The Law Offices of
**Ernest L. Edwards, Jr., APLC**

300 Lake Marina Avenue, Unit 5BE
New Orleans, LA 70124

**Via: Federal Express**

October 16, 2017

Ms. Lora W. Johnson
Clerk of Council
City Hall - Room 1E09
1300 Perdido Street
New Orleans, LA 70112

**Re: Application of Entergy New Orleans, Inc.
for Approval to Construct New Orleans Power Station
and Request for Cost Recovery and Timely Relief
CNO Docket No. UD-16-02**

Dear Ms. Johnson:

Please find enclosed the original and three copies of the Additional Direct Testimony and Exhibits of Maurice Brubaker on behalf of Air Products and Chemicals, Inc. in the docket noted above. Please file the attached additional direct testimony, exhibits and this letter in the record of the proceeding and return one time-stamped copy to the above address, in accordance with normal procedures. I hereby certify that on this date I have served by email to all parties on the attached service list the same.

I also certify that on this date I have served by means of overnight Federal Express a copy of the HSPM version of the Additional Direct Testimony and Exhibits of Maurice Brubaker on behalf of Air Products and Chemicals, Inc. in the docket noted above, to those parties on the attached service list who are entitled to receive an HSPM version (noted by an '*').

Should you have any questions regarding the above matter, please do not hesitate to contact me. Thank you for your assistance with this matter.

Respectfully submitted,

Ernest L. Edwards, Jr., Esq.
Counsel for Air Products and Chemicals, Inc.

Enclosure
cc: Official Service List UD-16-02 (via e-mail)

Phone: (504) 450-4226
Email: ledwards0526@gmail.com

**September 29, 2017**

**Application of Entergy New Orleans, Inc. for Approval to Construct New Orleans Power Station and Request for Cost Recovery and Timely Relief**
**CNO Docket NO: UD-16-02**

**Lora W. Johnson**, lwjohnson@nola.gov
Clerk of Council
City Hall - Room 1E09
1300 Perdido Street
New Orleans, LA 70112
(504) 658-1085 - office
(504) 658-1140 – fax

**Pearlina Thomas,** pthomas@nola.gov
Chief of Staff, Council Utilities Regulatory Office
**W. Thomas Stratton, Jr.,** wtstrattonjr@nola.gov
Director, Council Utilities Regulatory Office
City Hall - Room 6E07
1300 Perdido Street
New Orleans, LA 70112
(504) 658-1110 - office
(504) 658-1117 – fax

**David Gavlinski,** 504-658-1101, dsgavlinski@nola.gov
Interim Council Chief of Staff
City Hall - Room 1E06
1300 Perdido Street
New Orleans, LA 70112

**Rebecca Dietz,** rhdietz@nola.gov
**Bobbie Mason**, bfmason1@nola.gov
Law Department
City Hall- 5th Floor
New Orleans, LA 70112
(504) 658-9800 – office
(504) 658-9869 – fax

**Beverly Gariepy,** bbgariepy@nola.gov
Department of Finance
City Hall - Room 3E06
1300 Perdido Street
New Orleans, LA 70112
(504) 658-1502- office
(504) 658-1705 – fax

**ADMINISTRATIVE HEARING OFFICER**

**Hon. Jeffrey S. Gulin**, jgulin@verizon.net
3203 Bridle Ridge Lane
Lutherville, MD 21093
(410) 627-5357

**NEW ORLEANS CITY COUNCIL CONSULTANTS**

***Clinton A. Vince,** clinton.vince@dentons.com
**Presley Reed,** presley.reedjr@dentons.com
**Emma F. Hand,** emma.hand@dentons.com
DENTONS US LLP
1900 K Street NW
Washington, DC 20006
(202) 408-6400 - office
(202) 408-6399 - fax

**Basile J. Uddo (**504) 583-8604 cell, buddo@earthlink.net
***J. A. "Jay" Beatmann, Jr.** (504) 256-6142 cell, (504) 524-5446 office direct, jay.beatmann@dentons.com
c/o DENTONS US LLP
650 Poydras Street
Suite 2850
New Orleans, LA 70130

***Walter J. Wilkerson,** wwilkerson@wilkersonplc.com
**Kelley Bazile**, kbazile@wilkersonplc.com
Wilkerson and Associates, PLC
650 Poydras Street - Suite 1913
New Orleans, LA 70130
(504) 522-4572 - office
(504) 522-0728 - fax

***Joseph Vumbaco,** jvumbaco@ergconsulting.com
**Joseph W. Rogers,** jrogers@ergconsulting.com
**Victor M. Prep,** vprep@ergconsulting.com
**Byron S. Watson,** bwatson@ergconsulting.com
Legend Consulting Group
8055 East Tufts Ave., Suite 1250
Denver, CO 80237-2835
(303) 843-0351 - office
(303) 843-0529 – fax

***Errol Smith**, ersmith@btcpas.com
Bruno and Tervalon
4298 Elysian Fields Avenue
New Orleans, LA 70122
(504) 284-8733 - office
(504) 284-8296 – fax

**ENTERGY NEW ORLEANS, INC.**

**Gary E. Huntley,** ghuntley@entergy.com
Entergy New Orleans, Inc.
Vice-President, Regulatory Affairs
1600 Perdido Street, L-MAG 505B
New Orleans, LA 70112
(504) 670-3680 - office
(504) 670-3615 - fax

**Seth Cureington**, scurein@entergy.com
Entergy New Orleans, Inc.
Manager, Resource Planning
1600 Perdido Street, L-MAG 505B
New Orleans, LA 70112
504-670-3602 office
504-670-3615 fax

***Tim Cragin** (504) 576-6523 office, tcragin@entergy.com
**Brian L. Guillot** (504) 576-2603 office, bguill1@entergy.com
**Alyssa Maurice-Anderson** (504) 576-6523 office, amauric@entergy.com
**Harry Barton,** hbarton@entergy.com
**Karen Freese** (504) 576-4170 office, kfreese@entergy.com
Entergy Services, Inc.
Mail Unit L-ENT-26E
639 Loyola Avenue
New Orleans, LA 70113
(504) 576-5579 – fax

**Joe Romano, III** (504) 576-4764, jroman1@entergy.com
**Suzanne Fontan** (504) 576-7497, sfontan@entergy.com
**Danielle Burleigh** (504) 576-6185, dburlei@entergy.com
**Therese Perrault** (504-576-6950), tperrau@entergy.com
Entergy Services, Inc.
Mail Unit L-ENT-4C
639 Loyola Avenue
New Orleans, LA 70113
(504)576-6029 – fax

