Advisory Committee to the Director of the Colorado Energy Office on the Effectiveness of SB13-252

FINAL REPORT

Submitted to the Director of the Colorado Energy Office

September 30, 2013

Background

The Advisory Committee to the Director of the Colorado Energy Office on the Effectiveness of SB13-252 was established by Executive Order B 2013-005 signed on the fifth day of June 2013 and amended by Executive Order B 2013-006 signed on the sixth day of June 2013. Executive Order B 2013-006 was further amended on the second day of August 2013 by Executive Order B 2013-07. The Executive Order established the following duties for the Committee:

1. To advise the Director on the feasibility of achieving the twenty percent renewable energy standard by the year 2020, as required by SB13-252.
2. To advise the Director on administrative and legal considerations related to the two percent consumer rate cap and the impact the rate cap will have on the ability for impacted utilities to comply with the twenty percent renewable energy standard.
3. To advise the Director on related legislation for the 2014 session.

This report documents the agreements and outcomes of Advisory Committee discussions on the duties listed above. The report was prepared by The Keystone Center and reviewed by the Committee.

Advisory Committee Members

The Advisory Committee was comprised of twelve voting members and three non-voting members:

Advisory Committee Members (Voting)

- Marc Arnusch (Arnusch Farms)
- Bruce Driver (Western Resource Advocates)
- Mike Kopp (Intermountain Rural Electric Association)
- Chris Kraft (Badger Creek & Quail Ridge Farms)
- Dave Lock (Tri-State Generation & Transmission Association)
- Chip Marks (Agfinity, Inc)
- Pete Maysmith (Conservation Colorado)
- Dan McClendon (Delta Montrose Rural Electric Association)
- Fred Menzer (Climax Molybdenum Company)
- Lisa Nolder (Quantum Renewable Energy)
- Kent Singer (Colorado Rural Electric Association)
- Jerry Vaninetti (Renewable Energy Systems Americas, Inc)

Advisory Committee Members (Non-Voting)

- Joshua Epel (Colorado Public Utilities Commission)
- John Salazar (Colorado Department of Agriculture)
- John Suthers (Colorado Attorney General Office)

Process

Advisory Committee Meetings

The Advisory Committee met on three occasions between July, 2013 and September, 2013:

- The first meeting of the Advisory Committee was held on July 10, 2013 starting at 1:00pm and adjourning at approximately 5:00pm; it was held at the Colorado Energy Office in Denver, CO.
- The second meeting of the Advisory Committee was held on August 7, 2013, starting at 9:00am and adjourning at approximately 5:00pm; it was held at the Centennial Building in Denver, CO.
- The third meeting of the Advisory Committee was held on September 4, 2013, starting at 9:00am and adjourning at approximately 4:00pm; it was held at the Centennial Building in Denver, CO.

All Advisory Committee meetings were open meetings and observers were in attendance at each meeting. All meetings were facilitated by Julie Shapiro, Senior Associate at The Keystone Center. Notes were taken by Brooke Trainum, Associate at The Keystone Center. Meeting minutes have been included as appendices within this report and are posted on the Colorado Energy Office website: http://www.colorado.gov/cs/Satellite/GovEnergyOffice/CBON/1251643679171.

Definition of Consensus Agreement

At its first meeting, the Committee agreed to use a consensus process for decision-making. Consensus reflects the agreement of voting members of the Committee. For the purposes of this Committee, consensus is defined as agreement that all voting members can support or abide by and to which no one formally objects. Where consensus was not reached, divergent perspectives are documented. In the absence of consensus, the voting members of the Committee gauged the level of support on recommendations for related 2014 legislation through a voting process. Votes were placed with the understanding that only consensus recommendations would be characterized as recommendations of the Committee as a whole, but the number of Committee members in support of and in objection to the proposals for related 2014 legislation as well as Committee members who abstained from registering support or objection would be recorded along with reasons for support and concerns that were discussed.

Committee Agreements and Other Outcomes

Below are the agreements and other outcomes of Committee discussions, organized according to the duties of the Advisory Committee as established in the Executive Order.

1. To advise the Director on the feasibility of achieving the twenty percent renewable energy standard by the year 2020, as required by SB13-252.

Advisory Committee Members reached consensus agreement that it is feasible to achieve the twenty percent renewable energy standard by the year 2020 assuming the use of Renewable Energy Credits (RECs) as part of the resource portfolio for meeting the standard.

Committee members identified various considerations and different perspectives related to costs and feasibility of investment in new renewable energy projects that produce electricity and RECs (described below). However, the Committee agreed that it was not its role to undertake resource planning to explore different scenarios for meeting the standard.

Factors and considerations discussed by the Committee that impact the feasibility of investment in new renewable energy projects include the following:

- Load growth projections
- The impact of contracts and power purchase agreements on the ability to develop new resources as well as the implications of these contracts for who pays for new projects, over what timeframe, and with what tax credits
- Renewable capacity development needs
- Back-up capacity development needs
- Transmission line development needs and the influence of the permitting process on transmission line development timelines
- The availability and origin (in-state vs. out-of-state) of RECs purchased separate from energy, and the benefit to the ratepayer of the purchase of these RECs
- The recovery timeframe for capital investment costs and whether investments can be recovered over time
- The projected relationship between capital investment for renewables and reduced expenditures for energy costs over time
- The need for replacement capacity vs. new capacity and the role of renewables in displacing other energy sources
- The build out time for new projects
- Which renewable resources are eligible, which are developed (for example, wind, solar, or hydropower), and the impact of multipliers for specific resources
- The role and performance of future technologies
- Changing or declining costs of renewable technologies over time
- The impact of changing fuel prices on the cost-effectiveness of renewables

- Energy markets, including markets for RECs
- The impact of the two percent retail rate cap established by SB13-252 on all the above
- The potential that certain customers will self-generate energy if costs go too high, which will further impact rates to consumers left on co-op systems

Committee members held different perspectives regarding feasibility considerations; for example, Committee members expressed different perspectives regarding the costs, timelines, and required development of renewable capacity, back-up capacity and transmission capacity associated with investment in new renewable energy projects. Perspectives were based on internal data cited by utilities and other factors referenced by other Committee members. Committee members also discussed that the use of RECs that do not result in investment in new renewable energy projects may not achieve the additional infrastructure, return-on-investment, and stimulation to the economy intended by SB13-252. However, it was also expressed that there can be parallel investment in RECs and infrastructure and that long-term REC contracts can help create investment in new projects over time, which may or may not be sited in Colorado.

2. To advise the Director on administrative and legal considerations related to the two percent consumer rate cap and the impact the rate cap will have on the ability for impacted utilities to comply with the twenty percent renewable energy standard.

Advisory Committee Members agreed that the following are administrative and legal considerations related to the two percent consumer rate cap:

- The details of calculating and applying the rate cap should be determined by the implementers (e.g., Tri-State and retail co-ops) consistent with the Renewable Energy Standard as amended by SB13-252.
- The two percent rate cap is not compounded.
- The cap is a retail cap that applies to each customer and is calculated annually.
- There is no end date for the cap. However, it is possible that expenditure of the full two percent may not be needed to meet the standard.
- It is a hard two percent cap and the “off-ramp” is real with relation to compliance with the twenty percent by 2020 renewable energy standard.

The Committee agreed that it was not its role to undertake resource planning; it thus did not assess the impact of the rate cap on the ability of impacted utilities to comply with the twenty percent renewable energy standard. A utility can assess in its resource planning process the amount of renewables it can acquire within the rate cap; if a utility cannot meet the twenty percent standard by 2020, its report filed with the Public Utilities Commission explains progress, barriers, and future plans to meet the RES. The Committee noted that the Colorado Public Utilities Commission does not have enforcement authority over wholesale generation and transmission cooperatives with respect to meeting the twenty percent standard. Some Committee members also stated the view that the Public Utilities Commission does not have enforcement authority over retail cooperative electric associations with respect to meeting the percent renewables standard.

Throughout discussions of the two percent consumer rate cap, several Committee members also raised questions regarding the potential impact of a rate increase on rural energy consumers and on costs for agricultural products and inputs and suggested the need for mitigation measures to address these concerns. Some Committee members also noted that the calculation of the existing two-percent rate cap that applies to customers of investor-owned utilities has been the subject of extensive litigation and the implementation of the rate cap in SB13-252 for electric cooperatives could result in similar litigation.

3. To advise the Director on related legislation for the 2014 session

The Advisory Committee is not making a consensus recommendation on related legislation for 2014. However, the Committee discussed the following recommendations and registered level of support and objection for each, along with accompanying rationales and concerns. A summary of the discussion for each recommendation is provided; numbers reflecting supporting, opposing, and abstaining members refer to views of *voting members* of the Committee only.

- ### Summary of non-consensus recommendations for related legislation in 2014 discussed by the Advisory Committee

1. Extend the timeframe for compliance beyond 2020.

The Committee discussion on this proposal focused on whether the intent of SB13-252 was economic development or reaching twenty percent by 2020 even if the standard is not met only by new projects on the ground. There was discussion as to what is feasible to build by 2020 given the current landscape of permits, costs, complexity of projects, and transmission lines. Some members believed that extending the timeframe would allow for cost planning and construction of projects, whereas the 2020 timeframe would result in the use of RECs without construction of projects. There were also concerns regarding the unintended consequences of forcing customers in rural areas to purchase renewable energy and the effect of possibly causing customers to go off the grid. However, not all Committee members agreed an extended period was needed to construct projects and it was also noted that if a qualifying wholesale utility could not meet the standard by 2020 then they would only have to explain why and how they would continue to work towards the standard in their report to the PUC. A Committee member commented that reopening the legislation, in general, may be undesirable. Another Committee member expressed concern that in fact the Committee's explicit directive was to put forward recommendations to alleviate the impacts of SB13-252 and it was not the Committee's charge to determine what would be the political dynamics at the General Assembly.

