan, Gloria, Bansud, Bongabong, Roxas, Mansalay, Bulalacao)
No. of Barangays Energized:	426
Service Hours:	24
Distribution Lines, ckt-km.:	2,431.986
Installed Capacity, MW:	81.541
Dependable Capacity, MW:	66.540
Contracted Capacity, MW:	47.800
Peak Demand, MW:	42.700
Energy Sales, MWh:	199,363.683
UC-ME Subsidy:	PHP 603,143,469.810

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**79.941**	**135.941**	**135.941**	**120.941**	**105.641**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	74.766	130.766	130.766	115.766	100.466
Utility-Owned	5.175	5.175	5.175	5.175	5.175
Contracted Capacity (MW)	**48.100**	**88.100**	**88.100**	**83.100**	**74.100**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	45.400	85.400	85.400	80.400	71.400
Utility-Owned	2.700	2.700	2.700	2.700	2.700
Peak Demand (MW)	**46.598**	**50.783**	**54.971**	**59.137**	**63.267**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	216,578.997	233,982.724	251,611.436	269,339.553	287,079.529
UC-ME Subsidy, net of RECI (Million Pesos)*	565.921	1,101.746	1,396.547	1,292.160	872.250

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**
47.31 km Bansud - Mansalay 69kV Transmission Line	2016	380.16
57.88 km Mansalay - San Jose 69kV Transmission Line	2017	335.70
3-PCB Bansud Switching Station Expansion	2017	10.01
5-PCB Pinamalayan Switching Station	2017	126.37
10 MVA Puerto Galera Substation	2017	157.23
50.00 km Calapan - Minolo 69kV Transmission Line Rehabilitation	2018	75.00
40.00 km Minolo - Mamburao 69kV Transmission Line Rehabilitation	2018	60.00
Mansalay Switching Station		138.46
2.5 MVA Pinamalayan Substation Expansion	2018	7.50
2.5 MVA Roxas Substation Expansion	2019	7.50
5.0 MVA Mobile Power Transformer	2019	20.00
Upgrading and Automation of Distribution Substations	2018	60.00
Batangas - Mindoro Interconnection		



	2016	2017	2018	2019	2020
Rated Capacity	79.941	135.941	135.941	120.941	105.641
Contracted Capacity	48.100	88.100	88.100	83.100	74.100
Peak Demand	46.598	50.783	54.971	59.137	63.267

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
Baco	San Ignacio Hydroelectric Power Project	0.50
Baco	Dulangan Hydroelectric Power Project	8.25
Bansud	Bansud Hydroelectric Power Project	1.50
Bongabong	Bongabong Hydroelectric Power Project	2.60
Bongabong	VMA Rice Husk-fired Biomass Power Project	0.40
Bulalacao	Bulalacao Wind Power Project	
Naujan	Catuiran (Upper Cascade) Hydroelectric Power Project	8.00
Naujan	Mag-asawang Tubig B Hydroelectric Power Project	1.00
Puerto Galera - San Teodoro	Inabasan Phase II Hydroelectric Power Project	10.00
San Teodoro	Linao-Cawayan Hydroelectric Power Project (Phase II-tail end)	1.00
San Teodoro	Alag Tributary 1 Hydroelectric Power Project	2.80
San Teodoro	Alag Tributary 2 Hydroelectric Power Project	2.80
TOTAL		**38.85**


ORMECO Linao-Cawayan Mini-hydro Power Plant (Lower Cacade)


NPC Calapan Substation

Annex G
Mainland Occidental Mindoro

MAINLAND OCCIDENTAL MINDORO

Occidental Mindoro Electric Cooperative, Inc. (OMECO)

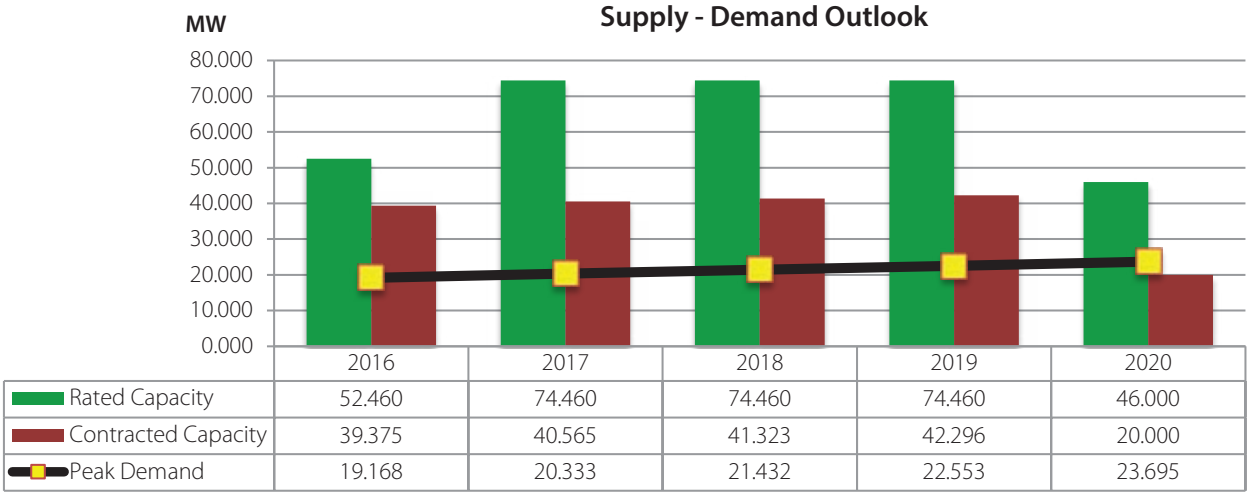
As of December 2015	
Coverage Area :	Municipalities of Paluan, Abra de Ilog, Mamburao, Santa Cruz, Sablayan, Calintaan, Rizal, San Jose and Magsaysay, Province of Occidental Mindoro. Paluan, while synchronized with the OMECO Grid, is served by the LGU.
No. of Barangays Energized:	127
Service Hours:	24
Distribution Lines, ckt-km.:	1,102.922
Installed Capacity, MW:	28.460
Dependable Capacity, MW:	18.600
Contracted Capacity, MW:	18.403
Peak Demand, MW:	17.337
Energy Sales, MWh:	75,898.581
UC-ME Subsidy:	PHP 1,077,026,206.099

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**52.460**	**74.460**	**74.460**	**74.460**	**46.000**
NPC-SPUG	28.460	28.460	28.460	28.460	0.000
NPP/IPP	24.000	46.000	46.000	46.000	46.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**39.375**	**40.565**	**41.323**	**42.296**	**20.000**
NPC-SPUG	19.375	20.565	21.323	22.296	0.000
NPP/IPP	20.000	20.000	20.000	20.000	20.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**19.168**	**20.333**	**21.432**	**22.553**	**23.695**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	86,389.762	91,743.146	96,772.039	101,902.663	107,118.788
UC-ME Subsidy, net of RECI (Million Pesos)*	506.511	1,833.265	1,655.658	1,621.001	1,960.122

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**
62.63 km Mamburao - Sablayan 69kV Transmission Line Rehabilitation	2016	155.68
57.88 km Mansalay - San Jose 69kV Transmission Line	2017	335.70
1-PCB San Jose Substation Expansion	2017	4.00
5-PCB Pinamalayan Switching Station	2017	93.91
40.00 km Minolo -Mamburao 69kV Transmission Line Rehabilitation	2018	60.00
Protection & Communication Equipment for Mamburao - Sablayan - San Jose Substation		5.40
5 MVA Mompong Substation	2016	25.17
2.2 km Iling Island Three-Phase Submarine Cable Interconnection	2016	52.16
2 km Iling Island - Ambulong Island Three-Phase Submarine Cable Interconnection	2016	51.90
Batangas - Mindoro Interconnection Project		



	2016	2017	2018	2019	2020
Rated Capacity	52.460	74.460	74.460	74.460	46.000
Contracted Capacity	39.375	40.565	41.323	42.296	20.000
Peak Demand	19.168	20.333	21.432	22.553	23.695

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
Abra de Ilog	Abra de Ilog Wind Power Project	40.00
TOTAL		**40.00**

NPC Power Barge 106


NPC Mamburao Substation

Annex G
Mainland Occidental Mindoro

MAINLAND MARINUQUE

Marinduque Electric Cooperative, Inc. (MARELCO)

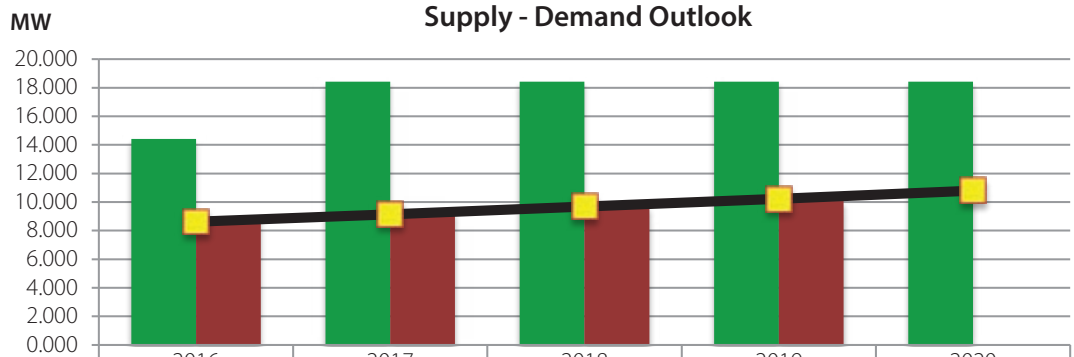
As of December 2015	
Coverage Area :	Mainland sitios and barangays of the Municipalities of Boac, Gasan, Mogpog, Sta. Cruz, Torrijos and Buenavista, Province of Marinduque
No. of Barangays Energized:	215
Service Hours:	24
Distribution Lines, ckt-km.:	539.850
Installed Capacity, MW:	14.422
Dependable Capacity, MW:	11.310
Contracted Capacity, MW:	8.640
Peak Demand, MW:	8.460
Energy Sales, MWh:	34,937.317
UC-ME Subsidy:	PHP 649,985,256.028

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**14.422**	**18.422**	**18.422**	**18.422**	**18.422**
NPC-SPUG	14.422	18.422	18.422	18.422	18.422
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**8.990**	**9.350**	**9.710**	**10.080**	**0.000**
NPC-SPUG	8.990	9.350	9.710	10.080	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**8.625**	**9.145**	**9.681**	**10.232**	**10.798**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	43,165.766	45,409.910	47,689.048	49,995.227	52,322.731
UC-ME Subsidy, net of RECI (Million Pesos)*	303.493	1,023.915	635.562	622.004	921.011

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**
5.0 MVA Boac Substation Expansion	2017	22.40



	2016	2017	2018	2019	2020
Rated Capacity	14.422	18.422	18.422	18.422	18.422
Contracted Capacity	8.990	9.350	9.710	10.080	0.000
Peak Demand	8.625	9.145	9.681	10.232	10.798

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
Buenavista - Torrijos	Mt. Malindig Geothermal Power Project	TBD
TOTAL		**00.00**


NPC Boac Diesel Power Plant


NPC Boac Substation

Annex G
PALAWAN MAIN GRID

PALAWAN MAIN GRID

Palawan Electric Cooperative, Inc. (PALECO)

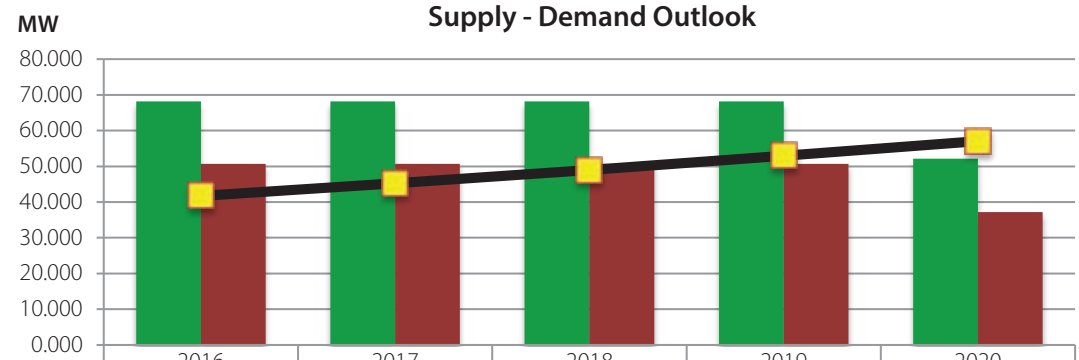
As of December 2015	
Coverage Area :	Barangay Irawan, Puerto Princesa to Barangay Ipilan, Brooke's Point, which includes Puerto Princesa City and the Municipalities of Aborlan, Bataraza, Brooke's Point, Narra, Quezon, and Sofronio Española, in Mainland Palawan.
No. of Barangays Energized:	137
Service Hours:	24
Distribution Lines, ckt-km.:	1,828.967
Installed Capacity, MW:	68.130
Dependable Capacity, MW:	50.475
Contracted Capacity, MW:	50.700
Peak Demand, MW:	36.900
Energy Sales, MWh:	181,129,898.540
UC-ME Subsidy:	PHP 649,688,522.110

Rated Capacity (MW)	68.130	68.130	68.130	68.130	52.130
NPC-SPUG	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
NPP/IPP	68.130	68.130	68.130	68.130	52.130
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	50.700	50.700	50.700	50.700	37.200
NPC-SPUG	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
NPP/IPP	50.700	50.700	50.700	50.700	37.200
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	41.712	45.215	48.961	52.916	57.043
Peak Demand (MW)	**46.598**	**50.783**	**54.971**	**59.137**	**63.267**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	221,618.032	236,023.204	250,184.596	264,194.933	277,404.680
UC-ME Subsidy, net of RECI (Million Pesos)*	536.121	1,096.600	1,766.896	1,186.451	652.687

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**
28 km Brooke's Point - Bataraza 69kV Transmission Line	2017	362.96
78 km Abo-Abo Switching Station - Quezon - Rizal 69kV Transmission Line	2017	836.00
5 MVA Bataraza Substation	2017	101.00
5 MVA Quezon Substation	2017	101.00
1-PCB Brooke's Point Substation Expansion	2018	46.52
3-PCB Abo-Abo Switching Station	2019	77.57



	2016	2017	2018	2019	2020
Rated Capacity	68.130	68.130	68.130	68.130	52.130
Contracted Capacity	50.700	50.700	50.700	50.700	37.200
Peak Demand	41.712	45.215	48.961	52.916	57.043

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
Bataraza	Marangas River Hydroelectric Power Project	12.00
Brooke's Point	Sologon River Hydroelectric Power Project	12.00
Narra	Bato-Bato (Kaliwa) Hydroelectric Power Project	12.00
Narra	Estrella River Hydroelectric Power Project	8.00
Narra	Malasgao (Kaliwa) Hydroelectric Power Project	10.00
Narra	Batang-Batang Hydroelectric Power Project	3.50
Puerto Princesa City	Langogan Hydroelectric Power Project	6.80
Puerto Princesa City	Iwahig Hydroelectric Power Project	1.50
Puerto Princesa City	Inaguan Hydroelectric Power Project	12.00
Puerto Princesa City	Palawan Solar Power Project	2.50
Puerto Princesa City	Puerto Princesa City Solar Power Project	10.00
Quezon	Palawan Solar Power Project	1.00
Narra	Batang-Batang Hydroelectric Power Project	3.50
TOTAL		**94.80**


NPC Irawan Substation


DMCI Irawan Diesel Power Plant

Annex G
BUSUANGA ISLAND

BUSUANGA ISLAND

Busuanga Island Electric Cooperative, Inc. (BISELCO)

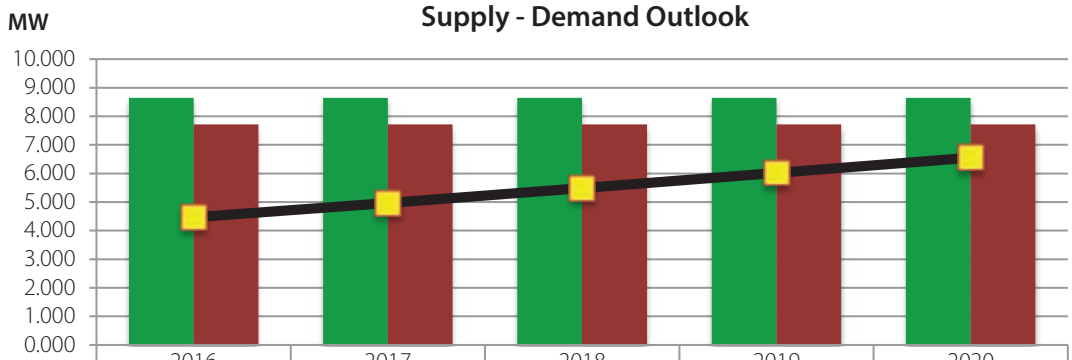
As of December 2015	
Coverage Area :	Areas under the municipalities of Busuanga and Coron located in Busuanga Island, Province of Palawan
No. of Barangays Energized:	30
Service Hours:	24
Distribution Lines, ckt-km.:	272.196
Installed Capacity, MW:	8.644
Dependable Capacity, MW:	8.300
Contracted Capacity, MW:	7.716
Peak Demand, MW:	3.997
Energy Sales, MWh:	15,707.152
UC-ME Subsidy:	PHP 151,730,241.570

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**8.644**	**8.644**	**8.644**	**8.644**	**8.644**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	8.644	8.644	8.644	8.644	8.644
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**7.716**	**7.716**	**7.716**	**7.716**	**7.716**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	7.716	7.716	7.716	7.716	7.716
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**4.466**	**4.966**	**5.484**	**6.015**	**6.552**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	19,201.119	23,472.298	28,693.578	**35,076.301**	**42,878.825**
UC-ME Subsidy, net of RECI (Million Pesos)*	158.137	252.314	307.538	349.409	274.903

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**
2.05 km Lajala (Uson Island) Single-Phase Submarine Cable Interconnection		20.05



	2016	2017	2018	2019	2020
Rated Capacity	8.644	8.644	8.644	8.644	8.644
Contracted Capacity	7.716	7.716	7.716	7.716	7.716
Peak Demand	4.466	4.966	5.484	6.015	6.552

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**

Annex G
TABLAS ISLAND

TABLAS ISLAND

Tablas Island Electric Cooperative, Inc. (TIELCO)

As of December 2015

Coverage Area :	Municipalities of Odiongan, Ferrol, Looc, Sta. Fe, Alcantara, Sta. Maria, San Andres, Calatrava and San Agustin in Tablas Island, Province of Romblon
No. of Barangays Energized:	107
Service Hours:	24
Distribution Lines, ckt-km.:	552.566
Installed Capacity, MW:	18.570
Dependable Capacity, MW:	13.040
Contracted Capacity, MW:	7.500
Peak Demand, MW:	5.628
Energy Sales, MWh:	31,335.422 (TIELCO Franchise)
UC-ME Subsidy:	PHP 348,774,510.527

