Northwest Colorado Energy Initiative

SURVEY 2 REPORT

Delivered on September 30th, 2024 for Department of Energy (DOE) Office of Fossil Energy and Carbon Management (FECM) in support of the Capacity Building for Repurposing Energy Assets Opportunity.

AGNC
ASSOCIATED GOVERNMENTS OF NORTHWEST COLORADO

COLORADO MESA UNIVERSITY

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Acknowledgements

This study was conducted by the Northwest Colorado Energy Initiative (NCEI), operating under the purview of the Associated Governments of Northwest Colorado (AGNC). The advisory board members are: former Colorado State House Majority Leader and Colorado Mesa University (CMU) President Emeritus Tim Foster, former State Senator Bob Rankin, Mesa County Commissioner Cody Davis, Garfield County Commissioner Mike Samson, Rio Blanco County Commissioner Doug Overton, former Moffat County Commissioner Ray Beck, and AGNC Executive Director Tiffany Dickenson. Former Town of Eagle Council Member Matt Solomon is the project manager.

The Capacity Building for Repurposing Energy Assets grant effort is funded by the Department of Energy (DOE) through the Office of Fossil Energy and Carbon Management (FECM) and the Office of Technology Transitions (OTT) in collaboration with the newly established Partnership Intermediary (PI) known as ENERGYWERX to support Northwest Colorado energy impacted communities. NCEI partnered with Bisconti Research, Inc. and the Unconventional Energy Center at Colorado Mesa University for the development and analysis of the surveys. The survey was written by Ann Bisconti, Ph.D., president of Bisconti Research, Inc., an expert in public opinion and communications research, and Matt Solomon of the Associated Governments of Northwest Colorado. Colorado School of Mines Greg Clough, Deputy Director of the Payne Institute, and contacts with the National Renewable Energy Laboratory (NREL) assisted with question development. Matt Solomon administered the survey and wrote Acknowledgement, Introduction, and Methodology sections. The report data was compiled, illustrated, and narrated by Nathan Perry, Ph.D., Professor of Economics at Colorado Mesa University, with the help of Colorado Mesa University research assistant Dillon Chapman.

NCEI is working closely with all of the regional communities directly and indirectly affected by the closure of the Craig and Hayden Power Stations and neighboring mines. These communities include Moffat County, Rio Blanco County, City of Craig, Town of Meeker, Town of Rangely, Town of Hayden, Town of Yampa, and the Town of Oak Creek. NCEI is actively coordinating with Craig Station executives to complement each other's efforts in the region.

Those involved in the project are also grateful to the Craig Chamber, Colorado Mountain College, Colorado Northwest Community College, Colorado State University Extension, Craig Press, Grand Junction Sentinel, Jackson Star, Rio Blanco Herald, Rocky Mountain Voice, Steamboat Pilot, and Steamboat Radio for assisting us in circulating this survey.

NCEI is appreciative of the regional state and federally elected officials that have supported us in this effort: Senator Hickenlooper, Senator Bennett, Congresswoman Boebert, Senator Roberts, Senator Will, Representative Lukins, and all of the local elected officials.

All questions and media requests should be directed to Matt Solomon with the Associated Governments of Northwest Colorado.

DOCUMENT VERSION

In order to maintain the highest level of accuracy, this document will be updated with changed, suggestions, and edits when appropriate.

Version 1: Released 9/30/24.

INTRODUCTION

The Northwest Colorado Energy Initiative (NCEI) was established with a critical mission: to guide the region through a pivotal energy transition, identifying suitable alternatives to coal and preparing for an upcoming feasibility study for nuclear power. NCEI is deeply committed to maintaining affordable energy costs, retaining a skilled regional workforce, and ensuring the availability of quality jobs with competitive wages. This commitment aligns with the broader goals outlined in Colorado HB23-1247.

NCEI's vision focuses on fostering a comprehensive regional discussion about the energy transition. Our approach is inclusive and forward-thinking, encompassing a range of potential energy solutions such as gas generation with carbon capture and storage, geothermal, clean hydrogen, advanced nuclear, wind, and solar coupled with storage. This diverse energy portfolio reflects our commitment to a balanced and sustainable energy future for our region.

This report analyzes survey data performed in Northwest Colorado, specifically Moffat County, Routt County, and Rio Blanco County, Garfield County, and Mesa County. Building on the insights gained from Northwest Colorado Energy Initiative's (NCEI) Survey 1, which provided critical insights into the energy needs and preferences of Northwest Colorado residents, this public survey aimed to further refine and identify the most viable and sustainable pathways for the region's energy future. Completing the survey took approximately ten minutes and participation was completely anonymous.

The motivation for such a survey is due to the retiring coal power plant in Craig and Hayden, Colorado, located in Moffat and Routt Counties, and the economic losses that will be incurred. The transition away from coal has led to much research on how to replace coal's economic activity in the region. There is significant energy infrastructure in place that could accommodate an array of resources. This study aims to provide data that will help the region, stakeholders, and policy makers look into options and ideas that foster a more resilient future.

This transition marks a significant moment for the communities of Northwest Colorado. While moving away from coal has deeply affected the region's cultural and economic identity, it also opens doors to new opportunities. One such opportunity is the vision of creating a comprehensive regional energy hub, positioning Western Colorado as a leader in the energy life cycle and establishing it as a significant player in the Rocky Mountain region.

By conducting comprehensive surveys and providing factual education through NCEI, one of the goals is to identify preferences for opportunities that align with the community's goals and aspirations during the energy transition in Northwest Colorado, while supporting the State's feasibility study being conducted according to HB23-1247.

The goal is to move the discussion beyond the traditional "either/or" mindset, where communities feel forced to choose between different energy sources, toward an "and" mindset, where a diversity of energy sources can be utilized in collaboration.

The results may provide opportunity for further actions surrounding energy education and provide the space for fact-based discussions regarding the future of Northwest Colorado's economic development.

Methodology

The goal of this study is to is to move the discussion beyond the traditional "either/or" mindset, where communities feel forced to choose between different energy sources, toward an "and" mindset, where a diversity of energy sources can be utilized in collaboration. The survey was written by Ann Bisconti, Ph.D., president of Bisconti Research, Inc., an expert in public opinion and communications research.

The strategy for ensuring the success of the survey was multifaceted, focusing on comprehensive outreach and direct engagement with the community. NCEI initiated efforts by conducting interviews with local newspapers, which provided a platform to explain the survey's objectives and importance, as well as to address any immediate questions or concerns from the public. This direct communication helped build transparency and trust, encouraging more residents to participate. Additionally, it was a priority to be accessible and responsive to the community by answering questions and addressing voiced concerns promptly. This responsiveness was crucial in alleviating any apprehensions and fostering a sense of involvement and empowerment among the participants.

To maximize outreach, the survey was publicized as widely as possible. This included leveraging various media channels, such as social media platforms, local radio stations, community bulletins, and partnerships with local organizations. By utilizing a diverse array of communication tools, we aimed to ensure that information about the survey reached all segments of the community, including those who might not be engaged through traditional channels. The publicity efforts were designed not only to inform, but also to emphasize the significance of each community member's input in shaping the future of energy transition in Northwest Colorado.

The survey was input into Survey Monkey and was advertised in local and regional newspapers, newsletters, and sent to government officials. The survey was also sent to Tri-State and Trapper Mine to get the opinion of the retiring coal industry, since any change in policy or practice should involve their engagement. The survey was open to the public.

The results are categorized into three distinct groups. The first group consists of the Tier 1 impacted communities, as defined by the Colorado Office of Just Transition, which includes Moffat, Rio Blanco, and Routt Counties. The second group combines Mesa and Garfield Counties. The third group is labeled "somewhere else in Colorado." It is important to note that there were only 13 responses in the "somewhere else in Colorado" category, making it less representative than the other groups. There were 126 responses from Moffat, Rio Blanco, and Routt Counties, and 93 from Mesa/Garfield. As a result, "somewhere else in Colorado" is used for comparison purposes when relevant. Additionally, "somewhere else in Colorado" lacks a confirmation data point, such as a zip code or county, to specify where respondents are geographically located within Colorado, meaning it may not accurately reflect the state as a whole. The primary focus of the report is on Northwest Colorado, with "somewhere else in Colorado" included in the tables and graphics for contextual comparison. The survey, consisting of 21 questions, took approximately 8 minutes to complete and was open from September 4 to 18, 2024.

The survey received 235 responses; however, 3 responses were from outside the state of Colorado and were therefore excluded, leaving 232 usable responses.

DEFINITION OF HUB VS. CAMPUS

This report frequently references the terms "Energy Hub" and "Energy Campus," so a clear definition of each is necessary for understanding the survey results.

An "Energy Hub" can be seen as the overarching concept encompassing the entire regional grid and infrastructure, which integrates various energy sources and technologies across Northwest Colorado and potentially beyond. It represents the macro-level strategy for regional energy coordination, resilience, and innovation.

On the other hand, an "Energy Campus" is more localized, serving as a specific physical and intellectual space within the hub where research, development, education, and community engagement happen. The campus would be where different energy technologies are piloted, tested, and demonstrated in a concentrated area, and it acts as a central point for innovation within the broader energy hub.

Energy Hub: The regional, macro-level network and strategy integrating various energy sources, technologies, and infrastructure.

Energy Campus: The localized, micro-level space within the hub, focused on research, development, and community engagement related to energy transition efforts.

DEMOGRAPHIC INFORMATION

Table 1 lists the respondents' county of origin. Of the respondents, 5.60% reported being from "somewhere else in Colorado," while 28.02% were from Moffat County, 18.97% from Routt County, 7.33% from Rio Blanco County, 1.72% from Garfield County, and 38.36% from Mesa County. Figure 1 illustrates the age/generation of the respondents, broken down by three regions: Northwest Colorado, Mesa/Garfield, and other parts of Colorado. Baby Boomers (ages 59-77) made up 42.13% of respondents, 34.89% were Gen X (ages 43-58), 17.45% were Millennials (ages 27-42), 3.83% belonged to the Silent Generation (77 and older), and 1.7% were Gen Z (under 27). Northwest Colorado had a higher proportion of millenials and Gen X compared to Mesa/Garfield, while Mesa/Garfield had a higher percentage of Boomers.

