Rate reform in the Northwest Territories

Prepared for Naka Power Utilities (Yellowknife) by London Economics International LLC ("LEI")

June 16th, 2025

LEI has performed an independent analysis of the current cost recovery practices in the Northwest Territories ("NWT") and conducted a review of relevant considerations. With existing rates, a key concern is that Naka Power Utilities (Yellowknife) customers (which represent ~53% of MWhs across all NTPC zones for 2025-2026) with revenue to cost coverage ("RCC") ratio of ~105% are subsidizing other customers, including Government customers in the Taltson zone (with RCC ratios of 67%-73%). Further, both the policymakers and regulator in NWT may want to consider the administrative and regulatory burden associated with short franchise agreement lengths, and closely review the implications of lost economies of scale in 'no harm' standard considerations. The Government of NWT ("GNWT") must also reflect on allowing the erosion of reasonable and competitive operations by an Indigenous-owned utility, in light of its stated objectives of truth and reconciliation with Indigenous communities and entities.

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1 Executive summary / key takeaways

Following an independent analysis of current rate design and associated relevant issues in the NWT, LEI has summarized its key findings/takeaways in five areas: (i) issues with current rates/rate design framework; (ii) application of no harm standard and impact on customers; (iii) considerations regarding Indigenous cooperation; (iv) importance of cost recovery principles and necessity of fair/reasonable compensation; and (v) consequences of short duration franchises and lost economies of scale.

I - Issues with current rates/rate design framework

- ***Revenue insufficiencies associated with consistently low revenue to cost coverage ("RCC") ratios***: regulators frequently require RCC or benefit to cost ratios ("BCR") to be close to or exceed 100%. If artificially low rates continue with RCC ratios consistently less than 1, NWT will ***need to*** raise rates in the future for long-term sustainability, unless an increasing level of subsidies (consistent with capital investments required in the sector) and/or cross-subsidies continue indefinitely.
- ***Application of subsidies***: rate design needs to consider full cost recovery first, and any subsidies need to be applied (and shown transparently) thereafter. If a harmonized/not-to-exceed rate and/or specified rate increase (per the Ministry objectives) is instituted, LEI envisions two steps:
    - First, the utilities submit the revenue requirement to the NWT Public Utilities Board ("PUB") for approval. Once approved, the utilities calculate and clearly present the portion of revenue requirement recovered by the rates (consistent with the not-to-exceed rate/rate increase), and the portion not recovered (if any).
    - The second step would then be for the GNWT / Ministry of Finance to fund the portion not recovered by rates.

  Full cost rates and subsidies should be transparently shown to customers on their bill statements and/or rate schedules.

II – Application of no harm standard and impact on customers

- ***No harm standard***: while the NWT PUB found that the 'no harm' standard has been met in approving the Hay River acquisition from an overall, combined utility cost perspective, LEI observes that with status quo rates, certain customers - particularly remaining Naka Power Utilities (NWT) customers with significant lost economies of scale, and Naka Power Utilities (Yellowknife) customers with RCC ratio of ~105% - continue to be harmed from a rate impact perspective. Following the acquisition, the remaining Naka Power Utilities (NWT) customer base faces higher per-unit costs. Separately, the Naka Power Utilities (Yellowknife) customers continue to subsidize other customers (including Government customers in the Taltson Zone with RCC ratio of ~73%, when policy guidelines specify the reasonable RCC ratio for Government customers is 100%-130%).

- ***Proposed harmonized rate framework***: Naka Power Utilities has proposed an alternative harmonized rate framework with uniform rates across zones and customer types. The

proposal seems generally reasonable, and LEI believes that rate reform could be beneficial for NWT, in terms of reducing regulatory burden, reducing rate volatility and reducing administrative costs. It is notable that regulatory efficiency would be higher not just for the regulated utilities but also for customers and the regulator. LEI also observes that while NWT has ~20,000 customers, the bulk of rate zones in Canada serve more than 20,000 customers (for example, of the 54 Ontario local distribution companies ("LDCs"), 56% (or 30 LDCs) serve more than 20,000 customers, and 15% (or 8 LDCs) serve more than 100,000 customers). This places NWT at the lower end of the distribution for customers per rate zone.

III – Fulfilling economic reconciliation commitments to Indigenous Peoples

- ***Indigenous population makes up approximately half of NWT population***, of which ~64% are Dene First Nations. The existence of Naka Power Utilities as an independent entity ensures the ~14,000 Dene identifying residents have access to the financial benefits associated with operating an Indigenous-led utility and the autonomy to guide their future economic wellbeing.

- ***Considerations regarding Indigenous partnerships*:** if Naka Power Utilities (which is 50% owned by Denendeh Investments Incorporated ("DII"), a representative of 27 Dene First Nations) is forced to give up its franchises in NWT due to predatory pricing[1] practices that are not sustainable in the long run, the spirit of working with the Indigenous Peoples, as outlined in the UN declarations and adopted by the GNWT comes into question.

IV - Importance of cost recovery principles and necessity of fair/reasonable compensation

- ***Cost recovery principles***: full recovery of costs through rates is one of the fundamental principles of utility rate making. The Bonbright Principle of revenue sufficiency (adopted and referenced by numerous Canadian and international regulators in rate-setting processes) requires that electricity rates allow a utility to recover its revenue requirement, i.e., the costs of providing electricity service plus a reasonable return commensurate with the risks being undertaken.
- ***Fair and reasonable compensation for risk is necessary***: profit should not be viewed as a 'dirty' word. In addition to Naka Power Utilities requiring a fair and reasonable return, taxpayers, as owners of Northwest Territories Power Corporation ("NTPC"), should also be demanding a reasonable return. Adequate compensation, factoring risk, promotes economic efficiency by incentivizing optimal performance with productivity goals. This is particularly relevant in a jurisdiction like NWT where relative risks are high, given the smaller number of customers and multiple isolated communities required to be served.

V - Consequences of short duration franchises and lost economies of scale

- ***Franchise renewals***: LEI observes that the duration/length of multiple franchise agreements in NWT is 5-10 years (which is significantly shorter than average duration of

[1] Predatory pricing is the practice of pricing goods/services below cost to reduce or eliminate competition. If utilities engage in predatory pricing when bidding for franchises, lower rates offered are illusionary.

33 years surveyed elsewhere, as illustrated later in Figure 10). A considerable number of resources are being utilized/wasted in pursuit of short-duration franchise renewals. In addition to increasing regulatory and administrative burden, short-duration franchises make long-term planning, access to debt financing, and investment decisions difficult, given the uncertainty around franchise renewals. As an example, if the franchise is up for expiry in 5 years, the franchisee may not implement a capital refurbishment program that benefits the system over a 10-20 year period.

- ***Economies of scale*** are crucial for reducing costs for regulated utilities. Utilities require large upfront investments in infrastructure. Once built, the cost of serving an additional customer is relatively low. As such, as output increases, the fixed cost is spread over multiple units of service, lowering average cost. Where there are multiple utilities, a harmonized rate approach can assist in sharing the economies of scale between customers of the utilities, while not confining economies of scale benefits to customers of one utility or the other. In addition, optimized operational service areas can help reduce duplication of services, improving overall efficiency.

Structure of the paper

Section 2 briefly discusses relevant issues faced by NWT with the aim of providing the reader with relevant context. Subsequently, Section 3 discusses the principles of cost recovery, fair return standard, and sustainability of the current rate design; Section 4 analyzes the loss of economies of scale via actual and potential loss of franchises; and Section 5 contextualizes the issues in light of stated objectives associated with Indigenous cooperation.

The figure below presents the list of acronyms used in this paper.

