

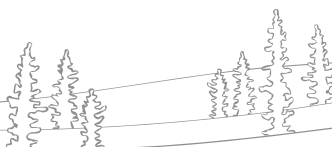
NORTHWEST TERRITORIES  
Carbon Tax  
Report

Rapport sur la  
taxe sur le  
carbone TNO

2020/21

Le present document contient la traduction  
française du Présentation.

Government of Northwest Territories  
Gouvernement des Territoires du Nord-Ouest





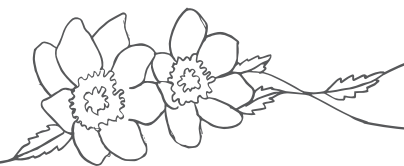
# Minister's Message



**Caroline Wawzonek**  
Minister of Finance

It is my pleasure to release the annual carbon tax report detailing the Northwest Territories carbon pricing results for the fiscal year ended March 31, 2021.

The Northwest Territories carbon tax was introduced September 1, 2019 as one of the Government of the Northwest Territories' (GNWT) commitments under the *Pan-Canadian Framework on Clean Growth and Climate Change* and is a key component of the *GNWT's Climate Change Strategic Framework*.



# Message de la ministre des Finances



**M<sup>me</sup> Caroline Wawzonek**  
*Ministre des Finances*

J'ai le plaisir de publier le rapport annuel sur la taxe sur le carbone, qui présente les résultats de la tarification du carbone aux Territoires du Nord-Ouest pour l'exercice financier se terminant le 31 mars 2021.

La taxe sur le carbone a été introduite aux Territoires du Nord-Ouest le 1er septembre 2019 comme composante clé du Plan d'action du Cadre stratégique sur le changement climatique; elle s'inscrit dans les engagements du gouvernement des Territoires du Nord-Ouest (GTNO) pris au titre du Cadre pancanadien sur la croissance propre et les changements climatiques.



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# 1. Introduction

The September 1, 2019 implementation of Northwest Territories carbon pricing fulfills the Department of Finance’s assignment of Action Item 1.1 B (Implement NWT carbon pricing) under the *2019-2023 Climate Change Strategic Framework Action Plan* and meets the Government of the Northwest Territories’ (GNWT) commitment on carbon pricing under the *Pan-Canadian Framework on Clean Growth and Climate Change*.

By signing the *Pan-Canadian Framework on Clean Growth and Climate Change* on December 6, 2016, the GNWT committed to introducing a carbon price in the territory that would increase over time to \$50 per tonne of greenhouse gas emissions by 2022-23.

The Northwest Territories carbon pricing plan was devised through discussions with the 18th Legislative Assembly, numerous stakeholders and the federal government. These discussions on the implications

of carbon pricing in the Northwest Territories produced a carbon pricing design that met the federal benchmark price and coverage requirements, while recognizing the existing barriers to reducing carbon energy use in the territory.

The GNWT’s carbon pricing approach is intended to encourage carbon conservation and substitution to reduce greenhouse gas emissions while minimizing the effect on the local cost of living or on creating additional barriers to economic

development. The GNWT has made investments in alternative energy options for territorial residents and businesses a priority and expects to continue making alternative energy investments while working closely with the federal and other Northwest Territories governments, and residents to provide reliable, affordable alternatives to carbon-intensive fuels for communities and businesses.

## DESCRIPTION OF THE CARBON TAX AND REBATES

The Northwest Territories carbon tax became effective September 1, 2019 at \$20/tonne of greenhouse gas emissions for the various types of fuel (see table). The rates will increase annually until 2022, when carbon pricing will reach \$50/tonne. The carbon tax does not apply to aviation fuel. Carbon tax is added to the price at the point of purchase of the fuel in the same way fuel taxes are applied. The fuel tax collectors also collect carbon taxes and remit the revenue to the GNWT in the same way as fuel taxes.

The carbon tax does not apply to the following:

- Indians and Indian Bands as defined in the federal Indian Act when making purchases or taking delivery of fuels on a reserve in the NWT. This exemption would not apply to those whose Indian Act tax exemption cease to exist under self-government agreements;
- Fuel purchased by visiting military forces under the Visiting Forces Act (Canada);
- Fuel use for aviation; and
- Fuel in sealed, pre-packaged containers of ten litres or less.