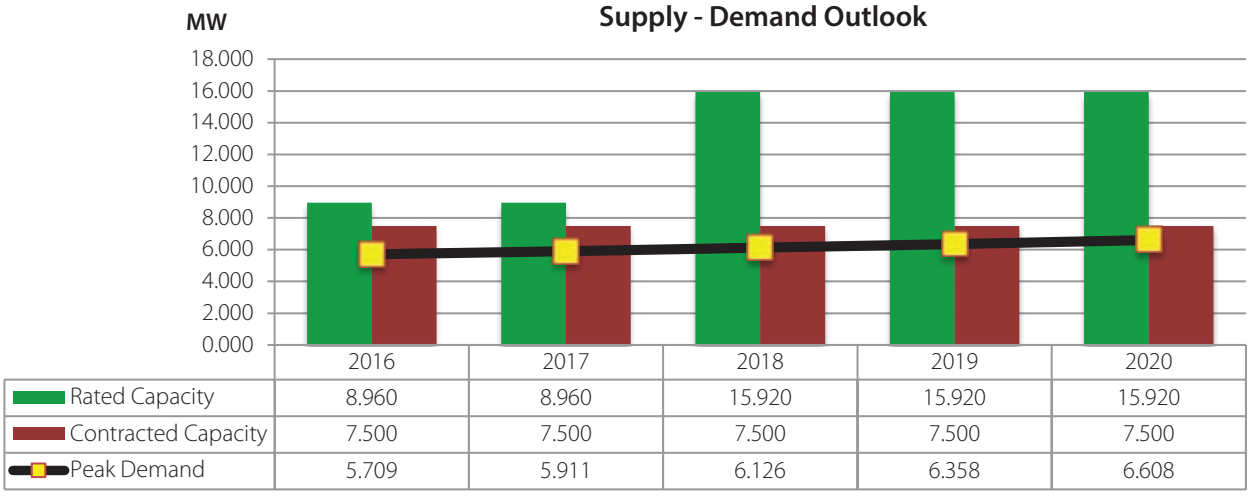
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**8.960**	**8.960**	**15.920**	**15.920**	**15.920**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	8.960	8.960	15.920	15.920	15.920
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**7.500**	**7.500**	**7.500**	**7.500**	**7.500**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	7.500	7.500	7.500	7.500	7.500
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**5.709**	**5.911**	**6.126**	**6.358**	**6.608**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	27,061.155	28,019.836	29,039.122	30,136.646	31,321.222
UC-ME Subsidy, net of RECI (Million Pesos)*	168.064	414.675	395.697	325.725	429.724

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP



	2016	2017	2018	2019	2020
Rated Capacity	8.960	8.960	15.920	15.920	15.920
Contracted Capacity	7.500	7.500	7.500	7.500	7.500
Peak Demand	5.709	5.911	6.126	6.358	6.608

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
Looc	Hydroelectric Power (for study)	0.30
Odiongan	Hydroelectric Power (for study)	0.30
Odiongan	Sicop Hydroelectric Power Project	0.60
Odiongan	Gabuan Hydroelectric Power Project	0.70
Odiongan	Libertad Hydroelectric Power Project	0.72
San Andres	Parapajoja-Nabitas Hydroelectric Power Project	0.85
TOTAL		**3.47**


STEC Tablas Diesel Power Plant


NPC Power Barge 109

Annex G
ROMBLON ISLAND

ROMBLON ISLAND

Romblon Electric Cooperative, Inc. (ROMELCO)

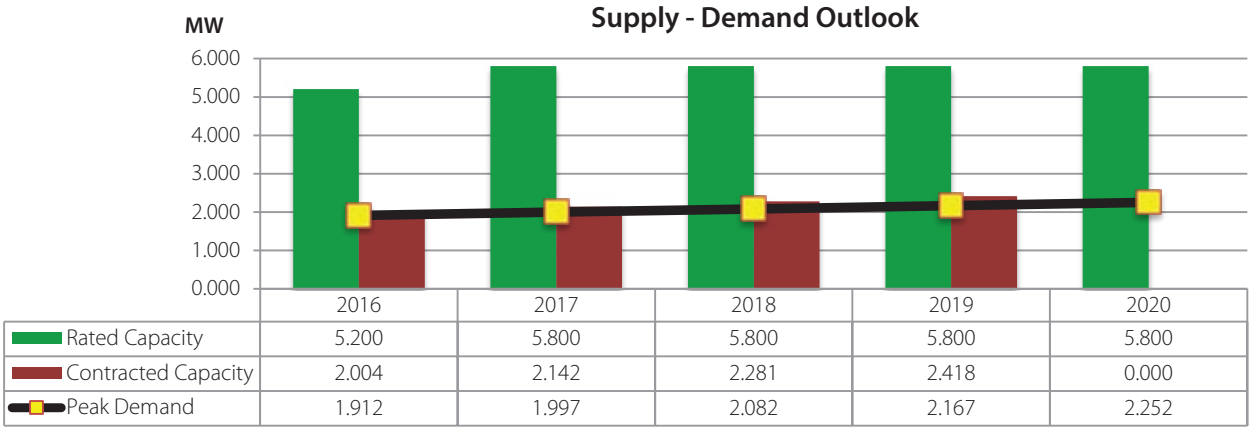
As of December 2015	
Coverage Area :	Mainland barangays of the Municipality of Romblon, Province of Romblon.
No. of Barangays Energized:	28
Service Hours:	24
Distribution Lines, ckt-km.:	154.708
Installed Capacity, MW:	5.200
Dependable Capacity, MW:	2.820
Contracted Capacity, MW:	1.886
Peak Demand, MW:	1.834
Energy Sales, MWh:	7,524.786
UC-ME Subsidy:	PHP 121,693,819.773

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**5.200**	**5.800**	**5.800**	**5.800**	**5.800**
NPC-SPUG	5.200	5.800	5.800	5.800	5.800
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**2.004**	**2.142**	**2.281**	**2.418**	**0.000**
NPC-SPUG	2.004	2.142	2.281	2.418	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**1.912**	**1.997**	**2.082**	**2.167**	**2.252**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	8,843.214	9,449.280	10,093.462	10,766.246	11,460.419
UC-ME Subsidy, net of RECI (Million Pesos)*	77.589	127.654	115.026	153.408	140.650

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	Target Year	Project Cost, Million PHP



	2016	2017	2018	2019	2020
Rated Capacity	5.200	5.800	5.800	5.800	5.800
Contracted Capacity	2.004	2.142	2.281	2.418	0.000
Peak Demand	1.912	1.997	2.082	2.167	2.252

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
Romblon	Wind Turbine	1.00
Romblon	Biomass	2.00
TOTAL		**3.00**


NPC Romblon Diesel Power Plant


NPC Power Barge 114

Annex G
CATANDUANES

MAINLAND CATANDUANES

First Catanduanes Electric Cooperative, Inc. (FICELCO)

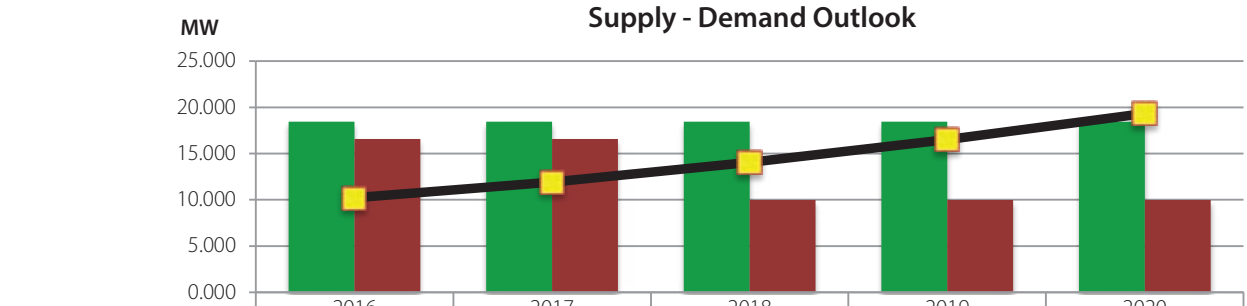
As of December 2015	
Coverage Area :	Mainland Catanduanes and the small Panay Island under the Municipalities of Bagamanoc and Panganiban.
No. of Barangays Energized:	315
Service Hours:	24
Distribution Lines, ckt-km.:	1,355.000
Installed Capacity, MW:	18.460
Dependable Capacity, MW:	14.630
Contracted Capacity, MW:	7.638
Peak Demand, MW:	9.128
Energy Sales, MWh:	40,007.425
UC-ME Subsidy:	PHP 269,547,561.075

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**18.460**	**18.460**	**18.460**	**18.460**	**18.460**
NPC-SPUG	11.260	11.260	11.260	11.260	11.260
NPP/IPP	7.200	7.200	7.200	7.200	7.200
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**16.571**	**16.571**	**9.971**	**9.971**	**9.971**
NPC-SPUG	6.600	6.600	0.000	0.000	0.000
NPP/IPP	9.971	9.971	9.971	9.971	9.971
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**10.225**	**11.925**	**14.040**	**16.526**	**19.333**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	45,405.316	46,931.822	48,777.141	50,743.762	52,818.513
UC-ME Subsidy, net of RECI (Million Pesos)*	134.911	288.754	215.080	181.819	606.281

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**
15 km Virac - San Miguel 69kV Transmission Line	2016	165.00
10 MVA Virac Substation	2016	135.00
5 MVA Codon Substation	2016	88.06
5 MVA San Miguel Substation	2016	92.57



	2016	2017	2018	2019	2020
Rated Capacity	18.460	18.460	18.460	18.460	18.460
Contracted Capacity	16.571	16.571	9.971	9.971	9.971
Peak Demand	10.225	11.925	14.040	16.526	19.333

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
San Miguel	Kapipian Hydroelectric Power Project	2.40
San Miguel	Pinagsangahan River	10.00
San Miguel	Kapipian Hydroelectric Power Project	2.40
TOTAL		**12.40**

SUWECO Solong Mini-hydro Power Plant


NPC Marinawa Diesel Power Plant

Annex G
MASBATE

MAINLAND MASBATE

Masbate Electric Cooperative, Inc. (MASELCO)

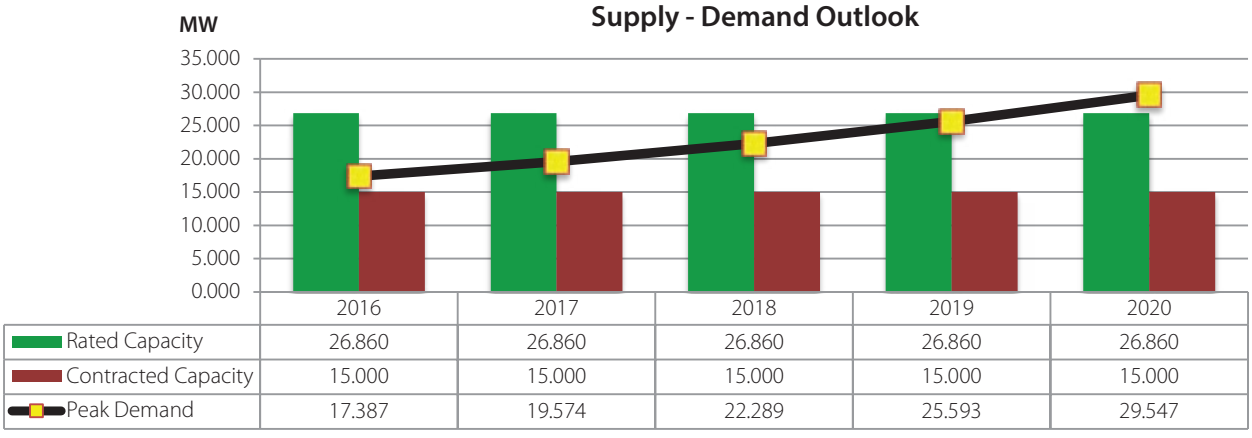
As of December 2015	
Coverage Area :	Mainland Masbate excluding areas under the Philippine Rural Electrification System project.
No. of Barangays Energized:	318
Service Hours:	24
Distribution Lines, ckt-km.:	2,168.000
Installed Capacity, MW:	26.860
Dependable Capacity, MW:	23.200
Contracted Capacity, MW:	15.000
Peak Demand, MW:	15.120
Energy Sales, MWh:	67,518.174
UC-ME Subsidy:	PHP 566,731,716.180

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**26.860**	**26.860**	**26.860**	**26.860**	**26.860**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	26.860	26.860	26.860	26.860	26.860
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**15.000**	**15.000**	**15.000**	**15.000**	**15.000**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	15.000	15.000	15.000	15.000	15.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**17.387**	**19.574**	**22.289**	**25.593**	**29.547**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	72,036.412	76,773.635	81,809.358	87,199.812	92,997.767
UC-ME Subsidy, net of RECI (Million Pesos)*	567.864	699.430	740.121	778.433	638.742

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**
32.59 km Mobo - Aroroy 69kV Transmission Line Rehabilitation	2016	84.25
20 MVA Mobo Substation Expansion	2018	78.18
5 MVA del Rosario Substation	2017	31.23
5 MVA Curvada Substation	2017	
Interconnection of PRES Mini-grids	2016	



	2016	2017	2018	2019	2020
Rated Capacity	26.860	26.860	26.860	26.860	26.860
Contracted Capacity	15.000	15.000	15.000	15.000	15.000
Peak Demand	17.387	19.574	22.289	25.593	29.547

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**


DMCI Masbate Diesel Power Plant


NPC Masbate Substation

Annex G
CAMOTES ISLAND

CAMOTES MAIN GRID

Camotes Electric Cooperative, Inc. (CELCO)

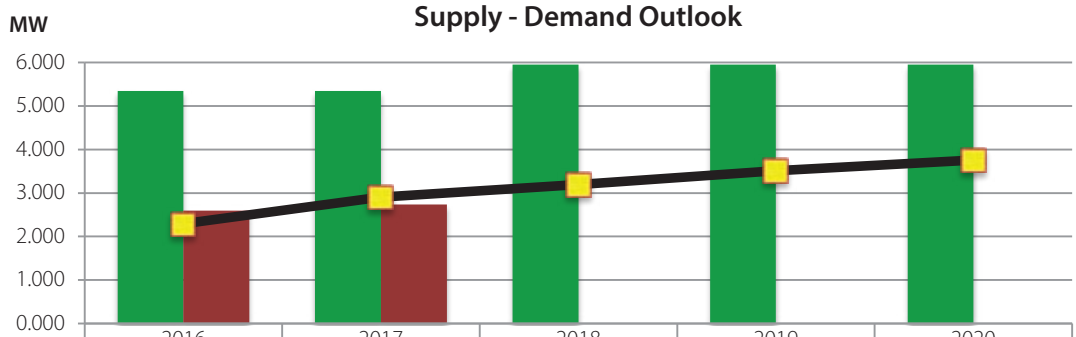
As of December 2015	
Coverage Area :	Municipality of San Francisco in Pacijan Island and Municipalities of Poro and Tudela in Poro Island, Camotes Islands, Province of Cebu
No. of Barangays Energized:	43
Service Hours:	24
Distribution Lines, ckt-km.:	-
Installed Capacity, MW:	5.348
Dependable Capacity, MW:	2.800
Contracted Capacity, MW:	2.469
Peak Demand, MW:	2.517
Energy Sales, MWh:	9,400.928
UC-ME Subsidy:	PHP 173,018,216.958

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**5.348**	**5.348**	**5.948**	**5.948**	**5.948**
NPC-SPUG	5.348	5.348	5.948	5.948	5.948
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**2.597**	**2.736**	**0.000**	**0.000**	**0.000**
NPC-SPUG	2.597	2.736	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**2.294**	**2.902**	**3.192**	**3.511**	**3.757**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	10,466.576	11,626.788	12,814.260	14,017.517	15,228.551
UC-ME Subsidy, net of RECI (Million Pesos)*	104.471	264.448	213.548	228.727	217.754

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	Target Year	Project Cost, Million PHP



	2016	2017	2018	2019	2020
Rated Capacity	5.348	5.348	5.948	5.948	5.948
Contracted Capacity	2.597	2.736	0.000	0.000	0.000
Peak Demand	2.294	2.902	3.192	3.511	3.757

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**

NPC Camotes Diesel Power Plant


NPC Power Barge 113

Annex G
BANTAYAN

MAINLAND BANTAYAN

Bantayan Electric Cooperative, Inc. (BANELCO)

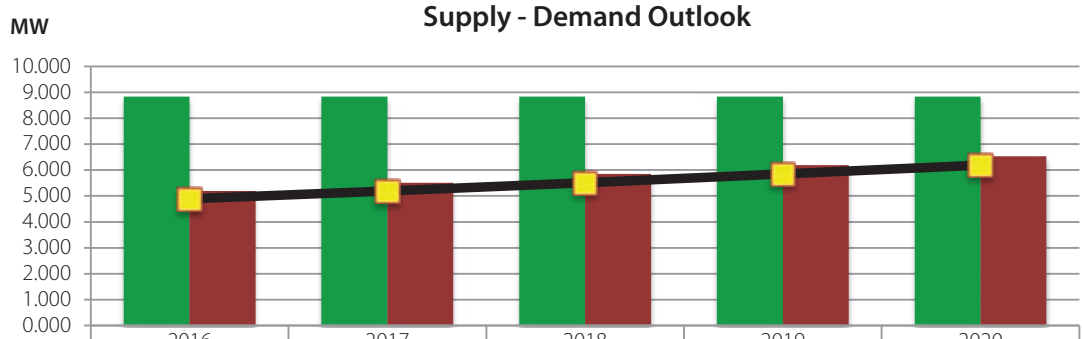
As of December 2015	
Coverage Area :	Barangays covered by the Municipalities of Bantayan, Madridejos and Santa Fe located in Bantayan Island, Province of Cebu
No. of Barangays Energized:	39
Service Hours:	24
Distribution Lines, ckt-km.:	249.42
Installed Capacity, MW:	8.838
Dependable Capacity, MW:	7.954
Contracted Capacity, MW:	4.892
Peak Demand, MW:	4.521
Energy Sales, MWh:	22,032.969
UC-ME Subsidy:	PHP 26,474,231.640

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**8.838**	**8.838**	**8.838**	**8.838**	**8.838**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	8.838	8.838	8.838	8.838	8.838
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**5.190**	**5.510**	**5.850**	**6.190**	**6.530**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	5.190	5.510	5.850	6.190	6.530
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**4.892**	**5.190**	**5.510**	**5.850**	**6.190**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	24,676.496	26,694.621	28,802.264	30,973.985	33,190.866
UC-ME Subsidy, net of RECI (Million Pesos)*	17.997	75.002	75.002	75.002	25.285

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**
2.68 km Hilantagaan Island Three-Phase Submarine Cable Interconnection		



	2016	2017	2018	2019	2020
Rated Capacity	8.838	8.838	8.838	8.838	8.838
Contracted Capacity	5.190	5.510	5.850	6.190	6.530
Peak Demand	4.892	5.190	5.510	5.850	6.190

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**

Annex G
SIQUIJOR

SIQUIJOR

Province of Siquijor Electric Cooperative, Inc. (PROSIELCO)

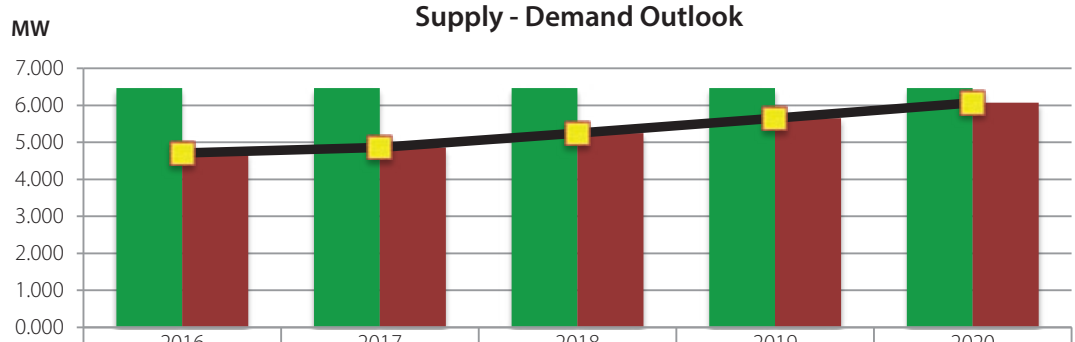
As of December 2015	
Coverage Area :	Province of Siquijor (Municipalities of Larena, Siquijor, Lazi, San Juan, Maria and Enrique Villanueva)
No. of Barangays Energized:	134
Service Hours:	24
Distribution Lines, ckt-km.:	227.87
Installed Capacity, MW:	10.244
Dependable Capacity, MW:	5.160
Contracted Capacity, MW:	4.559
Peak Demand, MW:	4.559
Energy Sales, MWh:	17,799.810
UC-ME Subsidy:	PHP 133,776,162.431

