STATE OF COLORADO

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January 25, 2008

The Honorable Buffy McFadyen, Chair, House Transportation and Energy Committee
The Honorable Jim Isgar, Chair, Senate Agriculture, Natural Resources, and Energy Committee
State Capitol, Rm 271
Denver, CO 80203

Dear Representative McFadyen and Senator Isgar:

During the 2007 legislative session, the General Assembly passed House Bill 07-1228, which was signed by the Governor and is now codified as §40-2-109.5 C.R.S. This new law required that the Public Utilities Commission

> *...develop a policy to establish incentives for consumers who produce distributed generation (DG), including, but not limited to small wind turbines, thermal biomass, electric biomass, and solar thermal energy*
>
> and
>
> *...consider whether a credit program similar to the renewable energy standard set forth in section 40-2-124 would work for consumers who produce distributed generation.*

The statute also directs the Commission to present the policy and its findings regarding a credit program to the House of Representatives Transportation and Energy Committee and the Senate Agriculture, Natural Resources, and Energy Committee. The technologies identified in this new law include thermal technologies (in contrast to technologies that generate electricity) that do not presently qualify for credit against the Renewable Energy Standard (RES).

The Commission is pleased to present the results of its investigation into incentives to promote distributed generation and the efficacy of a RES-like credit program for Colorado consumers who produce distributed generation.

The Commission's Process and Staff Report

In response to HB07-1228, the Commission opened Docket No. 07M-230E and directed the Staff of the Commission to solicit comments from interested parties on these topics. We also directed Staff to host a public workshop to elicit additional input and to engage interested parties about whether distributed generation (including production from solar thermal, geothermal, and biomass thermal resources) should receive credit against the RES. In response to our directive, Staff received written comments from numerous interested parties and conducted a workshop on August 21, 2007. The Commission received written comments from fifteen individuals and businesses; approximately thirty-two individuals participated in the workshop.

The outcome of this effort is the attached Staff Report entitled *Distributed Generation Incentives for Colorado Consumers*. The report includes a review of the information-gathering and analysis activities in this matter as well as Staff's analysis and recommendations for policy initiatives for Commission consideration in developing our policy and recommendations to the General Assembly. The report also includes a discussion of selected DG incentive programs in other states and a review of state and federal incentives presently available to Colorado consumers.

In addition to addressing the specific directives of HB 07-1228, the Staff report includes a comprehensive review of the options for promoting distributed generation and net metering in Colorado. The growth of net metering was found by the Staff to be closely linked to the promotion of distributed generation.

The recommendations presented in the Staff report are grounded on eight principles identified in section 5.1 of the report and are summarized below.

With regard to the specific charge in the statute to consider whether distributed generation should receive credit against the RES, the report finds that:

- Consumers who produce distributed electrical generation, such as that from small wind turbines and electric biomass, already receive renewable energy credits commensurate with the quantity of electricity generated. However, in small quantities and absent net metering incentive programs in much of the state, these credits may not have much economic value to consumers.

- For a variety of reasons detailed in the report, thermal (heat) production from technologies such as solar thermal, biomass thermal, and geothermal, should not apply against the RES, which is an electric standard. This does not mean that these renewable resources are not worthy of some form of public incentive, and the report describes a number of approaches that may be adopted to defray the above-market costs incurred by consumers who deploy them.

The report also makes eight recommendations to help foster distributed generation and net metering in Colorado. These are discussed in sections 5.2 through 5.5 of the report and are summarized on pages 13-14 of the Executive Summary. The report finds that none of these recommendations can be unilaterally implemented by the Commission. Most will require enabling legislation or action by other agencies.

Finally, the report recommends that a more progressive net metering policy be implemented by cooperative electric associations and municipal utilities and suggests that a DG set-aside may be the most effective mechanism for expanding distributed generation in these service territories.

Commission Policy Recommendations to the General Assembly

The Commission has reviewed and discussed the Staff's findings and recommendations, developed its policy recommendations as required by HB 07-1228 and now reports these to the General Assembly.

At the outset, we recommend that the General Assembly and the Commission consider the eight foundational principles identified by Staff as guidelines when evaluating initiatives to move toward a sustainable energy environment. These eight principles are:

1. Programs should be founded on measurable and transparent goals. Evaluation, measurement, and verification are critical to providing accountability to ratepayers and policy makers.

