

**EPN Comments on Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category-Unmanaged Combustion Residual Leachate**

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The Environmental Protection Network (EPN) harnesses the expertise of more than 750 former Environmental Protection Agency (EPA) career staff and confirmation-level appointees from Democratic and Republican administrations to provide the unique perspective of former regulators and scientists with decades of historical knowledge and subject matter expertise.

### **Introduction**

EPA's proposed rule exempts coal-fired power plants from meeting the mercury and arsenic discharge limits required in the 2024 steam electric effluent limitation guideline rule for unmanaged combustion residual leachate (CRL) that a permitting authority determines is being discharged to a Water of the United States (WOTUS) as the functional equivalent of a direct discharge. EPA's proposed rule retains the 2024 rule's mercury and arsenic discharge limits for unmanaged CRL that is captured and pumped to the surface for direct discharge. The rule also proposes exempting retired plants and landfills/impoundments, closed by July 8, 2024, from meeting unmanaged CRL limits.

EPA states that these exemptions are necessary because treatment of unmanaged CRL is no longer economically achievable now that so many coal-fired plants will remain in service. According to the proposed rule, the 2024 rule greatly underestimated the costs of treating mercury and arsenic in unmanaged CRL because the agency erroneously assumed that a number of plants would retire. EPA's proposal is predicated on the new reality that many more plants will stay open, producing more coal combustion residuals which will be transported to landfills and surface impoundments, fewer of these waste management units will be capped and closed, and discharges of CRL will greatly increase. EPN disagrees with this rationale and notes that EPA in the Resource Conservation and Recovery Act (RCRA) Solid Waste Coal Combustion Residual (CCR) proposed amendments has stated that the proposed changes will result in coal ash being used for beneficial uses, not placed in landfills and surface impoundments.<sup>1</sup>

EPA should withdraw the proposed rollback and retain the 2024 national mercury and arsenic limits for all unmanaged combustion residual leachate discharges, including those determined to be the functional equivalent of a direct discharge. The proposal relies on speculative assumptions regarding future coal plant operations, unquantified economic uncertainties, and incomplete assessment of public health and environmental benefits. More fundamentally, the proposal represents a broader shift away from enforceable national pollution-control standards toward discretionary, site-specific permitting decisions that transfer risk from polluters to communities, Tribes, drinking water systems, and future generations.

The Clean Water Act (CWA) requires EPA to establish nationally applicable technology-based standards based on the best available technology (BAT) economically achievable. EPA has not

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<sup>1</sup> 91 FR at 19007-19008, 19009, 19011

demonstrated that the 2024 standards are no longer achievable. Instead, the Agency has selectively amplified uncertainty regarding compliance costs while discounting or failing to quantify the substantial human health, ecological, drinking water, environmental justice, and Tribal benefits associated with reducing toxic releases from coal combustion residual waste units.

Viewed together with EPA's contemporaneous proposals to weaken or defer certain CCR requirements under RCRA, the proposed ELG revisions create a significant risk of regulatory leakage: less treatment under the CWA, greater discretion under RCRA, reduced accountability for groundwater contamination, and increased pollution burdens borne by downstream communities.

EPN is providing comments on each major issue in the proposed rule in the following sections but first wants to note that EPA is wasting its limited staff and funding to promulgate the fifth rule on steam electric power generating ELGs in 11 years, now eliminating requirements for coal-fired power plants to treat their highly toxic CRL which has been contaminating drinking water supplies and fisheries for decades. EPA is years behind the statutory requirement to review and update ELGs for many higher priority industry categories, allowing highly toxic wastewater discharges to go untreated from unregulated industries, impairing public health and the environment.

### **EPA declares unmanaged CRL treatment economically unachievable using highly uncertain assumptions**

The 2024 rule based its cost estimates on the known retirement schedules for coal-fired power plants and found that it was economically achievable for these plants to meet national mercury and arsenic limits using readily available, effective chemical precipitation treatment processes for their unmanaged CRL. EPA now estimates much higher costs based on the assumption that many more coal-fired power plants will remain in operation. EPA attributes this increase to the Department of Energy (DOE) issuing emergency orders requiring plants planning to retire to continue operation and to EPA delaying for five years the compliance date for the steam electric ELGs.

