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**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

APPLICATION OF PECO ENERGY :
COMPANY, PURSUANT TO CHAPTERS :
11, 19, 21, 22 AND 28 OF THE PUBLIC :
UTILITY CODE, FOR APPROVAL :
OF (1) A PLAN OF CORPORATE :
RESTRUCTURING, INCLUDING THE :
CREATION OF A HOLDING COMPANY :
AND (2) THE MERGER OF THE NEWLY :
FORMED HOLDING COMPANY :
AND UNICOM CORPORATION :

DOCKET NO. A-110550F0147

DOCKETED
MAY 17 2000

DIRECT TESTIMONY

OF

ANDREW ALTMAN

PA.P.U.C.
SECRETARY'S BUREAU

00 MAY 15 PM 2:00

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**Regarding Environmental Provisions of
the Joint Petition for Settlement**

PA.P.U.C.
SECRETARY'S BUREAU

00 MAY -3 PM 1:53

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May 3, 2000

1 DIRECT TESTIMONY OF ANDREW ALTMAN

2 **Q. Please state your name, address and identify the party or parties for whom you are**
3 **testifying.**

4
5 A. My name is Andrew Altman, I reside at 400 S. Camac Street, Philadelphia, PA 19147. I
6 am testifying on behalf of Clean Air Council, Dennis Winters, Amy Hammersmith, and myself in
7 an individual capacity.

8
9 **Q. What is the purpose of your testimony?**

10
11 A. My testimony will demonstrate that the environmental provisions of the Joint Petition for
12 Settlement in the PECO Merger and Restructuring Application serve the public interest.

13
14 **Q. Please describe your qualifications.**

15
16 A. I have served as Deputy Director of Clean Air Council since 1992. In this capacity I have
17 developed the Council's energy program. Since 1996, I have been integral to the Council's work
18 on electric deregulation, including the Environmentalists' positions in restructuring litigation. I
19 studied this issue and the changes it has been bringing to the markets and the generation,
20 transmission and distribution of electricity in Pennsylvania. I am familiar with the Electricity
21 Generation Customer Choice and Competition Act, PUC regulations and policies promulgated
22 thereunder, and PUC Orders on Restructuring. My focus has been on those aspects which pertain
23 to renewable energy, consumer education and information disclosure. My resume further details
24 my background in renewable energy and information, and is attached as Clean Air Council, et al,
25 Exhibit AA-1.

26
27 **Q. Please identify the environmental provisions in the Joint Petition.**

28
29 A. The Joint Petition provides some \$24 million in new funding. \$12 million to the

1 Sustainable Development Fund (SDF) for wind power generation projects; \$4 million to the SDF
2 to fund a minimum of 450 roof-top solar photovoltaic installations; \$2.5 million to the SDF to
3 fund renewable energy education; and roughly \$2 million more to the SDF generally as a result
4 of a front-loading of PECO's existing obligation from the 1998 Restructuring Settlement and the
5 extension of the distribution rate cap. \$3.5 million is provided for a wind block marketing
6 program. In addition, the Joint Petition contains changes to Rate RS tariff and interconnection
7 rules which have some financial value to PECO.

8
9 **Q. Why is it in the public interest for a portion of merger savings to be dedicated to**
10 **wind generation investments?**

11
12 A. Wind power is an environmentally benign energy resource which is renewable and largely
13 untapped in Pennsylvania. Wind power is becoming increasingly competitive on a per kilowatt
14 installed basis, and is now the fastest growing source of power in the world.

15
16 Pennsylvania residents are greatly in need of relief from health-threatening air pollution.
17 Nationwide, approximately 29% of nitrogen oxides come from power plants and 66% of sulfur
18 dioxide emissions are emitted from power plants. Because of Pennsylvania's heavy reliance on
19 coal-fired power plants and the minimal overall sulfur dioxide emissions controls on its power
20 plants at this time, the figure in the prior sentence is likely to be quite conservative. Nitrogen
21 oxide forms ozone smog. Both sulfur dioxide and nitrogen oxide cause acid rain and haze.
22 According to a recent report by U.S. Public Interest Research Group which compiled EPA
23 emissions data, Pennsylvania plants release more sulfur dioxide than plants in any state but Ohio.
24 The same report indicates that Pennsylvania power plants release more mercury to the air than
25 the plants in any other state. Mercury is a neurological and developmental toxin. Since coal-
26 fired power production is a major source of such pollution, it follows that wind generation
27 displacing a more polluting source of energy will benefit the public health.

