TECHNICAL PLANNING WORKSHOP FOR RE-COMPONENT ASEP PHASE 2

SUBSIDY RATIONALIZATION FOR THE MISSIONARY ELECTRIFICATION DEVELOPMENT PLAN (MEDP)

Asst. Director Irma C. Exconde

Electric Power Industry Management Bureau

Department of Energy

17 January 2020

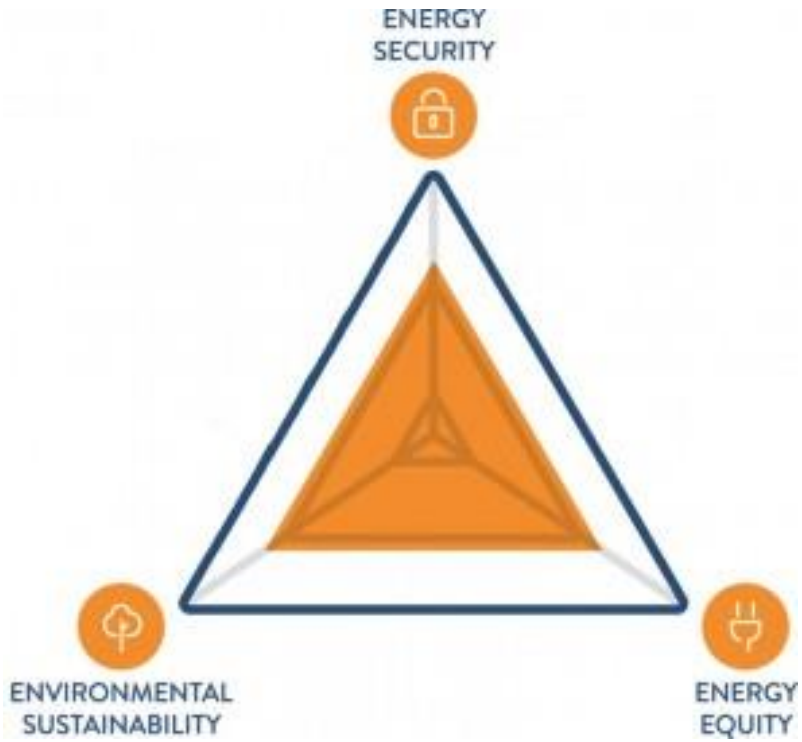
F1 Hotel, Bonifacio Global City

THE ENERGY TRILEMMA

- The three goals that should be achieved to reach energy sustainability.
- A balanced “triangle” implies integrated policy solutions and coherent innovation approaches.

– *World Energy Council*

Effective management of primary energy supply from domestic and external sources, reliability of energy infrastructure, and ability of energy providers to meet current and future demand.

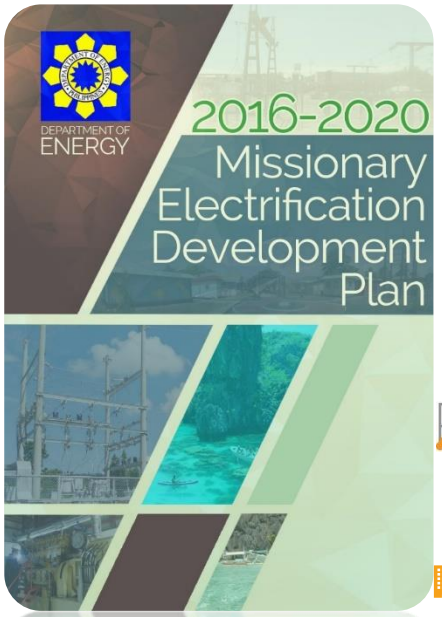


Achievement of supply and demand-side energy efficiencies and development of energy supply from renewable and other low-carbon sources.

