

POTENTIAL ENERGY

**Perceptions of Nuclear Power in Coal
Communities**

June 21st, 2022

About Us

Potential Energy Coalition is a data-driven, startup nonprofit that aims to dramatically increase public support for clean energy and climate solutions using the most **advanced marketing, analytics, customer insight, and creative techniques from the private sector**. We have developed an advanced communications capability that **significantly increases and broadens public will for clean energy at the lowest possible cost**. Powered by the largest coalition of analytic and creative talent in the marketing industry, our campaigns create a foundation of educated citizens that enables large-scale action on the energy transition.

For more information, please contact John Marshall (john@potentialenergycoalition.org)

Our research aims to fill a knowledge gap on sentiment and narrative change in candidate coal-to-nuclear communities

Current Scope: The coal-to-nuclear transition is one of the most promising potential pathways to a clean energy future. While research exists on general public sentiment and effective messaging on nuclear, no such research exists for the ~100 target coal-to-nuclear communities. To fill the gap and provide new insight on the best paths for narrative change, Potential Energy conducted four lines of research:

- 1) Baseline public opinion on nuclear sentiments at the **national scale**
- 2) Baseline public opinion research on **nuclear sentiments in candidate coal-to-nuclear communities**
- 3) Large-scale **persuasion research** (via randomized control testing) to identify the most promising message territories to drive lift in support for the coal-to-nuclear transition in these communities
- 4) Multiple **focus groups** in candidate coal-to-nuclear communities to derive qualitative insights on local beliefs and attitudes regarding nuclear power and the coal-to-nuclear transition

Project Goals

Our research objectives were to deeply understand coal-to-nuclear candidate communities, what their support for nuclear looks like, and what messages best grow it.

We addressed four key questions:

1 (**How strong is local support for the coal-to-nuclear transition?**)

2 (**How broad is the support?**)

3 (**To what extent can audiences be moved?**)

4 (**What messaging increases support?**)

We have conducted significant research on public perceptions of nuclear power over the last several months

Quantitative research

April 2022 National Nuclear Baseline (n = 949)

- Nationally representative nuclear energy sentiments survey

Mar 2022 Coal-to-Nuclear Message Test RCT (n = 5,001)

- Test 6 narrative territories to frame nuclear energy use as an innovative, clean, and economical power source
- Tested nuclear support versus control groups among 230 targeted communities

March 2022 Coal-to-Nuclear Community Baseline (n = 3,021)

- Research in over 230 targeted communities measuring baseline sentiments and understanding of nuclear energy
- Tested knowledge and agreement of nuclear benefits

Qualitative research

Coal-to-Nuclear Focus Groups

- Partnership with Engagious
- 2 focus groups with left-leaning Liberals/Moderates and right-leaning Conservatives/Moderates in targeted communities across the U.S.
- Sentiments on community issues; concerns about energy and nuclear power; feedback on nuclear persuasion messages

Asynchronous panel with Moderate citizens

- Partnership with Recollective
- Baseline perceptions of nuclear power and the industry; tested nuclear persuasion messages

Methodology | A “people-first” approach to our research on nuclear energy within candidate coal-to-nuclear counties

Sampling overview

- **Criteria:** Fielded within counties that either have a retiring coal-fired power plant, or will have a retiring coal-fired power plant in the next 10 years
- **Database:** County list compiled through supplemental analysis of the Good Energy Collective’s coal-to- nuclear candidate list
- **Field dates:**
 - **Coal-to-nuclear baseline:** March 14-24
 - **National baseline:** April 13
 - **Message test:** March 29 - April 6
 - **Focus groups:** April 5

Geographies:

- AL
- AZ
- CO
- DE
- FL
- GA
- IA
- IL
- IN
- KA
- KY
- MD
- MI
- MO
- MS
- NC
- ND
- NM
- NV
- OH
- OK
- PA
- SC
- SD
- TN
- TX
- UT
- VA
- WA
- WI
- WY
- WV

Foundational questions & research lanes

How strong is local support for the coal-to-nuclear transition?

How broad is the support?

Coal-to-nuclear candidate baseline survey: Consumer research, coal and nuclear baseline sentiment research

National nuclear sentiment poll: National nuclear sentiment research

How strong is local support for the coal-to-nuclear transition?

How broad is the support?

Nuclear message test RCT: Message testing across 7 different nuclear message territories

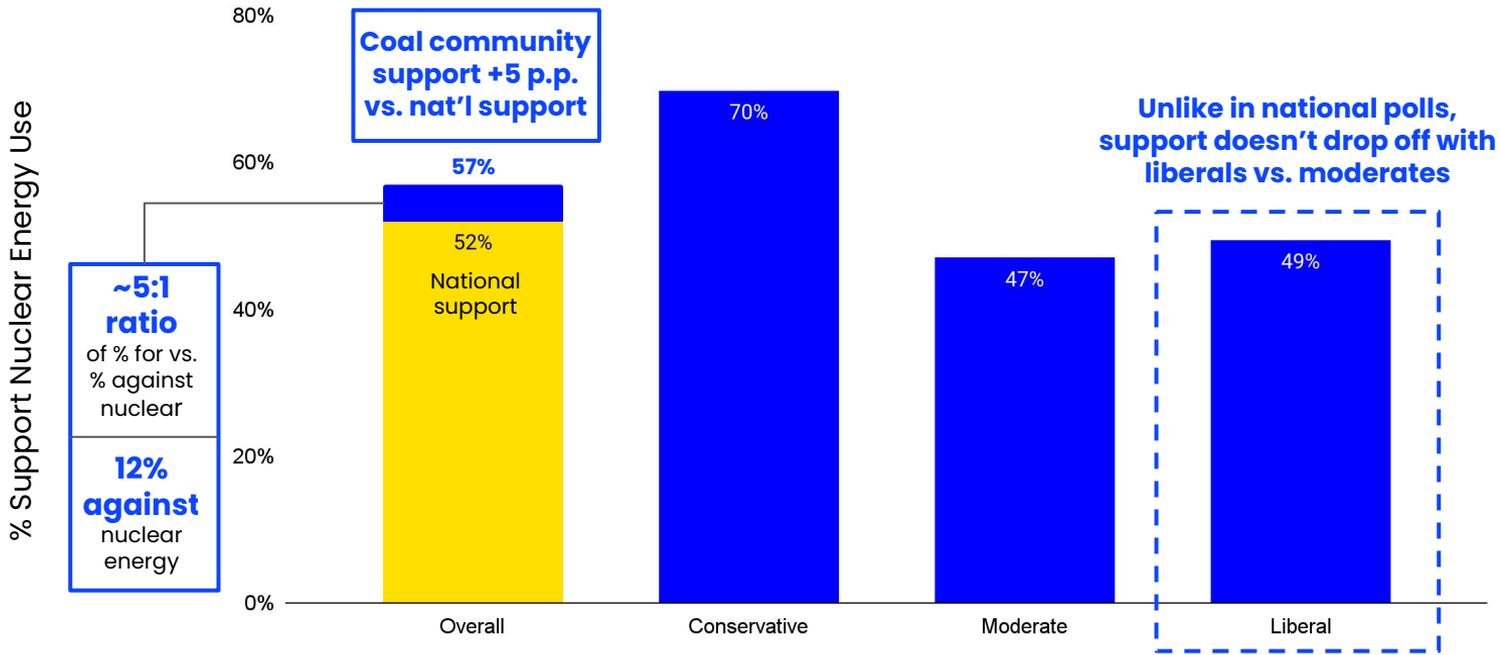
Nuclear focus groups: Focus groups on coal power, nuclear power, and nuclear messages with coal community members

