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ADDRESSING NEPA-RELATED INFRASTRUCTURE DELAYS

By Philip Rossetti

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EXECUTIVE SUMMARY

President Joseph Biden's infrastructure negotiations with Congress have renewed interest in infrastructure investment policy proposals. Due to this interest, it is worth returning to the topic of the National Environmental Policy Act's (NEPA) role in infrastructure deployment timelines. Delayed infrastructure deployment can result in economic impacts from delayed productivity, as well as reduced incentives for infrastructure investment. Further, from an environmental perspective, NEPA is increasingly becoming an involuntary impediment to clean energy and conservation-related projects. This is especially problematic given that this analysis finds 42 percent of the Department of Energy's (DOE) active NEPA projects are related to clean energy, transmission or conservation, while only 15 percent of the DOE's projects are related to fossil fuel—most of which were for Liquefied Natural Gas (LNG) exports that typically displace foreign coal.[1] Delays in completion of clean energy projects due to NEPA requirements can result in increased emissions and environmental harms. By contrast, policies that improve NEPA timelines can have environmental as well as economic benefits.

According to an analysis by the Council on Environmental Quality, the average time for NEPA process completion (for projects requiring an Environmental Impact Statement) is 4.5 years.[2] Consistent with previous assessments, this analysis found that prior to the Trump administration the average time taken to complete the NEPA process had increased significantly. From 2010 to 2016, the average timeline for NEPA project approval went from 3.4 years in 2010, to 5.2 years in 2016. During the Trump administration the average timeline was 4.7 years.[3] This may have been a result of either 2015 changes to litigation standards, or institutional differences between the Obama and Trump administrations in their implementation of NEPA.

Document preparation likely had a significant influence in NEPA approval timelines, as average Environmental Impact Statement (EIS) page length climbed from 2013 through 2017. Median EIS page length peaked in 2016 at 490—well above the historical median of 397.[4] Median EIS page lengths reached their lowest point in 2019, falling to 312.[5] However, lower EIS page length could be just as much of a harm as a help. Analysis of NEPA-related litigation reveals a correlation between NEPA document preparation time and court victories. Agencies with short NEPA timelines, such as the United States Forest Service (USFS) were 1.4 times as likely to be litigated than other agencies, and agencies with long NEPA timelines such as the Federal Highway Administra-

1. "DOE Environmental Assessments," Department of Energy, last accessed May 19, 2021. https://www.energy.gov/nepa/doe-environmental-assessments; "DOE Environmental Impact Statements," Department of Energy, last accessed May 19, 2021. https://www.energy.gov/nepa/doe-environmental-impact-statements.

2. "Environmental Impact Statement Timelines (2010-2017)," Council on Environmental Quality, Dec. 14, 2018, p. 1. https://ceq.doe.gov/docs/nepa-practice/CEQ_EIS_Timelines_Report_2018-12-14.pdf.

3. "EIS Timelines," Council on Environmental Quality, last accessed May 19, 2021. https://ceq.doe.gov/nepa-practice/eis-timelines.html.

4. "EIS Length," Council on Environmental Quality, last accessed May 19, 2021. https://ceq.doe.gov/nepa-practice/eis-length.html; "Length of Environmental Impact Statements (2013-2018)," Council on Environmental Quality, June 12, 2020, p. 1-4. https://ceq.doe.gov/docs/nepa-practice/CEQ_EIS_Length_Report_2020-6-12.pdf

5. Ibid.

tion (FHWA) were merely 0.3 times as likely to be litigated against as other agencies.[6]

From a policy perspective, the data reveals that document preparation difficulty is likely a major explanation for NEPA timelines, but there is also evidence to show that high quality NEPA documents are less likely to be litigated against. This creates a catch-22 where policies that force shorter NEPA timelines or EIS page counts may, ironically, create more difficulties for NEPA approval as courts may require EIS revision. Importantly, the federal government is more likely to lose on cases related to EIS adequacy than other NEPA-related cases (such as standing or jurisdiction), indicating that document adequacy concerns may be well founded.[7] Additionally, 59 percent of all NEPA cases are brought by public interest groups that may have a high appetite for litigation, and who are well equipped to prosecute cases where document inadequacy is suspected.[8]

Improving NEPA timelines should focus on three key recommendations:

1. Congress needs to agree on legislation that appropriately defines the parameters for litigation in ways that incentivize active engagement from stakeholders during NEPA document preparation, rather than incentivizing litigation after records of decision are issued. A potential way to achieve this is by bringing the statute of limitations for NEPA cases in line with other environmental statutes (60-120 days, as opposed to the current two years).
2. Congress should better define what adequate compliance looks like for the underlying statutes that NEPA ensures compliance with. Without Congressional definition, there exists an incentive to use court cases to set precedent for what appropriate compliance looks like, which creates an incentive for agencies to lean toward mitigating liabilities rather than complying with the letter of the law.
3. Executive offices should avoid the temptation of using NEPA as a vehicle for implementing policy in line with their political preferences. NEPA is supposed to ensure compliance with existing federal environmental laws, rather than serve as a mode of setting new environmental requirements. Furthermore, establishing additional requirements will extend NEPA timelines but may not achieve new environmental benefits.