Accessibility and affordability of energy supply across the population

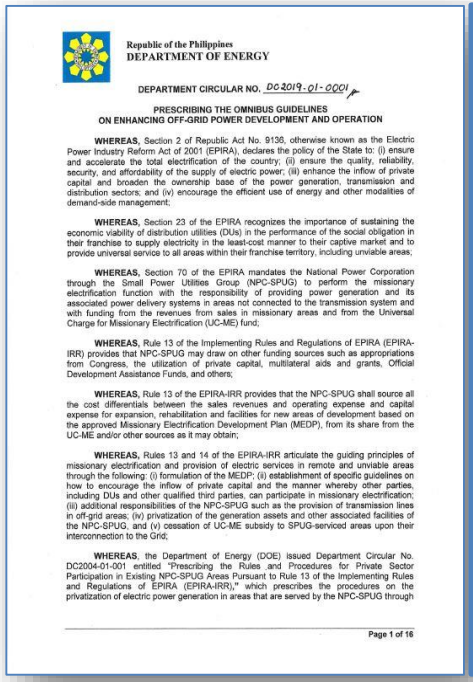
POLICIES AND PLANS

1. Missionary Electrification Development Plan 2016-2020



- Status of Missionary Electrification
- Remote and Unviable Electrification
- Demand and Supply Outlook
- Plans and Programs

2. DOE Circular DC-2019-01-0001 Omnibus Policy for Off-Grid Power Development and Operations



Republic of the Philippines
DEPARTMENT OF ENERGY

DEPARTMENT CIRCULAR NO. DC2019-01-0001

PRESCRIBING THE OMNIBUS GUIDELINES
ON ENHANCING OFF-GRID POWER DEVELOPMENT AND OPERATION

WHEREAS, Section 2 of Republic Act No. 9136, otherwise known as the Electric Power Industry Reform Act of 2001 (EPIRA), declares the policy of the State to: (i) ensure and accelerate the total electrification of the country; (ii) ensure the quality, reliability, security, and affordability of the supply of electric power; (iii) enhance the inflow of private capital and broaden the ownership base of the power generation, transmission and distribution sectors; and (iv) encourage the efficient use of energy and other modalities of demand-side management;

WHEREAS, Section 23 of the EPIRA recognizes the importance of sustaining the economic viability of distribution utilities (DUs) in the performance of the social obligation in their franchise to supply electricity in the least-cost manner to their captive market and to provide universal service to all areas within their franchise territory, including unviable areas;

WHEREAS, Section 70 of the EPIRA mandates the National Power Corporation through the Small Power Utilities Group (NPC-SPUG) to perform the missionary electrification function with the responsibility of providing power generation and its associated power delivery systems in areas not connected to the transmission system and with funding from the revenues from sales in missionary areas and from the Universal Charge for Missionary Electrification (UC-ME) fund;

WHEREAS, Rule 13 of the Implementing Rules and Regulations of EPIRA (EPIRA-IRR) provides that NPC-SPUG may draw on other funding sources such as appropriations from Congress, the utilization of private capital, multilateral aids and grants, Official Development Assistance Funds, and others;

WHEREAS, Rule 13 of the EPIRA-IRR provides that the NPC-SPUG shall source all the cost differentials between the sales revenues and operating expense and capital expense for expansion, rehabilitation and facilities for new areas of development based on the approved Missionary Electrification Development Plan (MEDP), from its share from the UC-ME and/or other sources as it may obtain;

WHEREAS, Rules 13 and 14 of the EPIRA-IRR articulate the guiding principles of missionary electrification and provision of electric services in remote and unviable areas through the following: (i) formulation of the MEDP; (ii) establishment of specific guidelines on how to encourage the inflow of private capital and the manner whereby other parties, including DUs and other qualified third parties, can participate in missionary electrification; (iii) additional responsibilities of the NPC-SPUG such as the provision of transmission lines in off-grid areas; (iv) privatization of the generation assets and other associated facilities of the NPC-SPUG, and (v) cessation of UC-ME subsidy to SPUG-serviced areas upon their interconnection to the Grid;

WHEREAS, the Department of Energy (DOE) issued Department Circular No. DC2004-01-001 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 EPIRA (EPIRA-IRR)," which prescribes the procedures on the privatization of electric power generation in areas that are served by the NPC-SPUG through

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RULE 10. RATIONALIZATION OF TARIFFS AND PHASE OUT OF UC-ME SUBSIDY IN MISSIONARY AREAS

10.1. The DOE, in consultation with the concerned stakeholders, shall study and formulate new policies and programs to rationalize existing tariffs in off-grid areas, including the removal of the UC-ME subsidy, not later than six (6) months upon the issuance of this circular.