Figure 1. List of acronyms

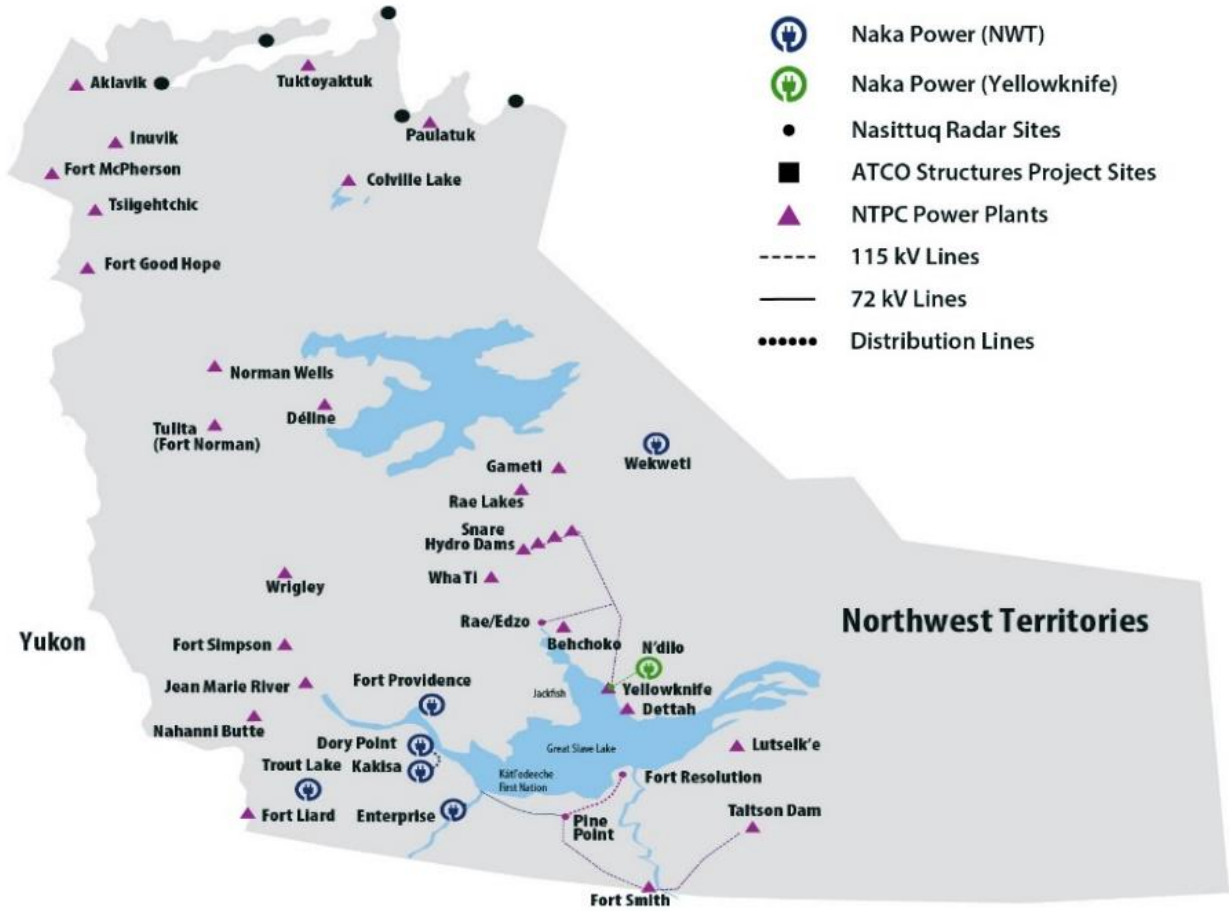
BCR	Benefit-cost ratio	**NREL**	National Renewable Energy Laboratory
BCUC	British Columbia Utilities Commission	**NTPC**	Northwest Territories Power Corporation
DII	Denendeh Investments Incorporated	**NWT**	Northwest Territories
FRS	Fair Return Standard	**OEB**	Ontario Energy Board
GNWT	Government of NWT	**PUB**	Public Utilities Board
GRA	General Rate Applications	**QEC**	Qulliq Energy Corporation
LDC	Local distribution company	**RCC**	Revenue to cost coverage
LEI	London Economics International LLC	**TRC**	Truth and Reconciliation Commission
LNG	Liquefied Natural Gas	**UNDRIP**	United Nations Declaration on the Rights of Indigenous Peoples
NARUC	National Association of Regulatory Utility Commissioners	**UNPFII**	United Nations Permanent Forum on Indigenous Issues
NEB	National Energy Board	**URRC**	Utility Rates Review Council

2 Context and description of key issues facing NWT

2.1 Context

The NWT has a population of 44,731 spread across 1.3 million square kilometers, with 49.8% of residents living in the capital of Yellowknife.[2] Approximately 50% of the population of the NWT is Indigenous, of which ~64% are Dene First Nations.[3] Composed of 27 separate electrical grids across 33 communities, the NWT is not connected to the North American electrical grid.[4] The figure below shows various NWT service areas and facilities.

Figure 2. NWT service areas and facilities



Source: Naka Power Utilities

[2] NWT Bureau of Statistics. Population Estimates By Community. July 1, 2024.

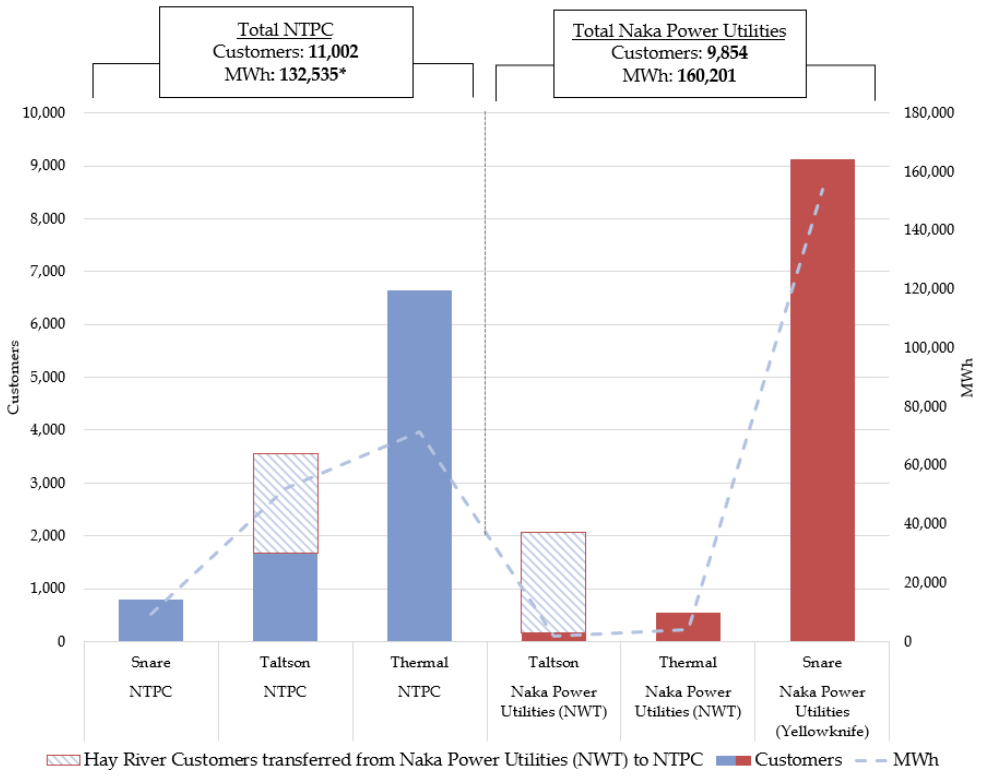
[3] NWT Bureau of Statistics. Community Population by Detailed Ethnicity. July 1, 2024

[4] Government of Canada. Northwest Territories: Clean electricity snapshot. February 13, 2025.

There are currently seven rate zones in NWT: (i) Naka Power Utilities Snare Zone, (ii) Naka Power Utilities Thermal Zone, (iii) Naka Power Utilities Taltson Zone, (iv) NTPC Snare Zone, (v) NTPC Taltson Zone, (vi) NTPC Thermal Zone and (vii) NTPC Norman Wells Zone.

As shown in Figure 3, four zones (with 11,002 customers and 302,893 MWh) are served by NTPC, two zones (with 719 customers and 6,107 MWh) are served by Naka Power Utilities (NWT), and one zone (with 9,135 customers and 154,094 MWh) is served by Naka Power Utilities (Yellowknife).

