

Republic of the Philippines
ENERGY REGULATORY COMMISSION
San Miguel Avenue, Pasig City



IN THE MATTER OF THE
APPLICATION FOR AUTHORITY
TO APPROVE THE
CONSTRUCTION OF THE STA.
BARBARA-CALASIAO 69 kV
LINE USING SINGLE 795 MCM
ACSR CONDUCTOR PER
PHASE, WITH PRAYER FOR
PROVISIONAL AUTHORITY

ERC CASE NO. 2015-051 RC

DAGUPAN ELECTRIC
CORPORATION (DECORP),
Applicant.

DOCKETED
Date: JUL 06 2015

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NOTICE OF PUBLIC HEARING

TO ALL INTERESTED PARTIES:

Notice is hereby given that on March 16, 2015, the Dagupan Electric Corporation (DECORP) filed an application for authority to approve the construction of the Sta. Barbara-Calasiao 69 kV line using single 795 MCM ACSR conductor per phase, with prayer for provisional authority.

In the said application, DECORP alleged, among others, the following:

1. It is a private corporation duly organized and existing under and by virtue of the laws of the Republic of the Philippines, with principal office address at VFL Building, A.B. Fernandez West, Dagupan City;
2. It has a legislative franchise under Republic Act. No. 9969 (R.A. 9969) dated June 21, 2011, to construct, operate and maintain a distribution system for the conveyance of electric power to end users in the City of Dagupan,

Municipalities of Calasiao, Sta. Barbara, Manaoag, San Jacinto, San Fabian, and Barangays Cruz and Bolingit of San Carlos City, all in the Province of Pangasinan;

3. Its power requirements are connected to the 230 kV/69 kV sub-transmissions owned by the National Grid Corporation of the Philippines (NGCP) located in San Manuel and Labrador, Pangasinan. The neighboring electric cooperatives, the Central Pangasinan Electric Cooperative, Inc. (CENPELCO) and Pangasinan III Electric Cooperative, Inc. (PANELCO III) power requirements are also being served through these substations;
4. It seeks the approval of the construction of the proposed Sta. Barbara–Calasiao 69 kV sub-transmission line using single 795 MCM ACSR conductor per phase along the national road leading to its Calasiao Substation. Its proposed subtransmission line shall be tapped to the NGCP 230 kV/69 kV substation currently being constructed at Barangay Balingueo, Sta. Barbara, Pangasinan and scheduled for completion by September 2015 (ERC Case No. 2011-107 RC). Its proposal, if approved, will result to the following:
 - 4.1 Decongests the Labrador and San Manuel Substations and sub-transmission facilities;
 - 4.2 Provides better reliability and power quality of supply;
 - 4.3 Addresses the concerns on the difficulty of maintaining and upgrading the existing 69 kV lines from San Manuel and Labrador substations;
 - 4.4. Renders significant the approved (on-going) construction of the NGCP's 230 kV/69 kV Substation at Barangay Balingueo, Sta. Barbara, Pangasinan, and
 - 4.5. Provides operational flexibility in the 69 kV facilities in Pangasinan.

BACKGROUND AND PROJECT RATIONALE

5. It filed the instant application pursuant to the Commissions' "*Guidelines to the Sale and Transfer of the TRANSCO's Sub-transmission Assets and the Franchising of Qualified Consortiums*" (*ERC Guidelines*), as amended, it acquired in 2009 from TRANSCO the ownership, operation and maintenance of the Labrador-Binmaley-Calasiao 69 kV subtransmission lines. These lines serve the power requirements of its load centers namely Dagupan City, Clasiao, Sta. Barbara and Barangays Cruz and Bolingit of San Carlos City;
6. Based on its demand forecast, the Labrador-Binmaley-Calasiao 69 kV line is presently overloaded. Moreover, it is having difficulty in maintaining the poles since most were erected on loose soil and open fields e.g. fishponds, rice fields, and river banks. This is not to mention the right of way issues which greatly impede its endeavors to upgrade the lines;
7. The San Manuel line, on the other hand, which serves its San Jacinto, San Fabian and Manaoag covered areas as well as CENPELCO and PANELCO III franchise areas has a limited transfer capability of only 10 MW during peak hours, in case the Labrador line fails;
8. In view of the reliability and line constraints issues coupled with its forecasted demand increase in its load center, it included in its proposed capital expenditures for the 2nd Regulatory Period (2007- 2011), the construction of a new 230 kV/69 kV substation in Sta. Barbara, Pangasinan. The Commission, however, preferred that a consortium particularly among DECORP, CENPELCO and PANELCO III shall collectively undertake the construction of the proposed project; hence, the proposal was put on hold pending the creation of a consortium;
9. During the public consultation on the NGCP's 2009 Transmission Development Plan - Luzon Substation Expansion Project 4 (TDP-LSEP 4), NGCP proposed a transformer upgrade for its Labrador and San Manuel Substations. However, it suggested an alternative to NGCP to build instead a drawdown substation in Sta. Barbara, Pangasinan which is a strategic location being near to the load centers of Pangasinan. This alternative eventually

culminated into a joint request made by it, CENPELCO, and PANELCO III to NGCP on January 2010 pursuant to the Commission's proposal in the its 2nd Regulatory Period Final Determination, Section 4.5.6;

