



## Research

# NRC Rules Would Benefit from OIRA Review

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## EXECUTIVE SUMMARY

- The Trump Administration is considering expanding the White House's review of regulations to include reviewing the Nuclear Regulatory Commission's (NRC) rules.
- The NRC is a good candidate for review because its incentive to regulate is misaligned with the safety risks of newer technologies.
- The benefits of expanding regulatory review to the NRC markedly outweigh the costs.

## INTRODUCTION

After tax reform, the Trump Administration's initiative with the largest economic impact is likely its deregulatory push in the executive agencies, and it appears that the administration is looking to expand that effort. In public remarks earlier this year, Office of Information and Regulatory Affairs (OIRA) Administrator Neomi Rao [indicated](#) the administration is considering expanding regulatory review to independent agencies. OIRA, an office within the White House's Office of Management and Budget, is currently responsible for reviewing significant proposed and final regulations from executive agencies. It reviews regulations to ensure they have met the analytical steps of the regulatory process required by either statute or executive order.

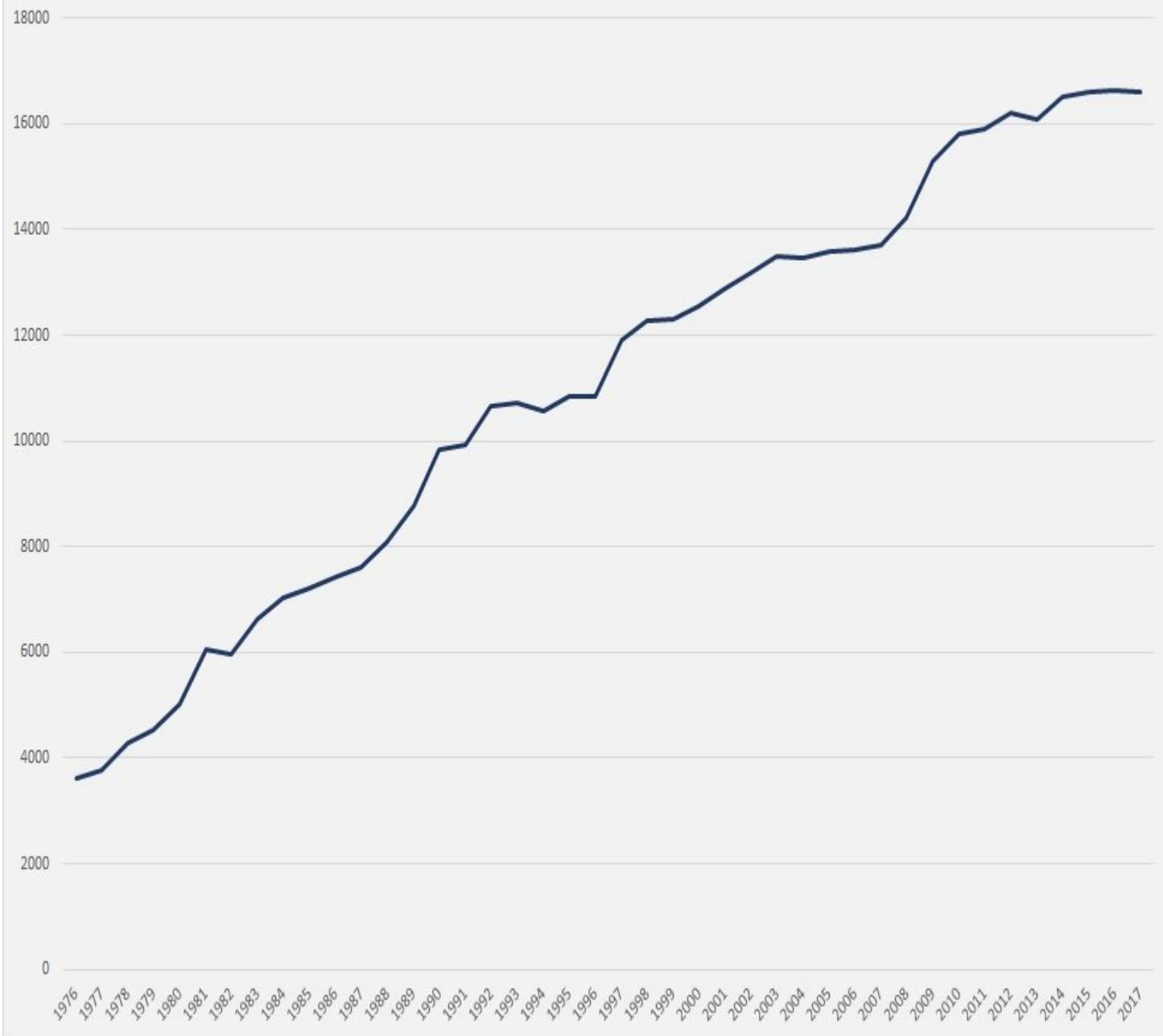
Such a move could be controversial. Independent agencies are designed to be insulated from the executive branch's political concerns, but the president does have responsibility for the entire executive branch, including independent agencies, and some [contend](#) that excluding independent agencies is a political rather than legal decision. Should the administration conclude that expanding OIRA regulatory review to all independent agencies is undesirable or impractical, it may decide to increase coverage to a small subset of these agencies initially. One strong candidate for inclusion is the Nuclear Regulatory Commission (NRC).