Figure 3. Rate zones in NWT



* Excludes wholesale sales (MWh) from NTPC (Snare) and NTPC (Taltson) zones
Note: The data for NTPC's Norman Wells is included in the NTPC Thermal Zone.
Source: LEI analysis; NTPC 2024-2026 GRA; Naka Power Utilities (NWT) 2025 GRA; Naka Power Utilities (Yellowknife) 2024-2025 GRA.

Currently both NTPC and Naka Power Utilities have General Rate Applications ("GRA") before the PUB, and Naka Power Utilities has filed evidence in NTPC's 2024-2026 GRA as an intervener. Following the Hay River franchise disposition and disputes regarding the efficiency of rates proposed in the latest set of GRAs, Naka Power Utilities has requested to work with the PUB and NTPC to "*collaborate openly on a better and more efficient rate design structure in the NWT*".[5]

[5] Naka Power Utilities. *RE: Request to pause utility rate proceedings to work collaboratively on increased efficiency*. November 28, 2024.

2.2 Key issues

A primary issue observed by LEI concerns artificially low RCC ratios and insufficient revenue recovery practices. The current seven rate zone system in the NWT results in excessive administrative and regulatory efforts for a small population, leading to inequity between customer groups and incorrect price signals. For instance, in some rate zones, NTPC has rates with RCC ratios of ~70%, and part of the shortfall created by below-cost rates is recovered from Naka Power Utilities' customers in Yellowknife, where NTPC has proposed RCC ratios of ~105% (as shown later in Figure 5). LEI explores this issue in Section 3, contextualizing it with the necessary and widely accepted regulatory principles of revenue sufficiency and cost recovery.

A second important issue is related to actual and potential loss of Naka Power Utilities' franchises, which directly affect the utility's economies of scale, in turn impacting Naka Power Utilities' remaining customers. After approximately a decade of arbitration and other regulatory hearings, the disposition of the Hay River franchise was approved in PUB Decision 1-2024, and the Naka Power Utilities (NWT) Hay River franchise transitioned operation to NTPC on March 1st, 2025.

Figure 4. Naka Power Utilities' franchises

Community	Designation	Expiry	Comments	Customers	Annual Energy (MWh)
Hay River	Town	Nov. 30, 2015	• Transitioned operation to NTPC on March 1, 2025	1,894	23,741
Enterprise	Hamlet	Apr. 30, 2015	• Presentation to council in August 2024 • NTPC presentation to council in July 2023, promised lower rates • ***Next steps expected in the second half of 2025***	64	613
Riverwoods	Undesignated	Mar. 31, 2019	• Community signed support for 10-year renewal in 2024 • ***Sitting with Minister for approval***	12	63
Sambaa K'e (formerly Trout Lake)	Designated Authority	Jan. 1, 2020	• Community signed support for 10 year renewal in 2024 • ***Sitting with Minister for approval***	51	426
Kakisa / Dory Point	Designated Authority	Jan. 27, 2023	• Community signed support for 5-year renewal in May 2024 • ***Sitting with Minister for approval***	38	221
Yellowknife	City	Dec. 31, 2025	• Renewed in 2020 for 5 year term • Presentation to CoYK March, 2025 • NTPC presentation to CoYK April 2025	9,135	153,284
Ft Providence	Hamlet	Mar. 23, 2027	• 5-year renewal in 2022	342	2,826
Wekweeti	Tlicho community Government	Mar. 8, 2032	• Renewed for 10-years in 2022	62	665
Katlodeeche	Designated Authority	No expiry	• Federal agreement to serve community	109	1,287

Source: Naka Power Utilities

Figure 4 shows details associated with the Hay River franchise and Naka Power Utilities' existing franchises, with expiry dates, and comments regarding status/renewals. With the exception of one franchise (with no expiry), there is renewal uncertainty for all other franchises. It is notable that three renewals have been awaiting Ministry approval, although community support has been obtained. If Naka Power Utilities continues to lose its franchises, it will trigger a downward spiral—eroding economies of scale and driving up rates—that could severely undermine the company's long-term sustainability.

This issue is exacerbated by the fact that most franchise agreement length/terms in the NWT are abnormally short relative to municipalities in North America (e.g., across a sample of over 3,500 municipalities in the United States, the average duration observed is ~33 years, as illustrated later in Figure 10), which can lead to unnecessary administrative costs for renewals, and a disincentive for longer term infrastructure investment. LEI explores this issue further in Section 4.

The final issue is related to Indigenous participation and the GNWT's obligation to uphold the rights and wellbeing of Indigenous peoples. Naka Power Utilities is an equal equity partnership between ATCO Ltd. and DII, representing 27 Dene First Nations. As noted earlier in Section 2.1, ~50% of the NWT's population is Indigenous. Being one of the first Indigenous owned utilities in Canada, Naka Power Utilities has argued that it is uniquely situated to promote Indigenous economic prosperity and self-determination, a community which composes ~50% of the total population of the NWT.[6] LEI explores this issue in Section 5.

[6] NWT Legislative Assembly. Public Briefing NWT's Energy Challenges. December 3, 2024.

3 Cost recovery principles and sustainability of rate design framework

This section analyzes the implications of the proposed RCC ratios in NTPC's latest GRA, beginning with an overview of the cost recovery and fair return principles in Section 3.1. LEI then examines the current rate design through an independent quantitative review of the RCC ratios/rate framework in Section 3.2.

3.1 Cost recovery principles and fair return standard

Full recovery of costs through rates is one of the fundamental principles for utility rate making. As highlighted in Naka Power Utilities' evidence, the principles articulated by Professor James Bonbright's Principles of Public Utility Rates are widely accepted as the gold standard for the issues that regulators need to consider when setting electricity rates.[7]

The Bonbright Principle of revenue sufficiency requires that electricity rates should allow a utility to recover its revenue requirement, that is, the costs of providing electricity service plus a reasonable rate of return.[8] These principles aim to balance the interests of both consumers and utility investors by ensuring that rates are fair, reasonable, and reflective of the true cost of service. Regulatory bodies, such as the National Association of Regulatory Utility Commissioners ("NARUC") frequently reference Bonbright's principles when discussing rate design, underscoring their foundational role in shaping fair and efficient rate structures.[9] Canadian regulators, such as the British Columbia Utilities Commission ("BCUC") and the Ontario Energy Board ("OEB") also consider the same principles to be fundamental to their rate-setting processes (as seen in the textboxes below).

BRITISH COLUMBIA
BCUC's Decision and Order

"The Bonbright Criteria, as paraphrased by BC Hydro and endorsed by the BCUC in previous proceedings are:

1. ***Recovery of the revenue requirement;*** *[emphasis added]*
2. *Fair apportionment of costs among customers;*
3. *Price signals that encourage efficient use and discourage inefficient use"*

Source: BCUC. Decision and Order G-140-23. Fiscal 2024 Residential Inclining Block Rate Pricing Principles Application. June 13, 2023.

ONTARIO
OEB EB-2012-0410: Rate Design

"The Board stated its principles for rate design. These principles encompass all of the Bonbright attributes of a sound rate structure:

1. ***Full cost recovery for distributors including a return on equity with appropriate risk premium;*** *[emphasis added]*
2. *Fairness including cost causality, simplicity and lack of controversy"*

Source: OEB. EB-2012-0410. Draft Report of the Board: Rate Design for Electricity Distributors. March 31, 2014. Page 5.

[7] NARUC. Rate Design for Cost-Reflective Tariffs. January 2021.

[8] James C. Bonbright. Principles of Public Utility Rates. Columbia University Press, New York. 1961.

[9] NARUC. Tariff Development II: Rate Design for Electric Utilities. Accessed on March 4th, 2025.

Recovery of costs includes recovering a fair return, commensurate with underlying risks. The Fair Return Standard ("FRS") is widely accepted by regulators across Canada, and establishes a legal framework for setting a fair and reasonable return on capital for regulated electricity and gas utilities, as described in the text box below.

