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PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for authority to modify certain accounting practices and for tariff approvals.

Case No. 07-1003-EL-ATA

DIRECT TESTIMONY OF

MARK S. FRALEY

ON BEHALF OF

OHIO EDISON COMPANY
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
THE TOLEDO EDISON COMPANY

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

2 A. My name is Mark S. Fraley, and my business address is 341 White Pond Drive,
3 Akron, Ohio 44320.

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

6 A. I am currently employed by FirstEnergy Generation Corp., as the Director of Fuel
7 Procurement.

8
9 **Q. WHAT IS YOUR EDUCATIONAL AND WORK EXPERIENCE?**

10 A. I graduated from the Youngstown State University with a Bachelor of Science Degree
11 in Combined Science in 1979, and received my MBA from Franciscan University of
12 Steubenville in 1995. I was hired by Penn Power in August 1979 and worked in the
13 Bruce Mansfield Operations Department. From there I moved to the WH Sammis
14 Plant in 1990 where I was responsible for air quality in the Environmental group. I
15 then moved to Bruce Mansfield Plant in 1995 where I was responsible for plant
16 budgeting and forecasting. In 1997 I move to FirstEnergy Solutions where I was
17 responsible for medium term generation planning in the Conversion Economics
18 group. In 2006 I transferred to the Supply Chain department where I held
19 responsibility for purchasing all non-fuel commodities for the Fossil Generation
20 Fleet. In 2008 I moved to the Fuel Procurement group where I have responsibility for
21 all fuel related procurement and delivery.

22

1 **Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS DIRECTOR OF FUEL**
2 **PROCUREMENT.**

3 A. As Director of Fuel Procurement, my responsibilities include supply planning and
4 procurement of coal, natural gas, oil, lime, aqueous ammonia, other environmental
5 control additives, emission allowances, management of delivery logistics for these
6 commodities, administration of the contracts for these commodities and services, and
7 management of inventories and fuel related fuel services such as budget development
8 and market intelligence.

9

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

11 A. I am testifying regarding the actual 2008 fuel costs and their comparison to the 2002
12 baseline fuel costs, other than nuclear fuel related costs. I will describe the process in
13 which the 2008 requirements for coal, natural gas, oil, lime, ash, stabilizers, other
14 additives and consumed emission allowances were developed. I will compare the
15 commodities included in the 2002 baseline fuel costs to the 2008 actuals.

16

17 **Q. PLEASE DESCRIBE THE POLICY REGARDING THE PURCHASE OF**
18 **FOSSIL FUELS.**

19 A. The policy is to obtain a supply of fossil fuel and fuel related materials, including
20 emission allowances, of the appropriate qualities and quantities at the lowest
21 reasonable cost consistent with the reliability of supply and subject to the prevailing
22 market conditions. The processes used and decisions made have provided and will
23 continue to provide for reliable and economic supplies of fuel.

1 **Q. PLEASE DESCRIBE THE PROCESS THAT WAS USED TO DEVELOP THE**
2 **FOSSIL FUEL REQUIREMENTS FOR 2008.**

3 A. The fuel expense requirements for 2008 were developed as part of an integrated
4 business planning process. The process started with the development of the load
5 projections for the load to be served by the generating units. The output from this
6 portion of the process is an hourly (8760 hours) load forecast, which is one of the
7 major inputs to the production cost model. Other inputs into the process include
8 items such as commodity price and fuel quality (heating value, % sulfur, % ash, etc.)
9 for each of the consumed commodities. Among the outputs of the production-costing
10 model are the megawatt-hours produced by all the generating units, and consumed
11 quantities such as MMBtu, coal, SO₂, NO_x, and natural gas. The tons of fly ash and
12 bottom ash produced are also a direct output of the model. The tons of lime and other
13 additives, such as ammonia, NOXOUT (a Urea based additive), and sodium sulfite,
14 and the gallons of light-off oil and peaking oil consumed are calculated based on the
15 megawatt-hours of generation produced by the generating units consuming these
16 various commodities. The tons of stabilizer consumed are calculated based upon the
17 number of tons of coal consumed at the Mansfield generating station. The level of
18 coal output is utilized to prepare a detailed monthly through stock calculation to
19 project the consumed coal cost. The consumed coal cost is then aggregated with the
20 monthly cost for the other fuels, stabilizers, additives and emission allowances into a
21 monthly projection for each plant and the total fleet. The sum of the twelve monthly
22 projections for each of 2008 comprises the projected annual fossil fuel expense.

Q. PLEASE PROVIDE A DESCRIPTION OF EACH OF THE CATEGORIES OF THE COMMODITIES INCLUDED IN BOTH THE BASE YEAR 2002 FUEL COSTS AND THE 2008 FUEL COSTS.