**ALLIANCE FOR AFFORDABLE ENERGY**

***Logan Atkinson Burke,** (646) 942-7149, logan@all4energy.org
***Forest Wright,** forest@all4energy.org
**Sophie Zaken**, regulatory@all4energy.org
4505 S. Claiborne Ave.
New Orleans, LA 70125

***Susan Stevens Miller,** (202) 667-4500, smiller@earthjustice.org
***Chinyere Osuala,** (202) 667-4500, cosuala@earthjustice.org
***Al Luna,** (202) 667-4500, aluna@earthjustice.org
1625 Massachusetts Ave., NW Ste 702
Washington D.C. 20036

**POSIGEN**

**Benjamin Norwood,** bnorwood@posigen.com
**Beth Galante,** bgalante@posigen.com
819 Central Ave. Suite 210
Jefferson, LA. 70121
(504)293-5665

**AIR PRODUCTS AND CHEMICALS, INC.**

***Ernest L. Edwards Jr,** ledwards0526@gmail.com
The Law Offices of Ernest L. Edwards Jr, APLC
300 Lake Marina Avenue unit 5BE
New Orleans, LA 70124
Phone: 504 450-4226

***Mark Zimmerman,** zimmermr@airproducts.com
Air Products and Chemicals, Inc.
7201 Hamilton Boulevard
Allentown, PA 18195-1501
610-481-1288 - office
610-481-2182 – fax

***Maurice Brubaker**, (636) 898-6725, mbrubaker@consultbai.com
Brubaker & Associates, Inc.
16690 Swingley Ridge Road, Suite 140
Chesterfield, MO 63017

***James R. Dauphinais,** (636) 898-6725**,** jdauphinais@consultbai.com
Brubaker & Associates, Inc.
16690 Swingley Ridge Road, Suite 140
Chesterfield, MO 63017

**DEEP SOUTH CENTER FOR ENVIRONMENTAL JUSTICE, INC.**

***Monique Harden,** (504) 517-2534,MoniqueCovHarden@gmail.com
3157 Gentilly Blvd., #145
New Orleans, LA 70122

**NEW ORLEANS COLD STORAGE & WAREHOUSE CO., LTD.**

**Luke Piontek,** LPiontek@roedelparsons.com
**Judith Sulzer,** Jsulzer@roedelparsons.com
**Gayle T. Kellner**
**Christian J. Rhodes**
**Shelley Ann McGlathery**
Roedel, Parsons, Koch, Blache,
Balhoff & McCollister
8440 Jefferson Highway, Suite 301
Baton Rouge, LA 70809
Telephone: (225) 929-7033
Facsimile: (225) 928-4925

**GULF STATES RENEWABLE ENERGY INDUSTRIES ASSOCIATION**

**Jeff Cantin, President**, (504) 383-8936, jcantin@gsreia.org
**Will Feldman,** (818) 631-9884, wfeldman@gsreia.org
400 Poydras St., Suite 900
New Orleans, LA 70130

**SIERRA CLUB**

***Joshua Smith,** joshua.smith@sierraclub.org
Sierra Club Environmental Law Program
2101 Webster St., Suite 1300
Oakland, CA. 94612
(412) 977-5560

***Robert B. Wiygul,** robert@wwglaw.com
Waltzer, Wiygul, & Garside, LLC
1011 Iberville Dr.
Ocean Springs, MS 39564
(228)872-1125

**Michael Brown,** michael@wwglaw.com
Waltzer, Wiygul, & Garside, LLC
1000 Behrman Hwy
Gretna, LA 70056
(504)340-6330

**BEFORE THE**
**COUNCIL OF THE CITY OF NEW ORLEANS**

| | | |
|---|---|---|
| **APPLICATION OF ENTERGY NEW ORLEANS, INC. FOR APPROVAL TO CONSTRUCT NEW ORLEANS POWER STATION AND REQUEST FOR COST RECOVERY AND TIMELY RELIEF** | ) ) ) ) ) | **DOCKET NO. UD-16-02** |

Additional Direct Testimony & Exhibits of

**Maurice Brubaker**

On behalf of

**Air Products and Chemicals, Inc.**

**PUBLIC VERSION**

October 16, 2017

BRUBAKER & ASSOCIATES, INC.

**BEFORE THE**
**COUNCIL OF THE CITY OF NEW ORLEANS**

| | | |
|---|---|---|
| **APPLICATION OF ENTERGY NEW ORLEANS, INC. FOR APPROVAL TO CONSTRUCT NEW ORLEANS POWER STATION AND REQUEST FOR COST RECOVERY AND TIMELY RELIEF** | ) ) ) ) ) | **DOCKET NO. UD-16-02** |

**STATE OF MISSOURI** )
) **SS**
**COUNTY OF ST. LOUIS** )

**Affidavit of Maurice Brubaker**

Maurice Brubaker, being first duly sworn, on his oath states:

1. My name is Maurice Brubaker. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by Air Products and Chemicals, Inc. in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes is my additional direct testimony and exhibits which were prepared in written form for introduction into evidence in the Council of the City of New Orleans Docket No. UD-16-02.

3. I hereby swear and affirm that the testimony and exhibits are true and correct and that they show the matters and things that they purport to show.

Maurice Brubaker

Subscribed and sworn to before me this 13th day of October, 2017.

TAMMY S. KLOSSNER
Notary Public - Notary Seal
STATE OF MISSOURI
St. Charles County
My Commission Expires: Mar. 18, 2019
Commission # 15024862

Notary Public

**BEFORE THE**
**COUNCIL OF THE CITY OF NEW ORLEANS**

| | | |
|---|---|---|
| **APPLICATION OF ENTERGY NEW ORLEANS, INC. FOR APPROVAL TO CONSTRUCT NEW ORLEANS POWER STATION AND REQUEST FOR COST RECOVERY AND TIMELY RELIEF** | **)** **)** **)** **)** **)** | **DOCKET NO. UD-16-02** |

**Additional Direct Testimony of Maurice Brubaker**

**Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A Maurice Brubaker. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

**Q WHAT IS YOUR OCCUPATION?**

A I am a consultant in the field of public utility regulation and President of Brubaker & Associates, Inc., energy, economic and regulatory consultants.

**Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

A This information is included in Appendix A to my testimony.

**Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?**

A I am appearing on behalf of Air Products and Chemicals, Inc. ("Air Products"), a large industrial customer taking service from Entergy New Orleans, Inc. ("ENO"). Air Products has been a customer of ENO, and predecessor company New Orleans Public Service, Inc., since 1965. Its load is mainly interruptible, and service is supplied at the

transmission voltage level, so no investment in the distribution system is required. It is the only customer taking service under the LIS rate.

