FEDERAL GAS TAX FUND IN BRITISH COLUMBIA

2018 Outcomes Report

UBCM

ACKNOWLEDGEMENTS

The outcomes report for the period of January 1, 2014 to December 31, 2016 is made pursuant to the tripartite agreement between Canada, British Columbia and UBCM on the Transfer of Federal Gas Tax Revenue (Gas Tax Agreement or GTA).

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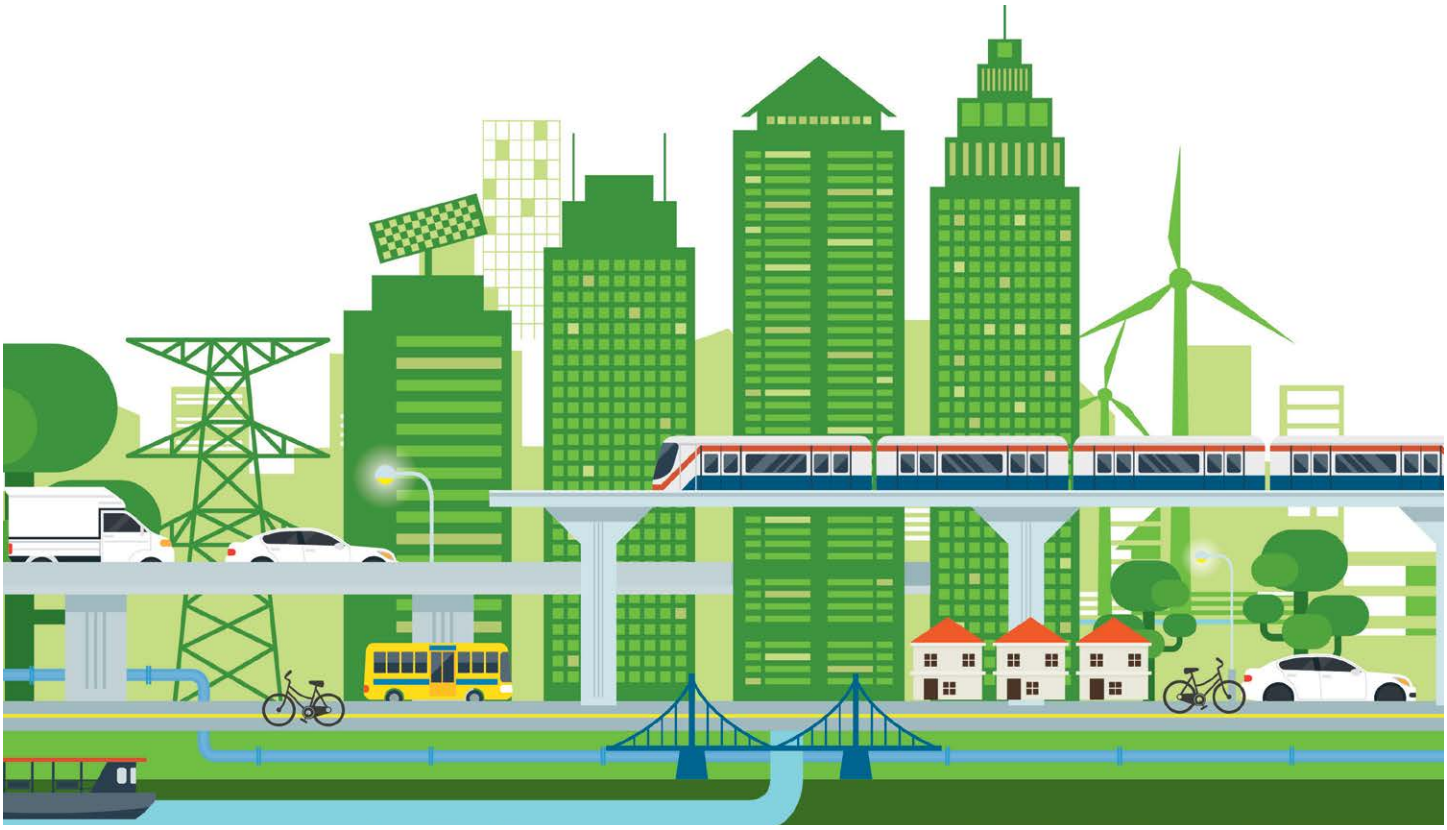

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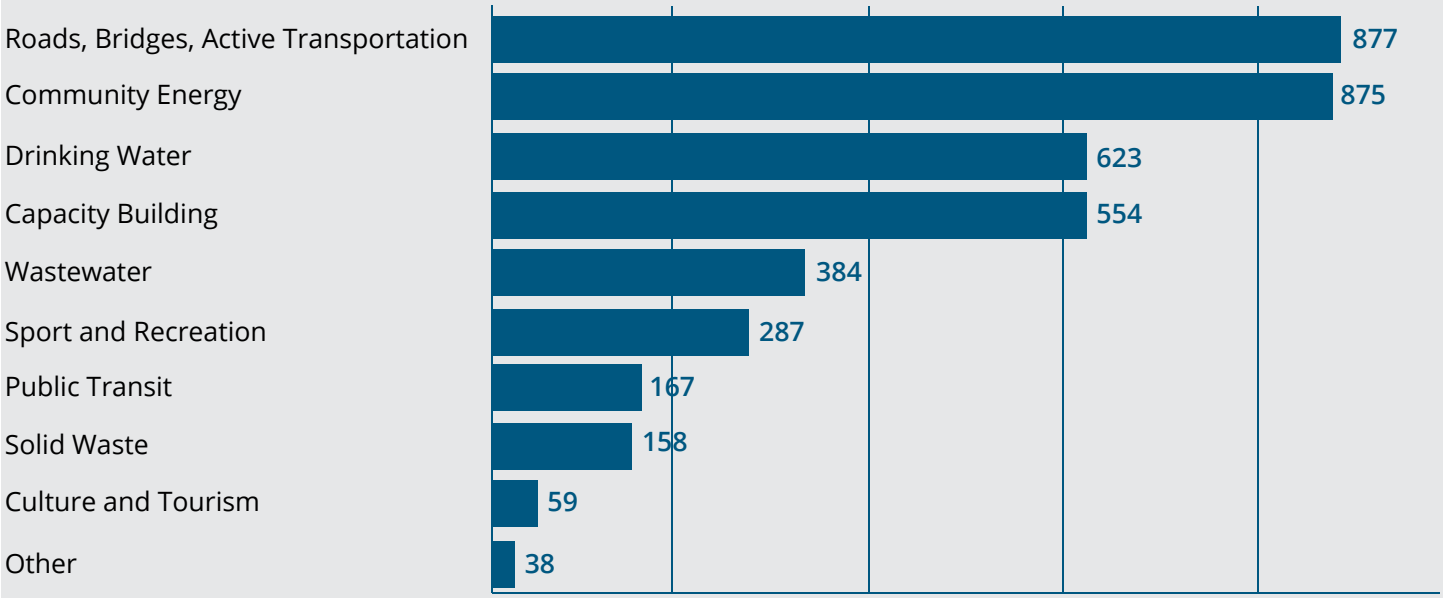
EXECUTIVE SUMMARY

This document analyzes and reports on Gas Tax funded projects completed between January 1, 2014 and December 31, 2016, and continues previous program analysis undertaken by the Union of BC Municipalities, dating back to the programs inception in 2005.

From 2014 to 2016 the federal Gas Tax Fund (GTF) contributed over $624 million towards 1,179 completed capital infrastructure projects in British Columbia. Projects span all eligible investment categories, though the majority of completed projects were for roads, public transit, and water/ wastewater infrastructure. Some of the environmental, economic and social benefits resulting from Gas Tax funded projects between 2014-2016 include:

- Over 69,000 tonnes of greenhouse gas emissions reduced annually;
- 4.1 million kWh of energy generated or saved annually;
- 735 km of road, bicycle lane, and multi-use corridor constructed or improved;
- 110 tonnes of CAC emissions reduced annually;
- 42,994 water meters installed;
- 542 public transit vehicle purchases;
- 8.2% increase in public transit ridership in the Greater Vancouver Region;
- 1485 new spaces per day for public transit users;
- 26 boil water advisories removed;
- 48 water/wastewater treatment plants constructed or improved;
- 174 km of water/wastewater transmission mains installed;
- Energy and efficiency upgrades on 194 sport/recreation facilities and 134 cultural/tourism facilities.

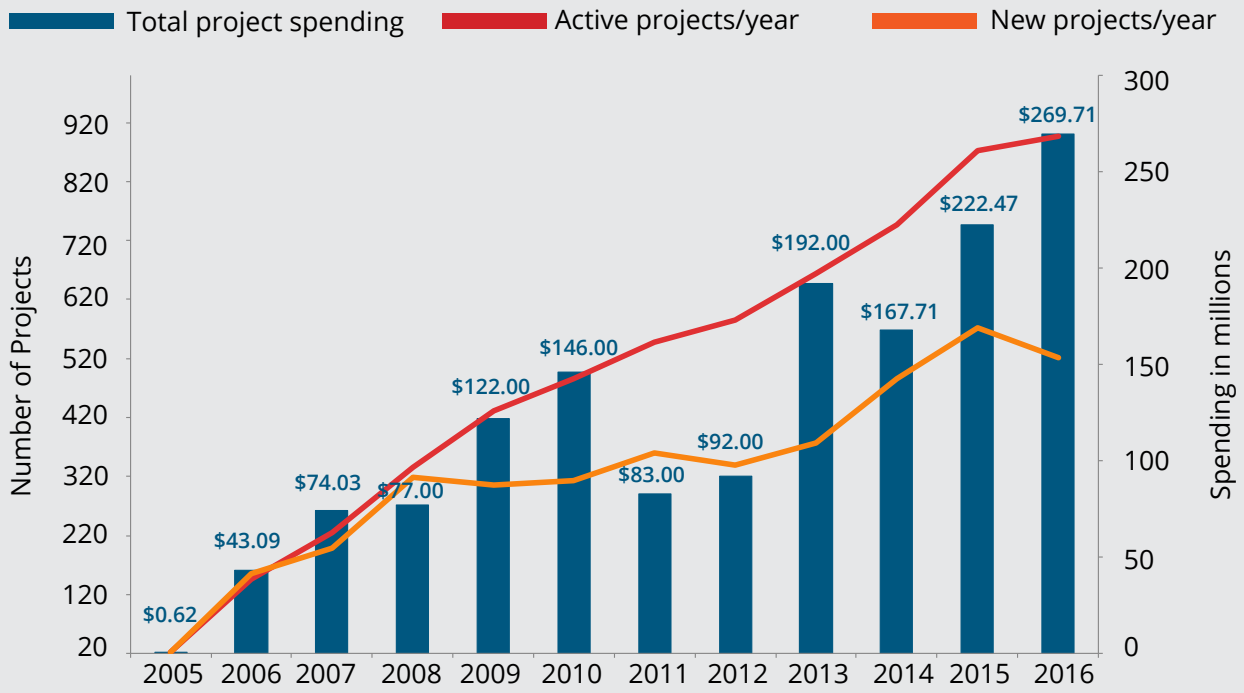
Figure 1: New Gas Tax projects by investment category, 2005 - 2016



PROGRAM BACKGROUND

The federal GTF in British Columbia provides communities with stable, predictable and dedicated funding for eligible infrastructure and capacity building projects. Since 2005, the federal government, through UBCM, has transferred over $2.4 billion to communities across British Columbia who, in turn, expended nearly $1.5 billion undertaking 4022 projects. Since its inception, the GTF program has grown from 22 projects with expenditures of $600,000 in its first year, to expending over $269 million on 896 active projects in 2016. Over this period the rate of annual expenditure by recipients has grown at an average of 22%, while the overall number of projects has grown at an annual average rate of 19%.

Figure 2: Project Statistics, 2005 - 2016



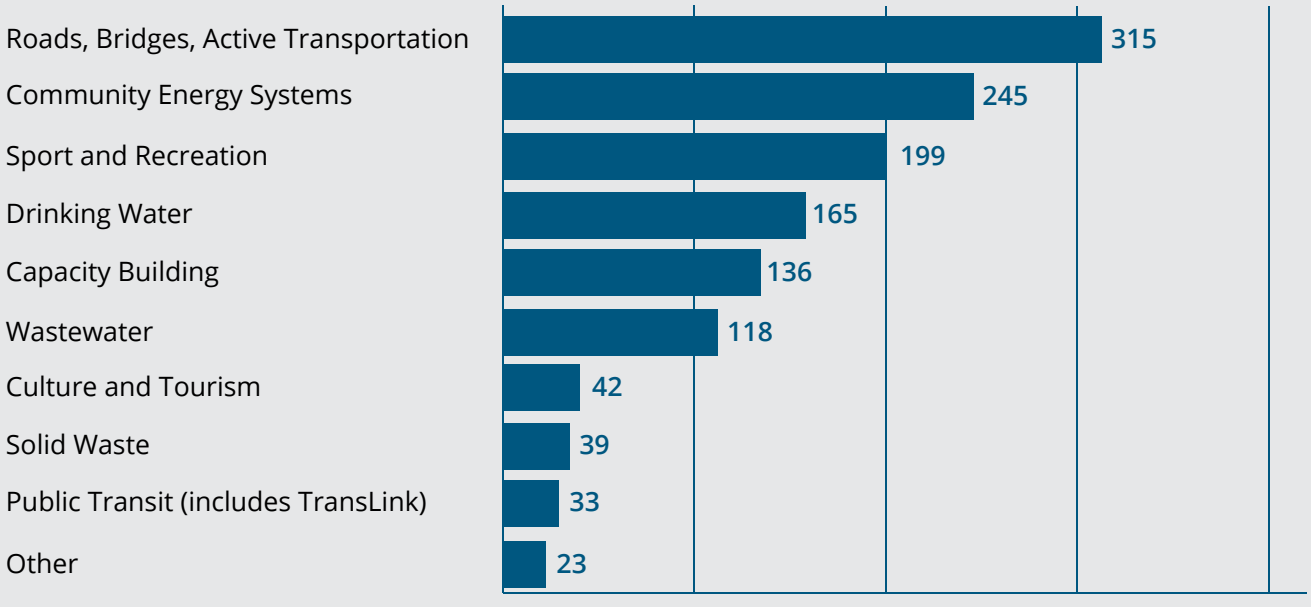
Renewed Administrative Agreement on the Federal Gas Tax Fund in British Columbia

On April 1, 2014, the *Renewed Administrative Agreement on the Federal Gas Tax Fund in British Columbia* (Agreement or GTA) took effect. The tripartite Agreement between Canada-British Columbia-UBCM provides the administrative framework for the delivery of federal Gas Tax funding to local governments and other recipients in British Columbia through 2024.

In its first iteration, the federal Gas Tax Fund required local governments and other eligible recipients to apply funding towards a range of eligible infrastructure and capacity building projects. Recipients of funding were also required to demonstrate the achievement of environmental outcomes of cleaner air, cleaner water or reduced greenhouse gas emissions as a result of completed infrastructure projects.

When the Agreement was renewed in 2014, additional eligible project categories were added, such as sport, recreation, tourism and cultural infrastructure. The renewed agreement also requires recipients to demonstrate how completed infrastructure projects contribute to one of three national objectives of *productivity and economic growth*; a *clean environment* and *strong cities and communities*. While investments in areas such as water management, transportation works, and community energy initiatives still account for 60% of all projects, over the past three years, new investment categories have grown to account for 22% of reported projects and $25 million in annual Gas Tax funding in 2016 (Fig. 1 & 3).