The Committee did not reach consensus with respect to recommending an extension of the compliance timeframe. When asked for a show of hands regarding those in support of extending the timeline to 2025 the vote was as follows:

- For: 5

- Against: 3
- Abstain: 4

2. *Sunset the two percent rate cap.*

The proposal to sunset the cap was made in order prevent consumers from paying an additional two percent indefinitely and also to address a concern that there is not clarity or transparency with utilities on how the two percent rate cap will work or be implemented. Committee members discussed that the two percent increase may not be needed or used each year and that the cap is meant to protect consumers from paying more. It was noted that a sunset of the cap could allow utilities to charge more than two percent and thus would not be desirable in meeting the intent of the proposal in protecting consumers from additional costs. A consideration was put forward that utilities need the two percent to allow for growth and the building of new projects. It was noted that a related proposal could be to sunset the bill so that there is not always the potential for a two percent rate increase, however this was not discussed in depth.

The Committee did not reach consensus with respect to recommending a sunset of the two percent rate cap. When asked for a show of hands regarding those in support of a sunset of the 2% rate cap the vote was as follows:

- For: 0
- Against: 10
- Abstain: 2

3. *Scale back the eligibility of Renewable Energy Credits (RECs) toward compliance with the standard.*

Utilities can purchase and retire RECs for compliance; however, some Committee members are concerned that this is not consistent with the intent of the legislation because it may not stimulate economic development. Therefore, a recommendation to scale back the use of RECs over a ten year period could encourage building of new renewable projects. However, there are concerns that RECs are needed to reach compliance under the current legislation and timeframe, and scaling back their eligibility would make it more difficult to comply. It was noted that there are two ways to be compliant with the RES mandate: co-ops may generate or buy and retire RECs; the issue was raised by a Committee member that for co-ops that are wholesale power purchasers rather than generation companies, by contract, REC-based compliance is the only option. A Committee member also raised the issue that this recommendation would raise legal considerations around the Commerce Clause of the U.S. Constitution if there are limits placed on where RECs can be purchased as well as the number that can be used.

The Committee did not reach consensus with respect to recommending scaling back the eligibility of RECs toward compliance with the standard. When asked for a show of hands regarding those in support of scaling back the eligibility of REC use the vote was as follows:

- For: 3

- Against: 4
- Abstain: 5

4. *Include other eligible resources towards the Renewable Energy Standard, specifically large hydropower.*

The Committee discussed a proposal that all non-carbon-emitting resources should be eligible under the RES and focused specifically on the inclusion of existing and new hydropower projects of any size as eligible under the RES. Some felt that while Colorado might ultimately move toward a clean energy standard based on carbon emissions, to achieve that result by amending SB13-252 in 2014 was likely impractical.

Proponents of making existing and new large hydro RES-eligible stated the following: EPA considers hydropower a renewable resource; it is time to revisit the issue of the size of hydropower projects that are eligible under the RES, as the size was set arbitrarily in the statute; new hydropower potential exists in both new dam building as well as in adding hydropower to existing dams with minimal environmental impact; hydropower is non-carbon emitting; hydropower provides baseload energy, does not require natural gas plants to integrate, as do wind and solar, and allows cooperatives to make use of the abundant renewable energy on their systems; a possible new, large hydro project is under consideration in Northern Colorado; large hydro could be included as eligible under certain conditions; inclusion of existing large hydro in the RES would not entail the same environmental and site-availability challenges as new hydro; and new large hydropower projects can bring benefits to agriculture in terms of water storage.

Opponents of making existing and new large hydro RES-eligible stated the following: large storage reservoirs can have high evaporation rates that can diminish water storage capabilities; the intent of the RES is to encourage new, environmentally-friendly technologies that are not yet well-integrated into the grid and large hydro does not meet these criteria; the environmental impacts of large hydro are significant and have cost hundreds of millions of dollars in our region to begin to remediate; there are no more suitable places in the West to construct new, large hydro projects due to environmental concerns; federal financing and FERC licensing would be unlikely for such projects; inclusion of existing large hydro would mean Tri-State would not have to take other steps to comply with the new 20% standard; and, there is strong support for small hydro in the form of state funding, and studies have pinpointed the location of small hydro potential in Colorado.

The Committee did not reach consensus to recommend inclusion of large hydropower as an eligible resources under the RES. When asked for a show of hands regarding those in support of adding existing and new large hydropower facilities, the vote was as follows:

- For: 8
- Against: 4
- Abstain: 0

5. *Include energy efficiency as an eligible resource under the RES.*

The Committee discussed a recommendation that there should be incentives to replace technology with more efficient systems that conserve energy. The intent of the recommendation was that if a utility/consumer can document energy savings then it should count similarly to renewable energy produced, or as a credit since there would be a net decrease in the overall amount of energy needed. However, it was also suggested that an additional credit would not be needed because energy efficiency reduces the RES requirement by reducing the energy sales on which the RES 20% is based. It was suggested that while there may be general support for promoting energy efficiency, it was not appropriate to include energy efficiency in the RES. There were also questions as to the method for documenting the energy savings, how rate structures affect this, and how this meets the intent of the RES in promoting the building of select new sources of clean energy.

The Committee did not reach consensus to recommend inclusion of energy efficiency as an eligible resource under the RES. When asked for a show of hands regarding those in support of adding energy efficiency savings to the RES the vote was as follows:

- For: 8
- Against: 3
- Abstain: 1

• Summary of non-consensus recommendations for additional opportunities beyond related legislation for 2014

Following its discussions of related legislation for 2014, the Advisory Committee discussed recommendations for opportunities beyond related legislation in 2014 and/or beyond the specific discussion of SB13-252 and the Renewable Energy Standard. The Committee is not making a consensus recommendation on additional opportunities, however some Committee members felt that the focus of these conversations was primarily for idea-generation rather than for seeking consensus at this time and that it would be useful for the discussion on these opportunities to continue in the future. The opportunities discussed include:

1. *Create a long-term energy plan for the State.*

It was suggested that Colorado should develop a long-term energy plan that would be similar to the state's 50-year water plan and would go beyond the Renewable Energy Standard and SB13-252. It was suggested that a long-term plan could provide guidance and goals for energy development and economic development. There was concern about creating a plan given uncertainties around future energy costs and changes in technology. There was also a question as to how binding the energy plan would be and the effect it would have on planning for the utilities. It was noted that agriculture faces these kinds of changes and uncertainties regularly but that having a plan creates a clear path and direction for where the State is heading. Others expressed that while they might generally support the concept, there are other initiatives emerging at the State level that might produce an energy plan and that the Committee should not make this recommendation without knowing the specifics of these other activities. There was not consensus to recommend the development of a long-term energy plan, however some Committee members expressed interest in the potential for further discussion in the future.

2. *Develop an appropriations measure for cost sharing for energy efficiency to support agricultural communities.*

This recommendation would encourage the leveraging of federal funds by the State to support energy efficiency for agriculture. While some Committee members expressed that it was not in their charge to endorse this type of measure, others expressed support for the recommendation. There were also questions expressed regarding where the State funds would be generated from. There was not consensus to recommend an appropriations measure for cost-sharing for energy efficiency to support agricultural communities.

3. *Request to the Governor to support large scale renewable projects.*

The request would be made for support for projects such as wind, solar, and hydropower. The underlying intent of this recommendation is to increase the supply available to Colorado consumers as well as cost reductions to the consumer with an increased supply. The Governor could provide support in various ways, e.g., through verbal support or funding; Committee members had questions regarding the mechanisms for providing support and the sources of funding for projects. There was not consensus to recommend that the Governor support large scale renewable projects.

4. *Increase the current contractual limit of 5% renewable energy that co-ops under Tri-State can produce to 10%.*

Some retail co-ops and their members would like to develop renewable projects in-house because they believe that the money invested would be a return back to the members, and thus there is an interest in raising the contractual limit on the amount of renewable energy that retail co-ops can produce. There was also interest expressed in co-ops partnering with farmers on renewable projects to help generate and deliver energy at cost. However, it was recognized that the contractual obligations that currently exist as well as the secured bonds in place between the retail co-ops and Tri-State make these recommendations better suited for discussion within the family of co-ops rather than within the Committee, and thus the Committee neither sought consensus nor voted on the recommendation.

Conclusion

The Advisory Committee to the Director of the Colorado Energy Office on the Effectiveness of SB13-252 was charged with three duties under Executive Order B 2013-005:

1. To advise the Director on the feasibility of achieving the twenty percent renewable energy standard by the year 2020, as required by SB13-252.

2. To advise the Director on administrative and legal considerations related to the two percent consumer rate cap and the impact the rate cap will have on the ability for impacted utilities to comply with the twenty percent renewable energy standard.
3. To advise the Director on related legislation for the 2014 session.

This report documents the consensus of the Advisory Committee regarding its advice to the Director on the first two duties. The Advisory Committee is not making a consensus recommendation to the Director regarding the third duty; however, this report documents the non-consensus positions on related legislation for the 2014 session that were discussed by the Committee and includes the reasons for and level of support and objection for each.

