

POWER SUPPLY PROCUREMENT PLAN

PAMPANGA I ELECTRIC COOPERATIVE, INC. **POWER SUPPLY PROCUREMENT PLAN**

In compliance with the Department of Energy's (DOE) Department Circular No. DC 2018-02-0003, "Adopting and Prescribing the Policy for the Competitive Selection Process in the Procurement by the Distribution Utilities of Power Supply Agreement for the Captive Market" or the Competitive Selection process (CSP) Policy, the Power Supply Procurement Plan (PSPP) Report is hereby created, pursuant to the Section 4 of the said Circular.

The PSPP refers to the DUs' plan for the acquisition of a variety of demand-side and supply-side resources to cost-effectively meet the electricity needs of its customers. The PSPP is an integral part of the Distribution Utilities' Distribution Development Plan (DDP) and must be submitted to the Department of Energy with supported Board Resolution and/or notarized Secretary's Certificate.

The Third-Party Bids and Awards Committee (TPBAC), Joint TPBAC or Third Party Auctioneer (TPA) shall submit to the DOE and in the case of Electric Cooperatives (ECs), through the National Electrification Administration (NEA) the following:

- a. Power Supply Procurement Plan;
- b. Distribution Impact Study/ Load Flow Analysis conducted that served as the basis of the Terms of Reference; and
- c. Due diligence report of the existing generation plant

All Distribution Utilities' shall follow and submit the attached report to the Department of Energy for posting on the DOE CSP Portal. For ECs such reports shall be submitted to DOE and NEA. The NEA shall review the submitted report within ten (10) working days upon receipt prior to its submission to DOE for posting at the DOE CSP Portal.

The content of the PSSP shall be consistent with the DDP. The tables and graph format to be use on the PSPP report is provided on the following sheets. Further, the PSPP shall contain the following sections:

- I. Table of Contents
- II. Introduction
- III. Energy and Demand Forecast (10 year historical and forecast)
- IV. Energy Sales and Purchase
- V. Daily Load Profile and Load Duration Curve
- VI. Existing Contracts & Existing GenCos due diligence report
- VII. Currently approved SAGR for Off-Grid ECs to be passed-on to consumers;
- VIII. DU's Current Supply and Demand
- IX. Distribution Impact Study
- X. Schedule of Power Supply Procurement
- XI. Timeline of the CSP

For inquiries, you may send it at doe.csp@gmail.com or you may contact us through telephone numbers (02) 840-2173 and (02) 479-2900 local 202.

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INTRODUCTION

PELCO I PROFILE

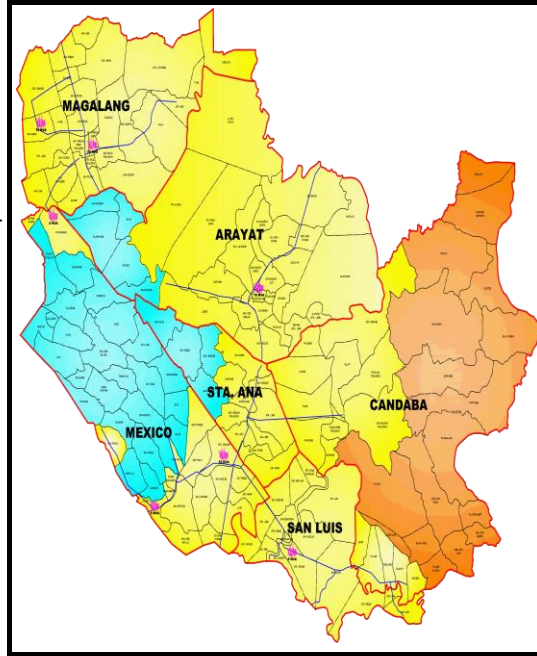
PELCO I is an electric cooperative duly organized, incorporated, and registered pursuant to Presidential Decree No. 269 as amended by P.D. 1645 and further amended by R.A. 10531.

PELCO I was issued an exclusive franchise by NEA under Certificate No. 160 to operate as an electric light and power services in the Municipalities of Arayat, Magalang, Candaba, Mexico, San Luis, and Sta. Ana. The franchise was issued on September 6, 1994 for a period of fifty (50) years.

PELCO I, a Hall of Fame Mega Diamond Electric Cooperative, is serving more than 101,000 member-consumers. In 2018, the overall system loss is 7.13% and the collection efficiency is 99.44%.

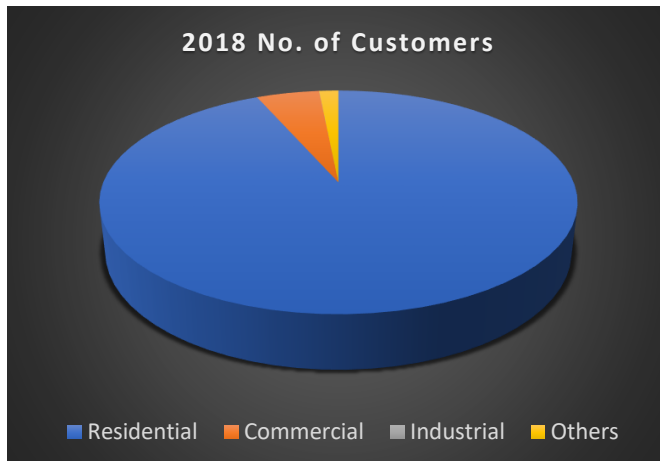
The 112 Barangays, consisting of 672 sitios, are 100% energized.