TABLE 1: CARBON TAX RATES AND EFFECTIVE DATES

FUEL TYPE	CARBON TAX RATE EFFECTIVE DATES			
	SEPT 1, 2019	JULY 1, 2020	JULY 1, 2021	JULY 1, 2022
Gasoline	4.7¢/litre	7.0¢/litre	9.4¢/litre	11.7¢/litre
Diesel	5.5¢/litre	8.2¢/litre	10.9¢/litre	13.7¢/litre
Aviation Gas	Exempt	Exempt	Exempt	Exempt
Aviation Jet Fuel	Exempt	Exempt	Exempt	Exempt
Propane	3.1¢/litre	4.6¢/litre	6.2¢/litre	7.7¢/litre
Naphtha	5.1¢/litre	7.7¢/litre	10.2¢/litre	12.8¢/litre
Butane	3.5¢/litre	5.3¢/litre	7.1¢/litre	8.9¢/litre
Natural Gas	3.8 ¢/m <sup>3</sup>	5.8¢/m <sup>3</sup>	7.7¢/m <sup>3</sup>	9.6¢/m <sup>3</sup>

The following describes the carbon tax offset expenditures that were put in place to offset the carbon tax burden on taxpayers. With the exception of the Cost of Living Offset (*Income Tax Regulations*), all carbon tax offset expenditures are set out in the *Petroleum Products and Carbon Tax Regulations*:

- **Heating Fuel Rebate** – a 100 per cent point-of-sale rebate of carbon tax paid on heating fuel for residents, governments and business entities other than prescribed large emitters.
- **Electrical Power Producers Rebate** – a point-of-sale rebate provided to public utilities equal to the carbon tax they pay for fuel used in electricity production for distribution to their customers.
- **Cost of Living Offset (COLO)** – a tax-free, non-income tested quarterly benefit that increases annually in step with carbon tax rate increases. The COLO is administered by the Canada Revenue Agency on behalf of the GNWT and consists of two components:
  - An amount paid to all NWT personal income tax filers aged over 17 years; and
  - An amount paid to families with children under the age of 18 years.
- **Large Emitters Offset** - large emitters are prescribed in regulations, which means that the Minister of Finance determines if they are a large

emitter. Currently there are only four designated large emitters: Ekati diamond mine, Diavik diamond mine, Gahcho Kue diamond mine and Imperial Oil Resources located at Norman Wells. The large emitters offset is comprised of two elements:

- Monthly rebates of 72 per cent of total carbon tax paid by the large emitter during the month, and
- Large Emitter Greenhouse Gas Emissions Reduction Grants: nominal accounts are maintained for each large emitter that record 12 per cent of all carbon tax paid during the fiscal year and large emitters can apply for grants against these accounts to fund greenhouse gas emission reducing investments. Government assistance is based on an applicant’s nominal account balance. The guidelines for the large emitter emissions reductions grant are posted on the [Department of Finance](#)<sup>1</sup> website. According to the guidelines approved projects must reduce greenhouse gas emissions by 5 per cent relative to the base level.
- The GNWT continues to prioritize investments in alternative energy options that can provide reliable and affordable alternatives to carbon-intensive reliance for communities and businesses.

<sup>1</sup> <https://www.fin.gov.nt.ca/en/services/carbon-tax>

# Présentation

La mise en œuvre, le 1er septembre 2019, de la tarification du carbone aux Territoires du Nord-Ouest répond à la mesure de suivi 1.1 B du ministère des Finances en vertu du Plan d'action du Cadre stratégique sur le changement climatique de 2019-2023 et respecte l'engagement du gouvernement des Territoires du Nord-Ouest (GTNO) en matière de tarification du carbone en vertu du Cadre pancanadien sur la croissance propre et les changements climatiques.

En signant le *Cadre pancanadien sur la croissance propre et les changements climatiques* le 6 décembre 2016, le GTNO s'est engagé à introduire une taxe sur le carbone aux TNO, laquelle augmenterait progressivement pour atteindre 50 \$ par tonne d'émissions de gaz à effet de serre d'ici 2022-2023.

Le plan de tarification du carbone des TNO a été conçu à la suite de discussions avec la 18e Assemblée législative, le gouvernement fédéral et de nombreux intervenants. Ces discussions sur les implications de la tarification du carbone

aux Territoires du Nord-Ouest ont donné lieu à une conception de la tarification du carbone qui répond aux exigences fédérales en matière de prix de référence et de couverture, tout en reconnaissant les obstacles actuels à la réduction de la consommation d'énergie carbonée sur le territoire.

