

STATE OF ARKANSAS

BEFORE THE PUBLIC SERVICE COMMISSION

**In the Matter of the Institution of)
Rules on Conservation & Energy)
Amendments to the Commission's)
Efficiency to Allow Self-Directed)
Programs for Large Customers)**

Docket No. 10-101-R

DIRECT TESTIMONY OF

PAUL CHERNICK

ON BEHALF OF

THE NATIONAL AUDUBON SOCIETY, INC.

AND

AUDUBON ARKANSAS

Resource Insight, Inc.

JULY 14, 2011

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1 **I. Identification and Qualifications**

2 **Q: Mr. Chernick, please state your name, occupation and business address.**

3 A: I am Paul L. Chernick. I am president of Resource Insight, Inc., 347 Broad-
4 way, Cambridge, Massachusetts.

5 **Q: Summarize your professional education and experience.**

6 A: I received an SB degree from the Massachusetts Institute of Technology in June
7 1974 from the Civil Engineering Department, and an SM degree from the
8 Massachusetts Institute of Technology in February 1978 in technology and
9 policy. I have been elected to membership in the civil engineering honorary
10 society Chi Epsilon, and the engineering honor society Tau Beta Pi, and to
11 associate membership in the research honorary society Sigma Xi.

12 I was a utility analyst for the Massachusetts Attorney General for more
13 than three years, and was involved in numerous aspects of utility rate design,
14 costing, load forecasting, and the evaluation of power supply options. Since
15 1981, I have been a consultant in utility regulation and planning, first as a
16 research associate at Analysis and Inference, after 1986 as president of PLC,
17 Inc., and in my current position at Resource Insight. In these capacities, I have
18 advised a variety of clients on utility matters.

19 My work has considered, among other things, the cost-effectiveness of
20 prospective new generation plants and transmission lines, retrospective review
21 of generation-planning decisions, ratemaking for plant under construction,
22 ratemaking for excess and/or uneconomical plant entering service, conservation
23 program design, cost recovery for utility efficiency programs, the valuation of
24 environmental externalities from energy production and use, allocation of costs
25 of service between rate classes and jurisdictions, design of retail and wholesale

1 rates, and performance-based ratemaking and cost recovery in restructured gas
2 and electric industries. My professional qualifications are further summarized in
3 Exhibit PLC-1.

4 **Q: Have you testified previously in utility proceedings?**

5 A: Yes. I have testified more than 250 times on utility issues before various regula-
6 tory, legislative, and judicial bodies, including the utility regulators of twenty-
7 eight states, five Canadian provinces, New Orleans, the District of Columbia,
8 and two U.S. Federal agencies.

9 **Q: Have you testified previously before this Commission?**

10 A: Yes. I testified on lost-revenue recovery and shareholder incentives in Energy
11 Arkansas's 2009 rate proceeding, Docket No. 09-084-U; on fuel switching,
12 program administration and oversight, and programs for large customers in the
13 Energy Efficiency Notice of Inquiry proceeding, Docket No. 10-010-U; and on
14 lost contributions to fixed costs, avoided costs, and shareholder incentives for
15 program performance in the Innovative Ratemaking proceeding, Docket No. 08-
16 137-U.

17 **Q: Please summarize your experience in the planning and promotion of**
18 **energy-efficiency programs.**

19 A: I have testified on demand-side management (DSM) potential, economics and
20 program design in approximately 55 proceedings since 1980.

21 **II. Introduction**

22 **Q: On whose behalf are you testifying?**

23 A: My testimony is sponsored by the National Audubon Society, Inc., and Audubon
24 Arkansas (collectively, "Audubon").

1 **Q: What is the purpose of your testimony?**

2 A: I have been asked to comment on behalf of Audubon in response to the Staff's
3 draft of "Section 11: Opt Out/Self Direct Option for Qualifying Non-Residential
4 Customers," a proposed amendment to the Commission's Rules on Conservation
5 and Energy Efficiency, filed as Attachments 1–3 to the direct testimony of Staff
6 Witness Kim O. Davis. That amendment introduces into the energy-efficiency
7 rules new options for two classes of large customers to opt out of paying for
8 utility energy-efficiency programs: customers who have no further cost-effective
9 energy-efficiency potential (efficiency exhaustion), and those who prefer to
10 substitute self-directed energy-efficiency efforts for utility-administered energy-
11 efficiency programs (self-directed or SD projects). The Commission would
12 approve an opt-out request by issuing a Certificate, as defined in Subsection A
13 of the draft rules.