**How strong is local
support for nuclear
energy?**

**How broad is the
support?**

Baseline support for nuclear in coal communities outweighs opposition by nearly 5x

Local coal communities % support of nuclear energy vs nat'l baseline and by ideology



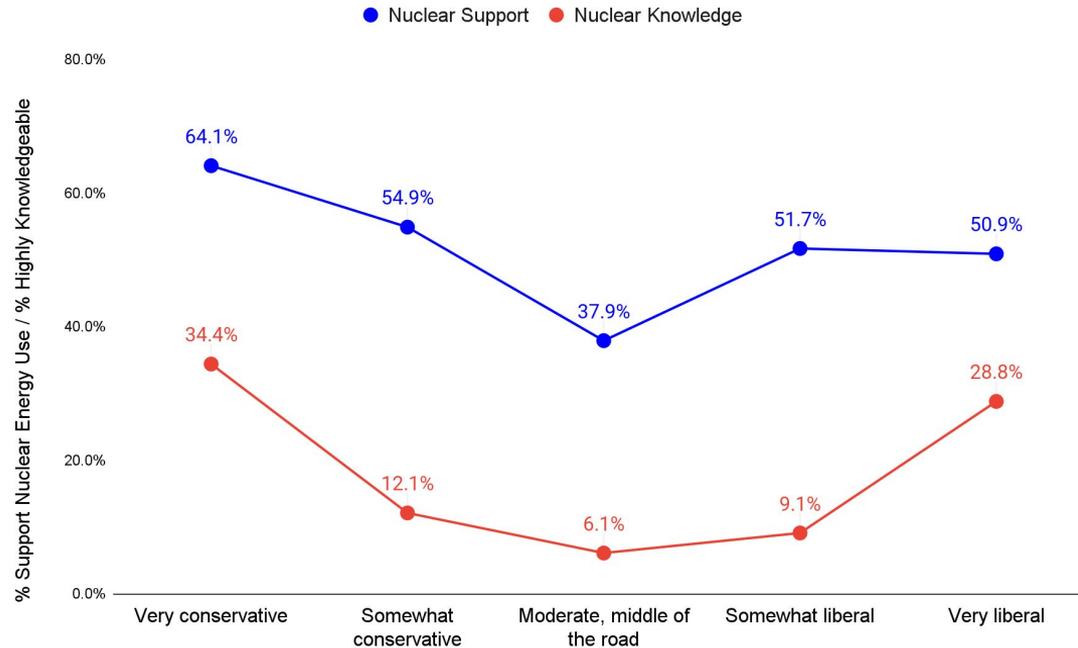
Sources: Potential Energy National Nuclear Baseline Poll (Apr. 2022); Potential Energy Nuclear Baseline Survey (Mar. 2022); Funk and Hefferon "U.S. Public Views on Climate and Energy" (Pew Research, Nov. 2019)

Notes: Support for nuclear energy was asked through a 5-point scale on agreement with the following statement: "I support the use of nuclear energy to generate electricity."
Sample sizes: National Nuclear Baseline Poll (n = 949), Overall Coal-to-Nuclear Baseline (n = 3,021), Conservative (n = 1,225), Moderate (n = 1,081), Liberal (n = 714)

Nuclear support is strong on the left and right, a unique situation

California data: Nuclear support and knowledge by ideology

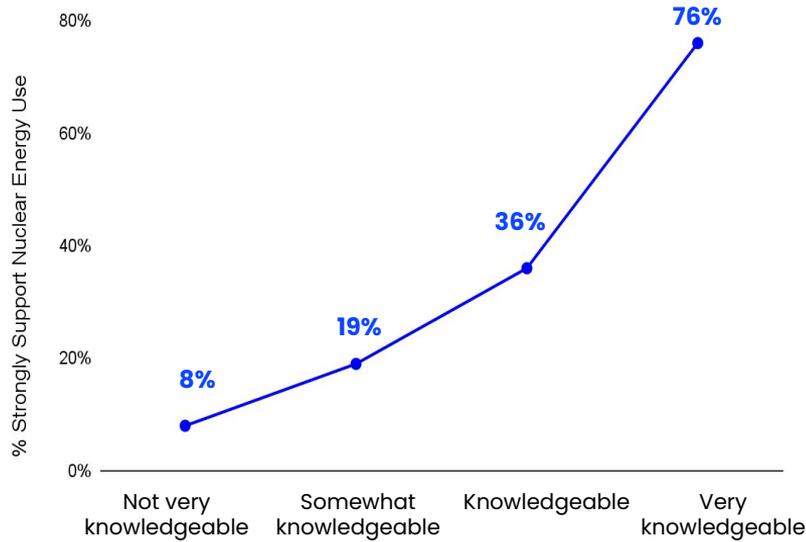
Preliminary data



Source: Potential Energy CA Nuclear Sentiments Survey (May 2022)
Sample size: CA Nuclear Sentiments Survey (n = 500)

Education on the issue makes a significant difference – nuclear support directly correlates with nuclear knowledge

Exponential returns on nuclear support as knowledge increases



And there is significant headroom to educate audiences

- **Only 15% of coal-to-nuclear candidate communities are highly knowledgeable**
- **Only 7% of the least supportive audience, Moderates, are highly knowledgeable**
- **Only 37% of community members know where their energy comes from**

Support for nuclear is high as coal communities believe it can help address jobs crisis coming with coal's departure

Coal is seen as the engine of the local economy, and they want to protect it...

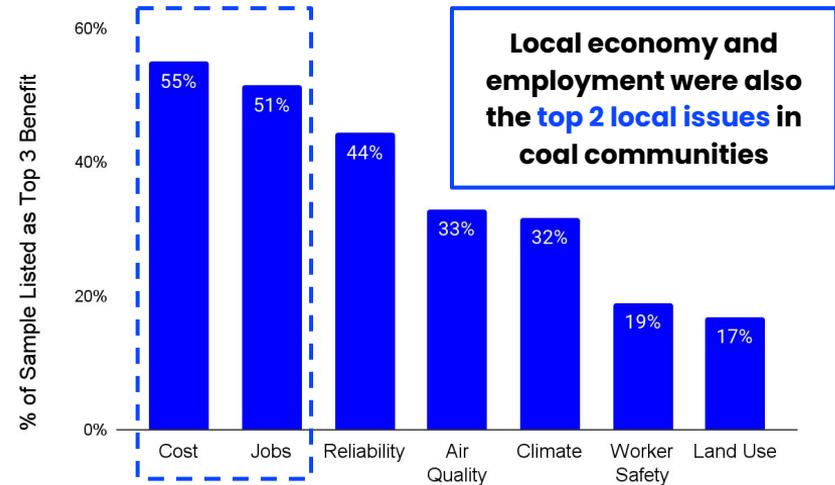
“
My entire family works in coal. I don't think it's safe, but it's a huge resource here and a huge source of income.
– Conservative from KY

“
[Coal] is so important for job creation. Some people wouldn't even have jobs otherwise, like those in the Appalachians.
– Liberal from OH

“
Coal has been a really valuable resource for us. You can't just phase out all the jobs.
– Moderate from AZ

...but coal communities believe that nuclear can potentially help fill the coal jobs gap

Top nuclear benefits in coal communities



**To what extent can
audiences be moved?**

We tested multiple message territories to increase support

Energy independence

Investing in nuclear power plants on American soil can create an industry that meets our energy needs at home, decreasing reliance on foreign energy.

Nuclear innovation

American nuclear engineers and tech startups are leading the global clean energy race by developing modern designs for nuclear power plants.