L'approche de tarification du carbone du GTNO vise à encourager la conservation et la substitution des produits de carbone afin de réduire les émissions de gaz à effet de serre tout en limitant le plus possible la hausse du coût

de la vie et les obstacles au développement économique. Le GTNO a fait des investissements prioritaires dans les sources d'énergie de remplacement pour ses résidents et entreprises, et prévoit continuer ces investissements tout en travaillant étroitement avec le gouvernement fédéral, les autres administrations publiques des TNO et les Ténos pour remplacer les combustibles riches en carbone par des solutions de rechange fiables et abordables.



## DESCRIPTION DE LA TAXE SUR LE CARBONE ET DES REMBOURSEMENTS

La taxe sur le carbone des TNO est entrée en vigueur le 1er septembre 2019 à 20 \$ par tonne d'émissions de gaz à effet de serre (GES) pour les différents types de combustibles (voir tableau). Elle augmentera chaque année jusqu'en 2022 pour atteindre 50 \$ par tonne. À noter qu'elle ne s'applique pas au carburant d'aviation. Elle est ajoutée au prix aux points d'achat du carburant, tout comme les taxes sur le carburant. Les percepteurs des taxes sur les carburants perçoivent aussi la taxe sur le

carbone et la remettent au GTNO de la même manière que les taxes sur le carburant

La taxe sur le carbone ne s'applique pas aux catégories suivantes :

- Premières Nations et leurs bandes selon la définition de la Loi sur les Indiens, lorsqu'ils achètent ou prennent livraison de carburants dans une réserve des TNO. Cette exonération ne s'applique pas à ceux dont l'exonération

fiscale prévue par la Loi sur les Indiens cesse d'exister en vertu des accords d'autonomie gouvernementale;

- carburant acheté par les forces militaires en visite en vertu de la Loi sur les forces étrangères (présentes au Canada);
- carburant d'aviation;
- carburant dans des conteneurs scellés et préemballés de dix litres ou moins.

TABLEAU 1 : TAUX DE TARIFICATION ET DATES D'ENTRÉE EN VIGUEUR

TAUX DE TARIFICATION ET DATES D'ENTRÉE EN VIGUEUR				
TYPE DE CARBURANT	1 <sup>ER</sup> SEPT. 2019	1 <sup>ER</sup> JUILLET 2020	1 <sup>ER</sup> JUILLET 2021	1 <sup>ER</sup> JUILLET 2022
Essence	4,7 ¢/litre	7 ¢/litre	9,4 ¢/litre	11,7 ¢/litre
Diesel	5,5 ¢/litre	8,2 ¢/litre	10,9 ¢/litre	13,7 ¢/litre
Carburant d'avion	Exemption	Exemption	Exemption	Exemption
Carburéacteur	Exemption	Exemption	Exemption	Exemption
Propane	3,1 ¢/litre	4,6 ¢/litre	6,2 ¢/litre	7,7 ¢/litre
Naphta	5,1 ¢/litre	7,7 ¢/litre	10,2 ¢/litre	12,8 ¢/litre
Butane	3,5 ¢/litre	5,3 ¢/litre	7,1 ¢/litre	8,9 ¢/litre
Gaz naturel	3,8 ¢/m <sup>3</sup>	5,8 ¢/m <sup>3</sup>	7,7 ¢/m <sup>3</sup>	9,6 ¢/m <sup>3</sup>

Voici une description des dépenses de compensation de la taxe sur le carbone pour compenser le fardeau de cette taxe sur les contribuables. À l'exception de la compensation du coût de la vie (Règlement de l'impôt sur le revenu), toutes les dépenses liées à la compensation de la taxe sur le carbone sont définies dans le *Règlement sur les taxes sur les produits pétroliers et sur le carbone* :

