

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

IN THE MATTER OF THE APPLICATION FOR
APPROVAL OF THE CONSTRUCTION OF 50 / 62.5
MVA SUB-STATION AND 2.5 KM 69 KV SUB-
TRANSMISSION LINE WITH PRAYER FOR
PROVISIONAL AUTHORITY

ERC CASE NO. 2010-007RC

PANAY ELECTRIC COMPANY, INC.,
(PECO)

Applicant.

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APPLICATION

COMES NOW applicant PANAY ELECTRIC COMPANY, Inc. (hereinafter referred to as PECO for brevity), through the undersigned counsel, and unto this Honorable Commission, would most respectfully state:

1. PECO is a domestic corporation duly organized and existing under and by virtue of the laws of the Republic of the Philippines, with principal office address at Manfred's Inn Building, Gen. Luna Street, Iloilo City;
2. PECO is a franchised and duly authorized operator of light, heat and power system in the City of Iloilo;
3. In compliance with the provisions of the Guidelines to Govern the Submission, Evaluation and Approval of Electric Distribution Capital Projects promulgated by the Honorable Energy Regulatory Commission on March 8, 2006 under its Resolution No. 13, Series of 2006, applicant respectfully submits for the consideration and approval of the Honorable Commission, the following major capital projects:

- a. Construction of 50 / 62.5 MVA sub-station located in Barangay Baldoza, Lapaz, Iloilo City
 - b. Construction of 2.5 KM 69 KV sub-transmission line connecting the Panay Energy Development Corporation coal plant to the new 50 / 62.5 MVA Sub-station in Barangay Baldoza, Lapaz, Iloilo City
4. The total project cost is ONE HUNDRED THIRTY SIX MILLION NINE HUNDRED THOUSAND EIGHT HUNDRED FOUR PESOS and 78/100 (PhP136,900,804.78), Philippine currency, broken down for each project, as follows:
 - A. For the 50 / 62.5 MVA sub-station, ONE HUNDRED SEVEN MILLION NINE HUNDRED THOUSAND ONE PESOS and 10/100 (PhP107,900,001.10), Philippine currency;
 - B. For the 2.5 KM 69 KV Sub-transmission line, TWENTY NINE MILLION EIGHT HUNDRED THREE PESOS and 68/100 (PhP29,000,803.68), Philippine currency
5. In support of the aforementioned capital projects, applicant submits the following documents:
 - A. Description of the Project
 - B. Justification of the Project
 - C. Options / Alternatives considered in lieu of the proposed Project
 - D. 5-year Historical and Forecast Planning Data
 - E. Technical Analysis
 - F. Projected Financial and Economic Cost Analysis
 - G. Project Financing Plan
 - H. Conceptual Engineering Design and Drawings
 - I. Project Cost Estimates
 - J. Proposed Gantt Chart Schedule
 - K. Secretary's Certificate approving the proposed Project

- L. Sworn Statement from the authorized representative of the Electric Utility that an application for approval from the concerned agencies that may have interest in the proposed project shall be filed
 - M. Sworn Statement from the authorized representative of the Electric Utility that the proposed major capital project is consistent with the DDP
6. The aforementioned projects undertaken and will be undertaken by the applicant are necessary and justified, benefited and will continue to benefit its consumers in terms of improved system reliability and stability. The projects are reasonably priced, having been procured and implemented following the accepted practice of competitive bidding.

WHEREFORE, the foregoing considered, it is respectfully prayed that pending hearing, the above-mentioned major capital projects be provisionally approved, and that after due notice and hearing, the instant application be approved.

Other reliefs just and equitable in the premises are also prayer for.

Iloilo City for Pasig City. _____ 2009.

THERESE C. DEL CAMPO - PEÑARANDA
Counsel for PANAY ELECTRIC COMPANY, INC.
Manfred's Inn Building, Gen. Luna Street, Iloilo City
PTR Number 3240371, January 24, 2009, Iloilo City
MCLE Compliance Number II-0000457 12/16/08
Attorney's Roll No. 47701

A. Description of the Project:

- a. Proposed 50 / 62.5 MVA Sub-station located at Barangay Baldoza, Lapaz, Iloilo City
- b. Proposed 2.5 KM 69 KV Sub-transmission line connecting the Panay Energy Development Corporation coal plant to PECO's 50 / 62.5 MVA sub-station in Barangay Baldoza, Lapaz, Iloilo City

B. Justification of the Project

A distribution utility's reliability is largely dependent on its ability to bring in power from various generation sources to its franchise area. The major factor that defines this capability of a utility is its total substation capacity.

