

GUAM PUBLIC UTILITIES COMMISSION

DOCKET NO. 07-10

DIRECT TESTIMONY OF

KEMM C. FARNEY

ON BEHALF OF

GUAM POWER AUTHORITY

Hagatna, Guam

October 04, 2007

BEFORE THE GUAM PUBLIC UTILITIES COMMISSION

In the Matter of)
 Guam Power Authority's Petition for Base)
 Rate Increase) Docket No. 07-10
)
)
)

AFFIDAVIT OF KEMM C. FARNEY

)
 TERRITORY OF GUAM)
)

KEMM C. FARNEY, being first duly sworn on his oath, states:

1. My name is **KEMM C. FARNEY**. My office is in Philadelphia, Pennsylvania. I am a partner in PL Mangilao Energy, LLC (Mangilao), a Guam company specializing in engineering and economic consulting.
2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Guam Power Authority, consisting of seven (7) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.
3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

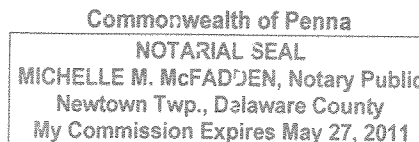


 KEMM C. FARNEY

Subscribed and sworn before me this 8th day of October 2007.


 Notary Public

My commission expires: May 27, 2011



**DIRECT TESTIMONY OF
KEMM C. FARNEY
Docket No. 07-10**

1. QUALIFICATIONS

1

2 **Q. PLEASE STATE YOUR NAME AND POSITION, AND BUSINESS ADDRESS.**

3 A. My name is Kemm C. Farney. I am a partner in PL Mangilao Energy, LLC
4 (Mangilao), a Guam company specializing in engineering and economic consulting. My
5 business address is PO Box 566, Newtown Square, PA 19073-0566 (Philadelphia).

6

7 **Q. WHAT ARE YOUR RESPONSIBILITIES AT MANGILAO?**

8 A. I am responsible for Mangilao's forecasting and economic analysis activities.

9

10 **Q. WHAT IS MANGILAO'S BUSINESS?**

11 A. PL Mangilao Energy, LLC was formed in 2005. It is a partnership between
12 Mangilao Economic Consulting, Inc. of Guam, Information2ENERGY, Inc. of Atlanta,
13 GA, and the company of which I am President, P&L Economics, Inc. of Philadelphia,
14 PA.

15

16 **Q. WHAT HAS BEEN YOUR PROFESSIONAL EXPERIENCE?**

17 A. I am president of P&L Economics, Inc., a consultancy formed in January of 2005
18 to serve the planning and forecasting needs of the power industry. Our clients have
19 included Haddington Ventures, LLC, of Houston, TX, the developers of a 2.2 gW
20 Compressed Air Energy Storage (CAES) facility near Akron OH, and McGraw-Hill
21 Platt's, of Colorado Springs, CO, a vendor of subscription data services to the energy
22 industry. I have also served as a principal with Pearl Street Advisors of St Louis, MO, a
23 consultant to the power industry on strategic planning and a publisher of original
24 analysis, and I have served as an advisor to the Pearl Street hedge fund.

25 Earlier this year I accepted a position as the Manager, Economics and
26 Forecasting, for PEPCO Holdings, Inc. ("PHI") of Washington, DC. PHI is the holding

1 company for PEPCO, Delmarva Power and Light and Atlantic City Electric, delivering
2 50 tWh annually to more than 1.6 million customers in 5 Mid-Atlantic states. In this
3 position I am responsible for all economic, sales and revenue forecasting for the
4 company's regulated jurisdictions.

5 I am a member of the Electric Utility Forecasters Forum, the Edison Electric
6 Institute Load Forecasting Committee and I am a voting member of the PJM
7 Interconnection Load Analysis Subcommittee.

8 Prior to joining PHI, I was the Principal or Vice President responsible for the
9 utility practice at Global Insight, Inc. and its predecessor companies DRI-WEFA, Inc.,
10 The WEFA Group, Inc. and Chase Econometrics, Inc. I also held this same position with
11 Resource Strategies, the US consulting arm of the British firm CRU, Inc. Between 1980
12 and 2005 I assisted more than 125 utilities around the world as they met their planning
13 and forecasting challenges.

14 In the early and mid 1990s I served as Corporate Economist and Principal
15 Planning Executive for NIPSCO Industries, the holding company for Northern Indiana
16 Public Service Company (NIPSCO). This company now does business as NiSource, Inc.
17 At that time NIPSCO was the fourteenth largest gas distribution company in the US and a
18 Fortune 500 service company. My responsibility was to direct the corporation's
19 economic forecasting, strategic planning, merger and acquisition analysis, corporate
20 financial modeling and sales forecasting. I also directed special studies for the Chief
21 Financial Officer and the Chief Executive Officer and chaired various budgeting
22 committees.

