TESTIMONY OF

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BEFORE THE

U.S. SENATE
COMMITTEE ON FINANCE

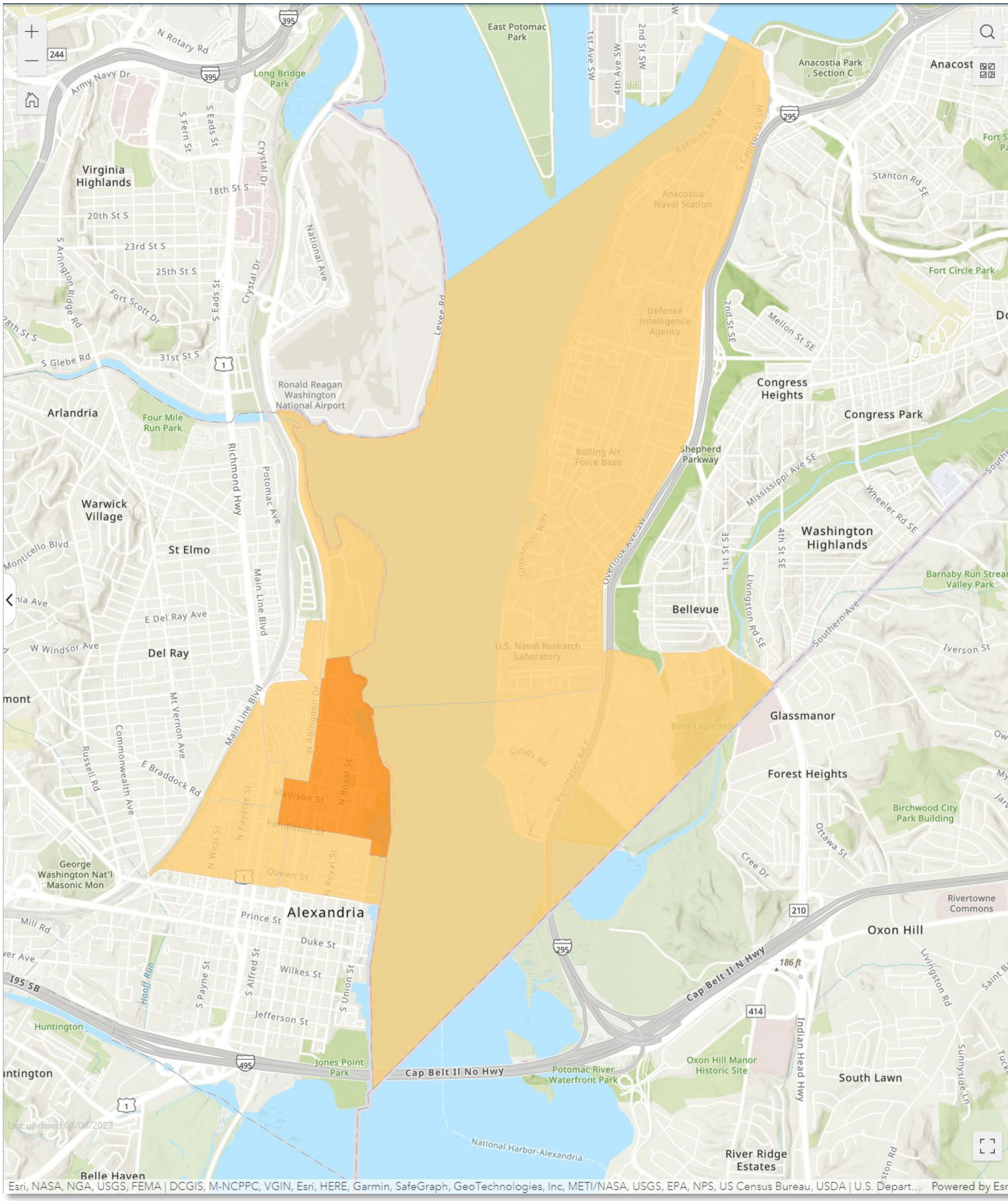
HEARING: "TAX INCENTIVES IN THE INFLATION REDUCTION ACT: THE IMPACT ON JOBS AND INVESTMENT IN ENERGY COMMUNITIES"

I support working to increase jobs and investment in economically distressed communities and traditional energy communities, but the way that Inflation Reduction Act defines "energy communities" appears to be leading to some strange outcomes.