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**6.464**	**6.464**	**6.464**	**6.464**	**6.464**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	6.464	6.464	6.464	6.464	6.464
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**4.712**	**4.865**	**5.252**	**5.654**	**6.068**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	4.712	4.865	5.252	5.654	6.068
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**4.711**	**4.865**	**5.252**	**5.654**	**6.068**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	17,152.740	17,610.513	18,068.287	19,328.023	20,703.468
UC-ME Subsidy, net of RECI (Million Pesos)*	90.358	104.013	109.214	114.674	71.498

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**
17 km Candanay - Maria 69kV Transmission Line	2019	62.09
7 km Candanay - San Juan 69kV Transmission Line	2020	26.63
5.0 MVA Candanay Substation	2020	117.04



	2016	2017	2018	2019	2020
Rated Capacity	6.464	6.464	6.464	6.464	6.464
Contracted Capacity	4.712	4.865	5.252	5.654	6.068
Peak Demand	4.711	4.865	5.252	5.654	6.068

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
Lazi	Senona Hydroelectric Power Project	3.20
Lazi	Gabangan Hydroelectric Power Project	4.14
TOTAL		**00.00**

NPC Siquijor Diesel Power Plant

Annex G
BASILAN

MAINLAND BASILAN

Basilan Electric Cooperative, Inc. (BASELCO)

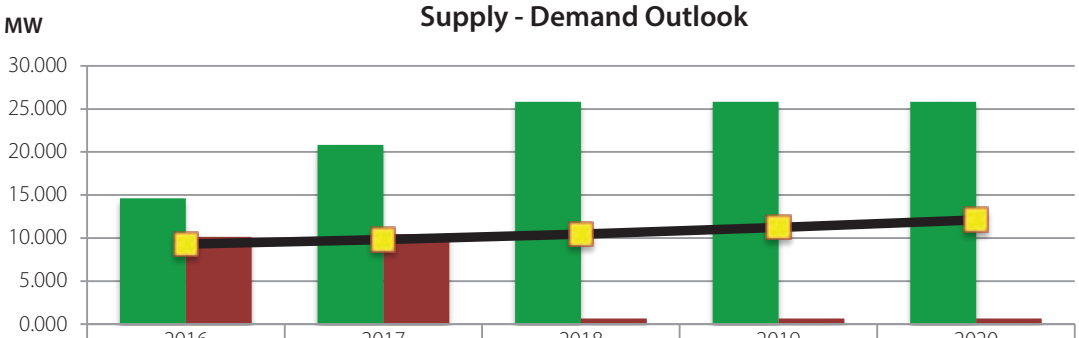
As of December 2015	
Coverage Area :	Barangays covered by Isabela City and Lamitan City and the Municipalities of Lantawan, Manuso, Sumisip, Tipo-Tipo, Tuburan, Akbar, Al-Barka, Hadji Mohammad Ajul and Ungkaya Pukan located in Mainland Basilan
No. of Barangays Energized:	226
Service Hours:	24
Distribution Lines, ckt-km.:	
Installed Capacity, MW:	14.029
Dependable Capacity, MW:	9.740
Contracted Capacity, MW:	9.179
Peak Demand, MW:	9.000
Energy Sales, MWh:	25,918.032
UC-ME Subsidy:	PHP 675,584,081.362

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**14.629**	**20.829**	**25.829**	**25.829**	**25.829**
NPC-SPUG	13.959	20.159	25.159	25.159	25.159
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.670	0.670	0.670	0.670	0.670
Contracted Capacity (MW)	**10.152**	**10.460**	**0.640**	**0.640**	**0.640**
NPC-SPUG	9.512	9.820	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.640	0.640	0.640	0.640	0.640
Peak Demand (MW)	**9.292**	**9.825**	**10.464**	**11.220**	**12.105**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	26,115.871	27,380.085	29,010.236	31,021.958	33,429.349
UC-ME Subsidy, net of RECI (Million Pesos)*	551.138	703.926	687.943	720.998	599.844

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**



	2016	2017	2018	2019	2020
Rated Capacity	14.629	20.829	25.829	25.829	25.829
Contracted Capacity	10.152	10.460	0.640	0.640	0.640
Peak Demand	9.292	9.825	10.464	11.220	12.105

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
Sumisip	Baiwas River	2.40
Sumisip	Ettub-Ettub River	0.90
TOTAL		**3.30**


NPC Basilan Diesel Power Plant

NPC Power Barge 119

Annex G
SULU

SULU MAIN GRID

Sulu Electric Cooperative, Inc. (SULECO)

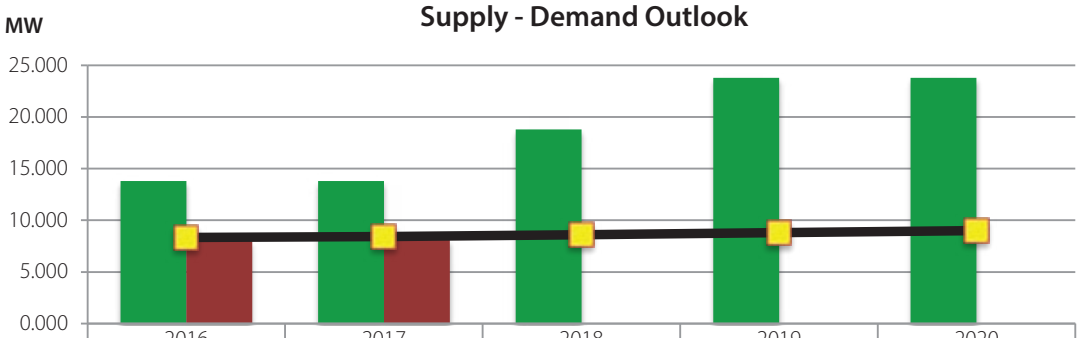
As of December 2015	
Coverage Area :	Municipalities of Jolo, Patikul, Talipao and Maimbung located in Jolo Island, Province of Sulu. The Municipalities of Parang and Indanan were disconnected due to pilferage and low collection and peace and order concerns.
No. of Barangays Energized:	141
Service Hours:	24
Distribution Lines, ckt-km.:	395.670
Installed Capacity, MW:	13.800
Dependable Capacity, MW:	10.410
Contracted Capacity, MW:	7.348
Peak Demand, MW:	7.870
Energy Sales, MWh:	32,684.764
UC-ME Subsidy:	PHP 785,886,574.085

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**13.800**	**13.800**	**18.800**	**23.800**	**23.800**
NPC-SPUG	13.800	13.800	18.800	23.800	23.800
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**8.000**	**8.200**	**0.000**	**0.000**	**0.000**
NPC-SPUG	8.000	8.200	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**8.338**	**8.435**	**8.600**	**8.800**	**9.000**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	36,013.000	37,774.000	39,742.000	42,410.000	45,123.000
UC-ME Subsidy, net of RECI (Million Pesos)*	623.567	1,266.548	733.975	795.724	839.979

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**



	2016	2017	2018	2019	2020
Rated Capacity	13.800	13.800	18.800	23.800	23.800
Contracted Capacity	8.000	8.200	0.000	0.000	0.000
Peak Demand	8.338	8.435	8.600	8.800	9.000

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**


NPC Jolo Diesel Power Plant

Annex G
TAWI-TAWI

BONGAO

Tawi-Tawi Electric Cooperative, Inc. (TAWELCO)

As of December 2015

Coverage Area :	Municipality of Bongao, Province of Tawi-Tawi
No. of Barangays Energized:	16
Service Hours:	24
Distribution Lines, ckt-km.:	38.410
Installed Capacity, MW:	8.442
Dependable Capacity, MW:	3.800
Contracted Capacity, MW:	4.587
Peak Demand, MW:	3.520
Energy Sales, MWh:	14,027.383
UC-ME Subsidy:	PHP 358,474,166.678

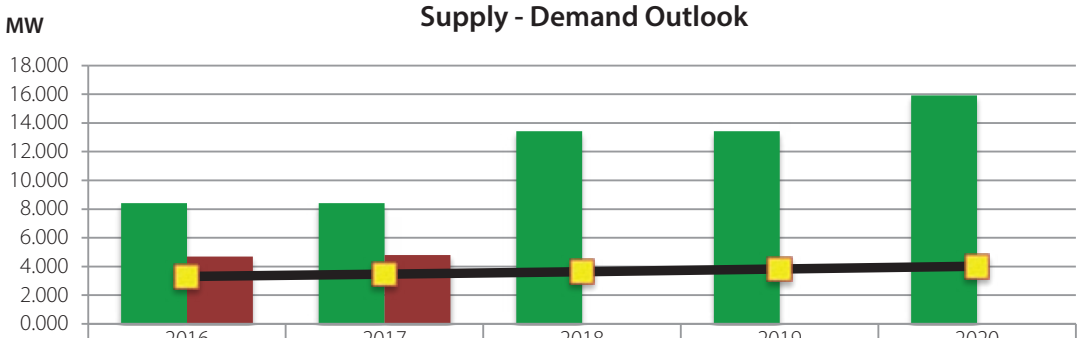
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**8.422**	**8.422**	**13.422**	**13.422**	**15.922**
NPC-SPUG	8.422	8.422	13.422	13.422	15.922
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**4.692**	**4.801**	**0.000**	**0.000**	**0.000**
NPC-SPUG	4.692	4.801	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**3.303**	**3.468**	**3.642**	**3.824**	**4.015**

SERVICE PROFILE	2016	2017	2018	2019	2020
Energy Requirement (MWh)	17,748.000	19,868.000	22,240.000	24,842.000	27,448.000
UC-ME Subsidy, net of RECI (Million Pesos)*	260.428	503.725	330.713	252.221	375.136

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP



	2016	2017	2018	2019	2020
Rated Capacity	8.422	8.422	13.422	13.422	15.922
Contracted Capacity	4.692	4.801	0.000	0.000	0.000
Peak Demand	3.303	3.468	3.642	3.824	4.015

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**


NPC Bongao Diesel Power Plant

NPC Power Barge 108

Annex H
LEBAK-KALAMANSIG

LEBAK-KALAMANSIG

Sultan Kudarat Electric Cooperative, Inc. (SUKELCO)

As of December 2015

Coverage Area :	Municipalities of Lebak and Kalamansig, Province of Sultan Kudarat
No. of Barangays Energized:	39
Service Hours:	24
Distribution Lines, ckt-km.:	502.712
Installed Capacity, MW:	5.820
Dependable Capacity, MW:	3.700
Contracted Capacity, MW:	3.048
Peak Demand, MW:	3.048
Energy Sales, MWh:	12,141.527
UC-ME Subsidy:	PHP 211,980,762.913

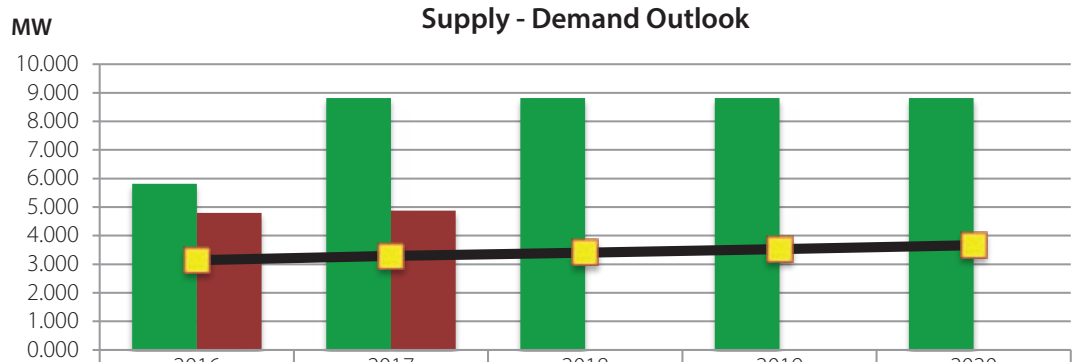
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**5.820**	**8.820**	**8.820**	**8.820**	**8.820**
NPC-SPUG	5.820	8.820	8.820	8.820	8.820
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**4.795**	**4.877**	**0.000**	**0.000**	**0.000**
NPC-SPUG	4.795	4.877	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**3.141**	**3.288**	**3.404**	**3.532**	**3.666**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	15,255.435	15,970.393	16,532.774	17,158.909	17,807.111
UC-ME Subsidy, net of RECI (Million Pesos)*	122.407	530.414	276.960	300.424	328.856

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP
Tacorong-Lebak Interconnection Project	2021	



	2016	2017	2018	2019	2020
Rated Capacity	5.820	8.820	8.820	8.820	8.820
Contracted Capacity	4.795	4.877	0.000	0.000	0.000
Peak Demand	3.141	3.288	3.404	3.532	3.666

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
Lebak	Makin Falls	0.80
TOTAL		**0.80**

NPC Kalamansig Diesel Power Plant

Annex H
DINAGAT ISLAND

DINAGAT ISLAND

Dinagat Island Electric Cooperative, Inc. (DIELCO)

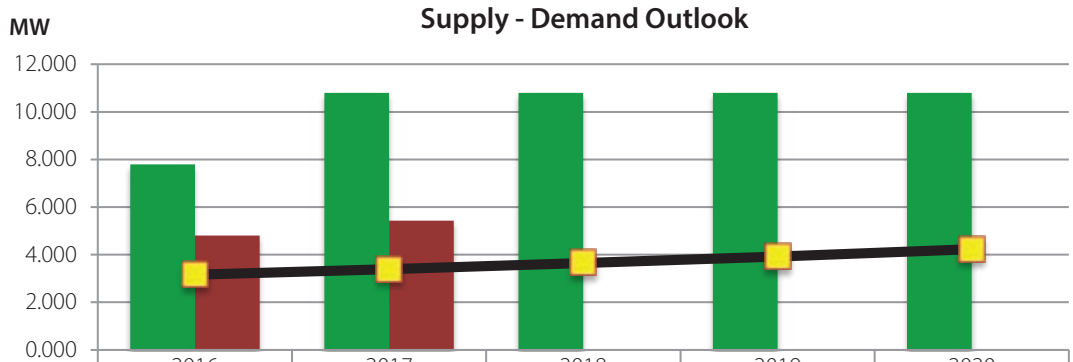
As of December 2015	
Coverage Area :	Province of Dinagat Islands (Municipalities of Dinagat, Cagdianao, San Jose, Basilisa, Libjo, Tubajo and Loreto) and seven (7) barangays of Nonoc Island, Surigao City, which are served via a Sale for Resale Agreement between DIELCO and Surigao del Norte Electric Cooperative, Inc.
No. of Barangays Energized:	95 (88 in Dinagat Island)
Service Hours:	24
Distribution Lines, ckt-km.:	365.359
Installed Capacity, MW:	6.290
Dependable Capacity, MW:	4.770
Contracted Capacity, MW:	4.210
Peak Demand, MW:	3.063
Energy Sales, MWh:	13,060.864
UC-ME Subsidy:	PHP 227,437,259.434

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**7.790**	**10.790**	**10.790**	**10.790**	**10.790**
NPC-SPUG	7.790	10.790	10.790	10.790	10.790
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**4.810**	**5.430**	**0.000**	**0.000**	**0.000**
NPC-SPUG	4.810	5.430	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**3.160**	**3.391**	**3.646**	**3.926**	**4.232**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	15,290.239	17,233.138	19,237.441	21,281.776	23,350.813
UC-ME Subsidy, net of RECI (Million Pesos)*	146.445	599.965	330.240	358.108	407.035

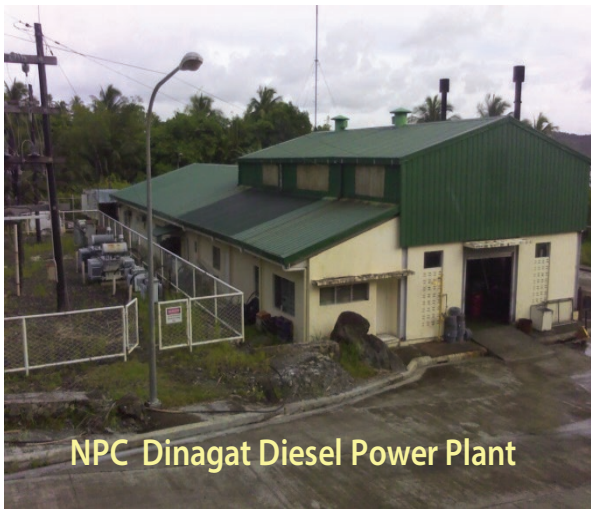
** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	Target Year	Project Cost, Million PHP



	2016	2017	2018	2019	2020
Rated Capacity	7.790	10.790	10.790	10.790	10.790
Contracted Capacity	4.810	5.430	0.000	0.000	0.000
Peak Demand	3.160	3.391	3.646	3.926	4.232

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
Loreto	Cambinwil Mini-hydro	0.50
TOTAL		**0.50**


NPC Dinagat Diesel Power Plant

NPC Loreto Diesel Power Plant

Annex H
EL NIDO

EL NIDO

Palawan Electric Cooperative, Inc. (PALECO)

As of December 2015

Coverage Area :	Municipality of El Nido, Province of Palawan
No. of Barangays Energized:	8
Service Hours:	24
Distribution Lines, ckt-km.:	44.285
Installed Capacity, MW:	3.675
Dependable Capacity, MW:	3.185
Contracted Capacity, MW:	2.539
Peak Demand, MW:	1.843
Energy Sales, MWh:	7,348.473
UC-ME Subsidy:	PHP 117,539,045.606

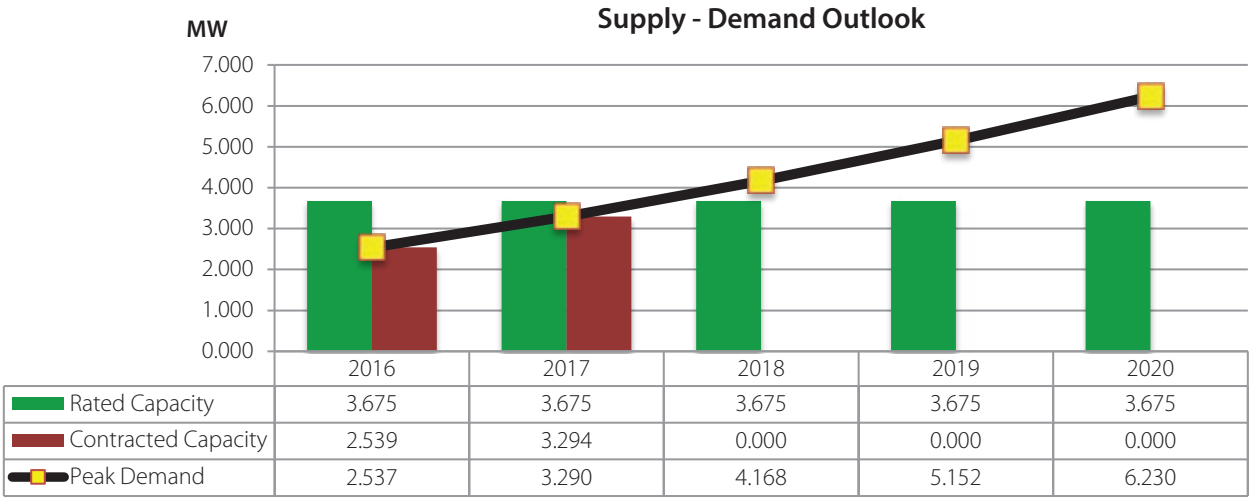
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**3.675**	**3.675**	**3.675**	**3.675**	**3.675**
NPC-SPUG	3.675	3.675	3.675	3.675	3.675
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**2.539**	**3.294**	**0.000**	**0.000**	**0.000**
NPC-SPUG	2.539	3.294	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**2.537**	**3.290**	**4.168**	**5.152**	**6.230**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	12,003.480	16,191.270	20,528.559	25,375.516	30,677.886
UC-ME Subsidy, net of RECI (Million Pesos)*	71.519	131.933	103.979	109.669	236.087