- a. Current available substation capacity of PECO

Substation capacity – Location	Available Capacity
10 MVA Substation – Jaro	10 MVA
25/30 MVA Substation - Mandurriao	30 MVA
25/30 MVA Substation – Molo	30 MVA
20 MVA Substation – City Proper	20 MVA
TOTAL RATED CAPACITY	90 MVA
TOTAL USABLE CAPACITY (at 90% PF)	81 MW

- b. PECO's current demand is 76MW. At an average growth rate of 3% per year, it will go beyond its available substation capacity in 2 years (2011). If this is the case and considering the gestation period for a substation, it needs to start building one within the year .It also has to be noted that in the event of trouble in any of the substations, PECO will have to resort to load shedding.

Determining the ideal size for the substation to be constructed – In the principle of redundancy (N-1) in operations, the spare unit must be equivalent or higher than the capacity of the biggest unit in service. In PECO's case, 30 MVA is the biggest capacity. We can therefore easily conclude that we have to build a substation with at least 30 MVA capacity. However, 30 MVA will only be enough to cover for the existing load. There will be no provision for load growth and we will end up overloading ther substations in the event that one is being serviced. It is therefore practical to consider a higher capacity based on projected loads.

Additional benefits for having a new substation on top of reliability and capacity improvement:

- a. Systems loss improvement
- b. Flexibility
- c. Attracts investors to locate in the franchise area because of power reliability

C. Options / Alternatives Considered in Lieu of the Proposed Project

Constructing a new substation to address the increase in load has no alternative. The only choice is whether to build a 40 MVA or a 50 / 62.5 MVA substation.

D. Five Year Historical and Forecast Planning Data

PECO projected demand for the next five years:

				Req MVA + (Reserve)
2009		-	76.0 MW	112.6MVA
2010	3% growth rate	-	78.3 MW	115.1 MVA
2011	5% growth rate	-	82.2 MW	119.3 MVA
2012	7% growth rate	-	88.0 MW	125.6 MVA
2013	5% growth rate	-	92.3 MW	130.4 MVA
2014	5% growth rate	-	97.0 MW	135.4 MVA

With these demand projections, an additional 40 MVA will answer PECO's growth and reserve equipments for the next five years (assuming that Megaworld Corporation' development projects will not come into the picture). However, considering the difference in pricing for a 40 MVA and a 50 / 62.5 MVA, we would be better off going for a 50 / 62.5 MVA. Also, the 50 / 62.5 MVA rating maximizes and matches the capacity of the NGCP 138/69 kV 50 MVA substation in the coal plant compound.

F. Projected Financial and Economic Cost Analysis

i. Impact / Effect on Rate Base of the Proposed Project

Under the Return on Rate Base (RORB) Rate-Setting Methodology, the proposed project will increase the rate base to the extent of 12% of the total project cost.

ii. Net Present Value

Life of the project: 40 years

Total Income to be earned : 50,000 kW x 50% load factor x 365 days x 24 hours x P0.2932 operating income per kwhr = Php64,210,800

$$\begin{aligned} \text{NPV} &= 64,210,800 \left(\frac{1 - 1/(1 + .04)^{40}}{.04} \right) \\ &= 64,210,800 (19.7928) \\ &= \text{Php } 1,270,911,522 \end{aligned}$$

iii. Internal Rate of Return

$$\begin{aligned} \text{IRR} &= -136,900,804.78 + \frac{64,210,800 \times 40}{(1 + r)^{40}} = 0 \\ \text{Internal rate of return} &= \underline{7.7\%} \end{aligned}$$