Finally, the Committee served another purpose, perhaps not anticipated in its charge. There was considerable discussion among Committee members about the direction of the utility industry and ideas for reform of Colorado's energy policies over the long run. While no formal consensus was reached on these issues, some thought that it would be useful for the discussions to continue in another forum, likely bringing additional people and interests to the table, but without duplicating other such efforts that may be underway. Several Committee members expressed throughout the process that drafting legislation designed to be carried out by rural electric utilities should involve communication with the affected utilities and rural consumers before new bills become law.

Appendices

The final minutes from the three meetings of the Advisory Committee are included within this report, beginning on the next page. All original formatting and page numbering of each set of minutes has been retained and minutes are presented in order of meeting occurrence (July 10, 2013; August 7, 2013; and September 4, 2013).

July 10, 2013 ● 1:00pm – 5:00pm ● Colorado Energy Office, 1580 Logan Street, Denver CO

Meeting Minutes (FINAL – Amended 8/14/13)[1]

This Advisory Committee meeting was established by Executive Order B 2013-005 signed on the fifth day of June 2013 and amended by Executive Order B 2013-006 signed on the sixth day of June 2013. The meeting was facilitated by Julie Shapiro, Senior Associate at The Keystone Center. Notes were taken by Brooke Trainum, Associate at The Keystone Center. Members of the Colorado Energy Office present included: Jeffrey Ackermann, Tracee Bently, and Chris Worley. The Advisory Committee meeting was an open public meeting and observers were in attendance.

Advisory Committee & Alternates in Attendance:

Advisory Committee Members (Voting): Marc Arnusch (Arnusch Farms), Bruce Driver (Western Resource Advocates), Mike Kopp (Intermountain Rural Electric Association), Chris Kraft (Badger Creek & Quail Ridge Farms), Dave Lock (Tri-State Generation & Transmission Association), Chip Marks (Agfinity, Inc), Pete Maysmith (Conservation Colorado), Dan McClendon (Delta Montrose Rural Electric Association), Jerry Vaninetti (Renewable Energy Systems Americas, Inc)

Advisory Committee Members (Non-Voting): Joshua Epel (Colorado Public Utilities Commission), John Salazar (Colorado Department of Agriculture), John Suthers (Colorado Attorney General's Office)

Alternates (present in absence of their principal): Geoffrey Hier (Colorado Rural Electric Association)

Other Designated Alternates: Cory Blair (Renewable Energy Systems Americas, Inc), Bernie Buescher (Colorado Attorney General's Office), Jenifer Gurr (Colorado Department of Agriculture), Todd Lundy(Colorado Attorney General's Office), Amy Robertson (Tri-State Generation & Transmission Association), Frank Swain (Conservation Colorado)

Purpose/Agenda

I. **Welcome and Agenda Review**
II. **History, Overview of Executive Order, Goals of the Advisory Committee**
III. **Comments from Non-Voting Members**
IV. **Decision Making Guidelines, Participation Ground Rules, Draft Process/Schedule Overview**
V. **How Many Megawatts would it take to be in Compliance with 20% Renewables by 2020?**

[1] August 14, 2013 amendments include changes and clarifications to the section detailing Advisory Committee and Alternate attendance.

Consensus Agreements:

- Committee members agreed to use a consensus process as outlined in the Decision Making Process document provided to the Committee (*note: the document is included at the end of these minutes*).
- Committee members agreed that the Committee would not select a chairman and vice-chairman and that The Keystone Center would provide the administrative, reporting and facilitation duties throughout the Advisory Committee process; The Keystone Center will prepare a draft agenda for each meeting and share it with the Committee for its review and will share the draft meeting minutes with the Committee members for review prior to finalization.
- Committee members agreed on the ground rules and to act in good faith and honor them throughout the process (*note: the Participation Ground Rules document is included as a reference at the end of these minutes*.

Additional Outcomes:

- It was clarified that the Committee member meetings are open meetings and that this meeting was noticed on the Colorado Energy Office website as well as through a media press release.
- It was clarified that the Director of the Colorado Energy Office shall use his discretion to fill the 11th seat of the Advisory Committee. Suggestions were given by the Advisory Committee members as to other sectors that may contribute to the conversations throughout the process.
- The Committee determined through polling that the next meeting will be on August 7, 2013 from 9:00am to 5:00pm at a location to be announced. Dates for future meetings will be determined through an online scheduling poll. *(Post-meeting update: the next meeting will be at the Centennial Building, 1313 Sherman Street, Denver, CO, Room 220).*
- Topics and presentations for future meetings were discussed and members will send additional ideas to The Keystone Center.

Action Items:

- All Advisory Committee members will designate an Alternate in the case they cannot attend an Advisory Committee meeting. In the event an Advisory Committee member cannot attend a meeting, the alternate should be fully prepared to participate on behalf of the member and/or their organization. Committee members will send contact info for their Alternate to The Keystone Center.
- The Keystone Center will send out a poll to all Advisory Committee Members to determine the dates for later meetings.
- All Advisory Committee Members will send their suggestions for topics and presentations to The Keystone Center.

Next Meeting:

- The next meeting will take place August 7, 2013 from 9:00am to 5:00pm at the Centennial Building, 1313 Sherman Street, Denver, CO, Room 220.

Meeting Notes:

I. Welcome and Agenda Review

The first meeting of the Advisory Committee began shortly after 1:00pm with introductions of Committee members, alternates, observers and the facilitation team. A question was raised by a committee member as to whether there was proper notice of the meeting. It was clarified that notice of the Advisory Committee meeting was posted on the Colorado Energy Office website as well as in a press release. A discussion of the role of the facilitators, election of a chairman and vice-chairman, and other procedural questions was deferred to the decision-making discussion later on the agenda.

II. History, Overview of Executive Order, Goals of the Advisory Committee

Jeffrey Ackermann, Director of the Colorado Energy Office, spoke to the history of Colorado Renewable Energy Standard, as well as the Executive Order, the charge to the committee, and the goal of the committee. The Colorado Energy Office is committed to providing professional facilitation services to ensure an effective meaningful process, provide additional resources as needed, receive a final report with an open mind as to what is best for Colorado, and to pursue the committee recommendations with the support of the Governor's Office during the 2014 Legislative session.

The Advisory Committee is charged with advising the Director of the Colorado Energy Officer with:

- The feasibility of achieving the twenty percent renewable energy standard by the year 2020;
- Administrative and legal considerations related to the two percent consumer rate cap and the impact the rate cap will have on the ability for impacted utilities to comply with the twenty percent renewable energy standard;
- Related legislation for the 2014 session.

Moreover, the Advisory Committee members will bring data and information pertinent to the discussions and actively engage in the process with the goal of consensus around the process, inputs, analytical data and results.

Finally, the topic of nominating the eleventh member to the Advisory Committee, as described under the Executive Order, was discussed and suggestions were given to the Director of the Colorado Energy Office for further contemplation. Suggestions included an individual representing consumer advocacy interests and an individual representing local community/rural development/energy economics.

III. Comments from Non-voting Members

John Suthers (Colorado Attorney General's Office), Joshua Epel (Colorado Public Utilities Commission) and John Salazar (Colorado Department of Agriculture), each discussed their roles as non-voting members of the Advisory Committee. Each of the non-voting members noted their intent to assist the Committee where possible. It was noted that the Public Utilities Commission does not regulate Tri-State and has no interest in doing so. Commissioner Salazar noted his concern over the feasibility of the 20% by 2020 and the possible need for an extended timeframe and also noted his concern regarding the impact on agriculture and the desire to explore partial exemptions for agriculture end users.

IV. Decision Making Guidelines, Participation Ground Rules, Draft Process/Schedule Overview

The Keystone Center provided an overview of the Decision Making Guidelines document as well as the Participation Ground Rules document *(note: both of these documents are included at the end of these minutes)*. Advisory Committee members discussed the definition of consensus and keeping an open dialogue throughout the process. The discussion as to whether the Committee should elect a chairman and vice-chairman was held, and based on the language of the executive order as well as the purpose of the Advisory Committee, it was determined that a chairman and vice-chairman would not be elected. Furthermore, there was a discussion as to the role The Keystone Center would play throughout the process. The Committee agreed that The Keystone Center will provide administrative services, facilitation, note taking, and a final report based on the decisions of the Advisory Committee. The Keystone Center will also prepare a draft agenda for each meeting and share it with the Committee for its review at least 2 weeks prior to the meeting; the agendas will be finalized a week in advance of the meeting. Further, The Keystone Center will share the draft meeting minutes with the Committee for their review prior to finalization. The final report will be approved by the members of the Advisory Committee before it is given to the Director of the Colorado Energy Office. Regarding the participation ground rules, the Advisory Committee discussed preparing alternates fully to participate in future meetings if needed and to ensure that all presentations and data could be understood across the sectors, including but not limited to, explaining acronyms and technical terminology. The Committee also discussed using discretion and avoiding attribution when discussing the Committee externally. The Committee agreed to the ground rules. It was clarified that the Alternate can vote in the absence of the primary Committee member.

The application of the Colorado Open Records Act (CORA) to this Committee was discussed. It was clarified that this Committee falls under CORA, meetings are open, notice of the meetings must be provided, minutes must be made available, and emails among Committee members can be discovered through the CORA process.

A proposed process schedule involving a total of 6-half day meetings was discussed. It was determined by the Advisory Committee that there would be fewer meetings for longer duration. Polling over break was used to determine that the next meeting occurring on August 7, 2013 from 9:00am to 5:00pm at a location to be determined at a later date. Polling will be used to identify future meeting dates between now and the end of October.