INTRODUCTION

The National Environmental Policy Act (NEPA) is perhaps the most significant environmental law that is applicable for new infrastructure in the United States. NEPA was originally signed into law in 1970 by President Richard Nixon and was the first among several major environmental laws of the period, including the Clean Water Act, major amendments to the Clean Air Act and the formation of the Environmental Protection Agency. Importantly, NEPA is not designed to create new environmental standards, but operates as an "umbrella law," which ensures compliance with other relevant federal, state and local laws. NEPA's purpose is not to create new environmental protections, but rather to simplify compliance with other environmental requirements.[9] Unfortunately, in recent years NEPA went from being a means of simplifying environmental review to being an increasing hinderance to environmental review of infrastructure development in the United States. This paper contends that policymakers who aim to facilitate infrastructure development should identify opportunities to ease compliance. Such an effort will likely focus on clarifying obligations and better-defining legal liabilities on the part of NEPA decisionmakers.

To understand NEPA, one should recognize that it applies to all that the federal government touches. Any proposed project, whether public or private, must comply with NEPA if it requires a "major federal action," be it from funding or permits.[10] Typical projects that require compliance with NEPA are liquefied natural gas (LNG) export facilities, electric transmission lines, hydroelectric dams, nuclear power plants, rail lines, pipelines, bridges, highways and any other sort of infrastructure that the federal government may have a hand in. Once a project is determined to fall under NEPA jurisdiction, the relevant federal agency (the Federal Energy Regulatory Commission, the Department of Energy, the Federal Highway Administration, etc.) becomes responsible for shepherding the project through the NEPA process.

Projects that require NEPA approval go through a three-step process. The first step is to determine whether a project is either categorically excluded (usually activities that are routine, temporary or small scale) or is ineligible for a categorical exclusion (CX). If the environmental impact of a project is uncertain, the lead agency then prepares an environmental assessment (EA), which is principally responsible for determining if the project's environmental impact is significant

6. John C. Ruple and Kayla Race, "Measuring the NEPA Litigation Burden: A Review of 1,499 Federal Court Cases," *Utah Law Digital Commons* (2019), p. 499. https://dc.law.utah.edu/cgi/viewcontent.cgi?article=1008&context=stegner_pubs.

7. Ibid., pp. 505, 514.

8. "NEPA Litigation Surveys: 2001-2013," Council on Environmental Quality, 2013. https://ceq.doe.gov/docs/ceq-reports/nepa-litigation-surveys-2001-2013.pdf.

9. *The National Environmental Policy Act: Background and Implementation, Congressional Research Service*, Jan. 10, 2011, p. 1. https://www.everycrsreport.com/files/20110110_RL33152_69b27c980f2b1121fd078e3982ac47e9c48d7111.pdf.

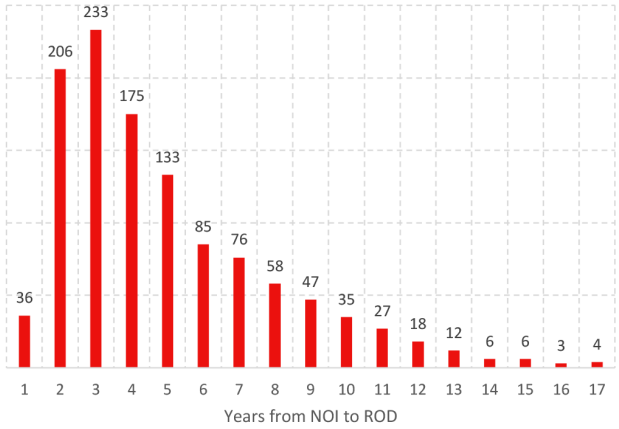
10. "National Environmental Policy Act Review Process," U.S. Environmental Protection Agency, last accessed June 24, 2021. https://www.epa.gov/nepa/national-environmental-policy-act-review-process.

enough to warrant the third step of creating an environmental impact statement (EIS). Otherwise, a project receives a finding of no significant impact (FONSI).

If a project requires an EIS, the agency first publishes a Notice of Intent (NOI), formally beginning the review process. The federal agency then thoroughly reviews the project, with the primary objectives of determining whether the impact of the project is justifiable relative to the need for the project and ensuring that all reasonable alternatives have been considered. The EIS process itself is open and transparent, with draft EISs receiving public comments for 45 days.[11] After public comments, a final EIS is published then another 30 day wait period occurs before a final Record of Decision (ROD) is announced.[12] The median page length of an EIS is 397 pages, though some EISs are much longer, with a little over 2 percent of EIS having page counts over 2,000.[13]

Overall, for a project requiring an EIS, the whole process takes an average of 4.5 years, but it can take much longer, with approximately 25 percent of reviews taking more than six years to complete and 9.5 percent of projects taking 10 years or more to receive approval.[14] Figure 1 below shows the distribution of RODs produced from 2010 to 2017 for projects requiring an EIS, broken down by the number of years to complete the EIS.

FIGURE I: YEAR TO COMPLETE NEPA REVIEW IF REQUIRING EIS 2010 – 2017 (NOI TO ROD)



Source: R Street graph created using data from Council on Environmental Quality, "Environmental Impact Statement Timelines (2010-2017)."[15]

11. Ibid.

12. Ibid.

13. "Length of Environmental Impact Statements (2013-2018)," Council on Environmental Quality, June 12, 2020, p. 1-4. https://ceq.doe.gov/docs/nepa-practice/CEQ_EIS_Length_Report_2020-6-12.pdf.

14. "Environmental Impact Statement Timelines (2010-2017)," Council on Environmental Quality, Dec. 14, 2018, p. 1. https://ceq.doe.gov/docs/nepa-practice/CEQ_EIS_Timelines_Report_2018-12-14.pdf.

