Testimony of Jeremy Harrell
ClearPath, Inc.
Chief Strategy Officer
U.S. House Committee on Natural Resources
Subcommittee on Oversight and Investigations
"The Biden Administration's Executive Overreach and its Impact on American Energy Independence"

May 11, 2023

Good afternoon Chairman Gosar, Ranking Member Stansbury and members of the Committee. My name is Jeremy Harrell, and I am the Chief Strategy Officer of ClearPath, a 501(c)(3) organization that develops and advances policies that accelerate innovations to reduce and remove global energy emissions.

Thank you for the opportunity to testify today and for holding this important hearing. America's energy demands are rapidly increasing. Some estimates say the U.S. will need to double the capacity of the grid by 2050 to meet expected clean energy demand. To support that grid modernization and U.S. manufacturing competitiveness, America will simultaneously need to construct tens of thousands of miles of new pipelines carrying natural gas, hydrogen, and captured carbon dioxide from power plants and industrial facilities.

Financing and building enough energy infrastructure projects to meet our nation's need for reliable, affordable cleaner energy is an immense challenge. Recent projections show that 1,300 gigawatts of new clean energy would need to be added by 2035. This would more than double the grid's current capacity within the next 12 years. But under the current regulatory environment, this pace of deployment is procedurally impossible.

Never has the phrase "time is money" been more appropriate. Regulatory delays that can last nearly a decade are making projects more expensive, and impeding the U.S.' ability to deploy billions of dollars of capital that would create American jobs, enhance U.S. energy security, keep consumer costs affordable, and reduce emissions.

The Council on Environmental Quality's (CEQ) own data shows that on average it takes agencies 4.5 years to issue a Record of Decision for an Environmental Impact Statement (EIS).[1] But the average belies the real challenge. In reality, 10 percent of projects took 10 years or more to reach a Record of Decision. The projects most likely to be held up in permitting purgatory are those that have the potential to offer the greatest benefits to the United States, including reduced energy costs, enhanced energy independence, increased economic opportunity, and lower global emissions.

The current system is broken. The structures in place are overwhelmingly titled toward those who seek to delay or block projects as opposed to those who seek to build. While that dynamic

[1] https://trumpwhitehouse.archives.gov/wp-content/uploads/2020/01/20200612CEQ_EIS_Length_Report_Update.pdf

may have made sense four decades ago when policymakers enacted these laws as a response to environmental disasters, today, those laws are being used to block projects that will reduce emissions and improve environmental quality. We need a system that promotes good outcomes – both economic and environmental. The pace and scale necessary to build clean energy infrastructure projects to reliably meet America's energy demand and reduce emissions is not something the authors of the 1970s environmental laws could have imagined.

The energy infrastructure we need today is simply not getting built fast enough, and throwing federal money at the projects or the agencies reviewing them is not going to substantially change that problem. The combination of permitting delays and "ping-ponged" decisions from Administrations past and present have disrupted the U.S. ability to build to fulfill needs. As a result, it can now take six years to permit carbon dioxide storage locations needed to store billions of tons captured from industrial sites, 16 years to permit an offshore wind farm in Massachusetts, and up to 15 years for a new transmission line from Wyoming to Utah.[2,3,4] Another important example is the need for timely approval of a new LNG terminal as well as any necessary interstate natural gas pipelines to supply these new terminals. These are just a few of the hundreds of projects held up by the status quo of the current system.

Fortunately, fixing this outdated, broken system is at the top of the agenda this Congress. This Committee has rightly put permitting reform front and center this year, passing with bipartisan support its signature energy package, the Lower Energy Costs Act, as H.R.1.

This bill addresses bottlenecks that make the current system a quagmire: unnecessary duplication, a morass of reviews across multiple agencies, and superfluous legal action. Solving these challenges will reduce emissions, increase production and boost U.S. energy security, all while providing safety and environmental protection for local communities.