The Air Products facility sustained significant damage as a result of Hurricane Katrina. Air Products spent in excess of $80 million to rebuild the facility and to maintain its presence in New Orleans.

**Q ARE YOU THE SAME MAURICE BRUBAKER WHO PREVIOUSLY SUBMITTED DIRECT TESTIMONY AND EXHIBITS IN THIS PROCEEDING ON JANUARY 6, 2017?**

A Yes.

**Q WHAT WAS THE SUBJECT OF THAT TESTIMONY?**

A In that testimony, I addressed resource selection procedures and ENO's proposed cost recovery plan for new capacity. For convenience, I have included my findings and recommendations from that testimony as Appendix B to this testimony.

**Q HAVE YOU REVIEWED ENO'S JULY 6, 2017 SUPPLEMENTAL AND AMENDING APPLICATION, TESTIMONY, EXHIBITS AND OTHER MATERIAL FILED IN THIS PROCEEDING?**

A Yes. I have reviewed both the public and the highly sensitive protected material ("HSPM") versions of this filing, including the application, testimony, exhibits and responses to data requests. In addition, I have reviewed other material, including the final integrated resource plan ("IRP") from Docket No. UD-08-02, the final action

plan from Docket No. UD-08-02, the material filed by ENO in Docket No. UD-16-01 and in UD-16-03. I also reviewed material from the Council of the City of New Orleans ("Council") and the Louisiana Public Service Commission ("LPSC") dockets concerning Ninemile Unit 6 ("NM6") and Union Power Station ("UPS").

**Q WHAT SUBJECTS DO YOU ADDRESS IN YOUR TESTIMONY?**

A My testimony addresses the resource choices proposed by ENO as a part of its request for approval to construct the New Orleans Power Station ("NOPS"), and the request for approval of a cost recovery plan.

## SUMMARY

**Q WHAT ARE YOUR FINDINGS AND RECOMMENDATIONS?**

A First, I find that ENO has not justified a need to add 226 MW of combustion turbine ("CT") capacity at this time.

Second, I find that ENO's alternative proposal to add seven 18 MW Wärtsilä Reciprocating Internal Combustion Engine ("RICE") Generator sets, sometimes referred to as the "alternative peaker" would be a much more suitable capacity addition than the CT.

Third, I find that even the smaller RICE resource would provide substantially more capacity than ENO's load forecast would justify for about the next ten years.

Fourth, I find that in light of the size of the RICE resource and ENO's load and capacity forecasts, that it would be appropriate for ENO to consider adding fewer than seven RICE units at this time, and instead install fewer than seven units, but construct

the infrastructure necessary to permit addition of the remaining units if future circumstances support adding more capacity.

Fifth, I find that ENO requests an exact cost recovery rider, such as the existing Purchased Power and Capacity Acquisition Cost Recovery Rider ("PPCACR Rider") for use between the time that new generation enters commercial service and the time that there is either a full rate case or an annual Formula Rate Plan ("FRP") review.

Sixth, I find that the PPCACR Rider is arbitrary because it allocates the non-fuel revenue requirement to customers on the basis of kWh purchased, and therefore is not cost-based and not an appropriate means of collecting non-fuel revenue requirements. Because of this inappropriate PPCACR Rider mechanism that allocates cost on a kWh basis, Air Products is already being charged at the rate of about $2.5 million per year, instead of a cost-based amount of about $1 million per year, for the Ninemile Unit 6 PPA ("NM6 PPA") and the Union Power Station Power Block No. 1 ("UPS").

Seventh, I also find that ENO does not need to have an exact cost recovery rider of any kind. Rather, it can capitalize and defer for later recovery (after the conclusion of a prudency review) the non-fuel costs associated with any new unit, should it be approved by the Council. This prudency review and reflection of costs in rates can occur in the context of a general rate case, or in an annual FRP review proceeding.

## REQUEST FOR APPROVAL OF NOPS

**Q WHAT IS NOPS?**

A As originally proposed, NOPS is a 226 MW (summer rating) CT which ENO proposes to construct and locate at the Michoud site. Because ENO will own the NOPS generating unit, it is best described as a self-build unit.

**Q IS THERE AN ALTERNATIVE TO THE NOPS CT?**

A Yes. In its July 6, 2017 testimony, ENO proposed an alternative peaker which is composed of seven Wärtsilä 18 MW RICE units. This facility also would be located at the former Michoud site.

**Q HAVE YOU REVIEWED THE SUPPLEMENTAL AND AMENDING DIRECT TESTIMONY OF ENO WITNESS CUREINGTON WITH RESPECT TO THE CLAIMED NEED FOR CAPACITY?**

A Yes. At page 7 of his testimony he states that ENO's updated studies indicate a long-term capacity need of approximately 99 MW by 2026 and up to 248 MW by 2036.

**Q WHAT IS THE BASIS FOR THE CLAIMED NEED BY 2036?**

A There are essentially two components. The first is a projected increase in load (including a 12% reserve margin) of 36 MW, and the second is a reduction in available capacity of about 129 MW.

**Q ARE THESE CHANGES CERTAIN TO OCCUR?**

A No. The 2036 data is a forecast almost 20 years into the future, and it is possible that the load does not grow as much as projected, that the retirements that have been identified will be delayed until a later point in time, or that both will occur.

Exhibit SEC-11 shows the annual values for load and capacity and the resulting surplus or deficit of capacity relative to the asserted need.

**Q HAVE YOU SUMMARIZED THE SHORT OR LONG POSITION BASED ON ENO'S UPDATED LOAD FORECAST AND THE 226 MW CT?**

A Yes. This is shown in column 1 of HSPM Exhibit MEB-3.

**Q IN YOUR OPINION, DOES THIS FORECAST JUSTIFY ADDING 226 MW OF CAPACITY (THE PROPOSED NOPS CT) AT THIS TIME?**

A No. There is not an immediate need for that amount of capacity. The near-term need as forecasted by ENO is less than 100 MW. In light of the long time before an indicated capacity need would approach 226 MW, a smaller amount of capacity added now will cover needs in the near future, provide time to evaluate how loads actually materialize, and allow stakeholders to monitor the need for and timing of unit retirements. The smaller revenue requirement associated with a smaller capacity addition also will reduce risk and create less of an impact on customers.