2. Responsibility for compliance should be borne equally by all consumers and companies.

3. There should be congruence between the population that pays for incentive programs and the population that benefits from them.

4. In order for renewable credits to be applicable to the Renewable Energy Standard, a distributed generation technology should displace electric energy from the grid.

5. The policy goals for promoting renewable energy should address society's need for clean energy considering environmental consequences, energy security, efficient use of scarce resources, and economic development at lowest cost. Incentives should be aligned accordingly.

6. Good public policy should focus on societal needs, not on specific technologies or the associated proprietary interests.

7. The policy should consider a broad range of possible incentives and funding sources, including tax credits and exemptions, rebates, cost sharing, grants, low interest loans, etc., in addition to ratepayer surcharges.

8. The goal of incentives should be to stimulate sufficient marketplace activity and induce cost reductions. The incentives should be designed to be eventually removed, not become permanent.

The Commission's specific policy recommendations include:

- Distributed electric generation, such as that from small wind turbines and electric biomass, already receive renewable energy credits commensurate with the quantity of electricity generated. No changes in law are necessary to qualify this distributed generation for RES credits. However, the practical economic value of this production to consumers will be significantly limited if the consumers do not have realistic net metering opportunities.

- Distributed thermal generation will be a valuable renewable resource in Colorado. Consumers who produce distributed thermal generation should receive incentives comparable in value to the incentives provided in law for producers of electric distributed generation. However, because thermal resources typically do not displace electricity in Colorado, thermal credits should not be credited against the RES. The General Assembly should consider incentives in the form of grants, low-cost loan programs and tax credits for distributed generation that could be accessed equally by consumers statewide.

- Programs to spread the costs and benefits of DG and net metering to co-op and municipal electric service areas offer the greatest potential for expanding DG in Colorado. Co-ops and municipal utilities supply approximately 45% of electricity in Colorado. Unless consumers served by these utilities have realistic opportunities to develop distributed generation resources, the potential for DG is correspondingly limited.

- The Commission finds that a statewide, uniform net metering policy is key to expanding distributed generation in Colorado. This finding is consistent with the recommendation in the PUC's Sunset Report that a substantially similar net metering policy should apply to all utilities in Colorado.

Additional Considerations

- The Commission is aware that the power contracts that cooperative electric utilities have with their principal suppliers often limit the flexibility that co-ops have in implementing net metering programs. These constraints, which may limit the size of net-metered systems on the co-op's grid, are likely to be a major impediment to the expansion of distributed generation in Colorado.

- There are certain details about a net metering regime that can significantly affect its success and usefulness to consumer-producers of distributed generation. One such detail concerns the period over which net metering reconciliation and payout for the net excess energy occurs. An end-of-calendar-year payout is stipulated in law at §40-2-124(1)(e). We heard comments that a more favorable closing date would be in the spring.

  A related detail concerns the frequency of reconciliation. In general, producers of DG are benefited by a longer reconciliation period, such as a year, and disadvantaged by a reconciliation period as short as one month. The PUC staff recommends a perpetual rollover of the net excess energy with no cash payout. The Commission agrees that this issue is one of the key details in a net metering regime and notes that this issue will likely be a subject of discussion in the 2008 legislative session.

- Another important detail related to distributed generation is the status of third parties who supply equipment to consumers who wish to produce DG. Colorado's current traditional regulatory framework (following from the enabling statutes) requires that a utility waive its exclusive service territory rights before service providers can operate DG systems and sell power to end use customers. This means, in effect, that the utility is the sole arbiter of who may provide certain DG systems (mainly photovoltaic) in its territory using a third-party financing method. The Staff report suggests that the Geothermal Heat

Suppliers Act, §40-40-101 *et. seq.* provides a model which should be considered as an approach to this issue when applied to other renewable resources.

The Commission hopes that the information contained in this letter and in the attached Staff report will assist the General Assembly as it grapples with these important energy policy issues. We stand ready to answer your questions about our recommendations and look forward to continuing to work with the General Assembly on these issues.

Sincerely,

Ron Binz

Ronald J. Binz
Chairman

James K. Tarpey

James K. Tarpey
Commissioner

Attachment