23
24 **Q. WHAT WAS YOUR EARLIER EXPERIENCE?**

25 **A.** Before joining NIPSCO, I was director of the Harry A. Cochran Research Center,
26 located in Temple University's School of Business and Management. The Cochran
27 Research Center is Temple University's bureau of business and economic research. I
28 also served as contracts and grants officer for the School of Business. While at Temple I
29 completed a number of consulting projects for the US Department of Energy/Energy
30 Information Agency.

1 Still earlier I was Senior Research Economist at the Florida Public Service
2 Commission. My service at the Florida Commission began immediately after the passage
3 of the Public Utilities Regulatory Policy Act of 1978, an exciting time fraught with
4 uncertainty and change, not unlike today. I have also worked extensively with the
5 commercial real estate and fisheries industries, and I have taught undergraduate and
6 graduate level economics and statistics at Florida State University, The University of
7 North Carolina at Charlotte, The University of California at Santa Barbara, Temple
8 University, Philadelphia University, Chestnut Hill College, Drexel University and
9 Villanova University.

10
11 **Q. WHAT IS YOUR ACADEMIC TRAINING?**

12 **A.** During my academic career I studied at Brevard Community College, Harvard
13 University, Florida State University and The University of California at Santa Barbara. I
14 hold a bachelor of arts, masters of science and doctor of philosophy degree from Florida
15 State University, all in economics. My fields within economics were econometrics and
16 mathematical statistics, resource economics and intellectual history, especially as it
17 relates to capital theory. My dissertation studied the prediction of construction cost
18 overruns in large budgeted capital expenditures such as nuclear power plants.

19
20 **Q. HAVE YOU TESTIFIED BEFORE THE GUAM PUBLIC UTILITY**
21 **COMMISSION?**

22 **A.** No, this is my first appearance here.

23
24 **Q. HAVE YOU SERVED AS AN EXPERT WITNESS ELSEWHERE?**

25 **A.** Yes, many times. I have served as an expert witness on economic and forecasting
26 issues relating to gas and electric utilities before the Florida Public Service Commission,
27 the Iowa Commerce Commission, the Ohio Department Of Development Division Of
28 Energy, the US Senate Committee On Energy and Natural Resources, the Indiana Utility
29 Regulatory Commission, the Public Service Commission Of Kentucky and the Delaware
30 Public Service Commission.

31

1 Q. **HAVE YOU PREPARED AN EXHIBIT DETAILING YOUR RELEVANT**
2 **EXPERIENCE?**

3 A. Yes. My resume is included as Exhibit KCF-1, Schedule 1.
4

5 **2. PURPOSE AND METHODOLOGY**

6

7 Q. **WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

8 A. The purpose of my testimony is to support GPA's application for an increase in its
9 rates. I am sponsoring GPA's electricity sales forecast.
10

11 Q. **HOW IS MANGILAO INVOLVED WITH THE GPA SALES FORECAST?**

12 A. In late 2005, Mangilao was retained by GPA to develop a turnkey sales
13 forecasting business process that would give the GPA Strategic Planning and Operations
14 Research Department (SPORD) the skills and tools necessary to conduct load and sales
15 forecasting in-house. Over the past two years Mangilao has developed a database of
16 information pertinent to GPA's sales and loads, built an econometric model that prepares
17 the required forecasts, and prepared documentation and training materials to transfer the
18 technology to SPORD.

19 In January of 2007, Mangilao trained the SPORD team members in the workings
20 of the forecasting business process. Since that time, SPORD and Mangilao have been
21 preparing forecasts in parallel, as we complete the transfer of knowledge.
22

23 Q. **HOW WAS GPA'S OFFICIAL FORECAST PREPARED?**

24 A. The GPA official forecast that we are presenting today is a budget forecast and a
25 planning forecast that represents a consensus view developed in a consultative process
26 involving both SPORD and GPA senior management. As such, it is not simply raw
27 model output – instead, it reflects the collective understanding and best ideas of all of the
28 participants in the budgeting and planning process.

29 The forecast was prepared in April 2007 by SPORD. I discussed their work with
30 them while it was on going, I reviewed their work as it was completed, and I am in
31 complete agreement with their resulting forecast.

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Q. WHAT ASSUMPTIONS WERE USED IN THE FORECAST?

A. Several important assumptions were made in preparing the forecast. First, the representative weather for Guam was taken as the actual weather recorded at the international airport, as reported by the National Weather Service. In the forecast period, normal weather was assumed to be the average weather observed over the past 30 years.

Second, GPA's retail price of electricity, taken as average revenue per kWh inclusive of all fuel costs, taxes and surcharges, was assumed to increase with the general rate of inflation, as measured by the Guam Consumer Price Index (CPI) that is published by the Guam Bureau of Labor Statistics. This assumption of constant real prices is common in utility budget forecasting. This is equivalent to assuming that on average all of the items purchased by GPA – labor, materials and supplies and fuel – have cost escalation at approximately the same rate as general inflation. In a long-term forecast, this is usually a reasonable assumption.