Project developers are ready to build today. There is real opportunity for this Congress to work on a bipartisan basis to modernize the permitting process. The important thing is policymakers keep an eye on the prize. Senate action cannot simply water down H.R.1 into something milquetoast that fails to fundamentally change the current regulatory regime.

This is underscored by recent proposals released this month, as leaders in the key Senate committees on both sides of the aisle have put forward their own proposals, including many concepts that match themes included in H.R.1.

As the permitting reform effort continues in both the U.S. House and Senate, I will highlight three key solutions that have been identified by project developers, former federal officials, academics and environmental non-governmental organizations.

1. Restore predictability to the system;

[2] https://www.reuters.com/business/energy/top-us-oil-states-vie-carbon-capture-oversight-speed-up-permits-2022-01-26/

[3] https://www.nytimes.com/2017/12/19/us/offshore-cape-wind-farm.html

[4] https://cowboystatedaily.com/2023/04/20/after-15-years-of-permitting-transwest-wind-transmission-project-is-still-5-years-from-going-live/

2. Provide more streamlined litigation; and
3. Improve coordination between and among federal, state and local governments.

American entrepreneurs have the wind at their backs to deploy more energy projects now. Congress has come together in a bipartisan manner, with bills like the CHIPS and Science Act and the Infrastructure Investment and Jobs Act (IIJA), to bring new technologies to the market and invest in American supply chains. 2022 saw record industry investment in energy, with the largest boost in recent years coming from the power sector.[5]

But again, simply spending more money on new projects will not necessarily make them a reality. Without meaningful permitting reform, there is a real risk that these major investments in technologies that the globe needs, such as carbon capture, advanced nuclear, and geothermal will go unrealized. And the U.S. will miss out on an opportunity to lead a global energy transformation.

While these challenges are numerous, Republican and Democratic policymakers have never been more closely aligned on the need for significant permitting reform. Whether the motivation is climate, economic growth, more energy production, or energy supply chain security, it is well-past time to fix what is broken, as America's energy, environmental, and economic future depends on sweeping reform.

Restore Predictability to the System

Reform must flip the permitting paradigm from one that favors stopping a project to one that expedites the approval process for projects that bring net benefits and comply with the legal requirements meant to ensure clean water and clean air. This approach would rely on a three-pronged approach that automatically advances projects with significant net benefits, focuses environmental and permit review on uniquely local conditions of a project on an accelerated timeline review, and keeps the relevant agencies within the boundaries of the laws Congress has enacted. Many of these concepts were included in H.R.1, and it is important a final bill doubles down on the concept and maximizes their impact.

First, projects that do not have an environmental impact should be granted immediate approval. For example, replacing a retiring power plant with a zero-emissions advanced nuclear generator at an existing site or building a solar project on a brownfield site should not require a yearslong permitting process. Advancing these types of projects without delay is a win-win. The economic and environmental benefits of these projects should not be delayed by unnecessary bureaucracy.

There should be criteria to prequalify technologies that are proven to have minimal environmental impacts and immense positive outcomes – similar to "permit-by-rule" concepts some states have implemented. In other words, there should be a presumption of project approval so long as the specifics of a project satisfy certain predefined criteria. In many cases, this would alleviate the requirement to do unnecessary boilerplate re-analysis.

[5] https://www.iea.org/reports/world-energy-investment-2022/overview-and-key-findings

One starting point could be to automatically advance projects that have nationally significant outcomes, like enhancing resilience of the grid or a significant reduction of global emissions, where the environmental impacts of development are well known. For example, a carbon capture retrofit of an existing facility, the modernization of a grid substation, or powering of a non-powered dam. H.R.1 took a similar tack for energy storage projects at existing facilities and maintenance or upgrades to existing transmission and distribution infrastructure.

Similarly, designating a list of prequalified geographic areas to encourage project sponsors to seek out specific locations, would go a long way towards accelerating projects with the lowest impact. Such areas could include previously disturbed locations or well categorized sites, such as brownfield sites that present opportunities to use existing electrical or mechanical infrastructure or former military bases. The environmental impacts to these locations related to energy deployment are minimal, and in many cases these locations are in or near communities that need the redevelopment most urgently. Congress could also consider regulatory incentives to direct investment toward areas where impacts are already well understood.

