

2023 Nuclear Performance Scorecard

Performance Outcomes		Measures <i>(single-year unless otherwise noted)</i>	2019	2020	2021	2022	2023		Historical Trend		2024
			Actual	Actual	Actual	Actual	Actual	Target			Target
Safety	Total Recordable Injury Frequency (#/200k hours worked)										
		Pickering	0.11	0.19	0.10	0.27	0.20	0.20	●	-	0.20
		Darlington	0.00	0.25	0.07	0.08	0.00	0.20	●	+	0.20
	Industrial Safety Accident Rate (#/200k hours)										
		Pickering	0.00	0.00	0.03	0.00	0.00	0.00	●	N	0.00
		Darlington	0.00	0.00	0.00	0.00	0.00	0.00	●	N	0.00
	Collective Radiation Exposure (person rem/unit)										
		Pickering	51.70	107.41	67.74	69.99	67.17	103.50	●	+	78.90
		Darlington	83.14	29.97	110.47	29.90	15.64	19.81	●	+	84.80
	Airborne Tritium Emissions (curies/unit)										
		Pickering	2,517	2,918	2,331	2,229	2,164	2,170	●	+	2,170
		Darlington	1,213	879	905	1,157	1,000	1,115	●	+	1,260
	Fuel Reliability Index (microcuries /gram)										
		Pickering	0.0002	0.0001	0.0008	0.0002	0.0003	0.0005	●	N	0.0005
		Darlington	0.0002	0.0035	0.0002	0.0005	0.0001	0.0005	●	+	0.0005
	Reactor Trip Rate (#/7000 hours)										
		Pickering	0.000	0.000	0.000	0.139	0.247	0.500	●	-	0.500
		Darlington	0.000	0.000	0.000	0.000	0.100	0.000	●	-	0.500
	Auxiliary Feedwater System Unavailability (#)										
		Pickering	0.0002	0.0118	0.0085	0.0010	0.0000	0.0200	●	+	0.0000
		Darlington	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	●	N	0.0000
	Emergency AC Power Unavailability (#)										
		Pickering	0.0008	0.000	0.000	0.0000	0.0000	0.0004	●	+	0.0000
		Darlington	0.0000	0.000	0.000	0.0000	0.0000	0.0000	●	N	0.0000
	High Pressure Safety Injection Unavailability (#)										
		Pickering	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	●	+	0.0000
		Darlington	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	●	+	0.0000
Reliability	WANO Nuclear Performance Index Rolling Average (%) ⁽¹⁾ ⁽²⁾										
		Pickering	82.50	82.50	73.80	80.90	81.20	81.00	●	-	85.00
		Darlington	88.90	93.60	85.80	91.40	89.40	91.80	●	-	78.90
		OPGN	84.60	85.30	76.80	82.40	82.30	82.50	●	-	84.20
	Forced Loss Rate (%)										
		Pickering	1.60	2.65	6.22	1.81	2.78	3.50	●	-	3.50
		Darlington	4.80	1.54	3.52	7.51	1.44	3.24	●	+	4.61
	Unit Capability Rate (%) ⁽²⁾										
		Pickering	87.55	76.25	78.92	80.01	80.66	77.81	●	-	80.91
		Darlington	87.44	93.05	82.66	86.99	96.99	96.78	●	+	81.26
		OPGN	87.50	84.45	80.70	82.66	86.68	84.34	●	-	81.04
	Chemistry Performance Indicator (Index)										
		Pickering	1.03	1.06	1.06	1.03	1.18	1.01	●	-	1.15
		Darlington	1.00	1.01	1.01	1.00	1.01	1.00	●	-	1.00
	On-line Deficient Non-Critical Backlog (work orders / unit)										
		Pickering	114.00	88.00	68.00	39.80	29.50	35.00	●	+	20.00
		Darlington	110.00	96.00	70.33	61.00	29.00	45.00	●	+	20.00
	On-line Deficient Critical Backlog (work orders /unit)										
		Pickering	5.00	0.50	1.30	0.80	0.67	0.00	●	+	0.00
		Darlington	3.00	1.33	0.00	0.00	0.00	0.00	●	+	0.00
	On-line Corrective Non-Critical Backlog (work orders /unit)										
		Pickering	9.00	3.00	6.30	3.80	0.83	2.00	●	+	1.00