Figure 3: Count of completed projects by investment category, 2014-2016



GAS TAX PROGRAM STREAMS

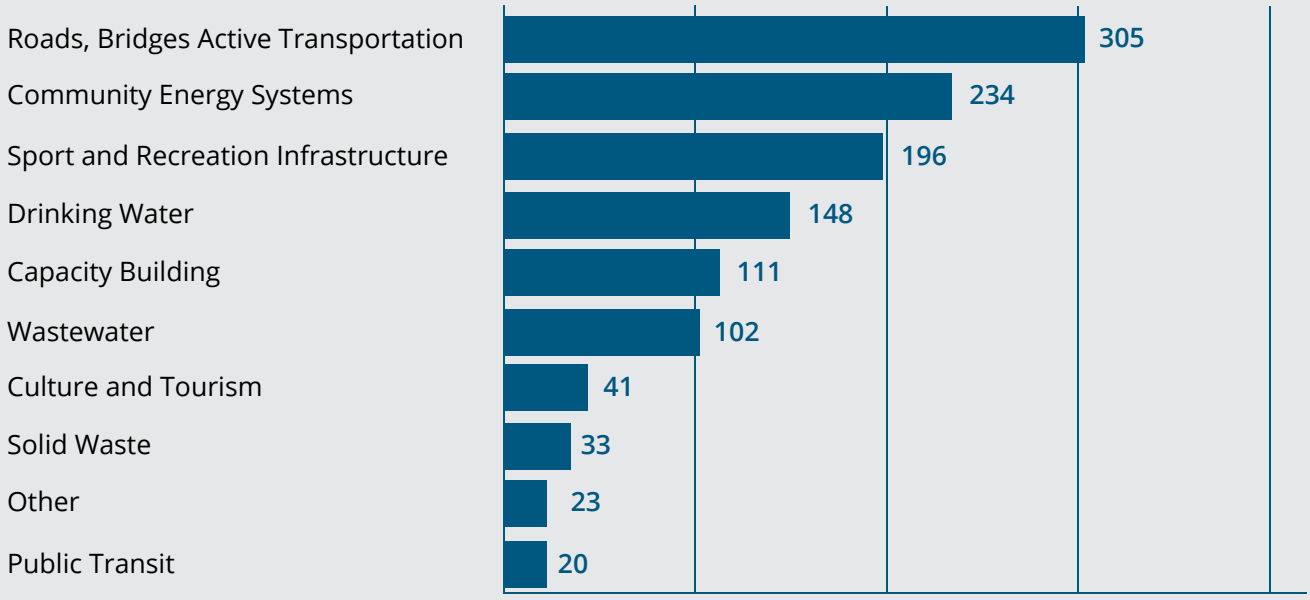
Upon the renewal of the Agreement in British Columbia, funding delivery was realigned through three funding streams: the Community Works Fund (CWF), the Strategic Priorities Fund (SPF) and the Greater Vancouver Regional Fund (GVRF).

Community Works Fund

The Community Works Fund (CWF) is available to all local governments in British Columbia. CWF is delivered twice annually based on a per capita formula with a funding floor for all recipients. Local governments make choices about which eligible projects to fund and report annually on these projects and the ways in which they lead towards the achievement of the national objectives for the program. Since 2014, 1826 CWF projects have been reported and account for $311.8 million in cumulative GTF investment. Accounting for $297 million of expenditures, 1,543 of these projects are capital infrastructure investments. Additionally, 283 capacity building projects were undertaken, accounting for $14.7 million in spending.

Using the Community Works Fund, recipients spent $138.8 million on 1,213 completed capital infrastructure projects between 2014 and 2016 (Figure 4). Public Transit, Local Roads, Bridges and Active Transportation accounted for 52% of projects and $47.1 million of CWF spending, or 61% of expenditures. Sports and Recreation accounted for 15% of projects and $13.7 million in expenditures, while investments in water infrastructure accounted for 17% of all projects and $16 million in expenditures. For completed CWF projects, for every $100 of GTF expended, local governments leverage an addition $190 from other sources.

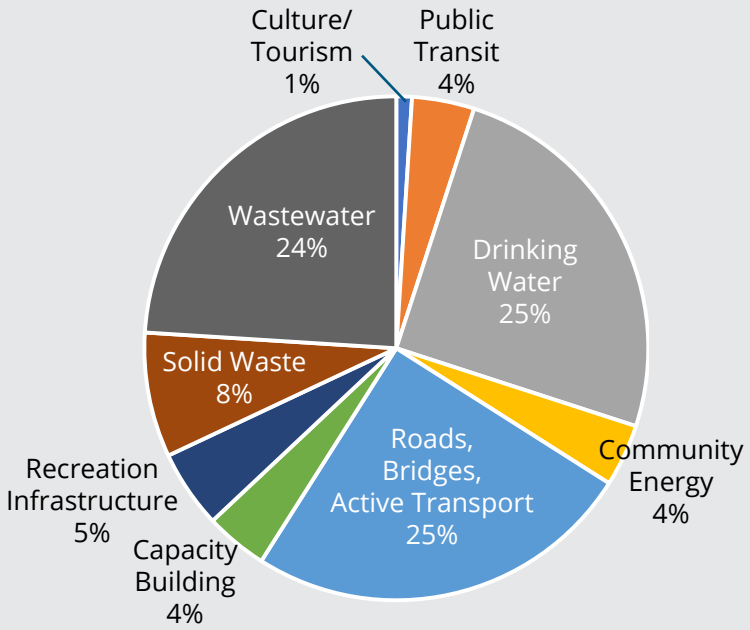
Figure 4: Complete CWF projects by investment category, 2014-2016



Strategic Priorities Fund

The Strategic Priorities Fund (SPF) is an application-based program available to local governments and eligible recipients outside the Greater Vancouver Regional District. SPF supports infrastructure and capacity building projects that are large in scale, regional in impact or innovative, and align with the GTA's national objectives of *productivity and economic growth*, a *clean environment*, and *strong cities and communities*. Since 2014, 85 local governments have reported spending on 170 pooled-fund projects. These include projects from both the new SPF fund and prior Gas Tax funding programs (Innovations Fund, Regionally Significant Projects Fund and General Strategic Priorities Fund), which collectively account for GTF expenditures of $192.9 million.

Figure 5:
Gas Tax Strategic Pooled Fund Project Spending



Greater Vancouver Regional Fund

The Greater Vancouver Regional Fund (GVRF) provides funding for regional transportation investments within the Greater Vancouver Regional District and its member municipalities. The GVRF funds regional transportation projects proposed by TransLink and approved by the GVRD board. Since 2014, GVRF has undertaken more than 20 major projects, with GTF providing more than $271 million in funding for improvements to transportation infrastructure in the Greater Vancouver region. On an annual basis, the GVRF accounts for the highest percentage of expenditures, averaging 40% of total annual expenditures, while barely accounting for 1.5% of all projects reported. Projects undertaken using GVRF funding impact a population of 2.46 million people living in the Metro Vancouver region. Projects funded through the GVRF must also demonstrate the achievement of one or more of the national objectives for the program.

Since 2014, 85 local goverments have reported on 170 pooled-fund projects, accounting for $192 million in GTF expenditures

REPORT METHODOLOGY

The Agreement requires UBCM to provide Canada and British Columbia with an outcomes report by March 31, 2018 and make it publicly available. In its outcomes report, UBCM is required to show in aggregate the degree to which investments through the federal Gas Tax Fund are supporting progress towards the achievement of beneficial impacts in communities, as well as the impact of the funding provided, including incremental spending and progress towards improving local government asset management. UBCM has produced two previous outcomes reports in 2009 and 2012.

2009 and 2012 Outcomes Report

In May 2009, the Gas Tax Partnership Committee approved the mandatory and non-mandatory indicator measures for the seven eligible project categories under the Agreement. These indicators offered flexibility in reporting by providing recipients the option to report on all possible outcomes. Two outcome reports were published using this method, the first in 2009 and again in 2012. These outcomes reports resulted in the analysis of more than 700 sustainably focused GTF projects, accounting for over $750 million in expenditures and more than 64,722 tonnes of GHG emissions reduced annually.

The indicators measured for the 2018 outcomes report were established in accordance with the Gas Tax performance measurement framework developed and approved by the Gas Tax Partnership Committee. UBCM also worked in collaboration with the provincial Ministry of Municipal Affairs and Housing and the Ministry of Transportation & Infrastructure to ensure that the proposed performance indicators aligned with other existing and future capital funding programs in BC. In British Columbia, recipients determine which national outcome (*productivity and economic growth*, a *clean environment* and *strong cities and communities*) best suits their project.

Performance Measurement (PM) indicators have been split into two components: Output and Outcome indicators. Outcome performance indicators include both quantitative and qualitative measures. To facilitate aggregation at the provincial and national level, a minimum of one output and one outcome (quantitative) were required to be reported on by all Ultimate Recipients. Together, outputs and outcomes demonstrate progress towards the achievement of the national objectives for the program.

Under the Greater Vancouver Regional Fund, and consistent with past practice in previous outcomes reports, TransLink is required to develop and report on a more robust set of performance indicators which, moving forward, will serve as a reference for performance measurement for projects undertaken using the GVRF. With the exception of TransLink, all recipients are required to meet approved reporting requirements.

Reporting Threshold

The most recent project data was collected from local governments through UBCM's online reporting system from November 2017 through February 2018. UBCM requested data on any project reported as complete between 2014 and 2016 with over $100,000 of Gas Tax funds invested. This threshold was first implemented in the 2012 Outcomes Report and has proven to be an effective strategy for several reasons. First, adhering to the threshold allows the report to collect data from large infrastructure investments which account for 95% of total Gas Tax investment in this period. Second, it lessens the administrative burden of reporting on local government staff.

Data Set

This report provides outcomes and output data for 491 Gas Tax funded capital infrastructure projects completed between January 1, 2014 and December 31, 2016, by 141 eligible recipients. 140 local governments returned or provided information for 484 projects - a 98% response rate. Once collected, data measuring output and outcome performance was analyzed and reported for each investment category. This performance outcomes report is the first to analyze the expanded eligible investment category list and the first report to include outcome indicators that demonstrate progress towards meeting national objectives of a *clean environment*, *strong cities and communities*, and *productivity and economic growth*.

The outputs and outcomes detailed in this report are based on data that was self-reported or collected by local governments and other recipients. In many cases, local governments provided data regarding project outputs but many did not provide tangible outcome metrics relating to the national program objectives. This was due, in part, to a lack of standard practice within local governments to measure increases and decreases, particularly in the category of roads and active transportation, as well as the culture/tourism/recreation and sport infrastructure categories. As a result, the outcomes achieved by these projects may be greater than listed in the report.

For projects that did not report GHG emissions reductions, calculation methodologies from the provincial Ministry of Municipal Affairs and Housing were applied to calculate emission reductions. The methodologies used for these calculations can be found in Appendix A, while a breakdown of the outcomes and outputs collected from recipients is listed in Figure 6. A list of the total number of projects completed by local government is attached in Appendix B. A high-level overview of the reporting period is located on page 8. Capacity building data and statistics are largely omitted from this report as tangible outputs and outcome are difficult to measure. Project counts are occasionally added to high-level statistical overviews to help paint a more complete picture of local government activity.

Between 2014 and 2016 recipients expended over $663.8 million of Gas Tax funding on 1667 projects

Summary of Reporting Period: A Macro-Overview of Gas Tax Activity

As previously mentioned, to help ease the administrative burden on all participants, UBCM established a Performance Measurement reporting requirement for projects completed between 2014-2016 that expended more than $100,000 in Gas Tax funding. The following information includes all projects completed during the reporting period, while the outputs and outcomes statistics located later in the report are generated from projects meeting our reporting threshold.

Between 2014 and 2016, recipients expended over $659.9 million of Gas Tax funding on 1667 individual projects. Of those projects, 1315 were reported as complete, while 352 will be completed in future years. Complete projects accounted for approximately $631.8 million of Gas Tax funds over this period.

2014 - 2016 Local Government Statistics

7
Average number of completed projects

$369, 391
Average cost per completed project

10.5
Average number of active projects

Complete Project Expenditures: 2014 - 2016		
Investment Category	Projects	Expenditures
Public Transit	33	$340,216,138.33
Roads, Bridges, and Active Transportation	315	$122,492,847.26
Drinking Water	165	$57,244,559.44
Wastewater	118	$44,598,411.20
Community Energy Systems	245	$22,653,949.12
Sport and Recreation Infrastructure	199	$20,114,408.13
Solid Waste	39	$12,714,754.80
Tourism and Cultural Infrastructure	42	$2,334,105.48
Capacity Building	136	$6,869,651.80
Disaster Mitigation	13	$1,956,925.71
Other (RLA, BR, BC, SLR)	10	$617,447.27
Totals	**1315**	**$631,813,198.54**

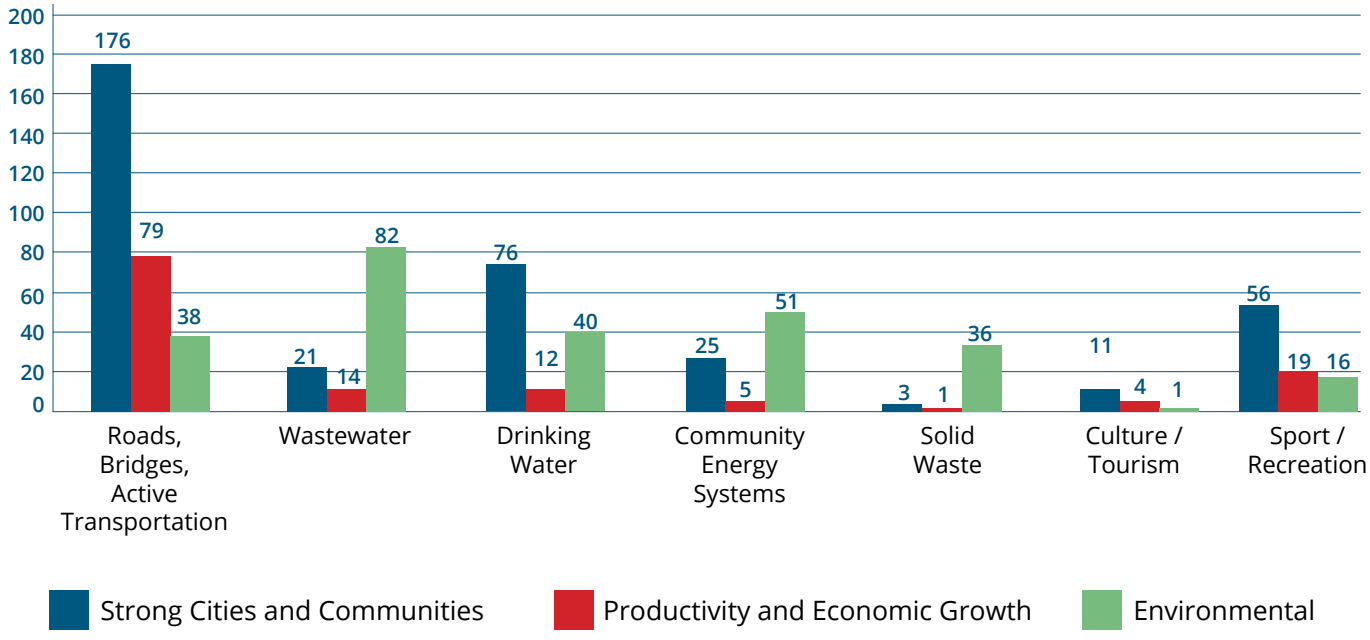
National Objective Analysis

Each project qualifying for analysis was required to report on at least one project output and one project outcome. Roughly 45% of projects reported multiple outcomes achieved and local governments averaged more than one national objective per project. The investment categories most frequently linked to the *strong cities and communities* objective are drinking water, sport/recreation/culture/tourism and local road projects. On average, 62% of the outcomes generated by these projects were reported as building stronger communities. *Strong cities and communities* was the most cited national objectives, as indicated by 48% of reported outcomes (Figure 6).

The national objective of *clean environment* is cited most in the investment categories of solid waste (90%), wastewater (70%), and community energy systems (63%). An environmental outcome is achieved in 42% of all projects.

Productivity and economic growth is the least cited national objective, indicated by only 17% of outcomes. Local roads and bridges and active transportation and the conglomeration of sport/recreation/culture/tourism projects cited *productivity and economic growth* in 25% of outcomes.