15. Ibid.

In the 1970s, NEPA approval for a Federal Highway Administration (FHWA) project would take about 2.2 years to comply with, which rose to 4.4 years in the 1980s and in 2011 that estimate had climbed to 6.6 years.[16] As a note, FHWA projects tend to take longer to attain NEPA approval, which had a median timeframe of 6.7 years from 2010-2018—nearly double the government-wide median of 3.5 years.[17] Lengthening NEPA timelines may be explained by increasing environmental statutes that NEPA ensures compliance with, such as an increasing number of protected species under the Endangered Species Act (ESA), more federal environmental regulations, and more state and local historical site preservation.

There is significant confusion regarding the ease or difficulty of complying with NEPA, because it is often controversial or large projects that require more scrutiny during the process and result in longer compliance timelines. In 2018 there were 96 projects requiring an EIS that received a record of decision.[18] From 2010-2018, the federal government issued an average of 139 records of decision per year for projects that required an EIS.[19] The best data is available for projects that require an EIS, but there is little data for projects that are categorically excluded.[20] The Government Accountability Office (GAO) estimates that 95 percent of projects that go through the NEPA process receive a CX.[21] This can make it difficult to assess the overall health of the NEPA process because some projects navigate it easily while others fight red tape for years. Importantly, the largest projects are the ones most likely to need an EIS and have the most requirements for compliance, meaning that the bigger and more economically and environmentally impactful a project is, the more important NEPA becomes.

Past Reforms

The long timelines of NEPA compliance have made it a target for reform, and the broad authority of NEPA has also made it an appealing vehicle for extraneous policies. Key changes to NEPA in recent years are detailed below:

- In 2015, the Fixing America's Surface Transportation Act (FAST) attempted to expedite NEPA review

16. Toni Horst, et al., "40 Proposed U.S. Transportation and Water Infrastructure Projects of Major Economic Significance," AECOM, Fall 2016, p. 7. https://www.treasury.gov/connect/blog/Documents/final-infrastructure-report.pdf.

17. "Environmental Impact Statement Timelines (2010-2018)," Council on Environmental Quality, Jun. 12, 2020, pp. 1, 13. https://ceq.doe.gov/docs/nepa-practice/CEQ_EIS_Timeline_Report_2020-6-12.pdf.

18. R Street estimates based on "EIS Length," National Environmental Policy Act, last accessed June 24, 2021. https://ceq.doe.gov/nepa-practice/eis-length.html.

19. Ibid.

20. Anne-Marie Fennell, "Little Information Exists on NEPA Analyses," U.S. Government Accountability Office, April 2014, p. 8. https://www.gao.gov/assets/gao-14-370.pdf.

21. Ibid.

by authorizing the use of non-federal environmental reviews in document preparation and shortening the statute of limitations from six years to two, and as low as 150 days for transportation projects.[22]

- In 2016, President Barack Obama's Council on Environmental Quality (CEQ, the agency that oversees NEPA compliance) issued final guidance for the consideration of greenhouse gas emissions as part of NEPA compliance; the culmination of draft guidance first issued in 2010.[23]
- In 2017, President Donald Trump withdrew the 2016 NEPA final guidance on consideration of greenhouse gases.[24]
- In 2020, President Trump's CEQ issued a final rule intended to adjust how regulators implement NEPA. Principally the reforms were targeted at clarifying definitions under which litigation should be brought, setting deadlines for completing the NEPA process and clarifying that court challenges should come after records of decision.[25] As a regulation rather than a Congressional action, these changes have limited authority and impact.
- In 2021, President Joseph Biden rescinded President Trump's NEPA changes, and placed the 2016 guidance for consideration of greenhouse gases under review.[26]

The effect of any one of these reforms is hard to determine, but the FAST Act's changes addressed a common concern regarding the broad legal liabilities that NEPA continues to place upon agencies and may have had the most impact. Contrastingly, the Trump administration's 2020 reforms could have had only a limited impact on NEPA timelines due to the short period of their implementation. Similarly, greenhouse gas estimation requirements have waxed and waned. However, data shown throughout this paper highlights that NEPA document length and compliance timelines were starkly different between the Obama and Trump administrations, which may indicate that administrative implementation of NEPA has more impact than attempts to codify new regulations or guidance for NEPA compliance.

THE NEED FOR NEPA REFORM

The policy discourse surrounding NEPA is almost always focused on the long timelines required for compliance. Long approval processes manifest as an economic impact from delayed capital productivity: if a project takes longer to complete, the benefits of that project are delayed to the future, where its net present value is lower (dollars today are worth more than dollars tomorrow). Delays may also disincentivize capital investment, because as returns become increasingly distant the investments become less competitive against opportunities with earlier returns. For the same reason that other regulations are constrained by processes to ensure that their capturable benefits exceed their burdens, there is concern that NEPA's lengthening timelines could jeopardize its ability to capture benefits overall.

NEPA has once again risen to the fore of policy discussions in response to proposed infrastructure investment. President Biden has proposed a $2 trillion infrastructure plan, which is principally considered a part of post-pandemic economic recovery and a vehicle for "job creation."[27] Moody's Analytics estimated that President Biden's plan would generate 2 million jobs by 2024.[28] Yet such analyses assume that the projects associated with the investment are approved and commence within expected timeframes, when there is some concern that NEPA could be an impediment to the president's economic agenda.