3. DOE Advisory on the Subsidy Rationalization dated May 24, 2019.

- Serves as an initial compliance to Rule 10.1 of the DOE Circular DC2019-01-0001
- Discusses the objectives of the Government in rationalizing subsidies in off-grid areas
- Enumerates both supply-side and consumption-side strategies in reducing UC-ME subsidies

STRATEGIES TO REDUCE UC-ME SUBSIDIES

EXISTING FORMULA BASED ON FULL COST RECOVERY RATE POLICY				
UC-ME Subsidy	**=**	**(TCGR – SAGR)*Sales** **NPPs**	**+ (FCRR - SARR)*Sales** **QTPs**	**+ REDCI** **RE Developers**	**+ NPC Fund Shortfalls** **NPC-SPUG**
PROPOSED MEASURES FOR RATIONALIZATION				
• **Interconnection to Main Grid as full graduation from subsidies** • Existing Government incentives to support priority development industries and activities, including ecotourism (BOI, RE Law, TIEZA, etc.) • LGU contributions • Other alternative sources of funds (ER1-94, NWT, etc.)		**<u>TCGR/FCRR Reduction</u>** • Operational efficiency of DUs • Optimal generation planning for the timely entry of low-cost and flexible indigenous and RE technologies • Hybridization of existing diesel micro-grids • Optimal hybrid micro-grid systems as new standard • Improved system operations • Grid modernization and smart grid systems • Improved competitive selection process • Improved policy regulation for TCGR/FCCR • Standards for reviewing PSAs/QSSCs • Review of existing PSAs and QSSCs **<u>Rationalize SAGR/SARR</u>** • Improved policy regulation for TCGR/FCCR • Limit eligibility for subsidy to poor households and depressed areas (DSWD) • Time-bound increase in SAGR per area		• Inclusion of REDCI in the calculation of bids during procurement process of DUs • Option for RE Developers to waive REDCI to improve its competitiveness in procurement process of DUs • Alternative formula for REDCI NOTE: REDCI = 0 as UC-ME is eliminated.	• Private Sector Participation to reduce NPC-SPUG capital subsidy requirements. • Efficiency improvements in NPC-SPUG operations • Policy on the use of NPC-SPUG Depreciation allowance • Cost recovery for transmission and substation operations in off-grid areas • Separate budget for NPC-SPUG electrification activities
MITIGATING MEASURES				
• Postponement or pause in the implementation of in case of major calamities		• SAGR increases must be supported by TCGR reduction • SAGR increases must follow economic improvement and poverty reduction in off-grid areas		• Joint OCSP and CSP to simultaneously obtain PSA and RE Service Contracts for RE projects.	Private sector investments

RESPONSIBILITIES

DOE – policy oversight for subsidy rationalization
ERC - regulations to implement the policies
NEDA-RDCs, DSWD – inputs on the subsidies to poor households
DOF, NEDA, TIEZA – inputs on partial subsidies to priority economic development activities
NPC-SPUG – UC-ME petitioner and administration
PSALM – UC-ME collections and disbursements
DUs in off-grid areas – Competitive Selection Process; Subsidy Rationalization Plan
NPC-SPUG, NPPs, DUs, QTPs - least-cost service, efficiency in operations
Consumers in off-grid areas – demand-side management
All electricity end-users – payment of the UC-ME as levy