Another opportunity could be to pair existing financial incentives, such as the "Opportunity Zones" or "Energy Communities" classifications established by Congress, with a streamlined permitting process to further boost investment. Both Opportunity Zones and Energy Communities were established by Congress to drive investment in distressed areas and communities that would benefit the most from new energy investments. Matching financial incentives with regulatory certainty will create a clear signal to project developers during the site selection process. Coordinated incentives like these can help drive investment to previously underserved areas and ensure the benefits of clean energy reach these communities without unnecessary delays.

Some of the most egregious problems of our broken system would be solved by this type of reform. For example, nonsensical approaches to geothermal exploration inhibit our ability of scaling baseload clean energy at scale. The Department of Energy estimates that geothermal generation could double by 2035 if our immense potential was unleashed. But concurrently, the Department found that "because additional steps and NEPA analyses are required, confirming the resource is more costly and risky," translating to permitting timelines of 5–7-years, rather than a 1–3 year period that would otherwise be available with a categorical exclusion.[6]

Geothermal energy uses similar technology as oil and gas exploration and drilling activities. When oil and gas uses this technology, these resource confirmation (e.g. exploration) activities benefit from statutory authority enacted by the Energy Policy Act of 2005 that expedites five types of development activities. However, when the same mechanisms are used to confirm a geothermal energy resource, the expedited pathway does not apply. As a result, two very similar methods to test for resource feasibility must undergo substantially different permitting reviews despite both having negligible environmental impact. The Bureau of Land Management has the authority to administratively grant this same expedited pathway for geothermal energy resources, yet has wrung its hands for years rather than simply updating its regulatory guidance. This system is clearly broken.

[6] https://www.energy.gov/sites/default/files/2019/06/f63/GeoVision-full-report-opt.pdf

Further, departments should proactively consult with other agencies to identify existing NEPA categorical exclusions available to accelerate development of energy infrastructure projects. DOE's recent Request for Information (RFI) to adopt new Categorical Exclusions is a model that should be replicated across other federal agencies.

Second, reform must streamline the approval process for projects where there are unique environmental impacts. In these cases, the review process could focus specifically on issues of the highest impact, resulting in more efficient timelines that still ensure compliance with existing environmental laws.

There are several provisions that have earned broad bipartisan support, including applying the "One Federal Decision" framework to energy projects. Similar support exists to reuse existing environmental review documents when a project will have substantially similar impacts as one previously studied. These provisions are both included in H.R.1 and other proposals that have been recently made public. Those principles should be expanded upon.

One immense opportunity that could be fostered by reforms like this is in new nuclear technologies. The U.S. Nuclear Regulatory Commission (NRC) has publicly stated it anticipates at least 13 applications for advanced reactors by 2027, technologies that could bring safe, flexible, and reliable clean energy to our energy system.[7] Decades of operation have shown that nuclear energy has a minimal environmental impact. Future designs hold the same promise.

Since the dawn of the nuclear age in the 1950s, nuclear reactors have been supplying Americans with clean, reliable, and affordable energy. On a bipartisan basis in the 115th, 116th, and 117th Congresses, legislation has been passed that strengthens the U.S. nuclear industry. However, except for the Vogtle Unit 3 reactor that recently came online in Georgia, the vast majority of nuclear plants in the United States were constructed over 40 years ago.[8]

That is changing today. The advanced reactor market is at an inflection point. Investors and potential end-users are closely watching first-of-a-kind utility-scale projects eyeing the late 2020s and early 2030s for commercial operation. American electric utilities are projecting a need for 90 GW of new nuclear power by 2050, nearly doubling our nuclear energy capacity in the next 30 years.[9] Simplifying the permitting for projects like TerraPower's flagship project in Kemmerer, Wyoming, which is leveraging the infrastructure at a retiring coal plant, is a no brainer. A nuclear facility is different from a coal-fired power plant, but many of the environmental factors that must be considered are similar. Additionally, many advanced reactors are looking to develop alongside industrial facilities or existing nuclear sites, where previous environmental analysis and community engagement has been extensive. A rational permitting system would leverage that work to accelerate exciting projects, not force needless duplication.