Figure 6: Performance Measurement National Objectives Analysis Investment Category



Outcomes and Outputs by Investment Category

Local Roads, Bridges, and Active Transportation

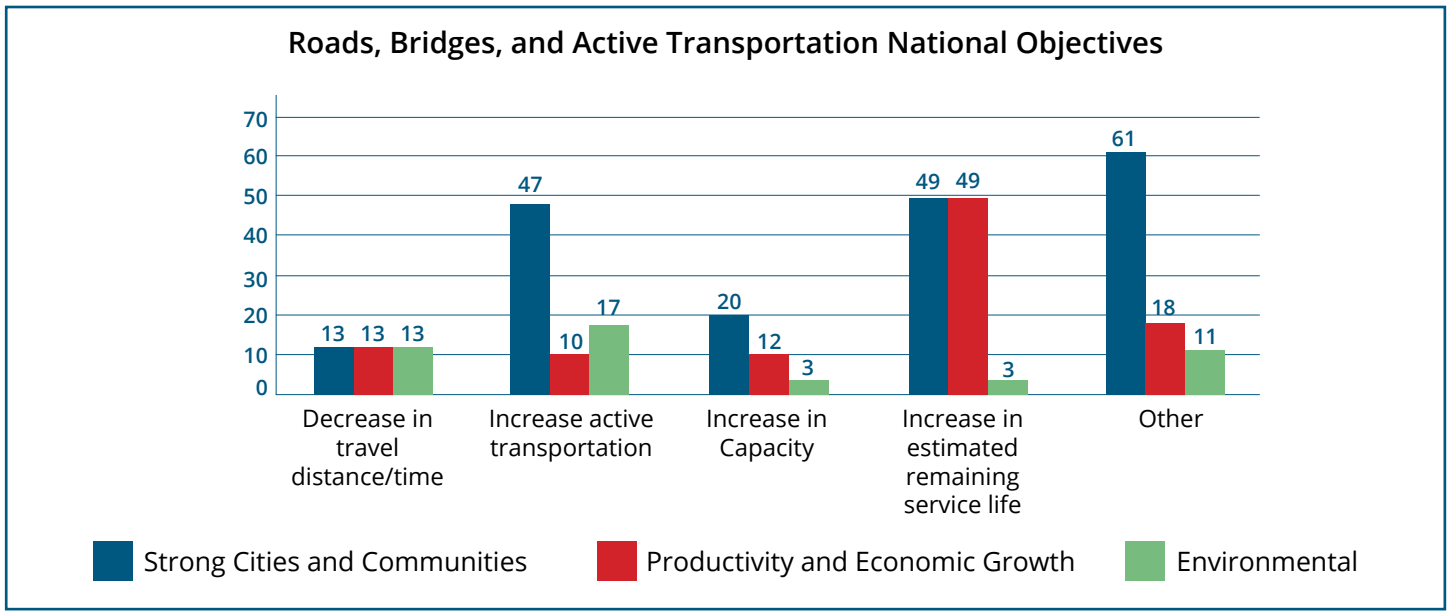
The investment category of local roads, bridges, and active transportation saw the highest number of projects completed between 2014 and 2016. Road works were primarily focused on renewal and re-paving of aging road infrastructure, as 84% of projects reported replacement or enhancement as the type of investment. Smooth roads can reduce carbon emissions from vehicles by as much as 4%.

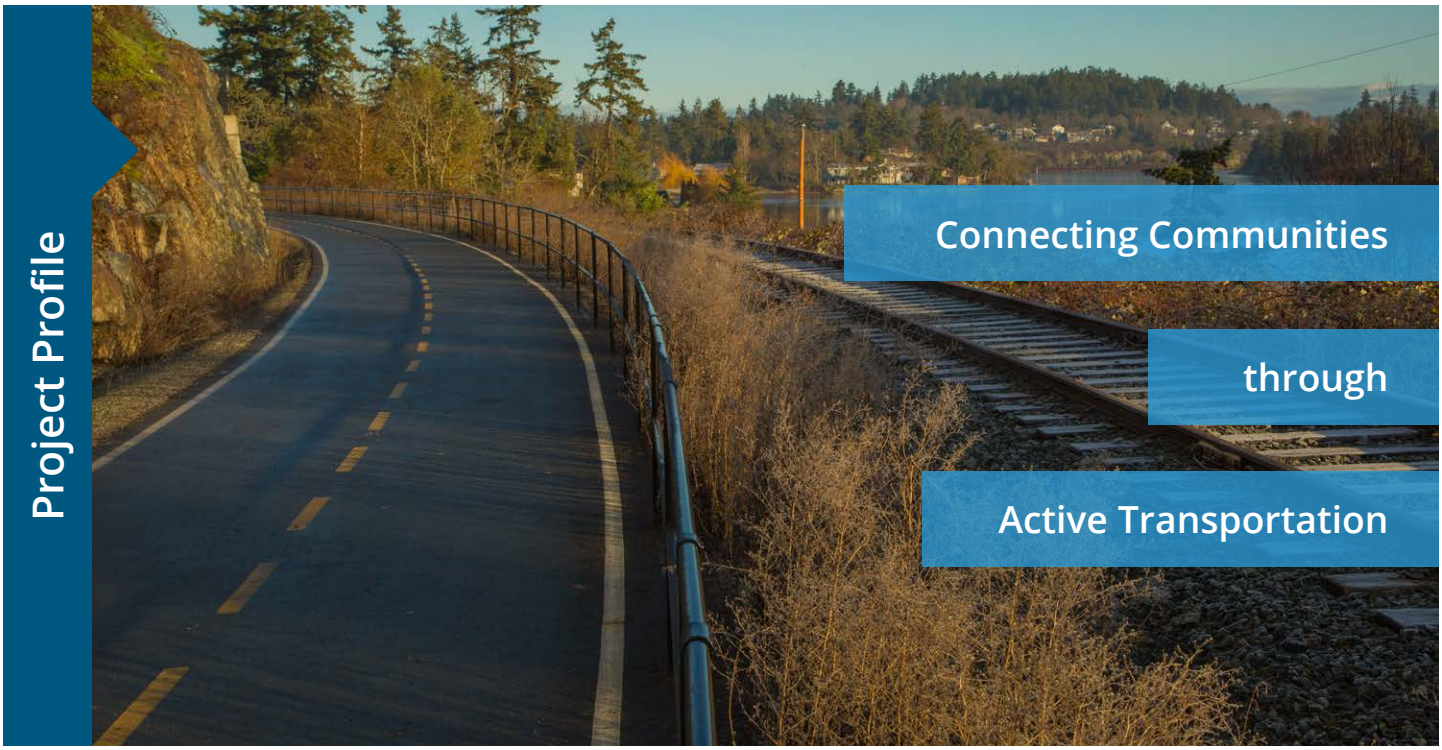
Many communities took advantage of economies of scale and along with road resurfacing, also completed substantial infrastructure upgrades including drinking water/wastewater pipe replacement, curbing/drainage upgrades, improved streetlights and road markings, and improved sidewalk infrastructure. An additional 30 km of transmission main was installed during roads projects.

Active transportation projects included the addition of bike lanes, multi-use trails, and new sidewalks in high traffic corridors that promote active lifestyles with their communities while, at the same time, offering modes of transportation that reduce traffic congestion and carbon emissions. This work also included active transportation network support infrastructure, such as bike storage lockers, intersection boxes, road markings and signage, and separated active transportation corridors. These projects provide commuters with safe and accessible alternative modes of transportation.

Local Roads, Bridges, and Active Transportation		
Total Reported Projects	182	
Total Gas Tax Funds ($)	125,231,379.00	
Total Project Cost ($)	237,108,886.00	
Outcomes/Outputs	**Data**	**Reported Projects**
Decrease in Travel Distance (km/day)	448,451	29
Increase in Active Transportation (annual trips = reduction in vehicles + increase in active transportation)	404,478	71
Increase in Capacity (Vehicles)	5,900	49
Reduction in GHG emissions (tCo2e)	50,123	163
Increase in Estimated Service Life (Average years)	27.1	93
Increase in Estimated Service Life (Total years)	3,447	179
Infrastructure Construction		
Active Transportation (km)	**301.27**	**167**
Bicycle Lanes (km)	152	58
Pedestrian Bridges (km)	1.18	5
Sidewalks (km)	89.63	83
Multi-use paths/Trails (km)	58.46	25
Roads Infrastructure (km)	**434.6**	**114**
New Road Construction (km)	13.44	16
Existing Road Improvements (km)	421.2	83
Gravel Road Paving (km)	8.22	2
Bridges (km)	0.53	7
Roundabouts (number)	6	6
Improved Curbing/Ditching/Drainage (km)	49.7	36
Intelligent Transportation Systems (#)	24	4
Cross Walks/Intersections (#)	27	23
Traffic Lights (#)	43	24
Water Mains (km)	30.2	28

Due to the broad array of work that can occur in conjunction with a road project, many communities reported multiple national outcome objectives for a single project. The most reported outcome indicator was an increase in estimated service life, the average of which was 27 years. Respondents viewed these projects as equally promoting *strong cities* and *economic growth*. The most cited outcome indicator was safety and accessibility, which is represented by the *Other* project category.





The Capital Regional District is constructing the second phase of the E&N Rail Trail thanks to Federal Gas Tax funding.

The completed project will provide 2.2 km of paved multi-use trail along the E&N railway line from the 4-Mile Bridge to an interchange in the Town of View Royal. This project adds to the 10 km of trail constructed through the first phase of this project. The E&N Trail links the communities of Victoria, Esquimalt, View Royal and Langford, and provides a critical connection with the 55 km Galloping Goose Regional Trail. In 2017, the E&N Trail was the transportation choice for 328,910 residents and visitors in the Capital Region.

Project Profile

Expanding Modal Capacity

The District of North Cowichan replaced an aging bridge over the Chemainus River using Federal Gas Tax funding.

The original single-lane bridge was a 58 year-old wood timber construction without pedestrian or cycling capacity. The bridge replacement combines a steel plate girder design with a concrete deck and is anticipated to have a serviceable life of at least 75 years. A wider deck allows two-way traffic and will include a dedicated pedestrian and cycling lane as part of the Trans Canada Trail and the Cowichan Valley Regional Trail and Cycle Network. This integrated project also included a partnership with the Halalt First Nation to enhance a Chemainus River side channel for salmon rearing.

Public Transit

Outside of the GVRF, a total of four public transportation projects qualified for the reporting threshold. Outputs and outcomes from these projects include infrastructure improvements at eleven bus stops, the paving of a park and ride facility with a capacity for 500 vehicles and two bus purchases which increased ridership by 136 persons per day.

A complete summary of TransLinks progress in improving public transportation in the Metro Vancouver region can be found starting on page 33.

Project Profile

Fuelling Innovation in Public Transportation

BC Transit used Federal Gas Tax funding to construct a compressed natural gas (CNG) fuelling station to service its low-emission bus fleet within the Regional District of Nanaimo.

Natural gas is delivered to the fuelling station through the same network that delivers supplies homes throughout the region. The natural gas is compressed onsite by a state of the art system and dispensed into high-pressure on-board storage tanks. In comparison to conventional buses, use of CNG reduces fleet greenhouse gas emissions by 15 to 25 per cent and costs 25 to 50 per cent less than traditional diesel fuel. Compared to diesel, the CNG-powered buses boast significantly quieter engines and simplified emission systems. Rider feedback indicates that the ride quality is improved due to the quieter operation of these buses. Adoption of clean burning CNG also supports British Columbians across the province employed by the natural gas industry.

Wastewater

Throughout the reporting period, recipients used federal Gas Tax funds to improve wastewater transmission mains, collection pipes, treatment and pumping facilities, and storage infrastructure. Highlights include more than 28 km of pipe upgraded or installed and an increase of almost 137,000 m^3 in new treatment capacity, and when combined with improved treatment capacity, this number reaches 172,818 m^3 of improved wastewater treatment per day. Many of the communities constructing new wastewater treatment infrastructure included the total capacity of the new system and this number is referenced in the increase of homes connecting to an existing system metric, as communities now have connected, or created capacity for, more than 34,000 new residents.

New pipe accounted for 62% of transmission infrastructure. Benefits from these projects include improving outfall capacity, eliminating leakage from pipes, and connecting new homes to a system.

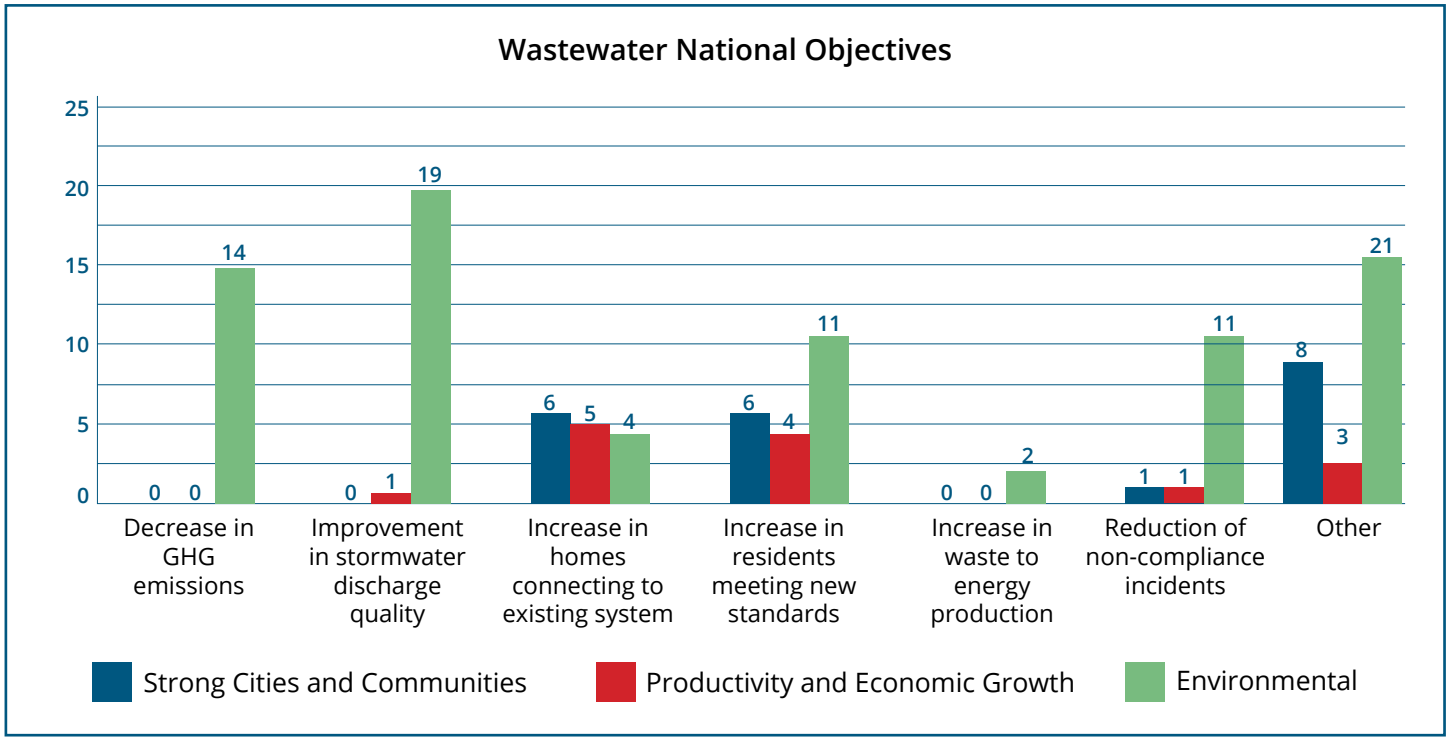
In total, seven communities reported the removal of 14 individual non-compliance incidents.

Wastewater		
Reported Projects	74	
Total Gas Tax Funds ($)	92,524,725	
Total Project Cost ($)	146,963,264	
Outcomes / Outputs	**Data**	**Reported Projects**
Projects Reporting Cleaner Water (#)	74	74
Decrease in GHG emissions (tCo2/year)	642	13
Improvement in storm water discharge quality (m^3/day)	35,568	22
Increase in number of homes connecting to an existing system (#)	32,248	18
Increase in number of residents served meeting new standards (#)	415,371	49
Increase in waste to energy production (kWh/year)	100,330	2
Reduction of non-compliance incidents (#)	14	13
Facilities, equipment and pumping stations (#)	**21**	**19**
New facilities, equipment, and pumping stations (#)	10	8
Improved facilities, equipment, and pumping stations (#)	11	9
Storage Infrastructure (m^3)	**1,402,259**	**14**
New storage infrastructure (m^3)	41,700	6
Improved storage infrastructure (m^3)	1,114,484	8
Transmission mains, collection pipes (m)	**30,939**	**31**
New transmission mains, collection pipes (m)	19,770	11
Improved transmission mains, collection pipes (m)	11,169	20
Treatment capacity (m^3/day)	**172,818**	**28**
New treatment capacity (m^3/day)	136,961	9
Improved treatment capacity (m^3/day)	35,857	19
Other		
Landscape level drainage work (acres)	44	3
Drainage basins/Sanitary main units (#)	277	8

A *clean environment* is the most cited national objective for wastewater projects. Many projects mentioned an anecdotal decrease in GHG emissions due to improved wastewater infrastructure, however, actually measuring the decrease in energy usage proved difficult to quantify for many communities, due either to capacity reasons or too little time having passed since project completion.

