

October 23, 2018



**GN RESPONSE TO THE OGOPA STANDING  
COMMITTEE REPORT ON THE AUDITOR  
GENERAL OF CANADA'S REPORT ON CLIMATE  
CHANGE IN NUNAVUT**

**August 2018**

**PREPARED BY:**

**Climate Change Secretariat**  
**Department of Environment**  
P.O. BOX 1000  
Station 1310  
Iqaluit, Nu  
X0A 0H0

## INTRODUCTION

On March 13, 2018, the *2018 Report of the Auditor General of Canada to the Legislative Assembly of Nunavut- Climate Change in Nunavut* was tabled in the Legislative Assembly.

The Standing Committee on Oversight of Government Operations and Public Accounts held a hearing on the AG report from April 30, 2018, to May 1, 2018. The hearing was televised, and senior management from the Department of Environment, the Department of Community and Government Services, the Qulliq Energy Corporation and the Nunavut Housing Corporation appeared as witnesses.

The Standing Committee released the *Report on the Review of the 2018 Report of the Auditor General of Canada to the Legislative Assembly of Nunavut-Climate Change in Nunavut*. The report outlines a series of observations and recommendations relating to five following issues:

- Government of Nunavut Action Plans and Related Matters;
- Pan-Canadian Framework on Clean Growth and Climate Change;
- Federal Funding for Green Infrastructure, Climate Change and Renewable Energy Initiatives;
- Legislation and Annual Reporting; and
- Meeting Outcomes.

The issues include a set of recommendations, each of which is addressed in this report (GN Response). Each issue has its own section, with recommendations numbered as they appear in the Standing Committee report. The GN response specifies which implicated department is responding, using the following acronyms:

- DOE (Department of Environment);
- CGS (Department of Community and Government Services);
- NHC (Nunavut Housing Corporation);
- QEC (Qulliq Energy Corporation); and
- FIN (Department of Finance).

Climate change is a very important issue for Nunavummiut, the Government of Nunavut, all Canadians and on the largest scale, all global citizens. The Climate Change Secretariat, facing significant capacity challenges, has been able to provide comprehensive interagency coordination on numerous initiatives. Those capacity issues are in the process of being addressed, which will result in the ability to access additional funding and coordinate more initiatives to both adapt to and mitigate the impacts of climate change in Nunavut. Addressing

climate change in Nunavut will require a tremendous amount of collaboration among GN departments, as well as strong and consistent leadership. The Sustainable Development Committee is well-positioned to provide the guidance and leadership that will be needed for a successful GN-wide response to climate change.

## 1 GOVERNMENT OF NUNAVUT ACTION PLANS AND RELATED MATTERS

### 1.1 RECOMMENDATION:

The Standing Committee recommends that the Government of Nunavut, in its response to this report, include a copy of each responding entity's formal action plan to implement the recommendations contained in the *2018 Report of the Auditor General of Canada to the Legislative Assembly of Nunavut- Climate Change in Nunavut*.

### GN Response (DOE)

The table below outlines the DOE response to two specific recommendations made in the Auditor General's report.

Auditor General Recommendation	Department of Environment's Response
<p><b>36.</b> The Department of Environment, in collaboration with other key departments, should develop an implementation plan for the Government of Nunavut's climate change strategies that</p> <ul style="list-style-type: none"><li>• Identifies priorities along with concrete actions, timelines, and costs;</li><li>• Includes reduction targets for greenhouse gas emissions;</li><li>• Clearly identifies roles and responsibilities, including who is responsible for overseeing the</li></ul>	<p>Agreed. The Department of Environment, through the Climate Change Secretariat, will collaborate with other key departments to identify priorities, concrete actions, timelines, costs, and implementation plans for climate change strategies. These strategies aim to take action on Nunavut's greenhouse gas emissions, reliance on diesel fuel, and role in adapting and combatting climate change.</p> <p>As evidenced below, implicated Government of Nunavut Departments have begun the process of</p>