Nuclear for climate change

Nuclear power works without producing harmful pollution. Investing in nuclear energy can help us fight climate change and keep our future pollution-free.

Cheap / Reliable energy

Americans have been feeling the impact of our dependence on fossil fuels with sky-high prices. Nuclear power is cheaper to operate and more reliable.

Nuclear for coal jobs

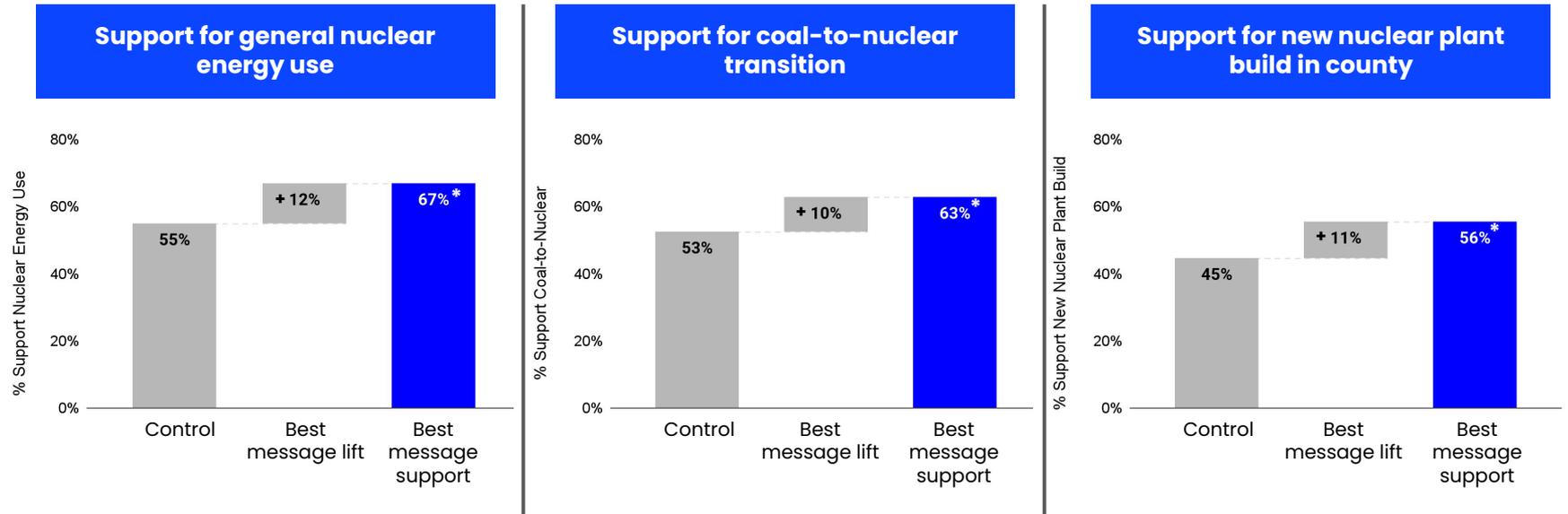
Many coal power plants are scheduled to be shut down soon. Nuclear power plants can increase the number of accessible, permanent jobs.

Safety / Health

Coal power plants have filled our air with toxic, health-damaging pollutants. Switching to clean nuclear power can help keep our communities safe and healthy.

Our data shows that strong messaging significantly increases support for nuclear energy

Lift from best message on support for nuclear, by metric



Source: Potential Energy Nuclear Message RCT (Apr. 2022)

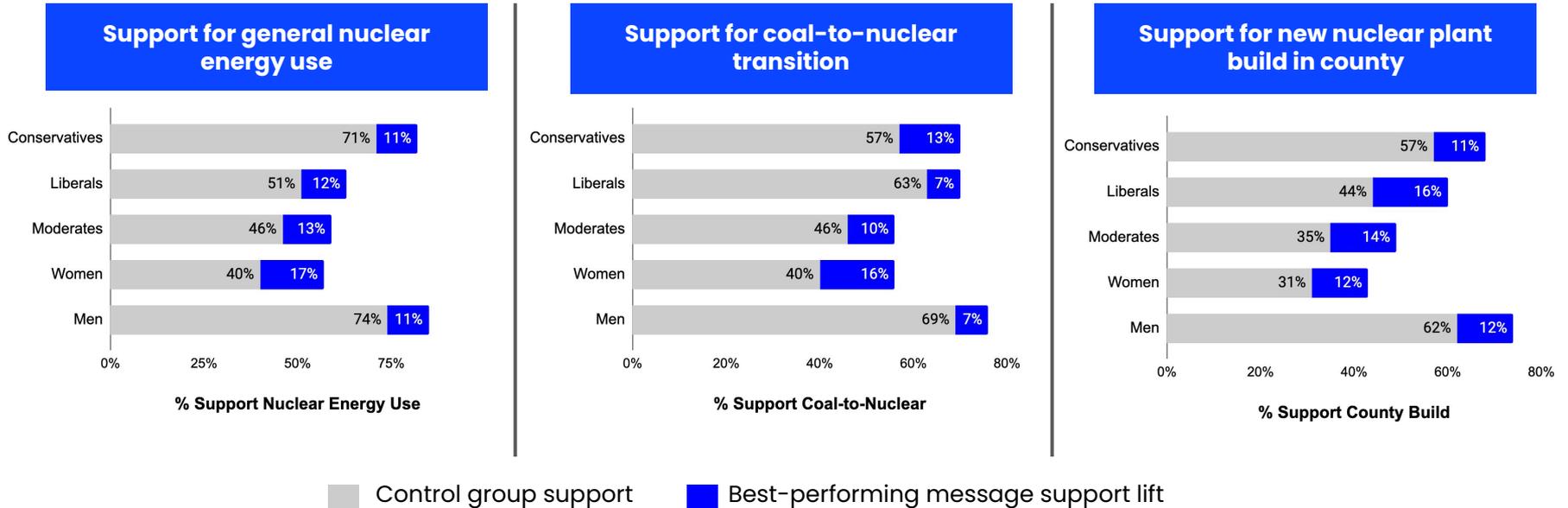
Notes: All support metrics were asked through a 5-point scale on agreement with the following statements: 1) "I support the use of nuclear energy to generate electricity." 2) "I would support replacing retiring coal power plants with nuclear power plants within my county." 3) "I would support the construction of a new nuclear power plant within my county."

Sample size: Overall Nuclear Message RCT (n = 5,001)

* denotes statistical significance at a 95% confidence level

We also found that our nuclear messages moved all audiences, especially women and Moderates

Lift from best message on support for nuclear, by metric, by audience



Source: Potential Energy Nuclear Message RCT (Apr. 2022)