Increasing the number of homes connecting to a system and increasing the number of residents meeting new wastewater treatment standards are viewed by respondents as building *strong cities and communities* and aiding *productivity and economic growth*, while a decrease in the number of non-compliance incidents is viewed as an *environmental* outcome.

Project outcomes reported by recipients in the *Other* category include increased flood resilience, aiding in the removal of a boil waster advisory, improved road and slope stability, and the extension of a municipal boundary to include more residents.



Project Profile

Expanding and Improving Wastewater Treatment

The District of Lake Country upgraded its wastewater treatment plant with Federal Gas Tax funding.

The renewed facility doubled plant capacity to allow for the extension of sanitary sewer service to District residences and provide capacity for future development. The project added a second bioreactor to improve aeration efficiency, more building space for blowers, a laboratory, and an operations centre. Other components of the upgrade included improvements to the foul air handling system and an energy efficient HVAC system and a new effluent disposal system. The new facility reduced operational energy consumption by 50%, equating to a savings of 550,000 kWh annually. It also provides improved protection of groundwater and surface waters through cleaner effluent and reduces the amount of hydrogen sulfide and methane released into the environment.

The new facility reduced operational energy consumption by 50%

50%

Drinking Water

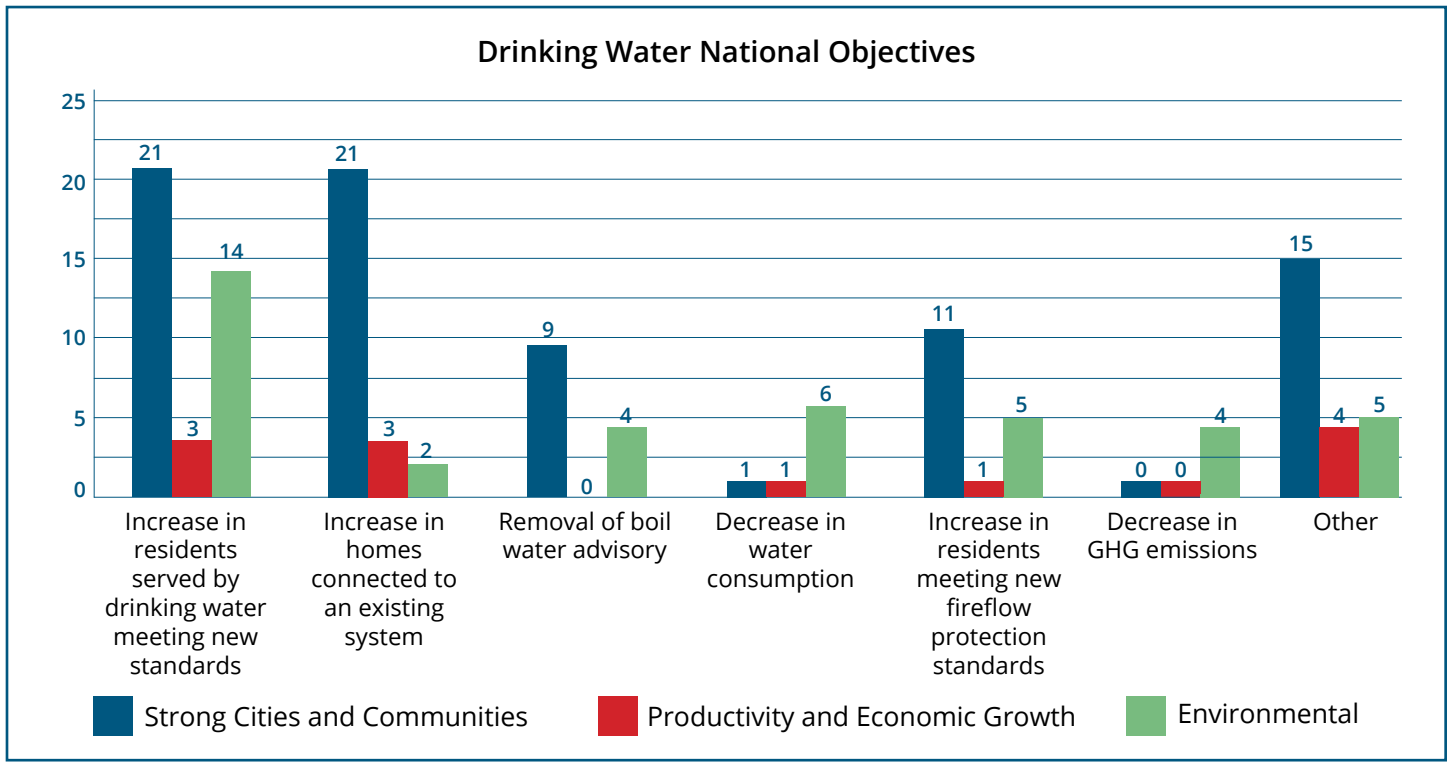
A safe and dependable supply of drinking water is critical to the resiliency of all regions. Drinking water infrastructure projects completed during this period helped supply more than 180,000 people with cleaner drinking water. To aid in reducing water waste, almost 43,000 new water meters were installed in three different communities. Additionally, more than 8,000 residents received increase fire flow protection standards and 10 separate communities had 26 boil water advisories lifted.

In addition to 51,000 m^3 of increased storage capacity, this reporting period saw two new water treatment facilities constructed, over 60 pieces of equipment installed and more than 100 km of new and improved transmission main installed. Highlights of the equipment installed, include pressure-reducing valves, pump stations, treatment equipment such as UV lights and filtration units, and SCADA monitoring systems.

Drinking Water Projects		
Reported Projects	88	
Total Gas Tax Funds ($)	61,749,963	
Total Project Cost ($)	84,142,081	
Outcomes / Outputs	**Data**	**Reported Projects**
GHG Emission Reductions (tCo2e/year)	**56.79**	**4**
Decrease in water consumption - Outcome in m^3/year	2,148,642	8
Increase in number of homes connected to an existing system (#)	9,851	33
Increase in number of residents meeting fire flow protection standard (#)	9,146	16
Number of residents served by drinking water meeting new standards (#)	185,568	71
Removal of Boil Water Advisory (#)	26	13
New water meters (#)	42,994	6
Facilities/equipment (pumping stations, valves, etc.) (#)	**61**	**18**
New facilities/ equipment (#)	12	11
Improved facilities/ equipment *#)	49	7
Storage - Output in m^3	**51,537**	**24**
New Storage (m^3)	45,190	12
Improved Storage (m^3)	12,347	12
Transmission mains, distribution pipes (m)	**115,153**	**35**
New Transmission mains, distribution pipes	18,582	12
Improved Transmission mains, distribution pipes	96,577	23
Treatment (including wells) (m^3/day)	**201,489**	**27**
New Treatment (m^3/day)	119,124	14
Improved Treatment (m^3/day)	82,365	12

Strong cities and communities is the most reported national outcome in the drinking water category. Supplying clean drinking water to communities and removing boil water advisories undoubtedly improves community resiliency. Environmental outcomes were cited but, as with wastewater projects, reporting of GHG emissions proved difficult to capture.

The two most common outcomes listed in the *Other* category are *clean environment* and *strong cities and communities*. The former by reducing the amount of chemicals used to treat drinking water and the latter through the reduction of dependence on a single source for drinking water.



Drinking water infrastructure projects completed during this period help supply more than 180,000 people with cleaner drinking water

Project Profile

Improving Water Treatment

The Village of Clinton upgraded its water treatment plant and water reservoir thanks to Federal Gas Tax funding.

The project saw the construction of a new filter treatment system. By passing untreated water through 28 membrane filters prior to chlorination, the Village has eliminated the need for boil water advisories to local residents and fulfilled all current treatment standards. The addition of a 480,000-gallon reservoir also increases the resilience of the community. Previously, during a power outage the Village would be without water within three hours. The new reservoir provides the Village with water for up to three days and has increased the Village's water capacity to respond to fire emergencies.

Community Energy Systems

Local governments undertook an array of community energy projects by employing alternative energy technology such as micro-hydro, bioenergy, solar panels, and energy loops in municipally-owned facilities. The outcomes of these projects help to reduce a community's dependence on fossil fuels for heating and electricity. Community energy projects also help reduce annual operational costs by decreasing the amount of energy required to heat publicly owned infrastructure.

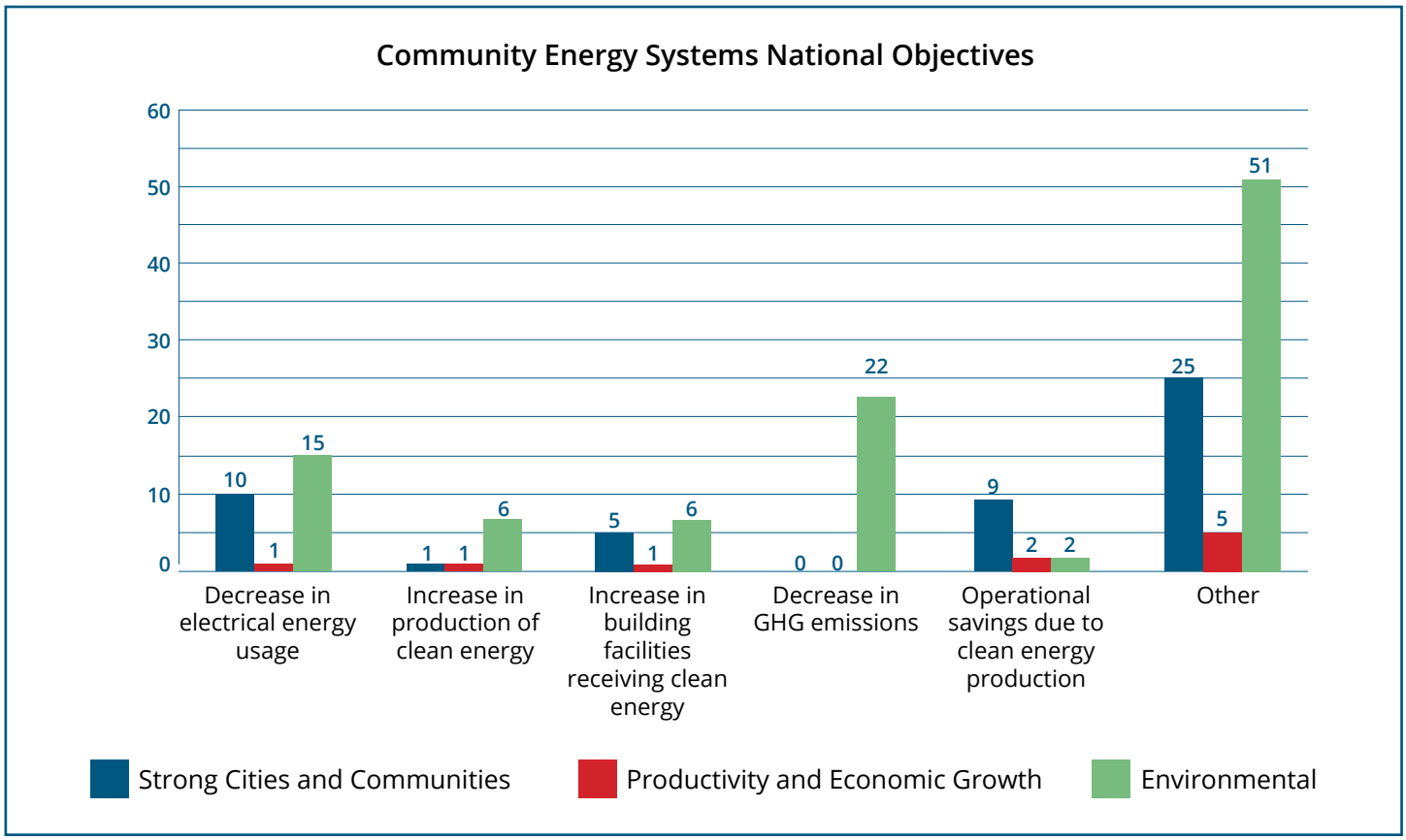
The most common project undertaken by respondents was the upgrade of an HVAC system, such as a furnace or boiler system. These units often see an average decrease in energy use of 20% when upgraded. However, many communities cited that once HVAC systems are improved, occupancy tends to increase, along with energy use. In fact one respondent noted, "with a new furnace system we are able to keep the building five degrees warmer for the same annual cost," and though a decrease in energy use was achieved in many instances, baseline measurements were not established prior to the installation of the new system.

Over 34,000 m^2 of community buildings received upgrades, these include six new alternative energy systems, five retrofit systems and 2,600 light bulbs converted to LED. These conversions took place in a variety of locations, including sport/cultural infrastructure such as arenas and theatres, local community centers, and streetlights.

Community Energy Projects		
Reported Projects	55	
Total Gas Tax Funds ($)	15,350,651	
Total Project Cost ($)	55,020,034	
Outcomes / Outputs	Data	Reported Projects
Decrease in energy usage (kWh/year)	4,031,532	26
Decrease in natural gas usage (GJ/year)	31,428	4
Propane use reduction (litres/year)	70,125	2
Decrease in GHG emissions (tCo2e/year)	976	22
Electric vehicle infrastructure (#)	5	5
Increase efficiency post retrofit (avg. % of energy savings)	56	4
Increase in production of clean energy (kWh/year)	615,675	8
Increase in waste to energy production (kWh/year)	-	-
Operational savings due to clean energy production (Avg. Annual Savings)	15,226	13
Energy systems - Wind/solar/thermal/geothermal (#)	11	8
New green energy systems	6	6
Retrofit green energy systems	5	2
Hydrogen Infrastructure - Output in total number	-	-
Green Building(s) Infrastructure (m^2)	48,264	30
New Green Building(s) Infrastructure (m^2)	14,039	6
Improved Green Building Infrastructure (m^2)	34,225	24
Increase in buildings meeting current green/building standards (#)	67	40
Increase in number of buildings/facilities receiving clean energy source (#)	30	12
Other type of investment		
LED lighting conversions	2,670	13

Clean environment is the most heavily cited national objective for this investment category; this is not a surprising outcome as a decrease in energy use was cited in 100% of responses in this category. A decrease in energy use and realized operational savings received the highest ranking for *strong cities and communities*.

Productivity and economic growth was most cited in the *Other* category: these projects were successful pilot-projects regarding small bioenergy and solar projects that were deemed successful and will be expanded in the future. Additional outcomes from the *Other* category include improved resiliency of rural fire halls, decreased light pollution, and increased occupancy capability.