** Actual UC-ME Subsidy for 2016*

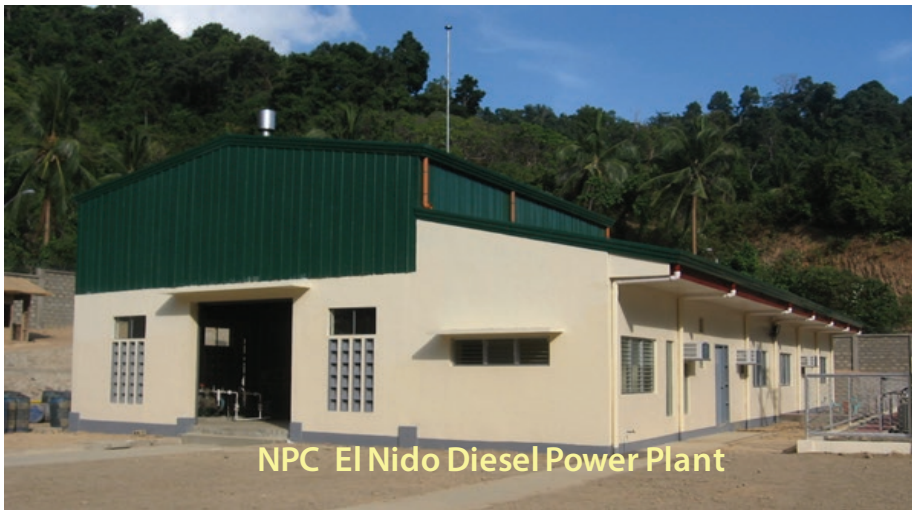
MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP
63 Km Taytay-El Nido 69 kV Transmission Line	2017	693.00
5.0 MVA El Nido Substation	2017	101.00



	2016	2017	2018	2019	2020
Rated Capacity	3.675	3.675	3.675	3.675	3.675
Contracted Capacity	2.539	3.294	0.000	0.000	0.000
Peak Demand	2.537	3.290	4.168	5.152	6.230

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
El Nido	Palawan Solar Power Project	3.00
El Nido	Bulalakao-1 North River Hydroelectric Power Project	0.34
El Nido	Bulalakao-2 South River Hydroelectric Power Project	0.44
TOTAL		**3.78**


NPC El Nido Diesel Power Plant

Annex H
ROXAS

ROXAS

Palawan Electric Cooperative, Inc. (PALECO)

As of December 2015

Coverage Area :	Municipality of Roxas, Province of Palawan
No. of Barangays Energized:	15
Service Hours:	24
Distribution Lines, ckt-km.:	130.200
Installed Capacity, MW:	3.630
Dependable Capacity, MW:	1.900
Contracted Capacity, MW:	1.517
Peak Demand, MW:	1.517
Energy Sales, MWh:	7,034.746
UC-ME Subsidy:	PHP 5,764,025.000

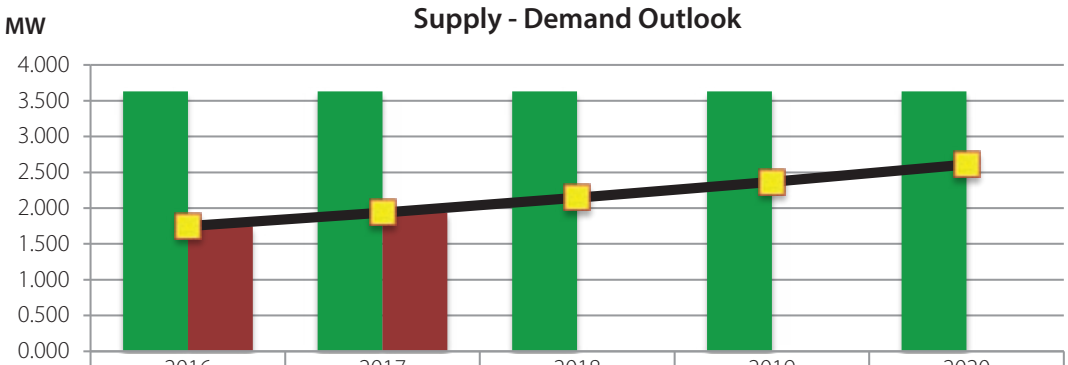
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**3.630**	**3.630**	**3.630**	**3.630**	**3.630**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	3.630	3.630	3.630	3.630	3.630
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**1.749**	**1.937**	**0.000**	**0.000**	**0.000**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	1.749	1.937	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**1.749**	**1.937**	**2.143**	**2.367**	**2.609**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	9,567.641	10,428.729	11,283.884	12,130.176	12,955.028
UC-ME Subsidy, net of RECI (Million Pesos)*	(part of DMCI Palawan)				

** Actual UC-ME Subsidy for 2016*

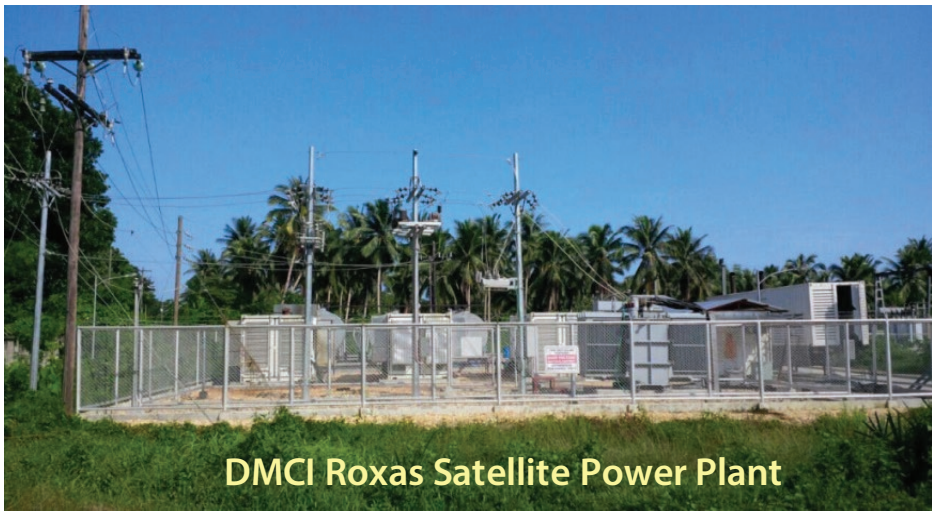
MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP
76 km Roxas - Taytay 69kV Transmission Line	2016	792.00



	2016	2017	2018	2019	2020
Rated Capacity	3.630	3.630	3.630	3.630	3.630
Contracted Capacity	1.749	1.937	0.000	0.000	0.000
Peak Demand	1.749	1.937	2.143	2.367	2.609

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**



DMCI Roxas Satellite Power Plant

Annex H
TICAO ISLAND

TICAO ISLAND

Ticao Island Electric Cooperative, Inc. (TISELCO)

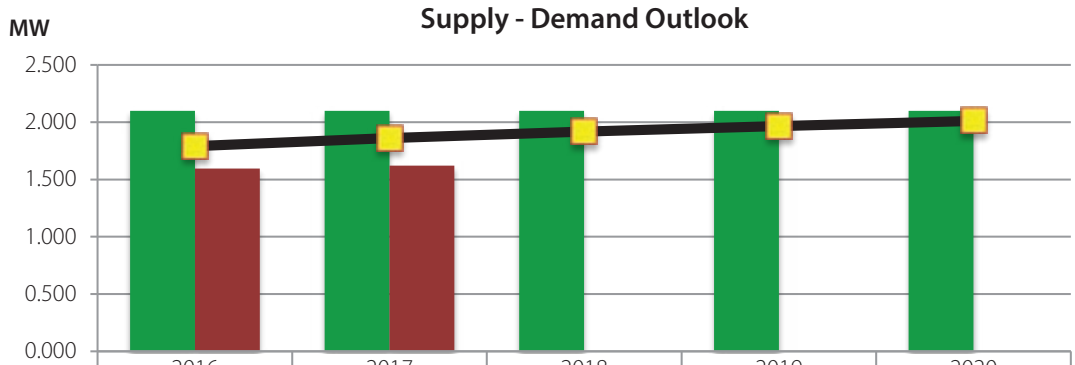
As of December 2015	
Coverage Area :	Municipalities of San Jacinto, San Fernando, Monreal, and Batuan, Ticao Island, Province of Masbate. Excludes areas under the Philippine Rural Electrification System (PRES) Project.
No. of Barangays Energized:	63
Service Hours:	24
Distribution Lines, ckt-km.:	212.27
Installed Capacity, MW:	2.100
Dependable Capacity, MW:	1.700
Contracted Capacity, MW:	1.570
Peak Demand, MW:	1.708
Energy Sales, MWh:	5,877.558
UC-ME Subsidy:	PHP 101,562,141.680

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**2.100**	**2.100**	**2.100**	**2.100**	**2.100**
NPC-SPUG	2.100	2.100	2.100	2.100	2.100
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**1.595**	**1.620**	**0.000**	**0.000**	**0.000**
NPC-SPUG	1.595	1.620	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**1.791**	**1.860**	**1.917**	**1.967**	**2.011**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	6,428.949	6,997.179	7,571.149	8,148.959	8,729.449
UC-ME Subsidy, net of RECI (Million Pesos)*	59.221	122.588	112.442	104.028	151.796

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**
Interconnection of remaining PRES Mini-grids	2016	



	2016	2017	2018	2019	2020
Rated Capacity	2.100	2.100	2.100	2.100	2.100
Contracted Capacity	1.595	1.620	0.000	0.000	0.000
Peak Demand	1.791	1.860	1.917	1.967	2.011

RENEWABLE ENERGY POTENTIAL		
Area	Project	Potential Capacity (MW)
TOTAL		00.00


NPC Ticao Diesel Power Plant

Annex H
BATAN (BATANES)

BATAN ISLAND

Batanes Electric Cooperative, Inc. (BATANELCO)

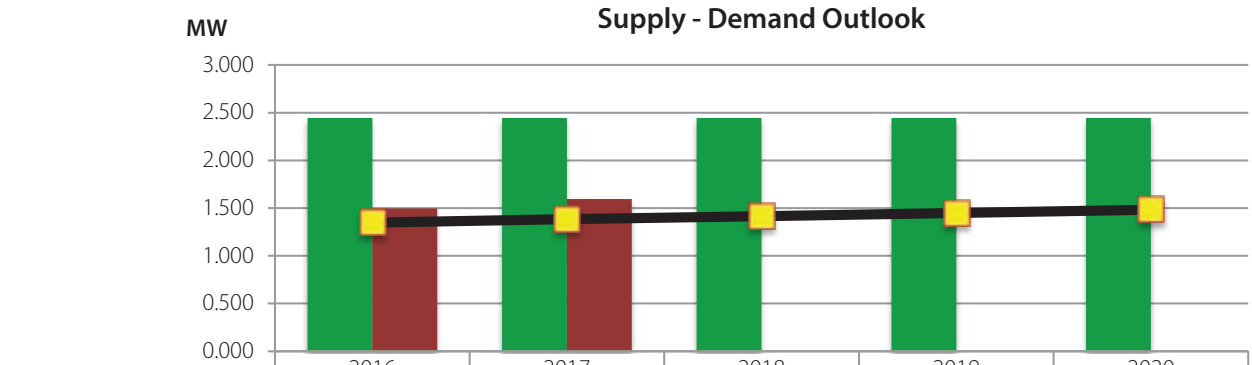
As of December 2015	
Coverage Area :	Municipalities of Basco, Mahatao, Ivana and Uyugan, Batan Island, Province of Batanes
No. of Barangays Energized:	18
Service Hours:	24
Distribution Lines, ckt-km.:	
Installed Capacity, MW:	2.445
Dependable Capacity, MW:	1.450
Contracted Capacity, MW:	1.308
Peak Demand, MW:	1.442
Energy Sales, MWh:	
UC-ME Subsidy:	PHP 96,141,275.308

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**2.445**	**2.445**	**2.445**	**2.445**	**2.445**
NPC-SPUG	2.445	2.445	2.445	2.445	2.445
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**1.497**	**1.596**	**0.000**	**0.000**	**0.000**
NPC-SPUG	1.497	1.596	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**1.348**	**1.383**	**1.416**	**1.450**	**1.483**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)					
UC-ME Subsidy, net of RECI (Million Pesos)*	53.977	124.585	115.437	106.545	170.359

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**



	2016	2017	2018	2019	2020
Rated Capacity	2.445	2.445	2.445	2.445	2.445
Contracted Capacity	1.497	1.596	0.000	0.000	0.000
Peak Demand	1.348	1.383	1.416	1.450	1.483

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**

NPC Basco Diesel Power Plant

Annex H
CUYO

CUYO ISLAND

Palawan Electric Cooperative, Inc.

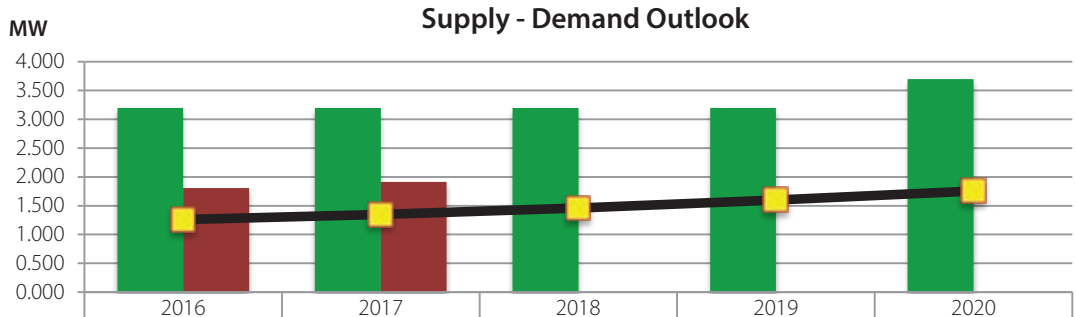
As of December 2015	
Coverage Area :	Areas under the Municipalities of Cuyo and Magsaysay located in Cuyo Island, Province of Palawan
No. of Barangays Energized:	19
Service Hours:	24
Distribution Lines, ckt-km.:	93.094
Installed Capacity, MW:	2.000
Dependable Capacity, MW:	1.600
Contracted Capacity, MW:	1.699
Peak Demand, MW:	1.200
Energy Sales, MWh:	4,712.535
UC-ME Subsidy:	PHP 80,214,092.559

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**3.200**	**3.200**	**3.200**	**3.200**	**3.700**
NPC-SPUG	3.200	3.200	3.200	3.200	3.700
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**1.806**	**1.913**	**0.000**	**0.000**	**0.000**
NPC-SPUG	1.806	1.913	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**1.260**	**1.348**	**1.462**	**1.599**	**1.755**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	5,561.587	5,923.090	6,278.475	6,655.184	7,027.874
UC-ME Subsidy, net of RECI (Million Pesos)*	41.783	120.565	134.921	146.587	85.406

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**



	2016	2017	2018	2019	2020
Rated Capacity	3.200	3.200	3.200	3.200	3.700
Contracted Capacity	1.806	1.913	0.000	0.000	0.000
Peak Demand	1.260	1.348	1.462	1.599	1.755

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**

NPC Cuyo Diesel Power Plant

Annex H
POLILLO

POLILLO ISLAND

Quezon II Electric Cooperative, Inc. (QUEZELCO II)

As of December 2015

Coverage Area :	Municipalities of Polillo, Burdeos and Panukulan, Polillo Island, Quezon Province
No. of Barangays Energized:	40
Service Hours:	16
Distribution Lines, ckt-km.:	111.993
Installed Capacity, MW:	2.360
Dependable Capacity, MW:	1.294
Contracted Capacity, MW:	1.595
Peak Demand, MW:	1.313
Energy Sales, MWh:	3,960.049
UC-ME Subsidy:	PHP 75,864,378.429

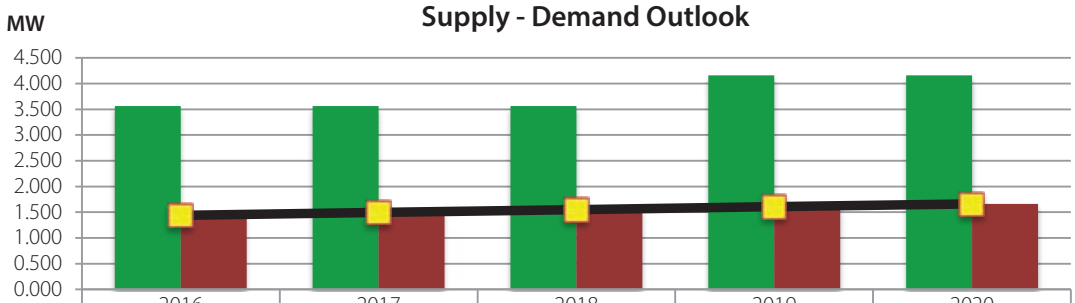
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**3.560**	**3.560**	**3.560**	**4.160**	**4.160**
NPC-SPUG	3.560	3.560	3.560	4.160	4.160
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**1.438**	**1.494**	**1.549**	**1.605**	**1.661**
NPC-SPUG	1.438	1.494	1.549	1.605	1.661
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**1.438**	**1.494**	**1.549**	**1.605**	**1.661**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	4,164.795	4,369.541	4,574.286	4,779.032	4,983.778
UC-ME Subsidy, net of RECI (Million Pesos)*	60.330	111.123	98.049	102.711	93.654

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP



	2016	2017	2018	2019	2020
Rated Capacity	3.560	3.560	3.560	4.160	4.160
Contracted Capacity	1.438	1.494	1.549	1.605	1.661
Peak Demand	1.438	1.494	1.549	1.605	1.661

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**


NPC Polililo Diesel Power Plant

Annex H
TAYTAY

TAYTAY

Palawan Electric Cooperative, Inc. (PALECO)

As of December 2015

Coverage Area :	Municipality of Taytay, Province of Palawan
No. of Barangays Energized:	7
Service Hours:	24
Distribution Lines, ckt-km.:	119.611
Installed Capacity, MW:	1.670
Dependable Capacity, MW:	1.480
Contracted Capacity, MW:	0.770
Peak Demand, MW:	0.801
Energy Sales, MWh:	3,704.386
UC-ME Subsidy:	PHP 57,840,373.054