<p>implementation of the plan and accountabilities for implementing actions; and</p> <ul style="list-style-type: none"> <li>• Requires monitoring and reporting on the plan's progress.</li> </ul> <p>The plan should consider actions taken to date and be informed by an assessment of climate change risks.</p>	<p>developing detailed action plans in response to specific recommendations contained in the <i>2018 Report of the Auditor General of Canada to the Legislative Assembly of Nunavut- Climate Change in Nunavut</i>.</p> <p>The Department of Environment, through the Climate Change Secretariat, and with assistance and guidance from the Sustainable Development Committee (SDC), will play a coordinating role in the development and implementation of formal action plans to address the recommendations contained in the AG report. This undertaking will require significant planning and collaboration between departments, as well as sufficient human resource capacity. The DOE continues to face challenges to address capacity issues at the Climate Change Secretariat, but remain hopeful a productive and capable team can be assembled.</p> <p>The Climate Change Secretariat was formed in November 2016 and has since begun work on a variety of foundational projects that will well position the Department of Environment to facilitate responding to such a recommendation. Preliminary work on community energy planning, greenhouse gas emissions and alternative energy inventories will support the Government of Nunavut's ability to identify realistic and reasonable greenhouse gas emission targets.</p>
<p>49. The Department of Environment's Climate Change Secretariat, in collaboration with other Government of Nunavut organizations, should analyze and rank the risks of climate change to Nunavut on the basis of their potential impacts and how likely they are to occur. Results of this analysis should be used to</p>	<p>Agreed. The Department of Environment intends to work with other Government of Nunavut departments and organizations and external bodies to identify and rank climate change risks and hazards to Nunavut.</p> <p>The Department of Environment hosted a pan-</p>

<p>inform future climate change priorities and actions.</p>	<p>northern meeting in March 2018 on permafrost hazard mapping. This brought northern communities and government decision makers together to determine risks, opportunities, and recommendations to better manage and respond to permafrost thaw and other climate change risks. Best practices and lessons learned from this session will help inform future work conducted to address other identified risks. Additional work is scheduled to begin including the development of climate change risk mitigation criteria for decision makers.</p> <p>A more formal action plan, with specific details on timelines, required human resources, assigned responsibilities and costs will be produced by the end of the 2019/2020 fiscal year.</p>
---	---

## GN Response (NHC)

The Nunavut Housing Corporation (NHC) agreed with each of the recommendations made by the Auditor General of Canada as they relate to NHC. To meet the recommendation of the Standing Committee, work plans setting out how the NHC will act on the OAG recommendations are included in the below sections A through D.

**Section A – OAG Recommendation para 64.** *The Department of Community and Government Services and the Nunavut Housing Corporation should ensure that climate change projections are incorporated into geotechnical site investigations where required.*

**Response to OAG:** Agreed. The NHC will incorporate climate change predictions into future geotechnical studies, where necessary.

**Context:** The NHC is increasingly using local geotechnical assessments to better design and plan residential units in communities. The NHC is using financial assistance provided through Indigenous and Northern Affairs Canada.



NHC's mandate does not include studying climate change. As such, the NHC relies on the work of others to inform its work.

**Action planned:**

**Starting 2018-2019 fiscal year and going forward:**

- Climate change data that NHC acquires, federal or otherwise, will be provided to consultants engaged on NHC's projects.
  - NHC will add provisions to each future scope of work requiring that consultants, engaged on geotechnical assessments, ensure that they have contacted territorial and federal agencies for available, up-to-date climate change data.
  - NHC will require consultants to include climate change data considerations in their design analysis and reporting back to NHC.
- In order to obtain the latest climate change data, NHC will work with the Department of Environment, at a territorial level, as well as with federal agencies, such as Polar Knowledge.
- To achieve a more consistent data exchange, beyond the sporadic status quo, NHC will establish a communications protocol with federal agencies in 2018-19, with a focus on data linked to geotechnical work being carried out in the Arctic.
- NHC will continue to participate at territorial-level climate change discussions, and will explore the value of establishing a working group that will support the work of incorporating climate change predictions into future geotechnical studies.

**2022-2023 fiscal year**

- Review progress on this action
- Based on evaluation, revise actions related to:
  - Direction to consultants;
  - Communications protocols and data exchange; and
  - NHC's contributions to territorial-level climate change discussions.

**Section B – OAG Recommendation, para 72.** *The Nunavut Housing Corporation should ensure that it completes its condition rating assessments according to its schedule.*

**NHC Response to the OAG:** Agreed. The NHC will work with its Local Housing Organizations (LHOs) to ensure building condition ratings are completed according to schedule. The NHC expects to implement a new building-condition software system in the 2018-19 fiscal year.

**Context:** In the last few years LHOs have had difficulty providing regular condition ratings of units. The current Condition Rating Tablets are outdated and problematic to repair. The new condition rating system operates on a regular tablet and will be easier to use.