- **Remboursement sur le mazout de chauffage** — remboursement à 100 % de la taxe carbone payée au point de vente par les résidents, administrations publiques et autres sociétés, à l'exception des grands émetteurs.
- **Remboursement pour les producteurs d'électricité** — remboursement au point de vente versé aux services publics d'un montant équivalent à celui payé pour le carburant utilisé pour produire l'électricité distribué à leurs clients.
- **Compensation pour le coût de la vie** — une compensation trimestrielle non imposable qui augmente chaque année en phase avec la hausse de la taxe sur le carbone. Cette compensation est administrée par l'Agence du revenu du Canada au nom du GTNO et est divisée en deux volets :
  - Un montant versé à tous les contribuables des TNO de 18 ans ou plus;
  - Un montant versé aux familles avec un enfant ou jeune de moins de 18 ans.
- **Compensation aux grands émetteurs** — aux termes du Règlement, c'est au ministère des Finances de déterminer si une société est un grand émetteur ou non. Les TNO comptent actuellement quatre grands émetteurs : la mine de diamant Ekati, la mine de diamant Diavik, la mine de diamant Gahcho Kue et Imperial Oil Resources, cette dernière située à Norman Wells. Cette compensation compte deux éléments :
  - Remboursement mensuel de 72 % de la taxe sur le carbone payée durant le mois;
  - Subventions pour réduction des émissions de GES destinées aux grands émetteurs : des

comptes de résultats sont tenus pour chaque grand émetteur qui enregistre 12 % de toute la taxe sur le carbone payée pendant l'exercice financier; de plus, les grands émetteurs peuvent demander des subventions sur ces comptes pour financer des investissements de réduction des émissions de GES. L'aide gouvernementale est basée sur le solde du compte de résultats du demandeur. Vous trouverez les lignes directrices sur les subventions pour réduction des émissions de GES destinées aux grands émetteurs sur le site Web du [ministère des Finances](#)<sup>1</sup>. Selon les lignes directrices, les projets approuvés doivent réduire les émissions de gaz à effet de serre de 5 % par rapport au niveau de base.

- Le GTNO continue de donner la priorité aux investissements dans les énergies de remplacement pour diminuer la dépendance des collectivités et des entreprises aux combustibles riches en carbone.

<sup>1</sup> <https://www.fin.gov.nt.ca/fr/node/8907>

## 2. Fiscal Year Results

The following tables provide 2020-21 carbon pricing results for the twelve-month period April 1, 2020 to March 31, 2021. Tables also include 2019-20 carbon pricing data for reference, from September 1 to March 31. Large emitter trust account balances at fiscal year-end are shown in Table 4 and Table 5 shows 2020-21 carbon emissions by source.

None of the large emitters had applied for funding from their large emitter individual accounts as of March 31, 2021.

The COLO is not directly tied to the amount of carbon tax collected but is included in the summary of expenditures related to the carbon tax. COLO annual benefit amounts are paid on a per individual basis as follows:

- 2019-20 - \$104 per adult and \$120 per child, paid in two equal payments in October 2019 and April 2020;
- 2020-21 - \$156 per year per adult and \$180 per child, paid quarterly starting July 1, 2020 to June 30, 2021; and,
- Starting July 1, 2021 - \$208 per adult and \$240 per child.
- There were \$2.2 million in 2020-21 net revenues remaining to notionally invest in other greenhouse gas-reducing priorities.

**TABLE 2: 2019-20 (SEPTEMBER 1 TO MARCH 31) AND 2020-21 (APRIL 1 TO MARCH 31) CARBON TAX VOLUMES AND REVENUES**

TOTAL VOLUMES (THOUSANDS)	2019-20	2020-21
Gasoline (litres)	29,917	44,982
Aviation gasoline (litres)	723	1,427
Aviation gasoline turbo jet (litres)	18,586	34,987
Diesel (litres)	133,292	191,150
Natural gas (cubic metres)	283	596
Natural gas heating (cubic metres)	442	592
Railway diesel (litres)	63	114
Diesel for heating (litres)	57,624	79,831
Propane (litres)	906	2,226
Propane for heating (litres)	20,811	26,207
Naphtha (litres)	-	11
MINE VOLUMES (THOUSANDS)	2019-20	2020-21
Diesel (litres)	99,089	216,485
Diesel for heating (litres)	18,832	26,919