28
29 Because it is a relatively new technology in application in the Eastern United States, finding

1 sufficient capital to meet the expanding markets for wind generation has not been easy. The
2 supply of wind power has been unable to keep up with the demand from consumers. The \$12
3 million for wind generation can be used to leverage private investment and satisfy a need for
4 financing of merchant wind power projects to serve the competitive market.

5
6 In addition to the direct environmental benefits, wind also helps diversify the generation mix in
7 Pennsylvania and provides a mitigation strategy against higher fuel prices or tighter
8 environmental regulations. For example, if natural gas prices rise substantially or if
9 environmental regulations on coal-fired generation significantly tighten, wind will likely become
10 a highly cost effective resource. Investments in wind energy now help identify the best wind
11 sites and give utilities and system operators experience with the resource.

12
13 Finally, wind provides economic development benefits. Wind projects built in Pennsylvania can
14 add revenues for farmers and other landowners and contribute to the tax base in rural
15 communities.

16
17 **Q. What is a “wind block” marketing program?**

18
19 A. The program to be funded by PECO under the provisions of the proposed settlement
20 offers blocks of newly developed Pennsylvania wind energy in flexible amounts for purchase by
21 customers paying a specified monthly premium. The pilot program currently offers 400 kWh per
22 month blocks of Pennsylvania wind energy for a premium of \$10.

23
24 **Q. Do you agree with PPL’s suggestion that this wind program is anti-competitive?**

25
26 A. No. Contrary to the characterization of PPL, the program finances new renewables
27 through the market, using market forces to pay the higher costs of wind power and produce new
28 wind resources in direct proportion to market demand.

1 It should also be noted that the Joint Petition specifically states the program will be available to
2 Pennsylvania electric customers in a manner that is non-exclusive to the Electric Generation
3 Supplier a participating customer may select.
4

5 **Q. Is there a precedent for a program of this kind elsewhere in the United States?**
6

7 A. Yes. The first utility windblock program in the nation was offered by Public Service
8 Company of Colorado in 1997. Since then, over 15,000 residences, 400 commercial customers,
9 and two dozen cities in Colorado have agreed to pay a combined premium in excess of \$2
10 million dollars to purchase 25 MW of wind. In the last two weeks, numerous federal facilities
11 have come together to purchase an additional 10 MW of wind blocks. By 2004, the Colorado
12 utilities expect to have aggregated over 50 MW of demand for blocks of new wind energy.
13

14 Moreover, a number of utilities have adopted the program to offer renewable energy blocks to
15 their customers. Renewable energy blocks are now offered by: Pacific Corp in Utah (100 kWh
16 blocks of new wind); Public Service Company of Colorado along with four other utilities in
17 Colorado (100 kWh blocks of new wind energy); Madison Gas and Electric Company (150 kWh
18 blocks of 100% new wind); Wisconsin Electric Power Company (100 kWh blocks of 75% new
19 renewables, including landfill gas, wind and hydro to large commercial customers); and
20 Tennessee Valley Authority (150 kWh of 100% new renewables, solar, wind and landfill gas).
21

22 The agreement by PECO to fund the introduction of windblocks in Pennsylvania brings this
23 market-compatible renewable program to Pennsylvania.
24

25 **Q. What is Community Energy, Inc.?**
26

27 A. Community Energy is a Delaware corporation formed in 1999 through a partnership
28 between Clean Air Council and the Land and Water Fund of the Rockies, the Colorado
29 environmental group that successfully launched the first wind block marketing program.

1 Community Energy was created to market new wind energy to Pennsylvania consumers using
2 this wind block concept. The program uses market demand to bring new wind generation
3 facilities on line in the Commonwealth. Community Energy developed a pilot Pennsylvania
4 Wind Energy Program to offer wind blocks to small businesses in the Philadelphia region, and
5 will expand that program with funds provided under this settlement.