14 **Q: Please summarize your concerns about the Staff draft rules.**

15 A: I have the following five major concerns relating to the clarity and effectiveness
16 of the proposed rules.

- 17 1. The draft rules are sometimes unclear regarding the distinctions between
18 the two distinct forms of opt-out.
- 19 2. The draft rules are not sufficiently clear on the requirements for qualifying
20 for the two forms of opt-out.
- 21 3. The draft rules do not properly match time periods, potentially resulting in
22 failure to meet the Commission's energy-efficiency goals.
- 23 4. The draft rules fail to describe the process of verifying SD project savings
24 and the consequences of failing to demonstrate savings.

1 5. The draft rules would reduce the utility's targets for customers that are
2 allowed to opt out due to a lack of efficiency options, even though the
3 targets were set based on aggregate efficiency potential.

4 In addition, the draft rules are unclear on a number of minor points, which
5 could cause confusion in implementation. For example, the rules are
6 inconsistent in some terminology, such as the use of "participating in programs
7 and measures." Customers participate in programs, which involve the
8 implementation of measures.

9 The draft rules are also redundant in some places. For example, since
10 Subsections A, K, and L limit requests for Certificates to certain large non-
11 residential customers, repeated references to non-residential customers in other
12 subsections is unnecessary.

13 I have tried to tighten up the terminology and remove redundancy wher-
14 ever possible.

15 **Q: How do you address these problems?**

16 A: I have attached a marked-up version of the draft rules as Exhibit PLC-2, and a
17 clean version of the edited draft rules as Exhibit PLC-3. This revision attempts
18 to remove ambiguities and redundancies, which could result in future disputes
19 and confusion. The revision also addresses the major issues listed above, which
20 I discuss in more detail in the subsequent sections.

21 **III. Types of Opt-Out and Requirements for Each**

22 **Q: Why is it important to clearly distinguish the two types of opt-out?**

23 A: The filing and compliance requirements for the two types of opt-out are quite
24 different. Various portions of the draft rules (such as subsection C(a), (b), (c),
25 (d), (f) and (h)) were written to address the SD opt-out and impose requirements

1 that are inapplicable to the efficiency-exhaustion opt-out. However, the Staff's
2 draft writes these subsections as if to apply those requirements to efficiency
3 exhaustion. The only requirement specific to the efficiency-exhaustion opt-out
4 filing is in subsection C(g), sandwiched between subsections that apply only to
5 the SD opt-out.

6 **Q: How have you corrected this problem?**

7 A: I specified that subsection C apply only to the efficiency-exhaustion opt-out and
8 moved the language applicable to the efficiency exhaustion opt-out into a new
9 subsection, C1. (In the final regulations, the sections would be renumbered, but
10 retaining the original numbering may reduce confusion in this proceeding.)

11 **Q: Did the draft rules propose adequate filing requirements for the SD opt-**
12 **out?**

13 A: Not quite. The filing for an SD-opt-out certificate should include a description
14 of the measurement of savings to be used to verify the savings, so the Commis-
15 sion can approve or reject the customer's plans for verifying its savings prior to
16 the opt-out. The process should be designed to minimize unpleasant surprises
17 for the customer, the utility, and the Commission. Since the energy use of
18 industrial facilities can vary widely with operating levels, the measurement of
19 savings must account for changes in output. The purpose of energy-efficiency
20 programs is to increase efficiency, not to reduce industrial output. A self-directed
21 efficiency project should not be deemed to be successful simply because the
22 customer has reduced its operations, or to have failed because the customer has
23 increased output.

24 In addition, some aspects of the requirements in subsection C were a bit
25 cryptic; I tried to clarify those in my draft.