EPN notes that the DOE emergency orders and the EPA compliance delays are under litigation and are highly vulnerable to being overturned by the courts. It is inappropriate for EPA to eliminate treatment requirements based on the assumption that the courts will uphold those actions. The courts will hear compelling evidence that meeting the nation's energy needs does not require old, inefficient coal-fired power plants to stay online. With regard to EPA's compliance delays, a new report, *Meeting Forecasted Growth in Electricity Demand*, contradicts EPA's argument that the nation's energy crisis requires these old plants to keep running.<sup>2</sup> This report supports EPA's estimation in the 2024 rule that toxic discharge limitations would have a minor effect on household electricity costs and the nation's total electric capacity. In fact, the report explains that households will get lower electricity costs if these plants are replaced by more efficient, cost-effective plants.

In 2023, the average age of operating coal-fired power plants was 45 years, making them extremely inefficient and costly to run. Most of the coal-fired power plants that retired between 2002 and 2021 retired either when the cost of operating the plant exceeded the expected revenue or when operating costs exceeded the plant's value to the power system, such as its value in providing reliability to the electric grid. Coal-fired power plants also have poor reliability performance during extreme weather conditions and slow ramping time when used to provide power during peak demand periods.

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<sup>2</sup> [https://www.analysisgroup.com/globalassets/insights/publishing/2025\\_meeting\\_forecasted\\_growth\\_in\\_electricity\\_demand.pdf](https://www.analysisgroup.com/globalassets/insights/publishing/2025_meeting_forecasted_growth_in_electricity_demand.pdf)

## **EPA requests comment on whether additional uncertainties should be considered in final rule**

In addition to determining the 2024 unmanaged CRL limits for functionally equivalent discharges to be economically unachievable, EPA requests comment on whether the agency should further support the elimination of these limits by considering the following factors: lack of detailed characterization data for unmanaged CRL; inability to collect a large enough volume of ground water to prevent receiving stream contamination; potential need for multiple unmanaged CRL treatment units; and need for treatment beyond the operational life of the facility.

EPA's proposal systematically treats uncertainty regarding compliance costs as a reason to weaken regulation while treating uncertainty regarding environmental and health benefits as a reason to discount those benefits.

For example, EPA relies on upper-bound cost scenarios built upon assumptions regarding future coal plant operations, future corrective action requirements, future groundwater pumping systems, and future permitting decisions. Yet EPA largely declines to quantify many of the corresponding health and environmental benefits associated with preventing releases of mercury, arsenic, selenium, chromium, cobalt, boron, and other harmful contaminants found in unmanaged combustion residual leachate.

This asymmetrical treatment of uncertainty produces a biased analytical framework in which industry compliance costs are treated as concrete and measurable while public health harms are treated as speculative or unknowable.

Uncertainty is not a one-way ratchet that justifies weaker standards. Where uncertainty exists regarding the magnitude of health and environmental damages, EPA should exercise caution in favor of protecting public health and water quality rather than relaxing pollution-control requirements.

In response to the lack of unmanaged CRL data, EPA made the reasonable assumption in the 2024 rule that pollutant removals through chemical precipitation for unmanaged CRL would be similar to that for managed CRL. EPA has repeatedly requested data from coal-fired power plants characterizing the quality of unmanaged CRL, but the industry has refused to provide such data. Now EPA is proposing to reward that refusal to provide data by asserting that unmanaged CRL is much different from managed CRL, so the 2024 treatment costs were greatly underestimated. EPN maintains that EPA cannot make that assertion in the absence of data. EPN further notes that RCRA coal combustion residue regulations placed 4600 ground water monitoring wells around waste management units that must be monitored by owners at least twice a year. This monitoring data clearly shows that 90% of the waste management units are leaking ground water contaminated with mercury and arsenic.<sup>3</sup> Unmanaged CRL appears to be as contaminated with mercury and arsenic as managed CRL. EPA was correct in 2024 to assume treatment of unmanaged CRL would be similar to that for managed CRL.

