

EXHIBIT NO. _____

BEFORE THE PENNSYLVANIA PUBLIC SERVICE COMMISSION

**In the Matter of the En Banc Hearing on)
Alternative Ratemaking Methodologies)**

Docket No. M-2015-25188831

**DIRECT TESTIMONY OF
DR. HUGH GILBERT PEACH
ON
RATE DECOUPLING MECHANISMS (RDM)**

MARCH 3, 2016

Testimony of Dr. Hugh Gilbert Peach

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I. QUALIFICATIONS	2
II. FOCUS OF TESTIMONY.....	7
III. RATE DECOUPLING MECHANISM (RDM).....	8
IV. SIMPLE AND EASY TO ADMINISTER.....	9
V. GENERAL ISSUES	9
VI. MONITORING.....	16
VII. SUMMARY AND CONCLUSION.....	16

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I. Qualifications

Q. Please state your name and address.

A. My name is Hugh Gilbert Peach and my address is H. Gil Peach & Associates LLC, 16232 NW Oakhills Drive, Beaverton, OR 97006.

Q. On whose behalf are you testifying?

A. I am participating at the invitation of the Pennsylvania Public Utilities Commission as one voice among a number of experts regarding the efficacy and appropriateness of alternative ratemaking methodologies, such as revenue decoupling, that remove disincentives that might presently exist for energy utilities to pursue aggressive energy conservation and efficiency initiatives.

Q. Please state your academic background and training.

A. My academic background and training is in Sociology (Ph.D., New York University, 1985) and Economics (M.A., New School for Social Research, 1972). Within these traditional academic disciplines, I have concentrated in two areas of study:

- My primary area of study is what economists call “political economics,” involving the way economic institutions operate to solve the fundamental economic problems of production and distribution. Sociologists call this “the sociology of economic life,” and focus on the social consequences of the structuring of markets and other economic

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institutions. My primary interest is in large-scale technical organizations such as utilities.

- My second area of study is quantitative analysis, including social statistics, economic analysis and econometrics.

Q. Do you have other areas of academic background and training?

A. Yes, I have a primary interest in the social study of technology, as represented in my doctoral dissertation study on the *Social Construction of Social Statistics* (1985) and my essays on “Public Perceptions of Technology,” and “Global Development of Technology” in the *Oxford Encyclopedia of Science and Technology* (2005) and sections on “Fossil Fuels” and “Coal” for a Science and Technology Textbook (2008). I am also a student of social control, and have completed the equivalent of an undergraduate minor in physics as well as experiential engagement in programs metropolitan urban services training in New York City and Chicago.

Q. What is your current position?

A. I serve as a verification, evaluation and policy consultant to the natural gas, electric, and water utility industries as well as to government energy and social service agencies and to public utility commissions.

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Q. What is the focus of your practice?

A. One focus of my practice is the area of customer service, particularly as it concerns inclusion of consistent service to low-income and ‘payment troubled’ customers and the design of rates and programs that balance the needs of households that are unable to pay cost of service rates with the needs of those who pay for payment assistance and low-income weatherization programs.

Another is in the area of adaptation to fundamental industry technical and market changes including the development of microgrids, distributed energy resources, management of distributed energy resources and the combination of these with traditional demand response; the goal is to facilitate climate adaptation and the evolution of markets within projects that include all of these approaches and also maximize the use of energy efficiency and energy conservation.

A third major focus is verification studies; direct inspections along with evaluation and program and policy reviews to uncover problems and insure ratepayer dollars are efficiently and appropriately spent to accomplish objectives in accord with terms and conditions established by public utility commissions. For example, I am currently an evaluation advisor to the staff of the New York Public Service Commission and I currently lead the verification team for the Nova Scotia Commission and serve as a Commission witness in Energy Efficiency and Conservation Rate Hearings.

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A fourth focus is on high level decoupling studies, to verify that rate decoupling mechanisms are implemented and conducted in accord with commission orders; to determine if any party is harmed by the rate decoupling mechanism and to answer sets of practical questions developed by commissions and advisory groups and parties to a settlement.

Q. What is the location of your consulting practice?

A. It is primarily a North American practice with almost all engagements in the United States and Canada.

Q. Please describe your prior employment history prior to H. Gil Peach & Associates LLC.

A. Prior to 1989, I was Evaluation Manager at Pacific Power & Light (PP&L). At PP&L I initially worked in load research in the Rate Department, then was responsible for what we would now call Demand Side Management evaluation, and, in particular, I was the Evaluation Manager for the Hood River Conservation Project, the most ambitious community-oriented public/private weatherization effort in the United States during the decade of the 1980s.