The Fair Return Standard ("FRS")

The FRS was articulated by the National Energy Board ("NEB") in its *RH-2004 Phase II Decision* (related to TransCanada PipeLines Cost of Capital), when it stated that three requirements must be satisfied to determine a fair and reasonable return on capital:

a) **Comparable investment standard**: a fair or reasonable return on capital should be comparable to the return available from the application of invested capital to other enterprises of like risk;

b) **Financial integrity standard**: should enable the financial integrity of the regulated enterprise to be maintained; and

c) Capital attraction standard: should permit incremental capital to be attracted to the enterprise on reasonable terms and conditions**.**

Source: NEB. RH-2-2004. Phase II Reasons for Decision, TransCanada PipeLines Limited cost of capital. April 2005.

As such, it is important that policymakers do not view profit as a 'dirty' word. Adequate compensation, factoring risk, promotes economic efficiency by incentivizing optimal performance with productivity goals. This is particularly relevant in a jurisdiction like the NWT, where relative risks are higher given the need to serve a sparsely populated customer base in multiple isolated communities.

3.2 Sustainability of current rate design / RCC ratios in NWT

Considering the cost recovery principles, it is evident that charging tariffs designed to recover revenue requirement underpins the financial sustainability of a utility.[10] Cost recovery also ensures that utilities continue to maintain and invest in the electricity system, which enables reliable electricity for consumers in the long term.[11]

In the context of the NWT, it is reasonable to expect elevated capital investment requirements for the near- to medium-term horizon. For instance, NTPC in its recent 2024-2026 rate application has proposed capital additions of $212 million in 2024-25, which is higher than the actual 2021-2024 average annual capital addition of $31 million.[12] Furthermore, the GNWT 2030 Energy

[10] Coady, D., Jahan, S., Machado, F., & Gu, M. (2023). The Distributional and Fiscal Implications of Public Utility Pricing. IMF Working Papers, 2023(118), A001. Retrieved Apr 4th, 2025.

[11] NARUC. Rate Design for Cost-Reflective Tariffs. January 2021.

[12] Additions to Hydro Plant increased to $76.9 million in the test year 2024-2025 forecast due to the Taltson Major Overhaul, while the Energy Utilization Group saw additions of $87.5 million in the same period because of the Inuvik High Point Wind project. Source: NTPC. General Rate Application 2024-26: Phase I. Schedule 11.0. October 30th, 2024.

Strategy targets a 25% reduction in greenhouse gas emissions from electricity generation in diesel communities by 2030.[13] As such, utilities in NWT are likely to face increasing capital investment needs for the remainder of the decade.

3.2.1 Evaluation of current/proposed RCC ratios

As indicated earlier, the primary issue with current rates is driven by varying levels of RCC ratios in NTPC zones, as shown below in Figure 5.

Figure 5. RCCs by zone for 2025-2026 per NTPC GRA

Utility	Zones	Category	MWh	# of customers	Revenue from Rates ($000)	Cost of Service ($000)	RCC
NTPC	Snare	Government customers	4,161	327	2,349	2,249	104%
		Non-Government customers	4,947	474	2,279	2,823	81%
		Wholesale to Naka (YK)	160,275		44,767	42,545	105%
		Wholesale to indutrial customers	7,547		1,926	2,137	90%
NTPC	Talston	Government customers	22,882	810	7,188	9,817	73%
		Non-Government customers	29,099	2,752	9,020	13,526	67%
		Wholesale to Naka (NWT)	2,536		521	715	73%
NTPC	Thermal	Government customers	31,553	2,449	39,651	33,360	119%
		Non-Government customers	39,893	4,190	31,904	43,148	74%
Total (NTPC)			**302,893**	**11,002**	**139,606**	**150,319**	

Note: The data for Norman Wells is included in the NTPC Thermal Zone.
Source: LEI analysis utilizing information from NTPC 2024-2026 GRA.

To highlight the key concern, RCC ratios for NTPC Taltson zone are in the range of 67% to 73%, while the RCC ratio associated with wholesale sales to Naka Power Utilities (Yellowknife) (which represents ~53% of MWhs across all NTPC zones for 2025-2026) is 105%. This results in Yellowknife customers effectively subsidizing other customers, including Government customers in the Taltson zone.[14] Further, the RCC ratios discussed here exclude additional expenses from the Taltson Zone. In particular, the Taltson Overhaul project has ~$30 million in construction work in progress ("CWIP"), which once included in rates (expected in 2029-2030), may further reduce RCCs in the Taltson zone.[15] LEI has independently verified the RCC ratios,

[13] The strategy paper proposes new investments in transmission lines for connecting diesel communities to renewable hydroelectricity and new electricity generation investments in solar, wind, mini-hydro, and Liquefied Natural Gas ("LNG"). Source: Department of Infrastructure, GNWT. 2030 Energy Strategy. April 2018.

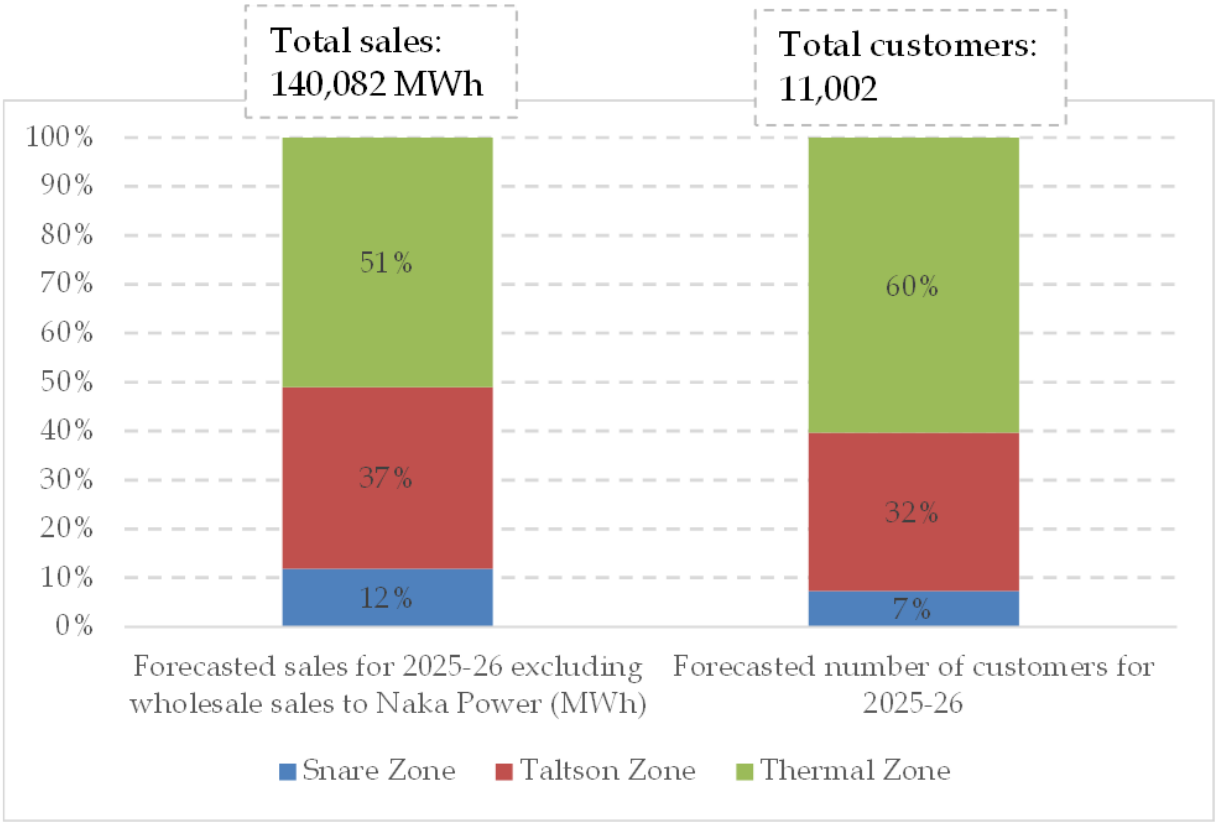
[14] The RCC ratios for Government customers in the NTPC Snare and Thermal zones are also over 100%, however these are consistent with the reasonable range of RCC ratios for Government customers as provided in the 2017 electricity rate policy directions from the Minister Responsible for the NWT PUB. The policy directions state that the reasonable range for RCC ratios is as follows: (i) 90% to 110% by zone; (ii) 80% to 110% for non-Government customers; and (iii) 100% to 130% for Government customers. Source: GNWT. 2017 Electricity Rate Policy Direction. February 23, 2017.