2019-20 (SEPTEMBER 1 TO MARCH 31) AND 2020-21 (APRIL 1 TO MARCH 31)		
GROSS CARBON TAX REVENUES (THOUSANDS OF DOLLARS)	2019-20	2020-21
Gasoline	1,406.1	2,890.1
Aviation gas	-	-
Aviation gas turbo jet	-	-
Diesel	7,331.0	14,495.4
Natural gas	10.8	31.6
Natural gas for heating	16.8	31.4
Rail	3.5	8.5
Diesel for heating	3,169.3	6,007.3
Propane	28.1	94.1
Propane for heating	645.1	1,107.2
Naphtha	-	0.9
<b>Gross carbon tax revenues</b>	<b>12,610.7</b>	<b>24,666.4</b>
CARBON TAX OFFSETS (THOUSANDS OF DOLLARS)	2019-20	2020-21
Carbon tax rebate for heating fuel (non-large emitters)	2,363.5	5,929.1
Large emitter 72% rebate of total carbon tax paid	4,669.7	8,576.9
Carbon tax rebate for fuel used in electrical generation for distribution	583.1	1,378.5
COLO	4,116.4	6,511.1
Large Emitter Grants	-	-
<b>Net carbon tax revenue</b>	<b>\$878.1</b>	<b>\$2,237.8</b>

Table 3 compares the carbon tax revenues generated by different taxpayers and the amount of revenue returned through carbon tax expenditures. Large emitter grant accounts

are included in the table as expenditures, even though none of the large emitters have drawn down funds from their accounts for greenhouse gas-reducing investments. The GNWT spends

more on carbon tax related expenditures than it generates in carbon tax revenues because the COLO does not link directly to carbon tax revenues.

**TABLE 3A: 2020-21 CARBON TAX REVENUES AND EXPENDITURES (MILLIONS OF DOLLARS)**

REVENUE FROM NWT CARBON TAX		EXPENDITURES ON REBATES & BENEFITS	
RESIDENTS, SMALL BUSINESS AND GOVERNMENTS			
Diesel Fuel, Propane & Natural Gas for Heating	\$5.8	100% Heating Rebate	\$5.9
Community Government Heating	\$0.14	Annual Rebate to Electricity Producers	\$1.4
Motive Diesel	\$3.8	COLO Benefit	\$6.5
Gasoline	\$2.9		
LARGE EMITTERS			
Facility Fuel Use	\$11.9	Large Emitter Rebate	\$8.6
		Large Emitter Grant Accounts	\$1.7
OTHER ITEMS			
Railway Diesel & Non-Heating Propane and Natural Gas	\$0.1	NWT Carbon Tax & Benefit Administration	\$0.3
<b>TOTAL</b>	<b>\$24.7</b>		<b>\$24.4</b>

**TABLE 3B: 2019-20 CARBON TAX REVENUES AND EXPENDITURES (MILLIONS OF DOLLARS)**

REVENUE FROM NWT CARBON TAX		EXPENDITURES ON REBATES & BENEFITS	
RESIDENTS, SMALL BUSINESS AND GOVERNMENTS			
Diesel Fuel, Propane & Natural Gas for Heating	\$2.8	100% Heating Rebate	\$2.4
Community Government Heating	\$0.14	Annual Rebate to Electricity Producers	\$0.6
Motive Diesel	\$1.7	COLO Benefit	\$4.1
Gasoline	\$1.4		
LARGE EMITTERS			
Facility Fuel Use	\$6.5	Large Emitter Rebate	\$4.7
		Large Emitter Grant Accounts	\$0.7
OTHER ITEMS			
Railway Diesel & Non-Heating Propane and Natural Gas	\$0.04	NWT Carbon Tax & Benefit Administration	\$0.3
<b>TOTAL</b>	<b>\$12.6</b>		<b>\$12.8</b>

**TABLE 4: LARGE EMITTER GRANT ACCOUNT BALANCES<sup>1</sup>**

	AT MARCH 31, 2020	AT MARCH 31, 2021
De Beers Canada Inc. (Gahcho Kue Diamond Mine)	\$201,168	\$595,511
Diavik Diamond Mines (2012) Inc. (Diavik Diamond Mine)	\$336,862	\$1,342,937
Arctic Canadian Diamond Mine (Ekati Diamond Mine)	\$129,728	\$446,644
<b>TOTAL</b>	<b>\$667,758</b>	<b>\$2,385,092</b>

<sup>1</sup> Imperial Oil Resources NWT Limited is also prescribed as a large emitter but did not qualify for the grant balance in 2020-21.

# 3. Measuring Movement towards a Less Carbon Intensive Economy

The fuel data required to measure the effect of the Northwest Territories carbon tax on reducing carbon emissions will not be available for many years. Since annual fuel usage changes due to factors such as weather, economic activity, and new technology, drawing conclusions about the direct contribution of the carbon pricing to reducing Northwest Territories emissions will require years of data. This data will come from GNWT carbon tax data and Statistics Canada.