Prior to 1980, I was employed by the Fund for the City of New York, a small 501(c)(3) operating foundation created and funded by the Ford Foundation. The focus my work was management studies and

1 evaluation research designed to improve the efficiency and effectiveness
2 of government agencies, “to do more with less” and to help keep public
3 agencies on track for the missions for which they were established. The
4 projects included performance studies of pediatric medical care in the
5 emergency wards of city hospitals, the subway system, taxi regulation,
6 employment and job training, and the case management system for
7 dealing with child abuse. From 1969 to 1978, I carried out program
8 research for the City of New York in housing and urban renewal, helped
9 develop training programs, and carried out evaluation of substance
10 abuse programs. Before that, I worked at the New York Stock Exchange
11 and the New York Public Library.

12
13 **Q. To which professional or industry associations do you belong?**

14 A. I am member of the American Evaluation Association (AEA), the
15 American Statistical Association (ASA), and the Society for the Social
16 Studies of Science (4S), the European Council for an Energy Efficiency
17 Economy (ECEEE), the Association of Energy Service Professionals
18 (AESP) and the American Society of Adaptation Professionals (ASAP). I
19 am a past President of the Oregon Chapter of the American Statistical
20 Association.

21
22 **Q. Have you carried out studies for Public Utility Commissions?**

23 A. Yes, I have served as an independent evaluation expert for the
24 Massachusetts, New Hampshire, California, New York and Nova Scotia
25 Commissions.

1 In addition, in several states including Washington, Oregon, Wisconsin,
2 California, Indiana, Kentucky, Ohio, North Carolina, South California, and
3 Pennsylvania; and in the Province of Ontario I have carried out
4 Commission mandated energy efficiency, low-income, and/or decoupling
5 evaluations that are submitted to Commissions and follow state or
6 provincial requirements. I have also conducted work for the District of
7 Columbia, the State of Nevada and the US Department of Health and
8 Human Services; and I have served I peer review for the US Department
9 of Energy.

10
11 **II. Focus of Testimony**

12
13 **Q. Please summarize the focus of your testimony.**

14 I have focused on Rate Decoupling Mechanisms (RDMs) from a practical
15 (rather than a theoretical) perspective.

16
17 The structure of my testimony follows the general issues and some of the
18 topics designed to guide the discussion as specified in the Notice of *En Banc*
19 Hearing on Alternative Ratemaking Mechanisms, Docket No. M-2015-
20 251883 dated January 22, 2016.

21
22 In particular, I will emphasize that RDMs are harmless, have no downside,
23 provide some positive benefits and do not cause additional costs to
24 administer.
25

1 **III. Rate Decoupling Mechanism (RDM)**

2 **Q. Please define what is meant by a Rate Decoupling Mechanism.**

3 A. Normally, rates are set and the revenue requirement of the utility is met
4 through a simple model of cost of service classes paying for energy at
5 rates set in advance. Customers pay based on energy use. In a RDM,
6 the same kind of process is followed but it is inverted one the revenue
7 requirement per year is set, rates are automatically adjusted based the
8 relation of actual energy use to projected energy use, within each Cost of
9 Service class.

10
11 In the first year of decoupling, rates are set for that one year. These first
12 year rates are called “K-factor” rates and they operate just like normal
13 rates for that year. However, based on the experience in year one, a
14 decoupling adjustment is made for each cost of service class that
15 automatically adjusts price per unit of energy for the duration of year two.

16
17 If a particular cost of service class has used more energy than expected
18 in year one, their decoupling surcharge adjustment lowers the price per
19 energy unit used in year two. If, instead, a particular cost of service
20 class used less energy than expected in year one, the decoupling
21 surcharge for year two increases the unit cost of energy for the second
22 decoupling year.

23
24 This process, with a new adjustment factor at the end of each decoupling
25 year to apply to unit energy costs by Cost of Service class for the

1 following decoupling year repeats for the number of years set for
2 decoupling.

3
4 **IV. Simple and Easy to Administer**

5 **Q. Are the procedures required for utility operation of a Rate**
6 **Decoupling Mechanism (RDM) simple and easy to administer?**

7
8 A. Yes. The key to decoupling operation is determination of the revenue
9 requirement per year and the forecast of planned energy use by Cost of
10 Service customer class by year over the decoupling years. These
11 elements of decoupling call upon technical skills and capabilities that are
12 already well established within utilities.