**Action planned:**

**2018-2019 fiscal year**

- **Roll-Out Housing Inspection Program (May 2018)**
  - NHC's previous Condition Rating System (CRS) had issues with the accuracy of data collected. NHC has developed the Housing Inspection Program (HIP) to replace the outdated CRS system.
  - The new, more user friendly and centrally monitored system was fully rolled out by the end of May 2018.
- **Implement and Monitor HIP**
  - All units across the territory will be entered into the HIP system by the end of fiscal year 2018-19.
  - NHC will support this work by regularly monitoring LHO progress, which is tracked by the HIP, and following up with LHOs as needed in order to meet overall objectives.

**2019-2020 fiscal year and onwards**

- **Implement and Monitor HIP**
  - Continue to offer training and support on the use of HIP, while monitoring LHO use.
- **Review previous year of implementation**
  - Review previous year's progress on the implementation of HIP and will identify gaps in data, as well as additional training needs for LHOs.
- **Examine additional uses for HIP**
  - Use the yearly progress review to determine if additional, more detailed inspection templates can be added to and deployed through the HIP, and if so, NHC will develop those templates internally.

**Section C – OAG Recommendation, para 99.** *The Nunavut Housing Corporation should set targets for fuel and electricity savings. Future reporting should include how fuel and electricity use has changed over time and discuss how the Corporation performed against its targets.*

**NHC Response to OAG:** Agreed. The NHC plans to evaluate fuel and electrical consumption to identify areas offering potential savings based on any available funding specifically allocated for energy retrofits. Targets and future reporting will be informed by the results of this work, with the understanding that prioritization of this work will be dependent on Government of Nunavut mandates and the direction of the Corporation's Board of Directors. The Corporation will comply with codes related to building design and energy efficiency in a northern climate.

**Context:** Energy retrofits and projects are typically capital intensive. To improve the NHC's ability to implement target specific energy savings projects the NHC plans to improve energy efficiency of units based on available funding, such as through the federal Low Carbon Economy Fund (LCEF).

It is important to note that any funding received from the LCEF will function as a targeted acceleration of an existing capital program. The NHC's current Modernization and Improvement program is reactive in nature, allowing for major renovations on public housing units, when required. The proposed project will use the existing structure of the Modernization and Improvements program to increase the renovations targeted specifically towards energy efficiency and emissions reduction.

The NHC will set baselines and assess efficiencies on units targeted under the proposed "Accelerated Replacement and Retrofit Program". However, as overcrowding is unfortunately a reality in Nunavut's communities, this may affect the results of efficiency upgrades. It is also important to note that fuel and electricity reductions will also depend on the kind of upgrades made, with improvements to the building envelope and major system upgrades in multiplex units offering the most potential in terms of efficiency gains.

The changes being made under LCEF reflect design elements that are already present in our more recent builds, therefore upgrades will be made primarily in older units.

**Action planned:**

**2018-19**

- Identify units in which to make efficiency upgrades (for example, building envelope or mechanical systems).



- Use data collected through the Home Inspection Program to assist in prioritizing energy efficiency upgrades.
- Project planning will be put in place as part of NHC's Modernization and Improvements program, including any federal monies received as part of the "Accelerated Replacement and Retrofit Program".
- Project planning will include assessments of the baseline fuel and electricity use data for identified units.
- The Corporation will continue to comply with codes related to building design and energy efficiency in a northern climate.

#### **2019-20, 2020-21, 2021-22**

- Work on the efficiency projects, including the use of federal funding approved for "Accelerated Replacement and Retrofit Program", will start each fall.
- Once the efficiencies are in place NHC will begin to monitor consumption for each unit.
- The Corporation will continue to comply with codes related to building design and energy efficiency in a northern climate.

#### **2022-23**

- The NHC will conduct an assessment of the outcomes of the 4-year "Accelerated Replacement and Retrofit Program".

**Section D – OAG Recommendation, para 100.** *The Nunavut Housing Corporation should take appropriate steps to ensure that heat recovery ventilators are maintained as required under its maintenance program.*

**NHC Response to OAG:** Agreed. The NHC will ensure maintenance programs related to heat recovery ventilators are implemented according to schedule.

**Context:** The NHC must ensure that each Local Housing Organization (LHO) is properly trained in heat recovery ventilators (HRVs) repairs and maintenance.

