



Utilities Policy Advisory Committee (UPAC)

Wednesday, September 3, 2025

8:00 a.m. – 10:30 a.m.

Blue River Board Room

121 S. Tejon Plaza of the Rockies or [Microsoft Teams](#)

1. Call to Order

Chair Katherine Danner called the meeting to order at 8:00 a.m.

Present – Vice Chair Michael Borden, Committee Member Larry Barrett, Committee Member Chris Meyer, Committee Member Scott Smith, Committee Member David Watson, Alternate Member Albert Badeau and Alternate Member Tom Carter

Utilities Board Chair Dave Donelson was also present at the meeting.

2. Approval of Aug. 8, 2025 UPAC Meeting Minutes

Committee Member Watson made a motion to approve the meeting minutes and Committee Member Barrett seconded the motion. The minutes passed unanimously.

3. State of Colorado Energy Office

Mr. Keith Hay, Managing Director, Policy with the Colorado Energy Office, presented on Geothermal in Colorado's Electric Power Sector. The vision of the Colorado Energy Office is "A prosperous, clean energy future for Colorado".

Alternate Member Carter asked if other modeling has been done on higher numbers, perhaps a 5% load growth. Mr. Hay answered that no additional modeling has been done, he doesn't believe that directionally that would change the results.

Alternate Member Carter said he did not see any mention of what is driven by vehicle electrification, or anything about industry electrification. Mr. Hay stated that the information provided is pre data centers, so all of the industrial load growth is included into that large base load. The only load growth looked at specifically was oil and gas electrification.

Committee Member Smith asked for the definition of a firm dispatchable. Mr. Hay said that the majority of that comes from coal units. He said that when deeper levels of decarbonization were looked at for firm dispatch ability, the model was based on a range of technologies – small modular reactors, geothermal and enhanced geothermal primarily. They also modelled gas combustion units with capture and both gas units with conversion to hydrogen and then hydrogen specific units.

Alternate Member Badeau asked if the relative cost per kilowatt (kw) is anticipated to change. Mr. Hay said the dollar values would change due to increased cost of resources; however, the relative economics would not change – with wind and solar still being the less expensive.

Board Member Barrett asked how important the federal tax policy is in terms of relative comparisons since there are many changes going on in tax policy. Mr. Hay said that the changes in HR1 have made wind and solar more expensive. The industry is seeing price increases that range from around 7% to a high of 30% in some bases for bids. These prices are still below gas and geothermal costs.

Vice Chair Borden asked if the cost of firming renewables is part of the relative cost vs. SMR, or is it while generative cost? Mr. Hay said that all of the pathways are required to meet reliability requirements, in terms of what the North American Electric Reliability Corporation (NERC) requires. Vice Chair Borden asked if battery supported renewables would be in the scope, and Mr. Hay said that they are.

Committee Member Burghart asked for an explanation of the reference to replacement of all fossil fuel resources with six gigawatts (gw) of green hydrogen generations. What is meant by green hydrogen and how is it going to be derived, with respect to water usage? Mr. Hay said the result was surprising. When the modeling was run, there were significant federal tax credits for hydrogen production and consumption, and it is not clear that hydrogen would come in as the least cost non-emitting resource any longer. Green hydrogen is defined in state statute and by IRS guidance as a result of the Inflation Reduction Act.

Alternate Member Carter asked if the net present value is calculated just over the 2023 to 2040 timeframe, and Mr. Hay said that it was calculated from 2023 to 2040. Mr. Hay said that this information and additional workbooks are available on the Colorado Energy Office website.

Alternate Member Badeau asked if pumping fluids other than water is in play. Mr. Hay said that it depends, typically existing water is used. Alternate Member Badeau asked if this is a closed loop system and Mr. Hay said that it is.

Committee Member Watson asked what the cost will be to Colorado residents for the projected \$45 to \$60 billion cost of new electrical generation. Mr. Hay said the information presented does not go down into community-level costs. The purpose of the modeling was to aggregate at a statewide level what the electricity consumption will look like and to understand from the perspective of the generation side what it would take to serve that load.

Committee Chair Danner asked if the Glade project is at risk due to the Department of Energy funding. Mr. Hay said that he would need to double-check this information, but he has not heard that it is at risk.

Committee Member Smith asked what the current coal-fired energy production in the state is. Mr. Hay said that it has been sitting at roughly 30 to 35%. Mr. Hay said the opportunity of advanced energy technology that the Colorado Energy Office has been asked to focus on is in southeast Colorado, west end of Montrose County, and the northwest. This includes gas, hydrogen and geothermal.

Committee Member Watson asked if the permitting process is being developed. Mr. Hay said that the Energy Office does not oversee this, another department has been tasked with this.

Committee Member Watson asked how many companies are marketing geothermal. Mr. Hay said that there are companies building geothermal in the United States, most focusing on existing hydrological sources.

Committee Member Borden asked if for-profit companies (such as Exxon) are being pushed to produce geothermal. Mr. Hay said he is not aware if the major gas companies are moving in this direction.

Committee Member Burghart asked about the budget and number of employees by the Colorado Energy Office. Mr. Hay said that he does not know the current amount but can get this information back to the Committee. The majority of funding for the Colorado Energy Office is through the federal budget, not the general fund.