1 **Q: Did the draft rules propose adequate filing requirements for the efficiency**
2 **exhaustion opt-out?**

3 A: No. The draft rules only require that the customer
4 provide an explanation of how the customer has exhausted its opportunity
5 to conduct further meaningful cost-effective EE programs and is unable to
6 realize benefits through participation in its utility's EE programs, including
7 a description of any measures implemented or investments made by the
8 customer that support that conclusion. (Subsection C(g))

9 Other than some confusion about roles (utilities conduct EE programs,
10 customers implement projects or measures), these requirements are fine, but far
11 from sufficient. The draft rules would not require that the customer provide any
12 information about its energy uses, or the cost-effectiveness of efficiency
13 improvement. While the Commission might decide that this level of detail is
14 implicit in the language of the draft rules, the regulations should spell out the
15 requirements as clearly as possible, to avoid unnecessary confusion and dispute.
16 The tight schedule proposed in the draft rules (which I do not propose to
17 change) makes clarity in expectations particularly important; there is little time
18 in the schedule for feedback and supplemental filings.

19 The edited rules in Exhibit PLC-2 and Exhibit PLC-3 clarify that the a
20 customer claiming that it has no cost-effective energy-efficiency options must
21 demonstrate that to be the case, using the Commission's cost-benefit tests.

22 **IV. Matching Time Periods for Self-Directed Opt-Out**

23 **Q: What are the problems with mismatching of time periods in the draft rules?**

24 A: I have identified three such problems:

- 25 • Subsection A(1) suggests that a customer who invested in any amount of
26 efficiency measures ten years ago would be exempted from efficiency

1 efforts, including paying its share of future utility programs and
2 implementing SD projects.

3 • Subsection A(2) suggests that a customer who plans to invest in any
4 amount of energy efficiency sometime in the next three years would be
5 similarly exempted from all other participation in energy efficiency.

6 • Subsection H would provide that “A Certificate approved by the Commis-
7 sion under Section 11 shall continue for the duration of the public utility’s
8 EE plan,” which could be up to three years. The requirement for receiving
9 a Certificate is that the customer demonstrate

10 EE savings at the customer’s facility in an amount equal to or greater
11 than the most current EE goals or standards established by the
12 Commission for the applicable program years,

13 without specifying that the savings need to be demonstrated for the entire
14 duration of the EE plan.

15 **Q: How should the timing of a SD Certificate be coordinated with the timing of**
16 **the customer’s implementation of energy-efficiency measures?**

17 A: First, the energy-efficiency measures eligible to be counted as part of an SD
18 project should be limited to those implemented following the Commission’s
19 December 10 2010 Order No. 15 in Docket No. 08-137-U. That order set goals
20 for efficiency improvements in 2011–2013, as percentages of 2010 sales. The
21 Commission’s targets do not include any savings achieved by customers in years
22 prior to 2011, with little or no utility support. Had every efficiency measure
23 adopted by an Arkansas gas or electric customer in 2001–2010 been included in
24 the Commission’s targets, those targets would have needed to be much higher to

1 have any effect.¹ For the SD option to be consistent with the Commission's
2 goals, it can only count savings achieved after 2010.

3 Second, customers should only be eligible for the SD option if they can
4 demonstrate that their savings in a calendar year meet the Commission's utility-
5 wide target for that year. They should not be allowed to opt out in 2012 based on
6 a promise that they will meet the target for 2013, or by demonstrating that it met
7 the target for 2011. Thus, Certificates should be issued, and compliance demon-
8 strated, for individual years.

9 **Q: How did you correct these problems?**

10 A: I deleted the portions of Subsection A that would allow customers to count out-
11 of-period free-rider and promises of savings. I modified Subsection H to align
12 the period of the Certificate with the period for which the customer demon-
13 strates savings.

14 **Q: What targets would a large customer need to meet to be eligible for the SD
15 option?**

16 A: To be eligible for an SD Certificate for 2012, an electric customer would need to
17 demonstrate savings of 0.5% of 2010 usage.² To be eligible for an SD
18 Certificate for just 2013, an electric customer would need to demonstrate
19 savings of 0.75% of 2010 usage. If the customer seeks a Certificate for both
20 2012 and 2013, it would need to demonstrate 0.5% savings by the end of 2012
21 and 1.25% by the end of 2013.

¹Of course, the pre-2011 savings are 100% attributable to free riders.

²Under the forward-looking approach in the draft rules, customers would not be able to retroactively opt out of 2011 energy-efficiency charges, so the 0.25% target would not be added to the 0.5% target for 2012.

