

Comments on IURC's Unit Retirement Commission Staff Report

NIPSCO's Michigan City Unit 12

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Executive Summary

Michigan City Unit 12 (Unit 12) is a 469-MW coal unit scheduled to retire in 2028. The July 2026 Indiana Utility Regulatory Commission (IURC) Unit Retirement Commission Staff Report (Staff Report) recommends that Northern Indiana Public Service Company (NIPSCO) re-evaluate this date in its 2027 Integrated Resource Plan (IRP).

We reviewed the unit's availability and capital spending and identified the following key findings:

- The unit performed worse on average than similarly sized coal plants between 2021 and 2025, operating at a lower capacity factor and availability and a higher forced outage rate.
- Coal ash disposal capacity at the R.M. Schahfer Generating Station (Schahfer) landfill cannot support indefinite continued operation of Unit 12 past 2028.
- Annual sustaining capital expenditures at Unit 12 are estimated at a minimum of about \$17.6 million in 2028, and annual capital expenditures are likely to rise the longer the unit remains in service.

Introduction

Unit 12 is a coal unit located in Michigan City, Indiana. The unit is owned by NIPSCO and has a nameplate capacity of 469 MW. Unit 12 opened in 1974 and has a scheduled retirement year of 2028. NIPSCO announced this retirement timeline in its 2018 IRP, then re-confirmed the timeline in its subsequent 2021 and 2024 IRPs.^{1, 2, 3} NIPSCO stated in its 2021 IRP that “Retaining Michigan City 12 beyond the currently planned retirement date of 2028 . . . is higher cost than the alternatives across all four [modeled] scenarios”.⁴

The Staff Report recommends that NIPSCO re-evaluate Unit 12's 2028 retirement date in its 2027 IRP, but we find that extending the unit's retirement date would expose customers to significant costs for a fairly unreliable generating asset.

¹ *NIPSCO 2018 Integrated Resource Plan*. Available at: https://www.nipsco.com/docs/librariesprovider11/rates-and-tariffs/irp/2018-nipsco-irp.pdf?sfvrsn=83256851_16.

² *NIPSCO 2021 Integrated Resource Plan*. Available at: https://www.nipsco.com/docs/librariesprovider11/rates-and-tariffs/irp/2021-nipsco-integrated-resource-plan.pdf?sfvrsn=f6ae0251_6. Note that the 2021 IRP provides a retirement year range of 2026 to 2028.

³ *NIPSCO 2024 Integrated Resource Plan*. Available at: https://www.nipsco.com/docs/librariesprovider11/rates-and-tariffs/irp/nipsco_2024-irp.pdf?sfvrsn=848ce451_9.

⁴ *NIPSCO 2021 IRP*, 218.

In this memo, we (1) evaluate the availability and outage behavior of the unit and (2) discuss the capital costs that would be required to extend the unit past its scheduled retirement date.

Availability

To evaluate Unit 12's recent historical availability, we reviewed: (1) NIPSCO's most recent performance metric report; and (2) quarterly reports from NIPSCO on forced outages at its coal units, including descriptions of the causes and lengths of those outages. Both the performance metrics and forced outage reports are useful in identifying trends in the unit's operating behavior.

Table 1 presents the unit's annual average net capacity factor (NCF), equivalent availability factor (EAF), and equivalent forced outage rate (EFOR). These metrics provide information about the unit's energy output relative to its maximum potential, its mechanical availability to generate at its rated capacity, and the extent to which unplanned outages and deratings reduced that availability, respectively.

Table 1. Michigan City 12 performance metrics

	2021	2022	2023	2024	2025	Average
Net capacity factor	37.2%	35.5%	35.8%	23.1%	48.6%	36.0%
Equivalent availability factor	57.4%	49.0%	70.7%	58.4%	73.0%	61.7%
Equivalent forced outage rate	16.9%	41.9%	19.3%	36.7%	8.8%	24.7%

Source: IURC Cause No. 44688. NIPSCO 2025 Performance Metric Report (July 1, 2026), Data Appendix at 1.

Unit 12's capacity factor has been less than 50 percent in every year we analyzed, and as low as 23 percent in 2024. This indicates that the unit is providing little energy value relative to its capacity—in most years around a third of the unit's maximum energy potential. This is in part due to the unit likely being uneconomic to operate (i.e., not clearing in the MISO energy market due to high operating costs and/or low market prices), but also because it is frequently unavailable due to forced outages.