[7] https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML22038A001
[8] https://www.eia.gov/tools/faqs/faq.php?id=228&t=3
[9] https://www.powermag.com/u-s-utility-survey-suggests-industry-mulling-additions-of-90-gw-of-new-nuclear/

Third, federal action can no longer vacillate according to political whims, particularly when the Congress has acted. Given long development timelines needed to bring a project from financing to construction, project developers need to be able to rely on regulatory certainty from one Administration to the next. This need is perhaps most acute for projects that seek to unlock critical minerals.

While the Administration has announced award selections worth a combined total of nearly $5 billion for critical minerals demonstration projects funded by the bipartisan infrastructure bill and other new programs, there remains one glaring omission in the critical minerals supply chain: none of these selected projects addresses our inability to extract new materials domestically.[10] The International Energy Agency (IEA) predicts that demand for energy-related minerals like lithium, cobalt, graphite, and nickel could grow by 20-40 times by 2040.[11] The U.S. will not be able to recycle its way out of this demand for critical minerals.

It is difficult to overstate the U.S. dependence on foreign supply chains, including reliance on China. According to the 2023 U.S. Geological Survey's Mineral Commodities Summary, the U.S. was 100 percent net import reliant for 12 of the 50 individually listed critical minerals and was more than 50 percent net import reliant for an additional 31 critical mineral commodities.[12] Meanwhile, China was the leading producing nation for 30 of the 50 critical minerals.[13] Regardless of where the minerals are mined, China exerts dominant control over the refining process for many of these critical minerals. Rising demand for minerals will place major stress on global supply chains and undermine the ability of the U.S. to deploy more clean energy.

One of the most prominent examples of America's inability to permit mines is Resolution Copper, which Congress explicitly authorized when the Southeast Arizona Land Exchange and Conservation Act was enacted into law with the Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015 (P.L. 113-291). Once approved, the proposed mine is expected to become the largest copper mine in North America, capable of producing up to 25 percent of U.S. copper demand each year.[14] The proposal received a final EIS in January 2021, only to have it unpublished by the Biden Administration two months later.[15] The Administration is explicitly subverting Congressional intent with this project. These unnecessary delays precede a decade of construction before operations can begin, bringing the project timeline to at least two full decades from its inception.

This back and forth regulatory review is far too common. The Resolution Copper Mine is just one of many examples. And the regulatory overreach deters investors, increases capital costs, and delays the energy security benefits of developing a robust domestic supply chain for clean energy and related infrastructure.

[10] https://www.clearpath.org/clearpath-infrastructure-tracker/
[11] https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions/executive-summary
[12] https://pubs.er.usgs.gov/publication/mcs2023
[13] ibid
[14] https://resolutioncopper.com/project-overview/
[15] https://www.fs.usda.gov/detail/r3/home/?cid=FSEPRD858166

Absent a clear, predictable, and streamlined process, America will continue to rely on critical minerals sourced from overseas, including from countries that pose national security risks or those that lack basic environmental and human rights protections. The choice should be clear: producing American resources here at home creates jobs, promotes innovation, increases energy security, and leads to better global environmental outcomes.

Provide more streamlined litigation

Once a project is approved, any further adjudications should be addressed as expeditiously as possible to ensure that protracted litigation does not undermine project viability. Judicial review is the biggest wildcard in the current permitting system, and H.R.1 appropriately recognized it as an area that could have the most meaningful impact towards efficient project deliverability. Establishing requirements where any legal disputes must be resolved in less than one year would meaningfully address this uncertainty.