PELCO I Franchise Map



Number of Customer	ACTUAL		FORECAST								
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Residential	93,569	97,608	100,808	103,964	107,070	110,123	113,122	116,067	118,958	121,797	124,585
Commercial	5,060	5,548	5,850	6,153	6,457	6,761	7,065	7,369	7,674	7,979	8,284
Industrial	13	16	16	16	18	18	18	20	20	20	22
Others	1,543	1,589	1,632	1,675	1,718	1,759	1,800	1,840	1,880	1,918	1,957
Contestable Customers served by RES	0	0	0	0	0	0	0	0	0	0	0
Total (Captive Customers)	100,185	104,761	108,306	111,808	115,263	118,661	122,005	125,296	128,532	131,714	134,848

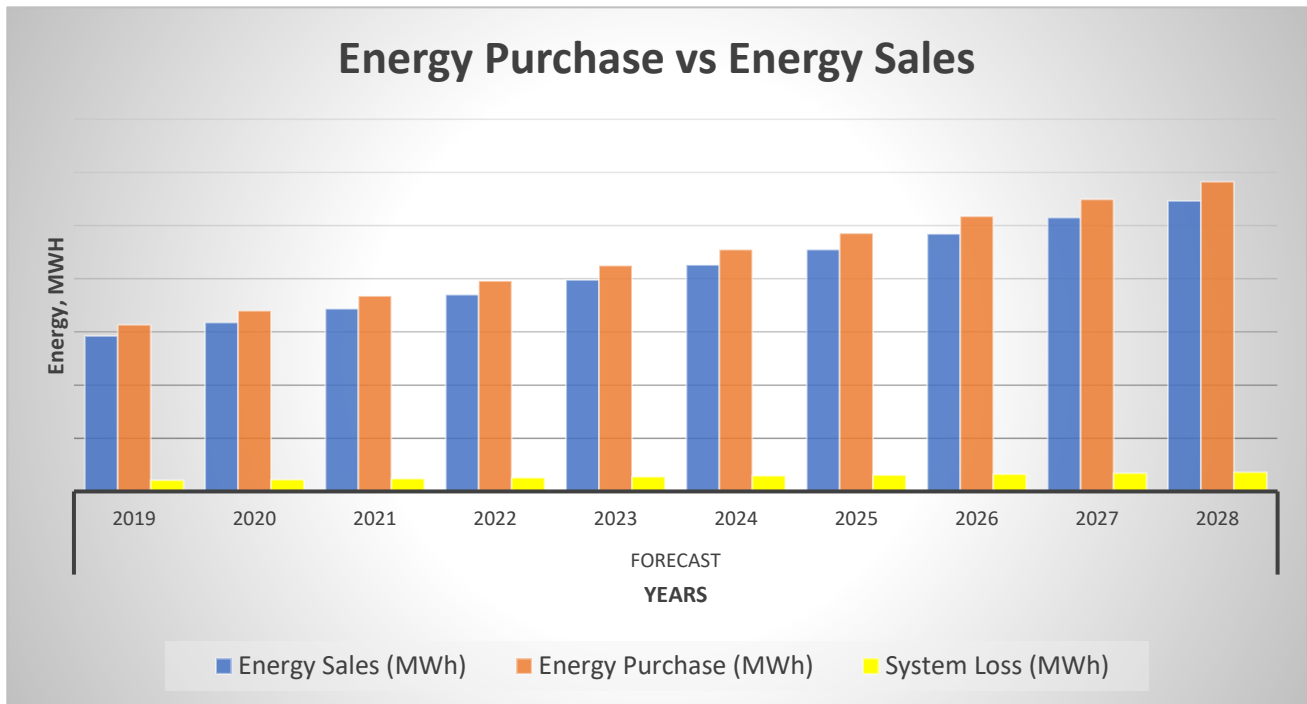
The 5-year average annual growth in the number of customers is 4.1%. The 93.4% of the total customers are residential. These residential customers consume the 65% of the total energy sales. The commercial and industrial customers consume the 31% share on the total energy sales. The entry of some big load customers contributes to the increase in demand. The 5-year average annual demand is 8.02%.



ENERGY SALES AND PURCHASE

ENERGY SALES AND PURCHASE	HISTORICAL									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Energy Sales (MWh)	129,886	148,805	145,719	154,678	169,409	184,187	204,189	230,199	245,897	264,150
Energy Purchase (MWh)	144,962	164,958	159,826	169,228	185,027	200,151	221,442	249,455	266,290	284,426
System Loss (MWh)	15,678	16,153	14,107	14,550	15,618	15,965	17,252	19,256	20,393	20,277

ENERGY SALES AND PURCHASE	FORECAST									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Energy Sales (MWh)	292,470	317,586	343,513	370,216	397,677	425,888	454,848	484,560	515,031	546,267
Energy Purchase (MWh)	313,235	339,975	367,559	395,946	425,117	455,062	485,778	517,268	549,538	582,594
System Loss (MWh)	20,765	22,390	24,046	25,730	27,440	29,173	30,930	32,708	34,507	36,327



The 5-year average annual growth in the historical energy sales and energy purchased are 9.5% and 9.0%, respectively. The 10-year average annual growth in the forecast energy sales and energy purchased are 7.54% and 7.44%, respectively.

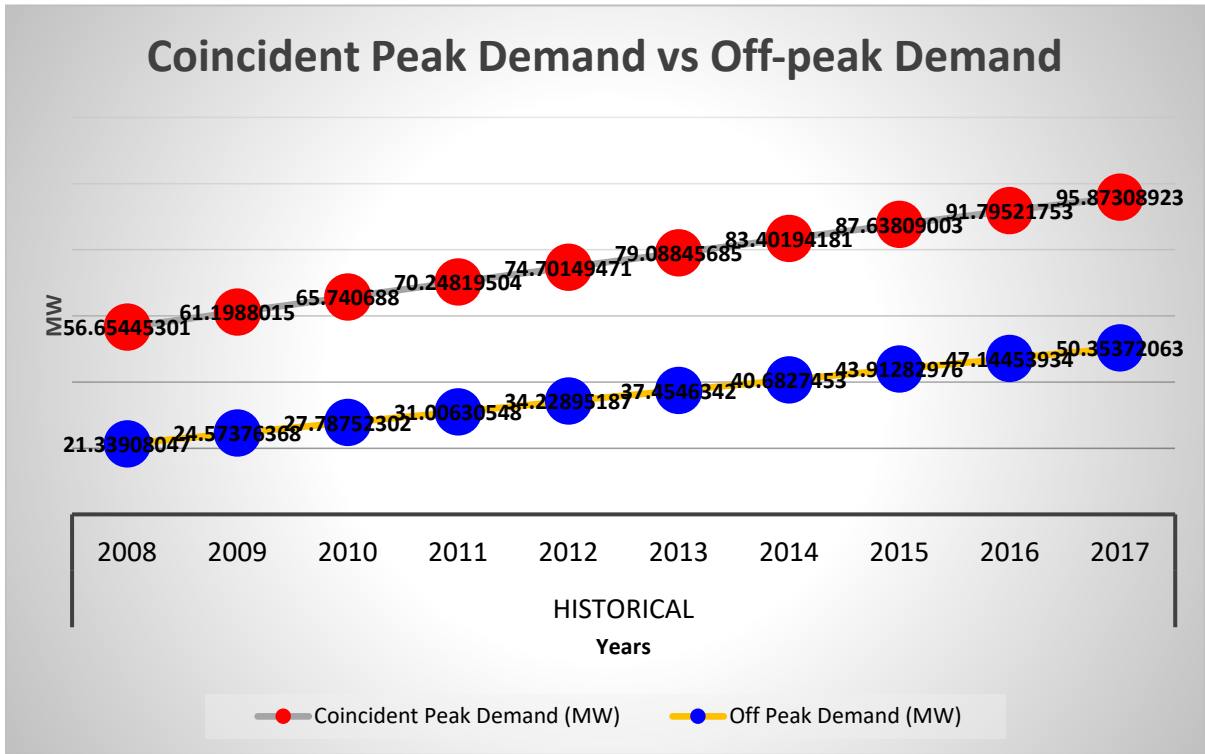
The high percentage increase in the energy sales is due to the influx of some big load commercial and industrial customers.