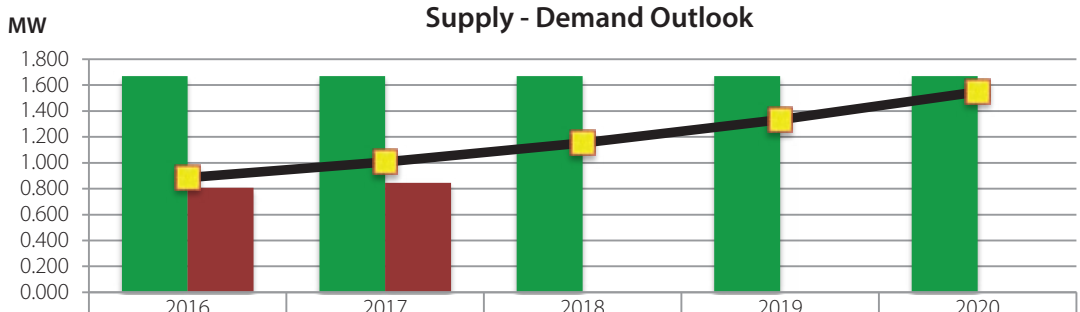
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**1.670**	**1.670**	**1.670**	**1.670**	**1.670**
NPC-SPUG	1.670	1.670	1.670	1.670	1.670
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**0.807**	**0.845**	**0.000**	**0.000**	**0.000**
NPC-SPUG	0.807	0.845	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**0.886**	**1.005**	**1.153**	**1.333**	**1.548**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	4,604.588	5,258.439	6,015.654	6,869.877	7,824.790
UC-ME Subsidy, net of RECI (Million Pesos)*	29.972	74.131	67.130	74.291	93.916

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP
76 km Roxas - Taytay 69kV Transmission Line	2016	792.00
63 km Taytay - El Nido 69kV Transmission Line	2017	693.00
5.0 MVA Taytay Substation	2017	101.00



	2016	2017	2018	2019	2020
Rated Capacity	1.670	1.670	1.670	1.670	1.670
Contracted Capacity	0.807	0.845	0.000	0.000	0.000
Peak Demand	0.886	1.005	1.153	1.333	1.548

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**

NPC Taytay Diesel Power Plant

DICADIDI

Aurora Electric Cooperative, Inc. (AURELCO)

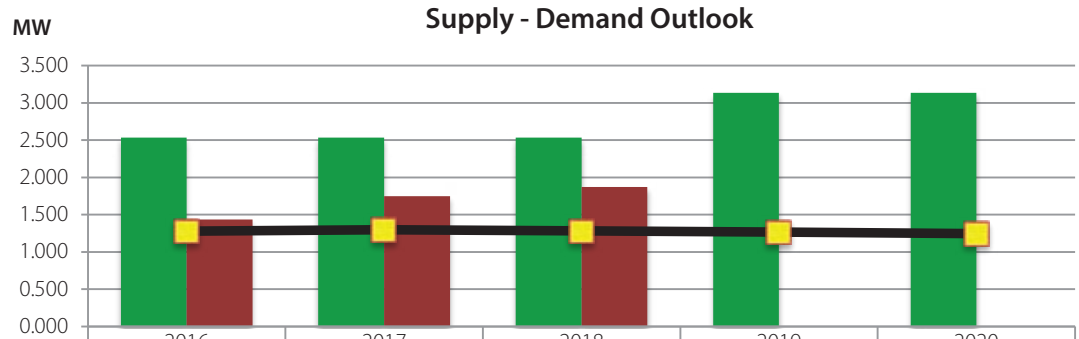
As of December 2015	
Coverage Area :	Municipalities of Dinalungan, Casiguran and Dilasag, Province of Aurora and Municipality of Dinapigue, Province of Isabela
No. of Barangays Energized:	50
Service Hours:	24
Distribution Lines, ckt-km.:	
Installed Capacity, MW:	1.935
Dependable Capacity, MW:	1.540
Contracted Capacity, MW:	2.156
Peak Demand, MW:	1.132
Energy Sales, MWh:	3,741.496
UC-ME Subsidy:	PHP 64,009,582.828

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**2.535**	**2.535**	**2.535**	**3.135**	**3.135**
NPC-SPUG	2.535	2.535	2.535	3.135	3.135
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**1.437**	**1.748**	**1.872**	**0.000**	**0.000**
NPC-SPUG	1.437	1.748	1.872	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**1.281**	**1.298**	**1.284**	**1.268**	**1.246**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	4,116.727	4,502.369	4,765.662	5,009.527	5,236.445
UC-ME Subsidy, net of RECI (Million Pesos)*	46.179	52.949	42.399	45.068	104.078

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**
Dipaculao - Dinalungan Interconnection	2016	-



	2016	2017	2018	2019	2020
Rated Capacity	2.535	2.535	2.535	3.135	3.135
Contracted Capacity	1.437	1.748	1.872	0.000	0.000
Peak Demand	1.281	1.298	1.284	1.268	1.246

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
Dinapigue	Ilaguen 2 Hydroelectric Power Project	14.00
Dilasag	Woody Biomass Power Project	1.50
Dinalungan	Talaytay Hydroelectric Power Project	1.45
TOTAL		**16.95**


NPC Casiguran Diesel Power Plant

Annex H
LUBANG

LUBANG ISLAND

Lubang Electric Cooperative, Inc. (LUBELCO)

As of December 2015

Coverage Area :	Barangays covered by the Municipalities of Lubang and Looc located in Lubang Island, Province of Occidental Mindoro
No. of Barangays Energized:	21
Service Hours:	24
Distribution Lines, ckt-km.:	
Installed Capacity, MW:	1.704
Dependable Capacity, MW:	1.400
Contracted Capacity, MW:	1.300
Peak Demand, MW:	0.835
Energy Sales, MWh:	3,063.239
UC-ME Subsidy:	PHP 50,590,470.071

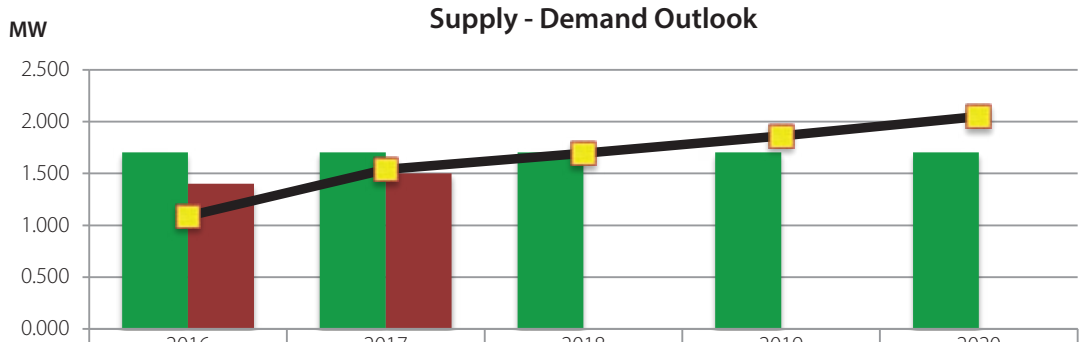
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**1.704**	**1.704**	**1.704**	**1.704**	**1.704**
NPC-SPUG	1.704	1.704	1.704	1.704	1.704
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**1.400**	**1.500**	**0.000**	**0.000**	**0.000**
NPC-SPUG	1.400	1.500	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**1.089**	**1.540**	**1.694**	**1.863**	**2.050**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	3,322.000	3,537.000	3,776.000	4,017.000	4,278.000
UC-ME Subsidy, net of RECI (Million Pesos)*	30.669	133.740	117.238	131.412	56.105

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP



	2016	2017	2018	2019	2020
Rated Capacity	1.704	1.704	1.704	1.704	1.704
Contracted Capacity	1.400	1.500	0.000	0.000	0.000
Peak Demand	1.089	1.540	1.694	1.863	2.050

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**

Annex H
SIASI

SIASI

Sulu Electric Cooperative, Inc. (SULECO)

As of December 2015

Coverage Area :	Municipalities of Siasi and Pandami, Province of Sulu
No. of Barangays Energized:	39
Service Hours:	24
Distribution Lines, ckt-km.:	168.00
Installed Capacity, MW:	1.860
Dependable Capacity, MW:	1.360
Contracted Capacity, MW:	2.846
Peak Demand, MW:	0.680
Energy Sales, MWh:	2,555.824
UC-ME Subsidy:	PHP 59,567,568.710

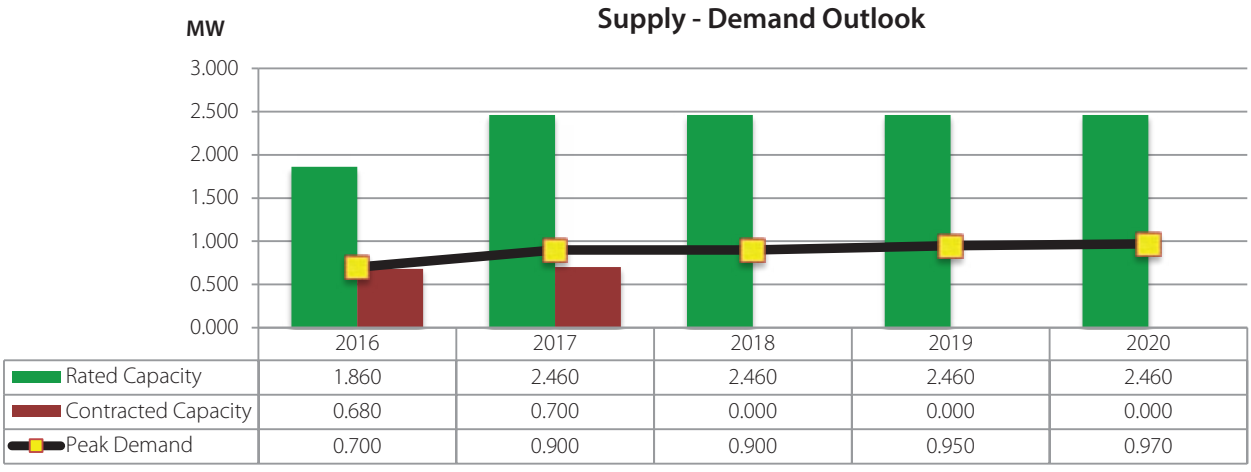
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**1.860**	**2.460**	**2.460**	**2.460**	**2.460**
NPC-SPUG	1.860	2.460	2.460	2.460	2.460
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**0.680**	**0.700**	**0.000**	**0.000**	**0.000**
NPC-SPUG	0.680	0.700	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**0.700**	**0.900**	**0.900**	**0.950**	**0.970**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	3,079.000	3,272.000	3,499.000	3,757.000	4,049.000
UC-ME Subsidy, net of RECI (Million Pesos)*	41.536	80.067	71.125	77.496	61.349

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP



	2016	2017	2018	2019	2020
Rated Capacity	1.860	2.460	2.460	2.460	2.460
Contracted Capacity	0.680	0.700	0.000	0.000	0.000
Peak Demand	0.700	0.900	0.900	0.950	0.970

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**


NPC Siasi Diesel Power Plant

Annex H
SAN VICENTE

SAN VICENTE

Palawan Electric Cooperative, Inc. (PALECO)

As of December 2015

Coverage Area :	Municipality of San Vicente, Province of Palawan
No. of Barangays Energized:	5
Service Hours:	24
Distribution Lines, ckt-km.:	74.821
Installed Capacity, MW:	1.223
Dependable Capacity, MW:	0.990
Contracted Capacity, MW:	0.683
Peak Demand, MW:	0.555
Energy Sales, MWh:	2,127.058
UC-ME Subsidy:	PHP 37,808,006.210

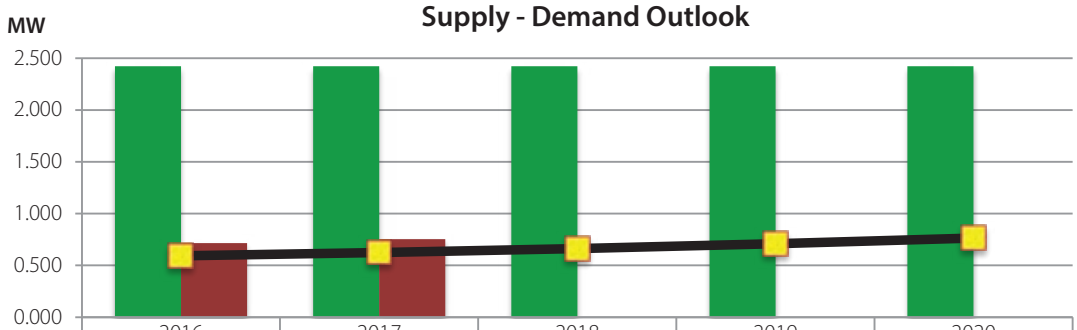
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**2.423**	**2.423**	**2.423**	**2.423**	**2.423**
NPC-SPUG	2.423	2.423	2.423	2.423	2.423
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**0.717**	**0.753**	**0.000**	**0.000**	**0.000**
NPC-SPUG	0.717	0.753	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**0.593**	**0.624**	**0.662**	**0.709**	**0.764**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	3,073.060	3,902.786	4,901.899	6,019.532	7,217.419
UC-ME Subsidy, net of RECI (Million Pesos)*	22.207	57.499	52.450	57.669	46.585

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP
13 km Itabiak - San Vicente 69kV Transmission Line	2019	59.00



	2016	2017	2018	2019	2020
Rated Capacity	2.423	2.423	2.423	2.423	2.423
Contracted Capacity	0.717	0.753	0.000	0.000	0.000
Peak Demand	0.593	0.624	0.662	0.709	0.764

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
San Vicente	Pamuayan Falls	0.20
San Vicente	Pidal River	0.80
San Vicente	Ombo River	0.30
San Vicente	Tabawe Falls	0.30
San Vicente	Little Baguio Falls	0.10
TOTAL		**1.70**


NPC San Vicente Diesel Power Plant

Annex H
TINGLOY

TINGLOY

Batangas II Electric Cooperative, Inc. (BATELEC II)

As of December 2015

Coverage Area :	Island Municipality of Tingloy, Province of Batangas
No. of Barangays Energized:	15
Service Hours:	12
Distribution Lines, ckt-km.:	
Installed Capacity, MW:	1.183
Dependable Capacity, MW:	0.675
Contracted Capacity, MW:	0 (no existing PSA with NPC-SPUG)
Peak Demand, MW:	0.680
Energy Sales, MWh:	1,044.263
UC-ME Subsidy:	PHP 24,634,078.060

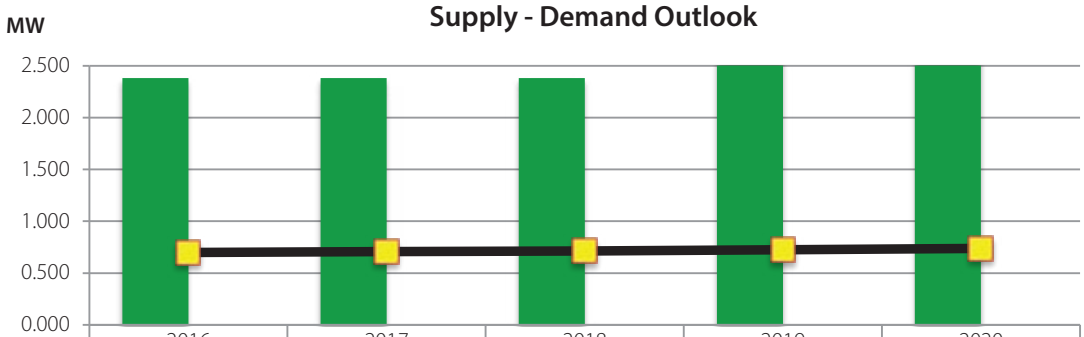
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**2.383**	**2.383**	**2.383**	**2.983**	**2.983**
NPC-SPUG	2.383	2.383	2.383	2.983	2.983
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
NPC-SPUG	0.000	0.000	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**0.699**	**0.707**	**0.714**	**0.724**	**0.738**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	16	16	16	24	24
Energy Requirement (MWh)	1,085.621	1,115.247	1,144.333	1,173.626	1,203.873
UC-ME Subsidy, net of RECI (Million Pesos)*	13.504	37.578	38.018	40.599	35.371

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP



	2016	2017	2018	2019	2020
Rated Capacity	2.383	2.383	2.383	2.983	2.983
Contracted Capacity	0.000	0.000	0.000	0.000	0.000
Peak Demand	0.699	0.707	0.714	0.724	0.738

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**


NPC Tingloy Diesel Power Plant

Annex H
SIBUYAN ISLAND

SIBUYAN ISLAND

Romblon Electric Cooperative, Inc. (ROMELCO)

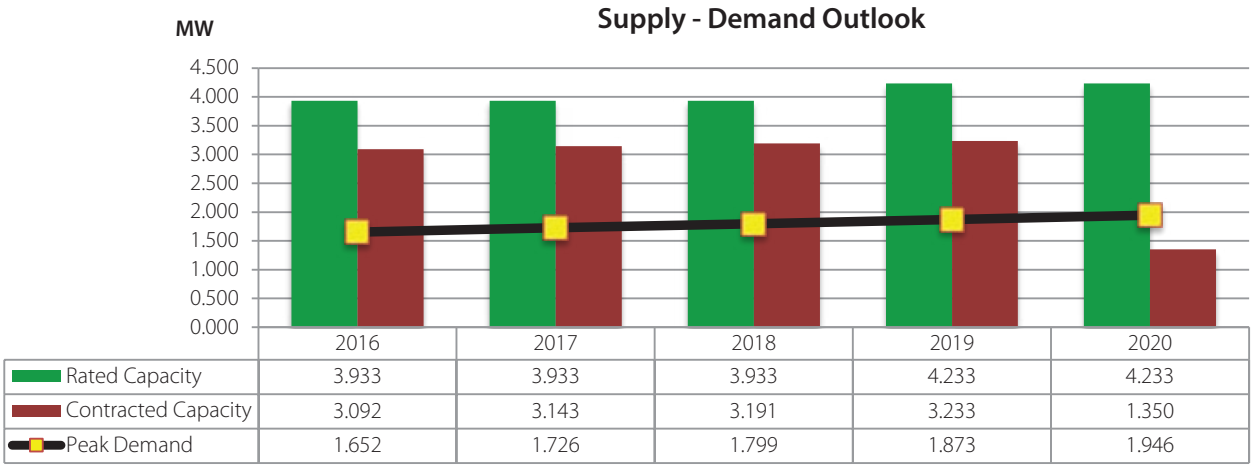
As of December 2015	
Coverage Area :	Municipalities of Cajidiocan, Magdiwang and San Fernando, Sibuyan Island, Romblon Province
No. of Barangays Energized:	35
Service Hours:	24
Distribution Lines, ckt-km.:	227.952
Installed Capacity, MW:	3.183
Dependable Capacity, MW:	2.410
Contracted Capacity, MW:	2.786
Peak Demand, MW:	1.585
Energy Sales, MWh:	7,524.786
UC-ME Subsidy:	PHP 44,856,971.880

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**3.933**	**3.933**	**3.933**	**4.233**	**4.233**
NPC-SPUG	2.583	2.583	2.583	2.883	2.883
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	1.350	1.350	1.350	1.350	1.350
Contracted Capacity (MW)	**3.092**	**3.143**	**3.191**	**3.233**	**1.350**
NPC-SPUG	1.742	1.793	1.841	1.883	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	1.350	1.350	1.350	1.350	1.350
Peak Demand (MW)	**1.652**	**1.726**	**1.799**	**1.873**	**1.946**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	8,843.214	9,449.280	10,093.462	10,766.249	11,460.419
UC-ME Subsidy, net of RECI (Million Pesos)*	17.253	45.069	44.643	49.013	39.747

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**



	2016	2017	2018	2019	2020
Rated Capacity	3.933	3.933	3.933	4.233	4.233
Contracted Capacity	3.092	3.143	3.191	3.233	1.350
Peak Demand	1.652	1.726	1.799	1.873	1.946

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
San Fernando	Mini-hydro	0.50
Magdiwang	Mini-hydro	1.50
Cajidiocan	Mini-hydro	1.50
Cajidiocan	Mini-hydro	0.50
San Fernando	Mini-hydro	0.50
TOTAL		**4.50**


ROMELCO Cantingas Minihydro Power Plant


NPC Sibuyan Diesel Power Plant

Annex H
CULION ISLAND

CULION ISLAND

Busuanga Electric Cooperative, Inc. (BISELCO)