13
14 Administration is *simple* because it almost entirely follows existing
15 procedures. Also, no new technology is required.

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18 **V. General Issues**

19 **Q. Does a Rate Decoupling Mechanism encourage better energy**
20 **efficiency and conservation programs?**

21
22 A. The answer is "MAYBE". RDM creates a kind of "green light" to exceed
23 energy efficiency and conservation targets with a utility as a large-scale
24 technical organization. It can remove the barrier of an Executive and
25 Management emphasis on sales and essentially puts an end to the

1 “sales mentality” at all levels of the organization. It does this by providing
2 a trustworthy and reliable understanding that necessary revenue
3 recovery is assured as sales decline.

4
5 But “vanilla” RDM, sometimes called “Decoupling 1.0” does not create a
6 “pull” towards better energy efficiency and conservation programs.

7
8 What is often talked about in the context of Decoupling is the idea of going
9 further to “Decoupling 2.0” which would be Decoupling along with a
10 monetization of some of the values of energy efficiency and conservation
11 and demand shifting (and/or other values) as a new payment stream for
12 the utility.

13
14 Otherwise, what happens with Decoupling is a kind of nuanced effect.
15 Efficiency Management and Staff will now feel (with Decoupling) that the
16 Executive Level will not be concerned if program targets are exceeded.
17 This is not the same thing as incenting effort or creating an additional
18 payment stream for the utility for increasing customer engagement, depth
19 of energy savings or for exceeding program targets.

20
21 **Q. So, RDM essentially creates a neutral condition?**

22 A. Yes. As stated above, it removes an important barrier. Without
23 Decoupling, the emphasis of the utility is necessarily on sales. With
24 Decoupling that barrier to energy efficiency and conservation is remove
25

1 and Staff may do a bit more of it. But the situation with Decoupling is
2 essentially neutral.

3
4 What is done in this situation depends upon determinations at the
5 Executive Level of the utility. If the Officers want to do more intensive or
6 complete energy efficiency and conservation, they can now move in that
7 direction without being concerned for loss of sales. If the Officers are
8 more focused and concerned with other areas and issues, there is
9 nothing in RDM to attract attention to the energy efficiency and
10 conservation area or to motivate Executive prioritization of energy
11 efficiency and conservation as a primary organizational goal.

12
13 Management and Staff may go a little further since they perceive a
14 “green light” to exceed program goals. But movement in this direction
15 will not go far without direct interest, encouragement, and monitoring by
16 an Officer with the support of the Executive Level of the utility.

17
18 **Q. Is a Rate Decoupling Mechanism just, reasonable and in the public**
19 **interest?**

20 A. Yes. RDM is a very low risk, careful and conservative *incremental*
21 regulatory reform. RDM is harmless. In actual practice, there is no
22 downside.

23
24 As stated above, RDM removes the revenue recovery barrier and, absent
25 action to the contrary by the Executive Level of the utility, removes the

1 emphasis on sales from the utility's organizational culture. It opens the
2 way towards better energy efficiency and conservation programs if the
3 Officer Group desires to move in that direction.

4
5 RDM makes the utility more open to energy efficiency and conservation
6 and renewable energy whether these enter from outside markets or
7 competitors, are driven by customer initiative or are driven from within the
8 utility by Officers, Management and Staff.

9
10 On balance, the benefits of Decoupling outweigh the costs. There are
11 mild positive benefits. No traditional cost of service class is harmed.
12 And there are lower overall costs due to smaller automatic year-to-year
13 adjustments and fewer rate cases.

14
15 **Q. Is there a Problem with the Alignment of RDM with implementation**
16 **of energy efficiency and conservation programs?**

17 A. No. RDM is carried out by the utility Rate and Regulatory Affairs
18 Department. Energy efficiency and conservation are implemented
19 through Customer Services or a similar department. There is no overlap
20 in staff functions between the two efforts. Both departments carry out
21 their assigned missions independently. The alignment within the overall
22 organization is automatic.

23
24 **Q. Is there an optimal rate mechanism for encouraging Energy**
25 **Efficiency and Conservation Programs?**

1 A. Yes. I will provide my particular overview of an optimal rate mechanism,
2 which would require moving to a “Decoupling 2.0” approach.

3

4 An optimal rate mechanism, sometimes called “Decoupling 2.0” would
5 include:

6

7 • Weather normalization to take weather variations out of revenue
8 recovery. This step should occur prior to the Decoupling adjustment.