Among Northwest Colorado respondents, 41.28% were male, 45.11% were female, 13.19% chose "no answer," and 0.43% identified as non-binary. Table 2 shows that the majority of respondents were of white/Caucasian descent (72.34%), with "no answer" being the second-highest response at 20.43%. The third and fourth most common responses were "mixed race" at 3.4% and "Hispanic or Latino" at 2.13%. Figure 2 breaks down respondents' educational levels by area, with most participants holding either a bachelor's degree or a graduate degree.

Table 1:

County of Origin

Location	Percentage	Frequency
Moffat County	28.02%	65
Routt County	18.97%	44
Rio Blanco County	7.33%	17
Garfield County	1.72%	4
Mesa County	38.36%	89
Somewhere else in Colorado	5.60%	13
Total	100%	235

Figure 1:

Generation

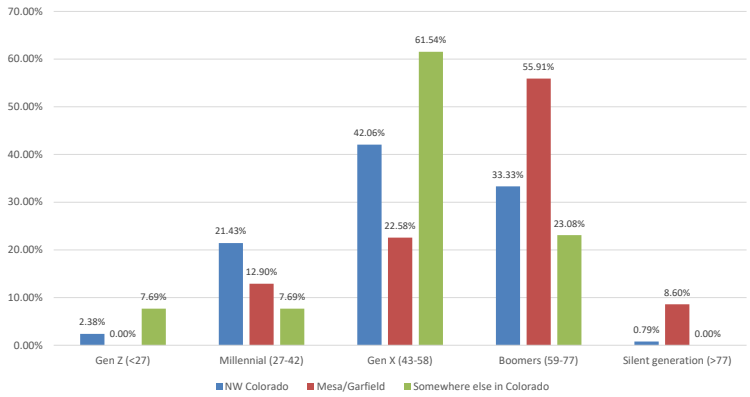


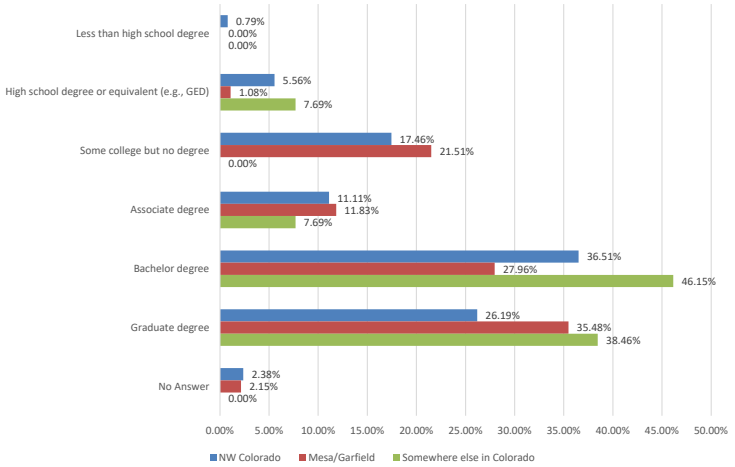
Table 2:

Ethnicity of Respondents

Location	Percentage	Frequency
Black or African American	0.85%	2
Hispanic or Latino	2.13%	5
Asian or Asian American	0.00%	0
American Indian or Alaska Native	0.85%	2
Native Hawaiian or other Pacific Islander	0.00%	0
White or Caucasian	72.34%	170
Mixed Race	3.40%	8
No Answer	20.43%	48

Figure 2:

Education Level



DEMOGRAPHICS CONTINUED, AND GROWTH

Figure 3 shows that Northwest Colorado respondents had a lower percentage that identified as Democrat compared to Mesa/Garfield and somewhere else in Colorado, with Northwest Colorado at 15.08%, Mesa/Garfield at 16.13%, and somewhere else in Colorado at 23.08%. The percentage of Republicans was close, with Northwest Colorado at 32.54% and Mesa/Garfield at 26.88%. The majority of respondents identified as Unaffiliated or Independent, with 38.10% of NW Colorado and 39.78% of Mesa/Garfield. Note that there are more republicans and independents than democrats for each region.

Figure 4 illustrates responses to the question, "Would you like to see more growth, less growth, or no change in this region of Colorado?" The question specifically refers to Northwest Colorado, where 49.21% of respondents expressed a desire for more growth, 21.43% preferred less growth, and 29.37% wanted no change. Mesa/Garfield respondents indicated a stronger preference for less growth compared to those in Northwest Colorado.

Figure 3:

Political Affiliation

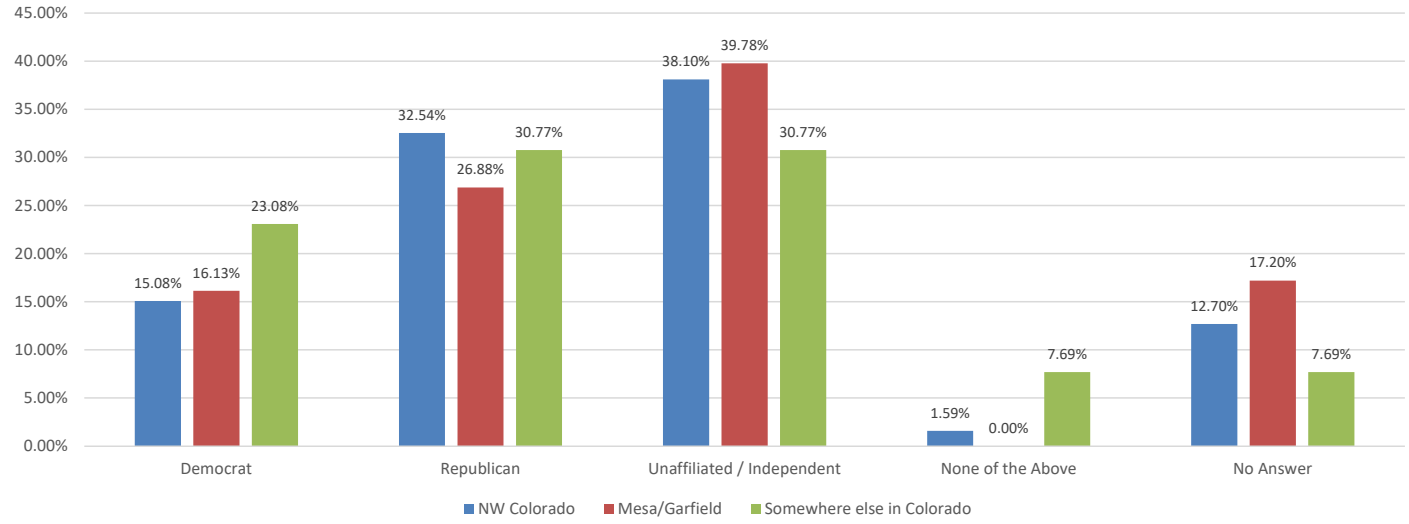
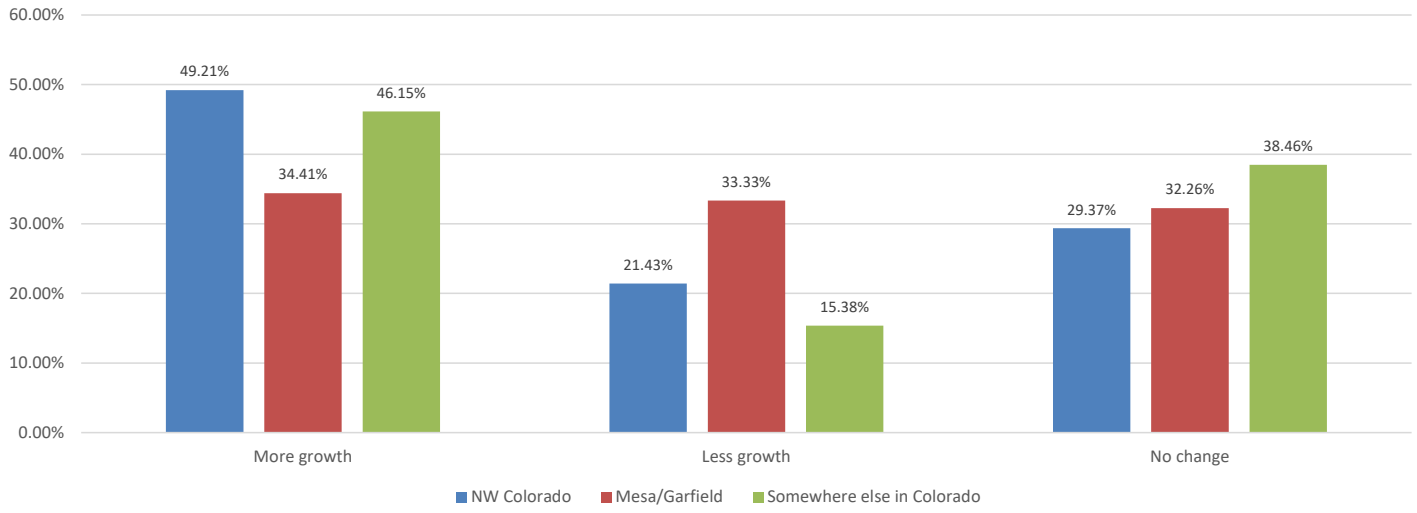


Figure 4:

Would you like to see more growth, less growth, or no change in this region of Colorado?



SUCCESSFUL ENERGY TRANSITION AND REGIONAL HUB

Figure 5 illustrates the responses to the question, "What should be the goals of a successful energy transition to a future energy system?" In Northwest Colorado, the top priority is protecting jobs (67.46%), followed by lowering energy costs (54.76%) and expanding energy production (53.97%). In contrast, Mesa/Garfield's top priority is increasing the reliability and availability of energy (73.12%), with protecting the environment (59.14%) coming in second.

Figure 6 shows the responses to the question, "Overall, is the concept of a regional energy hub, as described above, excellent, good, fair, or poor?" In Northwest Colorado, 40.48% of respondents rated the concept as "good," while 13.49% rated it "excellent." In Mesa/Garfield, 45.16% rated the concept as "good."