Committee Chair Danner asked if geothermal is the only technology that is being looked at to implement in the northwest, the southeast, and the west end of Montrose county, or are other energy technologies being looked at? Mr. Hay said that gas with capture, small modular reactors, hydrogen and geothermal are all being considered. Additionally wind and solar are being considered in the southeast as well, since it is a rich wind section of Colorado.

Alternate Member Carter asked about which retiring coal plants are going to be useful for geothermal and which ones are not. If they are not suitable for geothermal, what will they be used for? Mr. Hay said that the window for enhanced geothermal is still being researched. Alternate Member Carter asked if there is enough transmission capacity in load growth areas. Mr. Hay said that the State would need to make between \$4 and \$5 billion in investment.

Committee Member Smith asked if analyzation has been done regarding public pushback on transmission investment. Mr. Hay said the Energy Office is in the process of revising the report, which should be available no later than Oct. 1, 2025.

Committee Member Smith said that the location of electric lines can cause significant problems or cost increases. He asked if the Colorado Energy Office is seeing this as well. Mr. Hay said that there are local concerns about transmission and energy citings. The office has been in touch with different groups about how these transmission lines can serve the community where they are located. For example, fiber lines being pulled with the transmission lines, which could have a direct benefit to the community where the transmission lines are located.

Committee Chair Danner asked if any of the tax credits differentiate from traditional geothermal and advanced geothermal. Mr. Hay said there is no differentiation.

Alternate Member Carter asked if Colorado Springs would be eligible for the U.S. Department of Energy Community Tax Credit Bonus. Mr. Hay said that it should be eligible.

Committee Chair Danner asked if there are any programs at the state or federal level to look at advanced geothermal to generate partnerships. Mr. Hay said there are no partnerships currently, but he can reach out to his contacts to see if this is happening.

Alternate Member Carter asked what happens with insurance, who carries the risk and what are the challenges? Mr. Hay said that he will need to research this and get an answer back to the committee.

Committee Member Smith asked what the primary limitations of geothermal are today. Mr. Hay said the primary limitation of existing geothermal resources is around where hydrologic wells and resources are located. The challenge with advanced geothermal is the timeline and how companies can incorporate that into their resource plans.

Alternate Member Badeau asked what the differences are between the two heat maps. Mr. Hay said the differences are based on the drilling depth. The second map is more indicative of enhanced geothermal capacity.

Committee Member Watson said we have 15 years to get to zero emissions. Mr. Hay said that the state does not have a post 2030 emissions requirement or utility planning framework. Committee Member Watson asked if Mr. Hay has any insight into the requirement for reduced emissions by 2030. Mr. Hay said the energy office is in conversation with different utilities on the timeline and cost trajectories. All of the utilities currently have plans that will allow them to meet this requirement, but the Energy Office is in talks to reduce costs to the stakeholders.

The Committee took a break at 9:12 a.m. and returned at 9:24 a.m.

4. Geothermal Assignment Timeline

Ms. Bethany Schoemer, Strategic Planning and Governance Specialist Senior, reviewed the proposed geothermal assignment timeline. Ms. Schoemer asked if the Committee would like another presentation in October or if they would like to move on with a Working Session.

Alternate Member Carter suggested a presentation from the Colorado Energy and Carbon Management Commission. Chair Danner asked what type of information would be asked for with this presentation. Alternate Member Carter said permitting and regulations information. Ms. Schoemer will reach out to the Colorado Energy and Carbon Management Commission to see if they will present at a future meeting.

Committee Member Burghart asked for more information about the contact from California Power Association, and what they might cover. Ms. Schoemer said that she does not have specific information, but this recommendation came from the American Public Power Association. The contact from California would be in place of the proposed October 2025 presentation by the American Public Power Association. Committee Member Watson asked if the California presentation would be based on actual operational geothermal experience, which Ms. Schoemer said it would.

Ms. Schoemer asked if a second meeting, in mid-October would be beneficial as a working session. Committee Member Meyer said that the working session is needed separate from the regularly scheduled UPAC meeting.

Committee Member Watson asked if the assignment scope questions could be changed, and Ms. Danner said that since these questions were approved by the Utilities Board, they should be answered as they appear.

Vice Chair Borden asked if it would be possible to reach out to some major oil and gas companies to ask them what they are working on currently.

Chair Danner said that a discussion around the Federal Energy Regulatory Commission (FERC) Regional Transmission Organization (RTO) agreements and transmission and how they may affect geothermal may also be helpful.

Committee Member Smith asked if it would be possible to contact the governor's office for a recommendation on members of the legislature that are on the Natural Resources Committee to explain a bit of the philosophy, since they are drafting the legislative bills.

5. Customer Comment

There were no customer comments.

6. Committee Member General Discussion

Alternate Member Badeau said he is uninformed on transmission plans and how they integrate with state plans or larger reasons outside the state. He asked if there are planning resources available to help with this.

Committee Member Smith asked if a representative from the Governor's Office and State Administration could come in to provide background that was considered when determining mandates and what they are proposing for the upcoming state legislative session.

Committee Member Meyer asked if decisions are being made on something that may not be achievable, what is the state doing with the possibility of the deadline not being met. What will be done . . . fines, extensions, etc.?

Chair Danner said Alternate Member Carter's request is for geothermal specific. The other request is for a broader discussion, perhaps outside the scope of the assignment.

7. Adjournment

Chair Danner adjourned the meeting at 9:42 a.m. The next meeting will be on October 1, 2025.