9

10 • Following weather normalization, Rate Decoupling would remove
11 variation in sales from revenue recovery (“Decoupling 1.0”) and would be
12 volumetric or variable in nature (not affecting the fixed portion of the
13 rate). This step creates a neutral condition mildly favorable to Energy
14 Efficiency and Conservation programs.

15

16 • Third, an incentive mechanism would be introduced to create a
17 payment stream to the utility for achieving integration of energy efficiency
18 and conservation and renewable energy and transforming these to a
19 higher level. This is the “add-on” that would provide a “pull” encouraging
20 Energy Efficiency and Conservation programs.

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23 **Q. Whether decoupling diminishes a utility’s incentive to restore**
24 **service after a storm?**

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A. No. Service performance is independent of decoupling:

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First, the existing system of performance monitoring will remain in place. Any tendency towards lower service levels will be detected and may be addressed in the same way that it would be without decoupling.

Second, utilities are large-scale technical organizations (a good image is a spaceship). Every member of the organization is selected for ability and skill and utilities provide nearly constant training opportunities to keep staff highly aware and alert to better practices. Frankly, fear plays a part in this. No one wants to appear less than technically excellent in their specialty and attentive to their duty. Utility jobs generally pay well and have good benefits and utilities provide opportunity for lifetime careers. Those who become senior in the organization have high awareness, excellent knowledge and skills for their work areas and the organizations are infused with a public service ethic.

Sales motivation had an historical role, but the utility functions well as a technical organization independently of the presence or absence of a sales mentality because the other factors are important to how the organization works.

Q. Does Decoupling discourage customer energy efficiency and conservation?

1 A. NO. This is a theory of economic motivation. But, in practice, the
2 decoupling adjustments are very small. They are too small from year to
3 year to influence customer energy efficiency and conservation decisions.
4

5
6 **Q. Are there Potential Harms that show up in Decoupling?**

7 A. YES. But there are not actual harms from decoupling. The harms that
8 become evident in a decoupling context are in the general environment
9 and occur with or without decoupling.
10

11 For example decoupling surcharge adjustments affecting low-income
12 customers may increase bills without a payment assistance offset. But
13 bills would have increased (in a slightly different timeframe) in any case.
14 This showing of harm from higher bills is independent of decoupling.
15 The lack of offset can be caused by changes in federal (LIHEAP)
16 payment assistance – federal assistance can decline, creating need that
17 shows up when a decoupling surcharge is applied. But the problem is
18 the erratic nature of the timing and amount of federal assistance, not
19 decoupling. Decoupling only makes the federal problem more visible.
20

21 Also, for low-income, the federal consumer price index (CPI) that is used
22 each year to adjust the federal definition of poverty tends to lose about
23 one-half of increased costs over approximately ten years. But this, too,
24 is a background factor. It is independent of decoupling.
25

1 Customers who use more energy will have higher bills. This shows up in
2 decoupling but is independent of decoupling.

3
4 Very large volume customers may experience swings each year due to
5 decoupling. But the changes are there and show up because they are
6 monetized in yearly adjustments. These changes would have to be dealt
7 with over a slightly longer timeframe (through rate cases) in the absence
8 of decoupling.

9 10 **VI. Monitoring**

11 12 **Q. Do you recommend monitoring of Decoupling?**

13 A. YES. The Commission, an Advisory Group, and/or parties to Decoupling
14 compose a set of practical questions and an independent evaluator
15 should be selected to examine and monitor and develop a report on
16 Decoupling with answers to each question.

17 18 19 **VII. Summary and Conclusion**

20 21 **Q. Could you please summarize your testimony?**

22 A. YES. A well-constructed Rate Decoupling Mechanism (RDM) creates no
23 harm. It has no downside. But, it also does not have a “pull” effect
24 towards better energy efficiency and conservation programs (though it
25 has a nuanced effect in that Management and Staff feel they have a

1 “green light” to somewhat exceed program goals). Yet, Management and
2 Staff will not go very far without Executive Level commitment, which,
3 after Decoupling, is the key variable in encouraging energy efficiency and
4 conservation. RDM has some benefits (surety of revenue recovery with
5 lower sales; removes a barrier to energy efficiency and conservation).
6 RDM leads to lower costs, in part because adjustments are smaller and
7 more frequent and automatic; in part because there are fewer rate cases.
8
9 RDM leads to very small rate adjustment effects each year,
10 automatically. It is within the existing skill sets and technical scope of the
11 utility and does not require new specialties or new technology. It is very
12 doable.

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15 **Q. Does this conclude your testimony?**

16 A. Yes.
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