**Action planned:**

#### **2018-2019 fiscal year**

- Maintenance Management Operating System (MMOS)

- Investigate alternatives to the current MMOS, to better track and identify demand and preventative maintenance tasks in each community.
- Develop and issue a Request for Proposals.
- Acquire replacement to MMOS.
- Provide ongoing training and support to LHOs for HRV repairs and maintenance.
  - Examine options for video-based instruction as well as in-person training.
  - Set out schedule for LHO training.
  - Monitor once yearly maintenance to HRVs through current MMOS.
    - Fill in gaps in data where possible through the district level maintenance staff.
    - Follow up with LHOs when and where regular maintenance is not being completed.

#### **2019-2020 fiscal year**

- Initiate replacement of MMOS.
  - Carry out internal training, starting with the Territorial Maintenance Division;
- Provide ongoing support to LHOs with respect to maintenance requirements.

#### **2020-2021 fiscal year**

- Roll-out replacement to MMOS, including training to LHOs.
- Support LHOs on replacement of MMOS.

### **GN Response (CGS)**

Formal action plans and implementation plans for the four OAG recommendations directed at CGS will need to be developed and approved. CGS will collaborate with other departments and take direction from the Sustainable Development Committee in the development of these plans, with the goal of having them completed by the end of September of 2018. It must be noted that action plans that will require financial resources will need to be developed through the Main Estimates and Business Planning Process.

The table below contains information related to each of the four OAG recommendations.

Auditor General Recommendation	CGS Response
-----------------------------------	--------------

<p><b>64.</b> The Department of Community and Government Services and the Nunavut Housing Corporation should ensure that climate change projections are incorporated into geotechnical site investigations where required.</p>	<p>This recommendation will be part of CGS capital planning and project delivery process. No additional GN resources will be required since this will be funded and undertaken through GN Capital Projects as required and as projects get approved.</p> <p>Compliance to the recent 2017 Geotechnical Standard - CAN/BNQ 2501-500/2017: <i>Geotechnical Site Investigations for Building Foundations in Permafrost Zones</i> will be adhered to for geotechnical site investigation reports. The standard sets requirements for the geotechnical site investigation report and a description of the climate conditions influencing the building site as well as the climate change projections over the service life of the building foundations. Depending on the risk level of the project, a more detailed assessment of the climate conditions may be required for climate change projections, more specifically for moderate and high-risk projects as ranked in the BNQ standard.</p> <p>Climate Change projections shall cover elements relevant to the building foundations under consideration for the service life of those foundations, as well as the effect these elements have on the ground thermal regime and permafrost conditions of the building site.</p> <p>Climate Change projections present significant challenges, with evolving science and various models, with no standardized approach having been adopted for our Northern climate. Standards Council of Canada is actively working on the development of an infrastructure program, <i>Standardization Guidance for Weather Data, Climate Information and Climate Change Projections</i>, which will assist in this area.</p>
<p><b>71.</b> The Department of Community and Government Services should standardize its building assessment procedures and complete its building assessments according to its required schedule.</p>	<p>The Property and Asset Management Division within CGS will work with each regional office as well as the HQ office to ensure the annual and semi-annual facility maintenance inspections are carried out utilizing the new "Audit Planner" software. Further training will need to be provided to each regional office to ensure proper usage and clear results are obtained for community inspections. We expect this process to be completed by the end of Fall of 2018, which will allow for input from regional offices as well as higher levels prior to</p>

	<p>procedural finalization and implementation.</p> <p>Moving forward, CGS will be focusing on the following areas:</p> <ul style="list-style-type: none"> <li>• Setup of a training schedule for regional offices on the use of the audit planner software and report production;</li> <li>• The creation of checklists within scheduled inspection tasks on the Asset Planner to ensure all requirements are met under the inspection process;</li> <li>• The creation of inspection schedules for each region, including Iqaluit, in collaboration with regional staff;</li> <li>• Setup of annual and semi-annual inspection report deadlines for submission to PAMD, ADM and DM levels;</li> <li>• Development of an improved process to identify possible life cycle or other capital project items during an inspection, which will allow for improved project planning within the CGS PMO section;</li> <li>• Technical Services Division on the 5-year cyclical plan for full Building Condition Assessments (BCAs) inspection to ensure each facility is fully inspected every 5 years; and</li> <li>• Ensure proper funding allocation (O&amp;M budget) in order to secure consulting contracts to fill in shortfalls due to TSD workloads in conducting BCAs. No extra funding will be required for these actions as they will be covered under current operating budgets.</li> </ul>
<p><b>74.</b> The Department of Community and Government Services and the Nunavut Housing Corporation should develop best practices for managing snow and water to prevent permafrost degradation for their owned buildings and incorporate these practises into their operations and maintenance procedures.</p>	<p>In addressing this recommendation, CGS will adhere to the Standards Council of Canada's Northern Infrastructure Standardization Initiatives (NISI).</p> <p>The department will lead the development of Preventative Maintenance (PM) schedules to ensure adequate snow removal around GN facilities. New procedures will be incorporated into the "as &amp; when" snow removal contracts. This will help to ensure that snow removal and snow piles are controlled in such a way that during spring melt, a minimal amount of water will be directed towards the facilities, cutting down on standing water pooling under GN facilities.</p>