Table 2 compares Unit 12's performance metrics against 2021-2025 average benchmarks from the North American Electric Reliability Corporation (NERC) for coal plants between 400 and 599 MW. Unit 12's average NCF and EAF are both lower than the values reported by NERC, and its EFOR is more than double the benchmark value.

Table 2. Coal performance metric benchmarks, 2021 to 2025 averages

	Unit 12	NERC benchmark
Net capacity factor	36.0%	46.6%
Equivalent availability factor	61.7%	78.1%
Equivalent forced outage rate	24.7%	10.5%

Sources: IURC Cause No. 44688. NIPSCO 2025 Performance Metric Report (July 1, 2026), Data Appendix at 1; NERC. "Generating Unit Statistical Brochures". Available at: <https://www.nerc.com/programs/reliability-assessment--performance-analysis/generating-availability-data-system/gads-conventional/generating-unit-statistical-brochures>.



Table 3 lists Unit 12's reported forced outages since 2021, flagging instances where the unit was unavailable during at least part of each labeled winter storm event.

Table 3. Michigan City 12 forced outages

Year	Quarter	Hours of Forced Outage (out of 2,160 to 2,208 hours)	Outage Notes
2021	Q1	-	-
	Q2	-	-
	Q3	626	SCR failure, Air heater gearbox failure
	Q4	192	Motor failure
2022	Q1	1,080	Motor failure, Turbine control valve failure, Valve pipe leak
	Q2	536	Cooling tower structure failure, Pump motor issue, CCR conveyer drag chain failure
	Q3	262	Boiler bottom ash SFC failure, Turbine bore stress and low steam temperatures
	Q4	645	Tripper floor dust collector issue, Turbine oil leak, Steam drain line issue
2023	Q1	215	Tripper floor dust collector issue
	Q2	411	Condenser tube leak, FGD issue
	Q3	131	Circulating dry scrubber issue
	Q4	91	Bottom ash slag tank obstruction
2024	Q1	188	Bottom ash slag tank obstruction Winter Storm Heather (1/13-1/17)
	Q2	304	FGD issue
	Q3	417	FGD issue, Slag tank buildup, Boiler air pressure issue
	Q4	299	Slag tank buildup, Boiler air pressure issue, Water pipe leak, Air heater fluid drive issue
2025	Q1	112	Condenser tube leak Winter Storm Enzo (1/18-1/22)
	Q2	-	-
	Q3	84	Motor failure
	Q4	-	-
2026	Q1	748	Cooling tower structure failure, Air supply line hole Winter Storm Fern (1/22-1/27)
	Q2	291	Broken concrete flume panel, Broken submerged flight conveyer

Source: IURC Cause No. 38706 FAC 131-152. Direct testimony of NIPSCO Witness Saffran, Attachments 4-A.



The unit experienced forced outages in 50 percent of the 66 months we analyzed. Several of these forced outages overlapped with winter storm events, when demand on the system is typically highest. The unit's average forced outage rate (FOR) in the months of December, January, and February was 23 percent, compared to 14 percent across all months.⁵ The 2021-2025 NERC FOR benchmark for coal plants between 400 and 599 MW is half the Unit 12 average, or about 7 percent.⁶ While coal plants are often kept in service when especially high demand is anticipated, it appears that Unit 12 provides limited value during such hours due to its frequent maintenance issues.

This is especially concerning because capacity accreditation in MISO beginning in Planning Year 2028-2029 will be (i) set at the level of each technology class (e.g. coal) based on aggregate availability during modeled tight-margin hours, and then next (ii) assigned to each individual generating resource based on the plant's actual availability during actual tight-margin hours.⁷ Those methodologies will likely push Unit 12's accredited capacity rating below 77 percent (100 percent minus 14 percent FOR) in winter and below 86 percent (23 percent FOR) for all months, since the unit tends to fail when MISO supply-demand conditions get tight. Indeed, for 2026-2027, when a calculation akin to point (ii) above is already in effect, Unit 12 is accredited by MISO at 213.4 MW in winter, around 45.5 percent of nameplate capacity.⁸ For 2025-2026, Unit 12's winter accreditation was 170.9 MW, around 36.4 percent of nameplate capacity.⁹

In addition, utilities that own their own power plants typically plan to use them as a hedge against fuel cost or energy price volatility. However, Unit 12 is frequently on forced outage, including during winter storms. Unit 12 may therefore have the unintended effect of exposing NIPSCO to high energy market prices, driven by the high cost of gas during those times.