[Note: I write that the IRA "appears" to be leading to some strange outcomes because as of this writing, the federal government does not appear to have released the final maps. According to the Department of Energy's IRA Energy Community Tax Credit Bonus Mapping Application, an updated map will be released later this month.]

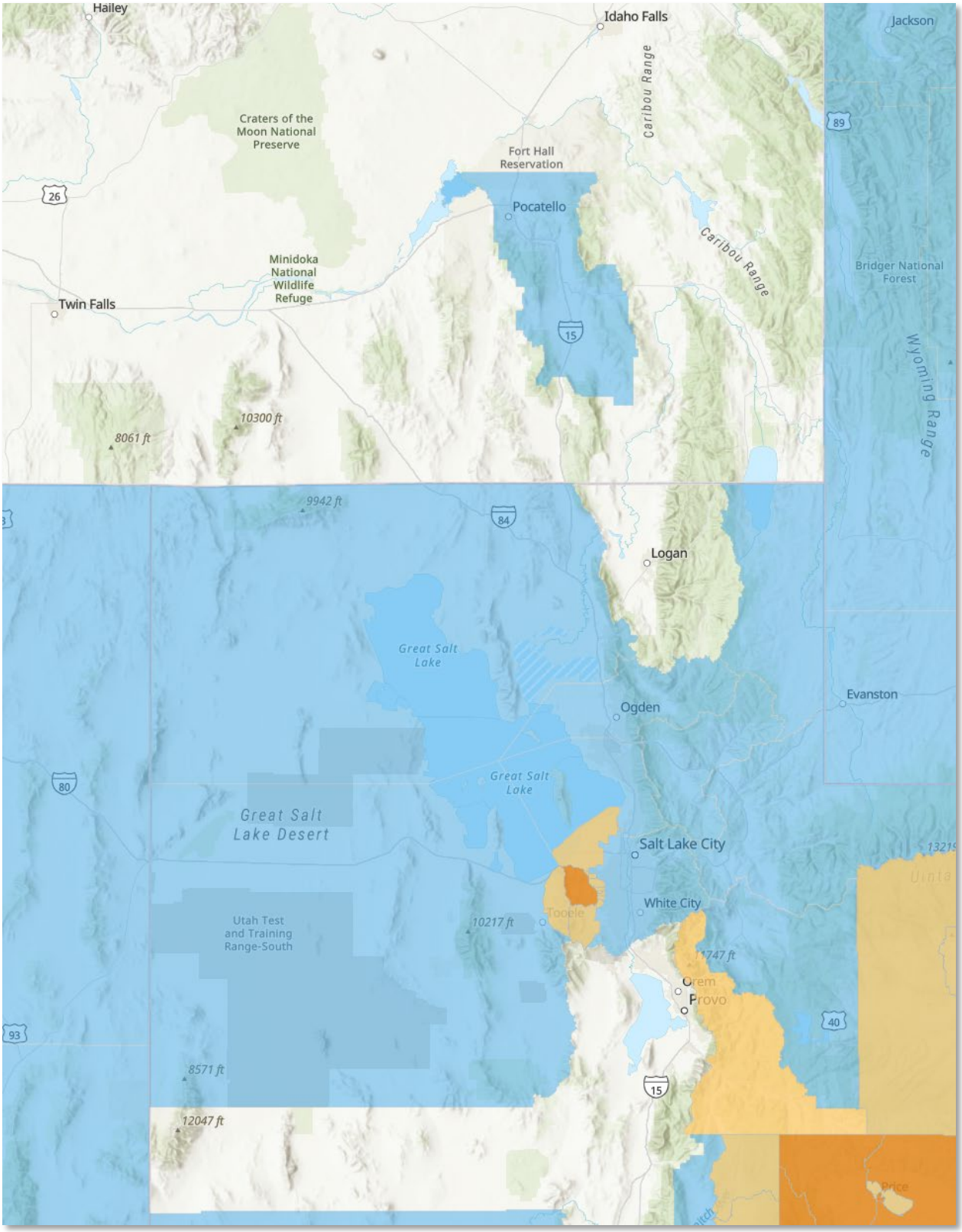
Just two miles south of here is an "energy community."[1] This energy community includes the Anacostia Naval Station, Bolling Air Force Base, the U.S. Naval Research Station, and DC Water's Blue Plains water treatment plant. The areas to the west of 295 are included in an energy community, but the areas to the east of 295 are not. Also, the energy community ends at the DC-Maryland border. Across the Potomac in Virginia, this energy community includes the northern part of the city of Alexandria, but not the southern part.