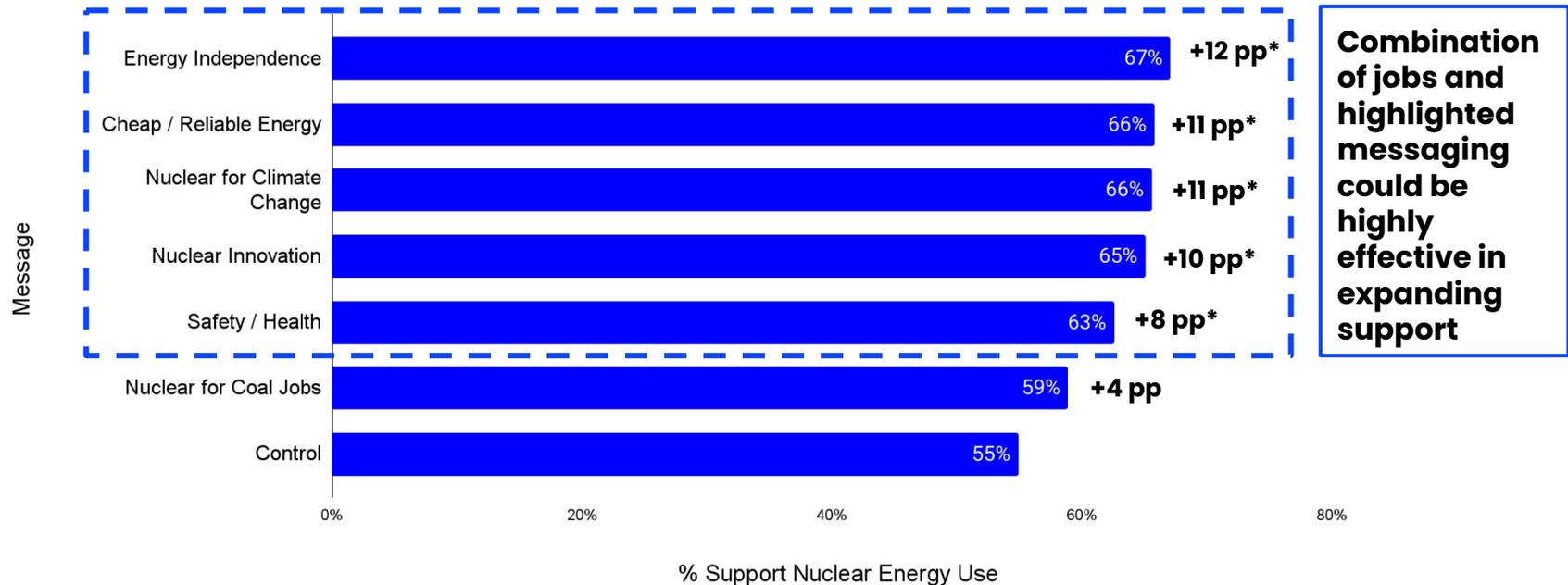
Notes: All lifts were statistically significant at a 95% confidence level

Sample sizes: Conservatives (n = 2,005), Moderates (n = 1,875), Liberals (n = 1,121), Women (n = 2,601), Men (n = 2,400)

**What messaging
increases support?**

Multiple messages were highly effective in lifting nuclear energy support in coal communities

Topline nuclear energy support post-messaging, by message



Source: Potential Energy Nuclear Message RCT (Apr. 2022)
* denotes statistical significance at a 95% confidence level
Sample size: Overall Nuclear Message RCT (n = 5,001)

Nuclear is seen as a key solution to energy independence

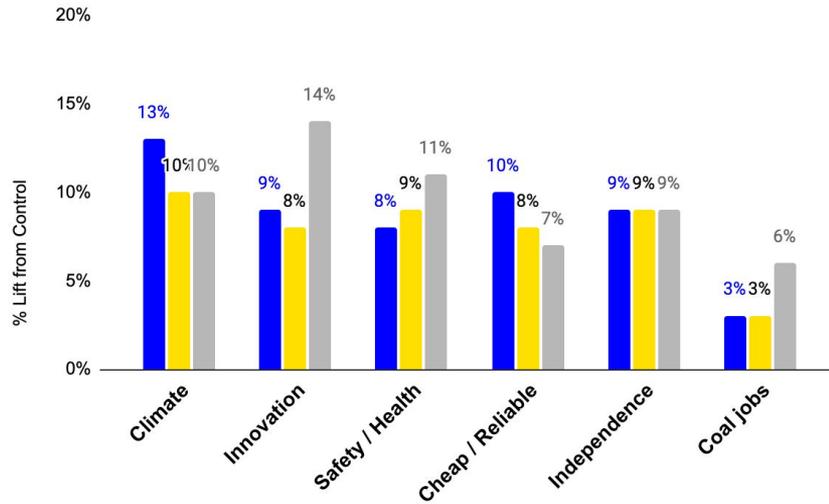
“ The war is a great example of how **bad it is to rely on other countries**. We need to get away from that. I have no problem with nuclear getting us there.
– Moderate from TX

“ If we can be independent from fuel from other countries, we can hopefully cut down the **cost of energy and be more sustainable** in the long run.
– Moderate from FL

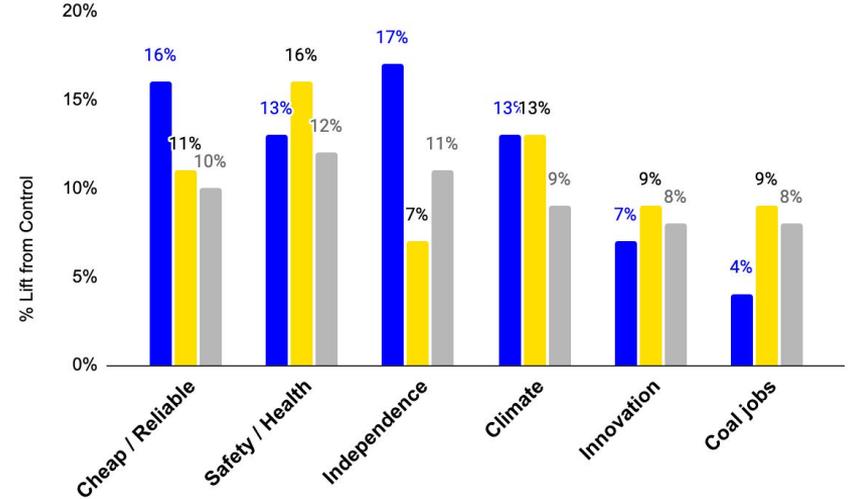
“ I’m really worried about the **state of the economy**. Have you seen the inflation going on? Look at the cost of gas, food, my rent.
– Liberal from MO

Moderates and women were initially the most skeptical groups, but both can be highly moved by several messages

Moderates are most persuaded by messages on climate and nuclear innovation



Women are most persuaded by messages on nuclear being cheaper and more reliable, as well as safer

