

FILE

12

DUKE ENERGY OHIO EXHIBIT _____

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the 2010)	
Long Term Forecast Report of)	Case No. 10-503-EL-FOR
Duke Energy Ohio, Inc.)	

DIRECT TESTIMONY OF

RICHARD G. STEVIE

ON BEHALF OF

DUKE ENERGY OHIO, INC.

2011 FEB 28 PM 4:38

RECEIVED - BOOKING EN

PUCO

November 18, 2010

This is to certify that the images appearing are an accurate and complete reproduction of a case file document delivered in the regular course of business.
Technician TD Date Processed 3-1-11

TABLE OF CONTENTS

	<u>PAGE</u>
I. INTRODUCTION.....	1
II. REVIEW OF LONG TERM FORECAST REPORT.....	4
III. CONCLUSION.....	10

I. INTRODUCTION

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

2 A. My name is Richard G. Stevie, and my business address is 139 E. Fourth Street,
3 Cincinnati, Ohio 45202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am Chief Economist of the Corporate Strategy & Planning Department for Duke
6 Energy Business Services, LLC (DEBS) with responsibilities covering load
7 forecasting, assessment of economic conditions, analysis of emerging economic
8 issues, and oversight on the incorporation of energy efficiency impact projections
9 into the load forecast and integrated resource plans. DEBS provides various
10 administrative and other services to Duke Energy Ohio, Inc. (Duke Energy Ohio
11 or the Company) and other affiliated companies of Duke Energy Corporation
12 (Duke Energy).

13 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND**
14 **PROFESSIONAL EXPERIENCE.**

15 A. I earned a Bachelor's Degree in Economics from Thomas More College in May
16 1971. In June 1973, I was awarded a Master of Arts degree in Economics from
17 the University of Cincinnati. In August 1977, I received a Ph.D. in Economics
18 from the University of Cincinnati.

19 My past employers include the Cincinnati Water Works, where I was
20 involved in developing a new rate schedule and forecasting revenues; the United
21 States Environmental Protection Agency's Water Supply Research Division,
22 where I was involved in the research and development of a water utility

1 simulation model and analysis of the economic impact of new drinking water
2 standards; and the Economic Research Division of the Public Staff of the North
3 Carolina Utilities Commission, where I presented testimony in numerous utility
4 rate cases involving natural gas, electric, telephone, and water and sewer utilities
5 on several issues including rate of return, capital structure, and rate design. In
6 addition, I was involved in the Public Staff's research effort and presentation of
7 testimony regarding electric utility load forecasting. This included the
8 development of electric load forecasts for the major electric utilities in North
9 Carolina. I was also involved in research concerning cost curve estimation for
10 electricity generation, rate setting and separation procedures in the telephone
11 industry, and the implications of financial theory for capital structures, bond
12 ratings, and dividend policy. In July 1981, I became the Director of the Economic
13 Research Division of the Public Staff with the responsibility for the development
14 and presentation of all testimony of the Division.

15 In November 1982, I joined the Load Forecast Section of The Cincinnati
16 Gas & Electric Company ("CG&E"). My primary responsibility involved
17 directing the development of CG&E's Electric and Gas Load Forecasts. I also
18 participated in the economic evaluation of alternate load management plans and
19 was involved in the development of CG&E's Integrated Resource Plan ("IRP"),
20 which integrated the load forecast with generation options and demand-side
21 options.

22 With the reorganization after the merger of CG&E and PSI Resources,
23 Inc. in late 1994, I became Manager of Retail Market Analysis in the Corporate

1 Planning Department of Cinergy Services, Inc. and subsequently General
2 Manager of Market Analysis with responsibility for the load forecasting, load
3 research, DSM impact evaluation, and market research functions of the combined
4 Cinergy Company. After the merger of Cinergy Corp. and Duke Energy in 2006,
5 I became the Managing Director of the Customer Market Analytics Department
6 with responsibility for several areas, including load forecasting, load research,
7 market research, energy efficiency analysis, and load management analytic
8 support. Since then, I have become the Chief Economist in the Strategy and
9 Planning area.

10 In addition, since 1990, I have chaired the Economic Advisory Committee
11 for the Greater Cincinnati Chamber of Commerce. I have been a part-time faculty
12 member of Thomas More College located in Northern Kentucky and the
13 University of Cincinnati teaching undergraduate courses in economics. I am an
14 outside adviser to the Applied Economics Research Institute in the Department of
15 Economics at the University of Cincinnati, as well as a member of an advisory
16 committee to the Economics Department at Northern Kentucky University.

17 **Q. ARE YOU A MEMBER OF ANY PROFESSIONAL ORGANIZATIONS?**

18 **A.** Yes, I am a member of the American Economic Association, the National
19 Association of Business Economists, and the Association of Energy Services
20 Professionals.