[1] National Energy Technology Laboratory, *Energy Community Tax Credit Bonus*, https://arcgis.netl.doe.gov/portal/apps/experiencebuilder/experience/?id=a2ce47d4721a477a8701bd0e08495e1d


East Potomac Park
Anacostia Park, Section C
Anacostia
Long Bridge Park
Virginia Highlands
Army Navy Dr
N Rotary Rd
18th St S
20th St S
23rd St S
25th St S
Fort Scott Dr
S Glebe Rd
31st St S
Crystal Dr
National Ave
Levee Rd
Ronald Reagan Washington National Airport
Anacostia Naval Station
Defense Intelligence Agency
Bolling Air Force Base
U.S. Naval Research Laboratory
Stanton Rd SE
Fort Circle Park
Mellon St SE
Congress Heights
Congress Park
Shepherd Parkway
Mississippi Ave SE
Wheeler Rd SE
Washington Highlands
Barnaby Run Stream Valley Park
Bellevue
Iverson St
Glassmanor
Forest Heights
Birchwood City Park Building
Arlandria
Four Mile Run Park
Richmond Hwy
Potomac Ave
Warwick Village
St Elmo
Monticello Blvd
E Del Ray Ave
W Windsor Ave
Del Ray
Main Line Blvd
Mt Vernon Ave
Commonwealth Ave
Russell Rd
E Braddock Rd
Madison St
N Royal St
Pendleton St
Queen St
Prince St
Alexandria
Duke St
Wilkes St
Jefferson St
George Washington Nat'l Masonic Mon
Huntington
Jones Point Park
Cap Belt II No Hwy
Cap Belt II N Hwy
Potomac River Waterfront Park
Oxon Hill Manor Historic Site
Oxon Hill
Rivertowne Commons
South Lawn
Indian Head Hwy
River Ridge Estates
National Harbor-Alexandria
Belle Haven
Esri, NASA, NGA, USGS, FEMA | DCGIS, M-NCPPC, VGIN, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA | U.S. Depart... Powered by Esri

Because I grew up in northern Utah, also I looked at how energy communities are designed in Utah and neighboring Idaho. Again, there may be some strange results. I grew up in Cache County, Utah. That county is not an energy community, but both counties to the east and west, Box Elder and Rich Counties both may be designed as energy communities. They both meet the fossil fuel employment threshold, but it is not clear if they meet the unemployment rate requirement and energy community status. However, none of the counties in Idaho that border Utah or Nevada meet the fossil fuel employment threshold. The only county in southeastern Idaho that meets that threshold is Bannock County.[2]

[2] National Energy Technology Laboratory, *Energy Community Tax Credit Bonus*, https://arcgis.netl.doe.gov/portal/apps/experiencebuilder/experience/?id=a2ce47d4721a477a8701bd0e08495e1d


Hailey
Idaho Falls
Jackson
Craters of the Moon National Preserve
Caribou Range
Fort Hall Reservation
Pocatello
Caribou Range
Bridger National Forest
Minidoka National Wildlife Refuge
Twin Falls
Wyoming Range
10300 ft
8061 ft
9942 ft
Logan
Great Salt Lake
Ogden
Evanston
Great Salt Lake
Great Salt Lake Desert
Salt Lake City
White City
Utah Test and Training Range-South
10217 ft
Provo
8571 ft
12047 ft
Price

As noted above, I want to see new jobs and investment in areas defined as energy communities,[3] but if the final maps show that Box Elder County, Utah is an energy community, but neighboring Cassia, and Oneida Counties in southern Idaho are not energy communities, that is a strange outcome. Additionally, what sense would it make for the energy community tax credit bonus to apply to northern Alexandria Virginia, but not southern Alexandria?

Growing jobs and investment through less red tape and faster permitting

While the final maps showing the eligible energy communities have not been released as of this writing, it appears there will be some odd outcomes where some communities are included while similarly-situated communities are excluded. This is why I highlight the distinction between northern and southern Alexandria, Virginia even though it is highly unlikely that someone is going to site a wind or solar facility in either place. If the energy community closest to our present location is odd, then there are likely many other odd results.

The example of the Utah-Idaho border is also instructive. People could site a PTC or ITC-eligible project in Box Elder County, Utah versus across the Idaho border in Cassia County, but the wind or solar resource would be essentially the same. This is an inexplicable outcome where facilities are sited based on tax credit "adders" instead of siting the facilities where they make the most sense in terms of providing value to the electric grid or providing value to electricity users.