Further, PELCO I is able to minimize the total system loss in its distribution system. In 2018, the total system loss is 7.13%.

DEMAND

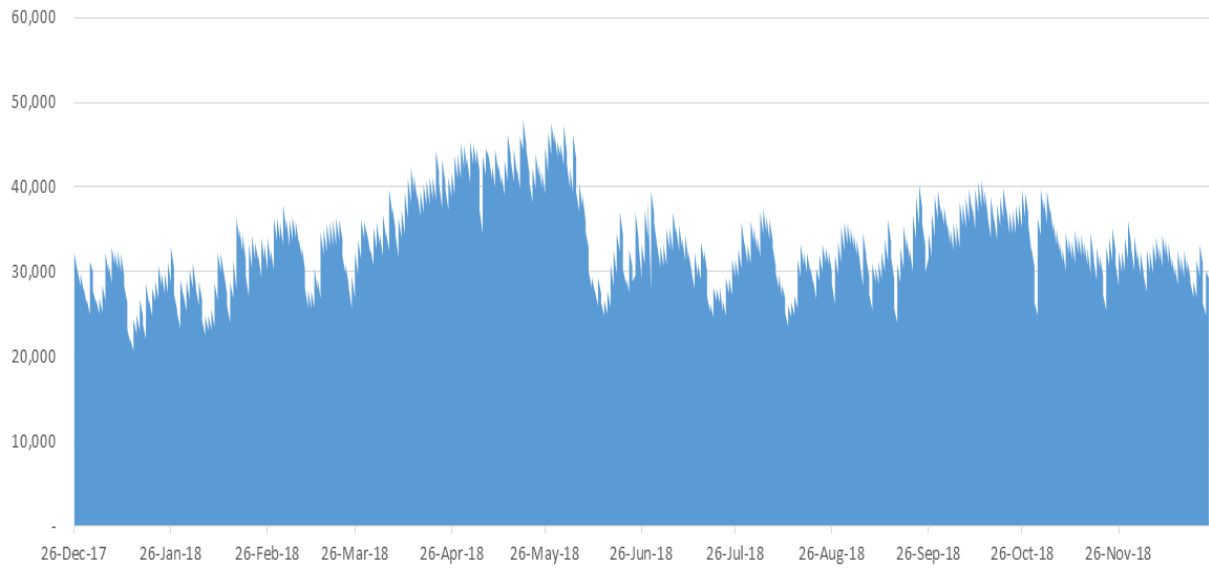
Demand	HISTORICAL									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Coincident Peak Demand (MW)	25.59	31.18	31.21	30.98	35.54	37.94	39.66	45.31	47.77	52.23
Off Peak Demand (MW)	10.01	10.45	11.7	11.17	14.84	14.92	14.07	14.96	15.21	18.09

Demand	FORECAST									
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Coincident Peak Demand (MW)	56.65	61.2	65.74	70.25	74.7	79.09	83.4	87.64	91.8	95.87
Off Peak Demand (MW)	21.34	24.57	27.79	31.01	34.23	37.45	40.68	43.91	47.14	50.35