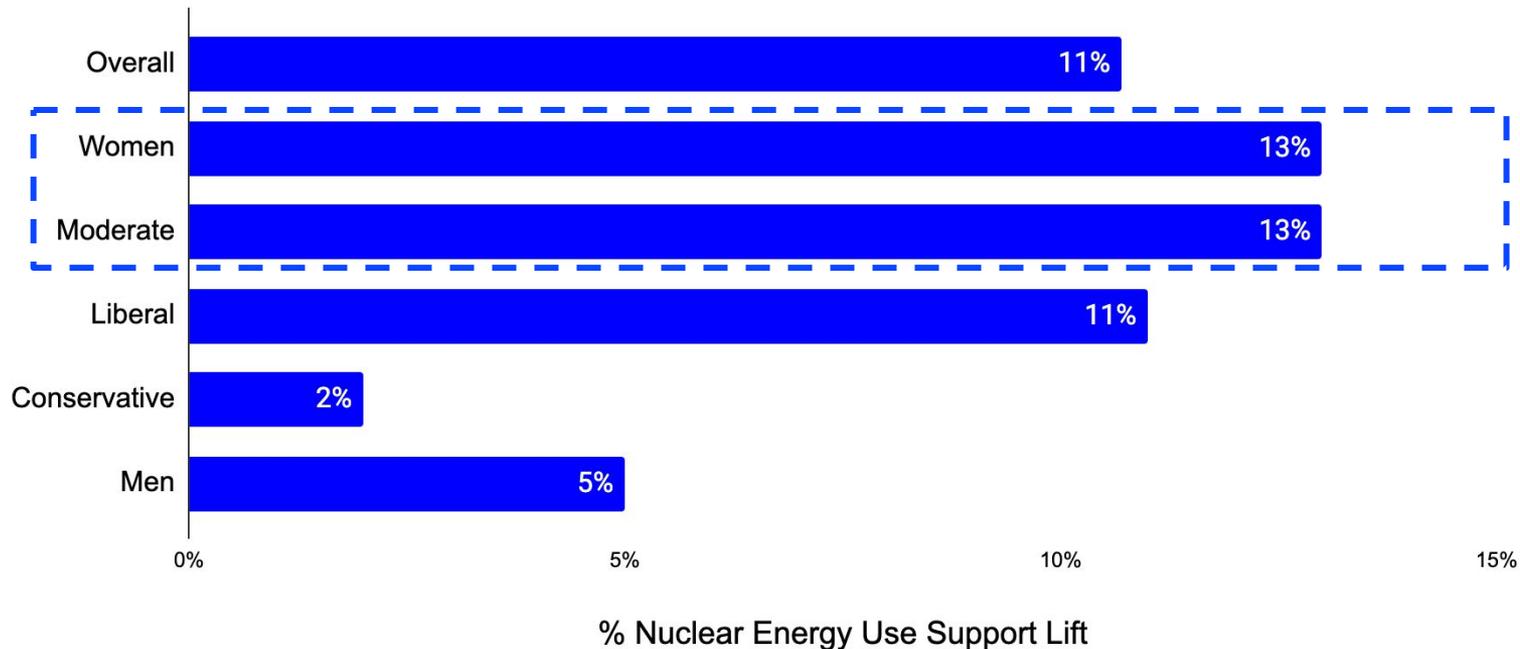


■ Nuclear energy support lift
 ■ Coal-to-nuclear support lift
 ■ County build support lift

Source: Potential Energy Nuclear Message RCT (Apr. 2022)
 Sample sizes: Moderates (n = 1,875), Women (n = 2,601)

Climate messaging is also promising, with high lift among women and Moderates and a non-polarizing reaction

Topline nuclear energy support lift from Climate message vs. control group, by audience



Source: Potential Energy Nuclear Message RCT (Apr. 2022)

Sample sizes: Overall Nuclear Message RCT (n = 5,001), Conservatives (n = 2,005), Moderates (n = 1,875), Liberals (n = 1,121), Women (n = 2,601), Men (n = 2,400)

Several messages present opportunities for future campaign development

Energy independence



Resonated with key audiences across **both general support and local build support** through bipartisan, topical framing

Nuclear innovation



Highly effective with Moderate audience and presents opportunity to rebrand nuclear power with several proof-points

Climate change



Effective with lower-support groups – women, Moderates, and Liberals – **without polarizing** Conservative audiences

Executive summary

① How **strong** is local support for the nuclear energy?



Local support for nuclear is high and **greater than national support**

② How **broad** is the support?



Support is **high among all ideologies**, particularly with conservatives

③ To what extent can audiences **be moved**?

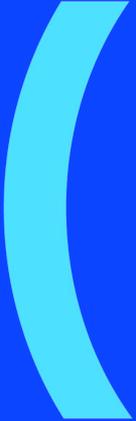


Communities are **highly persuadable**, especially women and Moderates

④ What are the best **messages** to to grow support?



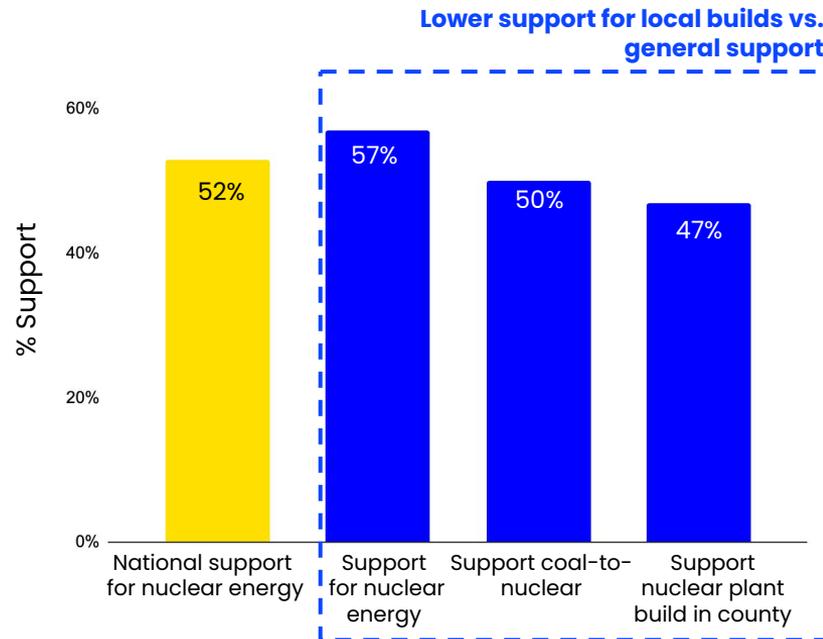
Several messages highly move audiences, with energy independence as the most effective



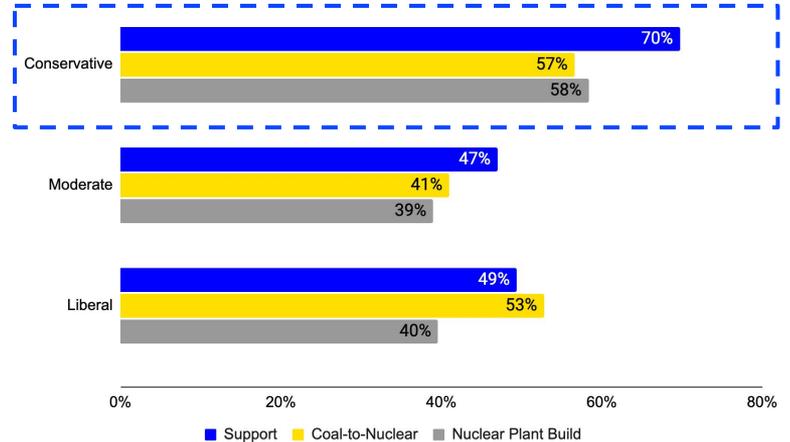
Appendix

Coal communities have greater support for nuclear energy versus nat'l figures, with ~50% support for local plant builds

Overall support for nuclear energy, coal-to-nuclear replacement, and new local nuclear plant build