		Darlington	4.00	2.30	2.00	0.50	0.00	0.00	●	+	0.00
	On-line Corrective Critical Backlog (work orders /unit)										
		Pickering	1.00	0.00	0.30	0.00	0.00	0.00	●	+	0.00
		Darlington	0.00	0.30	0.00	0.00	0.00	0.00	●	+	0.00
Cost Effectiveness	Total Generating Cost per Net MWh (\$/MWh)										
		Pickering	56.17	67.87	64.75	60.05	69.98	63.26	●	-	67.51
		Darlington	66.12	54.30	79.27	101.52	108.85	120.83	●	-	127.08
		OPGN	60.72	60.66	71.53	76.38	85.73	85.43	●	-	89.35
	Normalized Total Generating Cost per Net MWh (\$/MWh)										
		Pickering	39.78	47.94	44.76	39.55	48.02	41.08	●	-	44.22
		Darlington	37.90	32.23	45.59	33.88	36.60	41.03	●	N	42.85
		OPGN	38.93	39.71	45.15	37.32	43.40	41.06	●	-	43.71
	Total Generating Cost per Unit (\$M/unit)										
		Pickering	220.97	232.32	227.59	214.11	250.49	219.15	●	-	231.25
		Darlington	437.74	389.17	489.03	663.52	796.56	857.89	●	-	755.89
		OPGN	293.22	287.43	314.74	331.65	387.01	368.64	●	-	362.41
	Normalized Total Generating Cost per Unit (\$M/unit)										
		Pickering	167.34	177.15	169.54	151.79	184.98	153.50	●	-	163.50
		Darlington	264.72	241.83	297.90	238.91	287.92	315.81	●	-	278.33
		OPGN	199.80	184.49	212.33	174.57	210.71	191.49	●	-	192.21
	Non-Fuel Operating Cost per Net MWh (\$/MWh)										
		Pickering	48.70	59.97	57.24	54.40	63.24	57.17	●	-	60.75
		Darlington	45.19	36.91	57.64	64.98	67.14	71.60	●	-	88.53
	Normalized Non-Fuel Operating Cost per Net MWh (\$/MWh)										
		Pickering	--	--	--	--	--	--	-		--
		Darlington	36.48	31.33	47.29	41.51	41.83	41.33	●	-	55.44
	Fuel Cost per Net MWh (\$/MWh)										
		Pickering	4.00	3.89	3.72	3.75	3.90	3.91	●	N	4.31
		Darlington	4.20	4.22	4.00	3.82	4.32	4.78	●	N	4.62
	Capital Cost per MW Design Electrical Rating (\$k/MW)										
		Pickering	26.46	26.59	25.79	13.12	19.71	14.62	●	+	16.31
		Darlington	126.22	107.55	123.88	243.57	311.66	359.41	●	-	229.91
	Normalized Capital Cost per MW Design Electrical Rating (\$k/MW)										
		Pickering	--	--	--	--	--	--	-		--
		Darlington	97.42	82.96	90.52	104.28	133.09	194.34	●	-	106.91
Human Resources	18-month Human Performance Error Rate (#/200k ISAR and contractor hours)										
		Pickering	0.02000	0.02000	0.02000	0.06000	0.06000	0.00000	●	-	0.00000
		Darlington	0.03600	0.02000	0.01800	0.00000	0.00000	0.00000	●	+	0.00000

Note 1: Nuclear Performance Index (NPI) is a composite index of ten WANO indicators related to safety and production performance. NPI is calculated using a 2-year rolling average for PN and a 3-year rolling average for DN.

Note 2: WANO transitioned in 2024 to utilizing the new Method 10 calculation for NPI (Unit Capability Rate replaced Unit Capability Factor, Automatic & Manual Scrams US7 replaced Automatic Reactor Scrams UA7, Total ISA2 replaced Industry Safety ISA2, and threshold changes were implemented);

2019-2023 Actuals and 2023 Targets utilize Method 4 due to availability of data.

2024 Toraets utilize Method 10.

Current Year

● Target met

● Target not met

5-year Historical Trend

+ Favourable

- Unfavourable

N Neutral