There is also a growing concern that NEPA has become a somewhat ironic barrier to clean energy growth. Of the 47 active NEPA projects requiring either an EA or EIS under Department of Energy (DOE) jurisdiction, 20 (42 percent) are either transmission, clean energy or environmental conservation projects.[29] Seven of the 47 active projects (15 percent) are fossil fuel related, two of these are related to the now-cancelled Keystone XL pipeline, one is related to an energy efficiency rule and four concern liquefied natural gas (LNG) facilities.[30] Importantly, analysis shows that when LNG is exported there is no increase in global emissions

22. Holland & Knight and Genna Yarkin, "Will FAST Act Make Permitting Faster? Streamlining Offered for Infrastructure Projects," JDSupra, Dec. 22, 2015. https://www.jdsupra.com/legalnews/will-fast-act-make-permitting-faster-24293.

23. Christina Goldfuss, "Memorandum for Heads of Federal Departments and Agencies," Council on Environmental Quality, Aug. 1, 2016. https://obamawhitehouse.archives.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf.

24. Executive Order 13783, "Promoting Energy Independence and Economic Growth," March 28, 2017, Federal Register 82:61, p. 16,094. https://www.govinfo.gov/content/pkg/FR-2017-03-31/pdf/2017-06576.pdf.

25. "Fact Sheet: Modernizing CEQ's NEPA Regulations," Council on Environmental Quality, July 15, 2020. https://trumpwhitehouse.archives.gov/wp-content/uploads/2020/01/20200716FinalNEPA-Fact-Sheet.pdf.

26. "Notice of rescission of draft guidance," *Federal Register* 86:32 (Feb. 19, 2021), p. 10,252. https://www.govinfo.gov/content/pkg/FR-2021-02-19/pdf/2021-03355.pdf.

27. "FACT Sheet: The American Jobs Plan," The White House, March 31, 2021. https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/31/fact-sheet-the-american-jobs-plan.

28. Mark Zandi and Bernard Yaros, "The Macroeconomic Consequences of the American Jobs Plan," Moody's Analytics, p. 4. https://www.economy.com/getlocal?q=C228A0FF-2701-47B2-ADE0-D158B5866251&app=download.

29. "DOE Environmental Assessments," Department of Energy, last accessed May 19, 2021. https://www.energy.gov/nepa/doe-environmental-assessments; "DOE Environmental Impact Statements," Department of Energy, last accessed May 19, 2021. https://www.energy.gov/nepa/doe-environmental-impact-statements.

30. Ibid.

because its primary competition is higher-emitting coal.[31]

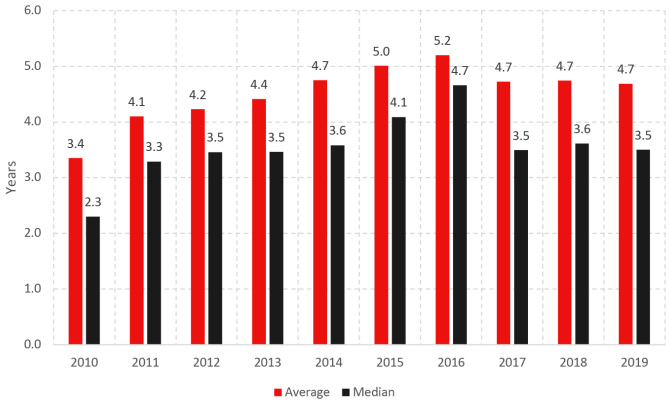
A similar trend is apparent when observing Bureau of Land Management (BLM) decisions. Going back to FY2000, of the 54 currently active EISs four (7 percent) are for fluid minerals (oil and gas), while 13 (24 percent) are for renewables.[32] Mining projects account for 15 active EISs, and three of those appear to be for coal, making fossil fuels account for 13 percent of BLM's active EISs.[33] Similarly, total EISs (including completed and withdrawn) are recorded as 29 for fluid minerals and 38 for renewables, while fluid minerals have 8,904 total NEPA-related decisions and renewables have only 318 over the same period.[34] For the BLM, renewables are much more likely to require an EIS than a fossil fuel project.

Generally, the data indicates that projects that can traditionally be defined as fossil-fuel related comprise only a small portion of NEPA reviews requiring an EIS, and changes to NEPA should not be viewed as predominantly helpful or harmful for fossil fuel-related industries. Interestingly, NEPA has become a bigger impediment for clean energy—particularly for transmission projects that account for eight of the DOE's active NEPA projects. New renewable energy typically has siting requirements that are different than legacy power generation (optimal placement needed for capturing solar or wind energy requires different sites than where transmission is already placed), and the vice president of the Midcontinent Independent System Operator noted:

> The challenges with a new transmission line tend to be siting related. You could be building many miles . . . that process can [take] as much as five years, and a wind turbine can come online in less than two.[35]

Since a primary concern regarding NEPA is that timelines seem to be extending, R Street analyzed CEQ data and concurs that—at least during the Obama administration—the timelines to comply with NEPA were indeed lengthening. For projects requiring an EIS, timelines went from a low of 3.4 years from notice of intent (NOI) to a record of decision (ROD) in 2010 to a peak of 5.2 years in 2016. During the Trump administration, timelines were modestly lower, with an average of 4.7 years. Median timelines followed a similar path, going from 2.3 years in 2010, to 4.7 years in 2016, and falling to 3.5 years in 2019. Shorter timelines during President Trump's tenure could be either a result of his administrative implementation of NEPA, which emphasized expeditious approval, or it could reflect a benefit from the changes to NEPA from the 2015 FAST Act. Figure 2 shows both the average and median time to complete the EIS process. Note that for both the average and median, timelines generally were trending upward, though had some modest reduction beginning in 2017.