Instead of such outcomes, I believe it would be preferable to have more broadly-applicable tax bonuses along with permitting reform. Permitting reform is indispensable to enable the rapid increase in renewable energy generation technologies.

For example, the authors of the Net Zero America report from Princeton University believe the United States needs to build between 2x and 5x as much electricity transmission as we have today to achieve net zero.[4] The National Renewable Energy Laboratory estimates that to meet President Biden's goal of a zero-carbon gird by 2035, the transmission capacity must increase up to 3 times today's capacity "or between 1,400 and 10,100 miles of new high-capacity lines per year starting in 2026."[5]

While the energy community tax bonus may help to build wind and solar projects, without massive amounts of additional electricity transmission, decarbonization of the grill will be greatly slowed. Worse, based on the approvals for new transmission lines given out by the Biden administration, there is no possible way to build that many miles of transmission lines.

[3] *See* Interagency Working Group on Coal & Power Plant Communities & Economic Revitalization, *Energy Community Tax Credit Bonus*, https://energycommunities.gov/energy-community-tax-credit-bonus/.
[4] *Net Zero America: Potential Pathways, Infrastructure, and Impacts*, https://netzeroamerica.princeton.edu/img/Princeton%20NZA%20FINAL%20REPORT%20SUMMARY%20(29Oct2021).pdf
[5] National Renewable Energy Laboratory, *100% Clean Electricity by 2035 Study*, https://www.nrel.gov/analysis/assets/pdfs/100-clean-electricity-by-2035-study-1-slide.pdf

Transmission permitting takes years and years

Last month the Biden administration approved the construction of the TransWest Express transmission project running from Wyoming to southern Nevada.[6] The Biden administration deserves kudos for getting this approval over the finish line, but it has taken over 15 years since the company first filed a preliminary right-of-way application with the Bureau of Land Management.[7]

But even with the Biden administration's approval, the Notice to Proceed excludes "several segments" on federal lands and only authorizes the company to "start non-surface disturbing, pre-construction activities on the Bureau of Land Management" land.[8]

Another example of the long time it takes the federal government to permit transmission lines is the Gateway South Transmission Line from western Wyoming to central Utah. The Biden administration issued a notice to proceed on this transmission line last May, 15 years after the PacificCorp first filed its original application.[9]

Another example is the Biden administration's approval of the Ten West Link last year.[10] The approval of this transmission line was very fast in comparison, but it still took also 7 years from the first filing by the company until the administration approved the transmission line.[11]

If we need to build between 2x and 5x as much transmission lines in the United States as we have constructed over more than a century, the federal government needs to greatly speed up its approval process because currently only taking 7 years to approve a transmission line is a speedy approval.

We need faster mineral and materials permitting as well

While the energy community designation will facilitate more new projects, these projects require massive amounts of minerals and materials—far more than our current energy economy which is powered mostly by oil, coal, and natural gas. For example, an electric vehicle requires six times the mineral inputs of a conventional car.[12] The International Energy Agency's "sustainable development scenario," calls for a 42-fold increase in lithium demand, a 25-fold increase in graphite demand, a 21-fold

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[6] BLM Approves Construction of TransWest Express Transmission Project, April 11, 2023, https://www.blm.gov/press-release/blm-approves-construction-transwest-express-transmission-project

[7] TransWest Express Timeline, https://www.transwestexpress.net/about/timeline.shtml

[8] Bureau of Land Management, *Notice to Proceed*, April 10, 2023, https://eplanning.blm.gov/public_projects/65198/200123119/20076580/250082762/Notice%20to%20Proceed%20-%20TransWest%20Express%204.10.23.pdf

[9] *See* Bureau of Land Management, Record of Decision for the Energy Gateway South Transmission Project, p. 1, Dec. 2016, https://eplanning.blm.gov/public_projects/nepa/53044/92847/111847/EGS-RecordofDecision.pdf

[10] U.S. Department of the Interior, *Biden-Harris Administration Approves Clean Energy Transmission Project in Arizona and California with Potential to Lower Costs for Consumers*¸ July 14, 2022, https://www.doi.gov/pressreleases/biden-harris-administration-approves-clean-energy-transmission-project-arizona-and

[11] *See* Bureau of Land Management, Final Environmental Impact Statement and Proposed Resource Management Plan Amendments for the Ten West Link Transmission Line Project, p. 1-1, *Sept. 2019, https://eplanning.blm.gov/public_projects/nepa/59013/20003312/250003944/Final_EIS_Ten_West_Link.pdf*

[12] International Energy Agency, *The Role of Critical Minerals in Clean Energy Transitions,* May 2021, https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions

increase in cobalt demand, a 19-fold increase in nickel demand, and a 7-fold increase in rare earth demand by 2040—only 17 years from now.[13]

One problem is that mining and mineral processing is far more concentrated than oil production has been for at least the last 50 years. In fact, China is the largest processor of copper, nickel, cobalt, lithium, and rare earths—processing between 35 percent and 85 percent of these minerals.[14] By comparison, the 13 members of OPEC—together—only produce around 40% of the world's oil.