Table 5 estimates NWT carbon tax emissions for September 1, 2019 to March 31, 2020, the seven months following the carbon tax’s introduction, and for the twelve months April 1, 2020 to March 31, 2021. (See appendix for historical greenhouse gas emissions based on fuel tax data.)

**TABLE 5: ESTIMATING NWT GREENHOUSE GAS EMISSIONS FROM CARBON TAX DATA**

	2020-21 Fuel volume	CO <sub>2</sub> e	September 1, 2019 to March 31, 2020 emissions (kilotonnes)	April 1, 2020 to March 31, 2021 emissions (kilotonnes)
Gasoline (litres)	44,981,744	2.511680 kg/l	75	113
Aviation gas (litres)	1,427,320	2.488540 kg/l	2	4
Aviation gas turbo jet (litres)	34,987,178	2.488540 kg/l	46	87
Diesel (litres)	192,630,130	2.708936 kg/l	361	522
Natural gas (cubic metres)	595,507	1.912355 kg/m <sup>3</sup>	1	1
Natural gas heating (cubic metres)	591,555	1.912355 kg/m <sup>3</sup>	1	1
Railway diesel (litres)	113,507	2.708936 kg/l	0	0
Diesel for heating (litres)	79,831,284	2.708936 kg/l	156	216
Propane (litres)	2,226,340	1.547859 kg/l	1	3
Propane for heating (litres)	26,207,061	1.547859 kg/l	32	41
Naphtha (litres)	11,105	2.254503 kg/l	0	0
			<b>676</b>	<b>988</b>

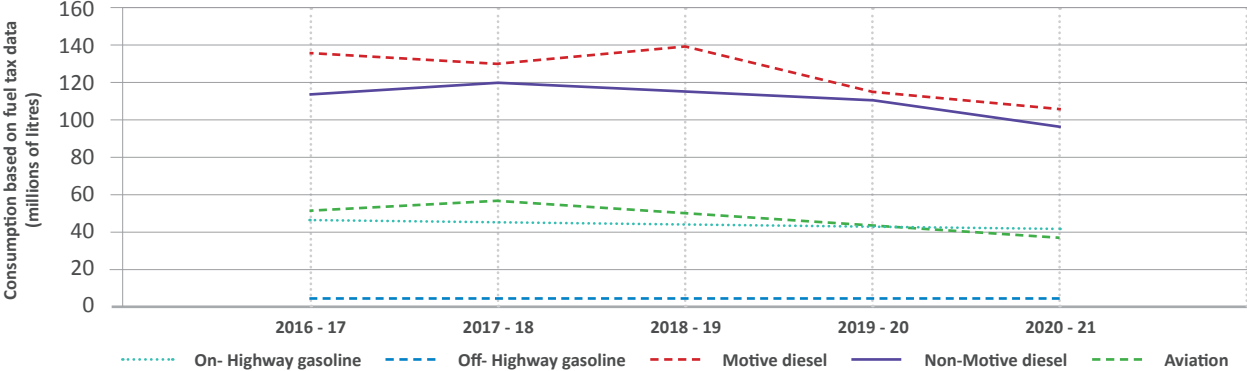
The increasing carbon tax rate is expected to provide an incentive to reduce carbon fuel consumption; its effects will be difficult to discern from other factors in the short term. For example, in 2020-21 the economic disruption caused

by the COVID-19 pandemic and, one diamond mine temporarily shutting down production, also caused fuel consumption to decrease. Fuel tax data (does not include heating volumes) show that fuel consumption declined in

2019-20 and 2020-21, coinciding with large contractions in real GDP. Isolating the effect of carbon tax in the territory will be difficult to discern with few data points among several factors of influence.



FIGURE 1: NWT BUSINESS SECTOR FUEL CONSUMPTION 2016-17 TO 2020-21



### MEASURING CHANGES IN CARBON INTENSITY IN HOUSEHOLDS

Carbon intensity of the household sector is measured in terms of household carbon emissions per person. Reductions in household carbon intensity will be measured by taking the ratio of carbon intensity in a given year to the average carbon intensity for 2009 to 2018. A ratio less than one will indicate improvement because the annual carbon intensity is below the medium-term average; a ratio greater than one will

indicate deterioration as the annual carbon intensity would be above the medium-term average. Since Statistics Canada data is released almost two years after the calendar year, the benchmark household carbon intensity has been established with the average carbon intensity for 2009 to 2018 but it will be years before any analysis is available on whether the NWT carbon tax is having an effect on carbon fuel use.