10. In response to the joint request, NGCP conducted a feasibility study. Initially, the plan was to locate the proposed 230 kV/69 kV Substation in Barangay Maningding, Sta. Barbara, Pangasinan but NGCP eventually chose the land situated at Barangay Balingueo, Sta. Barbara, Pangasinan for being more appropriate in terms of its area [at least seven (7) hectares] and location;
11. NGCP, included in its 2011 Transmission Development Plan the construction of the 230 kV Substation in Barangay Balingueo, Sta. Barbara, Pangasinan to provide a new 230 kV/69 kV drawdown substation to serve the load of the three DUs. NGCP subsequently filed with the Commission an application for its approval with the condition that the concerned DUs shall construct their respective 69 kV subtransmission facilities;
12. It included in its proposed capital expenditures for the 3rd Regulatory Period (2011-2015) the construction of a Twenty-three Million Pesos (PhP23,000,000.00) 69 kV Sta. Barbara - Calasiao Subtransmission line to be tapped to the 230 kV/69 kV Sta. Barbara Substation to be established by the NGCP. The project cost was based on the assumption that NGCP will construct the 230 kV/69 kV substation at Barangay Maningding, Sta. Barbara, Pangasinan, which is approximately eight (8) kilometers from its Calasiao Substation and not the location in Barangay Balingueo, which is eleven (11) kilometers from the Calasiao, Substation. The proposed project, however, was subsequently deferred subject to the Commission's confirmation and approval of the NGCP's application for the construction of the 230 kV/69 kV Sta. Barbara Substation;
13. On December 3, 2012, the Commission approved in ERC Case No. 2011-107 RC NGCP's application to construct a 230 kV/69 kV Substation in Barangay Balingueo, Sta. Barbara, Pangasinan. The approval of the NGCP's application ultimately paved the way for it to file the instant application;

14. Thus, pursuant to the above decision, it proposes the construction of the 11.012 kilometers Sta. Barbara-Calasiao 69 kV line using 795 MCM ACSR conductor per phase. It is pursuant to mandate under Republic Act No. 9969 to *"supply electricity to its captive market in the least cost manner. In the interest of the public good and as far as feasible and whenever required by the ERG, the grantee shall modify, improve or change its facilities, poles, lines, systems and equipment for the purpose of providing efficient and reliable service and reduced electricity costs x x x."*;
15. It, likewise, proposes that pending final approval, the Commission issue a provisional authority allowing it to commence the construction of the proposed sub-transmission line. This is due to the ongoing road widening projects along the national road from Calasiao to Sta. Barbara where it is being required to relocate its poles to the road right of way. In order to avoid duplicity of construction works, it desires to erect already the seventy-five (75 ft.) footer concrete poles when it starts the relocation instead of erecting the fifty (50 ft.) footer primary line concrete pole and to replace it with the seventy-five (75 ft.) footer;

OPTIONS/ALTERNATIVES CONSIDERED

16. In compliance with the Commission's Rules for the Approval of Regulated Entities' Capital Expenditure Projects, it considered the following alternatives:
 - 16.1 Alternative 1 - Construction of the Sta. Barbara-Calasiao 69 kV line using 2-336.4 MCM ACSR conductor per phase; and
 - 16.2 Alternative 2 - Construction of Sta. Barbara-Calasiao 69 kV line using single 795 MCM ACSR conductor per phase.

