BEFORE THE

STATE OF VERMONT
PUBLIC SERVICE BOARD

Amended Joint Petition of Central Vermont Public Service Corporation ("CVPS"), Danaus Vermont Corp., Gaz Métro Limited Partnership ("Gaz Metro"), Gaz Métro inc., Northern New England Energy Corporation ("NNEEC") for itself and as agent for Gaz Métro's parents, Green Mountain Power Corporation ("GMP") and Vermont Low Income Trust for Electricity, Inc. ("VLITE"), for approval of: (1) the merger of Danaus into and with CVPS; (2) the acquisition by NNEEC of the common stock of CVPS; (3) the amendment to CVPS's Articles of Association; (4) the merger of CVPS into and with GMP; and (5) the acquisition by VLITE of a controlling interest in Vermont Electric Power Company, Inc.	)	**Docket No. 7770**

Direct Testimony of

Dr. Alan Rosenberg

On behalf of

International Business Machines Corporation

Summary of Testimony

Dr. Rosenberg's testimony recommends four prerequisites that should apply if the Board approves the merger: (1) retain GMP's Transmission Service Rate as a separate and distinct class in any integrated class cost of service study conducted by Petitioners; (2) subsequent to the merger, IBM be allowed to take service under any published tariff of either Company; (3) before any future integrated cost of service study and set of tariffs are approved, all parties who wish to intervene be afforded full rights of discovery and presenting evidence; and (4) no customers' tariffs be increased unless such change is shown to be just and reasonable pursuant to a full and complete general rate proceeding.

January 20, 2012

BRUBAKER & ASSOCIATES, INC.
CHESTERFIELD, MO 63017

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Direct Testimony of Dr. Alan Rosenberg

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Dr. Alan Rosenberg. 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 a Managing Principal 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 TESTIFYING IN THIS PROCEEDING?

A I am testifying on behalf of International Business Machines Corporation ("IBM"). As a business electricity customer, IBM has an interest in ensuring that the proposed transactions do not have an adverse impact on the reliability of its electric service or its rates. Reliable delivery of electricity is critical to IBM's operations, and electricity costs represent a significant portion of its total operating costs.

Q COULD YOU PLEASE SUMMARIZE YOUR TESTIMONY?

A Yes. If the Board approves the merger, the following four prerequisites should apply:

1. GMP's Transmission Service Rate should be retained as a separate and distinct class in any integrated class cost of service study conducted by the Petitioners.

2. Before any future integrated cost of service study and set of tariffs are approved, and no later than the first billing period subsequent to the merger, IBM should be allowed to take service under any published, transmission-class tariff of either Company.

3. Before any future integrated cost of service study and set of tariffs are approved, all parties who wish to intervene should be afforded the full rights of discovery and presenting evidence, as is normally done with any general rate proceeding.

4. No customers' tariffs should be increased unless such change is shown to be just and reasonable pursuant to a full and complete general rate proceeding.

Q IS THIS PROCEEDING THE APPROPRIATE FORUM TO RAISE THESE ISSUES?

A Yes. In discovery, IBM asked the Petitioners what opportunities did they propose in order for customers to have input in the setting of new or integrated rates for the combined utility. (Q.IBM:PET.1-15). GMP responded that it proposes that general principles concerning the timing and substance of changes to the alternative rate plans and/or tariff integration, "be established in this proceeding." (Emphasis added). That is precisely what I have done in my testimony.

Q DO YOU HAVE ANY CONCERNS REGARDING THE IMPACT OF PETITIONERS' PROPOSAL ON IBM'S RATES?

A Yes. IBM is currently the only customer on GMP's Commercial and Industrial Transmission Service Rate. According to Robert J. Griffin, a witness for Petitioners, the Petitioners plan to "integrate the companies' tariff rates into a single set of tariffs" and to "integrate rates as of October 1, 2013". (Griffin Direct Testimony at 7). He also states that "the average rate levels for a majority of each company's rate classes are relatively close, and consequently there is no need for a long period to phase in the majority of rate differences.

Q WHAT IS THE PROBLEM WITH THAT PROPOSAL?

A While Mr. Griffin may be correct for a majority of the rate tariffs, he is not correct with regards to the Commercial and Industrial Transmission Service Rate. The closest "analogous" CVPS rate is Transmission Service Rate (Rate 5). I understand that at a workshop held on October 14, 2011, Mr. Griffin acknowledged that the GMP and CVPS rate structures are very different for the large, commercial and industrial rate

classes. It would therefore be wholly inappropriate and unfair to amalgamate GMP's Transmission Service Rate with CVPS's Rate 5, at least for purposes of a cost of service study.