As of December 2015

Coverage Area :	Areas located in Mainland Culion, Province of Palawan
No. of Barangays Energized:	13
Service Hours:	24
Distribution Lines, ckt-km.:	
Installed Capacity, MW:	1.123
Dependable Capacity, MW:	0.870
Contracted Capacity, MW:	0.505
Peak Demand, MW:	0.470
Energy Sales, MWh:	1,544.076
UC-ME Subsidy:	PHP 28,314,430.249

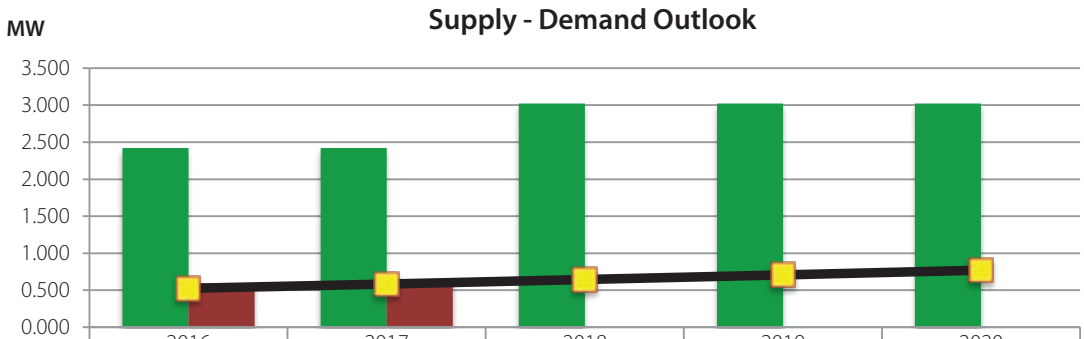
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**2.423**	**2.423**	**3.023**	**3.023**	**3.023**
NPC-SPUG	2.423	2.423	3.023	3.023	3.023
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**0.592**	**0.638**	**0.000**	**0.000**	**0.000**
NPC-SPUG	0.592	0.638	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**0.525**	**0.584**	**0.645**	**0.707**	**0.770**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)					
UC-ME Subsidy, net of RECI (Million Pesos)*	20.554	48.662	48.775	54.069	41.359

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP



	2016	2017	2018	2019	2020
Rated Capacity	2.423	2.423	3.023	3.023	3.023
Contracted Capacity	0.592	0.638	0.000	0.000	0.000
Peak Demand	0.525	0.584	0.645	0.707	0.770

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**

NPC Culion Diesel Power Plant

Annex H
CALUYA ISLAND

CALUYA ISLAND

Antique Electric Cooperative, Inc. (ANTECO)

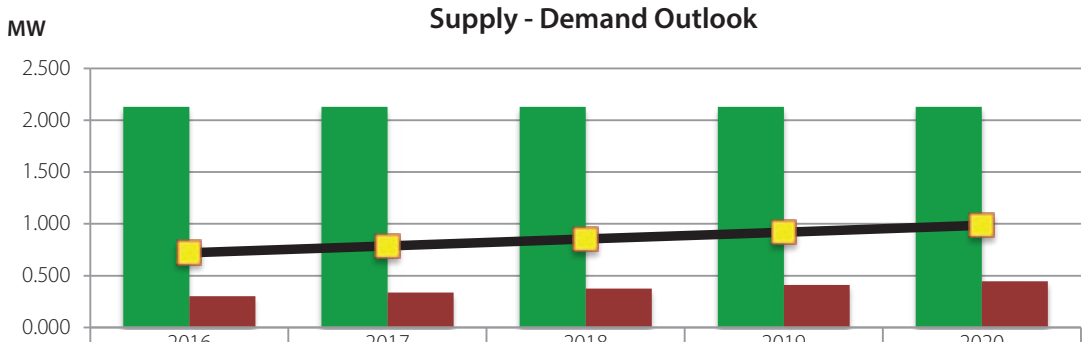
As of December 2015	
Coverage Area :	Caluya Island, Province of Antique. The Local Government Unit of Caluya augments the supply of NPC-SPUG in the island.
No. of Barangays Energized:	8
Service Hours:	24
Distribution Lines, ckt-km.:	
Installed Capacity, MW:	1.330
Dependable Capacity, MW:	0.947
Contracted Capacity, MW:	0.224
Peak Demand, MW:	0.484
Energy Sales, MWh:	3,582.442
UC-ME Subsidy:	PHP 26,814,660.947

SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**2.130**	**2.130**	**2.130**	**2.130**	**2.130**
NPC-SPUG	2.130	2.130	2.130	2.130	2.130
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**0.301**	**0.337**	**0.374**	**0.410**	**0.447**
NPC-SPUG	0.301	0.337	0.374	0.410	0.447
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**0.721**	**0.787**	**0.853**	**0.920**	**0.986**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	4,000.553	4,363.417	4,726.280	5,089.144	5,452.007
UC-ME Subsidy, net of RECI (Million Pesos)*	18.342	48.867	47.587	49.264	29.246

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS		
Project	**Target Year**	**Project Cost, Million PHP**



	2016	2017	2018	2019	2020
Rated Capacity	2.130	2.130	2.130	2.130	2.130
Contracted Capacity	0.301	0.337	0.374	0.410	0.447
Peak Demand	0.721	0.787	0.853	0.920	0.986

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**

NPC Caluya Diesel Power Plant

Annex H
ZUMARRAGA

ZUMARRAGA

Samar II Electric Cooperative, Inc. (SAMELCO II)

As of December 2015

Coverage Area :	Island Municipality of Zumarraga, Samar Province
No. of Barangays Energized:	25
Service Hours:	24
Distribution Lines, ckt-km.:	5
Installed Capacity, MW:	0.589
Dependable Capacity, MW:	0.548
Contracted Capacity, MW:	0.330
Peak Demand, MW:	0.324
Energy Sales, MWh:	915.314
UC-ME Subsidy:	PHP 27,973,496.556

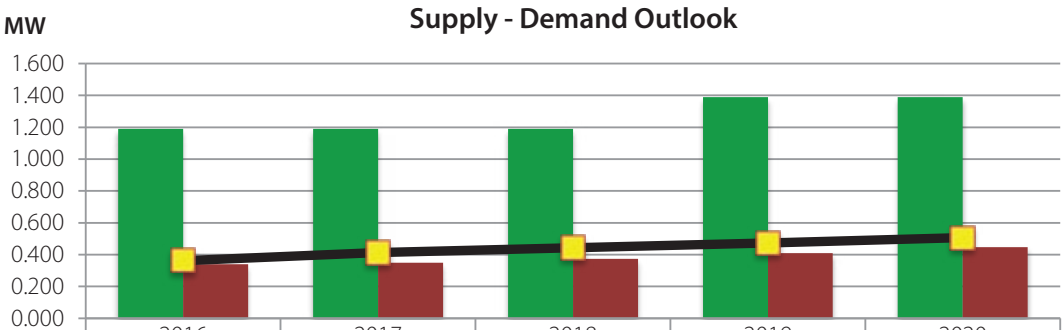
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**1.189**	**1.189**	**1.189**	**1.389**	**1.389**
NPC-SPUG	1.189	1.189	1.189	1.389	1.389
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**0.340**	**0.350**	**0.374**	**0.410**	**0.447**
NPC-SPUG	0.340	0.350	0.374	0.410	0.447
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**0.362**	**0.414**	**0.443**	**0.474**	**0.507**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	1,369.898	1,432.150	1,487.510	1,532.136	1,578.100
UC-ME Subsidy, net of RECI (Million Pesos)*	22.111	32.079	30.818	32.623	25.266

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP



	2016	2017	2018	2019	2020
Rated Capacity	1.189	1.189	1.189	1.389	1.389
Contracted Capacity	0.340	0.350	0.374	0.410	0.447
Peak Demand	0.362	0.414	0.443	0.474	0.507

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**


NPC Zumarraga Diesel Power Plant

Annex H
SEN. NINOY AQUINO

SEN. NINOY AQUINO

Sultan Kudarat Electric Cooperative, Inc. (SUKELCO)

As of December 2015

Coverage Area :	Municipality of Sen. Nino Aquino, Province of Sultan Kudarat
No. of Barangays Energized:	20
Service Hours:	14
Distribution Lines, ckt-km.:	209.592
Installed Capacity, MW:	0.846
Dependable Capacity, MW:	0.650
Contracted Capacity, MW:	0.526
Peak Demand, MW:	0.585
Energy Sales, MWh:	1,150.563
UC-ME Subsidy:	PHP 25,696,127.070

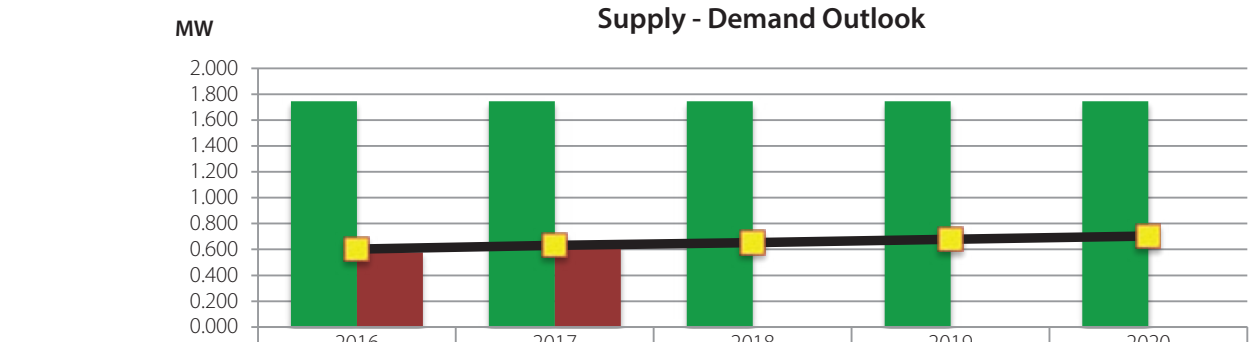
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**1.746**	**1.746**	**1.746**	**1.746**	**1.746**
NPC-SPUG	1.746	1.746	1.746	1.746	1.746
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**0.578**	**0.636**	**0.000**	**0.000**	**0.000**
NPC-SPUG	0.578	0.636	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**0.603**	**0.631**	**0.653**	**0.678**	**0.704**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	16	16	16	24	24
Energy Requirement (MWh)	1,548.917	1,621.508	1,678.608	1,742.180	1,807.994
UC-ME Subsidy, net of RECI (Million Pesos)*	22.543	35.879	38.449	42.031	40.114

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP



	2016	2017	2018	2019	2020
Rated Capacity	1.746	1.746	1.746	1.746	1.746
Contracted Capacity	0.578	0.636	0.000	0.000	0.000
Peak Demand	0.603	0.631	0.653	0.678	0.704

RENEWABLE ENERGY POTENTIAL		
Area	**Project**	**Potential Capacity (MW)**
TOTAL		**00.00**


NPC Ninoy Aquino Diesel Power Plant

Annex H
PILAR

PILAR

Camotes Electric Cooperative, Inc. (CELCO)

As of December 2015

Coverage Area :	Island Municipality of Pilar, Province of Cebu
No. of Barangays Energized:	13
Service Hours:	20
Distribution Lines, ckt-km.:	
Installed Capacity, MW:	0.576
Dependable Capacity, MW:	0.460
Contracted Capacity, MW:	0.334
Peak Demand, MW:	0.340
Energy Sales, MWh:	1,006.562
UC-ME Subsidy:	PHP 23,140,304.652

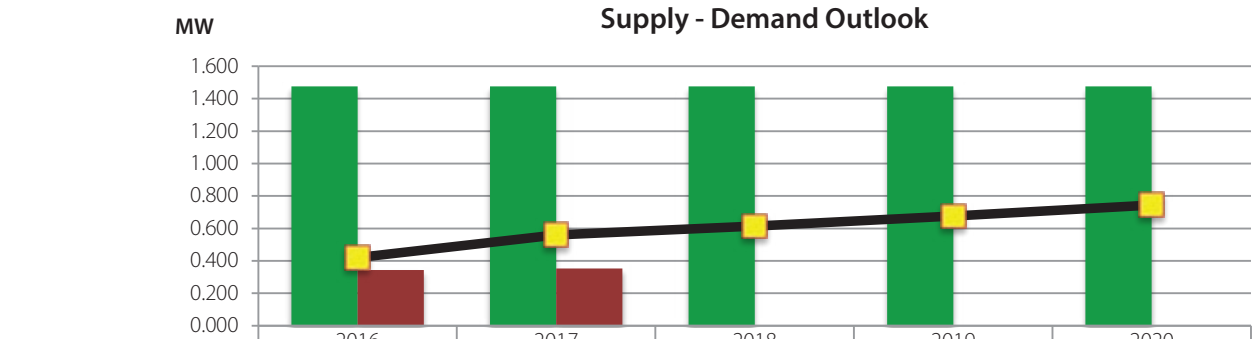
SUPPLY AND DEMAND	2016	2017	2018	2019	2020
Rated Capacity (MW)	**1.476**	**1.476**	**1.476**	**1.476**	**1.476**
NPC-SPUG	1.476	1.476	1.476	1.476	1.476
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Contracted Capacity (MW)	**0.343**	**0.353**	**0.000**	**0.000**	**0.000**
NPC-SPUG	0.343	0.353	0.000	0.000	0.000
NPP/IPP	0.000	0.000	0.000	0.000	0.000
Utility-Owned	0.000	0.000	0.000	0.000	0.000
Peak Demand (MW)	**0.420**	**0.559**	**0.615**	**0.677**	**0.744**

SERVICE PROFILE	2016	2017	2018	2019	2020
Service Hours	24	24	24	24	24
Energy Requirement (MWh)	1,122.598	1,247.037	1,374.399	1,503.455	1,633.346
UC-ME Subsidy, net of RECI (Million Pesos)*	22.060	28.895	26.406	27.377	39.326

** Actual UC-ME Subsidy for 2016*

MAJOR TRANSMISSION AND DISTRIBUTION SYSTEM PROJECTS

Project	Target Year	Project Cost, Million PHP



	2016	2017	2018	2019	2020
Rated Capacity	1.476	1.476	1.476	1.476	1.476
Contracted Capacity	0.343	0.353	0.000	0.000	0.000
Peak Demand	0.420	0.559	0.615	0.677	0.744