Figure 5:

What should be the goals of a successful transition to a future energy system? Select all that apply.

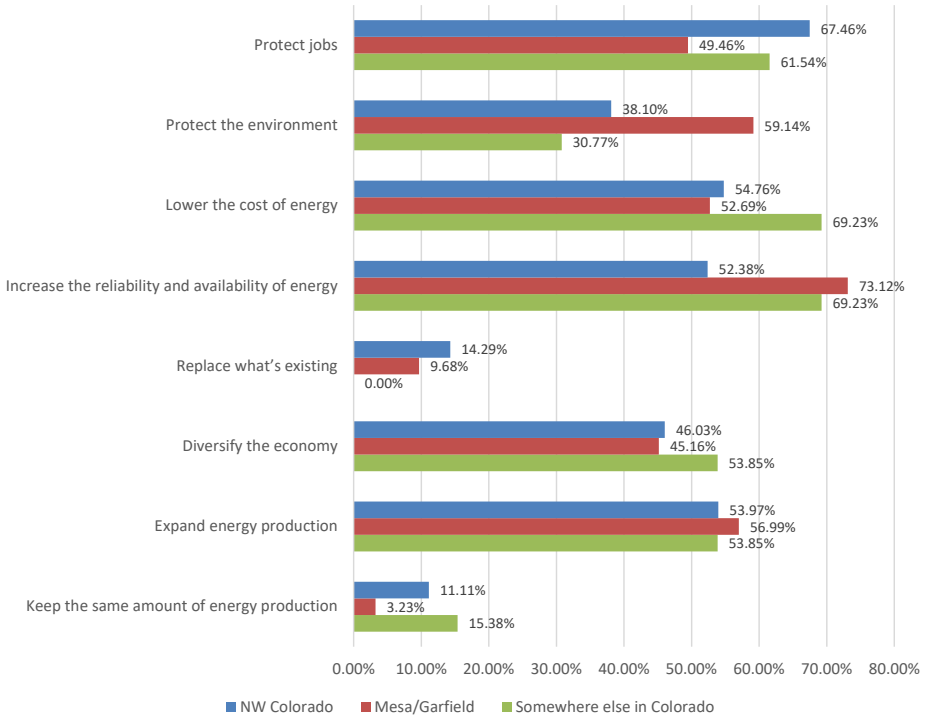
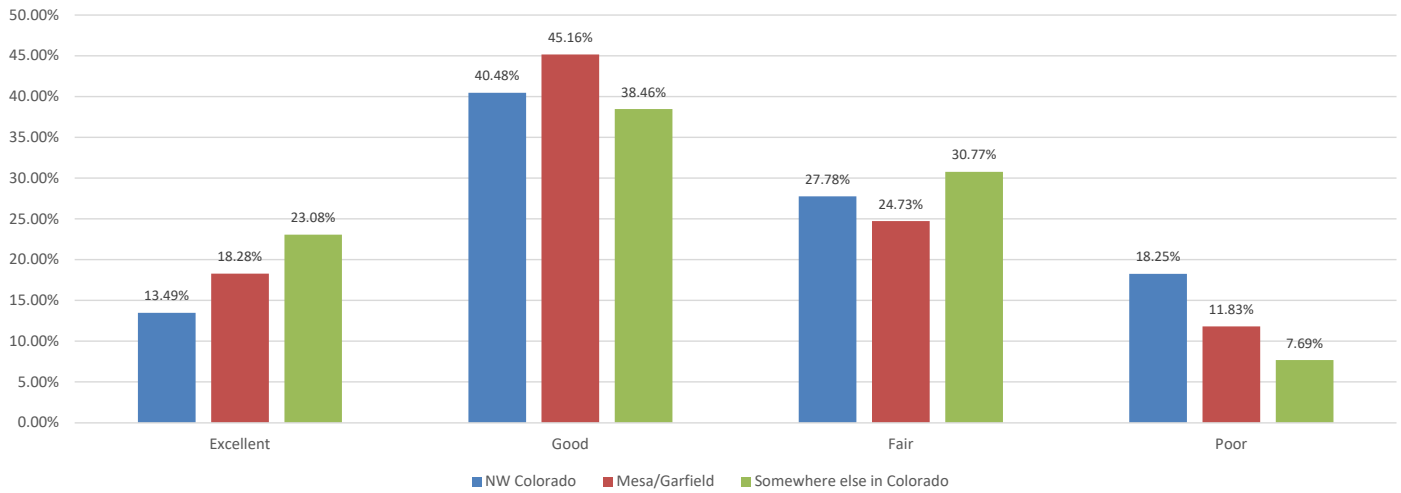


Figure 6:

Overall, is the concept of a regional energy hub, as described above, excellent, good, fair, or poor?



ENERGY HUB CONTINUED

Figure 7 illustrates the responses to the question, "In your opinion, is the idea of a regional energy hub with a diverse mix of energy sources that collaborate and complement each other an excellent, good, fair, or poor idea?" In Northwest Colorado, 21.43% responded "excellent," 37.30% responded "good," 28.57% responded "fair," and 12.7% responded "poor." Responses from Mesa/Garfield were similar but had a higher percentage for "good."

Figure 8 presents the responses to "Select the choices that best describe your opinion of the regional energy hub concept" which provided 8 prompts for the respondent. In Northwest Colorado, 11.9% responded "visionary," 4.76% "not visionary," 11.11% "realistic," 27.78% "not realistic," 15.87% "important," 2.38% "not important," 18.25% "good for this region," and 7.94% "not good for this region." Two notable differences are that the "not realistic" response from Northwest Colorado was much higher compared to Mesa/Garfield, while the "good for this region" response was lower. It is important to note that this question was intended to compare four sets of options, with each pair being a complete response. However, the way the question was formatted within the survey platform allowed only one response per set of pairs.

Appendix A at the end of this report contains the open-ended responses to the question, "What aspects of a regional energy hub would be most important to you?"

Figure 7:

In your opinion, is the idea of a regional Energy Hub with a diverse mix of energy sources that collaborate and complement each other an excellent, good, fair, or poor idea? Select one answer.

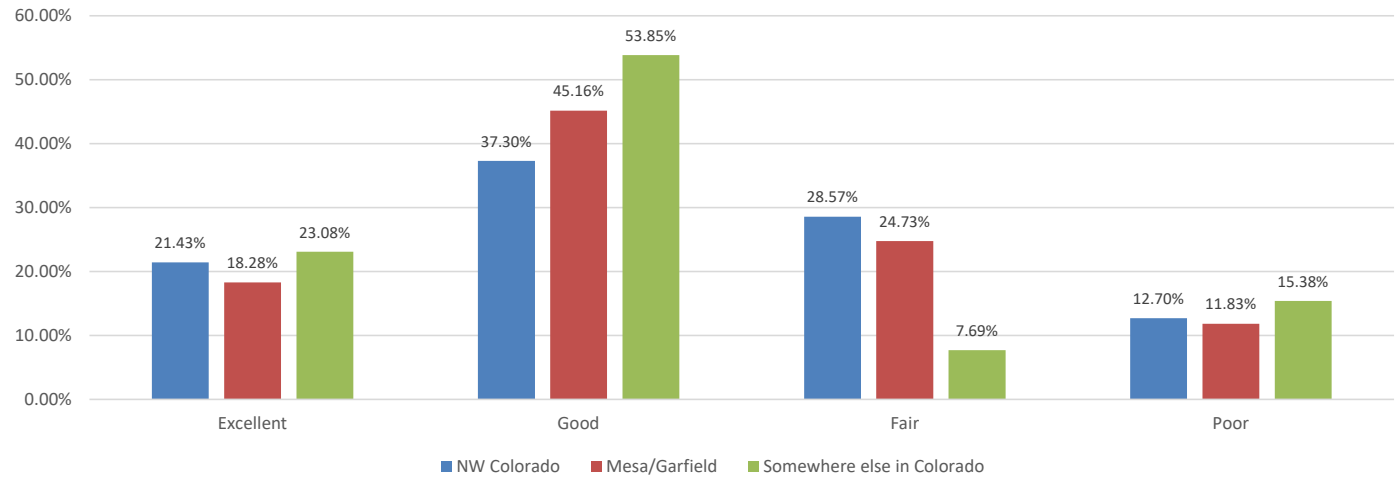
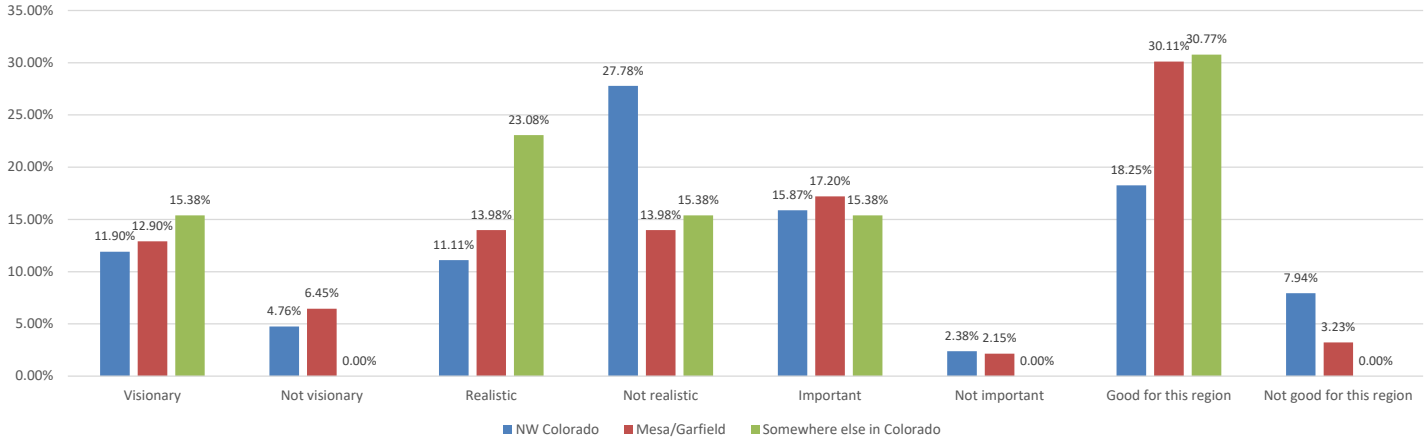


Figure 8:

Select the choice(s) that best describe your opinion of the Regional Energy Hub concept.