In the spirit of the current system rewarding those who seek to delay rather than those who seek to build, litigation under NEPA has become the favored tool of those who seek to indefinitely delay projects through procedural lawsuits. Such prominent examples include the saga of the proposed Cape Wind project off the coast of Massachusetts, where protracted litigation, including more than 20 administrative and judicial challenges to both federal and state reviews, ultimately led utilities to cancel power purchase agreements, effectively killing the project.[16] While no single suit ever specifically terminated the project, the purposeful delay tactics requiring evermore environmental analysis ultimately led investors to pull the plug. This same playbook is now being used to protest the approval for the Vineyard Wind project, despite new state laws that mandate utilities to procure offshore wind energy.[17]

The Atlantic Coast Pipeline (ACP) is another prime example in which legal uncertainty contributed to an untenable business environment leading project developers to cancel the project and take a loss. ACP was intended to bring natural gas access to residential, commercial, defense, and industrial customers in Virginia and North Carolina, but legal challenges to federal and state permits contributed to more than three years of delays and increased project costs from $8 billion from an original estimate of $5 billion.

Additionally ,the Mountain Valley Pipeline (MVP) from northwestern West Virginia to southern Virginia has also attracted extensive Congressional attention because of similar uncertainty. No doubt, the expected build out of gas, hydrogen, and CO2 pipelines needed to meet our future system demands requires a more predictable process for the private sector to deliver on these projects.

As more clean energy projects enter the permitting process, clean energy projects will increasingly find themselves subject to these delay tactics. Such actions too often delay significant economic and environmental benefits, like new clean energy generation from that wind farm or the net reduction in global emissions from the use of lower emissions U.S. gas

[16] http://static.djlmgdigital.com.s3.amazonaws.com/cct/capecodonline/graphics/pdf/GridFMNotice.pdf
[17] https://www.eenews.net/articles/4-lawsuits-threaten-vineyard-wind/

relative to dirtier Russian supplies in Europe. These increases in emissions or environmental harm are the very outcomes that NEPA was enacted to avoid and prevent.

Any changes to judicial review must balance a plaintiff's right to have his or her day in court with the goal of reaching finality on a more predictable timeline. One such proposal would be to immediately elevate any legal challenge under NEPA to the federal appellate court where the project is to be constructed or alternatively the DC Circuit. This would be similar to the process already used to challenge agency decisions, including those made by FERC.

Improve Coordination with State and Local Governments

Finally, it is important to recognize and address, to the maximum extent practicable, challenging permitting projects at the state and local level – without trampling on federalism.

An example of an unpredictable regulatory environment is the prolonged delay to review and approve permits for Class VI underground injection control wells needed to permanently sequester carbon dioxide. Class VI wells are a necessary part of the carbon capture equation of preventing more emissions and are the only authorized method permitted by the Environmental Protection Agency (EPA) to sequester carbon dioxide in permanent geologic storage.

While many states have long held primary enforcement authority for other well classes, only North Dakota and Wyoming have received primacy for this newest well class established in 2010. Congress rightly included provisions in the 2021 Consolidated Appropriations Act and the IIJA directing the EPA to support states applying for Class VI primacy and to actively improve the Class VI permitting review process.[18]

The advantages of state primacy for Class VI wells are readily apparent in North Dakota. Whereas the EPA has taken an average of three years to permit Class VI wells, it took North Dakota only five months. The EPA currently has more than 70 pending applications across eight states awaiting regulatory approval.[19]

This backlog is a prime example of where this Administration is working against its own priorities. The Department of Energy is investing billions of dollars to deploy new carbon capture technologies now, while the EPA muddles through reviews of storage sites at a palatial pace and the Department of the Interior stands in the way of related infrastructure projects across regions prime for commercial scale up.