**Q AT PAGE 7 OF HIS TESTIMONY, MR. CUREINGTON APPEARS TO ATTEMPT TO JUSTIFY THE INSTALLATION OF A NOPS CT BASED ON A CLAIMED NEED FOR PEAKING AND RESERVE CAPACITY RESOURCES, SEPARATE AND APART FROM THE OVERALL NEED FOR RESOURCES. IS THIS A REASONABLE BASIS FOR INSTALLING A LARGER UNIT SUCH AS NOPS?**

A No. While it is reasonable to identify the types of capacity needed, those evaluations should only influence the type of capacity that is installed when an overall need has been identified, and should not determine the amount of capacity to be installed. So long as the utility has sufficient capacity to meet its requirements, it is neither reasonable nor prudent to install more capacity than is required simply for the purpose of increasing the amount of one particular type of capacity that is not otherwise needed.

**Q HAVE YOU PREPARED A SIMILAR ANALYSIS UNDER THE ASSUMPTION THAT ENO WOULD INSTALL THE 128 MW OF RICE UNITS?**

A Yes. This is shown in column 2 of HSPM Exhibit MEB-3.

**Q HOW DOES THE (SHORT)/LONG POSITION WITH THE RICE UNIT EXPANSION OPTION COMPARE TO THE (SHORT)/LONG POSITION IF THE CT WERE TO BE CONSTRUCTED?**

A As would be expected, the long position would be reduced by the approximately 100 MW difference between the capacity of the CT and the RICE units.

**Q AS BETWEEN THE CT AND THE RICE RESOURCE, WHICH EXPANSION OPTION DO YOU BELIEVE IS THE MOST REASONABLE FOR THE ENO SERVICE TERRITORY AT THIS TIME?**

A I believe that the expansion with the RICE resource is the more appropriate alternative. Not only does the size of the resource correspond more closely to the forecasted need for capacity, but the RICE units are advantageous in a number of other respects. Many of these advantageous characteristics are set forth on page 4 of HSPM Exhibit SEC-12.

**Q WHAT ARE SOME OF THOSE BENEFICIAL CHARACTERISTICS AS COMPARED TO THE CT?**

A From an efficiency standpoint, the RICE units have a lower heat rate, which means that it takes fewer BTUs to produce a kilowatt-hour of energy than is the case for the CT. It also is less costly to start, because the fuel consumption per start is generally lower for the RICE units than for the CT.

From an operating perspective, the RICE resource is more flexible than the CT in terms of the minimum required run times when the resource is started. The RICE

units can be run for a shorter period of time than the CT, which means that there could be economies by not having to operate the units when the load doesn't require it to be operated. Also, because there are seven RICE units, all of the capacity does not need to be committed whenever there is a capacity need. The modular feature of the RICE resource means that the amount of capacity committed and operated can be matched more closely to the actual system needs. This feature also contributes to the reliability provided by the units. If the CT has a forced outage, it generally is all unavailable. If several RICE units are running, and one trips off, most of the other committed units will continue to run, providing additional reliability to the system.

Similarly, the expected forced outage rate of the RICE units is lower than for the CT, which also makes the RICE units an inherently more reliable choice.

In addition, ENO represents that the RICE units will use less water than is required by the CT. This is beneficial both from cost and use of resources standpoints.

**Q ARE THERE ANY OTHER BENEFITS?**

A Yes. There is a lower exposure to capital costs because the RICE units, even if they are all constructed, have a lower overall capital cost than does the CT.

**Q YOU INDICATED THAT THE LOAD FORECAST DOES NOT JUSTIFY ALL OF THE CAPACITY OF THE RICE UNITS FOR A NUMBER OF YEARS. DOES THE MODULAR NATURE OF THE RICE RESOURCE PROVIDE ANY OPPORTUNITIES TO DEFER CAPITAL EXPENDITURES?**

A Yes. As indicated, the RICE alternative consists of seven 18 MW Wärtsilä units. It certainly would be possible, and I strongly recommend that ENO consider, building out the infrastructure to accommodate all seven units, but not installing all seven at this time. Constructing four or five units now, and deferring the decision on adding other units until a later point in time, would reduce the amount of capital outlays and the cost impact on customers. This approach also has the benefit of providing time to learn how energy efficiency measures and general demographic and economic conditions actually impact the load.

## COST RECOVERY PROPOSALS

**Q WHAT DOES ENO PROPOSE AS A MEANS OF RECOVERING THE NON-FUEL REVENUE REQUIREMENT FOR EITHER NOPS ALTERNATIVE?**

A This is discussed in the Supplemental and Amending testimony of ENO witness Orlando Todd, beginning at page 5. He notes that the Company expects the Combined Rate Case described in Paragraph 8 of the Algiers Transaction Agreement in Principle ("AIP") approved in Council Resolution R-15-194 dated May 14, 2015 to be completed prior to the time that NOPS (if approved) would enter commercial operation – which is expected to be in late 2019 for the RICE units (or late 2020 if

the CT). Accordingly, ENO's expectation is that NOPS would not achieve commercial operation until after the conclusion of this Combined Rate Case.

As a result of this timing, ENO proposes that the non-fuel revenue requirement associated with NOPS be recovered through the PPCACR Rider, or a modified version of that Rider, until such time as there is a subsequent rate case or an annual review in an FRP proceeding.

**Q WOULD IT BE APPROPRIATE TO RECOVER THE NON-FUEL REVENUE REQUIREMENTS ASSOCIATED WITH NOPS, OR ANY OTHER GENERATION RESOURCE, USING THE PPCACR RIDER?**

A No. The PPCACR Rider grew out of a decision in the NM6 case. Essentially, the AIP and the Resolution adopted in the NM6 case provided for recovery of the non-fuel revenue requirements of NM6 on a kWh basis, but only until such time as the rate case contemplated by the NM6 docket was processed and the cost brought into base rates. That intended rate case never happened, and, in the meantime, the AIP and Resolution in the Algiers docket (referenced above) eclipsed those plans and moved the date of the next rate case into the 2018/2019 time frame.

Then, along came UPP and the Council decided to continue using the same non cost-based rider, namely an equal amount per kWh from all classes.

Regardless of whether the Rider is called PPCACR or something else, recovery of non-fuel revenue requirements associated with generation facility investment or generation PPAs by means of a kWh mechanism is not cost-based and is outside the mainstream of cost recovery practices.

**Q HOW SHOULD THE NON-FUEL REVENUE REQUIREMENTS OF THE NM6 PPA AND UPS HAVE BEEN COLLECTED FROM CUSTOMERS?**

A If there were a class cost of service study available, that should have formed the basis for determining how to apportion those costs among customer classes. These costs would have been allocated to customer classes using a demand-based allocator that recognized the fixed cost nature of that revenue equipment, similar to what was used in ENO's previous rate case, Docket No. UD-08-03.