Capital Spending

If Unit 12 were to remain online past its 2028 retirement date, it would incur costs related to environmental compliance as well as other maintenance costs. NIPSCO has already installed Selective Catalytic Reduction technology, Over-Fire Air systems, and dry Flue Gas Desulfurization at the unit for compliance purposes. However, there are notable compliance concerns related to the unit's coal ash disposal, which we discuss below, that impact estimates for the unit's sustaining capital expenditures.

⁵ FOR values are generally lower than EFOR values, since EFOR also accounts for partial deratings.

⁶ NERC. "Generating Unit Statistical Brochures". Available at: <https://www.nerc.com/programs/reliability-assessment--performance-analysis/generating-availability-data-system/gads-conventional/generating-unit-statistical-brochures>

⁷ *Midcontinent Independent System Operator, Inc.*, 189 FERC 61,065 (Oct. 25, 2024) at PP 2, 31, 66; MISO Tariff, Schedule 53A.

⁸ IURC Cause No. 46402, Petitioner's Submission of Redacted Reports (May 1, 2026) at 3.

⁹ IURC Cause No. 46233, Petitioner's Submission of Redacted Reports (May 1, 2025) at 3.



Coal Ash Disposal

Unit 12 had five coal ash surface impoundments, two of which were subject to the 2015 Coal Combustion Residuals Rule (CCR Rule). The two CCR ponds stopped receiving waste in 2018 and 2019, and all five were certified closed in 2023.^{10, 11} Since closure, NIPSCO has been transporting about 50,000 tons of coal ash annually from Unit 12 to a landfill at the Schahfer coal plant.¹² However, it cannot do this indefinitely and will incur additional costs if it tries to continue.

First, the Schahfer landfill has limited capacity. The landfill has a total permitted area (closed, active, and future) of 170 acres and receives coal ash from the Schahfer, Michigan City, and Bailly Generating Station units.¹³ The landfill footprint is divided into nine phases,¹⁴ with the following statuses (as of November 2025):

- I-VI – Closed
- VII – Completed construction in 2018 but is not active
- VIII – Completed construction in 2023 and active
- IX – No date set for construction¹⁵

When a phase reaches capacity, it is closed.¹⁶ Phases VII and VIII are each about 14 acres and therefore cannot operate indefinitely.¹⁷

In addition, there is uncertainty about what will happen when the Schahfer units eventually retire. They were planned to retire at the end of 2025, but the U.S. Department of Energy ordered those units to

¹⁰ IURC Cause No. 46120. Direct testimony of NIPSCO Witness Holcomb at 13.

¹¹ IURC Cause No. 45700. Direct testimony of NIPSCO Witness Turman at 10.

¹² NIPSCO. “Coal ash pond cleanup.” Accessed August 2026. Available at: <https://www.nipsco.com/our-company/about-us/our-environment/mcgs-coal-ash-pond-cleanup>.

¹³ Bailly retired in 2018, but ongoing remediation efforts as of 2025 include coal ash disposal. NIPSCO. “Remediation Updates”. *Bailly Generating Station RCRA Corrective Action Program*. Available at: <https://www.baillygenupdate.com/remediation-updates>.

¹⁴ A “phase” refers to a distinct section of a landfill. Each phase is separately constructed, filled with waste, and closed when it reaches capacity.

¹⁵ WSP. 2025. *R.M. Schahfer Generating Station Annual RCRA CCR Unit Inspection Report*. Prepared for NIPSCO. Available at: https://www.nipsco.com/docs/librariesprovider11/rates-and-tariffs/ccr/r.m.-schahfer/r.m.-schahfer-generating-station-operating-criteria/2025-11-18_nipsco-ccr-landfill-rcra-inspection.pdf?sfvrsn=2c2af251_3.