### Northwest Territories Household Carbon Emission History

Table 6 shows the annual emissions attributed to households, the annual NWT population as of July 1st of the year from Statistics Canada data, and the derived emissions per capita. Population has increased slightly while carbon emissions appear to be trending lower. Therefore, because population increased as carbon emissions decreased, per capita carbon emissions declined from 2009 to 2018.

Over the 2009 to 2018 period, the Canadian average household carbon emissions of 4,069 kilograms per person was 402 kilograms per person higher than average NWT household carbon emissions of 3,667 kilograms per person.

TABLE 6: NWT HOUSEHOLDS AVERAGE PER CAPITA CARBON EMISSIONS, 2009 TO 2018

	CO <sub>2</sub> e EMISSIONS (KILOTONNES)	POPULATION (PERSONS)	CARBON INTENSITY (KILOGRAMS PER PERSON)
2009	185	43,156	4,287
2010	151	43,285	3,489
2011	180	43,504	4,138
2012	155	43,648	3,551
2013	144	43,805	3,287
2014	180	43,884	4,102
2015	180	44,237	4,069
2016	157	44,649	3,516
2017	134	44,891	2,985
2018	146	44,981	3,246
<b>AVERAGE</b>	<b>161</b>	<b>44,004</b>	<b>3,667</b>

Sources: Statistics Canada Tables 38-10-0097-01, 17-10-0005-01 and NWT Finance

## MEASURING CARBON INTENSITY IN THE BUSINESS SECTOR

The carbon intensity of the business sector is measured as emissions per dollar of output. Emissions are measured in kilotonnes; business output in chained (2012) million dollars to remove the effect of inflation. To evaluate the success of carbon pricing, reductions in the carbon intensity of the business sector will be measured as the ratio of

carbon intensity in a given year to the carbon intensity of the 2009 to 2018 average. A ratio less than one will indicate improvement because the annual carbon intensity is below the medium-term average; a ratio greater than one will indicate deterioration because the annual carbon intensity is above the medium-term average.

### Northwest Territories Business Sector Carbon Emission History

Table 7 shows the carbon intensity of the Northwest Territories business sector averaged 0.361 kilotonnes per million dollars GDP over the 2009 to 2018 period.

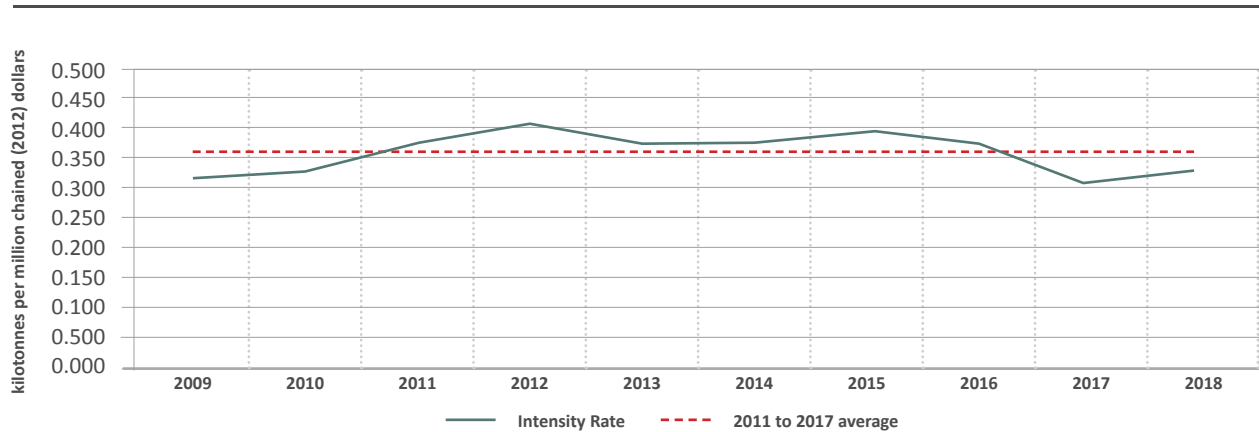
**TABLE 7: CARBON INTENSITY NWT BUSINESS SECTOR**