In the absence of a class cost of service study, the appropriate approach would be to apply a uniform percentage factor to the base rate revenues of all customer classes. This would essentially preserve existing rate relationships, and would be consistent with generally accepted cost of service principles.

**Q IN THE LPSC PROCEEDINGS, HOW DID ELL ALLOCATE THE COST OF ITS OWNERSHIP SHARE OF NM6 AND ITS OWNERSHIP OF UPP UNITS 3 AND 4 AMONG ITS CUSTOMER CLASSES?**

A As to both its ownership share of NM6 and UPP Units 3 and 4, ELL collected the non-fuel revenue requirements by applying a uniform percentage increase to the base rate revenues of all customer classes, except for the portion of customer base rates that were either for interruptible power service or were special contracts.

**Q HOW WERE THE NON-FUEL REVENUE REQUIREMENTS ASSOCIATED WITH NM6 THAT WERE ALLOCATED TO ELL'S SERVICE TERRITORY IN ALGIERS COLLECTED FROM CUSTOMERS?**

A ELL allocated these revenue requirements among the Algiers customer classes using a cost-based approach. Specifically, it used a factor based on the contribution of each class to the 12 monthly system peak demands.

**Q HOW HAS THE APPLICATION OF THE PPCACR IMPACTED AIR PRODUCTS?**

A The recovery of the non-fuel revenue requirements of the NM6 PPA and UPS on a per kWh basis has resulted in significant overcharges to Air Products.

Because a kWh allocation charges Air Products approximately 3.2% of the cost being allocated, whereas a more appropriate allocation on base rates would charge Air Products approximately 1.2% of the cost being allocated, the overcharge to Air Products from application of the kWh-based Rider is significant. As a result, Air Products is being allocated about $2.5 million per year of cost for these two resources instead of a more appropriate allocation of approximately $1 million, resulting in an annual overcharge of approximately $1.5 million. I have attached as Exhibit MEB-4 my direct testimony of September 26, 2016 in Docket UD-16-03 (public version), which explains the overcharge in more detail.

**Q IF THIS SAME MECHANISM WERE APPLIED TO REVENUE REQUIREMENTS ASSOCIATED WITH NOPS, WHAT WOULD BE THE RESULT?**

A Were this non cost-based allocation applied to the approximately $34 million annual revenue requirement for NOPS, Air Products would be allocated approximately $1.06 million of cost, instead of approximately $400,000 of cost if the 1.2% base rate allocation factor were used. This would result in an annual overcharge to Air Products of about $660,000.

**Q IF NOPS, OR ANOTHER FACILITY, IS APPROVED AND ENTERS SERVICE IN BETWEEN RATE CASES, HOW SHOULD THE NON-FUEL REVENUE REQUIREMENT BE TREATED?**

A Assuming NOPS, or another facility, enters service between rate cases, the non-fuel cost could be capitalized and deferred for consideration in a subsequent rate case or annual review as a part of an FRP. This approach would allow ENO ultimately to recover all of its prudently incurred costs, and avoid having to adjust customer rates until a full analysis, including a prudency review, can be conducted and evaluated in the context of a regular rate case or an annual review as part of an FRP.

**Q DOES THIS CONCLUDE YOUR ADDITIONAL DIRECT TESTIMONY?**

A Yes, it does.

## Qualifications of Maurice Brubaker

**Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A Maurice Brubaker. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

**Q PLEASE STATE YOUR OCCUPATION.**

A I am a consultant in the field of public utility regulation and President of the firm of Brubaker & Associates, Inc. ("BAI"), energy, economic and regulatory consultants.

**Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

A I was graduated from the University of Missouri in 1965, with a Bachelor's Degree in Electrical Engineering. Subsequent to graduation I was employed by the Utilities Section of the Engineering and Technology Division of Esso Research and Engineering Corporation of Morristown, New Jersey, a subsidiary of Standard Oil of New Jersey.

In the Fall of 1965, I enrolled in the Graduate School of Business at Washington University in St. Louis, Missouri. I was graduated in June of 1967 with the Degree of Master of Business Administration. My major field was finance.

From March of 1966 until March of 1970, I was employed by Emerson Electric Company in St. Louis. During this time I pursued the Degree of Master of Science in Engineering at Washington University, which I received in June, 1970.

In March of 1970, I joined the firm of Drazen Associates, Inc., of St. Louis, Missouri. Since that time I have been engaged in the preparation of numerous studies relating to electric, gas, and water utilities. These studies have included analyses of the cost to serve various types of customers, the design of rates for utility services, cost forecasts, cogeneration rates and determinations of rate base and operating income. I have also addressed utility resource planning principles and plans, reviewed capacity additions to determine whether or not they were used and useful, addressed demand-side management issues independently and as part of least cost planning, and have reviewed utility determinations of the need for capacity additions and/or purchased power to determine the consistency of such plans with least cost planning principles. I have also testified about the prudency of the actions undertaken by utilities to meet the needs of their customers in the wholesale power markets and have recommended disallowances of costs where such actions were deemed imprudent.

I have testified before the Federal Energy Regulatory Commission ("FERC"), various courts and legislatures, and the state regulatory commissions of Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Guam, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Michigan, Missouri, Nevada, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Utah, Virginia, West Virginia, Wisconsin and Wyoming.

The firm of Drazen-Brubaker & Associates, Inc. was incorporated in 1972 and assumed the utility rate and economic consulting activities of Drazen Associates, Inc., founded in 1937. In April, 1995 the firm of Brubaker & Associates, Inc. was formed.

It includes most of the former DBA principals and staff. Our staff includes consultants with backgrounds in accounting, engineering, economics, mathematics, computer science and business.

Brubaker & Associates, Inc. and its predecessor firm has participated in over 700 major utility rate and other cases and statewide generic investigations before utility regulatory commissions in 40 states, involving electric, gas, water, and steam rates and other issues. Cases in which the firm has been involved have included more than 80 of the 100 largest electric utilities and over 30 gas distribution companies and pipelines.

An increasing portion of the firm's activities is concentrated in the areas of competitive procurement. While the firm has always assisted its clients in negotiating contracts for utility services in the regulated environment, increasingly there are opportunities for certain customers to acquire power on a competitive basis from a supplier other than its traditional electric utility. The firm assists clients in identifying and evaluating purchased power options, conducts RFPs and negotiates with suppliers for the acquisition and delivery of supplies. We have prepared option studies and/or conducted RFPs for competitive acquisition of power supply for industrial and other end-use customers throughout the Unites States and in Canada, involving total needs in excess of 3,000 megawatts. The firm is also an associate member of the Electric Reliability Council of Texas and a licensed electricity aggregator in the State of Texas.