The NRC is focused primarily on safety regulations, which typically come under the administration's review and do not necessarily require agency independence. Further, the administration could review regulations without impacting the safety of nuclear plants, and a number of benefits would result from such review with limited costs.

## WHY NRC RULES SHOULD BE REVIEWED

Critics of regulatory bloat often point to the NRC as a prime example of an overregulating entity. The chart below shows why: The quantity of regulatory restrictions from the NRC since 1976 have increased by more than 4.5 times.

## NRC Restrictions, 1976-2017



Source: Mercatus Center's RegData Tool[1]

The American Action Forum (AAF) estimated last year that the regulatory burdens on nuclear power plants have exceeded **\$60 million per plant per year**, an amount greater than many plants' profit margins. This regulatory bloat from the NRC can be explained in part by two aspects of its structure that incentivize it to increase its regulatory burdens. First, the NRC is funded by fees on the regulated entities, and as more nuclear power plants go out of business, maintaining the NRC's budget requires more regulations on fewer plants. Second, the stated objective of the NRC is to "provide reasonable assurance of adequate protection of public

health and safety and to promote the common defense and security and to protect the environment.” Such a broad mission statement means there is often opportunity for further regulation.

There is little doubt that the NRC has achieved a reasonable assurance of protection. The same AAF analysis which identified regulatory burdens noted that nuclear energy is, by some measures, the safest energy source available. Therefore, the NRC may very well be experiencing diminishing returns with regard to regulations, given that those that are most able to provide enough benefit to justify their burdens have been imposed. The NRC has achieved such a level of safety in the industry that it seems as if increased regulations bring decreasing marginal benefits. OIRA oversight could force the NRC to better evaluate if new regulations it imposes are justifiable relative to the increased burdens.

The costs of NRC regulations indicate that it could benefit from OIRA review, and its purpose and history indicate that it does not need to be fully independent. The NRC began in 1946 as the Atomic Energy Commission (AEC), and since then much has changed with how the federal government handles regulation, not the least of which is that major regulators are typically under the oversight of the administration. The NRC is, in many ways, more like the Environmental Protection Agency (EPA) than other independent commissions such as the Securities and Exchange Commission (SEC). The SEC’s independence is important because it prevents Americans of station from using their political authority to corrupt investigations into their financial practices. As another example, the Trump Administration last year [requested](#) that the Federal Energy Regulatory Commission (FERC) interfere with electricity markets, but the regulator’s independence allowed it to easily reject what is speculated to have been a politically motivated proposal. Yet the NRC’s focus on safety differentiates it from SEC or FERC – two agencies that can directly affect market interactions. If the AEC had not existed, and NRC was a new agency, it would likely be under the same oversight as the EPA, Bureau of Land Management, and Occupational Safety and Health Administration (OSHA), etc.