Following a break, the Committee discussed the overall discussion schedule. While reiterating the underlying purpose of the Advisory Committee, the members identified the following list of agenda topics, presentations, and data they would like to discuss in future meetings:

- What the language of SB252 says and how it might work; what are the elements of the legislation; what are the multipliers and kickers; what is the enforcement or regulation of SB252.
- Feasibility considerations and obstacles; considerations that the co-ops face in reaching the targeted goals.
- What the two percent rate cap means and how it is applied; what are its impacts.
- What are the opportunities for recommendations to help clarify and create feasibility; what are possible solutions, e.g., those related to efficiency, end-user impacts, etc.

V. How Many Megawatts would it take to be in Compliance with 20% Renewables by 2020?

The group had an initial discussion on the considerations impacting the number of Megawatts needed in order to meet the twenty percent renewable standard by 2020. The discussion also brought out other specific interests and concerns as related to SB252. Discussion themes and points made include the following; these include discussion points and comments made by individual Committee members; consensus on these comments was not tested and therefore none of the following should be interpreted as consensus statements:

- Currently, under the previous 2007 standard the Co-ops in Colorado are striving to reach ten percent renewable energy, so they have a rough idea of what it would take to get to twenty percent. However, there is a need to take a look at both the generation and the transmission sides.
- Various projections for the amount of megawatts needed to reach the twenty percent standard by 2020 are roughly between 300 and 400 Megawatts. Projections depend on many variables, such as capacity factors, load growth, whether coal-mine methane and pyrolysis are factored in, whether the total projection includes Intermountain Rural Electric Association, and other factors.
- It was pointed out that the RES, including amendments to it by SB 252, establishes energy production goals for “eligible energy resources” stated in terms of megawatt-

hours, not capacity stated in megawatts and, thus, we should be discussing megawatt-hours, not, strictly speaking, megawatts.

- There are factors such as multipliers that affect the actual number that is needed and how the standard can be reached. All kickers/multipliers have expiration dates which will play a role in meeting the twenty percent by 2020.
- A participant commented that wind and solar power are renewable energy resource options but they need to have a back-up energy source, such as a gas power plant, which would cost money to build if the back-up capacity is not already on line.
- It was noted that all these resources are dependent on transmission. If there is transmission, then building the source is much easier. It was suggested that energy sources should add sources to where the transmission is available. The cost efficiency of building new transmission lines was questioned.
- There was a question regarding the role of hydropower in meeting the standard. It was commented that the reason for the increase in the Renewable Energy Standard is to develop new technologies. Large hydro projects are well developed and the best sites have already been used. Small hydro projects will still count towards the Renewable Energy Standard.
- Buying renewable energy credits allows entities to meet the standard. However, a Committee member noted that they are not a benefit to the customer because they do not add energy to the system. Furthermore, credits have a shelf life of five years from once the energy is created.
- There was brief discussion of costs of meeting the standard, what they include, and what costs the 2% rate cap applies to. For example, do long-term costs include effects of federal mandates and/or possibility that coal plants may be retired?
- Some Co-ops would like to meet the twenty percent standard because they see this as an opportunity for long-term stability and reduced costs to the end-users, but have issues tapping resources due to contract restraints. For example, under Tri-State contracts, Co-ops can produce up to 5% of the renewable generation.
- A goal of those in the farming communities is to have a broad pool of energy to draw from that keeps the energy affordable and provides long-term cost stability.
- There was brief discussion on the purpose of SB252. The history of RES was discussed as were various interests in cutting emissions, building a renewables marketplace for economic reasons, creating diversified resources, and promoting long-term resource and cost stability. It was noted that within the scope of the Executive Order, the Committee's charge is to focus on the feasibility of implementing the standard and the considerations and impacts associated with the 2% rate cap.

Meeting adjourned at 5:00pm.

Decision-Making Guidelines
Advisory Committee to the Director of the Colorado Energy Office on the Effectiveness of SB13-252

OBJECTIVES
Objectives of the Advisory Committee as established under Executive Order B2013-005:

1. To advise the Director of the Colorado Energy Office (CEO) on the feasibility of achieving the twenty percent renewable energy standard by the year 2020, as required by SB13-252;
2. To advise the Director of CEO on administrative and legal considerations related to the two percent consumer rate cap and the impact the rate cap will have on the ability for impacted utilities to comply with the twenty percent renewable energy standard; and
3. To advise the Director on related legislation for the 2014 session.

CONSENSUS
The Advisory Committee will strive to reach consensus on recommendations to the Director of the Colorado Energy Office. For the purposes of this Committee, consensus is defined as agreement that all participants can support or abide by and to which no one formally objects.

The Committee will strive for consensus agreements on…

- **Inputs:** Is there agreement on the parameters, assumptions, definitions and data that underlie feasibility and rate cap impacts analyses/assessments? *(examples: number of megawatts needed to reach 20% renewable by 2020; definition of cost; interpretation of 2% rate cap)*
- **Outputs/Outcomes:** Is there agreement that assessment outcomes, projections and/or estimates of feasibility and rate cap impacts are reasonable, given the inputs (parameters, assumptions, definitions, and data) that were used? *(examples: cost of compliance; rate impact analysis; feasibility assessment)*
- **Legislation:** Is there agreement on legislative recommendations to the Director of CEO?

DECISION PROCESS AND FINAL REPORT
Throughout the process, factual information, perspectives, and concerns will be presented and discussed; proposals and options/scenarios will be brainstormed, narrowed and refined; and a draft set of potential findings and/or recommendations of the Committee with respect to the three objectives above will be developed. Consensus will be tested throughout the process in an effort to identify where opinions either converge or diverge, where more information may be needed on a particular issue, and where alternative scenarios should be pursued.

The Committee will refrain from final decision-making until the end of the process. At its final meeting, the Committee will review the draft set of potential findings and recommendations and determine where consensus exists and where divergent perspectives persist. A final report documenting these findings and recommendations will be provided to the Director of the Colorado Energy Office.

Note: The Executive Order refers to voting and non-voting members of the Advisory Committee. All members will participate in conversations throughout the process. Final findings and recommendations will only represent the consensus and/or opinions of voting members.

Participation Ground Rules
Advisory Committee to the Director of the Colorado Energy Office on the Effectiveness of SB13-252

PARTICIPATE
- Attend and actively participate in each meeting. Share your ideas and your concerns.
- If you cannot attend a meeting, ensure that your alternate is fully prepped to participate on behalf of you and your organization.
- Help others to understand you by explaining acronyms and technical terminology that may not be familiar to everyone at the table.

LISTEN
- Everyone should have a chance to be heard and to hear others. Therefore, side conversations or interruptions while someone is speaking should be avoided.
- Be respectful regarding the use of cell phones, computers and other technologies.

SPEND TIME WISELY
- Be sensitive to the length and pertinence of comments as well as the importance of encouraging participation from all members of the group.
- Avoid repeating points that have already been made by others, except to agree briefly.
- Stay within the scope of Committee as well as the meeting agenda and objectives.

POSTPONE JUDGEMENT
- Remain open-minded about proposals, ideas, and concerns while different points of view are being presented and discussed. Rather than label particular proposals as "good" or "bad," seek to understand the underlying concerns that are expressed in a proposal.
- Understand and respect the different pressures and limits of each participant from their organizations and work to find solutions that fit within everyone's interests and limits.

FOCUS ON THE ISSUES
- Disagreement is inevitable, but being disagreeable is not; focus disagreement on the issues rather than on perceived motives, relationships, or personalities.
- Refrain from behavior that denigrates other participants or is disruptive to the work of the group.
- Seek and incorporate factual information into deliberations.

BELIEVE IN THE PROCESS
- Focus on what is within this group's control and purview; recognize differences but avoid rehashing past conflicts.
- Take ownership in this process; work within it, avoid actions that would undermine it, and avoid elevating issues before the process has a chance to try to resolve them.
- Use discretion when communicating about discussions still in process; avoid attributions.
- Work through disagreements together and strive for consensus solutions.
- Allow the facilitator to enforce these ground rules.

August 7, 2013 ● 9:00am – 5:00pm ● Centennial Building, 1313 Sherman Street, Denver CO, Room 220

Meeting Minutes (Final)

This Advisory Committee was established by Executive Order B 2013-005 signed on the fifth day of June 2013 and amended by Executive Order B 2013-006 signed on the sixth day of June 2013. Executive Order B 2013-006 was further amended on the second day of August 2013 by Executive Order B 2013-07. The second meeting of the Advisory Committee was held August 7, 2013 and was facilitated by Julie Shapiro, Senior Associate at The Keystone Center. Notes were taken by Brooke Trainum, Associate at The Keystone Center. Chris Worley was in attendance as an observer from the Colorado Energy Office. The Advisory Committee meeting was an open public meeting and observers were in attendance.