[15] Source: *NTPC – 2024-26 GRA Regulatory Treatment of Costs*. Letter from NTPC to NWT PUB dated March 24, 2025.

and the cross-subsidization of rate zones in the NWT through an analysis of Naka Power Utilities and NTPC's respective GRA filings.

In terms of share of and customers and electricity sales (excluding wholesale sales to Naka Power Utilities (Yellowknife) and Naka Power Utilities (NWT), collectively referred to as Naka Power Utilities), as shown in Figure 6, NTPC Thermal Zone accounts for the highest proportion (60% and 51% respectively), followed by Taltson Zone (32% and 37% respectively) and Snare Zone (7% and 12% respectively).

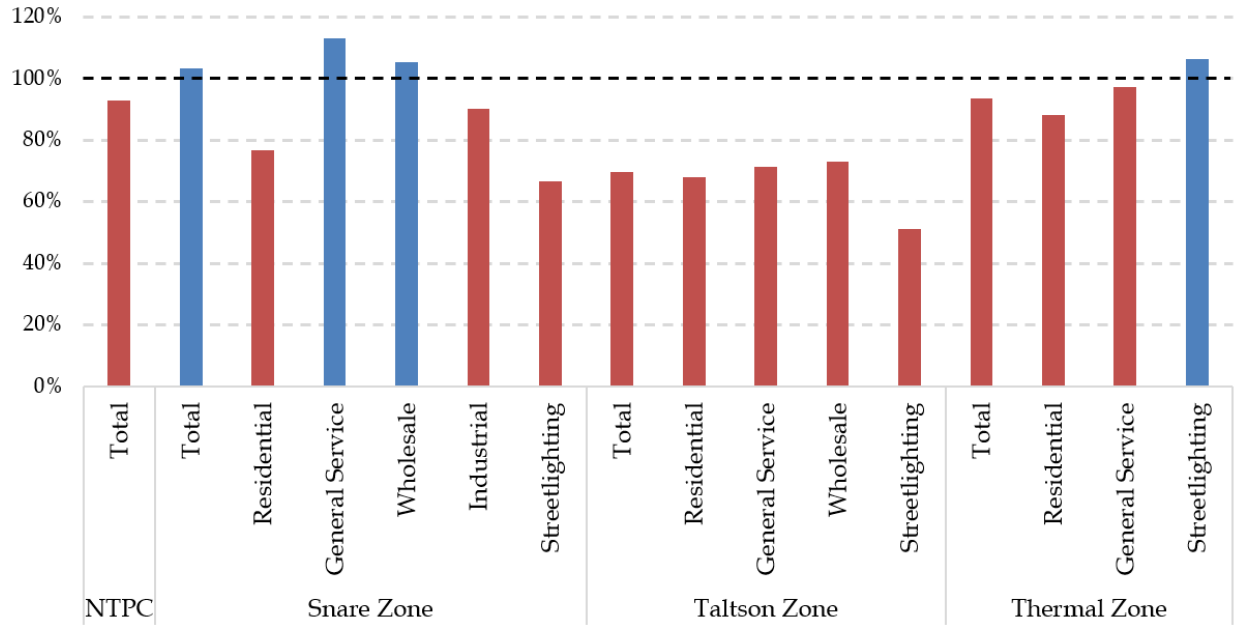
Figure 6. Share of NTPC's customers and electricity sales for 2025-26



Note: The forecasted sales exclude the wholesale energy sales to Naka Power Utilities (Yellowknife) and Naka Power Utilities (NWT), as these sales are intended for customers in zones served by Naka Power Utilities, not NTPC.
Source: LEI analysis utilizing information from NTPC General Rate Application 2024-26.

Overall, NTPC has proposed recovering ~93% of its costs for the 2025-2026 period. However, the cost recovery ratios differ across zones and customer classes (see Figure 7). For instance, the rates for Taltson Zone are proposed to recover 69.5% of the costs, rates for Thermal Zone are estimated to recover 93.5% of the costs, and rates for Snare Zone are estimated to recover 103.1% of the costs.

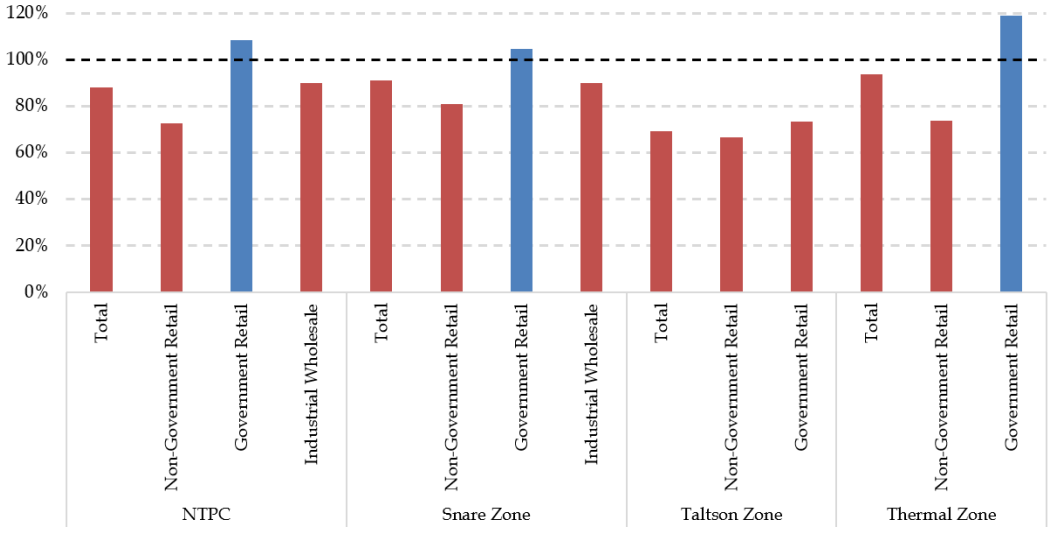
Figure 7. Estimated cost recovery for 2025-26 from NTPC's proposed rates (%)



Note: The data for Norman Wells Zone is included in the NTPC Thermal Zone.
Source: LEI analysis utilizing information from NTPC General Rate Application 2024-26.

It is worth noting that NTPC's overall cost recovery ratio proposed for 2025-2026 (i.e., ~93%) is after a proposed rate increase of 15%. Per NTPC estimates, the overall cost recovery ratio at 2023-24 rates (before the rate increase of 15%) is 80.8%. These ratios include wholesale electricity sales to Naka Power Utilities (Yellowknife) and Naka Power Utilities (NWT).

Figure 8. Estimated cost recovery for 2025-26 from NTPC's proposed rates if wholesale electricity sales to Naka Power Utilities are excluded (%)



Note: The data for Norman Wells is included in the NTPC Thermal Zone.
Source: LEI analysis utilizing information from NTPC General Rate Application 2024-26.

Excluding the wholesale revenues (and costs) allows for like-for-like comparison, i.e., revenue from rates in NTPC zones can be compared to costs associated with serving those zones. When wholesale electricity sales are excluded, the overall NTPC cost recovery ratio for 2025-2026 reduces to ~88%. Figure 8 summarizes cost recovery ratios, excluding wholesale electricity sales to Naka Power Utilities.

NTPC's proposed rates for 2025-2026 do not comply with RCC ratio targets in two of three categories, per the 2017 Electricity Rate Policy Direction:

(i) RCC for non-Government customers for 2025-2026 is 72.6% (policy direction is 80%-110%); and

(ii) RCC by zone for 2025-2026 is 88.1% (policy direction is 90%-110%).[16]

Within proposed rates, non-Government customers are generally being subsidized by: (i) Government customers, and (ii) wholesale electricity sales to Naka Power Utilities.[17] Given the proposed RCC of 105.2% associated with 160,275 MWh (i.e., ~53% of total NTPC MWhs) of energy being delivered to Naka Power Utilities (Yellowknife) customers, effectively Naka Power Utilities (Yellowknife) customers are subsidizing a majority of the subsidized customer base (including Government customers in the Taltson zone).