6
7 **Q. Why is it in the public interest for a portion of merger savings to be dedicated to the**
8 **Pennsylvania Wind Energy Program?**

9
10 A. The wind block marketing concept is extremely useful in advancing wind power, and
11 therefore reducing air pollution. By offering to provide for merely a portion of a customer's
12 needs with wind energy, the program can spread the economic toll of a higher-than-system-power
13 cost among a large number of willing participants. The program appeals to a large number of
14 customers in this manner. Another noteworthy effect of the program is its ability to draw
15 funding for new renewables from customers who would not otherwise be likely to support
16 renewables because of a reluctance to switch to a new supplier of energy. The intent of the
17 Pennsylvania Wind Energy Program is for it to be offered even to those who remain with their
18 provider of last resort.

19
20 **Q. Why is it in the public interest for a portion of merger savings to be dedicated to**
21 **renewables education?**

22
23 A. Most Pennsylvanians do not have a good understanding of where their electricity comes
24 from. The efforts at consumer education in Pennsylvania in the era of deregulation have
25 provided the public with very little information regarding the environmental factors which may
26 affect personal decisions about retail electric choice. In today's marketplace, renewable energy is
27 not generally the cheapest electric power available. Renewable energy has other attributes to
28 commend it, however, and the public interest is served when these are explained.

1 **Q. Why is it in the public interest for a portion of merger savings to be dedicated to**
2 **residential solar photovoltaic (PV) units?**

3
4 A. Solar PV technology is an environmentally benign renewable energy resource which
5 continues to become more efficient and more affordable. Panels of solar photovoltaic cells
6 would convert sunlight directly to electricity on the rooftops of homes and small businesses
7 under this program. The public benefits of this technology lie in the displacement of air
8 pollution causing forms of energy production and the delivery of power to the grid at peak times,
9 thereby reducing the need for construction of new, polluting central power plants for peak
10 operation. When electrical demand peaks, typically on the hottest days of summer, solar PV
11 rooftop units will be producing electricity at or near capacity.

12
13 The units funded in this Joint Settlement are of sufficient number to spark interest in PV units
14 among the public and among manufacturers, dealers, installers and maintenance businesses. This
15 type of infrastructure investment is a necessary component of a successful entry of solar power
16 into the Pennsylvania competitive market.

17
18 **Q. Does the settlement contain any other provisions which hold an environmental**
19 **benefit?**

20
21 A. Yes. The Joint Settlement has significant changes to PECO's Rate RS tariff and the
22 interconnection rules which govern small sources of generation.

23
24 **Q. Why is it in the public interest for PECO's tariff and interconnection rules to be**
25 **changed in this manner?**

26
27 A. These changes are crucial to allowing residential and small commercial scale distributed
28 generation to become economically viable in PECO service territory. Changes include: a tariff
29 revision which permits a customer to receive credit for power she generates and contributes back

1 to the grid at a rate equal to the amount paid for power taken from the grid; a tariff revision
2 which allows credit for excess power created in one month by the customer to offset the bill for
3 power taken from the grid in any subsequent month of a discrete 12-month period; or an
4 interconnection revision which provides certainty and eliminates onerous charges. Each of these
5 changes are necessary if substantial numbers of people are to self-generate electricity.

6
7 Self-generation is in the public interest because the renewable technologies used do not
8 create air pollution, decreasing demand for power from fossil-fuel plants which do pollute.

9
10 **Q. You have mentioned several times that wind and solar power applications will**
11 **reduce air pollution and produce an environmental benefit. Please explain.**

12
13 A. As more and more people in Pennsylvania choose a renewable power supply, the amount
14 of electrical load usage dependent upon polluting coal-fired plants in the state will decrease.
15 Power generated at those plants will be dispatched less often, the plants will therefore run at a
16 lower capacity and produce less emissions. This fact is significant because air pollution from
17 power plants contributes to a range of health problems, from increased asthma attacks and
18 premature death for lung irritants to unacceptable developmental and neurological risks
19 associated with mercury deposition.