Advisory Committee & Alternates in Attendance:

Advisory Committee Members (Voting): Marc Arnusch (Arnusch Farms), Mike Kopp (Intermountain Rural Electric Association), Chris Kraft (Badger Creek & Quail Ridge Farms), Dave Lock (Tri-State Generation & Transmission Association), Chip Marks (Agfinity, Inc), Pete Maysmith (Conservation Colorado), Dan McClendon (Delta Montrose Rural Electric Association), Fred Menzer (Climax Molybdenum Company), Lisa Nolder (Quantum Renewable Energy), Kent Singer (Colorado Rural Electric Association), Jerry Vaninetti (Renewable Energy Systems Americas, Inc)

Advisory Committee Members (Non-Voting): Joshua Epel (Colorado Public Utilities Commission), John Salazar (Colorado Department of Agriculture)

Alternates (present in absence of their principal): Gwen Farnsworth (Western Resource Advocates), Jenifer Gurr* (Colorado Department of Agriculture), Keith Hay* (Colorado Public Utilities Commission), Todd Lundy (Colorado Attorney General's Office), Amy Robertson* (Tri-State Generation & Transmission Association)

** The principals were present for portions of the meeting and alternates marked with an asterisk sat in the absence of their principals for only some portions of the meeting.*

Other Designated Alternates: Cory Blair (Renewable Energy Systems Americas, Inc), Geoff Hier (Colorado Rural Electric Association), David Rivera (Freeport-McMoran Copper and Gold), Frank Swain (Conservation Colorado)

Purpose/Agenda:

I. **Welcome, participant introductions, and agenda review**
II. **Review SB13-252 language as it related to feasibility of 20% by 2020**

III. **Presentations and discussion of feasibility**
IV. **Discussion of 2% rate cap**
V. **Identify next steps**

Outcomes:

- Advisory Committee Members reached tentative consensus on the feasibility of 20% by 2020 assuming the use of Renewable Energy Credits (RECs) as part of the resource portfolio for meeting the standard. Members also identified various considerations and different perspectives related to costs and feasibility of investment in new renewable energy projects that produce electricity and RECs.
- Advisory Committee Members discussed legal and administrative considerations related to the 2% rate cap and will continue the discussion of potential consensus areas at the next meeting. The focus of the discussion included the definition of the rate cap, how it is computed, and how it impacts the 20% by 2020 requirements.

Action Items:

- The Keystone Center will update minutes from the July 10, 2013 committee meeting minutes "participants" section to better reflect Advisory Committee member and alternate attendance.
- The Keystone Center will get clarification information about the definition of recycled energy and will email to Advisory Committee and alternates.
- The Keystone Center will draft language reflecting the Committee's tentative agreement on feasibility as well as its discussions and potential consensus areas related to the 2% rate cap for Advisory Committee members to review at the next meeting.

Next Meeting

- The next meeting will take place September 4, 2013 from 9:00am to 5:00pm at the Centennial Building, 1313 Sherman Street, Denver CO, Room 220.

Meeting Notes

I. **Welcome, participant introductions, and agenda review**

The second meeting of the Advisory Committee began shortly after 9:00am with introductions of Committee Members, alternates and the facilitation team. Two additional Advisory Committee Members were added to the Committee with Executive Order B 2013-007. Fred Menzer and Lisa Nolder took a few minutes upon their arrivals to introduce themselves and their background. After introductions, the facilitator reviewed the agenda and the group briefly reviewed the process that was used to approve meeting minutes by email following the first Advisory Committee meeting; the process will continue for future meeting minutes. An amendment to revise and clarify the "Participants" section of the July 10, 2013 minutes was proposed by a Committee member, such that the headings will better reflect Committee Member and alternate attendance and voting status. The committee agreed to this amendment of July 10, 2013 meeting minutes.

II. Review SB13-252 language as is relates to feasibility of 20% by 2020

Jerry Vaninetti of Renewable Energy Systems Americas, Inc, delivered a presentation to the group providing an overview of the language of SB13-252. The presentation outlined the evolution of the Renewable Energy Standard (RES) in Colorado as well as the changes included in SB13-252. Throughout the presentation, Advisory Committee members discussed and clarified elements of the legislation. Please refer to the updated slides (provided separately and updated by Jerry Vaninetti to reflect input from the August 7 meeting) for further detail.

- A question was posed related to the consequences of not meeting the RES; it was noted that the statute requires that a progress report be filed by all utilities; it was discussed that the expectation is for a good faith effort to meet the standard.
- SB13-252 amends Colorado's Renewable Energy Standard Title 40-Article 2, by adding coal mine methane and pyrolysis, eliminates different treatment of in-state and out-of-state resources, converts in-state resource REC multipliers or "kickers" to early action REC multipliers, adds Tri-State to the statute for 20% compliance by 2020, increases compliance from 10% to 20% for co-ops greater than 100,000 meters (IREA), and increases retail rate cap from 1% to 2% for co-ops. For investor owned utilities the standard is 30% by 2020 and for co-ops less than 100,000 meters and large municipalities greater than 40,000 meters the standard is 10% by 2020.The 20% by 2020 requirement for Tri-State means that effectively all of its 18 co-ops must meet the standard. Of the State's four other (non-Tri-State customer) co-ops, one is IREA (>100,000 meters, 20% by 2020 standard) and the other three co-ops are less than 100,000 meters and remain at 10%.
- Eligible resources towards the RES percentage include biomass, coal mine methane (greenhouse gas neutral), pyrolysis (trash gasification), recycled energy (exhaust heat), renewable energy (wind, solar, geothermal, biomass & small scale hydroelectric). Biomass includes forms of wood, manure, and landfill gas.
  - There was a brief discussion on why large hydro is not an eligible resource; some Committee members noted that this eliminates a potential resource that some utilities in Colorado have in their portfolio; some expressed that hydropower is important in Colorado, especially in agriculture-heavy areas that face water issues.
  - The Advisory Committee would like more clarification as to the definition of recycled energy.
  - A committee member also questioned whether purchase of RECs separate from energy "delay the inevitable" in terms of the need to construct new projects; it was noted that RECs are bought and sold through private market transactions.

- Another Committee member commented that all RES compliance is accomplished by retiring RECs, that all eligible and renewable energy projects generate both electricity and RECs, and that it is possible to invest in a project to produce electricity and RECs, to sign a long-term agreement to purchase electricity and RECs from a project, or to purchase only the RECs as stand-alone RECs.

- Early action kickers/multipliers: compliance obligations are reduced for early action. The Advisory Committee discussed the feasibility of having new RES resource projects operational prior to the multiplier expiration dates; there were differences of opinion on feasibility. It was noted that as long as the project is started prior to the expiration date of the kicker, the kicker then goes through the lifetime of the contract; multipliers do not expire for community based RES resource projects.
- Committee Members had a brief discussion on energy and how efficiency factors into meeting the purpose of SB-252. There is a reference to efficiency in the statute but it applies only to a specific case if a wholesale requirements contract signed prior to December 1, 2004 causes a qualifying retail utility to be deficient in meeting RES compliance. A Committee member noted that reducing the overall amount of energy used would result in less renewable sources needed to comply with the RES legislation.
- Some committee members noted that the RES sets different standards for different utilities and co-ops; fairness and uniformity was cited by some as a concern related to the RES as a whole.

III. Presentations and initial discussion of feasibility; focus on technical feasibility

Dave Lock from Tri-State Generation & Transmission Association began the discussion of feasibility with a presentation on what it means for Tri-State to comply with the RES of 20% by 2020. Please see the slides (provided separately) for further detail. Tri-State Generation & Transmission Association is a wholesale utility to 18 Colorado co-ops. As of August 2013, Tri-State operates six renewable energy projects, generating approximately 902 MW of non-greenhouse gas emitting energy. However, 667 MW comes from large hydro which does not count towards SB13-252 standards. Tri-State projects that an additional 200 MW of renewables will need to be developed to meet the previous 10% standard and that to meet the 20% standard, an additional 230 MW of renewable sources, 254 MW of natural gas to back up wind projects, and 484 MW of transmission capacity will be needed. Current figures are based on a 1.6 percent growth rate. Under those assumptions, Tri-State forecasted that if not for SB-252, they would not build addition resources until 2026. Tri-State forecasts that it will cost an additional 1.11 billion dollars to meet 20% by 2020, which they believe is not feasible with the 2% rate cap and the number of transmission lines needed to be constructed in six years. It was also noted that under the statute, costs can only be recovered from Colorado members. However, they do believe they could meet the new standard initially by purchasing RECs starting in 2019.

Mike Kopp of Intermountain Rural Electric Association (IREA) commented on the feasibility of reaching 20% by 2020. IREA buys half of its power through a power purchase agreement with Xcel Energy that ends in 2025. Because Xcel has a 30% RES by 2020, IREA will have 15% renewables by this timeframe. IREA's other energy sources are Western Area Power Administration and its ownership share of Comanche 3. Based on IREA's current agreements which impact the ability to develop new projects in order to meet the 20% by 2020, IREA expressed that it would need to retire RECs.

Kent Singer of Colorado Rural Electric Association was the last presenter on the feasibility of 20% by 2020. His comments focused on the different burden on rural utilities versus urban utilities and the costs associated with the fact there are fewer customers to distribute expenses to in rural areas.

Throughout and following the presentations/comments described above, Committee members asked questions and commented on the feasibility of 20% by 2020:

- The Committee identified tentative consensus that compliance of 20% by 2020 is feasible, assuming the ability to purchase RECs.
    - It was noted, however, that while purchase of stand-alone RECs can be used to meet the standard, this approach may not achieve the additional infrastructure and stimulation to the economy that is intended by the legislation.
    - Committee members noted that purchase of stand-alone RECs do not provide a long-term return-on-investment to co-op members, and that payers may prefer investment in local projects.
    - A Committee member suggested that this doesn't have to be an either/or – there can be parallel investment in infrastructure and in RECs, and that long-term REC contracts can help create investment in new projects.
    - A Committee member questioned whether the RECs IREA receives from Xcel exceed IREA's RES requirement. IREA can hold excess RECs for 5 years and use them for compliance in later years.
- There were different perspectives as to feasibility and costs associated with other options for meeting the standard by 2020. Some Committee members took issue with the compliance costs estimate of $1.11 billion for Tri-State, believe the costs would be less, and see the standard as potentially saving money and unlikely to hit the 2% rate cap; there were questions related to Tri-State's estimated investment requirements, including for required renewable resources, transmission, and back-up. However, it was also determined that it wasn't the role of Committee to undertake resource planning to explore different scenarios for meeting the standard.
    - There was discussion as to whether the 2% rate cap would allow for the amount of infrastructure to be built in order to reach 20% by 2020; it was noted that this would be influenced by the time period over which capital costs are recovered.