In addition to our main office in St. Louis, the firm has branch offices in Phoenix, Arizona and Corpus Christi, Texas.

**Findings and Recommendations of Maurice Brubaker**
**From January 6, 2017 Direct Testimony In Docket No. UD-16-02**

**Q WHAT ARE YOUR FINDINGS AND RECOMMENDATIONS?**

A First, I find that ENO has not justified a need to add 226 MW of capacity at this time. Second, I find that even if the amount of new capacity that has been identified by ENO were appropriate, ENO has not taken appropriate steps to determine the most reasonable choice for meeting the projected needs of ENO's customers. Third, I find that a competitive solicitation approach in the form of a request for proposals ("RFP") is an appropriate way to test the market to determine the full range of credible options available when a utility has identified a need for new capacity. Fourth, I find that ENO has not conducted any form of RFP to determine what alternatives exist to the self-construction of NOPS.

I also find that the conduct of a competitive solicitation in the form of an RFP is a requirement that many regulatory bodies, including the LPSC, have established as an integral step in the certification process for new capacity, and is a process that ENO should follow.

ENO's failure to conduct a competitive solicitation process by means of an RFP is an additional reason that I recommend the Council not grant approval for ENO to construct NOPS at this time.

I find that ENO requests an exact rider cost recovery, such as the existing Purchased Power and Capacity Acquisition Cost Recovery Rider ("PPCACR Rider") for use between the time that new generation enters commercial service and the time that there is either a full rate case or an annual Formula Rate Plan ("FRP") review.

I find that the PPCACR Rider is arbitrary because it allocates the non-fuel revenue requirement to customers on the basis of kWh purchased, and therefore is not cost-based and not an appropriate means of collecting non-fuel revenue requirements. Because of this inappropriate PPCACR Rider mechanism that allocates cost on a kWh basis, Air Products is already being charged at the rate of about $2.5 million per year, instead of a cost-based amount of about $1 million per year, for the Ninemile Unit 6 PPA ("NM6 PPA") and the Union Power Station Power Block No. 1 ("UPS").

I also find that ENO does not need to have an exact cost recovery rider of any kind. Rather, it can capitalize and defer for later recovery (after the conclusion of a prudency review) the non-fuel costs associated with any new unit, should it be approved by the Council. This prudency review and reflection of costs in rates can occur in the context of a general rate case, or in an annual FRP review proceeding.

HIGHLY SENSITIVE PROTECTED MATERIALS REDACTED PURSUANT
TO CONFIDENTIALITY AGREEMENT IN CNO DOCKET NO. UD-16-02

# Entergy New Orleans, Inc.
## CNO Docket No. UD-16-02

### ENO's Load and Capacity Position

| Year | (Short) or Long If 226 MW Peaker Is Constructed (Megawatts) (1) | (Short) or Long If 128 MW of RICE Units Are Constructed (Megawatts) (2) |
|---|---|---|
| 2019 | | |
| 2020 | | |
| 2021 | | |
| 2022 | | |
| 2023 | | |
| 2024 | | |
| 2025 | | |
| 2026 | | |
| 2027 | | |
| 2028 | | |
| 2029 | | |
| 2030 | | |
| 2031 | | |
| 2032 | | |
| 2033 | | |
| 2034 | | |
| 2035 | | |
| 2036 | | |

Source: Exhibit SEC-11

**BEFORE THE**
**COUNCIL OF THE CITY OF NEW ORLEANS**

| | | |
|---|---|---|
| **APPLICATION OF ENTERGY NEW ORLEANS, INC. FOR APPROVAL TO RESTRUCTURE** | **)** **)** **)** | **DOCKET NO. UD-16-03** |

Direct Testimony of

**Maurice Brubaker**

On behalf of

**Air Products and Chemicals, Inc.**

**PUBLIC VERSION**

September 26, 2016

BRUBAKER & ASSOCIATES, INC.

**BEFORE THE**
**COUNCIL OF THE CITY OF NEW ORLEANS**

| | | |
|---|---|---|
| **APPLICATION OF ENTERGY NEW ORLEANS, INC. FOR APPROVAL TO RESTRUCTURE** | ) ) ) | **DOCKET NO. UD-16-03** |

**STATE OF MISSOURI** )
) **SS**
**COUNTY OF ST. LOUIS** )

**Affidavit of Maurice Brubaker**

Maurice Brubaker, being first duly sworn, on his oath states:

1. My name is Maurice Brubaker. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by Air Products and Chemicals, Inc. in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes is my direct testimony which was prepared in written form for introduction into evidence in the Council of the City of New Orleans Docket No. UD-16-03.

3. I hereby swear and affirm that the testimony is true and correct and that it shows the matters and things that it purports to show.

Maurice Brubaker

Subscribed and sworn to before me this 23rd day of September, 2016.

TAMMY S. KLOSSNER
Notary Public - Notary Seal
STATE OF MISSOURI
St. Charles County
My Commission Expires: Mar. 18, 2019
Commission # 15024862

Notary Public

**BEFORE THE**
**COUNCIL OF THE CITY OF NEW ORLEANS**

| | | |
|---|---|---|
| **APPLICATION OF ENTERGY NEW ORLEANS, INC. FOR APPROVAL TO RESTRUCTURE** | **)** **)** **)** | **DOCKET NO. UD-16-03** |

**Direct Testimony of Maurice Brubaker**

**Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A Maurice Brubaker. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

**Q WHAT IS YOUR OCCUPATION?**

A I am a consultant in the field of public utility regulation and President of Brubaker & Associates, Inc., energy, economic and regulatory consultants.

**Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

A This information is included in Appendix A to my testimony.

**Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?**

A I am appearing on behalf of Air Products and Chemicals, Inc. ("Air Products"), a large industrial customer taking service from Entergy New Orleans, Inc. ("ENO"). Air Products has been a customer of ENO, and predecessor company New Orleans Public Service, Inc., since 1965. Its load is primarily interruptible, and it is the only customer taking service under the LIS rate.

The Air Products facility sustained significant damage as a result of Hurricane Katrina. Air Products spent in excess of $80 million to rebuild the facility and to maintain its presence in New Orleans.

**Q HAVE YOU REVIEWED THE APPLICATION, TESTIMONY, EXHIBITS AND OTHER MATERIAL FILED IN THIS PROCEEDING?**

A Yes. I have reviewed both the public and highly sensitive protected material ("HSPM") testimony and the responses to data requests.

## SUMMARY

**Q WHAT ARE YOUR FINDINGS AND RECOMMENDATIONS?**

A First, I find that ENO's proposal to provide five restructuring credits of $5 million each during the years 2016 through 2020 is insufficient, and that ENO should provide more credits to customers.