Excluding wholesale energy sales, NTPC forecasts a revenue shortfall of $12.7 million for 2025-2026. The excess revenue from Naka Power Utilities, i.e., the above cost revenue from wholesale energy sales to Naka Power Utilities, is proposed to subsidize ~16% of the shortfall (~$2 million).[18]

3.2.2 Alternative harmonized rate framework

Noting this cross-subsidization and lack of full cost recovery, Naka Power Utilities (NWT) has proposed an alternative harmonized rate framework with uniform rates across zones and customer types.

To quantify the impacts of its harmonized rate framework proposal, Naka Power Utilities (NWT) has estimated average monthly bills for a typical customer separately for Government and non-Government customers, which are further broken down into residential and general service categories. Based on Naka Power Utilities' evidence,[19] this entails:

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[16] For the third category, i.e., RCC for Government customers, the 2025-2026 proposal is 108.3%, which is within the policy direction of 100%-130%.

[17] NTPC defines "*Government Customer*" as "*a Customer whose account for Service is payable or funded by a federal, territorial or municipal authority, or whose function is to provide on behalf of or to the public*." NTPC. General Rate Application 2024-26. Appendix F: Terms and Conditions of Service. October 30th, 2024.

[18] This is based on LEI calculations using NTPC GRA (Revised Phase II Attachment B). Removing wholesale sales to Naka, the 2025-2026: (i) cost of service falls from ~$150 million to ~$107 million, and (ii) revenues at proposed rates fall from ~$139 million to ~$94 million. A such, revenue shortfall is $12.7 million (i.e., ~$107 million minus ~$94 million).

[19] NWT Public Utilities Board. Naka Power Utilities (NWT) 2025 General Rate Application: Supplemental Evidence. December 20th, 2024.

(i) maintaining the existing rates for some customer classes (e.g., residential non-Government customers other than those in the NTPC Taltson zone);

(ii) increasing rates for some customer classes (e.g., all NTPC Taltson customers and Government customers in Naka Power Utilities' zones); and

(iii) decreasing rates for other customer classes (e.g., general service customers in NTPC Snare Zone – both Government and non-Government).

While LEI's scope does not include quantitative evaluation of the alternative rate framework, LEI believes this proposal is generally reasonable, as it gradually moves RCC ratios towards policy targets, and avoids rate shocks. Naka Power Utilities (NWT) has proposed a gradual transition (e.g., over 5 years) to harmonized rates.[20]

Territory-wide/harmonized rates have also been implemented in neighboring jurisdictions (such as Yukon and Nunavut with similar attributes of isolated grids and a small population spread over a large area as evident in Figure 9), as well as other provinces (including Alberta and Manitoba).[21]

Figure 9. Territorial statistics

Statistic	Yukon	NWT	Nunavut
Population	45,597	44,731	40,673
Land area (km^2)	474,391	1,183,085	1,936,113
Number of isolated grids	5	27	25

Source: Yukon Bureau of Statistics. Population Report. 2023; Government of Canada. Yukon: Clean electricity snapshot. 2024; NWT Bureau of Statistics. Population Estimates By Community. 2024; Government of Canada. NWT: Clean electricity snapshot. 2024; Statistics Canada. Population Estimates. 2023. QEC. 2022-2023 General Rate Application. 2023.

LEI notes that rate harmonization alternative does not imply that cross-subsidization will be entirely eliminated. In a jurisdiction like the NWT where communities are isolated and sparsely populated, zero cross-subsidization is potentially near-impossible, however the alternative framework aims to move price signals consistent with policy targets, such as those stated in the 2017 Electricity Rate Policy Direction.

Gradual transition to avoid rate shock is sensible, and has been instituted by several regulators in other jurisdictions. In addition to the BCUC example shown in the textbox below, Nunavut's

[20] Ibid.

[21] NWT Public Utilities Board. Naka Power Utilities (NWT) 2025 General Rate Application: Supplemental Evidence. December 20th, 2024. Paragraph 32.

previously community-based rates were transitioned to a Nunavut-wide (postage stamp) rate over a realignment period of 6-years.[22]

BCUC on rate shocks

"*BC Hydro proposes a transition to the Proposed Flat Rate that provides for gradual implementation over three years… the gradual change over two years allows affected customers to continue bill savings and time to prepare their operations for the flat energy rate*"

Source: BCUC. Decision and Order G-353-23. December 15, 2023

Postage stamp/territory-wide rates do not come without their drawbacks; the textboxes below provides a flavor of regulators' perspectives on the pros and cons of postage stamp rates.

Extract of BCUC's merits and drawbacks of postage stamp rates

Pros: "*Customer fairness is a key driver in using postage stamp rates… this approach to rate-making provides equal opportunity to obtain electrical service regardless of whether customers are existing or new or where they are located in the system. Postage stamp rates ensure that no one industry or corporation has an advantage over others and that new entrants may compete on an equal basis with existing customers. Postage stamp rates remove economic disincentives that might otherwise exist for new development. Postage stamp rate-making is simple to administer and provides customers with cost certainty relative to other approaches*"

Cons: "*Postage stamp rates do not send signals to develop projects in locations that minimize incremental costs of transmission service because these costs are amortized over all customers*"

Source: BCUC. Postage Stamp Rates.

[22] URRC. Utility Rate Review Council's General Rate Application Report # 2018-01. March 26, 2018.

Utility Rates Review Council of Nunavut ("URRC") on uniform rates

Pros: "*Some of the benefits as provided by Qulliq Energy Corporation ("QEC") of changing to Nunavut-wide rates include: (a) administrative efficiency for QEC and its employees; (b) simple to understand for customers; (c) most of the transitional effects/increase will be borne by government customers; (d) level playing field for prospective renewable energy developers (based on the currently approved CIPP program) and new businesses; (e) the effect on the City of Iqaluit non-government customers was limited to the 5.1 per cent; and (f) the effect on almost all communities will be a decrease in rates*"

Cons: "*Some challenges of changing to Nunavut-wide rates in the manner proposed by QEC include: (a) the effect on the City of Iqaluit government customers potentially puts the City of Iqaluit and its commercial customers in a less favorable position compared to other municipalities, primarily due to the City of Iqaluit relying on property tax revenues and other fees/taxes, whereas all other hamlets obtain funds directly from the government via the GN Department of Community and Government Services Municipal Funding Formula; (b) the approach proposed by QEC focused only on energy rates; (c) it is unclear if non-tax-based communities subject to a rate increase due to the transition will be able to fully recover these additional costs via their appropriations from the GN.*"

Source: URRC. The 2022/23 General Rate Application, Utility Rates Review Council of Nunavut's Report 2022-02. August 18, 2022.

LEI emphasizes that subsidized customer classes in NWT need to gradually move closer to RCC of 100%, if GNWT subsidies are to be limited/phased out over time. While subsidies continue, transparent presentation of rates and subsidies to customers is vital. As such, LEI envisions two steps:

(i) the utilities submit the revenue requirement to the PUB for approval. Once approved, the utilities calculate and clearly present the portion of revenue requirement recovered by the rates (consistent with the not-to-exceed rate/rate increase), and the portion not recovered (if any); and

(ii) the GNWT / Ministry of Finance would then fund the portion not recovered by rates.

Full cost rates and subsidies should be transparently shown to customers on their bill statements and/or rate schedules. It is not uncommon for policymakers/regulators to encourage/require such transparency (see textbox below).

Transparency in customer bills

In Ontario, the Ministry of Energy, Northern Development and Mines released the *More Transparent Electricity Bills Coming to Ontario Households,* a push for greater transparency in electricity bills following the Auditor General's special report on fiscal transparency, accountability and value for money (2017). In this initiative, the ministry noted, *"helping ratepayers clearly see the true cost of electricity and the full amount of the Ontario Electricity Rebate as a single line item on their electricity bill is part of the government's plan to restore Ontarians' trust in the energy sector and build a more transparent and accountable electricity system".*

Source: Government of Ontario. More Transparent Electricity Bills Coming to Ontario Households. October 22, 2019.