FIGURE 2: AVERAGE TIME TO COMPLETE NEPA PROCESS FROM NOI TO ROD



Source: R Street graph created using CEQ NEPA data. Only projects requiring an EIS included. Timeframe is years from NOI to ROD.[36]

These findings are also consistent with the latest National Association of Environmental Professionals 2018 NEPA report, which found that NEPA compliance timelines have been generally rising since 2000.[37]

Lengthening compliance timelines can certainly indicate that the relative burden of NEPA is growing. However, recognizing a need for reform should go beyond simply pointing out the rising burdens of the rule. Policymakers should also determine if those growing burdens are tied to a comparable increase in benefits.

REASONS FOR LENGTHENING NEPA TIMELINES

There are multiple reasons for the increase in NEPA compliance timelines. Some potential reasons include:

- Increasing compliance burdens for underlying statutes (environmental regulations, endangered species

31. Selina Roman-White, et al., "Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States: 2019 Update," National Energy Technology Laboratory, Sept. 12, 2019, p. 20. https://globallnghub.com/wp-content/uploads/2019/10/2019-NETL-LCA-GHG-Report.pdf.

32. "Bureau of Land Management National NEPA Register," U.S. Department of the Interior, last accessed June 3, 2021. https://eplanning.blm.gov/eplanning-ui/home.

33. Ibid.

34. Ibid.

35. Robert Walton, "As operators update grid planning for renewables, transmission remains key constraint," *Utility Dive*, Sept. 18, 2017. https://www.utilitydive.com/news/as-operators-update-grid-planning-for-renewables-transmission-remains-key/505065.

36. "EIS Timelines," Council on Environmental Quality, last accessed May 19, 2021. https://ceq.doe.gov/nepa-practice/eis-timelines.html.

37. Charles P. Nicholson, et al., "2018 Annual NEPA Report," National Association of Environmental Professionals, November 2019, p. 13. https://naep.memberclicks.net/assets/documents/2019/NEPA_Annual_Report_2018.pdf.

and habitat preservation, historical site preservation, etc.).

- Insufficient resource and staffing allocations for carrying out EAs and EISs.
- Additional estimation requirements of incidental environmental impacts (climate change impacts).
- Lack of clarity for statutory obligations, such as the consideration of reasonable alternatives.
- Growing legal liabilities, and the need to address all such liabilities in the NEPA process.
- A high appetite for NEPA litigation, which agencies may respond to by exercising a preponderance of caution in document preparation.

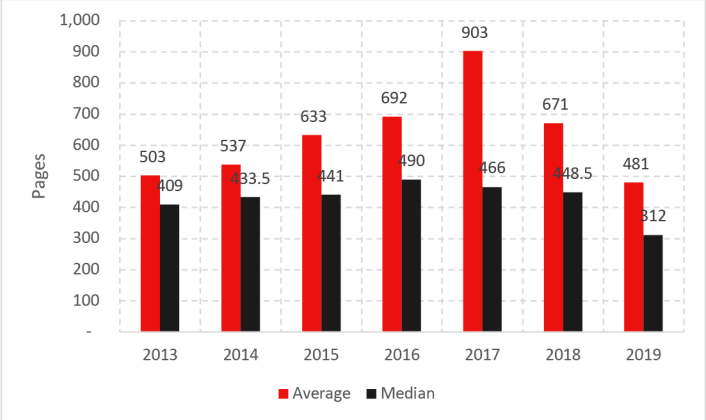
Pinning down any one reason for why NEPA timelines have been growing is a futile effort due to the heterogeneous nature of the projects, compliance requirements and litigations brought against NEPA. Caution should be exercised when presuming the impact of any single policy on NEPA compliance timelines because data limitations make it difficult to evaluate potential causal relationships.

Some guidance that has been offered on the topic comes from the Congressional Research Service (CRS) who note that "litigation is probably the most often cited cause of NEPA-related project delays."[38] CRS also find that "factors 'outside the NEPA process'" are the cause of delays 68 to 84 percent of the time, with compliance with underlying statutes—specifically the Endangered Species Act (ESA)—as a "primary reason for project delays."[39] Importantly, this research may indicate that improving NEPA compliance timelines can be readily achieved through broader regulatory reform that eases compliance with underlying statutes.

The DOE regularly analyzed its own NEPA preparation and found that expeditiously prepared EISs were often the result of actively engaged NEPA document managers, easily available data, sufficient staff and active engagement from key stakeholders.[40] Conversely, the DOE has found that lack of staff availability, lack of project prioritization from cooperating agencies and overly ambitious schedules can all detract from timely document preparation.[41]

One important set of data that sheds light on NEPA timelines is EIS page counts. An analysis of the average page count for final EISs was steadily climbing until the Trump administration, at which point page counts fell considerably. Average EIS page counts went from a peak of 903 in 2017, to a low of 481 in 2019.[42] Median page counts peaked in 2016 at 490, and fell to their lowest point in 2019 to 312.[43] Recall that the historical median was 397.[44] Figure 3 below shows the average and median EIS page counts from 2013-2019.

FIGURE 3: AVERAGE NUMBER OF PAGES IN FINAL EIS BY YEAR ROD



Source: R Street graph created using CEQ NEPA page count data.[45]

As page counts declined, so too did the average approval timeline for NEPA projects. Page counts are never a perfect metric for how easy or difficult an EIS may be to prepare, but in aggregate they can be indicative of broader trends. Easier preparation of EISs could be an explanation for why NEPA timelines were modestly shorter under the Trump administration.