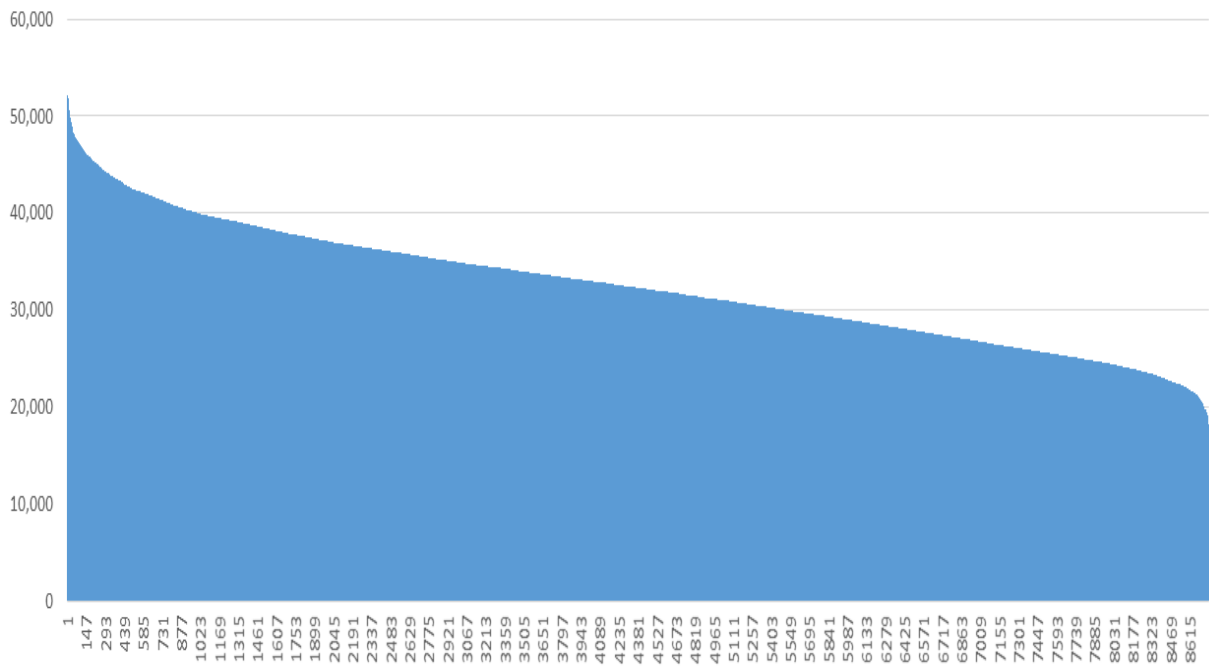


The 5-year average annual growth in the historical kW demand is 8.02%. The 10-year average annual growth in the forecast kW demand is 6.27%. The high percentage increase in the historical kW demand is due to the influx of some big load commercial and industrial customers.

LOAD PROFILE AND LOAD DURATION CURVE 2018



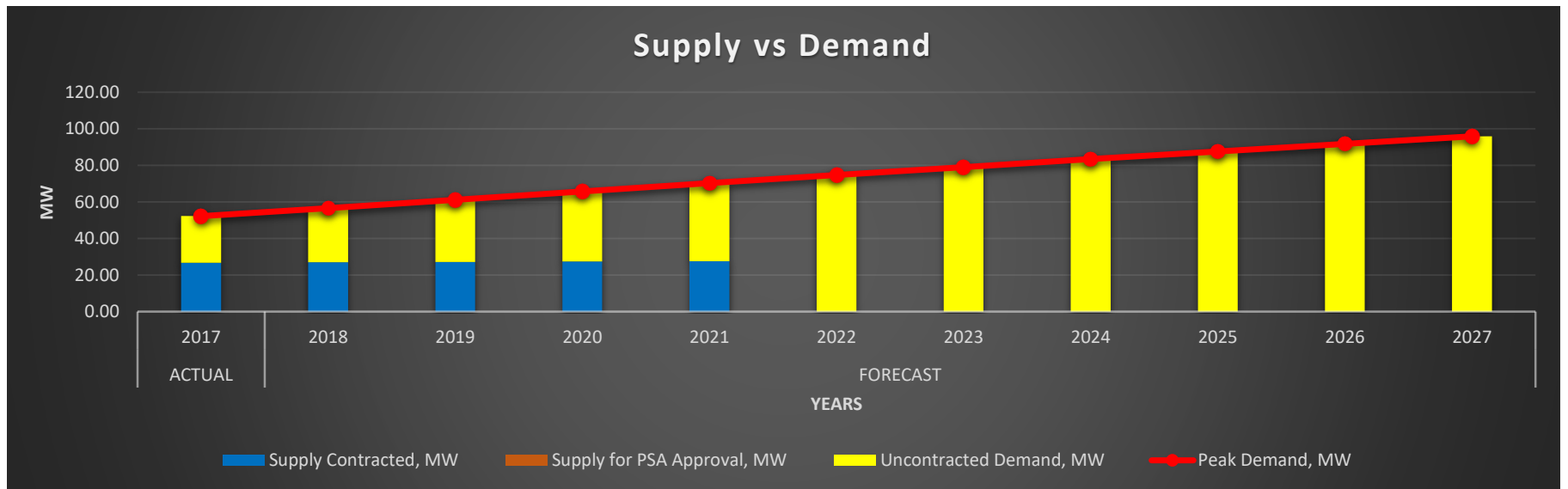
LOAD DURATION CURVE 2018



Based on the load curve, the base-load is 30MW, mid-merit is 10MW and peaking 15MW.

MIX SUPPLY VS DEMAND AND THE OPTIMAL SUPPLY

Supply Demand	ACTUAL	FORECAST									
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Peak Demand, MW	52.23	56.65	61.20	65.74	70.25	74.70	79.09	83.40	87.64	91.80	95.87
Supply Contracted, MW	26.75	26.95	27.16	27.37	27.58	0.00	0	0	0	0	0
MPPCL	26.75	26.95	27.16	27.37	27.58						
Generation Plant Name 2											
Generation Plant Name 3											
Supply for PSA Approval, MW	0	0	0	0	0	0	0	0	0	0	0
Generation Plant Name 1											
Generation Plant Name 2											
Generation Plant Name 3											
Uncontracted Demand, MW	25.48	29.70	34.04	38.37	42.67	74.70	79.09	83.40	87.64	91.80	95.87



POWER SUPPLY PROCUREMENT PLAN

List of Existing Contracts and Details

Supply Contracted	Plant Owner/ Operator	Capacity Factor	PSA Effectivity (MM/YR)	PSA Expiration (MM/YR)	Contracted Capacity, MW	Contracted Energy, MWH	Base / Mid-merit / Peaking	Embedded / Grid Connected	Utility-owned/ NPC/ IPP/ NPC-IPP	Status	Fuel Type	Installed Capacity (MW)	Net Dependable Capacity (MW)
MPPCL	SMCGPC	73.44%	10/2009	9/2022	27	1,551,287	Base	Grid Con	IPP	Active	Coal	600	540

MPPCL has been supplying the total electric energy requirement of PELCO I since 2009. MPPCL provides the replacement power which is being charged at contracted price. Meantime, PELCO I is an Indirect WESM participant. It has assigned MPPCL as it Direct WESM Counterparty. SMCGPC-MPPCL is managing all the energy requirements of PELCO I which are also charged at contracted price.

DISTRIBUTION IMPACT STUDY

PELCO I has used the SynerGee engineering software for the simulation of load flow analysis. For safety projects, the study shows that the quantities, sizes/ratings and coordination of protection devices are sufficient.