    - There was also discussion and differences of perspectives on the feasibility of building adequate transmission lines by 2020; it was noted that permitting processes across the State impact the amount of time it takes to build new lines.
    - A Committee member commented that several transmission lines are currently planned and in construction, and questioned whether Tri-State's estimate of 484 MW of additional transmission infrastructure is needed to accommodate the 230 MW of wind that Tri-State estimates is required by SB13-252.
    - A Committee member suggested that new renewable energy projects would displace other energy purchases and proposed that long-term planning analysis can identify the incremental and avoided costs over time. However another Committee member countered that there is a difference between capital investments and energy costs and that Tri-State's presentation reflected that no additional baseload resources are projected to be needed until 2026.
- In summary, the following factors and considerations were discussed as impacting feasibility of reaching 20% by 2020:
    - Load growth projections
    - The impact of contracts/power purchase agreements on the ability to develop new resources as well as on who pays, over what timeframe, and with what tax credits
    - Renewable capacity development needs
    - Back-up capacity development needs
    - Transmission line development and the influence of the permitting process on timelines
    - Buying RECs separate from energy, from developers in Colorado or from out of state and the benefit to rate payer
    - Recovery timeframe for capital investment costs – whether investments can be recovered over time
    - Replacement capacity vs. new capacity – whether renewables displace other sources
    - Build out time for projects
    - Which renewables are chosen and the impact of multipliers
    - The role of hydro power
    - Predicting future technologies and performance - e.g., how future grids and technologies perform may differ from assumptions based on past
    - Declining costs of renewable technologies
    - Predicting markets, including for RECs
    - Relationship between capital investment for renewables and reduced expenditures for energy over time
    - Impact of fuel prices on cost-effectiveness of renewables
    - Impact of 2% rate cap on all of the above

IV. Discussion of 2% rate cap

The discussion on the 2% rate cap started with acknowledgement that there did not seem to be definitive legislation that restricts how the 2% rate cap would be calculated. In the past, co-ops have been subject to the 1% rate cap, but it was noted that it was never invoked because they were working towards 10% by 2020. Furthermore, it was also noted that the legislation refers to a retail rate cap and the cap applies to the co-ops but not to Tri-State directly. Prior to SB13-252, co-ops in other states have chipped in to cover the costs, however under the language of SB13-252, only Colorado co-ops can be factored in to the 2% rate cap. It was also noted that there are different retail rates for each customer class within each co-op.

During the discussion of the 2% rate cap, a Committee member asked about the definition of the “total bill” to which the rate cap is applied. Committee members agreed to call on an observer to share how the rate cap has been implemented by Xcel. The observer noted that the 2% is added to the bottom line of the Xcel customer’s bill, it is added on top of all riders, and it is called the Renewable Energy Standard Adjustment (RESA). Moreover, the rate impact is a total bottom line bill but expenditures can still be in excess of 2% each month if the utility provides funds to a RESA fund and recovery of these funds from retail ratepayers is delayed. A Committee member commented that the example from Xcel does not have to be applied to the co-ops; the Committee member also suggested that resource planning can be done by modeling capital investments over the long term, so the incremental costs meet the 2% rate cap over time.

Advisory Committee Members further discussed the elements of the 2% rate cap but decided to wait to determine if there was consensus on these items until the next meeting, allowing time for members to further consider the issues and to review the items on paper. The following were left as areas of *potential* agreement regarding the administrative and legal considerations related to the 2% cap:

- The details of calculating and applying the rate cap should be determined by the implementers (e.g., Tri-State and co-ops).
- The 2% rate cap is not compounded.
- The cap is a retail cap that applies to each customer and is calculated annually.
- There is no end date for the cap. However, it is possible that expenditure of the full 2% may not be needed to meet the standard.
- It is a hard 2% cap and the “off-ramp” is real with relation to compliance with the 20% by 2020 standard.

Committee members discussed that, related to the “off-ramp,” a utility can assess in its resource planning process the amount of renewables it can acquire within the rate cap; if a utility cannot meet the 20% standard by 2020, its report filed with the Public Utilities Commission explains progress, barriers, and its future plans to meet the RES.

Committee members identified some of the implementation challenges associated with the rate cap, which include but are not limited to the different rate classes for a utility, translating between wholesale and retail rates, defining the total electric bill, and the implications if Co-op members do not agree with the Co-op board's interpretation of the cap.

Finally there was a discussion of the impacts of the rate cap on consumers and the possible unintended consequences of SB13-252. Some Committee members emphasized the role of agriculture in Colorado's economy, and Advisory Committee members in general discussed issues such as the technical feasibility of the legislation versus the intent to promote renewable development, environmental and cost impacts associated with the use of more water for agriculture during a drought, the potential impact on the cost of food, and the potential impact to costs of other agricultural products and inputs (e.g., fertilizer).

V. Identify next steps

The group concluded its meeting with a discussion of the next steps toward meeting the goals and the charge of the Committee as directed by the Executive Order. It was noted that consensus agreements will be finalized in the Committee's report. At the next meeting (September 4, 2013), the committee will:

- Review drafted language on the first two objectives of the committee (feasibility of 20% by 2020 and 2% cap).
- Discuss recommendations for legislation (and/or opportunities) related to feasibility and rate cap.
- Discuss other recommendations related to the SB13-252 and the RES.

The following issues were flagged for the future meeting: the fairness of different standards for different utilities, the role of energy efficiency as related to SB13-252, timeline for multipliers and kickers, the role of large hydro projects in meeting the 20% by 2020, exemptions for the agricultural community, meeting underlying objectives/intention of SB13-252, the relationship between SB13-252 and water issues in the State of Colorado, what the 2% rate cap means to the consumer, clarification on the cost of electricity to both the suppliers and the end users, and other substantive issues as related to SB13-252.

Meeting adjourned at 5:00pm.

September 4, 2013 ● 9:00am – 4:00pm ● Centennial Building, 1313 Sherman St., Denver, CO, Room 220

Meeting Minutes (Final)

This Advisory Committee was established by Executive Order B 2013-005 signed on the fifth day of June 2013 and amended by Executive Order B 2013-006 signed on the sixth day of June 2013. Executive Order B 2013-006 was further amended on the second day of August 2013 by Executive Order B 2013-07. The third meeting of the Advisory Committee was held September 4, 2013 and was facilitated by Julie Shapiro, Senior Associate at The Keystone Center. Notes were taken by Brooke Trainum, Associate at The Keystone Center. Chris Worley was in attendance as an observer from the Colorado Energy Office. The Advisory Committee meeting was an open meeting and observers were in attendance.

Advisory Committee & Alternates in Attendance:

Advisory Committee Members (Voting): Marc Arnusch (Arnusch Farms), Bruce Driver (Western Resource Advocates), Mike Kopp (Intermountain Rural Electric Association), Chris Kraft (Badger Creek & Quail Ridge Farms), Dave Lock (Tri-State Generation & Transmission Association), Chip Marks (Agfinity, Inc), Pete Maysmith (Conservation Colorado), Dan McClendon (Delta Montrose Rural Electric Association), Fred Menzer (Climax Molybdenum Company), Lisa Nolder (Quantum Renewable Energy), Kent Singer (Colorado Rural Electric Association), Jerry Vaninetti (Renewable Energy Systems Americas, Inc)

Advisory Committee Members (Non-Voting): Joshua Epel (Colorado Public Utilities Commission), John Salazar (Colorado Department of Agriculture)

Alternates (present in absence of their principal): Bernie Buescher (Colorado Attorney General's Office), Keith Hay* (Colorado Public Utilities Commission), Todd Lundy (Colorado Attorney General's Office)

** The principal was present for portions of the meeting and the alternate marked with an asterisk sat in the absence of their principal for only some portions of the meeting.*

Other Designated Alternates: Cory Blair (Renewable Energy Systems Americas, Inc), Jenifer Gurr (Colorado Department of Agriculture), Geoff Hier (Colorado Rural Electric Association), David Rivera (Freeport-McMoRan Copper and Gold)

Purpose/Agenda:

VI. **Welcome, participant introductions, and agenda review**
VII. **Finalization of August 7 minutes**

VIII. **Review drafted language regarding tentative agreements on feasibility and potential agreements on administrative and legal considerations related to the two percent rate cap**

IX. **Recommendations for related legislation for the 2014 session (and other related recommendations)**

X. **Review outcomes and next steps**

Outcomes:

- The Advisory Committee finalized the minutes for the August 7, 2013 Committee meeting.
- The Advisory Committee agreed to refinements of the tentative consensus language regarding the feasibility of the 20% standard by 2020.
- The Advisory Committee reached tentative consensus on the legal and administrative considerations related to the 2% rate cap.
- The Advisory Committee reviewed recommendations for related legislation for 2014 and identified level of support and objection. It determined that it is not making a consensus recommendation on legislation for the 2014 legislative session.