Second, I find that the per kWh allocation of capacity costs associated with the Ninemile 6 Unit PPA ("NM6 PPA") and the capacity cost associated with Union Power Station Power Block No. 1 ("UPS") disproportionately burdens Air Products. Its costs have gone up by more than $200,000 per month, or $2.5 million per year. This is about a 90% increase in base rates. This increase exceeds a reasonable allocation by at least $125,000 per month, or $1.5 million per year.

I also find that it would be appropriate to utilize a portion of the annual credits to mitigate the impact on Air Products resulting from the mis-allocation of the NM6

PPA and UPS by providing monthly credits to Air Products at the rate of $125,000 per month to partially mitigate this impact.

In addition, I find that because of certain agreements made by ENO, it appears unlikely that any permanent adjustment can be made prior to the 2018 rate case, so it is imperative that the mitigation described in this testimony begin now. Those credits should be applied beginning with the date when Air Products was first charged costs associated with UPS, and continue until an appropriate capacity cost allocation can be made in a rate case.

I recommend that the proposed reorganization not be approved unless these two items are a part of it; namely: (1) larger benefits to all customers; and (2) a separate credit to Air Products in the amount of $125,000 per month to partially mitigate the excess costs charged to Air Products under the PPCACR.

## CUSTOMER CREDITS

**Q ARE YOU FAMILIAR WITH ENO'S PROPOSAL TO PROVIDE CUSTOMERS WITH CREDITS OF $5 MILLION IN 2016 AND IN 2017 IF THE COUNCIL APPROVES ITS APPLICATION BY DECEMBER 31, 2016, AND ADDITIONAL CREDITS OF $5 MILLION IN EACH OF THE YEARS 2018, 2019 AND 2020 IF THE FEDERAL ENERGY REGULATORY COMMISSION ("FERC") APPROVES IT BY DECEMBER 31, 2018?**

A Yes, I am.

**Q DO YOU HAVE ANY COMMENTS WITH RESPECT TO THESE CREDITS?**

A Yes, I do.

**Q DO YOU BELIEVE THAT THESE AMOUNTS ARE ADEQUATE?**

A No. For reasons which I will discuss below, I believe that customers should be entitled to larger benefits.

**BEGINNING OF HSPM MATERIAL**

**END OF HSPM MATERIAL**

## IMPACT MITIGATION FOR RATE LIS

**Q HOW ARE THE CAPACITY COSTS ASSOCIATED WITH THE NM6 PPA AND UPS BEING COLLECTED FROM ENO'S CUSTOMERS?**

A Both are being collected through a mechanism that is part of the Purchased Power and Capacity Acquisition Cost Recovery Rider ("PPCACR").

**Q WHAT IS THE MECHANISM BY WHICH THE PPCACR COLLECTS THESE CAPACITY COSTS?**

A The operation of the PPCACR is to charge customers for these costs as a uniform amount per kWh regardless of customer class or rate schedule, with only a minor difference because of a slightly lower loss factor for customers taking service at the transmission voltage level.

**Q IS THIS HOW GENERATION CAPACITY COSTS TYPICALLY ARE ALLOCATED AND COLLECTED FROM CUSTOMERS?**

A No. Typically these types of cost are allocated to customers in a cost of service study using some measure of customer demand, rather than kWh. This approach allows for full consideration of the load characteristics of all customer classes. One of the most important for the purposes of allocating generation capacity costs is differences in class load factor. Load factor is a measure of how intensively a customer utilizes the capacity provided to serve its needs. If a customer had a 100% load factor, its take from the system would be approximately the same every hour of the year. A customer with a 50% load factor would be taking from the system at a much lower rate most of the time.

A customer with a high load factor uses the system more efficiently, and is less costly to serve than a lower load factor customer. A high load factor customer might, for example, only use 1% of the system's capacity, but would purchase 2% or 3% of the energy. A low load factor customer would have the reverse characteristics, perhaps using 3% of the utility system's capacity, but only purchasing 1% of its energy.

What this demonstrates is that allocation of capacity cost to customer classes on a kWh basis will over-allocate costs to high load factor customers, and under-allocate costs to low load factor customers.

**Q DOES AIR PRODUCTS HAVE A HIGH LOAD FACTOR?**

A Yes. Air Products' average monthly load factor is approximately 80%. This is well above average.

**Q ARE THERE ANY CHARACTERISTICS OF THE AIR PRODUCTS LOAD, OTHER THAN ITS HIGH LOAD FACTOR, THAT ARE UNIQUE AND SET IT APART FROM OTHER CUSTOMERS?**

A Yes. Approximately 83% of Air Products' load is interruptible. Interruptible service is of lower quality than firm service, and is much less costly to serve because ENO does not have to include the interruptible load in its generation resource planning. In fact, in generation resource planning, ENO treats the Air Products interruptible load as a "load modifying resource" and adds it to its own generation resources and PPAs to determine its total available resources.

**Q OVERALL, WHAT CONCLUSION SHOULD BE DRAWN FROM THE FACT THAT AIR PRODUCTS OPERATES AT A VERY HIGH LOAD FACTOR AND A SUBSTANTIAL PERCENTAGE OF ITS LOAD IS INTERRUPTIBLE?**

A Overall, this means that the generation capacity cost required to serve a kWh to Air Products is substantially less than the cost to supply a kWh to other customers on the system who are neither high load factor, nor interruptible.[1]

**Q IN THE ABSENCE OF A COST OF SERVICE STUDY, HOW SHOULD CAPACITY COSTS ASSOCIATED WITH GENERATION BE ALLOCATED AND RECOVERED FROM CUSTOMERS?**

A Instead of inappropriately allocating generation capacity costs on an energy basis, a much more logical approach would be to allocate them on class base rate revenues. This approach is how ELL and the two predecessor companies have handled the allocation of these types of costs in their Formula Rate Plan ("FRP") filings. While not as precise as using a cost of service study, it is a much more reasonable proxy than using class kWh.

[1]Evidence from ENO's most recent rate case, Docket No. UD-08-03, clearly shows the difference in capacity cost responsibility and energy responsibility. The direct testimony of ENO witness Michael Considine included a cost of service study and the supporting allocation factors. Exhibit ENO_(MPC 2-E07), page 1, summarized the allocation factors. At that time (2007), Air Products' energy allocation factor was 5.86%, but its demand allocation for purposes of production capacity was 1.19%. Because of changes in overall ENO sales and demand and in Air Products' energy purchases and demand, the absolute values of the numbers have changed since then, but the key fact that remains is that Air Products' capacity responsibility factor is significantly less that its energy responsibility factor.