Worse, China has a terrible human rights track record. The Biden administration and other countries have sanctioned China over China's abuses against the Uyghur people for example. It's not just China, according to experts, the Democratic Republic of Congo has more cobalt reserves than the rest of the world combined, but there are no "clean" supply chains of cobalt in the DRC. Much of the DRC's cobalt is being mined by so-called "artisanal" miners, which include children, who are paid just a few dollars a day for dangerous work.[15]

The problems with production in China and other places are not limited to modern-day slavery and human rights abuses, but also environmental degradation. The German publication Deutsche Welle argues that battery production "causes radioactive earth dumps, poisoned groundwater and Indigenous population displacement" in places like China, the DRC, and Rwanda.[16]

But there is a solution—more mineral and material production in the United States along with the attendant jobs and investment. Just as "drill, baby, drill" worked for oil and natural gas production, "mine, baby, mine" can work for minerals in the United States. But one critical, and overlooked, aspect of the shale revolution in the United States was that this revolution occurred on state and private lands, where energy entrepreneurs could get access to the resources and permitting could happen much quicker than on federal lands. For example, in 2022 it took the Bureau of Land Management 109 days on average to process a permit to drill on federal lands,[17] however, in Texas, it takes only 2 days on average.[18]

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[13] International Energy Agency, *The Role of Critical Minerals in Clean Energy Transitions,* May 2021, https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions

[14] Congressional Research Service, *U.S. Aluminum Manufacturing: Industry Trends and Sustainability*, Oct. 26, 2022, https://crsreports.congress.gov/product/pdf/R/R47294#:~:text=U.S.%20primary%20smelters%20use%20older,requires%20relatively%20large%20capital%20investments.

[15] *See* e.g. Terry Gross, How 'modern-day slavery' in the Congo powers the rechargeable battery economy, NPR, Feb. 1, 2023, https://www.npr.org/sections/goatsandsoda/2023/02/01/1152893248/red-cobalt-congo-drc-mining-siddharth-kara

[16] Michel Penke, *The toxic damage from mining rare elements*, DW.com, Apr. 13, 2021, https://www.dw.com/en/toxic-and-radioactive-the-damage-from-mining-rare-elements/a-57148185#:~:text=Securing%20just%20one%20ton%20of%20rare%20earth%20elements,Research%20Division%20of%20the%20German%20think%20tank%20SWP.

[17] Bureau of Land Management, Oil and Gas Statistics, Table 12: Time to Complete an Application for Permit to Drill (APD) Federal and Indian*,* https://www.blm.gov/sites/default/files/docs/2023-02/FY22_Oil%20and%20Gas%20Statistics.zip

[18] Texas Railroad Commission, RRC Staff Processing Standard Drilling Permits in Two Days, https://www.rrc.texas.gov/news/rrc-staff-processing-standard-drilling-permits-in-two-days/

In the case of mining, there is great mineral potential in the United States—potential that is necessary to produce the minerals for the new energy facilities in designated energy communities, but the Biden administration has stifled almost all new mining development. To name a few examples, the Biden administration has stymied the development of the Twin Metals and Polymet mines in Minnesota, the Resolution and Rosemount mines in Arizona, and the Pebble Mine in Alaska. They have also reduced access to the Ambler Mining District in Alaska. The Biden administration has been more disposed toward lithium mines, such as Rhyolite Ridge and Thacker Pass, but actual construction has only begun at Thacker Pass.

If we want more jobs and investment with the new energy economy facilitated by the energy communities' provisions, we need massive amounts of new mineral production, processing, and manufacturing. Permitting reform should unleash more mineral production and processing in the United States.

Conclusion

I support working to increase jobs and investment in economically distressed communities and traditional energy communities, but the way that the Inflation Reduction Act defines "energy communities" appears to be leading to some odd outcomes. To advance jobs and investment in new energy technologies, permitting reform is critical. This is especially true when it comes to competing against China for the energy of the future.