¹⁶ WSP. 2016. *R.M. Schahfer Generating Station CCR Landfill Run-On and Run-Off Control System Plan*. Prepared for NIPSCO. Available at: https://www.nipsco.com/docs/librariesprovider11/rates-and-tariffs/ccr/r.m.-schahfer/r.m.-schahfer-generating-station-operating-criteria/initial-run-on-and-run-off-control-system-plan-for-landfill.pdf?sfvrsn=27957151_4.

¹⁷ WSP. 2025. *R.M. Schahfer Generating Station Annual RCRA CCR Unit Inspection Report*. Prepared for NIPSCO. Available at: https://www.nipsco.com/docs/librariesprovider11/rates-and-tariffs/ccr/r.m.-schahfer/r.m.-schahfer-generating-station-operating-criteria/2025-11-18_nipsco-ccr-landfill-rcra-inspection.pdf?sfvrsn=2c2af251_3.



continue operating past their planned retirement dates.¹⁸ When the units do eventually retire, it is unclear whether the landfill will remain active.

Sustaining Capital Costs

We estimate sustaining capital expenditures using a Sargent and Lundy survey of U.S. coal plant capital expenditures as a function of unit age. In 2028, sustaining capital expenditures could add \$17.6 million per year to the cost of operating Unit 12, using assumptions for annual capital spending as a function of coal unit age (see Table 3).¹⁹

Table 4. Estimate of sustaining capital expenditures

Quantity	Value
Unit age in 2028 (years)	54
Sustaining capex in 2028 (thousands 2025\$)	\$17,551

Source: Sargent & Lundy. 2018. Generating Unit Annual Capital and Life Extension Costs Analysis: Final Report on Modeling Aging-Related Capital and O&M Costs, page 58. Prepared for the U.S. Energy Information Administration. Available at: https://www.eia.gov/analysis/studies/powerplants/generationcost/pdf/full_report.pdf.

This total includes the annual investment value only and not the total associated revenue requirement (i.e., does not include the cost of capital). In addition, utilities tend to ramp down capital investment ahead of a plant's retirement. If NIPSCO were to extend the retirement, it is likely that the unit would require substantial investments to replace aging equipment (which likely have been foregone in recent years) and, as discussed above, manage its coal ash. As a result, \$17.6 million is likely an underestimate.

As an example of near-term investment, the unit's cooling tower hot deck structure failed in January 2026. The unit was out of service for 599 hours beginning in late January and continuing through four separate events through April.²⁰ The repair was only temporary; the structure requires a full panel replacement during the 2026 Fall planned outage. The unit was also shut down in April due to high circulating water temperature caused by a broken concrete flume panel. NIPSCO again installed a temporary replacement, with permanent repairs also scheduled for the fall planned outage.²¹

¹⁸ U.S. Department of Energy. 2025. "2025 DOE 202(c) Orders." Available at: <https://www.energy.gov/ceser/2025-doe-202c-orders>. The legality and reasonableness of the DOE orders requiring the continued operation of the Schahfer units are being challenged in federal court.

¹⁹ This calculation is based on the following equation from the Sargent & Lundy report: Annual CAPEX spending in 2017 \$/kW-year = 16.53 + (0.126 x age) + (5.68 x FGD), where FGD = 1 if a plant has flue gas desulfurization; zero otherwise.

²⁰ IURC Cause No. 38706 FAC 151. Direct testimony of NIPSCO Witness Saffran, Attachment 4-A.

²¹ IURC Cause No. 38706 FAC 152. Direct testimony of NIPSCO Witness Saffran, Attachment 4-A.

Conclusion

Our review finds that extending Unit 12 past its scheduled 2028 retirement would expose customers to notable costs for a fairly unreliable asset.

The unit has operated at a capacity factor below 50 percent in every year since 2021 and experienced a forced outage in half the months we analyzed. Many of these outages occurred during winter storms, when demand on the system was highest.

Continued operation would also require NIPSCO to address environmental compliance and other maintenance expenses. Coal ash disposal at the Schahfer landfill is finite—only one of nine landfill phases is currently active, and it is unclear whether the site will continue accepting waste once the Schahfer units retire. In addition, we estimate sustaining capital expenditures at approximately \$17.6 million per year by 2028, and this figure likely underestimates the true cost.

These findings suggest that extending Unit 12's retirement date would expose NIPSCO and its customers to rising capital costs without providing substantial benefits.