**Q HOW MUCH OF AN INCREASE HAS AIR PRODUCTS EXPERIENCED BECAUSE OF THE CHARGING OF NM6 PPA AND UPS CAPACITY COSTS?**

A Air Products' costs have increased more than $200,000 per month, or $2.5 million per year. This is a 90% increase on base rates.

**Q HAVE YOU MADE ANY ESTIMATES OF THE ALLOCATION FACTORS AND ADVERSE IMPACT ON THE LIS RATE?**

A Yes. Because of the fast time schedule for this docket, I used data from the FERC Form 1 report for 2015 to approximate the allocations. ENO easily can provide more precise numbers.

**Q WHAT DID YOUR ANALYSIS SHOW?**

A Air Products on the LIS rate consumes approximately 3.2% of ENO's energy. Approximating base rate revenue by subtracting FAC revenues from total revenues shows that the LIS rate represents only about 1.2% of base rate revenues. Thus, an energy-based collection allocates almost three times as much cost to LIS as would a base rate revenue allocator, and produces a significant distortion in cost allocation.

**Q LOOKING AT THE COST ALLOCATION ON AN ANNUAL BASIS, APPROXIMATELY HOW MUCH COST OF UPS IS ALLOCATED TO AIR PRODUCTS, AND HOW MUCH WOULD BE ALLOCATED TO IT USING BASE RATE REVENUES?**

A The annual capacity revenue requirement for UPS is about $54 million, so 3.2% of that amount is $1.728 million. The base rate revenue percentage of 1.2% would allocate $648,000, and subtracting one from the other indicates that the annual over-allocation of costs to Air Products is about $1.080 million.

**Q WHAT ARE THE COMPARABLE NUMBERS FOR THE NM6 PPA?**

A I estimate that the revenue requirement for the NM6 PPA is about $23 million, so 3.2% allocated on a kWh basis would be about $736,000. On the other hand, allocating on a base revenue basis, at 1.2%, would allocate $276,000. The difference is $460,000 as the excess allocation to Air Products.

Adding the NM6 PPA and UPS together, the amount of over-allocation to Air Products that results from using a kWh allocation, rather than a more cost-based allocation, is slightly more than $1.5 million per year.

**Q COULD THESE DISTORTIONS BE CORRECTED IN A RATE CASE?**

A Yes, but likely on a prospective basis from the time of a rate case. However, it is my understanding that a rate case may not occur before 2018, by which time Air Products would have paid many million dollars more in electric costs than it should unless some mitigation takes place now.

**Q WHAT COULD THE COUNCIL DO AT THIS POINT IN TIME TO MITIGATE THIS PROBLEM IF IT DOES NOT WANT TO MODIFY THE PPCACR?**

A As an approach that would not require the PPCACR to be modified, the Council could use a part of the $5 million annual credits, that ENO is going to be providing to customers as a result of its restructuring, as an offset to the misallocation occurring under the energy-based PPCACR. Assigning to Air Products each year $1.5 million of the $5 million credit ($125,000 per month) would mitigate this problem from the time that it is applied until such time as a permanent adjustment can be made in a rate case.

**Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

A Yes, it does.

**Qualifications of Maurice Brubaker**

**Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A Maurice Brubaker. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

**Q PLEASE STATE YOUR OCCUPATION.**

A I am a consultant in the field of public utility regulation and President of the firm of Brubaker & Associates, Inc. ("BAI"), energy, economic and regulatory consultants.

**Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

A I was graduated from the University of Missouri in 1965, with a Bachelor's Degree in Electrical Engineering. Subsequent to graduation I was employed by the Utilities Section of the Engineering and Technology Division of Esso Research and Engineering Corporation of Morristown, New Jersey, a subsidiary of Standard Oil of New Jersey.

In the Fall of 1965, I enrolled in the Graduate School of Business at Washington University in St. Louis, Missouri. I was graduated in June of 1967 with the Degree of Master of Business Administration. My major field was finance.

From March of 1966 until March of 1970, I was employed by Emerson Electric Company in St. Louis. During this time I pursued the Degree of Master of Science in Engineering at Washington University, which I received in June, 1970.

In March of 1970, I joined the firm of Drazen Associates, Inc., of St. Louis, Missouri. Since that time I have been engaged in the preparation of numerous studies relating to electric, gas, and water utilities. These studies have included analyses of the cost to serve various types of customers, the design of rates for utility services, cost forecasts, cogeneration rates and determinations of rate base and operating income. I have also addressed utility resource planning principles and plans, reviewed capacity additions to determine whether or not they were used and useful, addressed demand-side management issues independently and as part of least cost planning, and have reviewed utility determinations of the need for capacity additions and/or purchased power to determine the consistency of such plans with least cost planning principles. I have also testified about the prudency of the actions undertaken by utilities to meet the needs of their customers in the wholesale power markets and have recommended disallowances of costs where such actions were deemed imprudent.

I have testified before the Federal Energy Regulatory Commission ("FERC"), various courts and legislatures, and the state regulatory commissions of Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Guam, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Michigan, Missouri, Nevada, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Utah, Virginia, West Virginia, Wisconsin and Wyoming.

The firm of Drazen-Brubaker & Associates, Inc. was incorporated in 1972 and assumed the utility rate and economic consulting activities of Drazen Associates, Inc., founded in 1937. In April, 1995 the firm of Brubaker & Associates, Inc. was formed.

It includes most of the former DBA principals and staff. Our staff includes consultants with backgrounds in accounting, engineering, economics, mathematics, computer science and business.

Brubaker & Associates, Inc. and its predecessor firm has participated in over 700 major utility rate and other cases and statewide generic investigations before utility regulatory commissions in 40 states, involving electric, gas, water, and steam rates and other issues. Cases in which the firm has been involved have included more than 80 of the 100 largest electric utilities and over 30 gas distribution companies and pipelines.

An increasing portion of the firm's activities is concentrated in the areas of competitive procurement. While the firm has always assisted its clients in negotiating contracts for utility services in the regulated environment, increasingly there are opportunities for certain customers to acquire power on a competitive basis from a supplier other than its traditional electric utility. The firm assists clients in identifying and evaluating purchased power options, conducts RFPs and negotiates with suppliers for the acquisition and delivery of supplies. We have prepared option studies and/or conducted RFPs for competitive acquisition of power supply for industrial and other end-use customers throughout the Unites States and in Canada, involving total needs in excess of 3,000 megawatts. The firm is also an associate member of the Electric Reliability Council of Texas and a licensed electricity aggregator in the State of Texas.

In addition to our main office in St. Louis, the firm has branch offices in Phoenix, Arizona and Corpus Christi, Texas.