In the 2024 rule, EPA assumed once an appropriate amount of ground water contaminated with CRL was removed from the aquifer and treated, the remaining ground water that reached a stream would not cause contamination. EPA now maintains that it may be technically infeasible to capture enough ground water to prevent downgradient contamination in streams. EPN maintains that EPA presents no data that such situations exist. There are already 10 coal-fired power plants in the

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<sup>3</sup> [https://earthjustice.org/wp-content/uploads/coal-ash-report\\_poisonous-coverup\\_earthjustice.pdf](https://earthjustice.org/wp-content/uploads/coal-ash-report_poisonous-coverup_earthjustice.pdf)

country which are successfully capturing and treating unmanaged CRL, and none of them are reporting that downgradient streams remain contaminated.<sup>4</sup>

In the 2024 rule, EPA assumed that multiple waste management units at a facility would be able to use a single treatment facility. EPA now maintains that each waste management unit will need a separate treatment facility, greatly increasing the costs in order to present an upper bound total annual cost estimate of \$1.4B for the 2024 rule. EPN maintains there are no data to support such an extreme situation since most waste management units are located in close proximity and can share the same wells, collection, capture, and treatment systems.

EPA now maintains that the 2024 rule underestimated the duration of unmanaged CRL discharges to a WOTUS and thus underestimated the costs of the rule. EPA now asserts that the 2024 rule would require treatment beyond the operating life of the plant. EPN maintains that a retired plant should properly close all waste management units, eliminating the need to treat unmanaged CRL for years after closure. As a result, this hypothetical factor should not be considered in the final rule.

### **EPA prefers Option 1 which replaces national treatment requirements with BAT limits based on the permitting authority's Best Professional Judgment**

EPA presents no new data indicating plants cannot meet the mercury and arsenic limits for unmanaged CRL discharged to a WOTUS as a functionally equivalent direct discharge. EPN maintains that if there are specific cases where this is true, EPA should depend on variances rather than exempt all plants from national limits. Under the CWA, a facility can request a variance from ELG requirements if it can demonstrate that its situation is different from the national standard. EPA or the state permitting authority must review the evidence and make a written finding on whether or not the factors at that facility are “fundamentally different.” Fundamentally different factors are the specific characteristics of a facility that are unique enough to warrant an adjustment to national ELGs. The CWA explains that these factors are distinct from those the EPA considered when developing the national standards and can include the age of equipment, processes, engineering aspects, and non-water quality impacts like energy requirements and costs. The core difference is that the national standard was based on a different set of assumptions, and these new factors make the ELG requirements impractical or economically unfeasible for a specific facility. If the variance is approved, EPA or the state permitting agency can establish new, adjusted effluent limitations that are either more or less stringent than the national standard, as dictated by the factors.

Under Option 1, EPA is also proposing that any new, unmanaged CRL BAT requirements do not extend to retired plants closed by the effective date of the 2024 ELG (July 8, 2024) or to landfills/impoundments closed by that date. EPA's economic analysis acknowledges that Best Professional Judgment (BPJ) outcomes are uncertain and therefore assigns no compliance costs and no predictable treatment outcomes for most functional-equivalent discharges.

EPA's own analysis effectively assumes no enforceable pollutant reductions for the majority of Type 1 discharges under the preferred option because future permit requirements are unknown. EPA therefore seeks credit for reducing regulatory costs while simultaneously disclaiming the ability to estimate resulting pollutant reductions or health impacts. This creates an analytical inconsistency at the core of the proposal.

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<https://www.epa.gov/coal-combustion-residuals/list-publicly-accessible-internet-sites-hosting-ccr-management-compliance>

EPA repeatedly emphasizes uncertainty regarding treatment costs while largely ignoring uncertainty regarding public-health damages, drinking water impacts, ecological degradation, fish contamination, and cumulative exposures. EPA's economic memorandum explicitly characterizes many environmental benefits qualitatively while presenting industry cost savings as quantified outcome

EPA's economic analysis acknowledges that BPJ outcomes are uncertain and therefore assigns no compliance costs and no predictable treatment outcomes for most functional-equivalent discharges.