Finally, it is notable that NWT has only ~20,000 utility customers spread across the 7 rate zones. In contrast, the bulk of rate zones in Canada serve more than 20,000 customers. For instance:

(i) of the 54 Ontario LDCs, 56% (or 30 LDCs) serve/have rates for more than 20,000 customers, and 15% (or 8 LDCs) serve more than 100,000 customers;

(ii) Manitoba Hydro serves 624,062 electric customers; and

(iii) BC Hydro serves more than 5 million customers.[23]

The current rate zone system in NWT has significantly fewer customers per rate zone, which likely leads to administrative burden and higher regulatory costs. Even under a territory-wide rate framework (if implemented), NWT will be placed at the lower end of the distribution for customers per rate zone. As such, there is merit to rate reform with an objective of achieving greater regulatory and administrative efficiencies, amongst other benefits.

Regulatory/policy implication

The current rates/rate framework in the NWT results in potentially unfair cross-subsidization across customers and rate zones. The PUB/policymakers may want to closely review the alternative rate framework, while considering the cost recovery/revenue sufficiency principles and already-established policy directions associated with targeted RCC ratios for various customer classes. Further, it is imperative that customers are aware of both full cost rates and associated subsidies. LEI has proposed the adoption of a two-stage process to enhance transparency for PUB/policymakers' consideration.

[23] Sources: OEB Open Data; Manitoba Hydro. About us. Accessed on April 9th, 2025; BC Hydro. BC Hydro quick facts.

4 Franchise renewals, economies of scale and the no harm standard

Naka Power Utilities has argued that its remaining customers in its Hydro and Thermal Zones are expected to face significant rate increases as a direct and unavoidable result of the lost economies of scale associated with the end of Naka Power Utilities (NWT)'s provision of service to Hay River.[24]

LEI agrees that economies of scale are crucial to reduce costs for regulated utilities. Utilities require large upfront investments in infrastructure. Once built, the cost of serving an additional customer is relatively low. As output increases, the fixed costs are spread over increasing units of service, lowering average cost.[25] In instances where there are multiple utilities, a harmonized rate system can assist in sharing the economies of scale between customers of the utilities, without confining economies of scale benefits to customers of one utility or the other. Further, optimized operational service areas can help reduce duplication of services, improving overall efficiency.

4.1 Application of the no harm standard

The disposition of the Hay River franchise is illustrative of the costs associated with the erosion of economies of scale for utilities in regions with sparsely populated ratepayer bases. An extract from the Decision on the matter is pasted in the textbox below.

PUB Decision 1-2024

"*In order to comply with the… legislative requirements, the Board will apply the* ***no harm standard from the perspective of rate impacts and service level impacts on customers*** [emphasis added] *in assessing whether the purchase and sale transactions are in the public interest. As part of assessing whether the no harm standard has been met, the Board will assess whether there are any impacts on the customers of either utility due to loss of economies of scale arising from the sale of assets by a smaller utility, namely Northland, to a larger utility, namely NTPC, and how such effects could be best mitigated.*"

Source: PUB. Decision 1-2024. March 26, 2024.

LEI notes that the 'no harm standard' can be applied by regulators when setting rates or assessing rate impact. In fact, as shown in the textbox above, considering rate impact on customers is a legislative requirement.

[24] NWT Public Utilities Board. Proceeding ID 2024-021. General Rate Application 2024-26. Exhibit 2024-021-078: Intervenor Evidence of Naka Power Utilities (NWT). February 7th, 2025.

[25] Joskow, Paul L. (2007). "*Regulation of Natural Monopolies.*" In Handbook of Law and Economics, Vol. 2, pp. 1227-1348.

In filings before the PUB, NTPC states "*the 'combined' costs was used by the Board when assessing the 'no harm test' in the context of an assets disposition proceeding. Such concept is not used in a GRA for rate setting purposes.*"[26]

While the NWT Board found that the 'no harm' standard has been met in approving the Hay River acquisition, from an overall combined utility cost perspective, resulting rates still need to be considered. LEI observes that certain customers continue to be harmed from a rate impact perspective, as they continue to subsidize other customers (and particularly Government customers in the Taltson Zone, when policy guidelines specify the reasonable RCC ratio for Government customers is 100%-130%).

The extract in the textbox below from the OEB Handbook is a relevant example, given the regulator's primary consideration associated with expected rate implications on customers.

Extract from OEB Handbook

"***The OEB will not consider temporary rate decreases proposed by applicants, and other such temporary provisions, to be demonstrative of "no harm" as they are not supported by, or reflective of the underlying cost structures of the entities involved and may not be sustainable or beneficial in the long term****. In reviewing a transaction the OEB must consider the long term effect of the consolidation on customers and the financial sustainability of the sector.* [emphasis added]

To demonstrate "no harm", applicants must show that there is a reasonable expectation based on underlying cost structures that the costs to serve acquired customers following a consolidation will be no higher than they otherwise would have been. ***While the rate implications to all customers will be considered, for an acquisition, the primary consideration will be the expected impact on customers of the acquired utility***". [emphasis added]

Source: OEB. Handbook to Electricity Distributor and Transmitter Consolidations. 2016.

4.2 Length of franchise agreements

LEI observes that the duration/length of multiple franchise agreements in NWT is 5-10 years, which increases both uncertainty and probability of further loss in economies of scale. A significant number of resources are being utilized/wasted in pursuit of short-duration franchise renewals. In addition to increasing regulatory and administrative burden, short-duration franchises make long-term planning and investment decisions difficult, given the uncertainty around franchise renewals.

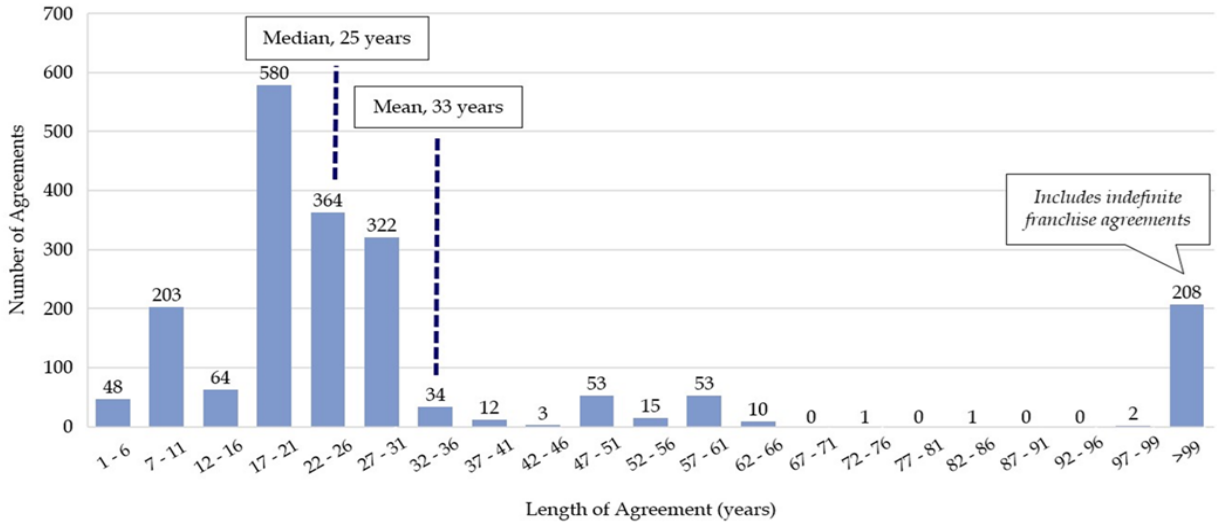
Based on a dataset published by the National Renewable Energy Laboratory ("NREL") analyzing over 3,000 municipal franchise agreements, the duration of franchise contracts with utilities

[26] NWT PUB. Rebuttal evidence NTPC. March 21, 2025.

averages 33 years, with the median being 25 years, and most frequently occurring contract term (mode value) being 20 years. A histogram of the contract terms is presented in Figure 10.