However, page counts are only part of the picture. There is also a question of whether page counts can reflect document quality and subsequently, litigation quality. One analysis of NEPA related litigation between 2001 and 2013 found that the number of cases brought against the U.S. government over NEPA had, at least for the observed period, been declining.[46]

38. Linda Luther, *The National Environmental Policy Act: Background and Implementation*, Congressional Research Service, Feb. 29, 2008. p. 29. https://fas.org/sgp/crs/misc/RL33152.pdf.

39. Ibid., p. 30.

40. "NEPA Lessons Learned Q3 FY2017," Department of Energy, September 2017, p. 7. https://www.energy.gov/sites/default/files/2017/09/f37/LLQR%20Sep_2017.pdf.

41. "NEPA Lessons Learned Q4 FY2016," Department of Energy, Dec. 2, 2016, p. 24. https://www.energy.gov/sites/default/files/2016/12/f34/LLQR_2016_Q4.pdf.

42. "EIS Length," Council on Environmental Quality, last accessed May 19, 2021. https://ceq.doe.gov/nepa-practice/eis-length.html.

43. Ibid.

44. "Length of Environmental Impact Statements (2013-2018)," pp. 1-4. https://ceq.doe.gov/docs/nepa-practice/CEQ_EIS_Length_Report_2020-6-12.pdf.

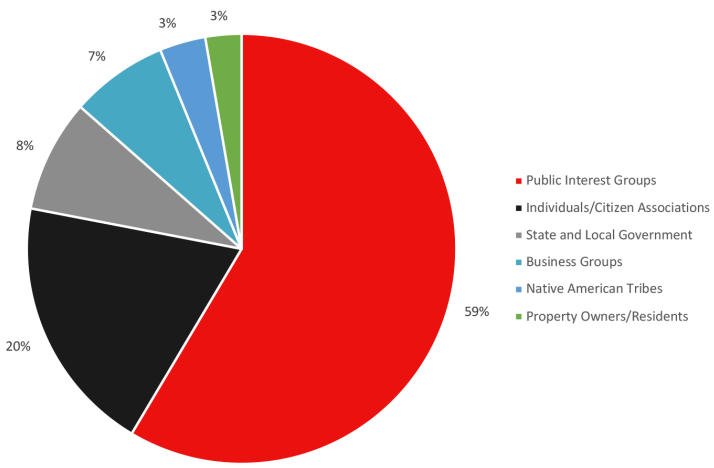
45. "EIS Length." https://ceq.doe.gov/nepa-practice/eis-length.html.

46. John C. Ruple and Kayla Race, "Measuring the NEPA Litigation Burden: A Review of 1,499 Federal Court Cases," *Utah Law Digital Commons* (2019), p. 501. https://dc.law.utah.edu/cgi/viewcontent.cgi?article=1008&context=stegner_pubs.

FIGURE 4: NEPA CASE FILINGS 2001-2013

Source: R Street graph created using data from Ruple and Race, "Measuring the NEPA Litigation Burden," 2019.[47]

FIGURE 5: NEPA LITIGATIONS BY PLANTIFF TYPE 2001-2013



Source: R Street estimates based on NEPA litigation surveys 2001-2013.[52]

The findings of the study demonstrate that NEPA related litigation is in decline, but it is perhaps better to say that the average number of NEPA related cases is turning toward earlier trends. The Council of Environmental Quality (CEQ) estimated in 1995 that the average number of annual cases filed related to NEPA was just above or below 100, but in 2004 the number of cases filed peaked at 166—not far from the levels of 1974 (189 cases filed).[48]

Yet, a noteworthy insight from the litigation data is that there is some correlation between EIS preparation times and litigation. One study found that agencies with shorter document preparation timelines were more likely to be litigated. For example, the United States Forest Service (USFS) had a median NEPA timeline of 2.9 years but had 1.4 times the expected litigation ratio.[49] Conversely, the Federal Highway Administration had the longest median NEPA timeline of 6.9 years, but a litigation ratio of only 0.3.[50] The authors note that "rapid EIS preparation therefore appears correlated with an increased risk of litigation."[51]

Evidence also points to litigation being driven by political activism, rather than private property concerns or disputes over Native American land use. Excluding combination plaintiffs, 59 percent of plaintiffs in NEPA litigation from 2001 to 2013 were public interest groups. Individuals and citizen associations represented the next largest portion at 20 percent. Native American Tribes were only 3 percent, as were property owners and residents.

Agencies should expect a large appetite for litigation against their NEPA decisions given that public interest groups can use court cases to indicate the effectiveness of their organization's ability to prevent environmental damage, and to encourage members to fund their efforts. This should not be construed as a criticism of activist litigation since such litigation could arguably preserve the quality of NEPA decisions—although more exhaustive research on the economic tradeoffs of legal liabilities and extenuated infrastructure development timelines is required for such assertions in either direction.

The above information leads to two possibilities that policymakers should consider. The first is that litigation is the primary driver of NEPA delays. The second is that growing EIS page counts and NEPA timelines are a response to a likely correct presumption that higher EIS document quality reduces the potential for litigation. As such, efforts to force truncated NEPA timelines could in fact worsen delays, as projects may be more vulnerable to successful suing and thus require extended EIS preparation to achieve adequate statutory compliance.