For capacity projects such as putting up of new substation or uprating the existing capacity, the forecast data used the 7-year historical data on the various forecast models provided by NEA on its e-ICPM. Also, PELCO I coordinated with the various Municipal Planning Offices within the franchise area to determine the other potential big load consumers who will connect to PELCO I's distribution system. PELCO I has included in its multi-year CAPEX projects 2019-2021 the augmentation of 10 MVA capacity of existing substations in Lagundi, Mexico and San Nicolas, Magalang. Also, a new 5MVA substation will be constructed in the Municipality of Candaba. A total of 25MVA capacity is expected to be constructed from 2019 to 2021 to supply the annual load growth and incoming big load commercial and industrial customers within PELCO I coverage area. The existing distribution lines are ready for the forecasted increase of loads. Other existing substations in Sto. Domingo, San Isidro and Pandacaqui are still adequate until 2021. Their augmentation in capacity, if required, will be included in the next multi-year capex projects 2022-2024.

The new 35MVA capacity substation in Navalang, Magalang is currently coordinated to NGCP for its connection to 69kV Clark Transmission Line 2 thru the San Nicolas to Dolores subtransmission line of PELCO I. This spot load is expected to operate in last quarter of 2019

Another 10MVA capacity spot load in Lagundi, Mexico is expected to connect of PELCO I line and operate in the last quarter of 2019. This additional load is currently coordinated by PELCO I to NGCP.

PELCO I has another potential large load industrial zone customers within its franchise area in the Municipality of Mexico. PELCO I is closely coordinating with NGCP on the possible connection of said project to PELCO I's subtransmission lines. Also PELCO I is conducting distribution impact and asset studies on the effects of said big loads in PELCO I's distribution system.

The power quality in the entire distribution system are within the acceptable level. The system reliability is at far compare to the standards set by ERC.

10 Year Monthly Data

Year	Forecast			Contracted and For PSA Approval Demand and Energy		Uncontracted Demand and Energy		Committed for CSP	
	Coincident Peak Demand (MW)	Off Peak Demand (MW)	Energy Requireme nt (MWh)	Demand (MW)	Energy (MWh)	Uncontrac ted Demand (MW)	Uncontrac ted Energy (MWh)	Demand (MW)	Energy (MWh)
2019									
Jan	42.71	21.34	23,091	23.49	11,554	19.22	11,537		
Feb	44.83	22.79	23,954	23.06	11,350	21.77	12,604		
Mar	47.37	23.35	23,405	24.39	10,920	22.97	12,484		
Apr	51.85	25.48	28,179	25.39	13,520	26.47	14,660		
May	56.65	29.37	30,608	26.95	13,699	29.70	16,909		
Jun	55.37	25.55	27,929	25.91	13,032	29.46	14,897		
Jul	48.62	25.60	24,557	25.50	12,409	23.12	12,148		
Aug	46.27	25.29	25,450	24.91	12,532	21.36	12,917		
Sep	49.84	24.28	26,194	25.32	12,434	24.52	13,759		
Oct	51.02	29.04	28,232	24.43	11,582	26.59	16,650		
Nov	48.52	26.63	26,990	25.29	12,406	23.23	14,584		
Dec	44.78	25.42	24,648	24.81	11,766	19.98	12,882		
2020									
Jan	46.14	24.57	25,062	23.67	11,670	22.47	13,392		
Feb	48.43	26.24	25,999	23.24	11,463	25.20	14,535		
Mar	51.17	26.89	25,403	24.58	11,030	26.58	14,373		
Apr	56.01	29.34	30,585	25.59	13,655	30.43	16,930		
May	61.20	33.82	33,221	26.40	13,836	34.79	19,385		
Jun	59.81	29.42	30,313	26.12	13,162	33.69	17,151		
Jul	52.52	29.48	26,653	25.70	12,533	26.82	14,121		
Aug	49.99	29.12	27,622	25.11	12,658	24.88	14,965		
Sep	53.84	27.96	28,430	25.52	12,559	28.32	15,871		
Oct	55.11	33.45	30,642	24.63	11,698	30.49	18,944		
Nov	52.41	30.66	29,294	25.49	12,530	26.92	16,764		
Dec	48.38	29.27	26,752	25.01	11,884	23.37	14,868		
2021									
Jan	49.56	27.79	27,095	23.85	11,786	25.71	15,309		
Feb	52.03	29.68	28,108	23.41	11,578	28.62	16,530		
Mar	54.96	30.40	27,464	24.78	11,140	30.18	16,324		
Apr	60.17	33.18	33,066	25.79	13,791	34.39	19,275		
May	65.74	38.24	35,916	26.61	13,974	39.13	21,942		
Jun	64.25	33.27	32,772	26.32	13,294	37.93	19,478		
Jul	56.42	33.34	28,816	25.90	12,658	30.52	16,158		
Aug	53.70	32.93	29,863	25.30	12,784	28.40	17,079		
Sep	57.84	31.62	30,736	25.72	12,684	32.12	18,052		
Oct	59.20	37.82	33,128	24.83	11,815	34.37	21,313		
Nov	56.30	34.67	31,671	25.69	12,655	30.61	19,016		
Dec	51.97	33.10	28,923	25.21	12,003	26.76	16,920		