	ALL INDUSTRY EMISSIONS (KILOTONNES)	GDP, BASIC PRICES (MILLIONS CHAINED (2012) DOLLARS)	CARBON INTENSITY (KILOTONNES PER MILLION CHAINED (2012) DOLLARS)
2009	1,470	4,581	0.321
2010	1,598	4,707	0.339
2011	1,620	4,274	0.379
2012	1,710	4,250	0.402
2013	1,649	4,367	0.378
2014	1,721	4,575	0.376
2015	1,794	4,621	0.388
2016	1,711	4,570	0.374
2017	1,499	4,737	0.316
<b>2018</b>	<b>1,593</b>	<b>4,764</b>	<b>0.334</b>
<b>AVERAGE</b>	<b>1,637</b>	<b>4,545</b>	<b>0.361</b>

Sources: Statistics Canada Tables 38-10-0097-01, 36-10-0402-01, and NWT Finance

Figure 2 shows the carbon intensity of the business sector over time.

**FIGURE 2: CARBON INTENSITY, NWT BUSINESS SECTOR**



Sources: Statistics Canada Tables 38-10-0097-01, 36-10-0402-01, and NWT Finance

Table 8 shows annual Northwest Territories carbon intensity by industry.

**TABLE 8: NWT CARBON EMISSIONS INTENSITY BY INDUSTRY**

	CARBON EMISSIONS (KILOGRAMS) PER MILLION DOLLARS VALUE ADDED										10-YEAR AVERAGE
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Total, All Industries	0.321	0.339	0.379	0.402	0.378	0.376	0.388	0.374	0.316	0.334	0.361
Non-metallic mineral mining & quarrying (BS21230)	0.398	0.398	0.514	0.647	0.636	0.520	0.528	0.384	0.255	0.295	0.458
Electric power generation, transmission & distribution (BS22110)	1.128	1.009	1.092	1.141	1.119	1.436	2.083	1.164	0.965	1.013	1.215
Air Transportation (BS48100)	3.827	3.655	3.153	3.193	3.240	2.908	2.834	2.782	2.543	2.569	3.070
Water Transportation (BS48300)	1.719	2.261	2.509	3.089	2.731	3.077	5.345	7.273	1.538	1.447	3.099
Other provincial & territorial government services (GS91200)	0.202	0.226	0.393	0.273	0.496	0.449	0.403	0.470	0.319	0.342	0.357

**Sources:** Statistics Canada Tables 38-10-0097-01, 36-10-0402-01, and NWT Finance

# Appendix

The following table provides estimated Northwest Territories greenhouse gas emissions based on fuel tax data. Since heating fuel is not taxed under the Northwest Territories fuel tax regime, heating fuel emissions are unavailable in historical fuel tax data.

## ESTIMATED NORTHWEST TERRITORIES GREENHOUSE GAS EMISSIONS BY FUEL TYPE\* 1999-00 TO 2020-21 GREENHOUSE GAS EMISSIONS (KILOTONNES)

	GASOLINE	AVIATION	DIESEL*	RAILWAY DIESEL	TOTAL
1999-00	107.4	90.8	173.0	0.8	372.0
2000-01	93.1	105.3	335.3	1.4	535.1
2001-02	105.1	124.7	455.5	1.4	686.7
2002-03	109.6	101.4	473.4	0.8	685.1
2003-04	111.5	107.5	527.9	2.2	749.0
2004-05	110.8	127.1	596.2	1.4	835.5
2005-06	101.9	122.8	592.7	0.9	818.4
2006-07	108.0	150.3	706.6	2.3	967.2
2007-08	106.2	134.3	626.1	0.5	867.1
2008-09	107.1	131.5	514.9	0.4	753.9
2009-10	104.2	108.7	493.5	0.3	706.6
2010-11	115.3	121.2	517.4	0.3	754.3
2011-12	114.9	139.9	608.3	0.3	863.4
2012-13	118.4	143.3	637.5	0.5	899.6
2013-14	112.5	121.8	656.2	0.5	891.1
2014-15	120.7	130.0	693.7	0.6	945.0
2015-16	118.8	129.9	725.6	0.8	975.0
2016-17	124.2	127.5	673.6	0.4	925.7
2017-18	115.4	138.9	677.2	0.4	931.9
2018-19	116.4	133.9	688.7	0.3	939.3
2019-20	118.3	124.4	620.1	0.2	863.0
2020-21	112.8	90.6	521.8	0.3	725.7

\*Does not include heating fuel.

Sources: Department of Finance Reporting, Treasury and Risk Management Division fuel tax data.

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