In general, NEPA compliance timelines are climbing, and it is more likely that the Biden administration's policies will more closely reflect those of the Obama administration than policies of the Trump administration. Therefore, if institutional differences in the implementation of NEPA is a major component of timelines, it may be reasonable to expect timelines to rise once again.

47. Ibid., p. 501.

48. "Environmental Quality, 25th Anniversary Report," Council on Environmental Quality, 1995, p. 51. https://ceq.doe.gov/docs/ceq-reports/ceq-25th-annual-report.pdf.

49. Ruple and Race, p. 499.

50. Ibid.

51. Ibid., p. 498.

52. "NEPA Litigation Surveys: 2001-2013," Council on Environmental Quality, 2013. https://ceq.doe.gov/docs/ceq-reports/nepa-litigation-surveys-2001-2013.pdf.

POLICY PATHWAYS

The CEQ data shown in Figures 1 and 2 indicate that concerns surrounding NEPA compliance timelines are warranted, and that policymakers seeking to improve or expedite infrastructure development in the United States should aim to improve the NEPA review process. Ideally such improvements will come with minimal tradeoffs and with improved clarity around statutory obligations that will shorten timelines without diminishing the enforcement of environmental provisions. However, policymakers should be aware that more blunt attempts to force truncation of NEPA compliance could create unintended tradeoffs between agency preparation time and litigation outcomes.

Perhaps the most interesting insight from one study is that shorter NEPA EIS preparation timelines does not necessarily result in better outcomes, as those EISs may be more vulnerable to litigation.[53] Overall the federal government won 69.8 percent of court cases involving NEPA, but in cases where EIS adequacy was in question only 58.3 percent of cases were won, and overall the authors estimate that 16.1 percent of final EISs were involved in court cases.[54] Given that previous policy attention focused on mandating reduced EIS page counts or enforceable timelines, any expectation of expedited infrastructure approval timelines must be accompanied by reforms that either improve document preparation capacity or remove underlying liabilities.

If the primary drivers of growing NEPA timelines are legal liabilities and the requirements to comply with underlying statutes, then policies that fail to address those liabilities may exacerbate problems by making agencies more likely to have their decisions litigated. Or worse, agencies that are unable to comply with required page counts or deadlines may instead reject projects that would otherwise be approved and avoid taking up projects that are unlikely to be approved within required timeframes. Without litigation data from the 2017 timeframe and beyond, it is unclear if quicker NEPA document preparation under the Trump administration ultimately helped or harmed infrastructure deployment timelines, as there may have been an uptick in litigation during the timeframe that is not yet represented in publicly available data.

Policies that effectively mitigate the liabilities of agencies or eliminate statutory obligations from other laws that NEPA ensures compliance with are more likely to reduce NEPA compliance burdens. The latter is likely less achievable. For example, the ESA is a frequent topic of policy discussion over concerns that the parameters for delisting species and defining their recovery are too vague. To date, approximately only 1 percent of species under the ESA have been delisted, and it is unclear how much of this is due to continued endangerment of a species versus vagary surrounding what constitutes a species emerging from endangerment.[55] Notably, under the Trump administration Gray Wolves lost their endangered status, which was defended on grounds of population growth, but environmentalists challenged the change by seeking a higher standard that included the presence of Gray Wolves in their traditional habitats.[56]

Lack of regulatory clarity alongside the difficulty of securing broad political agreement on the limiting principles of environmental statutes means that attempting to reform NEPA by eliminating underlying statutes is unlikely to succeed. Such a move could be severely misguided: if NEPA compliance timelines are driven by the need to avoid legitimate externalities that regulations address, then curtailing those policies could result in economic impacts that were previously addressed. Undoubtedly, underlying statutes will be of widely varying quality. While it is outside of the scope of this analysis to pinpoint which laws are most worthy of reform, it is important to note that such questions must be answered on a case-by-case basis, and as such, are not ripe for producing expeditious improvements to NEPA compliance timelines.

Perhaps the most promising opportunity for improving NEPA timelines is in clearer standards for litigation. The statute of limitations for NEPA decisions is currently two years (150 days for Federal Highway Administration projects). This means that a project may be approved, but up to two years later a case may be brought against it and the project could potentially be halted. A notable example of litigation-related delay is the Purple Line in Maryland, which was halted in 2016 when an activist group challenged the 2014 NEPA record of decision approving the project.[57] The plaintiffs argued that the project endangered the habitat of a microscopic crustacean, even though it failed to produce any

53. Ruple and Race, p. 498.

54. Ruple and Race, pp. 505, 514.

55. Louis Jacobson, "Under the Endangered Species Act, 'only 1 percent of the species that have been listed have actually been delisted,'" Politifact, Sept. 3, 2013. https://www.politifact.com/factchecks/2013/sep/03/cynthia-lummis/endangered-species-act-percent-taken-off-list.

56. Nathan Rott, "Gray Wolves to be Removed from Endangered Species List," NPR, Oct. 29, 2020. https://www.npr.org/2020/10/29/929095979/gray-wolves-to-be-removed-from-endangered-species-list.