POWER SUPPLY PROCUREMENT PLAN

2022									
Jan	52.96	31.01	29,188	24.03	11,904	28.93	17,284		
Feb	55.59	33.11	30,279	23.59	11,694	32.01	18,585		
Mar	58.73	33.92	29,585	24.97	11,251	33.76	18,334		
Apr	64.30	37.02	35,620	25.99	13,929	38.31	21,691		
May	70.25	42.67	38,690	26.81	14,114	43.43	24,576		
Jun	68.65	37.13	35,303	26.53	13,427	42.13	21,876		
Jul	60.29	37.20	31,041	26.11	12,785	34.18	18,257		
Aug	57.38	36.74	32,170	25.50	12,912	31.88	19,258		
Sep	61.80	35.28	33,110	25.92	12,811	35.88	20,299		
Oct	63.26	42.20	35,686			63.26	35,686		
Nov	60.16	38.69	34,117			60.16	34,117		
Dec	55.53	36.93	31,156			55.53	31,156		
2023									
Jan	56.32	34.23	31,338			56.32	31,338		
Feb	59.12	36.56	32,510			59.12	32,510		
Mar	62.45	37.45	31,765			62.45	31,765		
Apr	68.37	40.87	38,244			68.37	38,244		
May	74.70	47.11	41,540			74.70	41,540		
Jun	73.01	40.99	37,904			73.01	37,904		
Jul	64.11	41.06	33,328			64.11	33,328		
Aug	61.02	40.56	34,540			61.02	34,540		
Sep	65.72	38.95	35,550			65.72	35,550		
Oct	67.27	46.59	38,316			67.27	38,316		
Nov	63.98	42.71	36,630			63.98	36,630		
Dec	59.05	40.77	33,452			59.05	33,452		
2024									
Jan	59.62	37.45	33,545			59.62	33,545		
Feb	62.59	40.00	34,800			62.59	34,800		
Mar	66.12	40.98	34,002			66.12	34,002		
Apr	72.39	44.72	40,938			72.39	40,938		
May	79.09	51.55	44,467			79.09	44,467		
Jun	77.29	44.85	40,574			77.29	40,574		
Jul	67.88	44.93	35,676			67.88	35,676		
Aug	64.60	44.39	36,973			64.60	36,973		
Sep	69.58	42.62	38,054			69.58	38,054		
Oct	71.22	50.98	41,015			71.22	41,015		
Nov	67.74	46.73	39,211			67.74	39,211		
Dec	62.52	44.61	35,808			62.52	35,808		
2025									
Jan	62.88	40.68	35,810			62.88	35,810		
Feb	66.00	43.45	37,149			66.00	37,149		
Mar	69.73	44.51	36,297			69.73	36,297		
Apr	76.34	48.57	43,702			76.34	43,702		
May	83.40	55.99	47,468			83.40	47,468		
Jun	81.51	48.71	43,313			81.51	43,313		
Jul	71.58	48.81	38,084			71.58	38,084		
Aug	68.12	48.21	39,468			68.12	39,468		
Sep	73.38	46.29	40,622			73.38	40,622		
Oct	75.11	55.37	43,783			75.11	43,783		
Nov	71.43	50.76	41,857			71.43	41,857		
Dec	65.93	48.46	38,225			65.93	38,225		

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2026									
Jan	66.07	43.91	38,131			66.07	38,131		
Feb	69.35	46.90	39,557			69.35	39,557		
Mar	73.27	48.05	38,650			73.27	38,650		
Apr	80.21	52.43	46,535			80.21	46,535		
May	87.64	60.44	50,545			87.64	50,545		
Jun	85.65	52.58	46,121			85.65	46,121		
Jul	75.22	52.68	40,553			75.22	40,553		
Aug	71.58	52.04	42,027			71.58	42,027		
Sep	77.10	49.97	43,256			77.10	43,256		
Oct	78.92	59.77	46,621			78.92	46,621		
Nov	75.06	54.79	44,571			75.06	44,571		
Dec	69.28	52.30	40,703			69.28	40,703		
2027									
Jan	69.20	47.14	40,510			69.20	40,510		
Feb	72.64	50.35	42,024			72.64	42,024		
Mar	76.75	51.58	41,061			76.75	41,061		
Apr	84.02	56.29	49,438			84.02	49,438		
May	91.80	64.88	53,698			91.80	53,698		
Jun	89.71	56.45	48,998			89.71	48,998		
Jul	78.78	56.56	43,083			78.78	43,083		
Aug	74.98	55.87	44,649			74.98	44,649		
Sep	80.76	53.65	45,954			80.76	45,954		
Oct	82.67	64.17	49,530			82.67	49,530		
Nov	78.62	58.83	47,351			78.62	47,351		
Dec	72.56	56.15	43,242			72.56	43,242		
2028									
Jan	72.28	50.35	42,947			72.28	42,947		
Feb	75.87	53.78	44,552			75.87	44,552		
Mar	80.15	55.09	43,531			80.15	43,531		
Apr	87.75	60.12	52,411			87.75	52,411		
May	95.87	69.30	56,928			95.87	56,928		
Jun	93.70	60.29	51,945			93.70	51,945		
Jul	82.28	60.41	45,674			82.28	45,674		
Aug	78.31	59.67	47,334			78.31	47,334		
Sep	84.35	57.30	48,718			84.35	48,718		
Oct	86.34	68.53	52,509			86.34	52,509		
Nov	82.11	62.83	50,200			82.11	50,200		
Dec	75.78	59.97	45,844			75.78	45,844		

10 Year Monthly Historical Data

Year	Historical			Contracted and For PSA Approval Demand and Energy		Uncontracted Demand and Energy		Committed for CSP	
	Coincident Peak Demand (MW)	Off Peak Demand (MW)	Energy Purchased (MWh)	Demand (MW)	Energy (MWh)	Uncontracted Demand (MW)	Uncontracted Energy (MWh)	Demand (MW)	Energy (MWh)
2018									
Jan	39.38	18.09	20,967	23.31	11,440	16.06	9,527		
Feb	41.34	19.32	21,751	22.89	11,238	18.44	10,513		
Mar	43.67	19.79	21,252	24.20	10,812	19.47	10,440		
Apr	47.81	21.59	25,588	25.19	13,386	22.62	12,202		
May	51.05	24.89	27,793	26.00	13,563	25.05	14,230		
Jun	52.23	21.66	25,360	25.71	12,903	26.52	12,457		
Jul	44.83	21.70	22,298	25.30	12,286	19.53	10,013		
Aug	42.66	21.43	23,109	24.72	12,408	17.94	10,701		
Sep	45.95	20.58	23,785	25.13	12,311	20.83	11,473		
Oct	47.04	24.62	25,635	24.23	11,467	22.81	14,168		
Nov	44.74	22.57	24,508	25.09	12,283	19.65	12,225		
Dec	41.29	21.54	22,381	24.61	11,650	16.68	10,731		
2017									
Jan	37.76	17.34	19,212	25.14	11,326	12.62	7,885		
Feb	37.96	17.74	18,431	24.72	11,126	13.24	7,305		
Mar	43.53	19.72	19,447	26.01	10,705	17.52	8,741		
Apr	47.24	21.34	24,411	27.00	13,253	20.24	11,158		
May	47.77	23.30	25,535	28.55	13,429	19.23	12,106		
Jun	46.85	22.88	25,147	27.51	12,775	19.33	12,372		
Jul	47.25	21.39	22,655	27.11	12,164	20.15	10,490		
Aug	44.71	19.76	22,689	26.53	12,285	18.18	10,404		
Sep	44.72	20.91	23,340	26.93	12,189	17.79	11,151		
Oct	42.50	20.93	22,072	26.04	11,354	16.46	10,718		
Nov	40.94	18.85	22,314	26.89	12,161	14.05	10,153		
Dec	41.24	17.52	21,038	26.41	11,535	14.83	9,503		
2016									
Jan	33.97	19.70	18,645	24.97	11,214	9.00	7,431		
Feb	33.87	19.32	17,685	24.55	11,016	9.32	6,669		
Mar	39.06	20.72	19,363	25.82	10,599	13.23	8,764		
Apr	43.60	21.67	23,092	26.80	13,122	16.80	9,970		
May	45.31	23.65	23,870	28.34	13,296	16.97	10,574		
Jun	42.81	21.93	23,045	27.32	12,649	15.49	10,396		
Jul	43.06	21.53	20,964	26.91	12,044	16.15	8,920		
Aug	42.66	20.77	20,945	26.34	12,164	16.32	8,782		
Sep	39.33	21.23	21,330	26.74	12,069	12.60	9,262		
Oct	39.62	20.71	20,037	25.84	11,241	13.78	8,796		
Nov	37.99	21.17	20,885	26.70	12,041	11.29	8,844		
Dec	38.05	20.58	19,595	26.21	11,420	11.84	8,175		