Conservatives drive support for nuclear energy and local plant builds

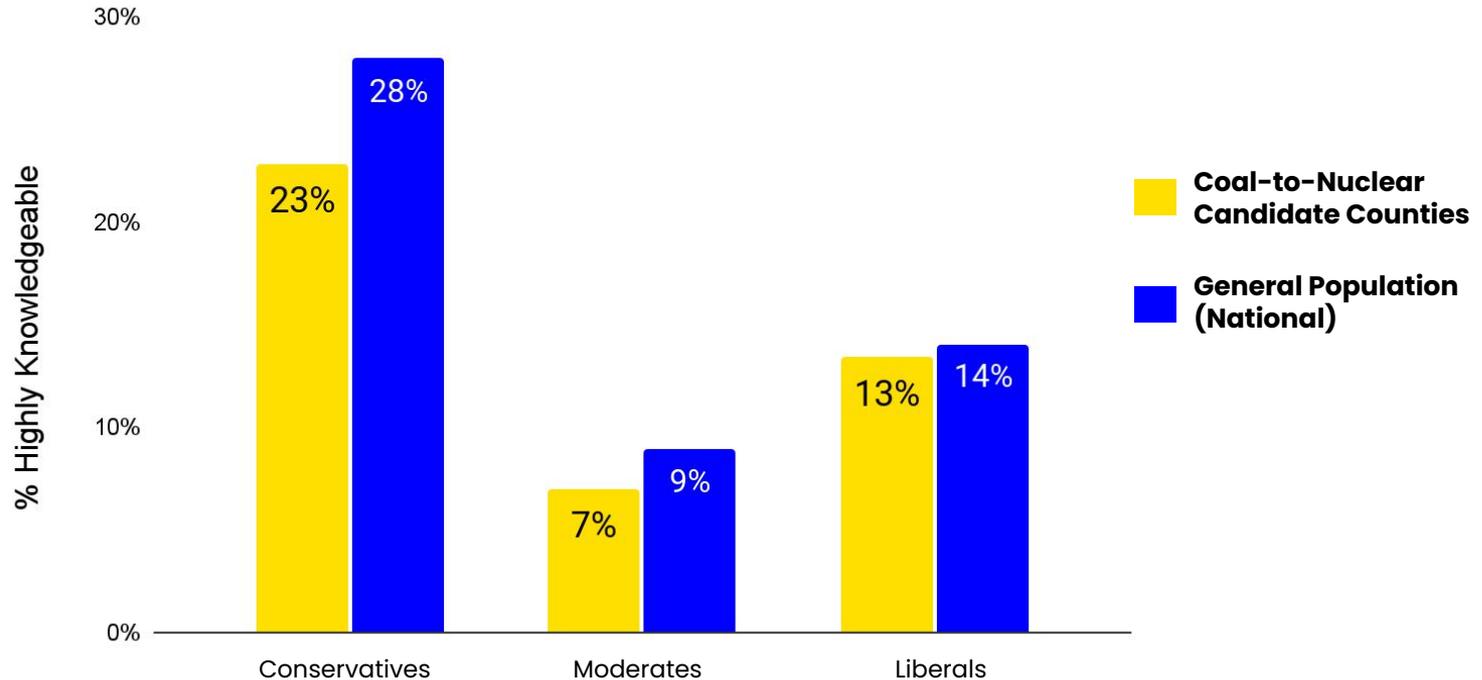


15% of overall sample is highly knowledgeable

37% of overall sample is aware of a coal plant in their county

Sources: Potential Energy National Nuclear Baseline Survey (Apr. 2022); Potential Energy Nuclear Baseline Survey (Mar. 2022)
 Sample sizes: National Nuclear Baseline Poll (n = 949), Overall Coal-to-Nuclear Baseline (n = 3,021), Conservatives (n = 1,225), Moderates (n = 1,081), Liberals (n = 714)

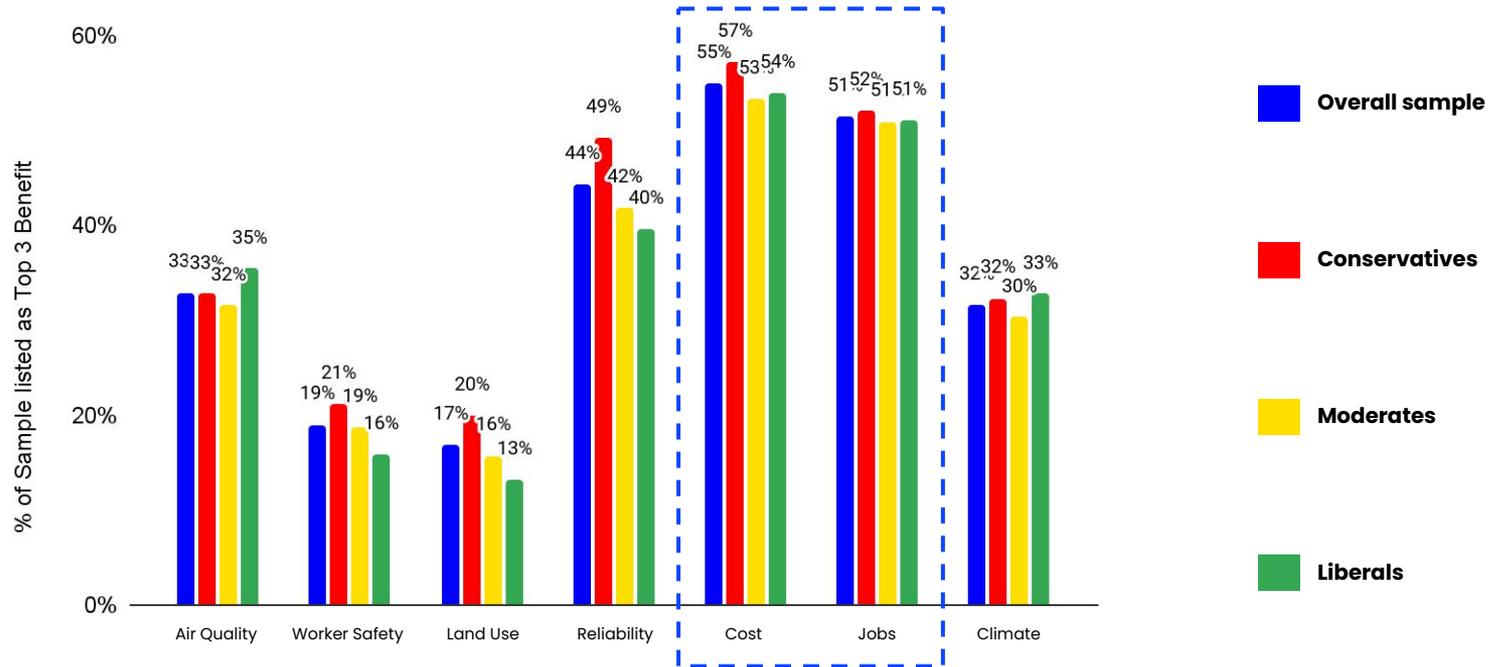
Support is higher in coal communities despite less knowledge than the general population



Sources: Potential Energy National Nuclear Baseline Survey (Apr. 2022); Potential Energy Nuclear Baseline Survey (Mar. 2022)
Sample sizes: Conservatives (n = 1,225), Moderates (n = 1,081), Liberals (n = 714)

Top benefits for nuclear energy align closely with the most common local issues of employment and the economy