Third, the Private Outdoor Lighting and Street Lighting revenue classes were assumed to show no growth in sales, based upon our collective judgmental assessment of the market. Finally, the econometric forecast of sales to the Government Large revenue class were adjusted upward to account for the anticipated consumption by four new schools that represent known new additions to GPA's load.

Q. WHAT ASSUMPTIONS WERE MADE REGARDING GUAM'S PROSPECTS FOR ECONOMIC GROWTH?

A. The forecasting process is designed to utilize the Moody's Economy.com economic forecast for Guam. The Moody's forecast used in this work was prepared in October 2006, the most current available at that time. This forecast called for Guam Civilian, Non-Agricultural Total Employment to grow at 3.3% annually over the period 2006-2010, with the rate of growth in the out-years reaching 5.4% annually.

Based upon our fieldwork on Guam, it is our opinion that Mainland analysts underestimate Guam's opportunities for economic growth. Our observation is that their forecasts do not take into account two important factors. They do not recognize that Guam's tourism industry may grow, and they do not take into account that there are

1 significant infrastructure and military construction projects that are either under way or
2 have been given clear schedules as budgeted capital expenditures.

3
4 **Q. BASED UPON THIS ANALYSIS, WHAT IS THE OUTLOOK FOR GPA**
5 **ELECTRICITY SALES?**

6 A. In 2006, GPA electricity sales amounted to 1.65 tWh. In this forecast, with data
7 available through February 2007, we expect 2007 to be 1.63 tWh, a decline of 1.25%.
8 We expect that this will grow by 4.3%, however, to a 2008 level of 1.70 tWh. By 2012
9 sales will reach a level of 2.01 tWh, representing an average compound annual growth of
10 3.3% over the six-year period 2006-2012.

11
12 **Q. IS THIS GROWTH EXPECTED TO OCCUR IN ALL REVENUE CLASSES?**

13 A. No. We expect that sales to the government revenue classes will actually fall
14 modestly. Sales to residential customers is expected to grow very modestly. But sales to
15 the small general demand and small general non-demand classes are expected to grow
16 very rapidly. Small general non-demand sales will grow from a 2006 level of 0.054 tWh
17 to a 2012 level of 0.077 tWh, or 6.1% annually. Growth in small general demand sales is
18 much faster and much more significant. Small general demand sales will grow from a
19 level of 0.205 tWh in 2006 to 0.429 tWh in 2012, or 13.1% annually. This very rapid
20 growth in sales to commercial customers results from the very rapid increase in
21 construction that is beginning here on Guam. A greatly increased amount of commercial
22 activity will be required to support the construction projects, the provision of materials
23 and supplies and the accommodation of large numbers of guest workers.

24
25 **Q. WHAT ASSUMPTION WAS MADE REGARDING SALES TO THE NAVY?**

26 A. Expectations regarding sales to the Navy we're made in consultation with their
27 purchasing officers. In other words, this sales forecast is judgmental rather than
28 econometric. This is an appropriate technique that is used frequently when a customer
29 knows with relative certainty what their consumption will be and is willing to share that
30 information.

1 Sales to the Navy are budgeted for 1.63 tWh in 2007, and are expected to be 1.70
2 tWh in 2008, growing to 2.01 tWh in 2012.

3
4 **Q. FINALLY, WHAT IS THE OUTLOOK FOR GPA'S PEAK HOUR DEMAND?**

5 A: Because so much of the forecast growth is in the commercial sector – driven by
6 an increased pace for tourism and infrastructure development – system peak demand is
7 going to start to grow pretty quickly over the time horizon of this forecast. In 2007,
8 system peak demand was 269 MW. Because of mild weather, this was actually 6 MW
9 lower than the 2006 peak. In 2008, however, the peak is expected to be 276 MW. By
10 2012, it will reach 309 MW, 40 MW higher than this year's level.

11
12 **3. RECOMMENDATIONS**

13
14 **Q. WHAT ARE THE MAJOR RECOMMENDATIONS THAT YOU DEVELOP IN
15 THIS TESTIMONY?**

16 A. Most of the recommendations that I might make have already been implemented by GPA
17 SPORD. Very briefly, those recommendations were, first, to realize that good
18 forecasting is the foundation of the planning process, and they must bring it in house.
19 That's been done. Second, SPORD staff is thoroughly trained, they are skillful planners,
20 they are cross-trained so that they are not reliant on a single person, and the forecasting
21 procedures are well documented in the event of staff turn over. Third, they appreciate
22 that forecasting is a continuous process that requires on-going attention throughout the
23 year. As a result, they don't come back to the forecasting process every year or every
24 couple of years, trying to remember what they did last time. At GPA, load and sales
25 forecasting is taken as seriously as it is at the very largest utilities.

26
27 **Q. DOES THIS COMPLETE YOUR TESTIMONY?**

28 A. Yes, it does. Thank you.
29
30