Safety and environmental rulemaking, such as what NRC does, is typically a balance of costs and benefits. Such rules, when issued by non-independent agencies, are constrained by Executive Orders 12866, 13563, and 13771, which ensure that regulations do not exceed the agency’s authority and offer a benefit that exceeds the burdens. The NRC, as a safety-focused regulator, could benefit from such a weighing of costs and benefits.

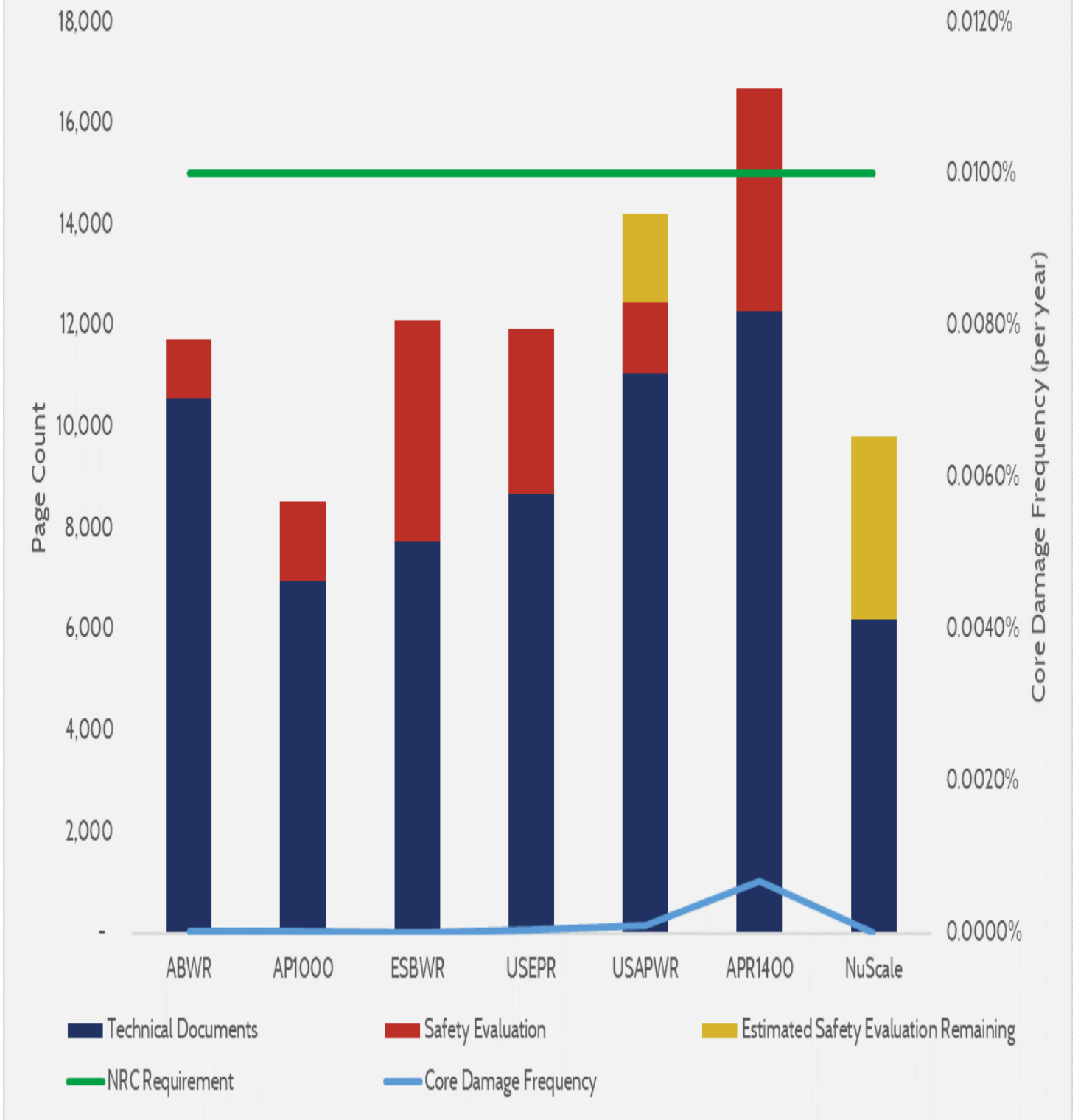
## **OIRA COULD ALIGN SAFETY REGULATIONS AND RISK**