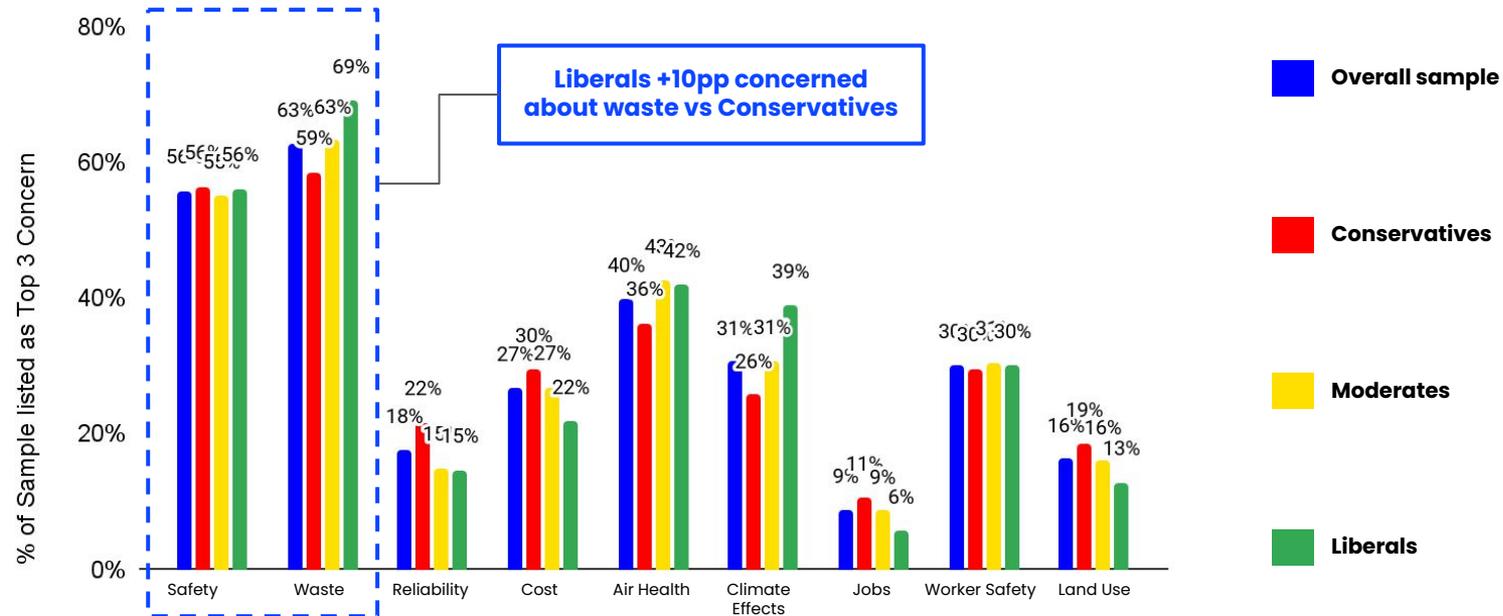
Lower cost and job opportunities were consistently seen as the top nuclear energy benefits among all audiences



Source: Potential Energy Nuclear Baseline Survey (Mar. 2022)
 Sample size: Overall Coal-to-Nuclear Baseline (n = 3,021)

Similar to national polls, safety of power plants and nuclear waste are the top concerns across all ideologies

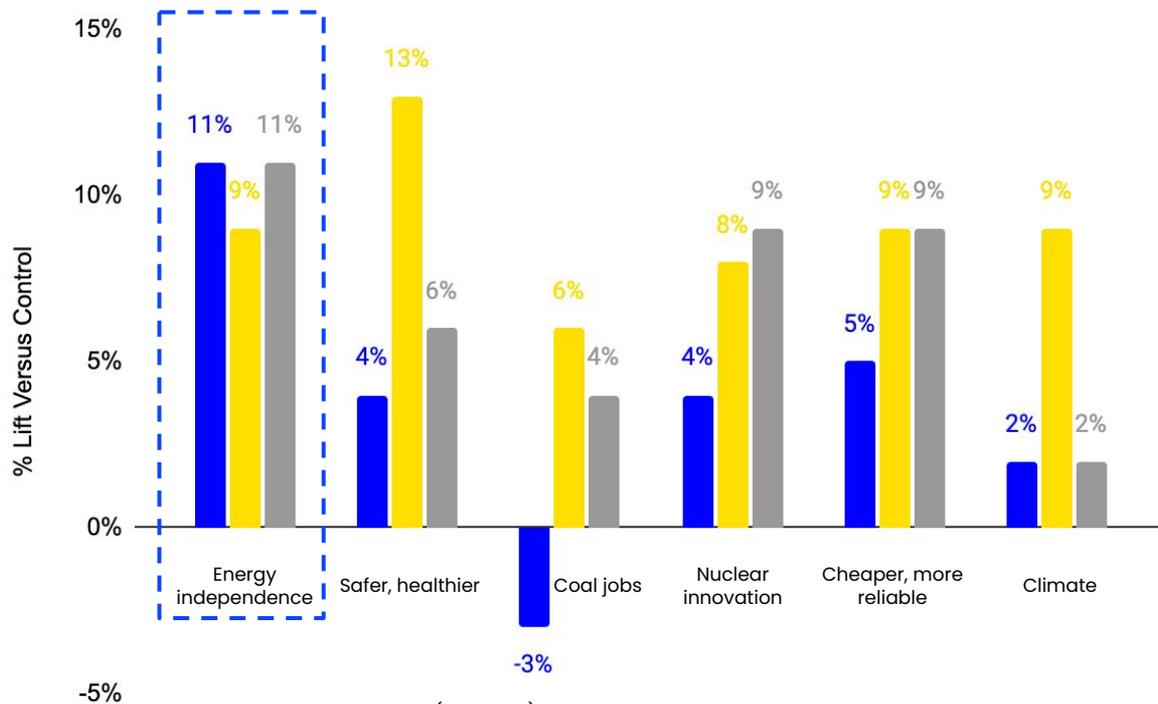
Waste and safety were the top nuclear energy concerns across ideologies



Sources: Potential Energy Nuclear Baseline Survey (Mar. 2022); "The University of Texas at Austin Energy Poll" (UT Austin, 2016)
 Sample size: Overall Coal-to-Nuclear Baseline (n = 3,021)

Most messages lifted coal-to-nuclear support among Conservatives, with Energy Independence as most consistent

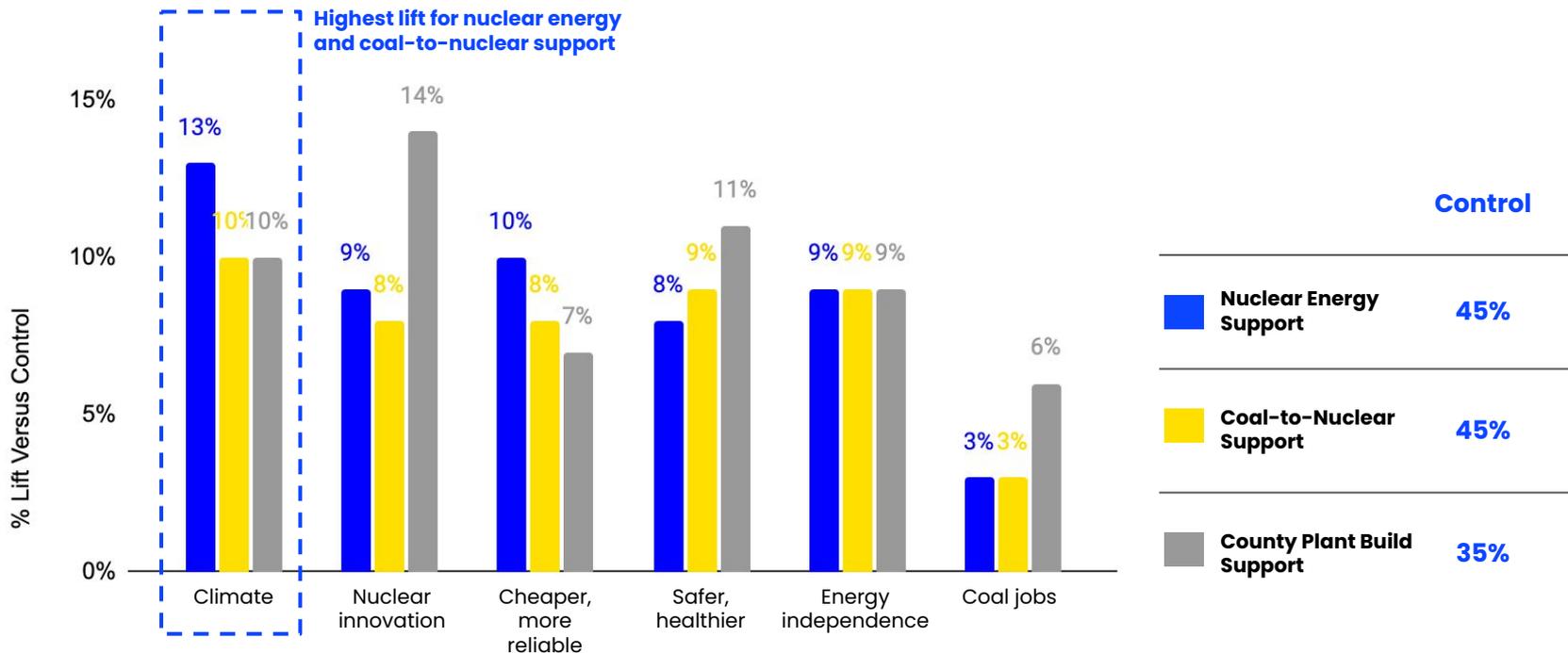
+~10 pp lift across all three measures



	Control
Nuclear Energy Support	71%
Coal-to-Nuclear Support	56%
County Plant Build Support	57%