SUBSIDY RATIONALIZATION STUDY

DELIVERABLES	REMARKS
A. DATA GATHERING AND CONSOLIDATION	
1. Complete datasets of relevant data to be collected from stakeholders (DOE, NPC, PSA, DSWD, ERC, ECs and other Off-grId service providers, etc.)	Use of Big Data Analytics
2. CY2018 (or 2019) socio-economic and consumption profiles of the ECs in the off-grid areas based on: (i) geo-political division or area grouping, (ii) customer class (with residential customers further broken down into poor and non-poor), and (iii) clustering according to consumption level (kWh), demand (kW), tariff level, etc.	Profile may use actual customer data by the EC may be for 12 months. Actual names may be omitted for issue of data privacy.
3. CY2018 (or 2019) True Cost Generation Rates (for NPPs/ECs with power plants) and Full Cost Recovery Rate (FCRR) for all customers and Corresponding Blended TCGRs for each area.	Thus must be readily available from UC-ME Subsidy Administrator.
4. CY2018 (or 2019) subsidy profiles of customers of ECs and other service providers in off-grid areas based on: (i) geo-political division or area grouping, (ii) customer class (with residential customers further broken down into poor and non-poor), and (iii) clustering according to consumption level (kWh), demand (kW), tariff level, etc.	Both in terms of Pesos/kWh and actual Pesos.

SUBSIDY RATIONALIZATION STUDY

DELIVERABLES	REMARKS
B. ANALYSIS	
1. List and description of scenarios of 5-Year Subsidy Removal Scheme. [May consider 2019 TCGR/FCRR and 2019 SAGR/SARR as reference]	Each scheme to consider area grouping, customer class (residential grouped as poor and non-poor), consumption and demand level.
2. Spreadsheet Models for the Projections of 5-Year UC-ME Requirements for each shortlisted scenario. a. Projected Consumption MWh per EC or service area, broken down to customer class and/or clustering of consumption and demand level. b. Blended TCGR/SAGR Projection based on Capacity Expansion Plan/Hybridization Plan. [***OR, may assume constant TGCR over planning horizon –not realistic.***] [NOTE: This may be realistic and doable if we assume letter b] c. Projected SAGR/SARR (Pesos/kWh) per EC or service area, broken down to customer class (residential grouped as poor and non-poor) and consumption/demand clusters.	Planning horizon must be set. DDP as reference for projection of consumptions within planning horizon. TCGR projections should consider optimal capacity expansion plan of the EC (c/o DOE) and hybridization of existing NPC-SPUG mini-grids (NPC).

SUBSIDY RATIONALIZATION STUDY

DELIVERABLES	REMARKS
B. ANALYSIS	
2. Spreadsheet Models for the Projections of 5-Year UC-ME Requirements for each shortlisted scenario. ***(continued)*** d. Projected Annual Subsidies per EC or service area, broken down to customer class and consumption/demand clusters. e. Average Annual Rate Increases per grouping or clustering of area and customers	Subsidy = TCGR/FCRR – SAGR/SARR
C. PRESENTATION OF OUTPUTS	
3. Recommended subsidy schemes based on the result of analysis of the rate impact of subsidy schemes	
4. Expert Review of and Recommendations on the Draft Circular on Subsidy Rationalization.	Towards the finalization of the Subsidy Rationalization Circular.

Proposed Arrangements:

- The whole activity may be undertaken as a collaboration between DOE and ASEP consultants.
- DOE also have some resources to support the implementation.

SUBSIDY RATIONALIZATION STUDY

DELIVERABLES	REMARKS
OTHER STUDIES FOR CONSIDERATION OF ASEP:	
1. Outputs of the Assessment of the Renewable Energy Developer's Cash Incentive (REDCI) to RE projects in missionary areas under RE Act a. Pro-forma Financial Spreadsheet for each RE Project in off-grid areas (non-recourse financing) b. Impact of REDCI to Project IRR and Return to Equity. c. Conclusion and Recommendations	May consider hydro, solar PV, wind, and hybrid mini-grid of project sizes typical in off-grid areas. The pro-forma model must incorporate all potential incentives for RE projects.
2. Outputs of the review and design for new subsidy mechanism through GAA to certain commercial activities (ecotourism), industries, or even public services deemed as priority to support economic development of the Province or area, as stated under DC2019-01-0001.	Is it economically reasonable or justifiable, considering that there are already existing menu of incentives to promote investment in off-grid provinces? What should be the most simple arrangement to implement such policy?

Thank You!