1 **V. Verifying Self-Directed Project Savings**

2 **Q: Do the draft rules provide for verification of the savings from self-directed**
3 **efficiency projects?**

4 A: Subsection H would provide as follows:

5 At the end of the final program year included in the utility's EE program
6 plan for which the customer has received approval of a Certificate, the
7 customer shall file a report presenting the measurement and verification of
8 the achievement of the estimated EE savings supporting the request for a
9 Certificate.

10 This provision assumes that all Certificates will be issued for the entirety of the
11 utility's EE program plan; as I note in §IV above, the rules should not make that
12 assumption. In addition, Subsection H proposes that the customer's projected
13 savings for the first year of a three-year utility plan should not be reviewed until
14 after the end of the plan. This delay is unreasonable and excessive; achieved
15 savings should be reviewed annually.

16 **Q: Under the draft rules, what would be the consequences for a customer who**
17 **promises SD savings, is allowed to opt out of the utility EE charges, but is**
18 **not able to demonstrate any savings?**

19 A: There would be no consequences, other than the possibility that "the Commis-
20 sion may consider the customer's previous EE savings results as compared to
21 goal in approving a subsequent request for a new Certificate" (Subsection I).

22 **Q: If a large customer did not believe it would participate in the utility**
23 **efficiency programs, would there be any downside to the customer claiming**
24 **that it will implement an SD project, and doing nothing?**

25 A: No. The customer could avoid contributing to the costs of utility-administered
26 programs for up to three years, without doing anything other than filing the
27 paperwork to apply for the Certificate.

1 **Q: How should this problem be corrected?**

2 A: A customer with an SD Certificate should demonstrate its compliance, in terms
3 of energy savings, annually. Customers who do not demonstrate compliance
4 should expect to lose their certificate and pay the energy-efficiency charges it
5 avoided, plus a surcharge for the delay in payment and the additional costs
6 imposed on the Commission, the utility, the Attorney General, and other parties.
7 If the customer has acted in good faith, but has encountered difficulties in
8 delivery of equipment, scheduling of outages for installing efficient equipment,
9 or in commissioning of the equipment.

10 I added the requirement for annual review of the SD customer's
11 achievements in my rewrite of Subsection H, and added a new Subsection H1
12 establishing the consequences of failure to meet SD obligations, while leaving
13 the Commission the option to roll over the obligations to future years or take
14 other actions, as may be appropriate.

15 **VI. Adjusting the Utility's Goals**

16 **Q: How would the draft rules adjust the utility's goals to account for customer
17 opt-outs?**

18 A: Subsection N(1) would reduce the utility's base-year sales by the sales to
19 customers granted Certificates. In addition, Subsection N(2) would exclude
20 those customers' consumption from the calculation of any EE savings.

21 **Q: Are these provisions appropriate?**

22 A: No. Subsection N(1) should reduce the utility's base-year sales by the sales to
23 SD customers, who are committed to achieving the target energy reductions in
24 their own use. The other category of opt-out Certificates, for customers with no
25 further efficiency opportunities, should not be netted from the utility's base-year

1 sales. The utility's savings targets are based on experience with actual mixes of
2 customers, including those that are highly efficient and those with low effi-
3 ciency, those that are well organized and those that have difficulty making
4 commitments, those that are highly motivated to work with the utility programs
5 and those indifferent or distracted, and many other variations. If the savings
6 targets were to be based on only the base-year usage of the customers that are
7 most likely to participate in energy-efficiency programs, the percentage targets
8 would need to be much higher than the target the Commission has set based on
9 total sales.

10 **Q: What is the purpose of Subsection N(2)?**

11 A: I do not know. It is not clear how any customer's *consumption* would be
12 included in "the calculation of any EE *savings*" (emphasis added). Perhaps the
13 intent was that the SD customers' savings would not be included in the utility's
14 savings computations. Since the utility would have no role in achieving the
15 customer's savings, it should not claim them in its reported savings. While there
16 is no harm to repeating the standard that the utility cannot claim savings
17 achieved by other parties, it is not necessary here, so I deleted Subsection N(2).

18 **Q: Does this conclude your testimony?**

19 A: Yes.