Action Items:

- The Keystone Center will provide the final draft of the minutes from the August 7, 2013 committee meeting.
- The Keystone Center will send out draft meeting minutes from the September 4, 2013 meeting for the Advisory Committee to approve by email.
- The Keystone Center will have the first draft of the final report out to Advisory Committee Members by Wednesday September 11, 2013; the Committee will follow a review process with an intended finalization date of September 30, 2013.

Next Meeting

- The next meeting is tentatively scheduled to take place October 2, 2013 from 9:30am to 12:00pm at the Colorado Energy Office, 1580 Logan Street, Suite, Denver, CO 80203. A decision to hold this meeting will be determined by close of business on September 30, 2013 and will be based on whether the Committee is able to finalize its final report by email.

Meeting Notes

VI. **Welcome, participant introductions, and agenda review**

The third meeting of the Advisory Committee began shortly after 9:00am with introductions of the Committee Members, alternates and the facilitation team. After the introductions, the facilitator reviewed the agenda.

VII. **Finalization of August 7 minutes**

There was consensus of the Advisory Committee to finalize the draft meeting minutes from the August 7, 2013 meeting. The Keystone Center will change the meeting minutes from draft to final and they will be posted on the Colorado Energy Office website.

VIII. Review drafted language regarding tentative agreements on feasibility and potential agreements on administrative and legal considerations related to the two percent consumer rate cap and the impact the rate cap will have on the ability for impacted utilities to comply with the twenty percent renewable energy standard

The Advisory Committee reviewed the draft language regarding tentative and potential agreements related to objectives 1 & 2 described in Executive Order B 2013-005. It was noted that for the purpose of this Committee, consensus is defined as agreement that all voting members can support or abide by and to which no one formally objects. It was also noted that agreements are not considered final until they are approved in the final report.

The Advisory Committee reviewed and discussed the tentative agreement that was drafted based on its August 7 meeting, in response to the Committee's first objective, "To advise the Director on the feasibility of achieving the twenty percent renewable energy standard by the year 2020, as required by SB13-252."

- An Advisory Committee Member raised a question regarding the clarity of the wording "on the feasibility" in the draft language. It was recommended to change the language to "Advisory Committee Members reached consensus agreement that **it is feasible to achieve** ~~on the feasibility of achieving~~ the twenty percent renewable energy standard by year 2020 assuming the use of renewable Energy Credits (RECs) as part of the resource portfolio for meeting the standard."
    - The Committee reached consensus to make this change and it will be included in the final report; it will remain a tentative agreement until the final report is approved.
- There was also a recommendation followed by a discussion as to changing the word "assuming" to "including" in the draft language. However, the Committee determined that the language would remain as "assuming."
- It was also suggested that the different considerations impacting the feasibility of twenty percent by 2020 should be included in the final report and not just reflected in the August 7, 2013 meeting minutes.
- As a result of the conversations, the new tentative agreement language reads as follows and will also be supplemented with more detail to reflect the feasibility considerations and perspectives that were discussed during the August 7, 2013 meeting:

    "*Advisory Committee Members reached consensus agreement that it is feasible to achieve the twenty percent renewable energy standard by year 2020* *assuming the use of Renewable Energy Credits (RECs) as part of the resource portfolio for meeting the standard.*

Committee Members identified various considerations and different perspectives related to costs and feasibility of investment in new renewable energy projects that produce electricity and RECs. However, the Committee agreed that it was not its role to undertake resource planning to explore different scenarios for meeting the standard."

The Advisory Committee reviewed the draft language on potential agreements related to the Committee's second objective, "To advise the Director on administrative and legal considerations related to the two percent consumer rate cap and the impact the rate cap will have on the ability for impacted utilities to comply with the twenty percent renewable energy standard."

- A concern was raised on the following draft potential agreement statement: "The details of calculating and applying the rate cap should be determined by the implementers (e.g., Tri-State and co-ops.)" The issue was that this statement as written could imply that details as to calculating and applying are left solely to the implementers without regard to the RES and underlying regulations. A suggestion was made to include the words "subject to rules and statutes as applicable." Some participants felt that this issue had already been addressed at the prior meeting. Committee members discussed this proposal and concerns were raised as to the authorities and the specific statutes that applied should this language be included. There was further discussion on how to best communicate that utilities should have flexibility in calculating and applying the rate cap while complying with the regulations that currently apply to each utility. As an outcome of this conversation, the Committee agreed to include at the end of the first bullet, "consistent with the Renewable Energy Standard as amended by Senate Bill 13-252." The committee agreed tentatively to the draft language and it will remain a tentative agreement until the final report is approved.
- As a result of the conversations, the new tentative agreement language reads as follows:

  Advisory Committee Members agreed that the following are administrative and legal considerations related to the two percent consumer rate cap:

  - *The details of calculating and applying the rate cap should be determined by the implementers (e.g., Tri-State and co-ops) consistent with the Renewable Energy Standard as amended by Senate Bill 13 252.*
  - *The two percent rate cap is not compounded.*
  - *The cap is a retail cap that applies to each customer and is calculated annually.*
  - *There is no end date for the cap. However, it is possible that expenditure of the full two percent may not be needed to meet the standard.*

- *It is a hard two percent cap and the "off-ramp" is real with relation to compliance with the twenty percent by 2020 renewable energy standard.*

The Committee agreed that it was not its role to undertake resource planning; it thus did not assess the impact of the rate cap on the ability of impacted utilities to comply with the twenty percent renewable energy standard. A utility can assess in its resource planning process the amount of renewables it can acquire within the rate cap; if a utility cannot meet the twenty percent standard by 2020, its report filed with the Public Utilities Commission explains progress, barriers, and future plans to meet the RES.

IX. Recommendations for related legislation for the 2014 session (and other related recommendations)

The discussion on recommendations to the Director regarding related legislation for the 2014 session started with a brainstorming session, with each Committee member stating any recommendations that they would like to discuss. The ideas were grouped by topic and the Committee began to discuss each recommendation in more detail (summarized below).

As the Committee began to discuss the first proposal in depth and to recognize differences of opinions, it turned to a conversation as to whether it would be able to reach consensus to recommend any related legislation. The Committee discussed a proposal that voting members should vote on each recommendation. Understanding that only consensus recommendations would be characterized as recommendations of the Committee as a whole, Committee members ultimately agreed to vote on the recommendations brought forth and record the number of Committee members in support of and in objection to the proposals; Committee members could also abstain from registering support or objection. It was agreed that the number of votes would be recorded along with reasons for support and concern that were discussed. Numbers reflecting supporting, opposing, and abstaining members refer to views of *voting members* of the Committee only.

The Committee then proceeded with further conversation on each of the recommendations for related legislation for 2014. At the close of these discussions, the Committee determined that it is not making a consensus recommendation on legislation for 2014 but will communicate that it reviewed the following recommendations and registered level of support and objection and the rationale for each. A summary of the discussion on each recommendation is provided below; each of the following refers to proposals for related legislation *in 2014*.

- ***Summary of non-consensus recommendations for related legislation in 2014 discussed by the Advisory Committee:***

6. *Extend the timeframe for compliance beyond 2020.*
    - *Discussion:*
        - The Committee discussion began with the question of whether the intent of SB13-252 was economic development or reaching a twenty percent by 2020, even if the standard is not met only by new projects on the ground. There was discussion as to what is feasible to build by 2020 given the current landscape of permits, costs, complexity of projects, and transmission lines. Some members believed that extending the timeframe would allow for cost planning and construction of projects, whereas the 2020 timeframe would result in the use of RECs without construction of projects. However, not all Committee members agreed an extended period was needed to construct projects.
        - There was also a question regarding the role of legislation in creating the customers needed to purchase the renewable energy in order to build more projects. A concern was expressed that there is a risk in forcing customers especially in rural areas to purchase renewable energy and the effect of possibly causing customers to go off the grid.
        - A Committee member questioned the desirability of re-opening the legislation for a timeline extension and expressed that re-opening the legislation could have unintended consequences. An Advisory Committee member noted that a conversation about an extended timeline occurred during the legislative process prior to SB13-252 being passed, however it was also noted that those conversations and the decision not to agree to an extended timeline during the legislative session occurred in a different context.
        - A Committee member noted that if a qualifying wholesale utility could not meet the standard by 2020 then they would only have to explain why and how they would continue to work toward the standard in their report to the PUC. A Committee member commented that if they cannot meet the 20% standard, the PUC does not have enforcement authority over the retail cooperatives or wholesale electrical cooperatives for compliance with the RES.
    - *Outcome:* The Committee did not reach consensus to recommend an extension of the compliance timeframe. When asked for a show of hands regarding those in support of extending the timeline to 2025 the vote was as follows:
        - For: 5
        - Against: 3
        - Abstain: 4

7. *Sunset the two percent rate cap.*

- *Discussion:* A Committee member raised the issue that there was not clarity or transparency with the existing two-percent rate cap that applies to customers of investor-owned utilities, and that the additional cost imposed on consumers to comply with SB13-252 should be transparent. The proposal to sunset the cap under SB13-252 was made with the intent to reduce the bill to consumers and prevent them from paying an additional two percent indefinitely (i.e., once the utility company has completely met its obligations under the law, consumers would no longer be charged an additional two percent). Committee members discussed that the two percent cap works differently for customers of investor-owned utilities, as the two percent increase under SB13-252 may not be needed or used each year and that the cap under SB13-252 is a hard cap meant to protect consumers from paying more than two percent per year. It was noted that a sunset of the cap could allow utilities to charge more than two percent and thus would not be desirable in protecting consumers from additional costs. A Committee member raised the issue that utilities need the two percent to allow for growth and the building of new projects. It was noted that a related proposal could be to sunset the bill so that there is not always the potential for a two percent rate increase, however this was not discussed in depth.
- *Outcome:* The Committee did not reach consensus to recommend a sunset of the two percent rate cap. When asked for a show of hands regarding those in support of sunsetting the 2% rate cap the vote was as follows:
    - For: 0
    - Against: 10
    - Abstain: 2

8. *Scale back the eligibility of Renewable Energy Credits (RECs) toward compliance with the standard.*
    - *Discussion:*
        - Utilities can purchase and retire RECs for compliance; however, the concern was raised that retiring RECs does not drive new demand and create renewable energy jobs.
        - An Advisory Committee member recommended scaling back the use of RECs beginning in 2014 and over a ten year period to encourage building of new renewable projects. However, concerns were voiced that RECs are needed to reach compliance under the current legislation and timeframe, and scaling back their eligibility would make it more difficult to comply. A Committee member raised the issue that for co-ops that are wholesale power purchasers rather than generation companies, by contract, REC-based compliance is the only option. Moreover, there was discussion that the purchase of RECs creates a market for supply and demand and that this can help promote new projects. There was also a concern that this recommendation would

raise legal considerations around the Commerce Clause of the U.S. Constitution if there are limits placed on where RECs can be purchased and/or limits on the number that can be used.