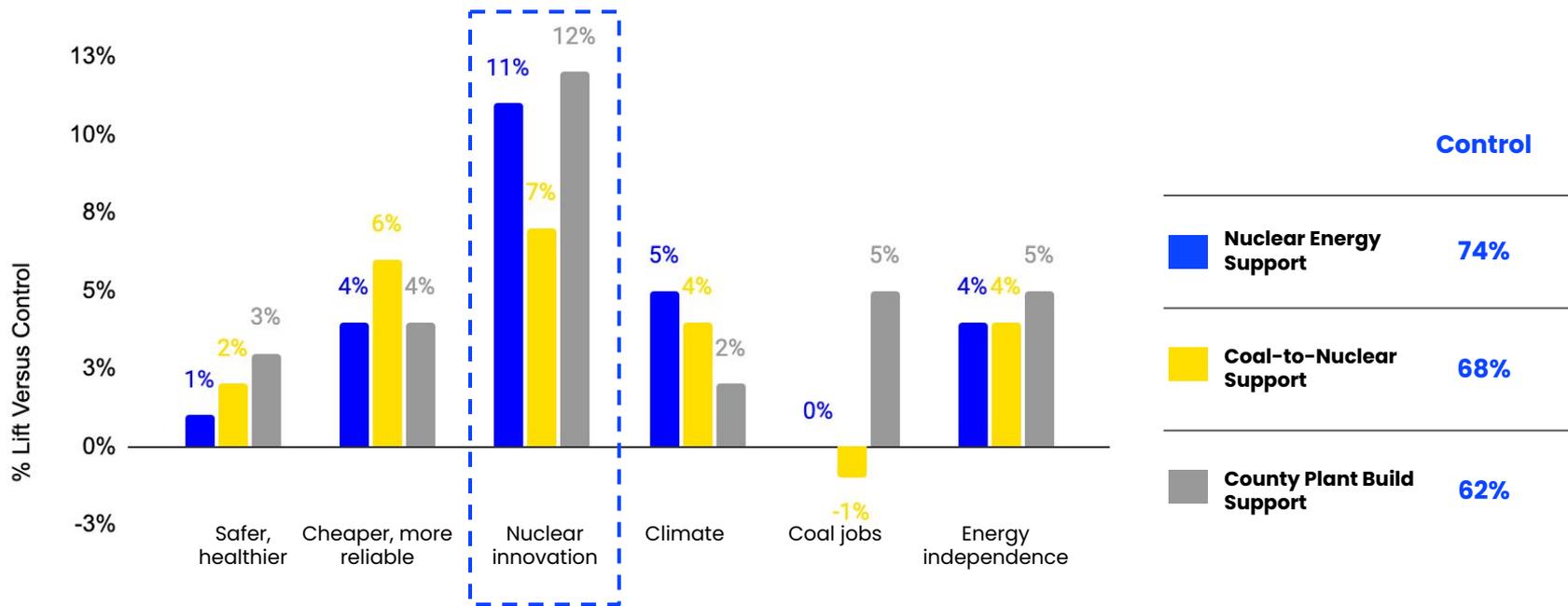
-5%
 Source: Potential Energy Nuclear Message RCT (Apr. 2022)
 Sample size: Conservatives (n = 1,225)

Moderates were receptive to most messages, but climate change was most consistently effective



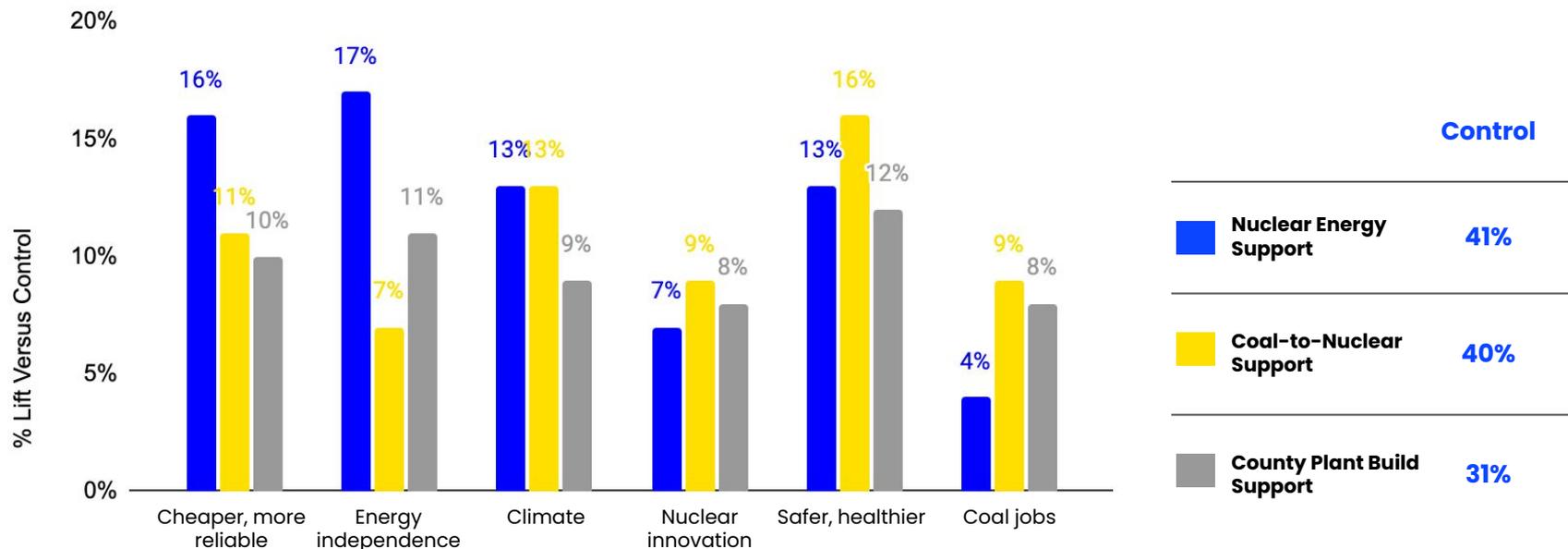
Source: Potential Energy Nuclear Message RCT (Apr. 2022)
 Sample size: Moderates (n = 1,081)

Men were less persuadable on most messages but had high baseline support; innovation messaging worked best



Source: Potential Energy Nuclear Message RCT (Apr. 2022)
 Sample size: Men (n = 2,400)

Women had lower baseline nuclear support, but most messaging was effective at moving these sentiments



Source: Potential Energy Nuclear Message RCT (Apr. 2022)
 Sample size: Women (n = 2,601)