ENERGY HUB IMPACT ON COLORADO

Figures 9 illustrates the response to the question "in your opinion, what effects would a regional energy hub have on the following aspects of life in Colorado" for both NW Colorado. There are four categories, including the economy, environment, reliability and availability of energy, and jobs. 51.59% of Northwest Colorado respondents answered either "very favorable effect," or "somewhat favorable effect" for the economy. This number was 47.62% for the environment, 49.21% for reliability and availability of energy, and 51.59% for jobs. A weighted average of the responses was calculated using a scale of 1-5, with "very favorable effect" a 5 and very unfavorable effect" a 1. Northwest Colorado averaged 3.22 for the economy, 3.22 for the environment, 3.29 for reliability and availability of energy, and 3.21 for jobs.

Figure 10 shows the same responses to the question but for Mesa and Garfield County. 65.59% of Mesa/Garfield thought an energy hub would be favorable for the economy, higher than Northwest Colorado. 52.69% see a favorable effect for the environment, 65.59% see a favorable effect for reliability and availability of energy, and 66.67% see a favorable impact on jobs.

Figure 9:

In your opinion, what effect would a regional energy hub have on the following aspects of life in Colorado? (Northwest Colorado responses)

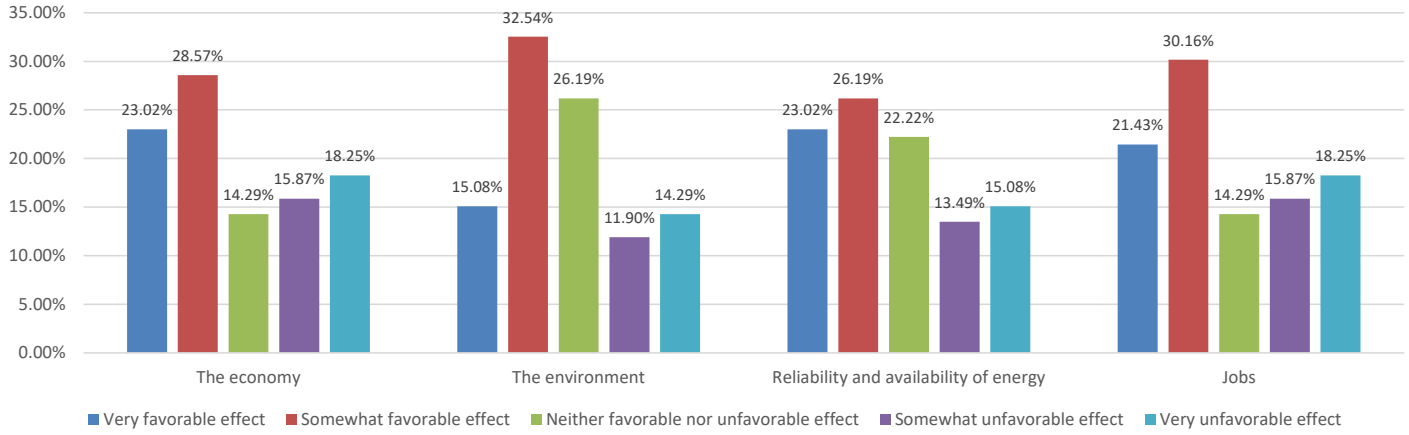
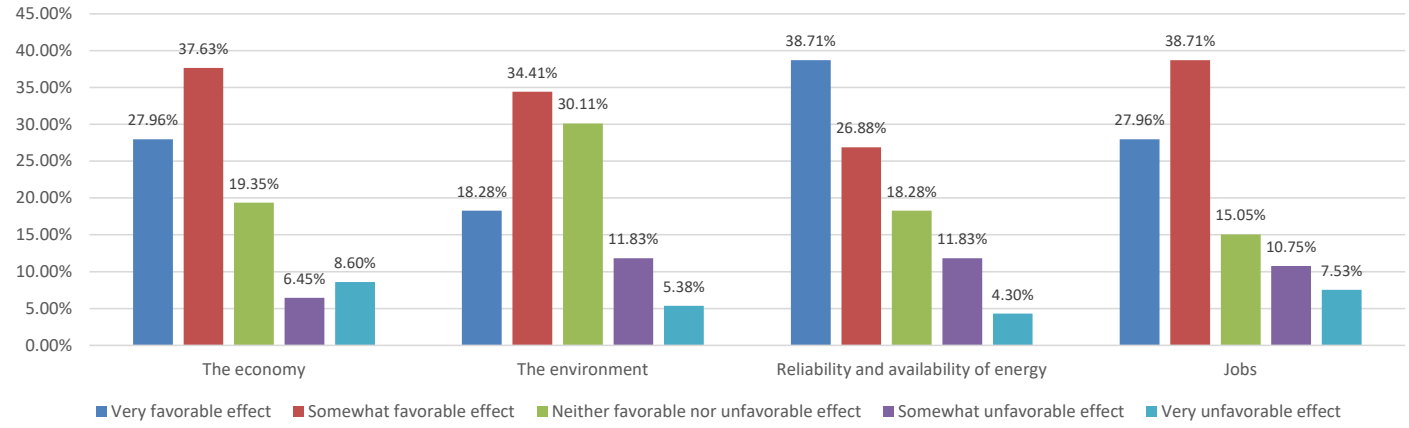


Figure 10:

In your opinion, what effect would a regional energy hub have on the following aspects of life in Colorado? (Mesa/Garfield responses)



REGIONAL HUB ENERGY SOURCES

Figure 11 asks respondents to select all of the energy sources that should be included in a regional energy hub. In Northwest Colorado, 76.19% selected natural gas, 75.40% selected coal, with geothermal, hydroelectric, nuclear, oil, and solar all just above 50%. Carbon capture and storage was chosen by 38.89%, and wind by 35.71%. Mesa/Garfield had similar responses, but rated coal lower at 65.96%, and solar and wind higher at 62.98% and 45.96%, respectively.

Figure 12 illustrates the responses to "the top three energy sources that would be the best options to meet the electric demands for the future in NW Colorado." Northwest Colorado had a much higher response for coal at 65.08%, followed by natural gas at 57.94%. The third highest was nuclear at 43.65%. Mesa/Garfield ranked natural gas the highest at 43.65%, followed by solar at 37.30%. Somewhere else in Colorado responded very highly to nuclear (84.62).

The open-ended responses to Figures 11 and 12 are listed in Appendices B and C.

Figure 11:

Select all the energy sources that should be included in a Regional Energy Hub.

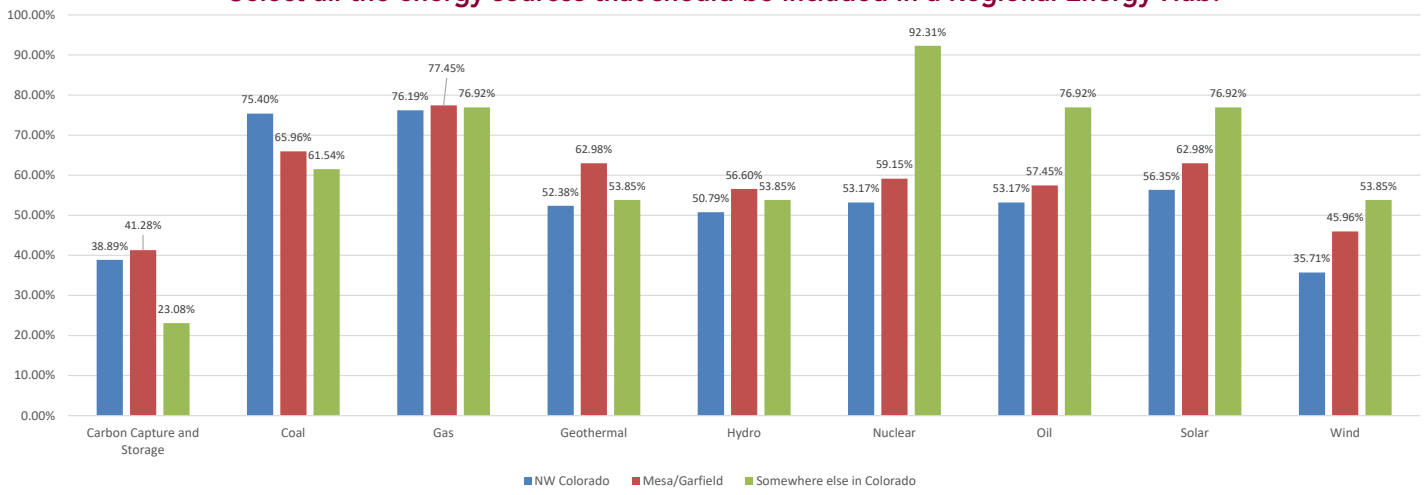
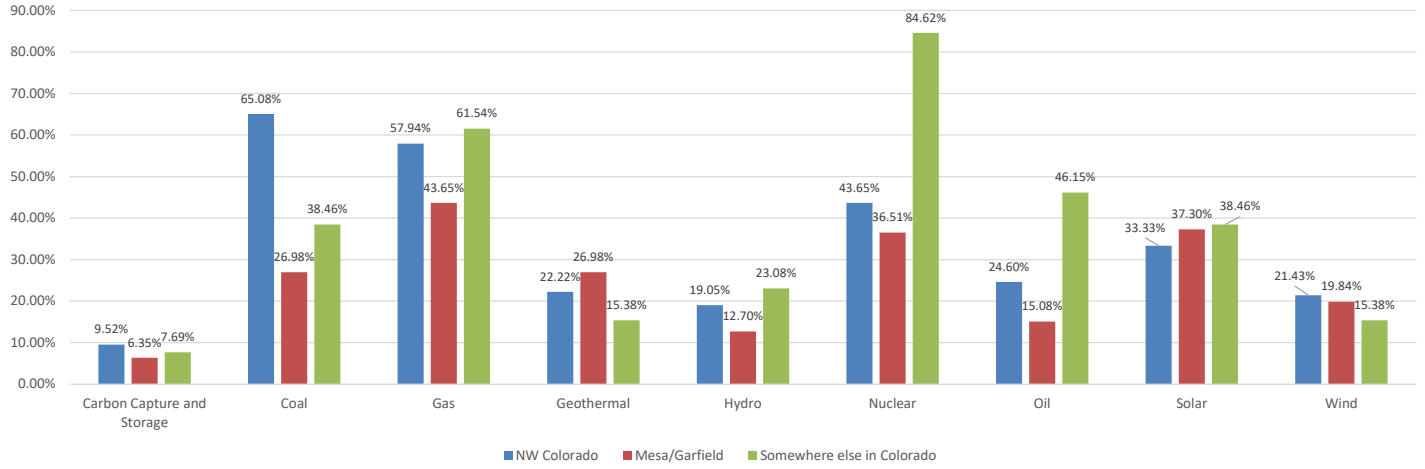


Figure 12:

Select the top three energy sources that would be the best options to meet the electric demands for the future in this region of Colorado.