Q PERTAINING TO THIS CONCERN, WHAT SPECIFICALLY IS YOUR SUGGESTED CONDITION FOR THE MERGER/ACQUISITION?

A The Board should direct the Petitioners to keep GMP's Transmission Service Rate as a separate class when conducting its planned integrated cost of service study, and to retain GMP's Transmission Service Rate as a distinct tariff.

Q WHY SHOULD IBM BE TREATED AS A DISTINCT CLASS IN THE COST OF SERVICE STUDY?

A IBM has unique service characteristics that make it less costly to serve than any other rate class. Besides having a very high load factor, even compared to the other large customers, IBM is over 20 times as large as GMP's next biggest customer. It is nearly twice as large as the ten largest customers on CVPS's system, combined.

Furthermore, while customers taking service under CVPS's Rate 5 could be served at voltages anywhere between 33 KV and 69 KV, IBM is served directly from the 115,000 volt transmission grid.

Q IS IT POSSIBLE THAT, ALL OTHER THINGS EQUAL, IT WOULD BE MORE EXPENSIVE TO SERVE IBM THAN IT WOULD TO SERVE A CUSTOMER ON CVPS'S RATE 5?

A No. In fact, just the opposite should be the case – IBM should be less costly to serve than other customers. On a given system there are three basic parameters that determine cost to serve:

- size;
- service voltage; and
- load factor.

When each of these factors is considered, IBM would appear to be favorably positioned. Large customers are less costly to serve because of economies of scale. For example, it generally costs less per MW of capacity to build a 50 MW substation than a 20 MW substation. Customers served at a higher voltage are less costly to serve than a comparable customer served at a lower voltage. This is true for two reasons. One, because electricity is transformed from higher voltage to lower voltages, high voltage customers do not use or require portions of the system operated at a lower voltage. Second, high voltage customers are less costly to serve because they have smaller losses from the generating station to the meter. Finally, there are two reasons why high load factor customers are less costly to serve than low load factor customers. First, high load factor customers are spreading the fixed costs of generation and transmission over a large number of kilowatthours, thereby resulting in a lower unit cost. Second, high load factor customers almost always use proportionally more of their consumption in the low load (and low cost) hours than do the other customers.[1]

[1] The notable exception to this rule is street lighting.

Q IS IT POSSIBLE THAT THE COSTS TO SERVE IBM WOULD INCREASE WHEN TAKING SERVICE UNDER AN INTEGRATED GMP/CVPS SYSTEM VIS-À-VIS TAKING SERVICE UNDER GMP'S SYSTEM, AS IS CURRENTLY THE CASE?

A No, and that is even before we consider any of the millions of dollars in merger savings claimed by the Petitioners. The reason for this is diversity. Diversity refers to the fact that many elements of the production and transmission system must be sized to meet the **coincident** peak of the customers, and not just the sum of the individual non-coincident demands. However, when systems are merged, because customers do not all peak at exactly the same time, system planners can take advantage of this diversity, i.e. a lower coincident peak. While it is conceivable that there will be little or no diversity benefits between the two systems, it is not possible that IBM's cost to serve will increase as a result of the merger. In fact, since CVPS's production and transmission costs are actually less than GMP's when expressed on a per kWh basis, it should cost less to serve IBM under an integrated system than under the status quo.

Q WHAT OTHER RECOMMENDATION EMANATES FROM THESE OBSERVATIONS?

A The Board should explicitly provide that, immediately upon the effective date, or certainly not later than the first billing cycle subsequent to the merger, IBM be permitted to take service on the most economic transmission-class tariff that is available, whether it be GMP's Transmission Service Rate or CVPS's Rate 5.[2]

[2]Because IBM is served at a higher voltage than any current Rate 5 customer, it would be necessary to insert the words "or higher" at the end of the first sentence of the applicability clause of Rate 5.

Q HAVE THE PETITIONER'S PROMISED THAT NO SINGLE CUSTOMER'S RATES WILL INCREASE AS A RESULT OF THE MERGER?

A No, they have not. However, they have gone on record (in response to Q.OMYA:PET.2-23) that:

> Large customers will remain on current tariffs after the merger, and until a new rate design, to take place approximately in 2015 at the earliest. (Emphasis added)

This statement was repeated in A.OMYA:PET.2-26.

Q HOW DOES THAT STATEMENT SQUARE WITH MR. GRIFFIN'S STATEMENT (ON PAGE 8, LINE 9 OF HIS PREFILED TESTIMONY) THAT GMP PROPOSES TO INTEGRATE RATES AS OF OCTOBER 1, 2013?

