DIRECT TESTIMONY OF

DR. HUGH GILBERT PEACH

ON

RATE DECOUPLING MECHANISMS (RDM)

MARCH 3, 2016
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
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.
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.
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
evaluation research designed to improve the efficiency and effectiveness of government agencies, “to do more with less” and to help keep public agencies on track for the missions for which they were established. The projects included performance studies of pediatric medical care in the emergency wards of city hospitals, the subway system, taxi regulation, employment and job training, and the case management system for dealing with child abuse. From 1969 to 1978, I carried out program research for the City of New York in housing and urban renewal, helped develop training programs, and carried out evaluation of substance abuse programs. Before that, I worked at the New York Stock Exchange and the New York Public Library.

Q. To which professional or industry associations do you belong?
A. I am member of the American Evaluation Association (AEA), the American Statistical Association (ASA), and the Society for the Social Studies of Science (4S), the European Council for an Energy Efficiency Economy (ECEEE), the Association of Energy Service Professionals (AESP) and the American Society of Adaptation Professionals (ASAP). I am a past President of the Oregon Chapter of the American Statistical Association.

Q. Have you carried out studies for Public Utility Commissions?
A. Yes, I have served as an independent evaluation expert for the Massachusetts, New Hampshire, California, New York and Nova Scotia Commissions.
In addition, in several states including Washington, Oregon, Wisconsin, California, Indiana, Kentucky, Ohio, North Carolina, South California, and Pennsylvania; and in the Province of Ontario I have carried out Commission mandated energy efficiency, low-income, and/or decoupling evaluations that are submitted to Commissions and follow state or provincial requirements. I have also conducted work for the District of Columbia, the State of Nevada and the US Department of Health and Human Services; and I have served I peer review for the US Department of Energy.

II. Focus of Testimony

Q. Please summarize the focus of your testimony.

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

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

In particular, I will emphasize that RDMs are harmless, have no downside, provide some positive benefits and do not cause additional costs to administer.
III. Rate Decoupling Mechanism (RDM)

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

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

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

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

This process, with a new adjustment factor at the end of each decoupling year to apply to unit energy costs by Cost of Service class for the
following decoupling year repeats die for the number of years set for
decoupling.

IV. Simple and Easy to Administer

Q. Are the procedures required for utility operation of a Rate
Decoupling Mechanism (RDM) simple and easy to administer?
A. Yes. The key to decoupling operation is determination of the revenue
requirement per year and the forecast of planned energy use by Cost of
Service customer class by year over the decoupling years. These
elements of decoupling call upon technical skills and capabilities that are
already well established within utilities.

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

V. General Issues

Q. Does a Rate Decoupling Mechanism encourage better energy
efficiency and conservation programs?
A. The answer is “MAYBE”. RDM creates a kind of “green light” to exceed
energy efficiency and conservation targets with a utility as a large-scale
technical organization. It can remove the barrier of an Executive and
Management emphasis on sales and essentially puts an end to the
“sales mentality” at all levels of the organization. It does this by providing a trustworthy and reliable understanding that necessary revenue recovery is assured as sales decline.

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

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

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

Q. So, RDM essentially creates a neutral condition?
A. Yes. As stated above, it removes an important barrier. Without Decoupling, the emphasis of the utility is necessarily on sales. With Decoupling that barrier to energy efficiency and conservation is remove
and Staff may do a bit more of it. But the situation with Decoupling is essentially neutral.

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

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

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

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

As stated above, RDM removes the revenue recovery barrier and, absent action to the contrary by the Executive Level of the utility, removes the
emphasis on sales from the utility's organizational culture. It opens the
way towards better energy efficiency and conservation programs if the
Officer Group desires to move in that direction.

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

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

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

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

Q. **Is there an optimal rate mechanism for encouraging Energy**
   **Efficiency and Conservation Programs?**
A. Yes. I will provide my particular overview of an optimal rate mechanism, which would require moving to a “Decoupling 2.0” approach.

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

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

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

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

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

A. No. Service performance is independent of decoupling:
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?
A. NO. This is a theory of economic motivation. But, in practice, the
decoupling adjustments are very small. They are too small from year to
year to influence customer energy efficiency and conservation decisions.

Q. Are there Potential Harms that show up in Decoupling?
A. YES. But there are not actual harms from decoupling. The harms that
become evident in a decoupling context are in the general environment
and occur with or without decoupling.

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

Also, for low-income, the federal consumer price index (CPI) that is used
each year to adjust the federal definition of poverty tends to lose about
one-half of increased costs over approximately ten years. But this, too,
is a background factor. It is independent of decoupling.
Customers who use more energy will have higher bills. This shows up in decoupling but is independent of decoupling.

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

VI. Monitoring

Q. Do you recommend monitoring of Decoupling?
A. YES. The Commission, an Advisory Group, and/or parties to Decoupling compose a set of practical questions and an independent evaluator should be selected to examine and monitor and develop a report on Decoupling with answers to each question.

VII. Summary and Conclusion

Q. Could you please summarize your testimony?
A. YES. A well-constructed Rate Decoupling Mechanism (RDM) creates no harm. It has no downside. But, it also does not have a “pull” effect towards better energy efficiency and conservation programs (though it has a nuanced effect in that Management and Staff feel they have a
“green light” to somewhat exceed program goals). Yet, Management and
Staff will not go very far without Executive Level commitment, which,
after Decoupling, is the key variable in encouraging energy efficiency and
conservation. RDM has some benefits (surety of revenue recovery with
lower sales; removes a barrier to energy efficiency and conservation).
RDM leads to lower costs, in part because adjustments are smaller and
more frequent and automatic; in part because there are fewer rate cases.

RDM leads to very small rate adjustment effects each year,
automatically. It is within the existing skill sets and technical scope of the
utility and does not require new specialties or new technology. It is very
doable.

Q. Does this conclude your testimony?

A. Yes.