COMPARATIVE EVALUATION OF THE ALTERNATIVES

17. Technical Evaluation

Table below shows the comparative effects of the above mentioned alternatives in providing long terms technical solutions to the identified deficiencies that beset its current electric system:

Actual and Forecasted Loading (with project)

Year	Overloading of Labrador-Binmaley-Calasio 69 kV Lines							
	System Performance							
	Project Alternative 1: Construction of Sta. Barbara-Calasio 69kV Line using 2-336.4 MCM ACSR per phase				Project Alternative 2: Construction of Sta. Barbara-Calasio 69kV Line using 795 MCM ACSR per phase			
	Labrador-Binmaley-Calasio Line (336.4 MCM ACSR per phase)		Sta. Barbara-Calasio Line (2-336.4 MCM ACSR per phase)		Labrador-Binmaley-Calasio Line (336.4 MCM ACSR per phase)		Sta. Barbara-Calasio Line (795 MCM ACSR per phase)	
	424		848		424		720	
	A	Loading %	A	Loading %	A	Loading %	A	Loading %
2014	445.74	105.13			445.74	105.13		
2015	210.02	49.53	258.90	30.53	210.02	49.53	258.90	35.96
2016	220.00	51.89	271.20	31.98	220.00	51.89	271.20	37.67
2017	229.39	54.10	282.77	33.35	229.39	54.10	282.77	39.27
2018	238.37	56.22	293.84	34.65	238.37	56.22	293.84	40.81
2019	246.95	58.24	304.43	35.90	246.95	58.24	304.43	42.28
2020	255.14	60.17	314.52	37.09	255.14	60.17	314.52	43.68
2021	263.13	62.06	324.36	38.25	263.13	62.06	324.36	45.05
2022	270.71	63.85	333.71	39.35	270.71	63.85	333.71	46.35
2023	278.10	65.59	342.82	40.43	278.10	65.59	342.82	47.61
2024	286.08	67.47	352.66	41.59	286.08	67.47	352.66	49.98
2025	294.07	69.36	362.51	42.75	294.07	69.36	362.51	50.35
2026	302.06	71.24	372.35	43.91	302.06	71.24	372.35	51.72
2027	310.04	73.12	382.19	45.07	310.04	73.12	382.19	53.08

Computed Receiving Voltage and Voltage Regulation (with project)

Year	Undervoltage at the Receiving End							
	System Performance							
	Project Alternative 1: Construction of Sta. Barbara-Calasiao 69kV Line using 2-336.4 MCM ACSR per phase				Project Alternative 2: Construction of Sta. Barbara-Calasiao 69kV Line using single 795 MCM ACSR per phase			
	Dagupan Substation (served by Labrador- Binmaley-Calasiao Line, 336.4 MCM ACSR per phase)		Calasiao Substation (served by Sta. Barbara-Calasiao Line, 2-336.4 MCM ACSR per phase)		Dagupan Substation (served by Labrador- Binmaley-Calasiao Line, 336.4 MCM ACSR per phase)		Calasiao Substation (served by Sta. Barbara-Calasiao Line, 795 MCM ACSR per phase)	
	V _{RECEIVING} (kV)	% Voltage Regulation	V _{RECEIVING} (kV)	% Voltage Regulation	V _{RECEIVING} (kV)	% Voltage Regulation	V _{RECEIVING} (kV)	% Voltage Regulation
2014	61.83	8.52	61.96	8.29	61.83	8.52	61.96	8.29
2015	66.18	4.26	68.22	1.15	66.18	4.26	68.17	1.22
2016	66.05	4.47	68.18	1.20	66.05	4.47	68.13	1.28
2017	65.92	4.67	68.15	1.25	65.92	4.67	65.09	1.33
2018	68.80	4.87	68.11	1.30	65.80	4.87	68.06	1.39
2019	65.68	5.05	68.08	1.35	65.68	5.05	68.02	1.44
2020	65.57	5.23	68.05	1.40	65.57	5.23	67.99	1.49
2021	65.47	5.40	68.02	1.44	65.47	5.40	67.96	1.53
2022	65.36	5.56	67.99	1.48	65.36	5.56	67.93	1.58
2023	65.26	5.72	67.96	1.53	65.26	5.72	67.90	1.62
2024	65.16	5.90	67.93	1.57	65.16	5.90	67.87	1.67
2025	65.05	6.07	67.90	1.61	65.05	6.07	67.84	1.72
2026	64.94	6.25	67.87	1.66	64.94	6.25	67.80	1.76
2027	64.84	6.42	67.84	1.70	64.84	6.42	67.77	1.81
2028	64.73	6.60	67.81	1.75	64.73	6.60	67.74	1.86

18. Financial Comparison

The tables below represent each project's expenditure and return:

Project Cost

Project Alternative	Project Description	Project Cost (PhP)
Alternative 1	Construction of Sta. Barbara-Calasiao 69 kV line using 2-336.4 MCM ACSR conductor per phase	73,103,937.45
Alternative 2	Construction of Sta. Barbara-Calasiao 69 kV line using single 795 MCM ACSR conductor per phase	54,864,308.78