ENERGY HUB AND MIX OF FACILITIES

Figure 13 asks whether a mix of facilities should be built in one location, in different parts of Colorado, or connected across different states. In Northwest Colorado, 38.89% responded in favor of a singular location, 47.62% preferred different parts of Colorado, and 13.49% chose different states. Mesa/Garfield had a lower response for a singular location at 9.68%, but a higher response for different parts of Colorado at 75.27%.

Figure 14 illustrates the responses to whether or not an interstate energy hub collaboration would be beneficial. Northwest Colorado had a lower response for "very beneficial" at 20.63% and higher responses for "not too beneficial" and "not at all beneficial." In contrast, Mesa/Garfield rated "very beneficial" at 38.71%, much higher than Northwest Colorado.

Figure 13:

Which seems like a better idea for a Regional Energy Hub: build a mix of facilities next to each other in one location or connect a mix of energy facilities in different parts of the state? Select one answer.

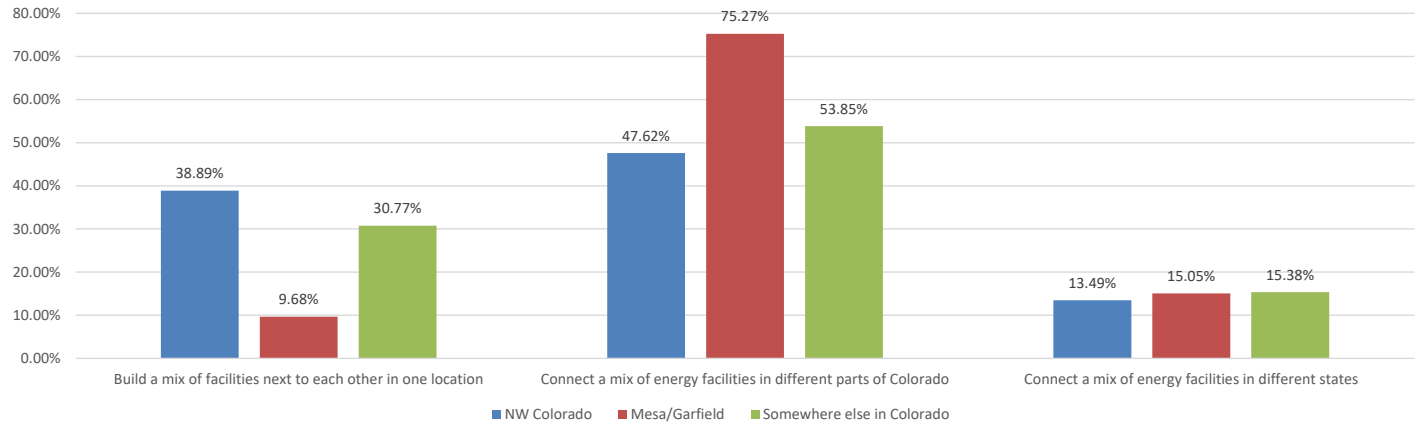
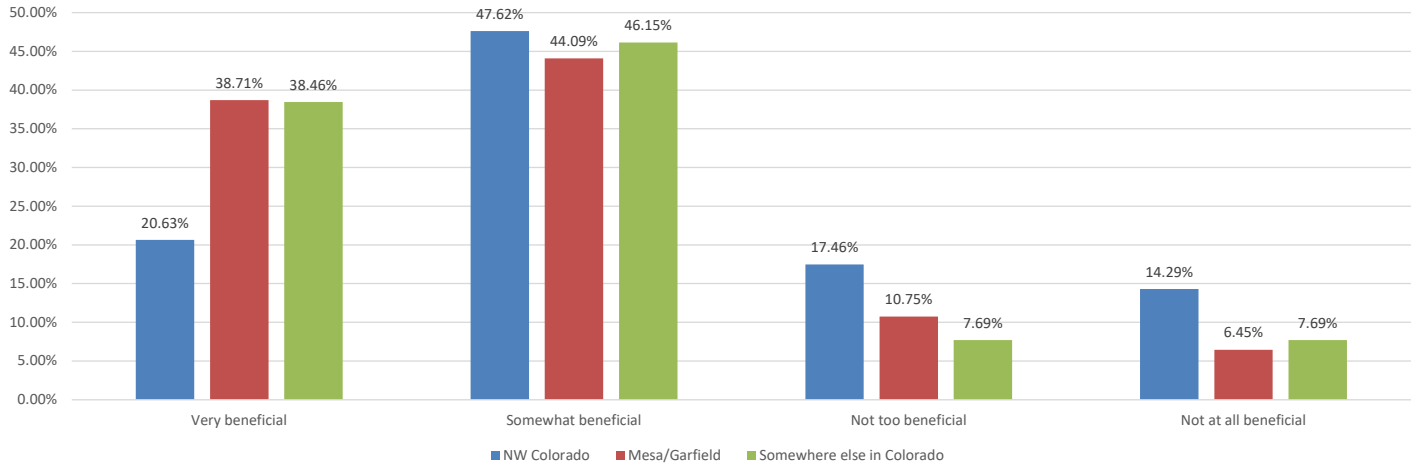


Figure 14:

A Regional Energy Hub could be expanded to an interstate coalition. Would this interstate collaboration be very beneficial, somewhat beneficial, not too beneficial, or not at all beneficial? Select one answer.



THE ENERGY CYCLE

Figure 15 presents the responses to the question, "Does Colorado have the ability to provide for all aspects of the energy cycle, from mining to electricity generation to waste management?" In Northwest Colorado, 34.13% of respondents answered "definitely yes," while 39.68% answered "probably yes." Mesa/Garfield showed similar results for "definitely yes" but had a higher response for "probably yes" at 52.69%.

Figure 16 illustrates respondents' support for capturing the full economic benefits of the energy cycle in Colorado. In Northwest Colorado, 28.57% of respondents answered "definitely yes," while 51.59% answered "probably yes." Mesa/Garfield respondents gave similar responses, with 24.73% answering "definitely yes" and 58.06% answering "probably yes."

Figure 15:

To the best of your knowledge, does Colorado have the ability to provide for all aspects of the "energy cycle"—from mining to electricity generation to waste management? Select one answer.

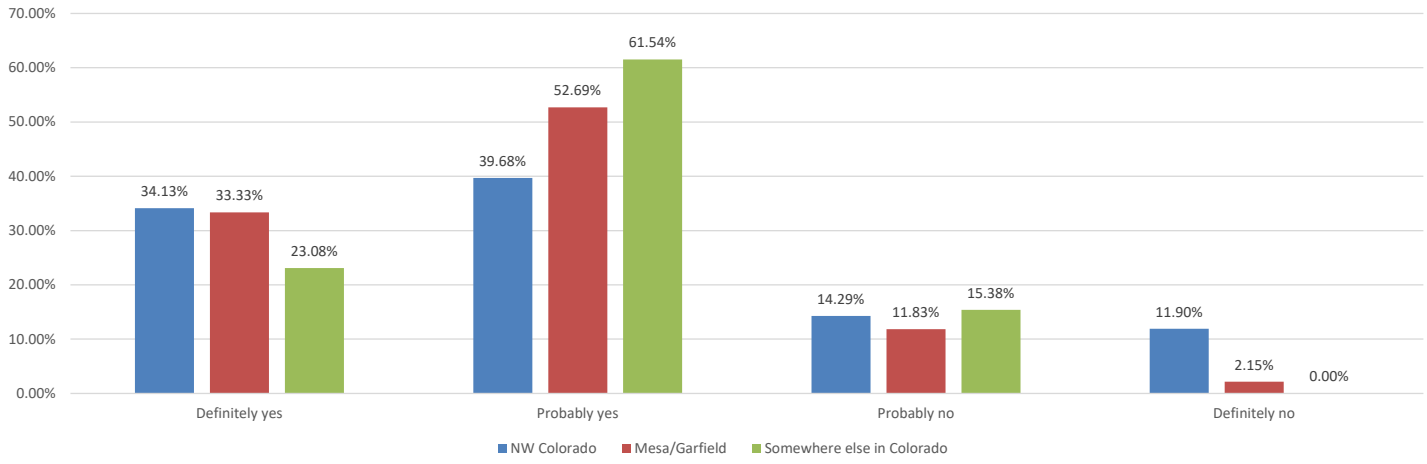
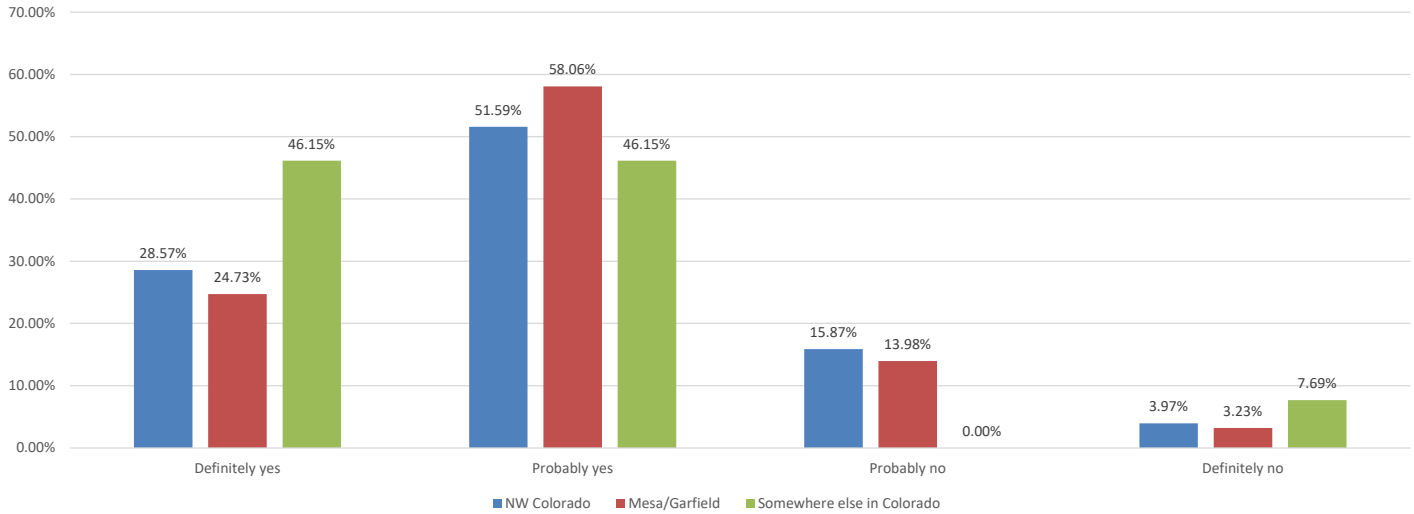