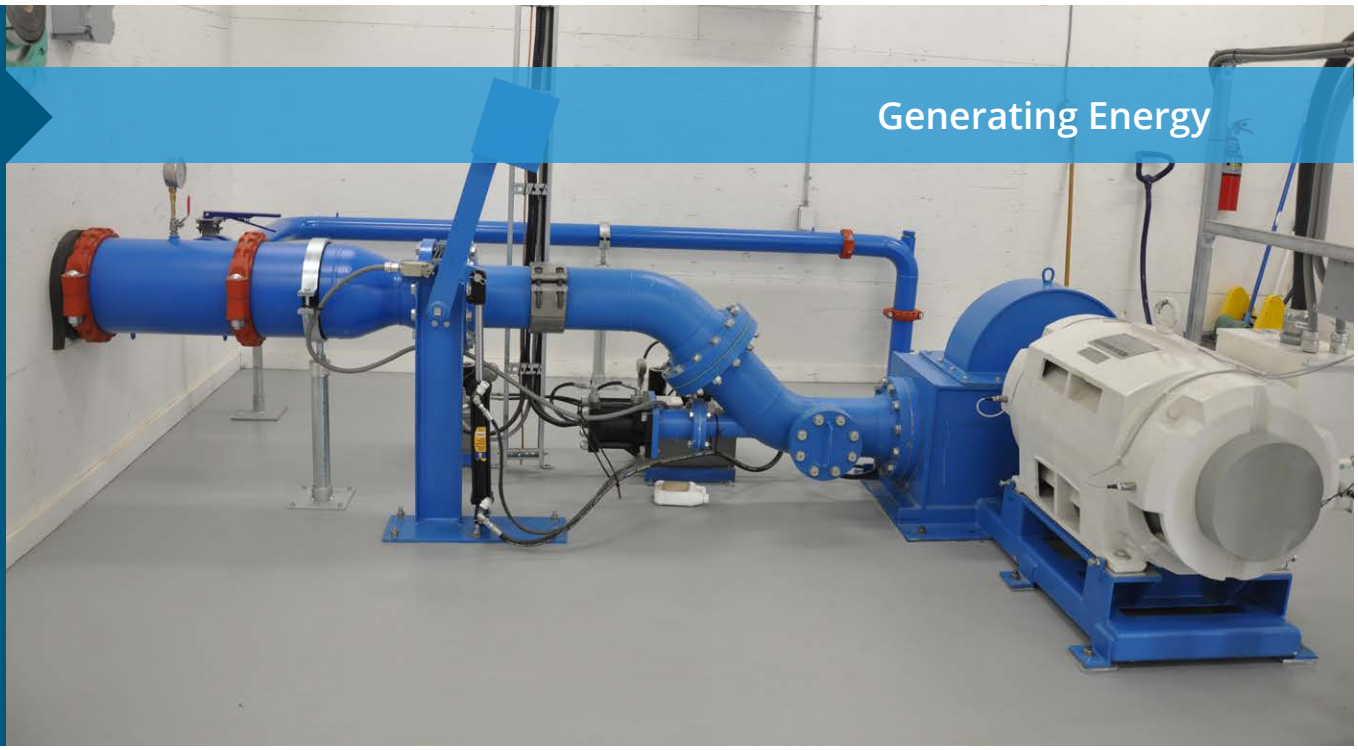


Due to the reporting threshold established by UBCM, many smaller scale infrastructure conversions and pilot-type projects were not analyzed. The following is a breakdown of Gas Tax projects undertaken within the reporting period that involved alternative energy in some capacity. This includes electric vehicle charging stations, solar powered crosswalk lights, geothermal conversions, heat pumps, and energy loop projects, not all of which fall under the Community Energy category.

Community Energy Projects*	
	Complete Projects
Biomass	8
Geothermal	12
Hydro	2
Retrofit	40
Solar	23
Electric Vehicle Charging Stations	5
Energy/Heat Loop	5

*Includes all projects using green technology completed between 2014 and 2016 across all investment categories

Project Profile



Generating Energy

The City of Fort St. John used Federal Gas Tax funding to install a micro-hydro system along the gravity discharge of a wastewater facility.

The project consists of a turbine, a 100-kilowatt generator, associated controls and building, along with a high-pressure penstock that was installed parallel to the existing discharge pipe. This is the first 100-kilowatt net metering installation in the province. All of the power produced is fed back into BC Hydro's power grid. The generator provides approximately 800 megawatt hours annually - enough power to supply 70 homes.

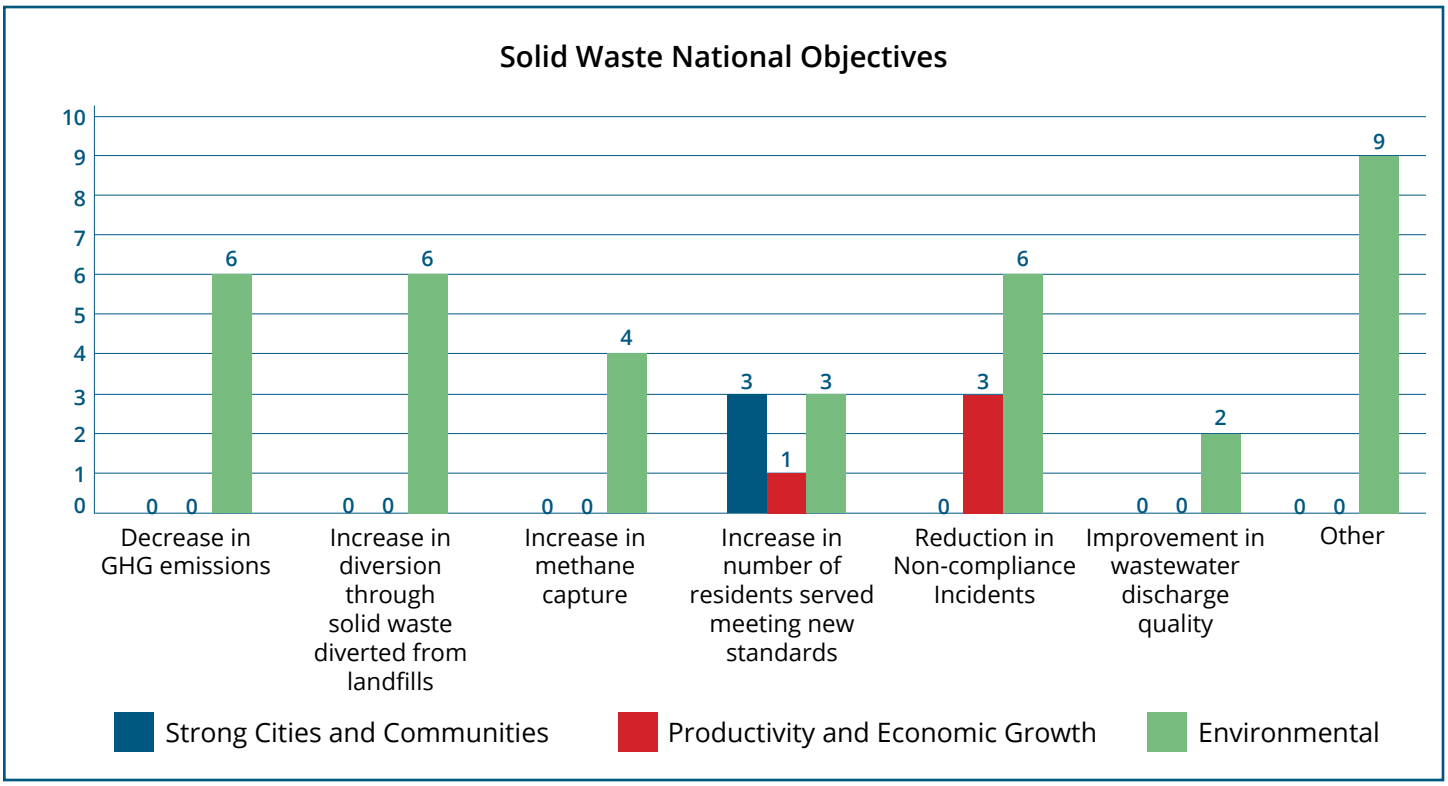
A decrease in energy use and realized operational savings received the highest ranking for *strong cities and communities*

Solid Waste

Local governments invested Gas Tax dollars in a variety of solid waste infrastructure projects. Several communities closed and capped decommissioned landfills by installing methane-reducing covers or landfill gas extraction systems, complete with flare capabilities. Other communities upgraded transfer stations to increase their ability to divert more waste from the landfill and purchased rolling stock and receptacles to expand local solid waste collection to include recyclable and compostable products.

Solid Waste Projects		
Reported Projects	12	
Total Gas Tax Funds ($)	15,844,945	
Total Project Cost ($)	26,448,697	
Outcomes / Outputs	**Data**	**Reported Projects**
Decrease in GHG emissions (tCo2e/year)	14,941	6
Improvement in wastewater discharge quality (m^3/day)	4,471	2
Increase in diversion through solid waste diverted from landfills (tonnes/year)	2,743	6
Increase in methane capture (tonnes/year)	1,986	4
Increase in number of residents served meeting new standards (#)	50,012	7
Reduction of non-compliance incidents (#)	6	6
Facilities (Compost, recycling, weigh scales, bins, etc.)	**10**	**7**
New Facilities	5	4
Improved Facilities	5	3
New Rolling Stock Purchases (#)	3	2
New Collection Receptacle Purchases (#)	4,555	3
New Landfill Gas Management Systems (#)	**4**	**4**
Landfill Gas Extraction Pipe/Trenching (metres)	10,450	4
Methane Reducing Landfill Covers (Ha)	23	14
Other outcomes		
Remediated Incinerator Ash (m^3)	60,000	2

Not surprisingly, recipients indicated that *clean environment* was the national objective best aligned to their projects. Several communities cited the conversion of decommissioned landfills as an outcomes leading towards national objectives of *clean environment* and *strong cities and communities*, as they were eliminating standing orders from the Ministry of Environment to remediate an area.



Project Profile

Reducing the Environmental Impact of Solid Waste

The Regional District of North Okanagan (RDNO) used Federal Gas Tax funding to install a landfill gas capture system at the Greater Vernon Recycling and Disposal Facility (GVRDF). This system was designed to meet the requirements of the B.C. Landfill Gas Management Regulation, reduce methane emissions from the GVRDF, and promote the potential to utilize the captured landfill gas as a source of renewable green energy.

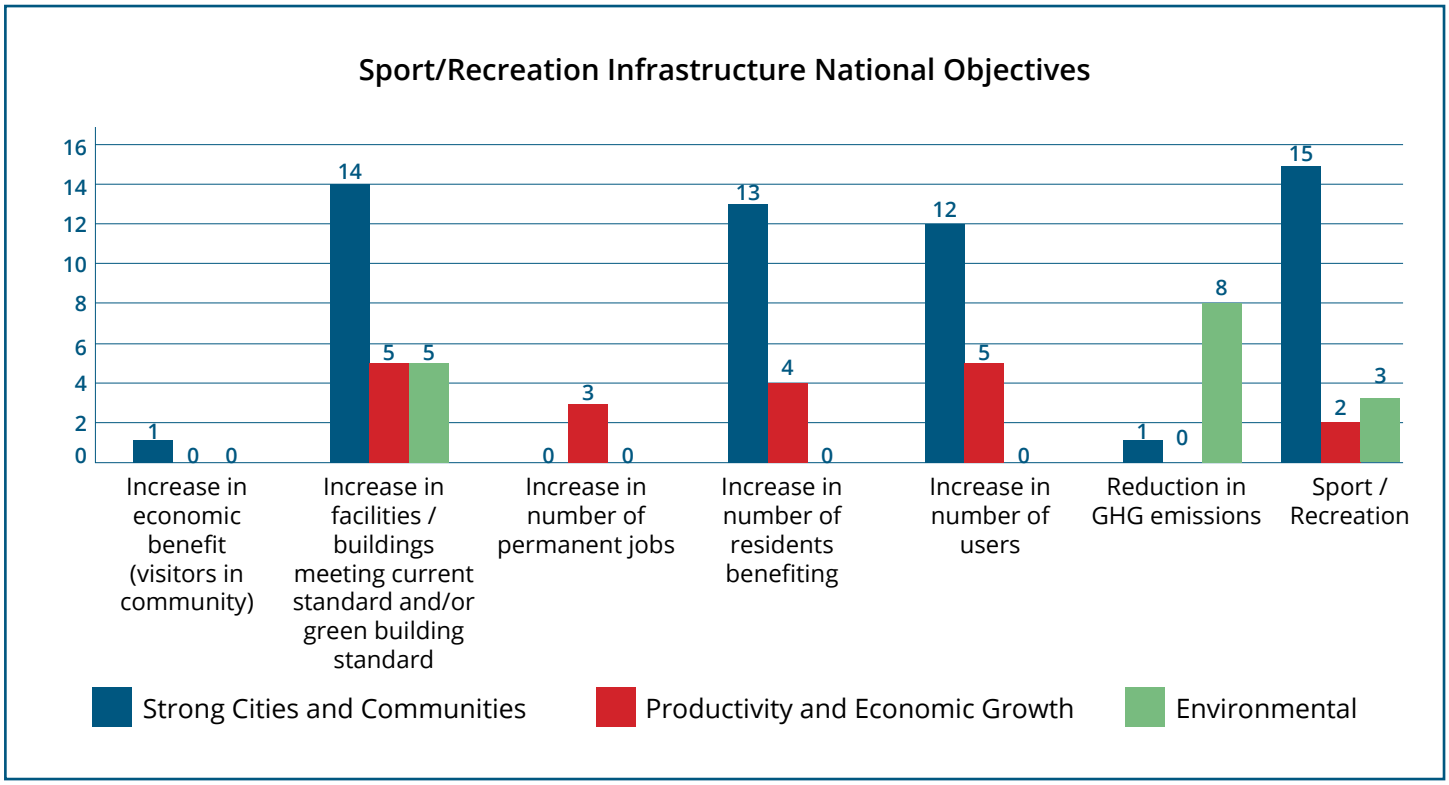
Landfill gas, composed of equal proportions of methane and carbon dioxide, is produced as a result of the biological decomposition of organic waste material. The project constructed 2.6 km of trenches supplied by vertical landfill gas extraction wells. The collected gas is flared at the control plant to destroy it. In 2016, the system eliminated 410 tonnes of methane emissions and reduced carbon dioxide emissions by 10,270 tonnes. RDNO is currently in discussions with FortisBC to recycle the gas that is currently being captured for commercial uses, such as powering vehicles.

Sport and Recreational Infrastructure

Outcomes collected from sports and recreation projects represent a diverse array of infrastructure that helps keep communities active and supports youth and amateur sport. Projects reported an increase of 387,629 individuals benefiting from funding. Three new facilities were constructed: a skateboard-park, one community centre, and an outbuilding for a community ski centre. Improved facilities embody a range of projects including playground infrastructure, splash parks, swimming pools, gymnasiums, ice rinks, rodeo grounds, and boat launches.

Sport and Recreation Infrastructure Projects		
Reported Projects	49	
Total Gas Tax Funds ($)	24,980,930	
Total Project Cost ($)	101,534,802	
Outcomes / Outputs	Data	Reported Projects
Increase in economic benefit (visitors to community/year)	500	1
Increase in facilities meeting current building standard and/or green building standard (#)	24	24
Increase in number of permanent jobs (#)	12	3
Increase in number of residents benefiting (#)	109,468	19
Increase in number of users (#)	278,161	17
Reduction in GHG emissions (tC02/year)	71.26	9
Community Centres - Output (m^2)	**14,262**	**7**
New Community Centres (m^2)	1,672	1
Improved Community Centres (m^2)	12,590	6
Facilities (arenas, pools, gymnasiums, sports fields, courts) (#)		
New Facilities	3	2
Improved Facilities	29	25
Skateboard Parks (#)	2	2
Rodeo Grounds (#)	1	1
Playgrounds (#)	4	4
Public Parks (#)	16	16
Docks/Boat Launch (#)	3	3
Swimming Pool (#)	9	9
Ice Rink (#)	7	7
Track or Sports Field (#)	5	5
Stadiums (#)	1	1
Community Rec Centre (#)	7	7
Ski Hill Infrastructure (#)	1	1
New Fitness trails/bike paths (m)	30.2	3
Parks (m^2)	**178,832**	**6**
New Parks (m^2)	18,130	2
Improved Parks (m^2)	160,702	4
Improved spectator seating/public spaces (#)	1	1

Strong cities and communities is the national objective indicated by most projects in this investment category. On average, 56% of outcomes cited improved community resiliency. Outcomes leading toward *clean environment* were achieved in a handful of projects, these occurred in cases of turf replacement that no longer requires grass to be watered, heat/energy loop technology in pools and ice rinks and the upgrading of interiors/exteriors of community facilities to meet modern building/energy codes. *Productivity and economic growth* was indicated by the addition of twelve permanent jobs, as well as hundreds of full-time temporary construction jobs that benefited from these projects.



Many sport and recreation projects are small in nature and did not meet UBCM's reporting threshold. The following is a count and spending tally of projects undertaken by recipients. The majority of these projects are funded through the Community Works Fund.