Projects' Expected Return

Project Alternative	Project Description	NPV (PhP in Million)	B/C	IRR (%)
Alternative 1	Construction of Sta. Barbara-Calasiao 69 kV line using 2-336.4 MCM ACSR conductor per phase	-6.727	0.91	13.40
Alternative 2	Construction of Sta. Barbara-Calasiao 69 kV line using single 795 MCM ACSR conductor per phase	10.313	1.19	18.17

19. Rate Impact

The table below shows the respective rate impact of the identified options computed in accordance with existing rules and regulations:

Rate Impact

	Alternative 1	Alternative 2
CAPEX	73,103,937.45	54,864,308.78
Working Capital	4,723.56	4,723.56
Total	73,108,661.01	54,869,032.34
WACC	14.97%	14.97%
Return on Capital	10,944,366.55	8,213,894.14
OPEX	60,558.40	60,558.40
Other Taxes	0.00	0.00
ARR	11,004,924.95	8,274,452.54
Energy Forecast CY2016	305,000,000.00	305,000,000.00
Rate Impact (PhP/kwh)	0.04	0.03

In terms of capacity, power quality and N-1 reliability, for either Dagupan Substation or San Jacinto Substation, both alternatives will have a favorable and long terms solution to its identified distribution system problems. While Alternative 2 has a lower project cost and rate impact, it has a higher Net Present Value (NPV), Benefit/Cost Ratio (B/C) and Internal Rate of Return (IRR). Therefore, Alternative 2 indicates that it is more economically and financially viable;

20. It is concluded that the construction of Sta. Barbara-Calasiao 69 kV line using single 795 MM ACSR conductor per phase (alternative 2) will have the most favorable impact on its sub-transmission system. The project not only address the capacity and constraint issues in relation to its growing demand but it will also significantly improve the reliability of the sub-transmission system as a whole;
21. In support of the application, it submitted the following documents:
 - a) Annex A – CAPEX Project Justification entitled "Construction of Sta. Barbara- Calasiao 69 kV Line Using Single 795 MCM ACSR Conductor Per Phase", showing the basis for the analysis of the issues and options used to resolve the same; it provides the exact location and diagrams of the proposed construction, as well as the scope of work and technical impact;
 - b) Annex B and series - Alternative 1;
 - c) Annex C and series - Alternative 2; and
 - d) Annex D – Copy of the Decision on ERC Case No. 2011-107 RC.
22. It prays that the Commission:
 - a) Issue a provisional authority for the approval of the implementation of the construction of the Sta. Barbara-Calasiao 69 kV sub-transmission line using single 795 MCM ACSR conductor per phase amounting to Fifty-Four Million Eight Hundred Sixty-Four Thousand Three Hundred Eight and 78/100 Pesos (PhP54,864,308.78); and

- b) Approve, after notice and hearing, the instant application and render judgment making provisional approval permanent.

The Commission has set the application for jurisdictional hearing, expository presentation, pre-trial conference and evidentiary hearing on **August 18, 2015 (Tuesday) at ten o'clock in the morning (10:00 A.M.) at DECORP's Main Office, VFL Building, A.B. Fernandez West, Dagupan City.**

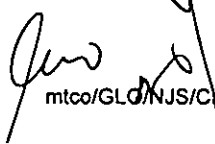
All persons who have an interest in the subject matter of the proceeding may become a party by filing, at least five (5) days prior to the initial hearing and subject to the requirements in the ERC's Rules of Practice and Procedure, a verified petition with the Commission giving the docket number and title of the proceeding and stating: (1) the petitioner's name and address; (2) the nature of petitioner's interest in the subject matter of the proceeding, and the way and manner in which such interest is affected by the issues involved in the proceeding; and (3) a statement of the relief desired.

All other persons who may want their views known to the Commission with respect to the subject matter of the proceeding may file their opposition to the application or comment thereon at any stage of the proceeding before the applicant concludes the presentation of its evidence. No particular form of opposition or comment is required, but the document, letter or writing should contain the name and address of such person and a concise statement of the opposition or comment and the grounds relied upon.

All such persons who may wish to have a copy of the application may request the applicant, prior to the date of the initial hearing, that they be furnished with a copy of the application. The applicant is hereby directed to furnish all those making such request with copies of the application and its attachments, subject to reimbursement of reasonable photocopying costs. Likewise, any such person may examine the application and other pertinent records filed with the Commission during the usual office hours.

WITNESS, the Honorable Chairperson, , **ZENAIDA G. CRUZ-DUCUT**, and the Honorable Commissioners, **ALFREDO J. NON**, **JOSEFINA PATRICIA A. MAGPALE-ASIRIT**, and **GERONIMO D. STA. ANA**, Energy Regulatory Commission, this 29th day of June, 2015 at Pasig City.


ATTY. FRANCIS SATURNINO C. JUAN
Executive Director III


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