- *Outcome:* The Committee did not reach consensus to recommend scaling back the eligibility of RECs toward compliance with the standard. When asked for a show of hands regarding those in support for scaling back the eligibility of REC use the vote was as follows:
  - For: 3
  - Against: 4
  - Abstain: 5

9. *Include other eligible resources towards the Renewable Energy Standard, specifically large hydropower.*
   - *Discussion:*
     - It was suggested that all non-carbon emitting resources should be eligible under the RES. A Committee member suggested that, while Colorado may be moving toward a clean energy standard, to achieve that result by amending SB13-252 in 2014 was likely impractical.
     - The discussion focused specifically on the inclusion of existing and new hydropower projects of any size as eligible under the RES. It was suggested that the size for eligible hydropower projects should be increased; it was noted that the 10MW cutoff for new hydro projects was determined by ballot initiative in 2004 and an exception for a project in Colorado Springs was made the following year; some Committee members commented the cutoff was set arbitrarily and should be revisited.
     - It was suggested that new hydropower potential exists in both new dam building as well as adding hydropower generation to existing dams with minimal environmental impact. A participant suggested that size could be increased with consideration of certain conditions, e.g., when there are not environmental impacts, and it was also suggested that a distinction could be made between adding hydropower generation to existing dams versus building new dams.
     - A Committee member commented that hydropower provides baseload energy, does not require natural gas plants to integrate as does wind or solar, and allows cooperatives to make use of abundant renewable energy on their systems. Others commented that hydropower is non-carbon emitting, that environmental lessons can be applied from past projects, and inclusion of existing hydro does not pose the same environmental concerns as new hydro.

        - A Committee member also noted the benefits that new large hydropower projects could bring to the agricultural community in terms of water storage; however another Committee member also noted that large reservoirs can have high evaporation rates that can diminish their water storage capabilities.
        - A Committee member explained opposition to the inclusion of large hydro: the intent of the RES is to encourage new, environmentally-friendly technologies that are not yet well-integrated into the grid, and large hydro does not meet these criteria; environmental impacts are significant and have cost hundreds of millions of dollars in our region to begin to remediate; there are no more suitable places in the West to construct new, large projects due to environmental concerns; federal financing and FERC licensing would be unlikely for such projects; inclusion of existing large hydro would mean Tri-State would not have to take other steps to comply with the new 20% standard. The individual supported small hydro projects, which are RES-eligible; studies pinpoint locations (many are on the Eastern Plains), pending federal legislation is supportive, and the State may provide funding.
    - *Outcome:* The Committee did not reach consensus to recommend inclusion of large hydropower as an eligible resource under the RES. When asked for a show of hands regarding those in support of adding existing and new large hydro power facilities the vote was as follows:
        - For: 8
        - Against: 4
        - Abstain: 0

10. *Include energy efficiency as an eligible resource under the RES.*
    - *Discussion:* A Committee member recommended that there should be incentives to replace technology with more efficient systems that conserve energy. The intent of the recommendation was that if a utility/consumer can document energy savings then it should count similarly to renewable energy produced, or as a credit. A Committee member expressed general support for the need to promote energy efficiency through other means but thought that it should not be included in the RES. There was concern as to how to document the energy savings under the RES, how rate structures affect this, and how this meets the intent of the RES in promoting the building of new sources of clean energy.
    - *Outcome:* The committee did not reach consensus to recommend inclusion of energy efficiency as an eligible resource under the RES. When asked for a show of hands regarding those in support of adding energy efficiency savings to the RES the vote was as follows:
        - For: 8

- Against: 3
- Abstain: 1

The Committee also discussed a potential recommendation to *not* reopen the legislation and therefore leave the legislation as it is currently drafted; rationales expressed for this recommendation included that Committee members may dislike and/or like the bill for different reasons and that there is uncertainty around any reopening of the legislation. The Committee ultimately did not vote on the recommendation and determined, instead, to communicate that it was not making a consensus recommendation on legislation for the 2014 legislative session (see above).

Prior to the end of the discussion, one Committee member noted a desire to discuss recommendations to strengthen the legislation; it was determined that this interest would be noted but not discussed.

- ***Summary of non-consensus recommendations for additional opportunities beyond related legislation for 2014***

Following its discussions of related legislation for 2014, the Advisory Committee discussed recommendations for opportunities beyond related legislation in 2014 and/or beyond the specific discussion of SB13-252 and the Renewable Energy Standard. There was not consensus of the Committee to recommend these opportunities, however some Committee members felt that the focus of these conversations was primarily for idea-generation rather than for seeking consensus at this time and that it would be useful for the discussion on these opportunities to continue in the future.

5. *Create a long-term energy plan for the State.* It was suggested that Colorado should develop a long-term energy plan that would be similar to the state's 50-year water plan and would go beyond the Renewable Energy Standard and SB13-252. It was suggested that the plan could provide guidance and goals for energy development and economic development. There was concern about creating a plan given uncertainties around future energy costs and changes in technology. There was also a question as to how binding the energy plan would be and the effect it would have on planning for the utilities. It was noted that agriculture faces these kinds of changes and uncertainties regularly but that having a plan creates a clear path and direction for where the State is heading. Others expressed that while they might generally support the concept, there are other initiatives emerging at the State level that might produce an energy plan and that the Committee should not make this recommendation without knowing the specifics of these other activities. There was not consensus to recommend the development of a long-term energy plan, however some Committee members expressed interest in the potential for further discussion in the future.

6. *Develop an appropriations measure for cost sharing for energy efficiency to support agricultural communities.* This recommendation would encourage the leveraging of federal funds by the State to support energy efficiency for agriculture. While some Committee members expressed that it was not in their charge to endorse this type of measure, others expressed support for the recommendation. There were also questions regarding where the State funds would be generated from. There was not consensus to recommend an appropriations measure for cost-sharing for energy efficiency to support agricultural communities. When asked for a show of hands regarding those in support of developing an appropriations measure for cost sharing for energy efficiency to support agricultural communities the vote was as follows:
    - For: 11
    - Against: 1
    - Abstain: 0

7. *Request to the Governor to support large scale renewable projects.* The request would be made for support for projects such as wind, solar, and hydropower. The underlying intent of this recommendation is to increase the supply available to Colorado consumers as well as cost reductions to the consumer with an increased supply. There was further discussion as to how the Governor would provide support, e.g., through verbal support, funding, etc. Committee members had questions regarding the mechanisms for providing support and the sources of funding for projects. There was not consensus to recommend that the Governor support large scale renewable projects.

8. *Increase the current contractual limit of 5% renewable energy that co-ops under Tri-State can produce to 10%.* A Committee member expressed that co-ops and their members would like to develop renewable projects in-house because they believe that the money invested would be a return back to the members, and thus there is an interest in raising the contractual limit on the amount of renewable energy that co-ops can produce. There was also interest expressed in co-ops partnering with farmers on renewable projects to help generate and deliver energy at cost. However it was recognized that the contractual obligations that currently exist as well as the secured bonds in place between the co-ops and Tri-State make these recommendations better suited for discussion within the family of co-ops rather than within the Committee, and thus the Committee neither sought consensus nor voted on the recommendations.

X. Review outcomes and next steps

Prior to adjourning the Committee reviewed the outcomes and revised tentative agreements. An overview of the structure of the report was discussed as well as the process and timeline as to which finalization of the final report would occur. It was agreed that the October 2, 2013 meeting would be tentative, and will be held only if the Committee is unable to finalize the report by email prior to that date.

The timeline discussed is as follows: First draft of the report will be emailed to Advisory Committee members by The Keystone Center by close of business on Wednesday, September 11, 2013. Committee members will be given one week to review and provide comments. Those comments and edits must be emailed back to The Keystone Center by close of business on September 18, 2013. The Keystone Center will turn around a second draft for review by the committee by September 23, 2013 and Committee members must then email comments and edits by close of business September 25, 2013. A third draft will be emailed to Committee members by September 27, 2013 and based on comments and edits returned on that draft, a decision will be made by September 30, 2013 regarding the need to hold an in person meeting on October 2, 2013.

The meeting adjourned at approximately 4:00pm.