iv. Cost / Benefit Analysis

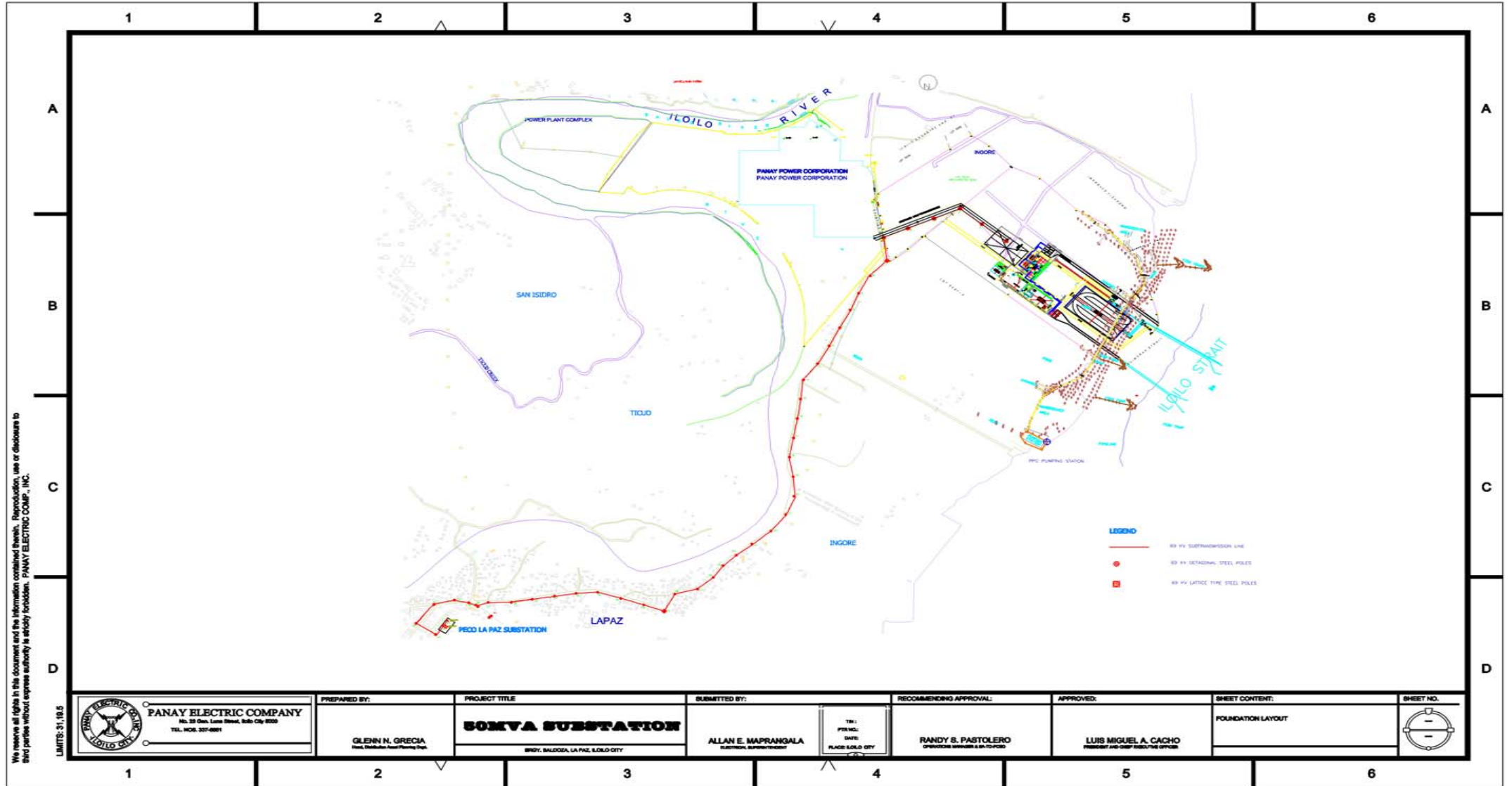
Cost = Php 136,900,804.78

Benefit = Net present value of Php 1,270,911,522

G. Project Financing Plan

This project will be financed by a financial assistance extended by Panay Energy Development Corporation as contained in a Memorandum of Agreement hereto attached as Schedule F-1.

PANAY ELECTRIC COMPANY, INC.
H. CONCEPTUAL ENGINEERING AND DESIGN



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LIMITS: 31,18.5

	PANAY ELECTRIC COMPANY <small>INC. 23 Old Lane Street, 3rd City 4000</small> <small>TEL. NO. 337-6881</small>
	<small>Head, Distribution Asset Planning Dept.</small>