### **DOE “Energy emergency” unsupported by EPA independent analysis**

In rolling back BAT limits, EPA again relies on an “energy emergency” for electric supply and grid reliability. Yet this alleged emergency is largely based on achieving a speculative future data-center growth/electricity demand. Like EPA did in the 2025 ELG compliance date extension, EPA references DOE Orders compelling select power plants to operate beyond retirement dates previously agreed upon by utilities, state public utility commissions, and regional energy commissions. These Orders are being challenged as not authorized by the Federal Power Act emergency provisions, not necessary to meet electric demand or grid reliability, and contrary to the authorities that Congress granted utilities, states, and regional energy organizations to plan for, and ensure adequate cost-justified electricity supply and grid reliability.

As a factual matter, there is no energy emergency. Rather EPA is again pursuing a deregulatory agenda to boost the shrinking percentage of operating coal assets within the domestic electric system.<sup>5</sup> That report analyzes historical data to show that federal and state energy regulatory processes successfully navigated comparable periods of accelerating electricity usage while maintaining grid reliability. Moreover, the report cites multiple existing tools being deployed to meet new electricity demand at reasonable costs, including innovative rate tariffs, new investment to compete in the wholesale markets, less expensive renewable electric generation technologies, plummeting storage costs to supply firm capacity, demand response programs, and distributive technologies.

Current data center growth trends call into question previously projected electric load growth that EPA references. The Wall Street Journal recently reported that previously announced data center construction is falling “behind targeted timelines, with the gap growing wider in recent months: A JPMorgan analysis last month found that more than 60% of data-center capacity planned for completion in 2027 isn't yet under construction, and another 7% is delayed.”<sup>6</sup> The report also highlights the trend that more companies are using strategies to get new construction back on track by co-locating self-generation/storage capacity and/or investing in grid upgrades to lower customer costs and increase grid reliability.

As a legal matter, EPA relied on a limited non-water quality energy factor in a way that Congress did not authorize EPA to under sections 304(b) and 306 of the CWA. In support of this unauthorized expansive consideration of energy, EPA references *BP Expl. & Oil v. EPA*, 66 F.3d 784 (6th Cir. 1995). Yet that court, consistent with other legal precedent, recognized that the CWA limited inclusion of energy as a technology-based criterion that EPA may consider. The court in *BP* limited energy considerations to the facility's control technology and energy efficiency losses associated with

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<sup>5</sup> See Figure 6, Meeting Forecasted Growth in Electricity Demand, Analysis Group, August 6, 2025. Analysis Group 2025. [https://www.analysisgroup.com/globalassets/insights/publishing/2025\\_meeting\\_forecasted\\_growth\\_in\\_electricity\\_demand.pdf](https://www.analysisgroup.com/globalassets/insights/publishing/2025_meeting_forecasted_growth_in_electricity_demand.pdf)

<sup>6</sup> America's Data-Center Build-Out Is Falling Way Behind Schedule, Wall Street Journal, June 3, 2026. <https://www.wsj.com/tech/ai/americas-data-center-build-out-is-falling-way-behind-schedule-e408a9a8>

the control usage. Legislative CWA history also supports the limited nature of the energy factor for BAT determinations. Prior to this administration, EPA's assertions of a general future energy emergency have not been previously used by EPA to extend compliance deadlines or establish BAT limits.

EPA cannot simply parrot contested DOE determinations. Rather, EPA must rely on factors that Congress specifically authorized, and if authorized, EPA must independently examine the factual record for specific factors related to the regulatory matter.<sup>7</sup> EPA has not supported its rollback of a national BAT with its own independent analysis that the projected national replacement of fossil power plant capacity is critical to meeting electricity demand, grid reliability, or cost considerations. As the U.S. Energy Information Administration (EIA) explains, "retirements largely occur either when the cost of operating a plant exceeds expected revenue or when operating costs exceed the plant's value to the power system, such as its value in providing reliability to the electric grid."<sup>8</sup> The Federal Power Act places power plant retirement assessments with utilities, states, and regional energy organizations – not federal agencies like DOE, and certainly not EPA.