OIRA oversight ideally functions as a “proof reader” to improve the quality of regulations, but the stakes are particularly high for nuclear power. Such review would be most helpful in situations where there is already an abundance of regulations and increasingly large burdens are needed to provide smaller and smaller benefits, as regulations reach a point of diminishing returns. If OIRA oversight would benefit the quality of NRC regulations, we would expect that the current regulations coming from the NRC would be of marginal safety value.

[Past research from AAF](#) indicates this dynamic is at work in the NRC, as the length of time required for NRC approval of new reactor designs was not correlated with expected safety of the reactors (a metric known as core damage frequency, or CDF). The same research showed that regulatory burdens on the nuclear industry have been steadily increasing. To further explore this point, compare the requirements for design approval and the expected core damage frequency. In theory, as the demands for approval increase, the risk should decrease, yet a comparison of reactor designs submitted for approval showed that despite rising page counts in applications and safety evaluations, the expected CDF seems uncorrelated. Below is a graph showing the total page counts of reactor design applications and their safety evaluations (the vertical bars), compared to the anticipated CDF of the reactor design (the horizontal blue bar) and the NRC requirement (a core damage frequency of one per

10,000 reactor-years, illustrated by the green bar). The order of the reactor designs is chronological, and all designs past the Economic Simplified Boiling-Water Reactor are still pending approval. The NuScale design has only just recently been submitted, and may have an increased page count as it undergoes more revisions.

## Reactor Design Page Count vs Core Damage Frequency



Source: NRC Design Certifications and AAF Estimates

What is the takeaway from the above data? Regulations are increasing, but the regulations do not seem to reduce risk. OIRA oversight likely could improve the quality of regulation. Given that the industry faces roughly \$60 million worth of regulatory burdens per plant per year, which for many plants represents a greater margin than their profitability, even a modest reduction in burdens could improve industry outlook without compromising safety.

## THE BENEFITS AND COSTS OF OIRA REVIEW OF NRC REGULATIONS

Submitting the NRC to OIRA review would have minor costs, but the benefits would far outweigh the costs.

One benefit is that the transparency of NRC rules' impact would improve. Under current practice, NRC does not publish the benefits and costs of its rules, nor is such information readily available in its rulemaking dockets. AAF reviewed all 44 significant regulations – the rules that would be reviewed by OIRA, per the executive orders noted above – finalized by NRC since September 1995. Notably, the commission included a cost or savings estimate in either the Federal Register notice establishing the rule or any accompanying regulatory impact analysis for just three of the rules. Two of the three had estimated savings, while just one had estimated costs. As previous [AAF research](#) showed, NRC rules impose substantial compliance costs, yet the public is not aware of these impacts because the information is either not readily available or not produced by the NRC at all. OIRA review would shed light on the costs and benefits of the regulations and ensure vigorous analysis of impacts.