57. See, e.g., Katherine Shaver, "Court ruling on Purple Line could set back light-rail construction," *The Washington Post*, Aug. 3, 2016. https://www.washingtonpost.com/local/trafficandcommuting/court-ruling-on-purple-line-could-set-back-light-rail-construction/2016/08/03/bc2d6186-599c-11e6-831d-0324760ca856_story.html; Maryland Transit Administration, "Governor O'Malley Announces Purple Line Receives Federal Environmental Approval," Press Release, March 20, 2014. https://www.purplelinemd.com/component/jdownloads/send/20-record-of-decision/69-record-of-decision-press-release.

evidence.[58] A later court decision in 2017 reinstated project approval.[59]

A shorter statute of limitations could set a higher bar for litigation quality, ensuring that potential plaintiffs are more actively engaged in the NEPA process and offering comment on EIS quality during comment periods, rather than waiting to litigate NEPA-related decisions after the fact. The BUILDER Act, originally proposed in 2020, aims to address some of these legal liability aspects by requiring plaintiffs to have submitted a comment during review periods, and shortens the statute of limitations for case filing to 120 days.[60] This would bring the period for filing petitions against NEPA decisions in line with other environmental statutes, which are typically 60 to 120 days.[61] Importantly, clearly defining the parameters for litigation should not diminish environmental quality or outcomes. Agencies still have the same obligation to comply with the letter of the law for environmental protection.

In addition to clearer legal statutes that define case standing, policymakers can constrain NEPA approval timelines by avoiding the temptation of using NEPA as a tool for the implementation of only tangentially related policies. For example, climate change is a repeated topic of concern for NEPA, as the Obama administration—and now the Biden administration—have asked agencies to consider the climate impacts of projects pending approval.

The inclusion of incidental environmental impacts is outside the conventional scope of NEPA, especially for globally dispersed pollutants like carbon dioxide. In part, this is because questions about the climate impact from an individual project may be almost impossible to answer with reasonable certainty. In addition to the difficulty of measuring the climate impact from a single project, the bigger challenge lies in the uncertainty of global substitutes and alternatives. For example, if an oil pipeline is rejected on climate grounds over concerns that emissions will increase from expanded oil supply at the destination, one needs to determine the elasticity of demand for oil at the destination and globally, whether alternative transport methods would be utilized for the oil, what the emissions profile of such transport would be and how the constrained supply may lead to higher prices, which could incentivize increased oil production elsewhere. These questions grow and build in various directions and may be too unwieldy for the NEPA to address when assessing a project, or otherwise greatly expand the burdens of compliance and required expertise on the part of agencies.

Addressing global environmental problems like climate change are best achieved through the conventional legislative process. Using NEPA as a vehicle to reinterpret environmental statutes may only result in infrastructure delays that could ironically impede the achievement of environmental benefits.

Policy Recommendations

Simply put, improving NEPA comes down to three clear actions:

1. Congress should set clearer standards for litigation, particularly with a focus on the statute of limitations, to encourage more active participation in the NEPA process from potential plaintiffs before a record of decision is issued. This could allow agencies to directly address concerns in their document preparation rather than attempting to anticipate all potential concerns that may or may not materialize.
2. Congress should review the statutes that NEPA regulates for compliance and determine if there are opportunities to improve compliance or more clearly define what adequate compliance looks like. Vague direction means court cases will play a greater role in defining statutory compliance and create an incentive for litigation as a means of setting precedent for a desired compliance outcome, regardless of Congressional intent.
3. The Executive Branch should avoid the temptation of reengineering NEPA requirements to suit the political objectives of any given administration. Adding requirements that are outside the scope of typical NEPA requirements adds cost and delays.

CONCLUSION

NEPA compliance timelines are longer than their historical average, especially when an EIS is involved. This trend is not tied to any singular reason but will likely have an economic impact and interfere with infrastructure-related policy agendas—even ones related to clean energy and environmental priorities. Data indicates that efforts from policymakers seeking quick and easy fixes to NEPA may cause more issues. For example, shorter EIS preparation is correlated with more litigation and more losses for agencies defending their

58. Robert McCartney, "Purple Line transit project opponents sue to protect tiny species they can't even find," *The Washington Post*, Aug. 30, 2014. https://www.washingtonpost.com/local/purple-line-transit-project-opponents-sue-to-protect-tiny-species-they-cant-even-find/2014/08/30/e376f0c2-2fd7-11e4-bb9b-997ae96fad33_story.html?utm_term=.bd9f080ea070.

59. Katherine Shaver, "Federal appeals court ruling allows Purple Line construction to continue," *The Washington Post*, Dec. 19, 2017. https://www.washingtonpost.com/local/trafficandcommuting/federal-appeals-court-ruling-allows-purple-line-construction-to-continue/2017/12/19/4f0844d8-e4d6-11e7-a65d-1ac0fd7f097e_story.html.

60. HR 2515, BUILDER Act of 2021, 117th Congress. https://republicans-transportation.house.gov/uploadedfiles/builder_act_2021_text.pdf.

61. Linda Luther, *The National Environmental Policy Act: Streamlining NEPA*, Congressional Research Service, Jan. 9, 2007, p. 14. http://nationalaglawcenter.org/wp-content/uploads/assets/crs/RL33267.pdf.

NEPA-related compliance. This indicates that policies that do not either address underlying compliance requirements for NEPA or better define litigation standing may merely result in more litigation and more NEPA-related delays. If the Executive Branch avoids reengineering NEPA for political purposes, and if Congress sets clearer standards for litigation and reviews opportunities to improve compliance, policymakers could shrink NEPA timelines while avoiding additional litigation or timeline management issues.

ABOUT THE AUTHOR

Philip Rossetti is a senior fellow for Energy and Environmental Policy at the R Street Institute. He has worked extensively on issues related to energy policy, environmental issues and climate change. Prior to joining the R Street Institute, Rossetti supported the minority staff of the Select Committee on the Climate Crisis in the U.S. House of Representatives, and before that he was the Director of Energy Policy at the American Action Forum.