### **Exempting Retired Plants and Closed Landfills**

EPN opposes the proposed exemption for retired facilities and units closed by July 8, 2024. Closure status does not eliminate contamination pathways. EPA's own technical analysis recognizes that numerous units closed with coal combustion residuals left in place remain capable of generating unmanaged leachate and contributing to groundwater contamination. Closure with waste in place is not equivalent to removal of contamination and should not serve as a basis for exemption from applicable treatment requirements.

Simultaneously, and paradoxically, in a separate *Federal Register* notice, EPA is proposing to make changes to requirements for disposal of coal combustion residuals (CCR) in landfills and surface impoundments under the Resource Conservation and Recovery Act (RCRA).<sup>9</sup> In that action, EPA is proposing changes to make clear that owners and operators may re-open closed landfills in order to extract CCR for beneficial use, a term that is defined in 40 CFR 257.53. CCR used for beneficial use can have significant economic value, and that proposal's stated purpose is to allow owners and operators to harvest the ash to realize that economic value. If EPA is making changes in its RCRA regulations to ensure owners may conduct operations at closed landfills to harvest CCR to sell it, there is no reason these owners could not treat unmanaged CRL from those same landfills.

This creates a fundamental inconsistency in EPA's analysis. On the one hand, EPA argues that closed facilities should be exempt from unmanaged combustion residual leachate treatment requirements because they are no longer generating electricity and treatment would impose excessive costs. On the other hand, EPA acknowledges that those same facilities may continue to generate revenue through the recovery and sale of CCR for beneficial use. If owners and operators may continue conducting economically beneficial activities at closed units, EPA must explain why those facilities should be categorically exempt from pollution-control obligations associated with ongoing leachate generation.

Moreover, EPA's economic analysis appears to treat treatment expenditures as pure costs while failing to evaluate whether revenues derived from beneficial use activities could partially or substantially offset those expenditures. To the extent CCR recovery reduces disposal volumes,

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<sup>7</sup> *Motor Vehicle Manufacturers Ass'n v. State Farm Mutual Automobile Insurance Co.*, 463 U.S. 29, 43 (1983); *United States Telecom Association v. FCC*, 825 F.3d 674 (D.C. Cir. 2016).

<sup>8</sup> <https://www.eia.gov/todayinenergy/detail.php?id=50658#>

<sup>9</sup> 91 FR 18968, April 13, 2026.

decreases long-term leachate generation, and creates ongoing revenue streams, EPA's estimate of the economic burden associated with unmanaged CRL treatment may be significantly overstated.

Per the EIA, the comprehensive economic footprint of the electric power industry is roughly \$880 billion annually with Americans spending approximately \$1.8 trillion (about 6.9% of GDP) on overall end-use energy every year, with electricity alone accounting for nearly half a trillion. The U.S. electric power industry is the most capital-intensive sector in the country, investing over \$100 billion annually to build smart grids and resilient energy infrastructure.<sup>10</sup> This puts into perspective the purported \$1.4B in annual costs—literally a rounding error.

EPA should evaluate the interaction between the proposed CCR beneficial-use amendments and the Steam Electric ELG before concluding that treatment of unmanaged CRL at retired facilities or closed units is not economically achievable.

### **Regulatory Leakage and CWA RCRA Integration**

EPA cannot weaken Clean Water Act Protections while simultaneously weakening CCR groundwater and closure requirements. EPA evaluates this proposal as though the unmanaged CRL requirements exist in isolation. They do not.

The unmanaged CRL provisions adopted in the 2024 Steam Electric ELG rule operate in conjunction with the Coal Combustion Residuals (CCR) program under RCRA. The two programs were designed to function as complementary safeguards addressing different pathways of pollution from coal ash disposal units.

The CCR program establishes requirements for groundwater monitoring, corrective action, closure, post-closure care, and structural integrity of coal ash disposal units. The Steam Electric ELGs address wastewater discharges resulting from those same units.

EPA's current regulatory agenda would simultaneously:

- Reduce nationally applicable treatment requirements for unmanaged combustion residual leachate under the Clean Water Act;
- Expand reliance on site-specific determinations and permit writer discretion;
- Provide additional flexibility regarding closure, corrective action, groundwater remediation, and post-closure management under the CCR program; and
- Extend compliance timelines and defer pollution-control investments.