The most egregious example may be in Louisiana. After years of delay, the Administration finally issued the draft rule necessary to approve Louisiana's request for Class VI primacy earlier this month. This initiates a 60-day comment period and a subsequent EPA response period that historically can take upwards of a year for a state to be granted final authority.[20] Once final, the

[18] https://carboncapturecoalition.org/recently-enacted-infrastructure-investment-and-jobs-act-to-bolster-economywide-deployment-of-carbon-management-technologies-upon-full-implementation/
[19] https://www.epa.gov/uic/class-vi-wells-permitted-epa
[20] https://www.epa.gov/newsreleases/epa-opens-public-comment-proposal-granting-louisiana-primacy-carbon-sequestration-and

decision is likely to have an immediate impact as 10 of the current outstanding Class VI permits are located in the state, which could unlock up to 6 million tons of carbon dioxide per year in Louisiana alone. If Republican and Democratic policy makers did not lean into the federal agencies in recent oversight hearings, this rule would likely still be stuck in the bureaucracy.

It is clear that the time to transfer Class VI authority should be improved for the other states looking to obtain primacy such as Pennsylvania, Arizona, Texas, and West Virginia, which are preparing applications for Class VI primacy. To date, primacy is the number one tool to get these projects permitted quickly, while preserving the safety of local communities. Additionally, this would allow federal agencies to focus their energies on permits in states not-yet equipped to take on permitting primacy or accelerate review of storage opportunities on federal lands or the Outer Continental Shelf, which have immense potential to contribute to our long-term energy future.

Similar barriers exist for proposed transmission lines that can better connect both new and existing generation assets to load as timelines to get new transmission projects developed now routinely stretch to over a decade.

One example is the SunZia line, designed to move power from New Mexico to California. The 550 mile line required cooperation from 10 federal agencies, 5 state agencies, and 9 local authorities while incorporating input from a host of additional state, local, and federal stakeholders. Projected to come online in 2025, the 3.5 GW project, which would provide power for millions of customers, will have taken over 17 years from proposal to completion.[21] These timelines, complicated by the intersection of different requirements from federal, state, tribal, and local regulators, impede the ability of new projects to interconnect to the grid.

According to the Lawrence Berkeley National Lab, there are 2000 GW of electricity and storage waiting in the interconnection queue to be connected to the grid.[22] While not all of these projects will be built, this figure is nearly double the current system capacity as it exists today. This backlog is especially relevant as hundreds of gigawatts of clean energy projects spend years stuck in the interconnection process, awaiting evaluation by transmission providers to determine their impact on the broader system. An average completion rate of 21% and queue wait time of 4 years makes meeting any target for a reliable and affordable clean energy system infeasible.[23] It is also important to note that analysis recently conducted by the regional transmission organization (RTO) PJM estimates that 40 GW of baseload generation, more than 21 percent of current installed capacity, is at risk of retirement by 2030 without reliable generation lined up to replace it and keep up with demand growth.[24]

While there is no silver bullet to rapidly and reliably modernize the grid, a combination of process improvements, permitting reforms, and technological innovation will help avoid clean energy deployment from hitting a wall.

---

[21] https://www.power-grid.com/td/sunzia-transmission-line-is-a-win-but-also-a-lesson-in-what-not-to-do/#gref

[22] https://emp.lbl.gov/sites/default/files/queued_up_2022_04-06-2023.pdf

[23] https://emp.lbl.gov/queues

[24] https://www.pjm.com/-/media/library/reports-notices/special-reports/2023/energy-transition-in-pjm-resource-retirements-replacements-and-risks.ashx

Conclusion

The current permitting system stymies clean energy resources and broadly delays the highest impact projects from delivering benefits. It is imperative that Congress address both aspects of the permitting process to maximize public and private sector investments and put steel in the ground. These pillars of pre-qualification to expedite review, more streamlined litigation, and improved coordination with state and local governments are priorities that merit consideration as the process to reach a permitting deal moves forward.

These reforms are ambitious by design as half measures have failed to move the needle for more than two decades. Anything less will only prolong the inability of the U.S. to build big things.

We look forward to working with this Committee to both further legislative action on regulatory reform and to reign in Executive Branch overreach. I look forward to today's discussion.