POWER SUPPLY PROCUREMENT PLAN

2015									
Jan	29.69	16.93	14,960	22.79	11,103	6.90	3,857		
Feb	29.81	16.71	15,171	22.38	10,907	7.43	4,263		
Mar	33.33	17.58	15,229	23.64	10,494	9.69	4,735		
Apr	38.34	19.09	19,761	24.61	12,992	13.72	6,769		
May	39.66	20.72	21,179	26.14	13,164	13.52	8,015		
Jun	39.59	20.27	21,404	25.12	12,524	14.47	8,880		
Jul	38.24	18.97	18,053	24.72	11,925	13.52	6,129		
Aug	38.48	18.40	19,464	24.15	12,043	14.33	7,421		
Sep	36.36	19.43	19,931	24.55	11,949	11.81	7,982		
Oct	36.18	18.91	18,662	23.65	11,130	12.53	7,532		
Nov	35.33	19.49	19,598	24.50	11,922	10.83	7,676		
Dec	35.30	18.72	18,030	24.02	11,307	11.28	6,723		
2014									
Jan	28.38	15.94	13,619	22.62	10,993	5.76	2,625		
Feb	28.04	15.48	14,005	22.22	10,799	5.82	3,206		
Mar	29.76	15.61	13,840	23.45	10,390	6.31	3,450		
Apr	35.87	17.94	18,638	24.42	12,863	11.45	5,774		
May	37.94	19.90	19,856	25.22	13,034	12.72	6,822		
Jun	37.31	19.18	18,808	24.93	12,400	12.38	6,408		
Jul	34.23	16.88	16,420	24.53	11,807	9.70	4,614		
Aug	33.85	15.94	17,198	23.97	11,924	9.88	5,274		
Sep	32.15	17.08	16,489	24.36	11,831	7.79	4,658		
Oct	33.06	17.35	17,274	23.46	11,020	9.61	6,255		
Nov	33.79	18.54	17,786	24.31	11,804	9.48	5,982		
Dec	32.04	16.73	16,219	23.83	11,195	8.21	5,024		
2013									
Jan	27.23	15.10	13,531	22.45	10,884	4.78	2,647		
Feb	26.85	14.64	13,673	22.05	10,692	4.79	2,981		
Mar	29.92	15.65	14,070	23.27	10,287	6.65	3,782		
Apr	34.16	17.19	17,933	24.23	12,736	9.93	5,197		
May	35.54	18.76	17,652	25.03	12,905	10.52	4,747		
Jun	33.52	17.35	17,192	24.73	12,277	8.79	4,915		
Jul	32.91	16.18	15,754	24.34	11,690	8.57	4,065		
Aug	29.17	13.57	14,888	23.78	11,806	5.39	3,082		
Sep	30.79	16.31	15,386	24.17	11,714	6.62	3,672		
Oct	30.07	15.89	14,374	23.27	10,910	6.80	3,464		
Nov	28.76	15.74	15,242	24.12	11,687	4.64	3,556		
Dec	30.40	15.68	15,331	23.64	11,085	6.76	4,247		
2012									
Jan	26.99	14.82	13,304	22.28	10,777	4.71	2,528		
Feb	26.43	14.27	13,051	21.89	10,586	4.54	2,465		
Mar	26.94	14.09	13,053	23.09	10,186	3.85	2,868		
Apr	30.40	15.44	15,279	24.05	12,610	6.35	2,669		
May	30.98	16.51	16,035	24.83	12,777	6.15	3,258		
Jun	29.38	15.34	15,364	24.54	12,155	4.84	3,209		
Jul	28.30	13.91	13,653	24.15	11,574	4.15	2,079		
Aug	25.83	11.90	12,944	23.60	11,689	2.23	1,255		
Sep	28.49	15.09	14,354	23.98	11,598	4.50	2,756		
Oct	28.04	14.95	13,861	23.08	10,802	4.96	3,058		
Nov	27.83	15.22	14,335	23.93	11,571	3.90	2,764		
Dec	27.99	14.30	13,993	23.45	10,975	4.54	3,019		