21 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY REGULATORY**
22 **AGENCIES?**

1 A. Yes. I have presented testimony on several occasions before the Public Utilities
2 Commission of Ohio (Commission), the Kentucky Public Service Commission,
3 the North Carolina Utilities Commission, the South Carolina Public Service
4 Commission, and the Indiana Utility Regulatory Commission.

5 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
6 **PROCEEDING?**

7 A. The purpose of my testimony is to present to the Public Utilities Commission of
8 Ohio (Commission) a review of the 2010 Electric Long-Term Forecast Report and
9 Resource Plan (LTFR) of Duke Energy Ohio in light of the determinations that
10 must be made as it pertains to the load forecast.

II. REVIEW OF LONG-TERM FORECAST REPORT

11 **Q. WHAT DETERMINATIONS MUST THE COMMISSION MAKE**
12 **REGARDING DUKE ENERGY OHIO'S LONG-TERM FORECAST**
13 **REPORT?**

14 A. As I understand it, under Ohio Revised Code, Section 4935.04 F, the Commission
15 must review the Long-Term Forecast Report and determine if:

- 16 (1) All information relating to current activities, facilities agreements, and
17 published energy policies of the State have been completely and
18 accurately represented;
- 19 (2) The load requirements are based on substantially accurate historical
20 information and adequate methodology;
- 21 (3) The forecasting methods consider the relationships between price and
22 energy consumption;

- 1 (4) The report identifies and projects reductions in energy demands due to
2 energy conservation measures in the industrial, commercial, residential,
3 transportation, and energy production sectors in the service area;
- 4 (5) Utility company forecasts of loads and resources are reasonable in relation
5 to population growth estimates made by State and Federal agencies,
6 transportation, and economic development plans and forecasts, and make
7 recommendations where possible, for necessary, and reasonable
8 alternatives to meet forecasted electric power demand;
- 9 (6) The report considers plans for expansion of the regional power grid and
10 the planned facilities of other utilities in the State; and
- 11 (7) All assumptions in the forecast are reasonable and adequately
12 documented.

13 **Q. WHICH OF THESE SEVEN FACTORS APPLY TO THE ELECTRIC**
14 **LOAD FORECAST PORTION OF THE COMPANY'S 2010 LTFR?**

15 **A.** It is my understanding that to varying degrees all but the sixth determination is
16 related to the electric load forecast portion of the LTFR. I will comment on those
17 factors as they pertain to the load forecast insofar as I understand them.

18 **Q. WITH RESPECT TO THE FIRST AREA OF DETERMINATION, HAS**
19 **ALL INFORMATION RELATING TO CURRENT ACTIVITIES,**
20 **FACILITIES AGREEMENTS, AND PUBLISHED ENERGY POLICIES**
21 **OF THE STATE BEEN COMPLETELY AND ACCURATELY**
22 **REPRESENTED IN DUKE ENERGY OHIO'S 2010 LTFR?**

1 A. Yes, with regard to the load forecast, all information relating to the current
2 activities, facilities agreements, and published energy policies of the State has
3 been completely and accurately represented in Duke Energy Ohio's 2010 LTFR.
4 Discussion concerning the State's energy policy is found on page 161 to 176 in
5 the section on the Company's energy efficiency programs relative to SB 221.

6 **Q. REGARDING THE SECOND AREA OF DETERMINATION, ARE THE**
7 **LOAD REQUIREMENTS BASED UPON ACCURATE HISTORICAL**
8 **INFORMATION AND ADEQUATE METHDOLOGY?**

9 A. Yes. With respect to the accuracy of historical information, the types and sources
10 of data employed are discussed in Duke Energy Ohio's 2010 LTFR on pages 18
11 to 23. Historical energy use data is collected by Duke Energy Ohio in the normal
12 process of metering and billing. It represents the best information available on
13 electricity usage. Historical data related to the economy is obtained from
14 Moody's economy.com (now Moody's Analytics). The data on the economy is
15 collected and published by state and federal agencies. All information relied upon
16 by Duke Energy Ohio in preparing the forecast is as accurate as can be obtained.
17 The methodology employed to develop the load forecast is described in Duke
18 Energy Ohio's 2010 LTFR on pages 5 to 53. The forecast relies primarily upon a
19 series of econometric developed equations that model electricity usage of
20 customers within the Duke Energy Ohio service area. Given the nature of the
21 Greater Cincinnati regional economy which covers Southwestern Ohio and
22 Northern Kentucky and the fact that economic data is reported for the
23 metropolitan area, the econometric forecasting models are developed for the

1 entire region including Duke Energy Kentucky's service area. The forecast for
2 the Duke Energy Ohio service area represents a share of the total regional
3 forecast.

4 Regarding the adequacy of the methodology, the ability of a forecast to
5 incorporate the effect of changes in the economy on the energy use projections
6 must be a critical factor. Since the econometric models employed in the
7 development of Duke Energy Ohio's forecast capture the relative impacts of
8 changes in the national and regional economies on electricity usage, forecast
9 methodology is adequate and reasonable and the resulting forecasts are as reliable
10 as possible.