20
21 **Q. Can you estimate how much air pollution is prevented by a renewable power**
22 **source?**

23
24 A. Yes. I will take as an example a 1.3 megawatt wind turbine, such as the ones currently
25 being installed in Western Pennsylvania. Assuming the turbine operates with a capacity factor of
26 25%, and given that coal-fired units comprise 59% of the generation mix in Pennsylvania, a
27 single wind turbine would prevent the emission of as much as 6,720 pounds of NOx annually,
28 and as much as 30,235 pounds of SOx annually. Source data was obtained from the U.S.
29 Department of Energy, Energy Information Administration, Form EIA-767, "Steam-Electric

1 Plant Operation and Design Report," and Form ELA-759, "Monthly Power Plant Report."
2

3 **Q: How precise are these estimates?**
4

5 **A:** These estimates do not involve any detailed modeling or quantitative analysis. Rather, I
6 have presented them to provide a rough projection of the likely pollution reduction benefits in
7 Pennsylvania associated with a single wind turbine.
8

9 **Q. Does this conclude your direct testimony?**
10

11 **A.** Yes.
12
13

Andrew Altman

Experience

1992 to present Clean Air Council Philadelphia, PA

Deputy Director

Program Management: (1992 – present)

- Responsible for all work with community groups and coalitions. Manages the Council's environmental education programs: Pollution Prevention Program and Sustainable Energy Education Program.
- Responsible for coordinating the Council's electricity deregulation program in Pennsylvania including the PECO, PP& L and GPU interventions, building environmental coalitions, planning and implementing educational programs, and working with the Public Utility Commission.
- Serves on the PECO Sustainable Development Fund board as Vice-President and official delegate to the statewide board.
- Founding board member and Secretary of Community Energy, a company created to develop and sell new wind power in Pennsylvania.
- Serves as member of the City of Philadelphia's Recycling Advisory Committee (RAC) and was on the management team of the Philadelphia Recycling Economic Development Consortium's U.S. Environmental Protection Agency - City Partnership.
- Serves on the Mid-Atlantic Advisory Committee to Green-e and is the Pennsylvania coordinator for the Power Scorecard.

Media: (1992 – present)

Responsible for media outreach for all programs. Has given interviews to all major stations in the Philadelphia region, been interviewed and quoted in local newspaper including the Philadelphia Inquirer, Daily News and Courier Post, and is used as a reliable environmental analyst/source by TV, newspaper and radio reporters.

1987 - 1991 Greenpeace Philadelphia, PA

Philadelphia Canvass Director

Directing: (1990 – 1991)

Raised one-half million dollars in the calendar year, 1990. Recruited and trained staff up to sixty canvassers. Designed and implemented new training systems to raise individual and office fundraising averages. Controlled petty cash and payroll; created and implemented advertising strategies; acted as public clearinghouse of information.

Media: (1989 – 1991)

- Served as official spokesperson. Appeared on ABC's "Good Morning America", local TV including WPVI, WCAU, KYW, and Fox Network. Interviewed and quoted in Time Magazine and in local newspapers including Philadelphia Inquirer, Daily News and Courier Post. Regular appearances on radio programs including WXPB's Kid's Corner and WMMR's noon show with Pierre Robert.

- Managed public relations for several activities including writing press releases, contacting media, providing live interviews, and follow-up.

Coordinating: (June 1989 – November 1989)

Motor Vessel "Greenpeace" Tour Education Coordinator and spokesperson. Directed major events in 14 cities, raising over \$25,000 and speaking to over 10,000 people. Complete responsibility for Public Open Ships, including organization of personnel, equipment, merchandise, logistics, and factual content of material/presentations.

Creating/Producing: (1988 – 1991)

Created student education program. Produced school, K-12 and college assemblies and class presentations, and led youth discussion sessions that concentrated on individual action and responsibility. Wrote and presented slide programs for over 100 groups ranging in size from 20 to 400 students.

Education

Emory University, Atlanta Georgia
B.A. History, Anthropology, May 1983

Languages

Fluent in French.