Municipalities such as Chicago and San Diego have referenced this NREL database in their franchise renewal decision-making processes, the latter finding that a short (5 year) term would reduce competition for the franchise because new entrants would be unwilling to invest in the system during their tenure. A third-party report for San Diego advocated for a 20-year term, noting "*it is of sufficient duration to encourage free and open competition for the franchises. It also provides the successful bidder with a substantial time period to earn a profit and motivation to make investments*".[27]

Figure 10. Utility franchise duration in the United States



Source: LEI analysis utilizing NREL Data Catalog. Municipal Franchise Agreements and Energy Objectives. 2019.

In the case of NWT franchises, a similar argument may be evoked: franchise lengths under 10 years do not incentivize utilities to invest in long-term infrastructure or efficiency improvements. Allowing for short (5- to 10-year) agreement lengths may yield adverse outcomes for the communities and utilities vying for ownership, as utilities are unwilling to invest in infrastructure and operational efficiencies that they may not benefit from in the long run. As such, capital refurbishment programs with multi-decade benefits may be foregone to the detriment of the ratepayers. Administrative and regulatory costs also increase due to short-term renewals, as utilities must devote resources to competing for the franchises, followed by new GRAs required to reflect the change in service costs for utilities. In addition, access to debt financing is impacted. Long-term borrowing used for financing utility assets are usually advantageous compared with short-term borrowing rates. Shortening long-term debt agreements can result in penalties, in turn increasing costs for ratepayers.

[27] JVJ Pacific Consulting. Report to the City of San Diego concerning Electric and Gas Distribution Systems. June 22, 2020.

Regulatory/policy implication

If utilities engage in predatory pricing when bidding for franchises, lower rates offered are illusionary. Additionally, franchise agreement duration/lengths of 5- to 10-years are generally inefficient and exacerbate the erosion of economies of scale. LEI advises that the policymakers/PUB consider these issues in their assessment, and suggests a review of franchise agreement lengths to eliminate this inefficiency.

5 Fulfilling economic reconciliation commitments to Indigenous Peoples

Naka Power Utilities is one of the first Canadian regulated utilities with Indigenous ownership, allowing historically suppressed Indigenous voices to have a say in the use of the critical resources and economic wellbeing of their own communities. As mentioned earlier, ~50% of the population of the NWT is Indigenous, thus the continued success of DII as an economic institution of these communities should be of concern to the GNWT. This section elaborates upon the stated commitments of the GNWT towards upholding Indigenous rights and prosperity.

In Canada, Indigenous peoples have historically faced systemic and legal barriers to socio-economic prosperity.[28] The government of Canada and the NWT have begun to acknowledge the historical and current harms imposed on Indigenous communities, and are attempting to reconcile this through legislation and regulation such as the United Nations Declaration on the Rights of Indigenous Peoples Act (2021), establishment of the Truth and Reconciliation Commission ("TRC") of Canada, and stated policy objectives.[29]

The United Nations Permanent Forum on Indigenous Issues ("UNPFII") developed the United Nations Declaration on the Rights of Indigenous Peoples ("UNDRIP") in 2006, which includes provisions on Indigenous self-determination rights (Article 3), land and resource rights (Article 26), and consultation rights (Article 19 and Article 32).

Article 19 specifies: "*States shall consult and cooperate in good faith with the Indigenous peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them*".[30] Bill C-15, titled the United Nations Declaration on the Rights of Indigenous Peoples Act, received Royal Assent in Canada in 2021, affirming the standards adopted in the 2007 UN General Assembly.[31]

UNDRIP Article 32

32.1. *"Indigenous peoples have the right to determine and develop priorities and strategies for the development or use of their lands or territories and other resources.*

32.2. *States shall consult and cooperate in good faith with the Indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources."*

Source: United Nations. UN Declaration on the Rights of Indigenous Peoples. September 13, 2007.

[28] Government of Canada. An update on the socio-economic gaps between Indigenous Peoples and the non-Indigenous population in Canada. 2021.

[29] Government of Canada. Backgrounder: United Nations Declaration on the Rights of Indigenous Peoples Act.

[30] United Nations. UN Declaration on the Rights of Indigenous Peoples. September 13, 2007.

[31] Government of Canada. Backgrounder: United Nations Declaration on the Rights of Indigenous Peoples Act.

On March 29, 2023, the GNWT introduced Bill 85, titled the United Nations Declaration on the Rights of Indigenous Peoples Implementation Act, which aligned the provincial law, regulations, policies and procedures with the UNDRIP. The legislation was meant to "*direct that the laws of the Northwest Territories must be interpreted in a manner consistent with the Declaration*".[32] The GNWT also published official responses to the TRC Calls to Action, noting with regard to Call to Action 43 and 44, "*The GNWT will continue to work with the federal government and Aboriginal governments to further the promotion and protection of Aboriginal and treaty rights, including the negotiation and implementation of Aboriginal self-governments*".[33]

TRC Calls to Action 43 and 44

43. *"We call upon federal, provincial, territorial, and municipal governments to fully adopt and implement the United Nations Declaration on the Rights of Indigenous Peoples as the framework for reconciliation.*

44. *We call upon the Government of Canada to develop a national action plan, strategies, and other concrete measures to achieve the goals of the United Nations Declaration on the Rights of Indigenous Peoples."*

Source: Government of Canada. Canadian governments and the UNDRIP. 2021

Moreover, the Mandate of the GNWT (shown in textbox below) explicitly outlines the provincial government's commitments to Indigenous communities and entities.

Mandate of the GNWT (2023 to 2027)

"The following commitments will guide the implementation of the Mandate across all Priorities:

- *Collaborate with Indigenous governments and residents to achieve the objectives of the United Nations Declaration on the Rights of Indigenous Peoples;*
- *Strengthen government-to-government relationships with Indigenous governments and work in partnership to jointly engage the federal government to advance issues of shared interest;*
- *Work with negotiation partners to advance, settle and implement land claim, self-government and other Indigenous rights agreements;*
- *Explore options to support Economic Reconciliation through more flexible and streamlined funding arrangements with Indigenous governments"*

Source: GNWT. Mandate of the Government of the Northwest Territories 2023 to 2027.

As an extension of the Crown, the GNWT has a duty to consult and accommodate Indigenous communities, as well as an obligation under the UNDRIP and Bill 85 to obtain free, prior and

[32] GNWT. Implementing the UN Declaration on the Rights of Indigenous Peoples in the Northwest Territories.

[33] GNWT. Meeting the Challenge of Reconciliation: The Government of the Northwest Territories response to the Truth and Reconciliation Commission Calls to Action. October 5, 2015.

informed consent for any governmental actions affecting Indigenous communities.[34] Should the GNWT be perceived to oversee the issue of predatory pricing without due consideration to Indigenous communities and commercial entities, GNWT risks undermining the integrity of its mandate and goals of Indigenous reconciliation.

Naka Power Utilities was recently highlighted in the First Nations Major Power Projects Coalition report on Indigenous Utilities in Canada. The report highlights Indigenous participation in the Canadian utility landscape as a vehicle to build capacity, contribute to the energy transition, and move past the structural and financial exclusions of Indigenous nations from infrastructure ownership, towards greater self-determination and benefits for Indigenous nations.[35] As one of the first regulated utilities with Indigenous ownership in Canada, Naka Power Utilities should reasonably expect fair treatment under the aforementioned Indigenous rights that the GNWT has unequivocally supported.

Regulatory/policy implication

The GNWT has an obligation to uphold the rights and wellbeing of Indigenous peoples. As a 50% Indigenous owned utility, Naka Power Utilities allows Indigenous communities to have a say in their economic prosperity and self-determination. Considering the GNWT mandate and continued adherence to truth and reconciliation, the PUB/policymakers must account for the adverse impact of status quo rates/rate framework on this Indigenous-owned entity.

[34] Government of Canada. Backgrounder: United Nations Declaration on the Rights of Indigenous Peoples Act.

[35] First Nations Major Projects Coalition. Indigenous Utilities. April 29, 2025.