11 **Q. WITH RESPECT TO THE THIRD AREA OF DETERMINATION, DO**
12 **THE FORECASTING METHODS CONSIDER THE RELATIONSHIP**
13 **BETWEEN PRICE AND ENERGY CONSUMPTION?**

14 A. Yes. Basic economic theory indicates that consumer demand for a commodity or
15 service is negatively impacted by relative increases in the price of that commodity
16 or service. With this in mind, a primary consideration is the incorporation of
17 electric price variables in the development of the econometric models. Then,
18 when the econometric models are utilized to prepare a forecast, the impact of
19 relative price changes is directly included in the forecast. The econometric model
20 specification is provided on pages 6 to 14 of the Duke Energy Ohio 2010 LTFR.
21 In addition, the econometric models are provided on pages 28 to 52. From this
22 information, it is clear that the forecasting methods consider the relationship
23 between price and energy consumption.

1 Q. REGARDING THE FOURTH AREA OF DETERMINATION, DOES THE
2 2010 LTFR IDENTIFY AND PROJECT REDUCTIONS IN ENERGY
3 DEMAND DUE TO ENERGY CONSERVATION MEASURES IN THE
4 INDUSTRIAL, COMMERCIAL, AND RESIDENTIAL SECTORS IN THE
5 DUKE ENERGY OHIO SERVICE AREA?

6 A. Yes. As discussed on pages 161 to 176 of the Duke Energy Ohio 2010 LTFR,
7 the Company provides information on the projected impacts of its energy
8 efficiency programs under a "high" case based on the level of energy efficiency
9 required by SB 221 and an "economic potential" case that tracks SB 221
10 requirements until a level of 1% additional energy efficiency per year is reached.
11 Tables on pages 171 and 172 of the LTFR provide data on the projected impacts.
12 The energy efficiency programs offered under the Company's save-a-watt
13 program were approved for implementation by the Commission in the Company's
14 2008 Electric Security Plan proceeding (Case No. 08-920-EL-SSO) and recently
15 reaffirmed (except for the Prepaid Billing Services program) on December 15,
16 2010 in the Company's Application for Approval of its Portfolio proceeding
17 (Case No. 09-1999-EL-POR).

18 Q. WITH RESPECT TO THE FIFTH AREA OF DETERMINATION, ARE
19 THE FORECASTS OF LOADS AND RESOURCES REASONABLE IN
20 RELATION TO POPULATION GROWTH ESTIMATES MADE BY
21 STATE AND FEDERAL AGENCIES, TRANSPORTATION AND
22 ECONOMIC DEVELOPMENT PLANS AND FORECASTS?

1 A. Yes. As noted on page 23 of the 2010 LTFR, the population projections are
2 obtained from Moody's Analytics, a major vendor of national and regional
3 economic and population projections. Moody's Analytics provides projections of
4 population at the county level for selected age cohorts. The historical and
5 projected values are summed across the relevant counties in the Company's
6 service area to arrive at the estimate of historical and projected population. As
7 one of the major vendors providing economic and demographic projections,
8 Moody's Analytics' population projections are the most recent available. The
9 Ohio Department of Development's most recent population forecast for the
10 counties in the Duke Energy Ohio service area is dated March 2003 and will not
11 be updated until after the 2010 census estimates are complete. Since Moody's
12 Analytics' population forecast is more recent, it should be considered reasonable
13 for use by the Company in preparing its load forecast. As a result, the forecast of
14 loads must be considered reasonable in relation to the population forecasts of
15 State and Federal agencies.

16 Discussion on the fifth area of determination as it relates to the resource plan for
17 meeting projected electric loads is provided in the testimony of Mr. Jim Northrup.

18 **Q. REGARDING THE SIXTH AREA OF DETERMINATION, DOES DUKE**
19 **ENERGY OHIO'S 2010 LTFR CONSIDER PLANS FOR EXPANSION OF**
20 **THE REGIONAL POWER GRID AND THE PLANNED FACILITIES OF**
21 **OTHER UTILITIES IN THE STATE?**

1 A. This area is not associated with the development of the load forecast. Discussion
2 on this issue is provided in the testimony of Duke Energy Ohio witness Jim
3 Northrup.

4 Q. WITH RESPECT TO THE SEVENTH AREA OF DETERMINATION,
5 ARE ALL ASSUMPTIONS MADE IN THE FORECAST REASONABLE
6 AND ADEQUATELY DOCUMENTED?

7 A. Yes. Information and documentation on assumptions employed in the load
8 forecast portion of the Duke Energy Ohio's 2010 LTFR are provided in pages 5 to
9 24, including the discussion of forecast methodology. The assumptions are
10 reasonable in light of the reasonableness of the methodology employed in that it
11 captures relationships between energy consumption and price and between energy
12 consumption and changes in the economy.

III. CONCLUSION

13 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

14 A. Yes.