A I do not know. In response to Q.OMYA:PET.2-26 Mr. Griffin states that effective January 1, 2013 there will be a "uniform percentage change to all (CVPS and GMP) customers' existing rates."

Q HAVE THE PETITIONERS PROPOSED A FULL RATE PROCEEDING?

A No, they have not. Instead, the Petitioners have proposed only some sort of a "compliance filing," leaving IBM concerned that, once the merger has been approved, customers will be presented with a limited opportunity to participate in the rate design process.

Q IS THIS ACCEPTABLE OR APPROPRIATE?

A No. The Board should condition approval of the merger on the stipulation that no customer tariff should increase prior to the Board having an opportunity to conduct, and decide on, a fully litigated rate proceeding.

Q WHY IS A FULL RATE PROCEEDING A PREREQUISITE FOR IMPLEMENTING NEW TARIFFS?

A Rates should be predicated primarily on cost of service, as best as that can be determined. It has been a number of years since either CVPS or GMP conducted a cost of service study. Thus, it is difficult to gauge what the cost of serving customers is on each system individually, much less what the costs are for serving customers on the new integrated system.

Q WHY IS IT NECESSARY TO EXPLICITLY LAY OUT THE RIGHTS OF CUSTOMERS IN COST OF SERVICE AND TARIFF MATTERS?

A In response to Q.IBM:PET.1-15, GMP states:

> Although GMP has not yet proposed how customers will provide input in connection with the review of the detailed proposals, tariff integration will be the subject of a follow-on PSB proceeding, in which GMP would expect affected customers, in addition to the DPS to have the opportunity to comment.

Not only is this statement vague, but it also does not contemplate a complete vetting of the Company's analysis, logic, or economic positions that are so necessary for a robust regulatory process. The rights of customers must be made more explicit so that customers can be confident that they will not be denied due process in the setting of the new rates emanating from this merger.

Q WHAT TIME FRAME WOULD BE REASONABLE TO CONDUCT THIS PROPOSED RATE INVESTIGATION PROCEEDING?

A Normally, a cost of service study can be completed in six months or less. However, because of the added complexity of combining two utilities, I would suggest that the Petitioners file their rate application no later than 12 months subsequent to approval of the merger/acquisition. This should give Petitioners enough time to collect the necessary data**.** Assuming 7 months for the hearing process, that would allow new rates to be effective approximately one and a half years subsequent to the final decision in this proceeding.

Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes, it does.

Qualifications of Dr. Alan Rosenberg

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Alan Rosenberg. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017.

Q WHAT IS YOUR OCCUPATION?

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

Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A I was awarded a Bachelor of Science Degree from the City College of New York in 1964 and a Doctorate of Philosophy in Mathematics from Brown University in 1969. Subsequently, I held an Assistant Professorship of Mathematics at Wesleyan University in Connecticut. In the summer of 1975, I was a Visiting Fellow at Yale University. From July, 1975 through January, 1981, I was Assistant Controller and Project Manager for a division of National Steel Products Company. My responsibilities there included supervision of management accounting, cost accounting and data processing functions. I was also responsible for internal control, general ledger systems, working capital levels, budget preparation, cash flow forecasts and capital expenditure analysis.

I have published in major academic journals and am a member of the International Association for Energy Economics. I was an invited speaker at the

NARUC Introductory Regulatory Training Program and a panelist at a conference on LDC and Pipeline Ratemaking sponsored by the Institute of Gas Technology. I have presented a paper on stranded costs at the 21st Annual International Conference of the International Association for Energy Economics. I have had two papers on transmission congestion pricing and one paper on reorganizing markets published in *The Electricity Journal*. I am also a Certified Energy Procurement Professional by the Association of Energy Engineers. In January, 1982, I joined the firm of Drazen-Brubaker & Associates, Inc., the predecessor of Brubaker & Associates. Since that time, I have presented expert testimony on the subjects of industry restructuring, open access transmission, marginal and embedded class cost of service studies, prudence and used and useful issues, electric and gas rate design, revenue requirements, natural gas transportation issues, demand-side management, and forecasting.

I have previously testified before the Federal Energy Regulatory Commission as well as the public service commissions of Arizona, Connecticut, Delaware, Florida, Idaho, Illinois, Iowa, Massachusetts, Michigan, Montana, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, Wyoming and the Provinces of Alberta, British Columbia, New Brunswick, Nova Scotia, and Saskatchewan in Canada. I have also testified before the Michigan Senate Technology and Energy Committee.

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