RENEWABLE ENERGY POTENTIAL		
Area	Project	Potential Capacity (MW)
TOTAL		00.00

NPC Pilar Diesel Power Plant

Annex I
Power Outlook of Small NPC-SPUG Areas

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
CORDILLERA ADMINISTRATIVE REGION (CAR)						
Kabugao, Apayao (Kalinga - Apayao Electric Cooperative, Inc.)						
Rated Capacity, MW	0.643	1.043	1.043	1.043	1.193	1.193
Contracted Capacity, MW						
Peak Demand, MW	0.190	0.216	0.242	0.271	0.303	0.339
Service Hours	24	24	24	24	24	24
Energy Requirements, MWh	654.928	701.431	749.158	798.108	847.059	897.233
UC-ME Subsidy, Million PhP	17.564	12.952				
CAGAYAN VALLEY (REGION II)						
Itbayat, Batanes (Batanes Electric Cooperative, Inc.)						
Rated Capacity, MW	0.326	0.326	0.326	0.326	0.326	0.326
Contracted Capacity, MW	0.175	0.161	0.176	0.000	0.000	0.000
Peak Demand, MW	0.150	0.158	0.162	0.166	0.170	0.174
Service Hours	18	24	24	24	24	24
Energy Requirements, MWh	545.334	654.348	719.783	791.761	870.937	963.139
UC-ME Subsidy, Million PhP	16.491	12.230				
Sabtang, Batanes (Batanes Electric Cooperative, Inc.)						
Rated Capacity, MW	0.326	0.326	0.326	0.326	0.476	0.476
Contracted Capacity, MW	0.128	0.122	0.141	0.000	0.000	0.000
Peak Demand, MW	0.118	0.124	0.127	0.130	0.133	0.136
Service Hours	18	24	24	24	24	24
Energy Requirements, MWh	433.759	621.364	664.860	711.400	761.198	892.755
UC-ME Subsidy, Million PhP	12.587	9.641				
Calayan Is., Cagayan *(LGU - Calayan)*						
Rated Capacity, MW	0.426	1.026	1.026	1.026	1.026	1.026
Contracted Capacity, MW						
Peak Demand, MW	0.178	0.189	0.208	0.228	0.251	0.276
Service Hours	12	16	16	16	24	24
Energy Requirements, MWh	357.616	498.840	558.700	650.660	728.740	816.190
UC-ME Subsidy, Million PhP	12.366	8.200				
Balatubat, Camiguin Is., Cagayan *(NPC)*						
Rated Capacity, MW	0.120	0.120	0.120	0.120	0.180	0.180
Contracted Capacity, MW						
Peak Demand, MW	0.071	0.063	0.069	0.076	0.084	0.092
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	77.261	103.160	113.480	147.710	162.480	345.200
UC-ME Subsidy, Million PhP	5.680	6.827				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
Minabel, Camiguin Is., Cagayan *(NPC)*						
Rated Capacity, MW	0.109	0.109	0.109	0.109	0.164	0.164
Contracted Capacity, MW						
Peak Demand, MW	0.027	0.030	0.041	0.046	0.051	0.057
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	42.272	49.158	54.074	70.013	77.014	82.844
UC-ME Subsidy, Million PhP	1.948	3.234				
Maconacon, Isabela *(NPC)*						
Rated Capacity, MW	0.240	0.240	0.240	0.240	0.240	0.240
Contracted Capacity, MW						
Peak Demand, MW	0.104	0.218	0.171	0.188	0.207	0.228
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	142.164	674.991	751.574	836.920	932.121	845.636
UC-ME Subsidy, Million PhP	6.482	5.843				
Palanan, Isabela (Isabela II Electric Cooperative, Inc.)						
Rated Capacity, MW	0.523	1.023	1.023	1.023	1.273	1.273
Contracted Capacity, MW	0.255	0.385	0.282	0.000	0.000	0.000
Peak Demand, MW	0.200	0.210	0.218	0.226	0.233	0.240
Service Hours	12	16	16	16	24	24
Energy Requirements, MWh	447.880	470.861	488.839	505.856	524.104	544.873
UC-ME Subsidy, Million PhP	11.126	6.956				
CALABARZON (REGION IV-A)						
Jomalig, Quezon (Quezon II Electric Cooperative, Inc.)						
Rated Capacity, MW	0.423	0.823	0.823	0.823	0.823	0.823
Contracted Capacity, MW	0.170	0.210	0.233	0.262	0.292	0.323
Peak Demand, MW	0.175	0.198	0.218	0.238	0.258	0.278
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	240.289	255.293	270.297	285.301	300.304	315.308
UC-ME Subsidy, Million PhP	8.101	7.703				
Patnanungan, Quezon (Quezon II Electric Cooperative, Inc.)						
Rated Capacity, MW	0.423	1.323	1.323	1.323	1.323	1.323
Contracted Capacity, MW	0.306	0.260	0.264	0.274	0.284	0.294
Peak Demand, MW	0.216	0.221	0.219	0.216	0.214	0.212
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	441.865	463.522	486.250	509.786	533.927	558.513
UC-ME Subsidy, Million PhP	9.518	6.387				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
MIMAROPA (REGION IV-B)						
Maniwaya Is., Marinduque (Marinduque Electric Cooperative, Inc.)						
Rated Capacity, MW	0.104	0.104	0.104	0.104	0.104	0.104
Contracted Capacity, MW	0.050	0.047	0.048	0.050	0.051	0.000
Peak Demand, MW	0.044	0.045	0.047	0.049	0.051	0.053
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	78.570	85.261	92.609	100.676	109.535	119.265
UC-ME Subsidy, Million PhP	0.990	1.647				
Mongpong Is., Marinduque (Marinduque Electric Cooperative, Inc.)						
Rated Capacity, MW	0.104	0.104	0.104	0.104	0.104	0.104
Contracted Capacity, MW	0.048	0.045	0.047	0.048	0.050	0.000
Peak Demand, MW	0.057	0.054	0.057	0.061	0.065	0.068
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	69.878	75.829	82.364	89.539	97.418	106.071
UC-ME Subsidy, Million PhP	1.130	1.595				
Polo Is., Marinduque (Marinduque Electric Cooperative, Inc.)						
Rated Capacity, MW	0.092	0.092	0.092	0.092	0.092	0.092
Contracted Capacity, MW	0.037	0.038	0.041	0.044	0.047	0.000
Peak Demand, MW	0.035	0.036	0.037	0.038	0.039	0.040
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	46.001	49.919	54.221	58.944	64.131	69.827
UC-ME Subsidy, Million PhP	0.893	1.363				
Cabra Is., Occidental Mindoro (Lubang Electric Cooperative, Inc.)						
Rated Capacity, MW	0.180	0.180	0.180	0.180	0.280	0.280
Contracted Capacity, MW	0.100	0.057	0.075	0.000	0.000	0.000
Peak Demand, MW	0.052	0.057	0.063	0.069	0.076	0.083
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	65.758	103.757	114.133	229.316	276.201	303.821
UC-ME Subsidy, Million PhP	24.302	17.050				
Agutaya Is., Palawan (Palawan Electric Cooperative, Inc.)						
Rated Capacity, MW	0.326	0.326	0.326	0.326	0.326	0.326
Contracted Capacity, MW	0.098	0.102	0.106	0.000	0.000	0.000
Peak Demand, MW	0.098	0.102	0.106	0.112	0.119	0.127
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	187.963	207.887	229.694	252.663	275.150	298.538
UC-ME Subsidy, Million PhP	11.229	6.606				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
Araceli, Palawan (Palawan Electric Cooperative, Inc.)						
Rated Capacity, MW	0.586	0.886	1.186	1.186	1.186	1.186
Contracted Capacity, MW	0.161	0.165	0.168	0.000	0.000	0.000
Peak Demand, MW	0.158	0.165	0.173	0.181	0.191	0.202
Service Hours	16	16	16	16	24	24
Energy Requirements, MWh	436.240	545.300	626.004	696.117	744.845	789.536
UC-ME Subsidy, Million PhP	13.208	9.098				
Balabac Is., Palawan (Palawan Electric Cooperative, Inc.)						
Rated Capacity, MW	0.326	0.776	0.776	0.776	0.776	0.776
Contracted Capacity, MW	0.164	0.163	0.169	0.000	0.000	0.000
Peak Demand, MW	0.170	0.181	0.193	0.207	0.224	0.242
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	341.720	362.224	386.855	412.774	439.604	466.860
UC-ME Subsidy, Million PhP	16.781	8.967				
Cagayancillo, Palawan (Palawan Electric Cooperative, Inc.)						
Rated Capacity, MW	0.163	0.163	0.163	0.163	0.463	0.463
Contracted Capacity, MW	0.111	0.118	0.125	0.000	0.000	0.000
Peak Demand, MW	0.120	0.140	0.159	0.178	0.198	0.217
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	200.613	220.173	235.585	254.431	274.786	296.769
UC-ME Subsidy, Million PhP	9.312	6.968				
Linapacan Is., Palawan (Busuanga Is. Electric Cooperative, Inc.)						
Rated Capacity, MW	0.322	0.522	0.522	0.522	0.722	0.722
Contracted Capacity, MW	0.102	0.111	0.120	0.000	0.000	0.000
Peak Demand, MW	0.105	0.108	0.115	0.123	0.130	0.137
Service Hours	12	16	16	16	24	24
Energy Requirements, MWh	282.653	393.681	433.049	470.203	517.223	574.313
UC-ME Subsidy, Million PhP	12.234	10.148				
Banton, Romblon (LGU - Banton)						
Rated Capacity, MW	0.326	0.326	0.326	0.326	0.326	0.326
Contracted Capacity, MW	0.208	0.218	0.229	0.239	0.251	0.000
Peak Demand, MW	0.216	0.228	0.237	0.245	0.254	0.262
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	174.686	289.003	314.020	342.664	374.134	407.817
UC-ME Subsidy, Million PhP	8.269	6.754				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
Concepcion, Romblon (LGU - Concepcion)						
Rated Capacity, MW	0.326	0.926	0.926	0.926	0.926	0.926
Contracted Capacity, MW	0.230	0.390	0.400	0.410	0.415	0.425
Peak Demand, MW	0.225	0.300	0.320	0.325	0.340	0.345
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	225.000	300.000	320.000	325.000	340.000	345.000
UC-ME Subsidy, Million PhP	9.124	7.305				
Corcuera, Romblon (LGU - Corcuera)						
Rated Capacity, MW	0.663	0.663	0.663	0.663	0.663	0.663
Contracted Capacity, MW	0.395	0.410	0.425	0.440	0.455	0.460
Peak Demand, MW	0.380	0.380	0.401	0.422	0.442	0.463
Service Hours	16	16	24	24	24	24
Energy Requirements, MWh	817.000	878.949	935.137	987.888	1037.540	1084.422
UC-ME Subsidy, Million PhP	19.686	16.427				
San Jose, Carabao Is., Romblon (Tablas Is. Electric Cooperative, Inc.)						
Rated Capacity, MW	0.554	1.304	1.304	1.304	1.604	1.604
Contracted Capacity, MW	0.333	0.302	0.314	0.324	0.333	0.340
Peak Demand, MW	0.321	0.390	0.429	0.472	0.519	0.571
Service Hours	12	16	16	16	24	24
Energy Requirements, MWh	821.394	919.171	1011.088	1445.422	1589.964	1748.960
UC-ME Subsidy, Million PhP	15.973	12.620				
BICOL REGION (REGION V)						
Batan Is., Albay (Albay Electric Cooperative, Inc./APEC)						
Rated Capacity, MW	0.626	0.626	0.626	0.926	0.926	0.926
Contracted Capacity, MW	1.100	1.400	1.800	0.000	0.000	0.000
Peak Demand, MW	0.273	0.455	0.551	0.606	0.666	0.733
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	337.161	1130.152	1243.167	1601.541	1761.695	1937.864
UC-ME Subsidy, Million PhP	9.970	7.830				
Rapu-Rapu Is., Albay (Albay Electric Cooperative, Inc./APEC)						
Rated Capacity, MW	1.426	1.426	1.426	1.426	1.426	1.926
Contracted Capacity, MW	1.500	2.000	2.300	0.000	0.000	
Peak Demand, MW	0.380	0.714	0.896	1.003	1.124	1.259
Service Hours	12	16	16	16	24	24
Energy Requirements, MWh	872.983	2022.159	2264.818	2649.208	2967.113	3323.167
UC-ME Subsidy, Million PhP	22.099	13.826				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
Atulayan Is., Camarines Sur (Camarines Sur IV Electric Cooperative, Inc.)						
Rated Capacity, MW	0.022	0.022	0.022	0.022	0.022	0.022
Contracted Capacity, MW	0.005	0.006	0.006	0.006	0.006	
Peak Demand, MW	0.008	0.008	0.008	0.009	0.010	0.011
Service Hours	6	8	8	8	16	16
Energy Requirements, MWh	6.598	6.403	7.044	7.748	8.523	9.375
UC-ME Subsidy, Million PhP	0.542	0.375				
Lahuy Is., Camarines Sur (Camarines Sur IV Electric Cooperative, Inc.)						
Rated Capacity, MW	0.120	0.120	0.120	0.120	0.240	0.240
Contracted Capacity, MW	0.047	0.051	0.056	0.056	0.056	
Peak Demand, MW	0.048	0.057	0.067	0.079	0.093	0.109
Service Hours	4	8	8	8	16	16
Energy Requirements, MWh	40.954	112.075	123.282	163.865	180.251	197.997
UC-ME Subsidy, Million PhP	3.362	2.333				
Haponan Is., Camarines Sur (Camarines Sur IV Electric Cooperative, Inc.) - disconnected due to low collection						
Rated Capacity, MW						
Contracted Capacity, MW						
Peak Demand, MW	0.000					
Service Hours	(8)	8	8	8	16	16
Energy Requirements, MWh	0.000					
UC-ME Subsidy, Million PhP						
Quinalasag Is., Camarines Sur (Camarines Sur IV Electric Cooperative, Inc.)						
Rated Capacity, MW	0.150	0.150	0.250	0.250	0.250	0.250
Contracted Capacity, MW	0.053	0.059	0.064			
Peak Demand, MW	0.085	0.131	0.160	0.196	0.240	0.293
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	72.741	195.416	214.958	269.643	296.607	540.503
UC-ME Subsidy, Million PhP	5.971	6.964				
Palumbanes Is., Catanduanes (First Catanduanes Electric Cooperative, Inc.)						
Rated Capacity, MW	0.022	0.022	0.062	0.062	0.102	0.142
Contracted Capacity, MW	0.018	0.022	0.022	0.000	0.000	0.000
Peak Demand, MW	0.019	0.031	0.034	0.036	0.040	0.044
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	22.826	45.528	48.760	52.222	57.575	63.477
UC-ME Subsidy, Million PhP	0.847	0.831				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
Chico Is., Cawayan, Masbate (LGU - Cawayan)						
Rated Capacity, MW	0.035	0.035	0.035	0.085	0.085	0.085
Contracted Capacity, MW						
Peak Demand, MW	0.023	0.027	0.042	0.047	0.051	0.056
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	32.567	51.082	56.190	74.618	82.080	90.143
UC-ME Subsidy, Million PhP	0.824	0.982				
Gilotongan Is., Cawayan, Masbate (LGU - Cawayan)						
Rated Capacity, MW	0.090	0.090	0.090	0.090	0.210	0.210
Contracted Capacity, MW						
Peak Demand, MW	0.075	0.077	0.097	0.109	0.122	0.136
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	133.979	147.018	161.719	204.148	224.563	246.771
UC-ME Subsidy, Million PhP	3.388	3.401				
Guin-awayan Is., Cawayan, Masbate (LGU - Placer)						
Rated Capacity, MW	0.035	0.035	0.035	0.035	0.075	0.075
Contracted Capacity, MW						
Peak Demand, MW	0.021	0.021	0.034	0.039	0.045	0.052
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	38.240	42.565	48.099	55.537	62.201	69.609
UC-ME Subsidy, Million PhP	0.967	1.095				
Nabuctot Is., Placer, Masbate (LGU - Placer)						
Rated Capacity, MW	0.025	0.025	0.025	0.025	0.065	0.065
Contracted Capacity, MW						
Peak Demand, MW	0.017	0.016	0.027	0.030	0.033	0.036
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	40.240	43.364	49.869	61.644	70.891	81.590
UC-ME Subsidy, Million PhP	1.018	0.723				
Pena, Cobre Is., Cawayan, Masbate (*LGU - Cawayan*)						
Rated Capacity, MW	0.025	0.025	0.025	0.025	0.085	0.085
Contracted Capacity, MW						
Peak Demand, MW	0.017	0.054	0.053	0.059	0.067	0.075
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	87.665	72.315	79.547	102.720	112.992	124.129
UC-ME Subsidy, Million PhP	2.217	1.467				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
San Pascual, Burias, Masbate (*LGU - San Pascual*)						
Rated Capacity, MW	1.283	1.783	1.783	1.783	1.783	2.083
Contracted Capacity, MW						
Peak Demand, MW	0.269	0.419	0.401	0.441	0.485	0.534
Service Hours	12	8	8	8	16	16
Energy Requirements, MWh	487.346	750.563	825.619	908.181	1289.749	1418.724
UC-ME Subsidy, Million PhP	10.174	13.134				
Dancalan, Burias Is., Masbate (*LGU - San Pascual*)						
Rated Capacity, MW	0.080	0.080	0.080	0.080	0.080	0.140
Contracted Capacity, MW						
Peak Demand, MW	0.025	0.033	0.040	0.043	0.048	0.051
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	27.355	46.878	51.566	68.361	76.564	86.636
UC-ME Subsidy, Million PhP	1.819	2.489				
Mababangbaybay, Burias Is., Masbate (*LGU - Claveria*)						
Rated Capacity, MW	0.060	0.060	0.060	0.060	0.060	0.060
Contracted Capacity, MW						
Peak Demand, MW	0.022	0.027	0.032	0.035	0.039	0.043
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	25.471	37.779	42.307	56.134	62.867	68.258
UC-ME Subsidy, Million PhP	1.694	1.342				
Malaking Ilog, Burias Is., Masbate (*LGU - San Pascual*)						
Rated Capacity, MW	0.060	0.060	0.060	0.060	0.060	0.110
Contracted Capacity, MW						
Peak Demand, MW	0.023	0.028	0.034	0.038	0.042	0.046
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	36.182	45.326	49.858	63.436	69.780	76.758
UC-ME Subsidy, Million PhP	2.406	2.477				
Osmeña, Burias Is., Masbate (*LGU - Claveria*)						
Rated Capacity, MW	0.080	0.080	0.080	0.080	0.160	0.160
Contracted Capacity, MW						
Peak Demand, MW	0.030	0.041	0.050	0.055	0.060	0.066
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	45.964	55.175	61.795	82.888	92.835	103.975
UC-ME Subsidy, Million PhP	3.056	3.662				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
Peñafrancia, Burias Is., Masbate (*LGU - Claveria*)						
Rated Capacity, MW	0.080	0.080	0.080	0.080	0.160	0.160
Contracted Capacity, MW						
Peak Demand, MW	0.027	0.031	0.035	0.038	0.042	0.046
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	41.695	43.306	48.503	66.192	74.135	83.031
UC-ME Subsidy, Million PhP	2.772	1.990				
Quezon, Burias Is., Masbate (*LGU - Claveria*)						
Rated Capacity, MW	0.060	0.060	0.060	0.060	0.060	0.060
Contracted Capacity, MW						
Peak Demand, MW	0.015	0.025	0.030	0.033	0.038	0.042
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	21.620	33.568	37.596	50.167	56.187	62.929
UC-ME Subsidy, Million PhP	1.438	1.174				
WESTERN VISAYAS (REGION VI)						
Batbatan Is., Antique (*NPC*)						
Rated Capacity, MW	0.100	0.200	0.200	0.200	0.200	0.200
Contracted Capacity, MW						
Peak Demand, MW	0.043	0.046	0.061	0.070	0.081	0.089
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	51.490	75.199	81.215	133.510	144.190	142.855
UC-ME Subsidy, Million PhP	4.449	3.449				
Sibolo Is., Antique (*NPC*)						
Rated Capacity, MW	0.030	0.030	0.030	0.030	0.060	0.090
Contracted Capacity, MW						
Peak Demand, MW	0.016	0.014	0.029	0.033	0.038	0.041
Service Hours	6	8	8	8	16	16
Energy Requirements, MWh	17.484	18.762	21.014	43.676	48.044	52.848
UC-ME Subsidy, Million PhP	1.511	0.906				
Guiwanon Is., Guimaras (*NPC*)						
Rated Capacity, MW	0.036	0.036	0.036	0.036	0.086	0.086
Contracted Capacity, MW						
Peak Demand, MW	0.023	0.030	0.037	0.042	0.047	0.051
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	34.843	56.353	61.988	77.742	85.516	94.067
UC-ME Subsidy, Million PhP	3.010	1.751				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
Gigantes Norte Is., Iloilo (Iloilo III Electric Cooperative, Inc.)						
Rated Capacity, MW	0.326	0.776	0.776	0.776	0.776	0.776
Contracted Capacity, MW						
Peak Demand, MW	0.152	0.157	0.163	0.169	0.176	0.184
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	269.088	433.151	476.467	644.855	709.340	780.274
UC-ME Subsidy, Million PhP	9.050	7.931				
CENTRAL VISAYAS (REGION VII)						
Bagongbanwa Is., Bohol (Bohol I Electric Cooperative, Inc.)						
Rated Capacity, MW	0.038	0.118	0.118	0.118	0.168	0.168
Contracted Capacity, MW						
Peak Demand, MW	0.021	0.024	0.032	0.037	0.042	0.048
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	45.563	48.812	53.658	58.297	62.739	66.998
UC-ME Subsidy, Million PhP	2.236	2.344				
Balicasag Is., Bohol (Bohol I Electric Cooperative, Inc.)						
Rated Capacity, MW	0.038	0.138	0.138	0.138	0.188	0.188
Contracted Capacity, MW						
Peak Demand, MW	0.031	0.040	0.058	0.066	0.076	0.087
Service Hours	6	8	8	8	16	16
Energy Requirements, MWh	50.044	54.050	58.465	63.342	68.690	74.515
UC-ME Subsidy, Million PhP	1.577	1.235				
Batasan Is., Bohol (Bohol I Electric Cooperative, Inc.)						
Rated Capacity, MW	0.056	0.156	0.156	0.156	0.256	0.256
Contracted Capacity, MW						
Peak Demand, MW	0.028	0.036	0.042	0.047	0.052	0.058
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	30.639	31.382	32.692	33.988	35.269	36.530
UC-ME Subsidy, Million PhP	1.504	1.568				
Bilangbilangan Is., Bohol (Bohol I Electric Cooperative, Inc.)						
Rated Capacity, MW	0.020	0.020	0.020	0.020	0.020	0.020
Contracted Capacity, MW						
Peak Demand, MW	0.010	0.010	0.015	0.019	0.023	0.029
Service Hours	4	8	8	8	16	16
Energy Requirements, MWh	7.961	8.364	8.738	9.096	9.438	9.766
UC-ME Subsidy, Million PhP	0.391	0.444				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
Cuaming Is., Bohol (Bohol I Electric Cooperative, Inc.)						
Rated Capacity, MW	0.086	0.206	0.206	0.206	0.206	0.206
Contracted Capacity, MW						
Peak Demand, MW	0.045	0.048	0.057	0.064	0.072	0.081
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	94.992	99.005	107.748	116.386	124.895	133.264
UC-ME Subsidy, Million PhP	2.994	2.298				
Hambongan Is., Bohol (Bohol I Electric Cooperative, Inc.)						
Rated Capacity, MW	0.020	0.020	0.020	0.020	0.050	0.050
Contracted Capacity, MW						
Peak Demand, MW	0.011	0.013	0.022	0.025	0.029	0.033
Service Hours	4	8	8	8	16	16
Energy Requirements, MWh	13.119	13.153	13.281	13.396	13.500	13.594
UC-ME Subsidy, Million PhP	0.644	0.657				
Mantatao Is., Bohol (Bohol I Electric Cooperative, Inc.)						
Rated Capacity, MW	0.038	0.118	0.118	0.118	0.118	0.118
Contracted Capacity, MW						
Peak Demand, MW	0.017	0.021	0.027	0.031	0.036	0.041
Service Hours	4	8	8	8	16	16
Energy Requirements, MWh	21.125	21.312	21.719	22.100	22.459	22.798
UC-ME Subsidy, Million PhP	0.666	0.553				
Mocaboc Is., Bohol (Bohol I Electric Cooperative, Inc.)						
Rated Capacity, MW	0.020	0.020	0.020	0.020	0.070	0.070
Contracted Capacity, MW						
Peak Demand, MW	0.012	0.015	0.019	0.022	0.025	0.028
Service Hours	5	8	8	8	16	16
Energy Requirements, MWh	15.581	15.853	16.575	17.291	17.997	18.692
UC-ME Subsidy, Million PhP	0.765	0.675				
Pamilacan Is., Bohol (Bohol I Electric Cooperative, Inc.)						
Rated Capacity, MW	0.056	0.156	0.156	0.156	0.256	0.256
Contracted Capacity, MW						
Peak Demand, MW	0.039	0.038	0.054	0.062	0.070	0.080
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	70.972	70.347	76.522	82.282	87.680	92.761
UC-ME Subsidy, Million PhP	2.237	1.825				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
Pangapasan Is., Bohol (Bohol I Electric Cooperative, Inc.)						
Rated Capacity, MW	0.015	0.015	0.015	0.015	0.065	0.065
Contracted Capacity, MW						
Peak Demand, MW	0.012	0.014	0.025	0.030	0.035	0.040
Service Hours	5	8	8	8	16	16
Energy Requirements, MWh	15.922	16.462	16.973	17.453	17.907	18.337
UC-ME Subsidy, Million PhP	0.781	0.701				
Ubay Is., Bohol (Bohol I Electric Cooperative, Inc.)						
Rated Capacity, MW	0.012	0.012	0.012	0.012	0.042	0.042
Contracted Capacity, MW						
Peak Demand, MW	0.006	0.007	0.012	0.013	0.015	0.017
Service Hours	5	8	8	8	16	16
Energy Requirements, MWh	5.964	6.528	7.018	7.507	7.990	8.468
UC-ME Subsidy, Million PhP	0.293	0.286				
Cabul-an Is., Bohol (Bohol II Electric Cooperative, Inc.)						
Rated Capacity, MW	0.064	0.064	0.184	0.184	0.184	0.304
Contracted Capacity, MW	0.033	0.034	0.035	0.036	0.037	0.038
Peak Demand, MW	0.062	0.090	0.082	0.091	0.100	0.110
Service Hours	6	8	8	8	16	16
Energy Requirements, MWh	82.643	111.867	164.135	181.466	200.626	298.754
UC-ME Subsidy, Million PhP	2.605	2.142				
CENTRAL VISAYAS (REGION VII)						
Doong Is., Cebu (Bantayan Electric Cooperative, Inc.)						
Rated Capacity, MW	0.326	0.776	0.776	0.776	0.926	0.926
Contracted Capacity, MW	0.187	0.194	0.200	0.000	0.000	0.000
Peak Demand, MW	0.171	0.238	0.288	0.316	0.348	0.383
Service Hours	8	24	24	24	24	24
Energy Requirements, MWh	146.071	159.587	172.638	186.269	200.314	214.652
UC-ME Subsidy, Million PhP	8.459	9.198				
Guintarcan Is., Cebu (Bantayan Electric Cooperative, Inc.)						
Rated Capacity, MW	0.263	0.563	0.563	0.563	0.713	0.713
Contracted Capacity, MW	0.090	0.093	0.096	0.000	0.000	0.000
Peak Demand, MW	0.089	0.171	0.207	0.231	0.255	0.280
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	274.111	292.855	316.807	341.822	367.597	393.909
UC-ME Subsidy, Million PhP	6.019	4.889				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
EASTERN VISAYAS (REGION VIII)						
Maripipi, Biliran (Maripipi Multipurpose Cooperative)						
Rated Capacity, MW	0.476	1.076	1.076	1.076	1.076	1.076
Contracted Capacity, MW	0.280	0.300	32.000	0.000	0.000	0.000
Peak Demand, MW	0.211	0.300	0.320	0.329	0.339	0.348
Service Hours	12	16	16	16	24	24
Energy Requirements, MWh	478.743	466.153	480.095	494.036	507.978	521.920
UC-ME Subsidy, Million PhP	7.017	10.071				
Batag, Northern Samar (Northern Samar Electric Cooperative, Inc.)						
Rated Capacity, MW	0.050	0.170	0.170	0.170	0.290	0.290
Contracted Capacity, MW	0.036	0.041	0.042	0.000	0.000	0.000
Peak Demand, MW	0.041	0.066	0.145	0.163	0.182	0.204
Service Hours	6	8	8	8	16	16
Energy Requirements, MWh	47.370	56.010	59.460	62.245	65.022	67.038
UC-ME Subsidy, Million PhP	2.809	2.087				
Biri, Northern Samar (Northern Samar Electric Cooperative, Inc.)						
Rated Capacity, MW	0.489	1.239	1.239	1.239	1.239	1.489
Contracted Capacity, MW	0.285	0.210	0.216	0.000	0.000	0.000
Peak Demand, MW	0.248	0.345	0.395	0.434	0.478	0.526
Service Hours	12	16	16	16	24	24
Energy Requirements, MWh	577.892	580.851	616.632	645.509	674.307	695.212
UC-ME Subsidy, Million PhP	18.692	11.446				
Capul, Northern Samar (Northern Samar Electric Cooperative, Inc.)						
Rated Capacity, MW	0.326	1.076	1.076	1.076	1.076	1.076
Contracted Capacity, MW	0.272	0.220	0.227	0.000	0.000	0.000
Peak Demand, MW	0.253	0.308	0.353	0.388	0.419	0.452
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	394.977	421.834	447.819	468.791	489.705	504.888
UC-ME Subsidy, Million PhP	11.936	9.751				
San Antonio, Northern Samar (Northern Samar Electric Cooperative, Inc.)						
Rated Capacity, MW	0.576	1.326	1.326	1.326	1.326	1.326
Contracted Capacity, MW	0.380	0.235	0.242	0.000	0.000	0.000
Peak Demand, MW	0.265	0.342	0.377	0.396	0.416	0.436
Service Hours	18	24	24	24	24	24
Energy Requirements, MWh	733.110	716.197	760.315	795.920	831.429	857.206
UC-ME Subsidy, Million PhP	18.726	15.422				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
San Vicente, Northern Samar (Northern Samar Electric Cooperative, Inc.)						
Rated Capacity, MW	0.263	0.463	0.463	0.463	0.463	0.463
Contracted Capacity, MW	0.110	0.087	0.090	0.000	0.000	0.000
Peak Demand, MW	0.098	0.113	0.125	0.137	0.151	0.166
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	167.078	157.549	167.254	175.086	182.898	188.568
UC-ME Subsidy, Million PhP	8.285	6.272				
Almagro Is., Samar (Samar I Electric Cooperative, Inc.)						
Rated Capacity, MW	0.263	0.813	0.813	0.813	0.813	0.813
Contracted Capacity, MW						
Peak Demand, MW	0.084	0.087	0.089	0.091	0.093	0.095
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	156.741	160.978	165.340	168.402	171.555	174.847
UC-ME Subsidy, Million PhP	6.970	6.867				
Sto. Niño Is., Samar (Samar I Electric Cooperative, Inc.)						
Rated Capacity, MW	0.263	0.563	0.563	0.563	0.563	0.563
Contracted Capacity, MW						
Peak Demand, MW	0.098	0.112	0.115	0.117	0.119	0.122
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	165.127	224.031	228.804	234.147	238.121	242.482
UC-ME Subsidy, Million PhP	9.095	6.074				
Tagapul-an Is., Samar (Samar I Electric Cooperative, Inc.)						
Rated Capacity, MW	0.263	0.263	0.263	0.263	0.263	0.263
Contracted Capacity, MW						
Peak Demand, MW	0.093	0.095	0.097	0.099	0.101	0.103
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	163.879	168.132	172.654	175.824	179.124	182.562
UC-ME Subsidy, Million PhP	8.289	7.156				
Biasong, Almagro, Samar (*NPC*)						
Rated Capacity, MW	0.060	0.060	0.060	0.060	0.060	0.060
Contracted Capacity, MW						
Peak Demand, MW	0.023	0.031	0.039	0.044	0.048	0.053
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	27.375	40.176	44.997	60.289	67.523	75.626
UC-ME Subsidy, Million PhP	2.086	1.733				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
Costa Rica, Almagro, Samar (*NPC*)						
Rated Capacity, MW	0.120	0.120	0.120	0.120	0.240	0.240
Contracted Capacity, MW						
Peak Demand, MW	0.062	0.084	0.101	0.114	0.125	0.137
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	82.489	110.646	123.930	163.200	182.784	204.718
UC-ME Subsidy, Million PhP	6.285	5.747				
Kirikite, Alamagro, Samar (*NPC*)						
Rated Capacity, MW	0.060	0.060	0.060	0.060	0.060	0.060
Contracted Capacity, MW						
Peak Demand, MW	0.022	0.027	0.036	0.042	0.048	0.055
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	27.461	36.607	41.000	54.966	61.562	68.949
UC-ME Subsidy, Million PhP	2.092	1.932				
Lunang, Almagro, Samar (*NPC*)						
Rated Capacity, MW	0.180	0.180	0.180	0.180	0.180	0.280
Contracted Capacity, MW						
Peak Demand, MW	0.040	0.057	0.071	0.079	0.087	0.096
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	50.396	65.886	73.793	101.305	113.461	127.076
UC-ME Subsidy, Million PhP	3.840	3.254				
Bagongon, Catbalogan City, Samar (*NPC*)						
Rated Capacity, MW	0.060	0.060	0.060	0.060	0.110	0.110
Contracted Capacity, MW						
Peak Demand, MW	0.015	0.021	0.041	0.048	0.056	0.065
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	16.739	61.414	70.401	85.371	95.616	107.090
UC-ME Subsidy, Million PhP	1.369	2.350				
Buluan, Catbalogan City, Samar (*NPC*)						
Rated Capacity, MW	0.040	0.040	0.040	0.040	0.040	0.040
Contracted Capacity, MW						
Peak Demand, MW	0.009	0.016	0.020	0.023	0.025	0.028
Service Hours	6	8	8	8	16	16
Energy Requirements, MWh	11.778	18.720	20.965	29.410	32.939	36.892
UC-ME Subsidy, Million PhP	0.963	0.901				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
Cinco-Rama, Catbalogan City, Samar (*NPC*)						
Rated Capacity, MW	0.100	0.190	0.190	0.190	0.270	0.270
Contracted Capacity, MW						
Peak Demand, MW	0.055	0.054	0.068	0.076	0.085	0.095
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	62.679	81.651	91.449	118.646	132.883	140.041
UC-ME Subsidy, Million PhP	5.127	7.674				
Cabungaan, Sto. Niño, Samar (*NPC*)						
Rated Capacity, MW	0.040	0.040	0.040	0.040	0.040	0.040
Contracted Capacity, MW						
Peak Demand, MW	0.024	0.033	0.042	0.047	0.051	0.057
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	37.657	49.449	55.382	72.619	81.334	91.094
UC-ME Subsidy, Million PhP	2.032	1.595				
Ilijan, Sto. Niño, Samar (*NPC*)						
Rated Capacity, MW	0.040	0.040	0.040	0.040	0.040	0.090
Contracted Capacity, MW						
Peak Demand, MW	0.018	0.023	0.029	0.032	0.036	0.040
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	19.096	24.214	27.120	38.682	43.324	48.523
UC-ME Subsidy, Million PhP	1.030	0.805				
Libucan Dacu, Tarangnan, Samar (*NPC*)						
Rated Capacity, MW	0.100	0.100	0.100	0.100	0.100	0.200
Contracted Capacity, MW						
Peak Demand, MW	0.065	0.081	0.098	0.110	0.121	0.133
Service Hours	6	8	8	8	16	16
Energy Requirements, MWh	42.373	116.609	130.602	172.834	193.574	216.803
UC-ME Subsidy, Million PhP	2.287	4.481				
Takut, Sto. Niño, Samar (*NPC*)						
Rated Capacity, MW	0.100	0.300	0.300	0.300	0.300	0.300
Contracted Capacity, MW						
Peak Demand, MW	0.066	0.081	0.098	0.107	0.118	0.130
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	102.651	109.348	122.470	162.814	182.352	204.234
UC-ME Subsidy, Million PhP	5.539	4.381				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
Limasawa, Southern Leyte (Southern Leyte Electric Cooperative, Inc.)						
Rated Capacity, MW	0.326	0.626	0.626	0.626	0.776	0.776
Contracted Capacity, MW	0.180	0.185	0.190	0.000	0.000	0.000
Peak Demand, MW	0.110	0.184	0.195	0.208	0.222	0.239
Service Hours	12	16	16	16	24	24
Energy Requirements, MWh	380.417	382.149	395.725	409.301	422.877	436.453
UC-ME Subsidy, Million PhP	10.712	8.295				
ZAMBOANGA PENINSULA (REGION IX)						
Sacol Is., Zamboanga City (Zamboanga City Electric Cooperative, Inc.)						
Rated Capacity, MW	0.150	0.400	0.400	0.400	0.400	0.400
Contracted Capacity, MW	0.100	0.100	0.100	0.000	0.000	0.000
Peak Demand, MW	0.092	0.099	0.114	0.131	0.150	0.172
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	166.941	191.624	219.957	252.479	289.810	332.660
UC-ME Subsidy, Million PhP	6.801	9.217				
DAVAO REGION (REGION XI)						
Talicud Is., Davao del Norte (Davao del Norte Electric Cooperative, Inc.)						
Rated Capacity, MW	0.586	1.186	1.186	1.186	1.586	1.586
Contracted Capacity, MW	0.274	0.287	0.300	0.000	0.000	0.000
Peak Demand, MW	0.267	0.270	0.294	0.309	0.325	0.341
Service Hours	16	16	16	16	24	24
Energy Requirements, MWh	671.000	689.122	723.521	765.705	816.671	877.386
UC-ME Subsidy, Million PhP	14.646	16.474				
Balut Is., Davao Occidental (Davao del Sur Electric Cooperative, Inc.)						
Rated Capacity, MW	0.489	1.189	1.189	1.189	1.189	1.189
Contracted Capacity, MW	0.195	0.235	0.275	0.315	0.355	0.395
Peak Demand, MW	0.195	0.230	0.265	0.300	0.335	0.370
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	388.965	667.917	750.111	819.306	888.500	957.694
UC-ME Subsidy, Million PhP	11.904	15.933				
SOCCSKSARGEN (REGION XII)						
Palimbang, Sultan Kudarat (Sultan Kudarat Electric Cooperative, Inc.)						
Rated Capacity, MW	0.698	1.898	1.898	1.898	2.498	2.498
Contracted Capacity, MW	0.493	0.504	0.513	0.000	0.000	0.000
Peak Demand, MW	0.493	0.508	0.532	0.551	0.571	0.593
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	564.405	590.857	611.663	634.828	658.810	683.034
UC-ME Subsidy, Million PhP	13.343	15.031				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
CARAGA (REGION XIII)						
Hikdop Is., Surigao City (Surigao del Norte Electric Cooperative, Inc.)						
Rated Capacity, MW	0.283	0.683	0.683	0.683	0.683	0.683
Contracted Capacity, MW	0.112	0.117	0.123	0.000	0.000	0.000
Peak Demand, MW	0.113	0.119	0.137	0.150	0.165	0.182
Service Hours	7	16	16	16	24	24
Energy Requirements, MWh	438.090	514.944	532.944	551.944	572.944	593.944
UC-ME Subsidy, Million PhP	5.574	10.906				
AUTONOMOUS REGION OF MUSLIM MINDANAO (ARMM)						
Luuk, Sulu (Sulu Electric Cooperative, Inc.) - disconnected due to low collection						
Rated Capacity, MW	0.325	0.325	0.325	0.425	0.425	0.425
Contracted Capacity, MW						
Peak Demand, MW	0.065					
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	52.956					
UC-ME Subsidy, Million PhP	6.012	4.762				
Mapun, Tawi-Tawi (Cagayan de Sulu Electric Cooperative, Inc.)						
Rated Capacity, MW	1.020	1.020	1.020	1.020	1.020	1.020
Contracted Capacity, MW						
Peak Demand, MW	0.430	0.617	1.260	1.323	0.139	1.459
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	896.700	1573.231	1730.554	2351.296	2515.887	2691.999
UC-ME Subsidy, Million PhP	17.499	17.709				
Manuk-Mankaw, Tawi-Tawi (Tawi-Tawi Electric Cooperative, Inc.)						
Rated Capacity, MW	0.163	0.163	0.163	0.163	0.163	0.163
Contracted Capacity, MW	0.072	0.072	0.073	0.000	0.000	0.000
Peak Demand, MW	0.090	0.114	0.155	0.132	0.145	0.160
Service Hours	6	16	16	16	24	24
Energy Requirements, MWh	188.027	330.439	363.483	478.004	525.805	578.385
UC-ME Subsidy, Million PhP	7.023	7.434				
Panglima Sugala (Balimbing), Tawi-Tawi (Tawi-Tawi Electric Cooperative, Inc.)						
Rated Capacity, MW	0.726	1.026	1.026	1.126	1.126	1.126
Contracted Capacity, MW	0.188	0.189	0.190	0.000	0.000	0.000
Peak Demand, MW	0.155	0.188	0.278	0.306	0.337	0.354
Service Hours	16	16	16	16	24	24
Energy Requirements, MWh	617.677	544.345	598.779	789.559	868.515	911.940
UC-ME Subsidy, Million PhP	18.588	25.254				