Infrastructure	All Complete Projects	GTF Spending
Skateboard Parks	2	$367,000.00
Rodeo Grounds	1	$298,119.00
Playgrounds	17	$1,106,374.98
Public Parks	77	$10,616,756.93
Docks/Boat Launch	7	$596,618.00
Swimming Pool	21	$9,127,423.05
Ice Rink	48	$5,985,903.83
Sports Field/Track	9	$1,312,693.92
Stadium	2	$667,524.00
Ski Hill Infrastructure	10	$401,699.31

Project Profile

Supporting Community Recreation

The Regional District of Central Kootenay retrofitted the Nelson and District Community Aquatic Centre thanks to Federal Gas Tax funding.

The renovations completely renewed the facility, extending its life expectancy by 40 years. In addition to improving access for those with mobility challenges, all major pieces of mechanical equipment were replaced or improved. Upgrades to the HVAC system improved air quality in the pool area, improving comfort and safety for both the public and employees. Following the upgrades, attendance at the Aquatic Centre increased 8.3% to 264,607 visits annually.

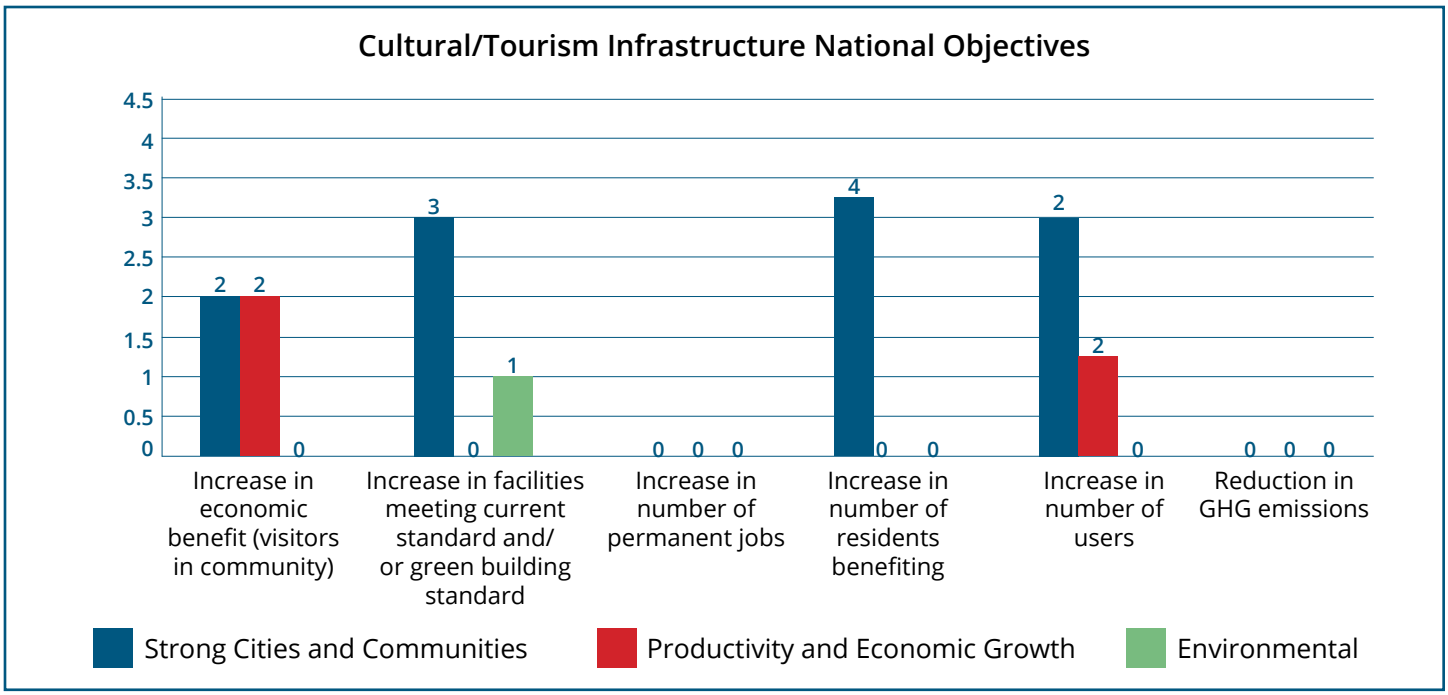
Cultural and Tourism Infrastructure

Culture and tourism projects provided new spaces for nearly 418,000 individuals in eight different communities. Three community halls were constructed or improved, one visitor centre constructed, and one heritage building improved. Roughly 10,000 residents directly benefited from cultural infrastructure upgrades in five different communities.

Improvements include energy upgrades, exterior renovations to facades, windows and doors to theatres, cultural centres, and municipal halls.

Tourism and Cultural Infrastructure Projects		
Reported Projects	8	
Total Gas Tax Funds ($)	4,921,989	
Total Project Cost ($)	14,928,224	
Outcomes / Outputs	**Data**	**Reported Projects**
Reduction in GHG emissions (tCo2e/year)	-	-
Improved Convention Centres (m^2)	11,882	1
Increase in economic benefit (visitors to community) (#)	380,000	4
Increase in economic benefit (total revenue/year)	2,500,000	4
Increase in number of permanent jobs (#)	-	-
Increase in number of residents benefiting (#)	39,472	6
Increase in number of users (#)	378,123	4
Halls (m^2)	**17,355**	**4**
New Halls (m^2)	16,172	2
Improved Halls (m^2)	1,145	2
Improved Heritage Buildings (m^2)	525	1
Increase in facilities/buildings meeting current building standard and/or green building standard (#)	5	4
Museums (#)	-	-
Improved Theatres (#)	1	1
New Visitor Centres (#)	1	1
Other		
New boat launch	1	1

Outcomes were largely viewed by recipients as leading to *strong cities and communities* and *productivity and economic growth*. These outcomes are due to an increase of visitors to the community, increase in residents who can access facilities, and an increase in the number of facilities meeting modern or green building standards. Respondents struggled to produce an outcome for increased number of permanent jobs as many of the jobs created by this category fall into temporary or part time status.



Culture and tourism infrastructure had fewer entries largely due to the fact that both categories were added in 2014. Prior to that, energy efficient upgrades at these locations were considered community energy projects, therefore this has caused the categories of community energy systems and cultural/ tourism infrastructure to become somewhat blurred. Only eight projects met our reporting threshold of exceeding $100,000, therefore, the chart below includes a count of all projects completed that were undertaken on performance output indicators like museums, theatres, and heritage buildings. Much of this work is actually small scale lighting replacements or HVAC upgrades for community association buildings in Regional Districts. In fact, culture and tourist infrastructure projects in Regional Districts account for 73% of projects and 40% of spending in the category. These projects account for $10.6 million spending, though the average spent on projects in $76,000, while the average cost of projects spending less than the threshold is $28,000. Many communities are undertaking large-scale community energy projects particularly at recreation centres, ice rinks, and municipal buildings where energy and heat loops are becoming more prevalent. However, once a project reaches such a scale, it generally becomes categorized as an energy project.

Infrastructure Type	Complete Projects	Renovation/ Replacement/ Retrofit	New Construction/ Installation	HVAC	Lighting / Electrical	Exterior	Improved Accessibility	Water/ Septic/ Sewer
Museum	7	2	5	3	1	1	3	0
Visitor Centre	4	2	2	0	1	0	1	2
Heritage Building	4	5	1	0	2	1	1	0
Convention Centre	1	1	0	1	1	0	0	1
Halls	114	141	20	47	47	70	13	22
Theatres	4	6	1	4	1	0	0	1
Totals	134	157	29	55	53	72	18	26

Project Profile

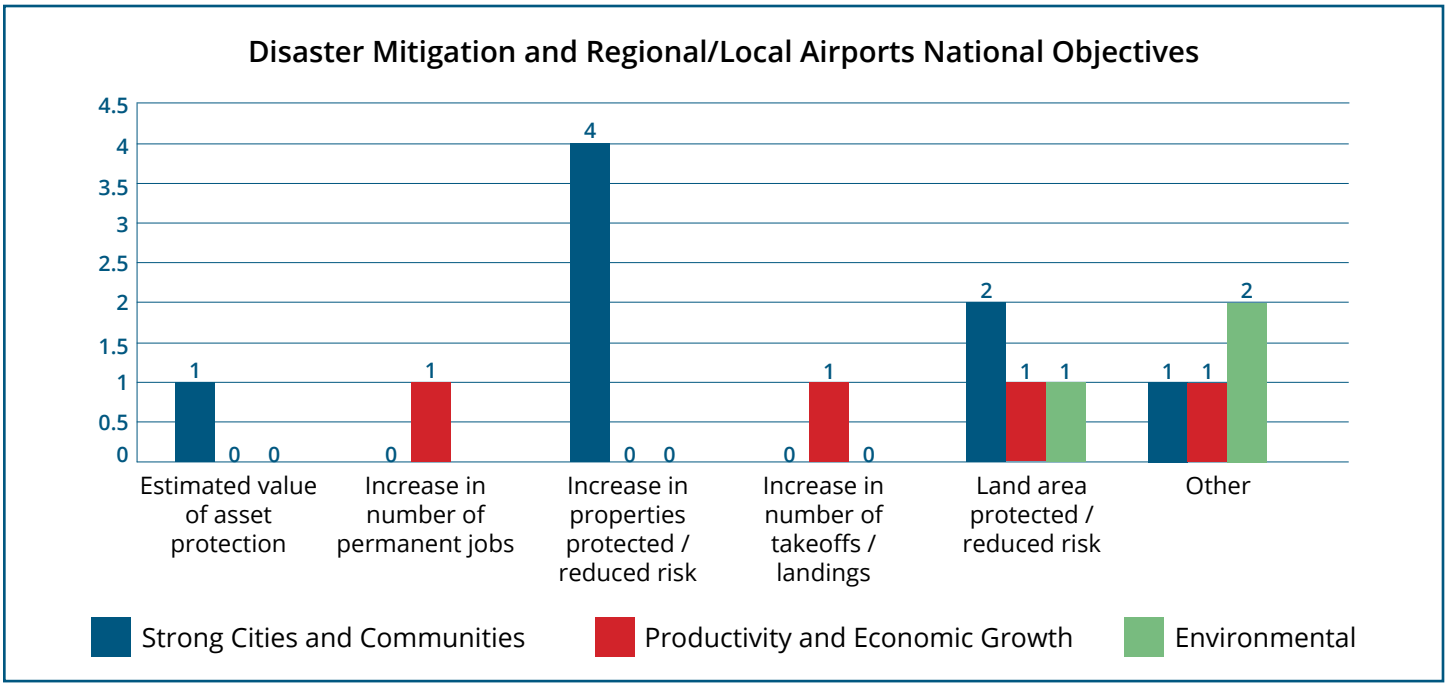
Supporting Tourism

The District of Tumbler Ridge used Federal Gas Tax funding to construct a new visitor information centre.

Open year-round and located in the downtown core, the visitor information centre is the first stop for visitors to Tumbler Ridge's 47 hiking trails, 30 waterfalls, and UNESCO Global Geopark. In addition to the main visitor centre, the facility has two offices and a fully equipped meeting room on the lower level. Both floors have wheelchair accessible washrooms and there is an elevator to the lower meeting room. The facility also provides a hub for all tourism signage in the community. Since opening in 2015, the number of tourists entering the visitor centre has increased by nearly 60% to 16,500 visits annually.

Other Capital Infrastructure Projects

Disaster Mitigation and Regional/Local Airports		
Reported Projects	8	
Total Gas Tax Funds ($)	2,268,027	
Total Project Cost ($)	7,859,900	
Outcomes / Outputs	**Data**	**Reported Projects**
Increase in number of permanent jobs (#)	2.5	1
Increase in number of take-offs/landings (#)	17	1
Renewed Runway/apron capacity (m^2)	36,809	1
Increase in properties protected/reduced risk (#)	311	4
Land area protected/reduced risk (m^2)	32,213,322	4
Expanded Berms/Dikes - Output (#)	4	1
Seismic Upgrades (#)	1	1



Project Profile

Safeguarding Infrastructure

The Cowichan Valley Regional District has used Federal Gas Tax funding to mitigate the impacts of flooding through improvements to dikes around the City of Duncan.

The lower Cowichan River's floodplain covers one of the region's urban centers and includes a substantial portion of the region's population, as well as a much of its critical infrastructure and social capital. A November 2009 flood demonstrated that not only was the region affected immediately by the flood event, but also the potential long-term impacts due to road closures, loss of economic activity, and the disabled infrastructure. The dikes constructed by the CVRD protect all elevations at risk in the event of a 200-year flood and provide allowance for additional increases due to climate change.

Public Transit: Translink - Summary of Activity

The following is TransLink's submission to the federal Gas Tax Fund in British Columbia - 2018 Outcomes Report.

Purpose

This report provides outcomes and output data for the federal Gas Tax funded projects TransLink completed between January 1, 2014 and December 31, 2016[1]. Further details on TransLink's overall performance from 2014-2016 is provided on page 42.

Between 2014 and 2016 - Translink has invested over $175 million in Gas Tax funds for a range of transit projects

Between 2014 - 2016

23 %

of the revenue fleet energy use was from renewable sources, primarily electricity

Between 2014 - 2016 CAC emissions

decreased by 110 tonnes

= 13 % reduction

[1]This report does not include any 2016 Fleet Replacement projects as they have yet to be substantially completed.

Summary of Projects

Between 2014 and 2016, TransLink has invested over $175 million in Gas Tax funds for a range of transit projects designed to increase system capacity and/or replace older vehicles that were at end of life. Vehicles operating past their life expectancy result in higher emissions, greater fuel consumption and higher operating costs negatively impacting customer service and reliability. Newer vehicles generally improve noise pollution, and reduce greenhouse gas (GHG) emissions and criteria air contaminants (CACs). These benefits contribute to improvements in the quality of life in the Lower Mainland of British Columbia. A summary of the project outcomes is provided below.

Summary of Projects 2014-2016

Public Transit	
Completed Projects	11
Total Gas Tax Funds ($)*	175,025,464
Total Project Costs ($)**	181,090,263
Outcomes / Output	
Vehicle Purchase	540
40' Conventional Diesel Buses	*17*
40' Compressed Natural Gas Buses	*96*
60' Hybrid Articulated Buses	*46*
Community Shuttles	*201*
HandyDART Vehicles	*151*
SeaBus Vessels	*1*
West Coast Express Rail Cars (buy-out)	*28*
System Capacity Increase (number of spaces)	1,348
GHG Emissions Reductions (tonnes of CO2e/year)	2,438
Reduction in CAC Emissions (tonnes/year)	136
HC (tonnes/year)	1
CO (tonnes/year)	5
NOx (tonnes/year)	126
PM (tonnes/year)	3
Estimated Fuel Consumption (Litres/year) / (GJ/year)	6,876,570 L decrease in diesel consumption 3,850,490 L increase in gasoline consumption 183,264 GJ increase in compressed natural gas consumption
Other Transit Projects	5
New Transit Centre	*1*
Upgrade to Operations and Maintenance Centre	*1*
Smart Card System	*1*
Technology Upgrades	*2*

**Includes interest earned on fund received*
*** Project Forecast Costs as at 31 December 2016*

Fleet Project Outcomes

Community Shuttle Replacement 2011 & 2012

The projects consisted of replacing 38 diesel shuttles that reached the end of their economic life. The vehicles were replaced with 25 diesel shuttles and 13 gasoline shuttles.

The 38 Community Shuttle vehicles had reached the end of their economic life in 2011 (based on 6 years / 450,000 km life expectancy).

Total Gas Tax Funds ($)	5,514,586
Total Project Costs ($)	5,647,477
System Capacity Increase	-
GHG Emissions Reductions (tonnes of CO2e/year)	-12
Reduction in CAC Emissions (tonnes/year)	5.42
HC (tonnes/year)	*0.06*
CO (tonnes/year)	*-0.42*
NOx (tonnes/year)	*5.77*
PM (tonnes/year)	*0.02*
Estimated Fuel Consumption (Litres/year)	313,000 L increase diesel consumption
	321,000 L increase gasoline consumption *
Additional Benefits	New shuttles are more reliable and quieter than the existing Community Shuttle fleet.

*The replacement vehicles are heavier than the retired vehicles, which resulted in increased fuel consumption, and increased GHG emissions.