Figure 16:

Would you support an effort to capture the economic benefits of the full energy cycle within our state? Select one answer.



ENERGY SOURCES

Figure 17 presents the responses to the question, "Do you know what energy sources your electricity provider currently uses to power your home?" In Northwest Colorado, 55.56% of respondents answered "definitely yes," 32.54% said "probably yes," and 10.32% responded "probably no." Northwest Colorado had a higher percentage of "definitely yes" responses compared to Mesa/Garfield, where 34.41% answered "definitely yes." However, Mesa/Garfield had a significantly higher response rate for "probably yes," at 53.76%.

Figure 18 builds on Figure 17 by asking respondents who answered "yes" to "select all energy sources your electric provider uses to power your home." In Northwest Colorado, 87.30% selected coal, 49.21% chose natural gas, and 50.79% selected solar. Mesa/Garfield showed a similar percentage for coal but had much higher responses for natural gas at 85.23% and solar at 77.27%. The open-ended responses for Figure 18 are listed in Appendix D.

Figure 17:

Thinking about electric energy, do you know what energy sources your electricity provider currently uses to bring electricity to your home? Select one answer.

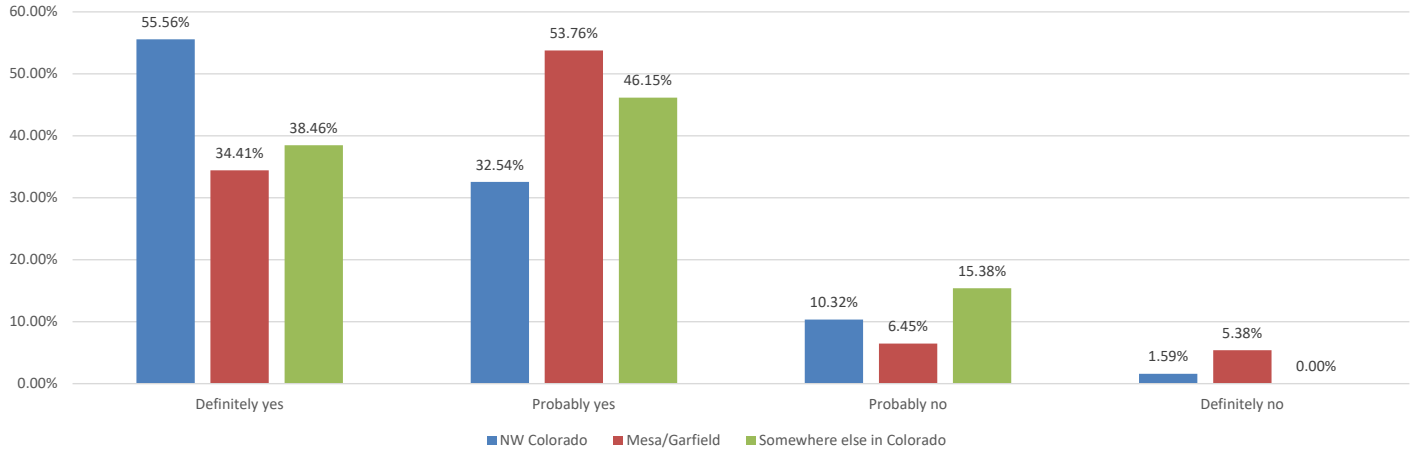
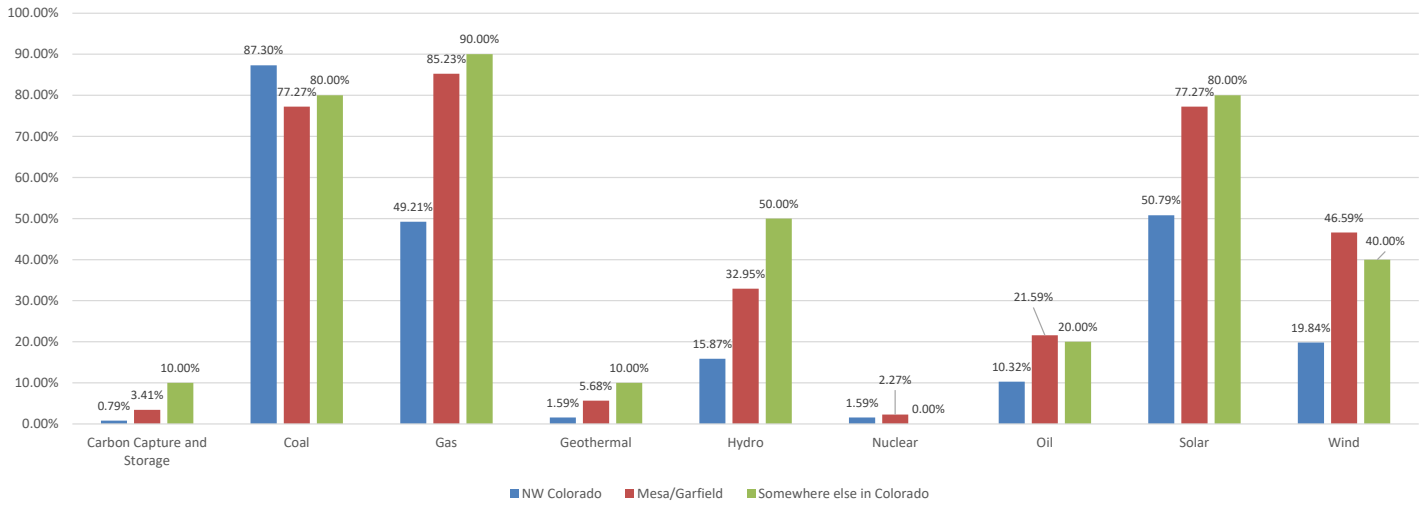


Figure 18:

If yes to the previous question: Select all energy sources that your electric provider uses to bring electricity to your home.



CONCLUSIONS

The Northwest Colorado Energy Initiative (NCEI) survey reveals valuable insights into the region's energy transition preferences and its community's priorities. As the area prepares for a post-coal future, protecting jobs remains a top priority for respondents in Northwest Colorado, reflecting the deep ties between the local economy and the energy sector. While there is significant support for renewable energy sources like solar and wind, traditional energy sources, including coal and natural gas, still play a critical role in the region's vision for the future. This dual focus on both legacy and emerging energy technologies underscores the need for a balanced approach in planning the region's energy transition.

The concept of a regional energy hub received broad support across the survey, with many respondents favoring a diverse mix of energy sources that can collaborate and complement each other. However, there is a marked difference in opinion regarding the potential benefits of an interstate energy collaboration. Northwest Colorado respondents were more skeptical about the benefits, highlighting regional variations in attitudes toward collaboration and the scope of the energy transition.

Moving forward, it is clear that any successful transition must address both economic and environmental concerns. The region is keen on maintaining energy reliability and availability while ensuring that new energy sources do not undermine job security or increase costs for consumers. As policymakers and stakeholders continue discussions, the results from this survey offer valuable insights and critical guidance on the community's priorities, helping shape a sustainable and inclusive energy future for Northwest Colorado.