Annex I
Power Outlook of Small NPC-SPUG Areas (Continued...)

Power Outlook of Small NPC-SPUG Areas						
	Actual	Forecast				
SIIG (Distribution Service Provider)	2015	2016	2017	2018	2019	2020
Sibutu, Tawi-Tawi (Tawi-Tawi Electric Cooperative, Inc.)						
Rated Capacity, MW	0.326	0.326	0.326	0.326	0.326	0.326
Contracted Capacity, MW	0.255	0.297	0.312	0.000	0.000	0.000
Peak Demand, MW	0.250	0.303	0.327	0.359	0.395	0.435
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	402.416	806.060	886.666	1196.408	1316.049	1447.654
UC-ME Subsidy, Million PhP	11.508	9.952				
Sitangkai Is., Tawi-Tawi (Tawi-Tawi Electric Cooperative, Inc.)						
Rated Capacity, MW	0.824	0.824	0.824	0.824	0.824	0.824
Contracted Capacity, MW	0.364	0.371	0.378	0.000	0.000	0.000
Peak Demand, MW	0.204	0.371	0.386	0.393	0.401	0.409
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	392.500	619.971	632.379	958.403	977.571	997.122
UC-ME Subsidy, Million PhP	17.985	24.506				
Tandubanak, Tawi-Tawi (Tawi-Tawi Electric Cooperative, Inc.)						
Rated Capacity, MW	0.435	0.735	0.735	0.735	0.735	0.735
Contracted Capacity, MW	0.196	0.200	0.204	0.000	0.000	0.000
Peak Demand, MW	0.193	0.151	0.363	0.399	0.439	0.483
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	328.146	618.729	680.602	1021.992	1124.191	1236.610
UC-ME Subsidy, Million PhP	10.379	9.697				
Tandubas Is., Tawi-Tawi (Tawi-Tawi Electric Cooperative, Inc.)						
Rated Capacity, MW	0.150	0.150	0.150	0.150	0.150	0.150
Contracted Capacity, MW	0.084	0.085	0.085	0.000	0.000	0.000
Peak Demand, MW	0.141	0.145	0.167	0.184	0.202	0.222
Service Hours	8	8	8	8	16	16
Energy Requirements, MWh	254.318	496.147	545.762	705.925	776.517	669.811
UC-ME Subsidy, Million PhP	7.372	6.889				
West Simunul, Tawi-Tawi (Tawi-Tawi Electric Cooperative, Inc.)						
Rated Capacity, MW	0.673	0.673	0.673	0.673	0.673	0.673
Contracted Capacity, MW	0.297	0.300	0.303	0.000	0.000	0.000
Peak Demand, MW	0.295	0.297	0.424	0.466	0.512	0.666
Service Hours	8	16	16	16	24	24
Energy Requirements, MWh	614.323	918.997	1010.897	1359.223	1495.145	1457.767
UC-ME Subsidy, Million PhP	18.625	13.762				

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