A second benefit is that OIRA review could help NRC more closely align its regulatory burden with the risk its regulations seek to mitigate. As demonstrated by the charts above, the NRC rules' regulatory burden has grown exponentially despite the fact that newer reactor designs continue to achieve safety levels well beyond what the NRC requires. Regulatory review would offer the opportunity for OIRA or other agencies to point out unnecessary and costly requirements that do not sufficiently mitigate further risk.

A third benefit is improved coordination among agencies that have overlapping authority with the mandate of the NRC, such as the EPA and Departments of Energy and Defense. As noted by the Government Accountability Office, improving cross-agency cooperation is vital in such critical tasks as [nuclear non-proliferation](#) and [waste storage](#). Further cooperation on the regulatory analysis front is also warranted. Though memoranda of understanding (MOU) exist between the NRC and other agencies to promote regulatory cooperation (examples of NRC and EPA MOU can be found [here](#) and [here](#)), centralizing NRC regulatory review at OIRA would improve coordination by establishing a third party referee with an interest in minimizing overlap and contradiction. For instance, as [noted](#) by Professor Richard Revesz, NRC spent years determining its own “value of a statistical life” – a key factor agencies use to quantify the benefits of a regulation – before arriving at a figure that ended up being “simply the average of values used by two executive branch agencies.” Further coordination from the outset could have saved the agency such trouble.

A fourth benefit is greater public accountability. The NRC has demonstrated its preference for additional regulation without meaningful regard to the need for, or cost of, more regulatory requirements. Unlike professional regulators, the president is directly accountable to the public. OIRA review would bring greater public accountability by requiring significant rules to be well-founded, cost-effective, and attentive to the president's policy goals.

There are two potential costs associated with expanded OIRA review to the NRC: increased delay while rules are under review, and an increased burden on OIRA staff. When examining the potential impact of delays, it

needs to be considered from two perspectives: public safety and industry. Public safety could be at risk if certain regulatory safeguards are held up, particularly in emergency situations. Fortunately, emergency rules can be handled differently by OIRA and NRC than typical rules, including forgoing OIRA review entirely. For non-emergency rules where public safety is still likely a concern, OIRA review is typically not longer than two months. AAF analyzed the 114 major rules reviewed by OIRA from the beginning of the Trump Administration through November 12, 2018. The average review time was 54 days, and the median review time was 37 days. For perspective, that is roughly the same as the public comment period typically provided for such rules. From the industry perspective, these review times are minor considering that the NRC [can take](#) more than eight years to review new plant license approvals. It is reasonable to conclude that the time OIRA review takes is insignificant with regard to public safety or industry concerns, and likely worth the time to ensure regulations are thoroughly analyzed to ensure they are justified.

Regarding any additional burden on OIRA staff, if NRC regulations were subject to OIRA review, then less than one-third (nine of 28) of the current rules at NRC would be covered, based on information from the most recent [Unified Agenda of Regulatory and Deregulatory Actions](#). According to data from [reginfo.gov](#), OIRA received 333 rules for review from January 1 through October 31, 2018 – nine more would be a negligible additional burden. Any costs in the form of delays and additional burden on OIRA staff are likely overwhelmed by the benefits of OIRA regulatory review.

## CONCLUSION

Though an independent agency, the NRC would make a good candidate for OIRA regulatory review. Its legacy as an independent agency predates the more recent approach of putting environmental and safety and health agencies like EPA and OSHA under closer executive oversight. The NRC's work is also more similar to executive agencies than other independent commissions such as the SEC. Further, the NRC's incentives as a regulatory agency are such that its level of regulatory activity has grown substantially over the last four decades.

OIRA review of NRC regulations offers significant benefits with few costs. The potential benefits include cost and benefit transparency, improved regulatory coordination, and greater public accountability. The costs are likely to be in the form of minor delays with no effect on public or worker safety.

[1] McLaughlin, Patrick A., and Oliver Sherouse. RegData US 3.1 Annual (dataset). QuantGov, Mercatus Center at George Mason University, Arlington, VA, 2018. <https://quantgov.org/regdata-us/>.