2013 HandyDART Replacement

The project consisted of replacing 57 vehicles (21 diesel micro-buses, 24 diesel midi-buses and 12 diesel mini-buses) that reached the end of their economic life. The vehicles were replaced with 31 vehicles (6 diesel micro-buses and 25 gasoline micro-buses).

The 57 HandyDART vehicles had reached the end of their economic life in 2012 as follows:

- 21 micro buses and 24 midi buses based on a six year / 200,000 km life expectancy; and
- 12 mini buses based on an eight year / 250,000 km life expectancy.

The 57 vehicles were replaced by 31 micro-buses in the second year option of the HandyDART vehicle contract. The fleet was "right-sized" with a combination of fewer and smaller buses resulting in a reduction in vehicle capital costs. Lighter-weight, smaller vehicles consume less fuel and therefore, have lower GHG emissions.

Total Gas Tax Funds ($)	3,535,399
Total Project Costs ($)	3,594,738
System Capacity Increase	-448
GHG Emissions Reductions (tonnes of CO2e/year)	712
Reduction in CAC Emissions (tonnes/year)	2.48
HC (tonnes/year)	*-0.06*
CO (tonnes/year)	*-1.56*
NOx (tonnes/year)	*4.09*
PM (tonnes/year)	*0.001*
Estimated Fuel Consumption (Litres/year)	239,580 L decrease in diesel consumption
	45,540 L increase gasoline consumption
Additional Benefits	HandyDART is a shared-ride public transit service, which uses specially equipped vehicles designed to carry passengers with physical or cognitive disabilities who are unable to use public transit without assistance.

2013 Community Shuttle Replacement

The project consisted of replacing 44 diesel shuttles that reached the end of their economic life. The vehicles were replaced with 57 shuttles (37 diesel shuttles and 20 gasoline shuttles).

The 44 Community Shuttle vehicles had reached the end of their economic life in 2013 (based on 6 years / 450,000 km life expectancy). In this project, an additional 13 shuttles were added to the fleet resulting in an increase in fuel consumption and therefore, higher GHG emission.

Total Gas Tax Funds ($)	8,842,437
Total Project Costs ($)	8,878,970
System Capacity Increase	312
GHG Emissions Reductions (tonnes of CO2e/year)	-813
Reduction in CAC Emissions (tonnes/year)	7.16
HC (tonnes/year)	*0.13*
CO (tonnes/year)	*0.16*
NOx (tonnes/year)	*6.84*
PM (tonnes/year)	*0.04*
Estimated Fuel Consumption (Litres/year)	115,700 L decrease in diesel consumption 494, 000 L increase gasoline consumption
Additional Benefits	Expanding the Community Shuttle fleet provides an increase in capacity and service reliability.

2012 Conventional Bus Replacement

The project consisted of replacing 42-40' conventional diesel buses that reached the end of their economic life. The vehicles were replaced with 17- 40' conventional diesel buses and 25- 60' articulated hybrid buses.

The 42-40' conventional buses had reached the end of their economic life in 2012 (based on 17 years / 1,000,000 km life expectancy).

Total Gas Tax Funds ($)	28,626,000
Total Project Costs ($)	29,437,406
System Capacity Increase	1,228
GHG Emissions Reductions (tonnes of CO2e/year)	202
Reduction in CAC Emissions (tonnes/year)	19.91
HC (tonnes/year)	*-0.01*
CO (tonnes/year)	*2.02*
NOx (tonnes/year)	*17.12*
PM (tonnes/year)	*0.78*
Estimated Fuel Consumption (Litres/year)	76,800 L decrease in diesel consumption
Additional Benefits	Increased capacity and service results in improved accessibility and quality of public transit, thereby encouraging more people to use public transit and decrease dependency on passenger vehicles.

2014 Conventional Bus Replacement

The project consisted of replacing 52-40' conventional diesel buses that reached the end of their economic life. The vehicles were replaced with 45- 40' compressed natural gas (CNG) buses.

The 52-40' conventional buses had reached the end of their economic life in 2014 (based on 17 years / 1,000,000 km life expectancy).

Total Gas Tax Funds ($)	24,450,000
Total Project Costs ($)	24,884,429
System Capacity Increase	-539
GHG Emissions Reductions (tonnes of CO2e/year)	671
Reduction in CAC Emissions (tonnes/year)	30.22
HC (tonnes/year)	*0.02*
CO (tonnes/year)	*4.04*
NOx (tonnes/year)	*25.44*
PM (tonnes/year)	*0.73*
Estimated Fuel Consumption (Litres/year)/(GJ/year)	1,840,800 L decrease in diesel consumption
	85,905 GJ increase in natural gas consumption
Additional Benefits	Compressed natural gas is considered a lower carbon fuel than diesel. TransLink gain carbon credits as a Fuel Supplier of CNG under the British Columbia Renewable & Low Carbon Fuel Regulation.

2014 Community Shuttle Replacement

The project consisted of replacing 49 diesel shuttles that reached the end of their economic life. The vehicles were replaced with 49 gasoline shuttles.

The 49 Community Shuttle vehicles had reached the end of their economic life in 2014 (based on 6 years / 450,000 km life expectancy).

Total Gas Tax Funds ($)	7,310,000
Total Project Costs ($)	7,400,162
System Capacity Increase	-
GHG Emissions Reductions (tonnes of CO2e/year)	278
Reduction in CAC Emissions (tonnes/year)	6.31
HC (tonnes/year)	*0.22*
CO (tonnes/year)	*-1.60*
NOx (tonnes/year)	*7.64*
PM (tonnes/year)	*0.03*
Estimated Fuel Consumption (Litres/year)	1,146,600 L decrease in diesel consumption
	1,210,300 L increase in gasoline consumption
Additional Benefits	New shuttles are more reliable and quieter than the existing Community Shuttle fleet.

2014 HandyDART Vehicle Replacement

The project consisted of replacing 65 HandyDART vehicles (37 diesel micro-buses, 21 diesel midi-buses and 7 diesel mini-buses) that reached the end of their economic life. The vehicles were replaced with 65 vehicles (40 gasoline micro-buses and 25 diesel midi-buses).

The 65 HandyDART vehicles had reached the end of their economic life in 2013 (based on six years / 200,000 km life expectancy). The fleet was "right-sized" with a combination of fewer and smaller buses resulting in a reduction in vehicle capital costs. Lighter-weight, smaller vehicles consume less fuel and therefore, have lower GHG emissions.

Total Gas Tax Funds ($)	7,530,000
Total Project Costs ($)	7,577,080
System Capacity Increase	-68*
GHG Emissions Reductions (tonnes of CO2e/year)	69
Reduction in CAC Emissions (tonnes/year)	4.52
HC (tonnes/year)	*0.09*
CO (tonnes/year)	*-0.66*
NOx (tonnes/year)	*5.06*
PM (tonnes/year)	*0.02*
Estimated Fuel Consumption (Litres/year)	332,640 L decrease in diesel consumption
	356,400 L increase gasoline consumption
Additional Benefits	HandyDART is a shared-ride public transit service, which uses specially equipped vehicles designed to carry passengers with physical or cognitive disabilities who are unable to use public transit without assistance.

*Capacity decreased as additional smaller sized micro-buses were purchased.

SeaBus Replacement

The project consisted of replacing the Burrard Otter SeaBus, one of the two original vessels in service since 1976. The new SeaBus entered into revenue service on December 1, 2014.

The SeaBus replacement was necessary to maintain safe water transportation between Waterfront Station in Downtown Vancouver and Lonsdale Quay in North Vancouver. The original vessels, built in the late 1970's, concluded their useful lives of 30-years. Although proven to be highly reliable, due to new regulations by Transport Canada, these vessels did not fall within current safety and compliance guidelines. Originally, the intention was to refurbish the Burrard Otter SeaBus; however, the cost was not justified in comparison to the purchase price of a new vessel ($33.5M refurbishment vs $46.1M new vessel).

Total Gas Tax Funds ($)	19,697,042
Total Project Costs ($)	20,475,029
System Capacity Increase	-
GHG Emissions Reductions (tonnes of CO2e/year)	41
Reduction in CAC Emissions (tonnes/year)	6.68
HC (tonnes/year)	*0.11*
CO (tonnes/year)	*0.72*
NOx (tonnes/year)	*5.57*
PM (tonnes/year)	*0.28*
Estimated Fuel Consumption (Litres/year)	15,500 L decrease in diesel consumption
Additional Benefits	The new vessel was procured to meet TransLink policy objectives of 10-minute peak service on major corridors and to address forecast increased demand for SeaBus service.

Fleet Replacements (2015 Conventional Bus Replacement)

The project consisted of replacing 72-40' conventional diesel buses that reached the end of their economic life. The vehicles were replaced with 51- 40' compressed natural gas (CNG) buses and 21-60' articulated hybrid buses.

The 72-40' conventional buses had reached the end of their economic life in 2015 (based on 17 years / 1,000,000 km life expectancy).

Total Gas Tax Funds ($)	54,800,000
Total Project Costs ($)	56,844,331
System Capacity Increase	903
GHG Emissions Reductions (tonnes of CO2e/year)	335
Reduction in CAC Emissions (tonnes/year)	41.09
HC (tonnes/year)	*-0.06*
CO (tonnes/year)	*5.07*
NOx (tonnes/year)	*34.76*
PM (tonnes/year)	*1.32*
Estimated Fuel Consumption (Litres/year)/(GJ/year)	1,854,000 L decrease in diesel consumption
	97,359 GJ increase in natural gas consumption
Additional Benefits	Compressed natural gas is considered a lower carbon fuel than diesel. TransLink gain carbon credits as a Fuel Supplier of CNG under the British Columbia Renewable & Low Carbon Fuel Regulation.

Fleet Replacements (2015 Community Shuttle Replacement)

The project consisted of replacing 62 defective diesel shuttles of the entire 2012/13 International/Champion community shuttle fleet. The vehicles were replaced with 62 gasoline shuttles.

Total Gas Tax Funds ($)*	9,350,000
Total Project Costs ($)	9,472,356
System Capacity Increase	-
GHG Emissions Reductions (tonnes of CO2e/year)	889
Reduction in CAC Emissions (tonnes/year)	7.98
HC (tonnes/year)	*0.28*
CO (tonnes/year)	*-2.02*
NOx (tonnes/year)	*9.67*
PM (tonnes/year)	*0.04*
Estimated Fuel Consumption (Litres/year)	1,450,800 L decrease in diesel consumption
	1,289,600 L increase gasoline consumption
Additional Benefits	New shuttles are more reliable and quieter than the existing Community Shuttle fleet.

WEST COAST EXPRESS RAIL CARS BUYOUT

In 1995/1996 TransLink (then BC Transit) entered into a 20-year lease agreement for the provision of 28 bi-level passenger train cars to be operated by the West Coast Express service ("WCE"). After researching current market conditions, TransLink chose to exercise the buyout of the existing lease.

Non-Fleet Project Outcomes

HAMILTON TRANSIT CENTRE

The Hamilton Transit Centre (HTC) was designed to serve as a storage, operating and maintenance facility for 300 40-ft buses; including up to 80 community shuttle buses, and 150 CNG buses (Compressed Natural Gas).

HTC performs three major functions: dispatch, fuel/wash service, and maintenance for buses servicing the Richmond, New Westminster, Burnaby, and Vancouver areas. It is an energy-efficient facility which meets LEED (Leadership in Energy and Environmental Design) Silver specifications.

The proximity of HTC to two major exchanges (22nd Street Station & New Westminster Station), and to Highway 91, has allowed Coast Mountain Bus Company (CMBC), a TransLink subsidiary, to decrease the deadhead times for many routes and increase in-revenue time. While this is a more effective use of resources, another benefit is the size of the facility. HTC offers a substantial portion of the parking and maintenance capacity required for the completion of Phase 1 of the Mayors' Plan, and the start of Phase 2.

SKYTRAIN OPERATING AND MAINTENANCE CENTRE – PHASE 2

The purpose of this project was to expand the Operations and Maintenance Centre (OMC) for British Columbia Rapid Transit Company (BCRTC), a TransLink subsidiary, to address the maintenance and storage capacity required to meet an increase in SkyTrain vehicles. Prior to the expansion, the OMC was working beyond capacity and fully utilizing the existing storage capacity. This resulted in storing some vehicles on the mainline SkyTrain guideway during non-peak and non-revenue hours, which in turn added risks to service reliability, routine maintenance and security.

The project included: three new vehicle storage tracks to store 74 new SkyTrain cars, expansion of the propulsion power substation, expansion of the maintenance facility and expansion of the operations office and administration area.

The benefits of this project have been increased revenue, cost reduction and improved service reliability through reduced repairs/maintenance-related costs and downtime.

SMART CARDS

The purpose of this project was to implement a smart card fare collection system and the installation of fare gates at SkyTrain stations in order to address fare evasion and security issues.

Primary benefits of the project:

1. Improved operating efficiency and increased ridership through improved customer and ridership information and data.
2. New opportunities to generate or increase revenue.
3. New and convenient options for customers to increase customer satisfaction.
4. Improved quality and efficiency of transit service delivery.
5. Improved safety and security.

The fare gates were closed over a period of time with total closure being obtained in April 2016. Year-over-year annual fare revenue for 2016/2015 revealed there was a 6.7% increase, with ridership increasing by 4.5% (2016 Annual Report, page 25.) By comparison, the increase in annual fare revenue from 2014 to 2015 was 2.6% (2015 Annual Report, page 49.) The closure of fare gates and the marketing drive to educate customers on Compass card program were important factors in capturing revenue that was previously lost to fare evasion.

EXPO LINE PROPULSION POWER UPGRADE

This project was to upgrade the SkyTrain Expo Line propulsion power system by expanding and improving the existing infrastructure. Prior to commencement of the project, the electrical network on the Expo Line was not suitable for operating the system at the existing vehicle load. The Expo Line suffered regular incidents of failure due to power substations tripping due to overloading. However, the Expo Line was required to handle an additional 48 Mark II cars and would not have been able to do so without some major upgrades to the existing infrastructure. Once the upgrades and project were completed, the addition of the 48 Mark III SkyTrain Cars allowed for the transport of 15,900 pphpd (persons per hour per direction.) Previously, the system was operating overcapacity at 13,300 pphpd, while built to handle only 11,880 pphpd.

AUTOMATED TRAIN CONTROL EQUIPMENT REPLACEMENT

Components of the Automatic Train Control System (ATC) were reaching 30+ years of service and had not been improved or upgraded since SkyTrain went into service. A phased approach was adopted for the replacement of the ATC system and this project was the second phase of the program which upgraded the Expo Line ATC Communication system. This upgrade intended to keep SkyTrain running in a good state of repair, with enhanced system reliability.

Included in the scope was the replacement of end-of-life FID's (Feed-In Devices) on the Expo Line and upgrade to the communication system via migration to fibre optic cables from copper cables. The use of copper cables in the past led to many system failures. Additionally, usage of fibre optic cables enables the use of digital signals instead of analog signals for systems communications leading to extremely reliable communication.

According to a "*Reliability, Availability and Maintainability Analysis*" conducted by an independent third party, the implementation of this project expected to reduce the ATC's failure rate and increase the mean time between failures from 2,387 hours to 2,998 hours. The migration to fibre optic cables concluded as of November 2017.

Overall TransLink Performance 2014-2016

Ridership

- From 2014 to 2016, the number of boarded passengers increased by 29.3 million, an increase in 8.2%.

Fleet Energy Consumption

- From 2014 to 2016, energy consumption (GJ) related to fleet fuel consumption use decreased slightly (0.3%). The energy consumption per boarded passenger decreased by 8% signifying efficiencies across the transit network.
- From 2014 to 2016, 23% of the revenue fleet energy use was from renewable sources, primarily electricity.

Fleet Greenhouse Gas (GHG) Emissions

- More fleet and service was added between 2014 and 2016, which resulted in an increase of approximately 1,340 tonnes CO2e. GHG emissions per boarded passenger decreased by 7% signifying efficiencies across the transit network.

Air Quality – Criteria Air Contaminants (CAC)

- From 2014 to 2016, CAC emissions decreased by approximately 110 tonnes, resulting in a 13% reduction in CAC emissions during this period.