POWER SUPPLY PROCUREMENT PLAN

2011									
Jan	25.68	14.00	12,520	26.41	10,227	(0.73)	2,293		
Feb	26.82	14.37	12,352	23.77	10,071	3.05	2,280		
Mar	25.84	13.54	11,635	24.24	10,135	1.60	1,499		
Apr	27.18	13.96	13,942	25.94	12,568	1.24	1,374		
May	31.21	16.82	15,387	25.89	11,939	5.32	3,448		
Jun	30.03	15.86	14,138	25.37	11,696	4.66	2,442		
Jul	28.07	13.83	13,614	24.61	10,761	3.46	2,854		
Aug	28.14	12.86	13,632	23.38	10,438	4.76	3,194		
Sep	26.65	14.14	13,462	24.43	10,699	2.22	2,763		
Oct	27.19	14.66	12,697	23.70	10,592	3.49	2,105		
Nov	26.48	14.51	13,420	23.46	10,698	3.02	2,722		
Dec	26.65	13.51	13,026	23.70	9,949	2.95	3,077		
2010									
Jan	25.38	13.76	12,271	25.27	9,923	0.11	2,348		
Feb	25.40	13.53	12,269	22.74	9,625	2.66	2,643		
Mar	26.96	14.18	12,352	23.43	10,015	3.53	2,337		
Apr	29.34	15.28	14,749	25.07	12,419	4.27	2,331		
May	31.18	17.03	16,004	25.32	11,798	5.86	4,206		
Jun	30.49	16.32	15,108	24.81	12,039	5.68	3,069		
Jul	29.64	14.66	13,684	24.07	11,076	5.57	2,608		
Aug	27.72	12.60	13,972	22.86	10,743	4.86	3,229		
Sep	28.69	15.29	13,981	25.16	11,012	3.53	2,969		
Oct	27.97	15.29	13,462	24.40	10,092	3.57	3,370		
Nov	27.50	15.13	13,857	24.16	11,011	3.34	2,846		
Dec	28.59	14.41	13,250	24.40	11,240	4.19	2,010		
2009									
Jan	-	-	10,293	24.25	10,046	(24.25)	247		
Feb	-	-	11,383	22.31	9,845	(22.31)	1,538		
Mar	-	-	11,438	22.76	9,877	(22.76)	1,561		
Apr	-	-	13,354	24.35	12,247	(24.35)	1,107		
May	-	-	12,588	23.87	11,635	(23.87)	953		
Jun	-	-	12,271	23.39	11,583	(23.39)	688		
Jul	-	-	12,287	23.16	10,656	(23.16)	1,631		
Aug	-	-	12,755	22.00	10,337	(22.00)	2,418		
Sep	-	-	12,780	24.19	10,595	(24.19)	2,185		
Oct	24.30	13.49	11,423	23.46	10,489	0.84	934		
Nov	25.60	14.16	12,561	23.23	10,594	2.37	1,967		
Dec	25.45	12.78	11,830	23.46	9,852	1.99	1,978		

SUMMARY OF FORECAST MODELS

Model No.	Forecasting Model	Model Description	Validity Tests	Accuracy Tests	Remarks (Pass/Fail)
9	Peak Demand : $Y = at^2 + bt + c$	Quadratic Logarithmic with Smoothing	Ajt. R2 = 0.996	MAPE = 0.52%	Pass
55	Total Purchase : $Y = aln(t)^3 + dt - 1 + e$	Cubic Logarithmic with Smoothing	Ajt. R2 = 0.993	MAPE = 0.85%	Pass
55	Total Sales : $Y = aln(t)^3 + dt - 1 + e$	Cubic Logarithmic with Smoothing	Ajt. R2 = 0.996	MAPE = 0.63%	Pass
55	Total Customer : $Y = aln(t)^3 + dt - 1 + e$	Cubic Logarithmic with Smoothing	Ajt. R2 = 0.993	MAPE = 0.84%	Pass
55	Customer - Residential : $Y = aln(t)^3 + dt - 1 + e$	Cubic Logarithmic with Smoothing	Ajt. R2 = 0.993	MAPE = 0.43%	Pass
5	Customer - LV Commercial : $Y = at + b(t^{-1}) + e$	Linear with Smoothing	Ajt. R2 = 0.995	MAPE = 0.53%	Pass
55	Customer - HV Commercial : $Y = aln(t)^3 + dt - 1 + e$	Cubic Logarithmic with Smoothing	Ajt. R2 = 1.000	MAPE = 0.60%	Pass
55	Customer - Public Building : $Y = aln(t)^3 + dt - 1 + e$	Cubic Logarithmic with Smoothing	Ajt. R2 = 0.993	MAPE = 0.40%	Pass
5	Customer - Street Lights : $Y = at + b(t^{-1}) + e$	Linear with Smoothing	Ajt. R2 = 0.990	MAPE = 0.21%	Pass
55	Sales Residential : $Y = aln(t)^3 + dt - 1 + e$	Cubic Logarithmic with Smoothing	Ajt. R2 = 0.997	MAPE = 0.59%	Pass
55	Sales LV Commercial : $Y = aln(t)^3 + dt - 1 + e$	Cubic Logarithmic with Smoothing	Ajt. R2 = 0.998	MAPE = 0.58%	Pass
9	Sales HV Commercial : $Y = at^2 + bt + c$	Quadratic Logarithmic with Smoothing	Ajt. R2 = 0.992	MAPE = 0.50%	Pass
55	Sales LV Industrial : $Y = aln(t)^3 + dt - 1 + e$	Cubic Logarithmic with Smoothing	Ajt. R2 = 0.999	MAPE = 0.12%	Pass
35	Sales HV Industrial : $Y = aln(t)^3 + c \ln(t) + d$	Cubic Logarithmic	Ajt. R2 = 0.992	MAPE = 1.11%	Pass
5	Sales Public Building : $Y = at + b(t^{-1}) + e$	Linear with Smoothing	Ajt. R2 = 0.999	MAPE = 0.18%	Pass
55	Sales Street Lights : $Y = aln(t)^3 + dt - 1 + e$	Cubic Logarithmic with Smoothing	Ajt. R2 = 0.999	MAPE = 0.07%	Pass
55	Sales LV Irrigation : $Y = aln(t)^3 + dt - 1 + e$	Cubic Logarithmic with Smoothing	Ajt. R2 = 1.000	MAPE = 0.20%	Pass
55	Sales HV Irrigation : $Y = aln(t)^3 + dt - 1 + e$	Cubic Logarithmic with Smoothing	Ajt. R2 = 0.999	MAPE = 0.11%	Pass
55	Sales Admin Use : $Y = aln(t)^3 + dt - 1 + e$	Cubic Logarithmic with Smoothing	Ajt. R2 = 0.999	MAPE = 0.24%	Pass
55	Sales Station Use : $Y = aln(t)^3 + dt - 1 + e$	Cubic Logarithmic with Smoothing	Ajt. R2 = 0.998	MAPE = 0.65%	Pass