APPENDIX A

Figure 19:

What aspects of a regional energy hub would be most important to you? Open Ended Answers Word Coud

Table 3:

What aspects of a regional energy hub would be most important to you? Open Ended Answers

There isn't any
--Anything that would CLEAN THE AIR =lessen emissions! --GETTING the passenger TRAINS TO CRAIG AND TO DENVER, ARE BOTH VITAL! =not only getting US easier travel in BOTH directions (West & East, and I guess South as well!), BUT ALSO lowering vehicle emissions in our valley as well! This is not for only daily workers, cleaners, etc., going West/East; but also for Residents wanting to go to the Front Range (to the "Big City") also! [This can also benefit the valley "indirectly"--by allowing "city slickers" (and other travelers) better and easier access to Northwest Colorado! This might also cut vehicle emissions here, since fewer autos/vans would be needed for the Hayden-Steamboat runs!]
A plan that incorporated an all in one approach, including coal, natural gas and nuclear options
What are the energy sources? Will there still be coal mining? The plan is a bunch of talk with no details.
Wind and solar are sham billionaire moneymakers that are unreliable and harmful to the environment without any consequences for the damage they cause.
You have not clearly defined what a "regional energy hub" is. Seems to be some vague mix of electricity generation
protecting agriculture and wildlife, no solar/wind farms.
Keeping coal, gas, and oil in the mix along with nuclear energy.
Well there is not enough information to make any real judgement. We do not have the technology to store all this energy, so of coal is out wind and solar will not be able to provide all we need.
Get government out of the way of energy producers
Keep mining coal and keep the power plant going. The wind isn't always going to blow and the sun isn't going to always shine.
Keep jobs, keep the lights on
Seems unrealistic
So called renewables are unproven to be reliable and sustainable, as well as how they distribute infrastructure across natural landscapes.
You have no specifics, as you can not provide reasonable and valid information given, there are no bases to offer an intelligent reply.
Transitioning existing jobs into less fossil fuel dependent ones, while protecting critical habitat of sage grouse.
You will never shut down the power plants in nw colorado unless you replace coal with natural gas. Wind. Solar, etc is a.pipe dream for now.
Diversity
Diversity of use of energy
Coal keeps our lights on!!
The Sun. It is the beginning and the end.
Keep jobs
Coal
To Keep Coal
Energy sources that do NOT come from wind and solar
Having enough energy to stay warm through NW Colorado deep freeze winters!
Sustainable energy sources such as wind and solar that can leverage existing transmission and distribution infrastructure

Table 3 (continued):

What aspects of a regional energy hub would be most important to you? Open Ended Answers

That statement about the "regional energy hub" is full of Jargon and nonsense words, with a statement like that it could mean anything, and more than likely mean that we and you don't fully understand your intentions by design, and you are masking your intentions behind noncommittal buzzwords. You have already chosen to be either/ or in an extremely glaring way. So you start on a shaky foundation of mistrust based on energy theories that more than likely won't make sense in the long run for the citizens depending on reliable access to energy, but go ahead and write that and know we all know it means nothing until proven sustainable and dependable.
We should use all sources. Renewables by itself isn't practical
Sustainability and environmental responsibility.
Keep coal and augment with nuclear..small modular reactors!!
Stable, cleaner energy that also protects the land. The huge solar array field would have been better closer to the plant to protect open land.
transition current coal plant to nat gas
Keeping jobs in this area.
green, renewables focus
Balancing a vibrant economy with sustainable energy production.
Drill oil,mine coal,tap natural gas Stop green new deal
People keep their jobs and it doesn't hurt our economy!
Using what we have efficiently. Bypassing paperwork and connecting to solar capacity at the Hayden plant like they're doing in the mid-west.
Ddd
Reliability and cost
None
Protect jobs
Low cost, environmentally conscious energy.
None
Coal
N/a
clean energy, environmental safety, less fossil fuels,
Expand regional energy
Transportation south routt
reliability
Cost
Transition to renewable energy
unsure
Jobs
Security
Be real with less fluff
Jobs
Diversified energy sources. Not just one
Not to get rid of coal use completely, and to still have the ability to use the systems we have in place for power in the near future. We do need to change with the times, but it's not bad to have a backup plan. It's better to have something and not need it. Rather than not having something and needing it.
Looking to a more sustainable vision of what energy resilience could look like for the growth of the community
Economic support for the region
Power plants can be converted to NG, but you idiots will not allow common sense solutions.
cost for customers, jobs and environment
Diversified energy portfolio
Cheaper energy cost
Sustainability, environment
Diversification - relying on coal is what got us into this mess
High paying jobs
Utilizing the source we have had here for decades, keeping the jobs of those who work at the plants and mines, keeping solar plants from destroying the beauty of Colorado
Diversification and collaboration
renewable energy sources
Adding nuclear as an option for cheap, reliable, abundant, safe, and environmentally friendly energy
Balancing the pace of change with the ability to keep energy prices affordable and energy available at all times. Less political driven change and rhetoric, focus on what works in what realistic time frame.
being able to insure we have the energy that we will need and what we have had, don't want ANY black outs
Jobs
A balance of energy sources would still include coal production. A Regional Energy Hub needs to provide jobs of comparable pay to those currently available at the mines. Displaced employees should be given first chance to be selected and trained for these Regional Energy Hub jobs.
Dependable production, low cost, eco friendly
Keep coal
Protecting our custom and culture, including wildlife habitat, clean water and wild places while ensuring we have adequate cost-effective energy supplies.
Economic development
Not one thing
PV/Wind/BESS Integration. Get rid of the coal plants that poison our families and lands.
Reliability, innovation, cost efficient, environmentally sound

Table 3 (continued):

What aspects of a regional energy hub would be most important to you? Open Ended Answers

Diversification of economic opportunities and jobs
Having the front range and legislature understand that going to one energy source is not a sustainable or long term solution
reliable
minimal impact on environment and wildlife, and growth that is manageable for the current infrastructure (housing, water/sewer, schools, etc.)
lower cost of energy bill here
Maintain the power plant. Think hydro and nuclear, gas. Do environmental impact studies before pushing solar or wind. (Example, Wind farms causing severe loss of ocean life off the east coast. No fish, lobsters etc.) where you have huge solar farms and wind farms, the loss of birds. Heating up the earth more, interrupting animal migration.)
Less reliance on foreign maufactured technology such as solar panels and wind turbines which contain many foreign made components. Many green energy systems require Americans to pay to foreign companies to design and build essential components of these systems. Instead, all dollars should be spent on American labor and all systems built by American manufacturing.
You need to not take out coal and increase natural gas production. Wind and solar are unreliable, environmentally unfriendly, and take far to much rural land to produce.
Jobs.
Use of diverse energy sources including fossil fuels and nuclear to provide reliable and affordable energy. Producing energy locally to support local jobs.
Nuclear energy
I think we need a mix of all sources of energy, nuclear energy needs to added to the mix.
Natural gas
I think a variety of energy sources…to include nuclear energy… would be much more favorable and would ensure that we can produce all that we need as we as well as produce extra that could be sold to other jurisdictions.
Nuclear energy, clean safe. one small modular nuclear energy facility runs on spent fuel rods from other reactors
The idea of a Regional Energy Hub is good. However, I think there needs to be more of a focus on the environment.
Diversified sources provide maximum reliability and affordability while contributing to a healthy economy.
Cost of energy, availability of energy, clean energy -- coupled with good jobs, tax base for local government.
Not eliminating the burning of coal for energy production.
Economic and environmental sustainability
Diverse and sustainable sources including renewables and nuclear
Sustainability, collaboration, and inclusivity
Keep exiting oil and gas prices reasonable and stable. Forcing a rush to alternatives is not practical,foolish.
Diverse energy sources
Get underground and solar wind, a mixture
That it would lower the cost of energy prices.
the preservation of the environment. minimal destruction.
Adopting clean energy.
Focusing on renewables. If solar energy can be successfully used in dark, gray states like Vermont, it can absolutely thrive in our sunny valley.
You cannot get rid of oil and gas and coal industries outright in an attempt to scale up 'clean energy' strategies unless you want to decimate the Colorado economy and threaten our viability when it comes to delivering energy to Americans. As reality has shown. A strategic approach to scaling up 'clean energy' industries depends upon the infrastructure (threatened by radical green new deal initiatives and extremist democrat politicians) of traditional energy delivery and resources. We are blessed to have resources in Colorado that can answer this demand, if only extremist left politicians would get out of the way. Colorado's economy and the financial wellbeing of residents would be in a much stronger position now if political warfare hadn't been waged so strongly against the traditional energy industry our state has a history of providing for the state, nation and world.
Oil and gas
?
Transition to renewables and protecting livelihoods of those affected by the transition
Protecting the environment and ensuring that new projects are done with deliberate emphasis on protecting the future while providing safe, quality paying jobs in the community.
Protect the environment, address climate crisis
This hub still needs to find solutions that cut C02 emissions in half by 2030.
Not reliant on a single type, ie electrical
Continuing to have multiple sources of energy for price reduction, and not having to burden the current system.
I would like to see more oil energy
All
We are an AND region. We add to our energy portfolio instead of picking and choosing winners and losers with regulations. We should support free market innovation and Incentivize technology and clean, innovative, or existing energy industries.
-
The commitment to use all forms of energy. Do not pick winners and losers; let the market decide!
A rapid shift away from fossil fuels
A diverse portfolio of energy sources

Table 3 (continued):

What aspects of a regional energy hub would be most important to you? Open Ended Answers