Capacity Building

Between 2014 and 2016, local governments expended $6.8 million on 136 complete capacity building projects. Integrated Community Sustainability Planning accounted for 46% of capacity building expenditures and projects. Long Term Infrastructure Planning accounted for 28% of projects and expenditures. Improving asset management practices accounted for 21% of projects and 15% capacity building expenditures.

Complete Capacity Building Projects		
	Projects (#)	**Spending**
Integrated Community Sustainability Planning	63	$3,170,498
Long Term Infrastructure Planning	40	$1,866,117
Asset Management	28	$1,022,662
Municipal Capacity Building	5	$810,373
	136	**$6,869,652**

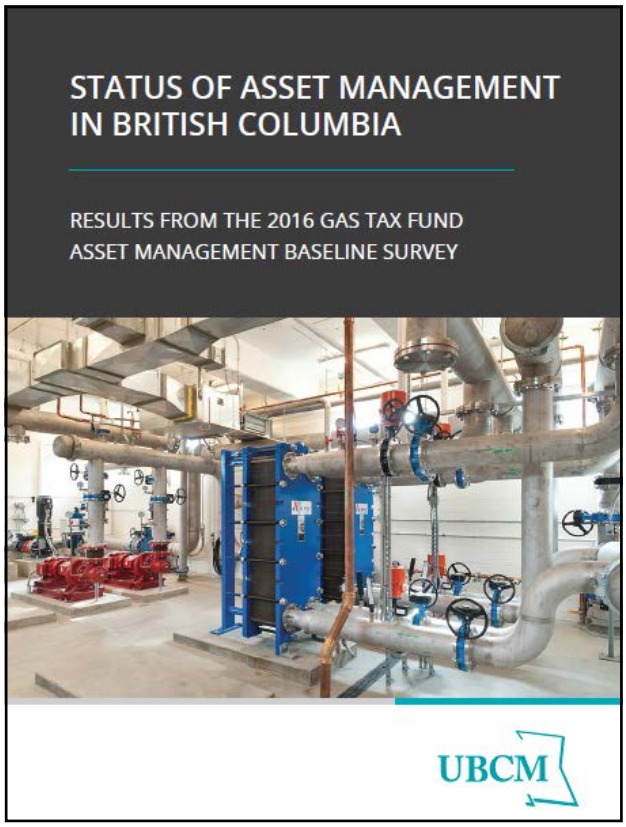
Capacity Building by Funding Stream		
	Projects (#)	Cumulative Spending
CWF	111	$4,368,714.94
SPF	25	$2,500,936.86
	136	**$6,869,652**

Asset Management

Under the terms of the renewed Administrative Agreement on the Federal Gas Tax Fund in British Columbia (the GTA), UBCM administers asset management commitments developed and approved by the Gas Tax Partnership Committee. The Gas Tax Partnership Committee identified and approved the development of Asset Management for Sustainable Service Delivery: A BC Framework (the Framework) as a guidance document designed to build and strengthen local government asset management over the term of the GTA.

Pursuant to the GTA and the Framework, the Gas Tax Partnership Committee also developed and approved local government asset management commitments. The commitments include three (3) phases designed to measure BC local government progress in developing and implementing asset management practices and meeting asset management reporting requirements under the GTA;

- Phase 1 of the GTA's commitment to improving asset management in BC local governments was met in the fall of 2017 with the release of the report Status of Asset Management in British Columbia: Results from the 2016 Gas Tax Fund Asset Management Baseline Survey. The document analyzes cumulative data as self-reported by all 189 local governments in BC and establishes baseline information on local government asset management practices and information management,
- Phase 2 is being implemented in Spring 2018 whereby individual local governments will establish a commitment towards improving and/or implementing additional asset management practices, and
- Phase 3 will be implemented through the release and submission of an Asset Management Assessment Form – Progress Report that will report on local government progress made during the term of the GTA, providing a cumulative analysis on all 189 BC local governments.



The Phase 1 survey results illustrate that BC local governments are engaged and active in moving forward with asset management. With respect to capacity for asset management, local governments are at various stages of maturity and have assets that are in need of immediate replacement and/or rehabilitation (very poor and/ or poor condition), it is important to ensure that the current activity and interest in asset management is maintained.

To support local governments with making improvements in asset management, together with Asset Management BC and Ministry of Municipal Affairs and Housing, UBCM will support and encourage the development of asset management tools, resources, and training opportunities. Local governments should use their results from the survey to develop an implementation plan, as required under the Gas Tax Agreement. The results from the Phase 1 survey can assist local governments in identifying gaps and setting priorities for improvement in asset management and sustainable service delivery.

Incremental Spending

The GTA in British Columbia measures incremental spending by determining gross net capital spending of eligible recipients over a five-year period. To meet the incremental spending threshold, local governments are required to spend more than the baseline of $ 2,482,961,340, while Translink is required to meet a net capital spending threshold of $591,162,000. Both of these amounts were agreed on by Partnership Committee in 2005 and reconfirmed by PC in 2015. UBCM measures net capital spending of local governments using the *Changes in Net Financial Assets* document released annually by the Ministry of Municipal Affairs and Housing.

Gas Tax Fund recipients in British Columbia have fulfilled the requirement to ensure the federal funding received has resulted in net incremental capital spending. Local governments outside the Greater Vancouver region have achieved this five-year goal in just three years.

	Translink	**Local Governments (outside GVRD)**
Own source capital spending 2014	$199,500,000	$ 999,301,228
Own source capital spending 2015	$263, 898,000	$ 1,009,193,476
Own source capital spending 2016	$388,499,000	$ 1,113,5071799
Own source capital spending 2017	N/A	N/A
Own source capital spending 2018	N/A	N/A
Total	$851,897,000	$ 3,122,002,503
Baseline	**$591,162,000**	**$ 2,482,961,340**

Conclusion: Gas Tax and the Future

The Federal Gas Tax fund in British Columbia has grown to become a predictable and dependable source of funding that helps communities grow and improve infrastructure. The outputs and outcomes described in this report reveal that the renewed Gas Tax Agreement is meeting its national program objectives of *productivity and economic growth*, *a clean environment*, and *strong cities and communities*.

From 2014 to 2016, local governments expended over $624.9 million of Gas Tax funds on 1,179 completed capital infrastructure projects. Projects span across all investment categories with the majority of investment occurring in roads, public transit, and water/wastewater infrastructure. Local governments expended an additional $6.8 million on planning, capacity building and asset management projects. Gas Tax funded projects can therefore claim a multitude of environmental, economic, and social benefits both regionally and provincially.

Looking to the future, the federal Gas Tax Fund will continue to provide robust outcomes due to 112 new Strategic Priorities Fund projects approved in 2018. These projects account for approximately $200 million in future investments and will build on a legacy of pooled fund projects that have proven to provide substantial infrastructure upgrades to communities of all sizes across the province.

Appendix A:
GHG Emissions Reduction Calculation Methodology

Project Category	Calculation Method[1]
Local Roads, Bridges and Active Transportation	• Non-Recreation Bike Paths and Bike Lanes: GHG emissions are calculated by estimating the number of commuters who will use the bike facility instead of driving, and then calculating the resulting emissions avoided. • Roads and Bridges: GHG emissions are calculated by estimating the number of kilometers of vehicle use avoided and then calculating the resulting emissions avoided. • In instances where only the number of users was known, GHG emissions reductions were calculated using benchmark data from the GHG EA Guide.
Public Transit	• Vehicle Replacement: GHG emissions reductions are calculated by comparing the fuel efficiency of the new vehicle to that of the original.
Community Energy Systems	• Renewable Energy System: GHG emission reductions will depend on the amount of conventional energy avoided as a result of using a renewable energy system. The GHG emissions factor depends on the kind of heating system that is already in place, or that would have been used if the renewable heating system was not installed (i.e. electric, natural gas, or propane). • Building Retrofit: In most cases, energy savings are determined through a feasibility study. However, if not available, savings estimates can be calculated using existing consumption and percentage savings. Most retrofit projects will save between 10-30% of a building's energy.
Solid Waste	• GHG reductions are calculated based on the estimated reduction in methane production at landfills, reduced vehicle use, and reduced fuel use from the replacement of waste disposal vehicles with more fuel efficient models.
Wastewater	• GHG reductions are calculated based on the estimated reduction in wastewater flow and the resulting reductions in energy use.
Drinking Water	• GHG reductions are calculated based on the estimated reduction in water flow and the resulting reductions in energy use.
Sport/Rec/Cultural/Tourism	• See community energy systems

BC Ministry of Community Development, Greenhouse Gas Emission Assessment Guide: For British Columbia Local Governments, 2008.

Appendix B

Completed Capital Infrastructure and Capacity Building Projects between 2014 and 2016 by Local Government

Community	Completed Projects	Gas Tax Funding ($)
100 Mile House, District of	2	159,031
Abbotsford, City of	16	1,682,195
Alberni-Clayoquot, Regional District of	3	553,111
Alert Bay, Village of	4	625,712
Anmore, Village of	1	107,456
Armstrong, City of	5	850,005
Barriere, District of	13	1,603,403
BC Transit	1	750,000
Bowen Island Municipality	1	118,000
Bulkley-Nechako, Regional District of	40	1,935,525
Burnaby, City of	8	2,420,531
Burns Lake, Village of	3	225,050
Cache Creek, Village of	3	264,289
Campbell River, City of	11	1,376,712
Canal Flats, Village of	2	142,915
Capital Regional District	21	6,155,794
Cariboo Regional District	29	2,452,834
Castlegar, City of	1	1,211,748
Central Coast Regional District	4	303,820
Central Kootenay Regional District	53	9,137,055
Central Okanagan, Regional District of	45	1,801,021
Central Saanich, District of	2	225,000
Chase, Village of	6	951,413
Chetwynd, District of	4	193,342
Chilliwack, City of	5	13,491,947
Clearwater, District of	4	235,895
Clinton, Village of	4	350,995
Coldstream, District of	5	1,039,400
Columbia-Shuswap Regional District	36	4,116,052
Colwood, City of	16	993,686
Comox Valley Regional District	9	1,110,374
Comox, Town of	8	523,866
Coquitlam, City of	9	664,888
Courtenay, City of	8	1,009,867
Cowichan Valley Regional District	26	4,482,828
Cranbrook, City of	10	10,244,232
Creston, Town of	3	583,187
Cumberland, Village of	12	759,396
Dawson Creek, City of	5	1,332,798
Delta, City of	1	680,000
Duncan, City of	9	786,291
East Kootenay, Regional District of	15	1,347,141

Community	Completed Projects	Gas Tax Funding ($)
Elkford, District of	2	761,040
Enderby, City of	6	916,505
Esquimalt, Township of	11	3,932,881
Fernie, City of	3	1,223,489
Fort St. James, District of	6	323,669
Fort St. John, City of	12	4,597,993
Fraser Lake, Village of	4	82,636
Fraser Valley Regional District	16	667,285
Fraser-Fort George, Regional District of	11	467,798
Fruitvale, Village of	8	1,705,194
Gibsons, Town of	2	36,945
Gold River, Village of	3	111,154
Golden, Town of	7	438,154
Grand Forks, City of	-	-
Granisle, Village of	8	241,374
Greenwood, City of	4	277,951
Harrison Hot Springs, Village of	5	1,802,668
Hazelton, Village of	1	22,956
Highlands, District of	2	510,000
Hope, District of	3	912,627
Houston, District of	1	2,703,970
Hudson's Hope, District of	1	730,752
Invermere, District of	1	169,389
Jumbo Glacier, Mountain Resort Municipality	1	101,189
Kamloops, City of	8	3,203,688
Kaslo, Village of	6	100,181
Kelowna, City of	13	14,173,792
Kent, District of	3	969,525
Keremeos, Village of	5	549,821
Kimberley, City of	3	633,847
Kitimat-Stikine, Regional District of	7	536,896
Kitimat, District of	2	850,848
Kootenay Boundary, Regional District of	30	735,287
Ladysmith, Town of	15	847,837
Lake Country, District of	8	5,358,920
Lake Cowichan, Town of	2	1,355,881
Langford, City of	7	2,523,798
Langley, City of	1	127,680
Langley, Township of	-	-
Lillooet, District of	4	6,816,332
Logan Lake, District of	2	173,790
Lumby, Village of	7	263,467
Lytton, Village of	2	235,233
Mackenzie, District of	-	-
Maple Ridge, City of	-	-
Masset, Village of	1	100,000
McBride, Village of	1	151,097

Community	Completed Projects	Gas Tax Funding ($)
Merritt, City of	3	351,381
Metchosin, District of	2	110,351
Midway, Village of	1	700
Mission, District of	3	1,279,388
Montrose, Village of	1	92,824
Mount Waddington Regional District	20	594,280
Nakusp, Village of	2	413,398
Nanaimo Regional District	31	3,157,142
Nanaimo, City of	2	21,522,833
Nelson, City of	9	1,990,293
New Denver, Village of	-	-
New Hazelton, District of	1	58,041
New Westminster, City of	3	734,488
North Coast Regional District	2	145,500
North Cowichan, District of	10	7,126,609
North Okanagan Regional District	47	2,400,876
North Saanich, District of	2	317,149
North Vancouver, City of	2	578,650
North Vancouver, District of	4	1,223,149
Northern Rockies Regional Municipality	1	1,152,336
Oak Bay, District of	1	738,000
Okanagan Basin Water Board	1	95,000
Okanagan-Similkameen, Regional District of	18	1,902,829
Oliver, Town of	9	1,831,674
Osoyoos, Town of	3	1,506,968
Parksville, City of	7	685,500
Peace River Regional District	5	2,601,913
Peachland, District of	4	94,109
Pemberton, Village of	2	322,127
Penticton, City of	18	3,277,787
Port Alberni, City of	19	1,361,583
Port Alice, Village of	5	163,938
Port Clements, Village of	2	867,536
Port Edward, District of	2	145,982
Port Hardy, District of	5	223,484
Port McNeill, Town of	1	311,191
Port Moody, City of	2	146,416
Pouce Coupe, Village of	5	576,691
Powell River Regional District	14	1,047,887
Powell River, City of	17	3,300,504
Prince George, City of	31	11,702,630
Prince Rupert, City of	11	2,891,281
Princeton, Town of	4	937,329
Qualicum Beach, Town of	4	993,440
Queen Charlotte, Village of	4	250,374
Quesnel, City of	7	149,765
Radium Hot Springs, Village of	2	25,064

Community	Completed Projects	Gas Tax Funding ($)
Revelstoke, City of	5	464,049
Saanich, District of	7	29,145,565
Salmo, Village of	7	167,469
Salmon Arm, City of	10	1,335,827
Sayward, Village of	3	104,640
Sechelt, District of	17	10,760,798
Sechelt Indian Government	3	387,865
Sicamous, District of	4	750,506
Sidney, Town of	6	196,492
Silverton, Village of	4	134,561
Slocan, Village of	-	-
Smithers, Town of	14	1,029,654
Sooke, District of	4	1,189,067
South Coast British Columbia Transportation Authority (TransLink)	12	175,025,464
Spallumcheen, Township of	3	666,304
Sparwood, District of	2	1,553,641
Squamish-Lillooet Regional District	7	393,035
Squamish, District of	11	1,059,418
Stewart, District of	3	379,669
Strathcona Regional District	4	448,457
Summerland, District of	4	1,039,943
Sun Peaks Mountain Resort Municipality	7	197,509
Sunshine Coast Regional District	7	767,161
Surrey, City of	1	609,143
Tahsis, Village of	1	662,686
Taylor, District of	2	215,306
Telkwa, Village of	1	36,000
Terrace, City of	9	1,671,107
Thompson-Nicola Regional District	40	6,082,901
Tofino, District of	7	584,445
Trail, City of	-	-
Tumbler Ridge, District of	4	384,430
Vancouver, City of	-	-
Vanderhoof, District of	2	446,901
Vernon, City of	8	1,174,918
Victoria, City of	3	851,610
View Royal, Town of	13	1,268,177
Warfield, Village of	5	446,082
Wells, District of	1	239,930
West Kelowna, City of	9	1,877,891
West Vancouver, District of	2	330,000
Whistler, Resort Municipality of	3	359,154
White Rock, City of	-	-
Williams Lake, City of	2	1,514,650
Zeballos, Village of	2	143,232

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