PREPARED BY:
GLENN N. GRECIA

PROJECT TITLE
SOMVA SUBSTATION
BRGY. BALDIZA, LA PAZ, ILOILO CITY

SUBMITTED BY:
ALLAN E. MAPRANGALA
SUBSTATION SUPERINTENDENT

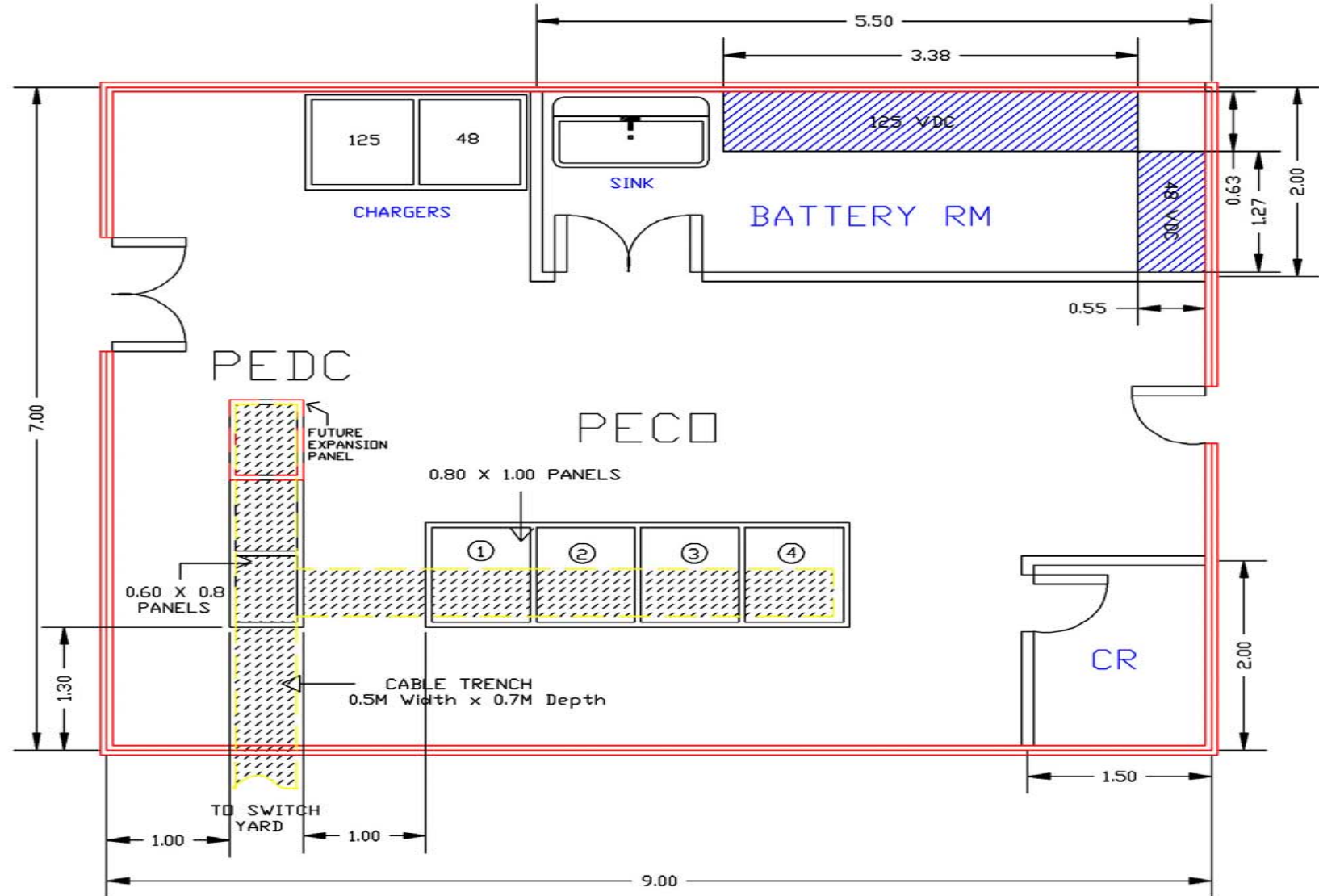
TITLE:
 PREPARED BY:
 DATE:
 PLACE: ILOILO CITY

RECOMMENDING APPROVAL:
RANDY S. PASTOLERO
OPERATIONAL MANAGER & SA-TO-PCSD

APPROVED:
LUIS MIGUEL A. CACHO
PRESIDENT AND CHIEF EXECUTIVE OFFICER

SHEET CONTENT:
FOUNDATION LAYOUT

SHEET NO.

○ CONTROL HOUSE
 FLOOR PLAN

PANAY ELECTRIC COMPANY, INC.
 J. PROPOSED GANTT CHART SCHEDULE