I don't want to transition from oil, which is a low cost energy source. I only want to add new energy sources if they are low cost to consumers.
Diversified
A modern facility that is capable of harnessing energy from diffuse energy sources with the lowest impact on the environment.
to better solve issuses, "all of the above" use of energy sourses makes sense.
Variety of energy sources
Improving short- and long-term health impacts on the environment, wildlife, human life, wilderness. Being innovative and utilizing evidence-based technologies, makes us wiser and more efficient stewards. Long-view and big picture awareness and actions is good for all of us, now and future generations.
Energy without any government subsides!
Resiliency. If we figure out storage, that will help with everything. Prepare for new technologies. Can use each technology to it's full strength.
Hopefully keeping or expanding the job market while meeting the demand for energy in new technologies that will not only meet the needs of our communities and beyond, but also help to protect our environment.
Be realistic and drill baby drill! We need to become energy independent and start paying down the National Debt.
More availability of energy, and personal choice.
Job creation, environmental impacts
keeping jobs
A focus on non renewable, renewable energy harvesting technologies
The realization that it's not "all" or "none." We CAN and should expect to have varying sources of energy, especially as we move toward renewable/ earth-friendly sources. Critics need to be made aware and understand this.
Looking at most cost efficient energy sources
Energy options, if one means becomes unavailable for a time we need options so we aren't just left without power due to putting all our eggs in one basket.
To prioritize natural gas production/use along with solar farm development.
Focus on fossil fuels. Dismissal of the renewable energy source dystopia
It sounded like a diverse energy mix at the beginning, but, when you throw the word "clean" into the mix. green energy comes to mind. I'm not for the green energy as the only source. We have an abundance of energy types from gas, oil and, with imagination, hydro power that would provide less expensive, more reliable and environmentally correct sources than solar or wind.
Reliability, sustainability, affordability
Reliability and affordability. Since the coal power plants have closed, we're having unprecedented outages. We are not using hydropower enough. Government regulation is stifling and unfair.
Local resources used instead of imports, local jobs, local efficient low cost energy. Preservation of wild space. Follow logic, not trends. Take a long view.
To transition away from fossil fuels as quickly as possible.
Keeping what works and adding other sources
Using existing, paid for resources (e.g. transmission, industrial footprint, etc)
Using all types of energy, coal, petroleum, nuclear,water, solar, etc.
Reducing harmful emissions through prioritizing clean energy
n
You need to elaborate. How will a REH help fight wildfires? What do you mean by 'energy storage'? Those concepts are probably loaded with impacts that the designer of this survey has chosen to leave undefined in order to get a sense skewed response.
TO USE EVERY TYPE AVAILABLE NOT just one source as that limits who will have it and how much it will cost. It will all work together and is better to have all types available as not all areas have everything available to them.
Less government control.
I support oil and gas production and even clean coal. In this day and age, few people don't care about doing any of those without a concern for the environment. I don't want to see solar fields and lots of windmills. They also have negative impacts on the environment and for the amount of energy per space, to me is not worth it. Also, neither of them can happen without oil and by-products. Oil and gas are NATURAL RESOURCES and we should use them, not manufactured panels and windmills. God told us to be good stewards of the environment, but gave us those resources. We should use them.
Transition away from fossil fuels at a manageable pace to allow current energy workers to train and/or find employment in renewable resources or other non-energy opportunities.
rapidly phasing out fossil fuels and ensuring those who work in those industries are trained for renewable energy jobs
Maintain coal-fired power plants at current outputs.
Clean energy and a diverse portfolio of energy
Diversification, abundance and low cost overall
compatible with culture. Create local employment
Gradually transition to more renewable for long term sustainability.
Diverse energy supplies
manage with a focus on the long-term.
Reliable source of energy that reduces outages and is wild fire resilient.
Bring back oil and gas to Western Colorado with less government restrictions

Table 3 (continued):

What aspects of a regional energy hub would be most important to you? Open Ended Answers

Jobs and dependability
We need to look at all energy options as one is just not sustainable. We also need to look for energy options that are less damaging to the environment. Need to diversify.
Aligning with future environmental goals and sustainability.
Adding geothermal and nuclear energy to the mix
Use a balanced mix of energy production near the source of the raw feed material or infrastructure.
N/A
A mix of energy sources that provide long-term energy solutions for all.
Keep the existing coal and fossil fuels. A mini nuclear reactor would also help. Renewal energy a total energy source does not work.
Recognizing the fossil fuels are an important part of our energy and will be for some time to come.
Using our natural resources that are abundant in our area and much cleaner than importing dirty oil from other countries
Reliable, affordable energy
Collaboration and energy expansion.
Creating workforce for 21st Century energy economy. Places like CNCC embracing clean energy tech to train the next generation of workers that can stay here in NW CO.
Nuclear energy and setting up vertical integration of the supply chain, where feasible. Mining, milling, refining, processing, and everything in between can be done here in Western Colorado.
Producing the same amount or more energy than is currently produced, but with different sources and also capitalizing on the economic diversification and economic growth in other sectors that would come with this hub.
Bring all energy sources to the table including nuclear.
Nuclear and natural gas
Not getting rid of one until another source has proved it is viable The lowest cost will help the changeover and it will occur naturally
Reliability and cost
cost
?
High paying nuclear jobs
efficiency of the energy and environmental impact
None!!
Uninterrupted production, great jobs
The "all of the above" theme using all types
Keep our jobs and way of life
Unsure
Utilizing as much of the buried natural resources as possible, with little or no subsidies for "wind and solar".... and build a lot more hydro.... easy cheap electricity with a bonus of more water...
Reliability
Expand what we have
Keeping coal and oil production
Oil and gas
Everything is nothing but political propaganda, making everything unaffordable and destroying our environment with wind and solar going where there should be trees, grasslands, and farms.
To not do it. It will fail ! I like to be warm in the winter
Creating/keeping jobs and economic growth
I think the biggest hurdle is getting people to look past coal. So many people are holding out hope that a presidential, local, or statewide change is going to happen and keep coal here. While I don't have a crystal ball, helping coal communities understand that change isn't all bad and that we need to stop holding out misguided hope for coal to stay is only going to hurt coal communities in the long run is paramount. Even if coal stays, this should be enough of a wake up call that economical diversity is necessary to keep our communities alive.
Long term prosperity
X
Promote jobs while still keeping energy production
It going away and keeping coal and natural gas as the energy source.
Keep our local energy producer. Keep all the jobs. Develop secondary power sources locally. Then transition once the capacity and loads are in harmony. We cannot handle rolling blackouts like is happening in some parts of our nation - especially in the winter. Lower prices. Lower hidden and attached fees. Set limits on how much corporations can profit off consumers.
Jobs / growth - but keeping gas/coal - batteries are worse for the environment- and don't work in the cold and are fire hazards - solar fields takes away from farming land
High paying jobs
President Trump back in office to become energy independent instead of shutting down our supplies and buy from communist countries! Ridiculous!!!!!!!!!!

Table 3 (continued):

What aspects of a regional energy hub would be most important to you? Open Ended Answers

Diversity, multifaceted approach, good jobs.
Keep our power plants
Other than using existing footprints, I don't see how coal production, O&G production and power plants can be converted to clean drinking water usage or firefighting.
Providing a stable income for the families in the community.
Energy as a whole vs a singular product. All energy on the table. There are numerous vast natural resources in the region.
Keep the jobs and tax base
Nuclear
Jobs
diversified resources
Other areas of the country are better suited for wind and solar and we may be at a disadvantage trying to compete in these areas, dispatchable generation and or storage may be better suited to this area.
With a Regional Energy Hub, you have more choices, more opportunities for employment and a diverse economy.
Sustainable practices and job security
Keeping energy affordable and reliable. This along with creating a sustainable tax base for the affected communities.
1. Diversification of energy options given that one source will not take care of all the energy needs. 2. Ensuring long term prosperity of the region 3. Positive impact on wild fires and drinking water
Reliable, sustainable energy sources. Job creation.
Diversification
Creating systems utilizing the existing infrastructure

APPENDIX B

Table 4:

Select all the energy sources that should be included in a regional energy hub (open ended answers).

Human energy - time
Hydrogen energy development
Propane
Transition off of coal to solar
Wind kills birds, hydro kills fish, solar is rife with fraud and net terrible for the environment
Without storage capacities, on cloudy and mindless days, we still need energy. The carbon footprint of producing and replacing green energy components should be calculated into the environmental equation. When nuclear goes bad - the effects ruin environments. We need to build resilience into our systems so society doesn't crumble when there is an attack on segments of the power grid. This is where locally generated power is outstanding over regional hubs are a risk. Power companies could be linking consumers up with their back up plans- solar, gas systems, electric, wood burning fire places to keep us functioning when the grid goes down. We need redundancy, use gas without converting it to electricity so the energy isn't lost during the conversion. Thank You!
Energy storage (battery, H2, etc)
require all new and renovation commercial projects to include roof top solar and small winds generators.
Encouraging residential energy generation and storage. Residential solar.
Gas...as transition source only. Should be used less and less.
All energy options should be considered and deemed appropriate for the region
Hydrogen
Hydrogen, Biomass, Methane capture and reuse,
Mini hydro & mini wind turbines
Photovoltaic
Solar and wind projects should be done on an individual basis, not on a city or state
Improve the gas/oil infrastructure to be cleaner and less harmful to the environment
Other emergent technologies as they become available/ feasible, i.e. molten salt, etc.
renewables only- it is sunny 300+ days per year!
solar and wind as the least used.
ADD Nuclear "Modular" Generators in CRAIG--at the EXISTING Power Plant facility--BECAUSE ALL OF THE INFRASTRUCTURE IS ALREADY THERE (=housing, streets, water, AND MOST IMPORTANTLY ALL OF THE "POWER INFRASTRUCTURE) IS ALREADY THERE--including the High Tension electrical wires and "attached" substations and switching facilities both here AND ALSO NOW on the "receiving end" of the present-day Yampa Valley electricity! [Plus, passenger rail/trains are ideal for our lengthy Yampa Valley!]
We need to vary our sources, moving toward more eco-friendly ones in time.
Battery Storage
be specific on your recommendation, at this moment you have nothing except a concept. Give me some facts to make an educated guess
biomass gasification, renewable bio-fuels/diesel
Everything that can help drawdown CO2
Make energy affordable and dependable. NOT expensive, unsustainable. Don't make us pay for your vision.
Natural Gas
You're going to need to flesh out these ideas in order to get meaningful responses.

APPENDIX C

Table 5:

Select the top three energy sources that would be the best options to meet the electric demands for the future in this region of Colorado.
(open ended responses)

You know carbon capture and storage does not generate electricity right?
Coal bed methane gas
Mini hydro & mini wind trubines
Wind is good here to expensive to maintain solar too much snow takes up to much space
[See my prior comments re. NUCLEAR--that would be the easiest and least expensive way to go--soon....
NONE Electric is horrible for the environment, not to mention that they use child slave laborers to mine for the ingredients to manufacture lithium batteries
no proven concept, can't make an informed decision bases only on FACTS
biomass gasification, renewable bio-fuels/diesel
What research shows to be effective including ways to reduce usage
that is for the experts to determine, and more than likely be theoretical, unsustainable, and much more expensive.
Natural Gas
Find efficiencies and reduce consumption.

APPENDIX D

Table 6 (continued):

If yes to the previous question: Select all energy sources that your electric provider uses to bring electricity to your home (open ended responses).

We are 100% solar for electric
We have residential solar that provides an excess relative to our needs, the excess is sold to excel.
Unknown
I don't know
don't know
We have more outages and higher prices than ever before
Unsure
I'm off grid
Hydro Electric
we are paying for all renewable for our house, but YVEA uses the 3 above