EPA cannot evaluate these actions independently while ignoring their cumulative effect.

### **EPA ignores impacts on Tribes and Tribal Waters**

In Section XIII (G) of its Federal Register notice, EPA states that it did not consult with Indian Tribes in accordance with Executive Order 13175 because the proposed rule will not have substantial direct effects on Tribal governments. EPA improperly defines Tribal impacts based on ownership of regulated facilities rather than exposure to pollution from regulated facilities.

Indian Tribes are disproportionately affected by this action due to the fishing and fish consumption rates of Tribal members, many of whom consume locally-caught fish at rates far higher than the general public, as EPA has long recognized. EPA should consult with Indian Tribes regarding the

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<sup>10</sup> <https://www.eia.gov/todayinenergy/detail.php?id=50658#>

proposed rule's exemption of CRL treatment which will result in continuing mercury contamination of fish that will disproportionately affect Indian Tribes.

In addition to subsistence fishing impacts and fish consumption, EPA should consider several broader impacts on Tribes like Treaty rights, Tribal drinking water sources, downstream exposure pathways, cumulative burdens in coal-impacted regions, and environmental justice communities surrounding legacy coal ash sites.

### **EPA's Economic Analysis is flawed**

As summarized by EPA, "The 2024 ELG also established non-zero numeric discharge limitations on mercury and arsenic from unmanaged CRL, which is a distinct subset of CRL defined in the ELG to include discharges of CRL that the permitting authority determines are the functional equivalent of a direct discharge to a WOTUS through groundwater or discharges of CRL that have leached from a waste management unit into the subsurface and mixed with groundwater before being captured and pumped to the surface for discharge directly to a WOTUS."

Yet in this proposal, EPA has chosen to cost treatment at 111 facilities and assumes the need for separate wastewater treatment systems for each waste management unit. EPA thus assumes each of the waste management units at these facilities would have a discharge that is functionally equivalent to direct discharge to a WOTUS, or a discharge that has leaked to groundwater and subsequently been captured and pumped to the surface for discharge directly to a WOTUS. With this flawed costing methodology, EPA is ignoring the effects of its concurrent proposal to scale back RCRA coal ash regulations, as well as EPA's proposal to drastically reduce the scope of waters with jurisdictional status as WOTUS. EPA must revise its costing methodology to reflect the interplay of all three of these proposals on the cost of maintaining option 2, the current regulatory requirements for unmanaged CRL. If the Agency does not, it will have acted unreasonably, arbitrarily and capriciously.

EPA's proposal does not contain evidence to support its \$1.4 billion cost estimate to capture and treat unmanaged CRL from a waste management unit. Information gathered by EPA about the costs of groundwater extraction and treatment systems in the Superfund program, when adjusted for inflation, indicate the actual cost of an individual system is much lower.<sup>11</sup>

### **Conclusion**

EPA has not demonstrated that the 2024 unmanaged combustion residual leachate requirements are no longer economically achievable. Instead, the proposal relies on speculative assumptions regarding future coal plant operations, contested emergency orders, delayed compliance deadlines, and uncertain future permitting outcomes while discounting the substantial public health, drinking water, ecological, Tribal, and environmental justice benefits of reducing toxic pollutant discharges.

The proposal also creates significant inconsistencies across EPA's regulatory programs. While EPA proposes under RCRA to facilitate beneficial use of coal combustion residuals and recognizes the potential economic value of recovered ash, it simultaneously argues under the Clean Water Act that treatment requirements are no longer justified. EPA cannot emphasize compliance costs while

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<sup>11</sup> Groundwater Pump and Treat Systems: Summary of Selected Cost and Performance Information at Superfund-financed Sites, EPA 542-R-01-021b, December 2001.

overlooking both the economic value of CCR recovery and the costs of pollution borne by communities, ecosystems, and future generations.

For these reasons, EPA should withdraw the proposed rollback, retain the 2024 mercury and arsenic limitations for unmanaged combustion residual leachate, and maintain nationally consistent technology-based standards that protect public health, water quality, and environmental integrity. The Clean Water Act was designed to prevent pollution before it reaches the nation's waters, not shift the resulting risks and costs onto people and the public.