A. The following provides a category by category comparison between the 2002 base year and the 2008 fuel costs.

Coal – This category includes the cost of the coal commodity plus the cost of delivering the coal to each of the generating plants where it is consumed. For rail delivered coal, the cost of transportation includes the cost incurred for leasing the rail car capacity utilized to transport the coal as well as the cost of the railroad delivery service.

Natural Gas – This category includes the cost of the natural gas commodity as well as the cost of transportation for the natural gas to the generating station where it is consumed.

Bayshore Steam – This category includes the cost of steam supplied to the Bayshore Generating station from the Bayshore Power Project, which is a project financed waste conversion facility that consumes waste petroleum coke from the Toledo BP Refinery and produces steam for the Generating station and the Refinery.

Chemical Additives – The chemical additives comprising this category are used at the various generating units in the control of emissions of sulfur dioxide (SO₂), oxides of nitrogen (NO_x) and for opacity control. The Selective Catalytic Reduction (SCR) reactors at Mansfield plant use ammonia as the additive in the catalytic reaction of NO_x back to N₂. The scrubbing system at Mansfield uses Lime as the additive to remove SO₂. Mansfield also uses sodium sulfite to reduce H₂SO₄ emissions from the

1 stack, while slag is used to stabilize the sludge for settling at Little Blue Run. In
2 addition, at the Eastlake and Sammis generating plants, the Selective Non Catalytic
3 Reduction (SNCR) technology uses a Urea based additive (also called NOXOUT) to
4 react the NO_x back to N₂ without the use of a catalyst. Finally, at Burger Plant
5 minimal amounts of chemical additives are used in the Electric Catalytic Oxidation
6 (ECO) NO_x and SO₂ Control System.

7 Other Fuel – This category includes the cost of ash disposal less the cost of ash sales,
8 as well as peaking oil for the combustion turbine peaking units and oil for light-off of
9 coal fired boilers.

10 Emission Allowances Consumed – Environmental regulations require that emission
11 allowances must be surrendered to the appropriate agency for each ton of SO₂ and
12 NO_x which are emitted by the generating plants. This category includes the book
13 cost of emission allowances consumed (surrendered by generating plants).

14
15 **Q. PLEASE DISCUSS THE DIFFERENCES BETWEEN THE 2002 BASE YEAR**
16 **AMOUNTS AND THE 2008 FUEL AMOUNTS.**

17 A. The following reviews the differences between the 2002 and 2008 fossil commodity
18 costs by category.

19 Coal – The expenses increased from the baseline year 2002 due to price increases for
20 coal and coal transportation. During this same period the market price of the typical
21 system fuel blends used at the generating plants increased by 103%. The cost of
22 Northern Appalachian high sulfur (4%S) used at the Mansfield generating plant
23 increased by 127% from 2002 to the 2008 market prices. The cost of Northern

1 Appalachian medium sulfur (2.6%S) coal used at the Mansfield, Sammis and
2 Eastlake generating plants has increased by 112% over the same period. The cost of
3 Central Appalachian low sulfur (Nymex) coal used primarily at the Sammis
4 generating plant has increased by 96% over the same period. Western (PRB) coal
5 which is used at the Ashtabula, Bayshore, Burger, Eastlake, Lakeshore and Sammis
6 generating plants has increased by 86% over the same period.

7 Natural Gas – The expense for natural gas decreased during the 2008 period due to
8 the decrease in the amount of MWhs generated with natural gas, even though the unit
9 delivered price of natural gas increased in 2008.

10 Bayshore Steam – The expense for Bayshore steam increased in 2008. In 2008 the
11 total increase was due to an increase in total MWh and an increase in rate.

12 Chemical Additives – The total expense for chemical additives increased in 2008.
13 Part of this increase is due to an increase in price of lime and stabilizer at Mansfield
14 which were the chemical additives in the base year. The balance of the increase is
15 attributed to chemical additives being used in the control of emissions of sulfur
16 dioxide (SO₂), oxides of nitrogen (NO_x) and for opacity control. These chemical
17 additives used during the period include urea and ammonia for NO_x control at
18 Sammis, Eastlake and Burger and sodium sulfite at Mansfield.

19 Other Fuel – Expense in the other fuel category includes oil, ash sales and ash
20 disposal. Oil and ash sales and disposal price increases were due to rate increases
21 over the time period.

22 Emission Allowances – The total expense for the category emission allowances has
23 increased in 2008. The increase in expense is due to an increase in the cost of

1 allowances for SO₂ for the period. The market price of SO₂ increased by 210% in
2 2008. The market price of NO_x decreased by 25% in 2008.

3

4 **Q. DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?**

5 A. Yes, it does.