	<p>Snow piles will be trucked away prior to the spring melt, which will further eliminate the risk of negative issues arising due to melting snow. In addition, during the summer period, surrounding parking and access roads will be graded to help ensure proper drainage away from the facility is maintained over the warmer months. This will also be achieved through the GN maintenance program as an annual PM schedule.</p> <p>New PM schedules will also be introduced into the GN maintenance program to deal with standing water under GN facilities, and to ensure any such water is removed as quickly as possible in the spring and summer period to lessen the possibility of permafrost degradation.</p> <p>Property and Asset Management will be working with the regional offices on refining this procedure and setting up the required PM schedules over the next few months. This will include creating amendments to current "as &amp; when" snow removal contracts, as well as adding the new procedures into the scope of work for any future snow removal contracts. It is anticipated that these changes will be completed for the upcoming winter season.</p>
<p><b>105.</b> The Department of Community and Government Services should ensure that its public reporting on the Nunavut Energy Management Program is up-to-date.</p>	<p>In the near future, CGS will update the status of past Nunavut Energy Management Project (NEMP), more specifically the Iqaluit pilot project. This will include an update on two years of successful and consistent energy savings, as evidenced through measurement and verification reporting.</p> <p>The successes of the Iqaluit pilot project will be used as a guide to inform the development of similar projects in other communities within Nunavut. Once CGS proceeds with the next phases of NEMP, CGS will provide regional project overviews and results on its website. No additional funding will be required since this will be expensed either through the NEMP funding allocation and/or current O&amp;M budgets within the Department.</p>

## GN Response (QEC)



Auditor General Recommendation	QEC Response
<p><b>91.</b> The Qulliq Energy Corporation should establish priorities and targets for renewable energy (such as what share of energy production it wants to come from renewable energy). Targets should have a baseline and timelines against which the Corporation can measure performance. Future reporting by the Corporation should include its progress on its priorities and performance targets.</p>	<p>Qulliq Energy Corporation (QEC) will actively participate in the Government of Nunavut's action plan for the territory's renewable energy priorities and targets. Once a clear plan has been established, QEC will review the territorial objectives within the context of the Corporation's unique operating environment, and develop a QEC specific action plan and report accordingly.</p> <p>QEC anticipates that its small rate base, along with financial, geographical, and technical challenges, will impact the deployment of renewable energy technology and subsequently any related GHG reduction targets. The achievement of these targets will need to be reconciled with the Corporation's primary objective of delivering reliable and affordable energy in an Arctic setting. Renewable energy targets that increase Nunavut's electricity rates, already the highest in the country, will directly affect customers across the territory.</p> <p>Outside of the larger GN framework, the Corporation has already started renewable energy initiatives that do not affect electricity rates. These practical solutions will be important in meeting any proposed GHG reduction targets. The Net Metering program, whereby qualified customers are able to receive credits towards their power bill for renewable energy they produce and feed back into the grid, officially launched in April and QEC continues to accept applications. More ambitiously, with Legislative approval, QEC expects to commence its Independent Power Producer program in 2019, enabling further renewable energy generation capacity in Nunavut and reductions in GHG emissions.</p>

## 1.2 RECOMMENDATION:

The Standing Committee further recommends that the Government of Nunavut, in its response to this report, provide a detailed description and breakdown of the activities and expenditures undertaken by the Department of Environment's Climate Change Secretariat during the 2017-2018 fiscal year.

---

## GN Response (DOE)

The Climate Change Secretariat addresses climate change in Nunavut through three inter-related areas: Adaptation, Mitigation, and Knowledge Mobilization.

- **Adaptation Section** - ensures Nunavummiut are prepared for and have the resources available to adapt to climate change. This includes ensuring climate change adaptation measures are incorporated into decision-making and policies.
- **Mitigation Section** - focuses on greenhouse gas reduction, energy conservation, and supporting alternative energy development in the territory, in order to reduce Nunavut's reliance on diesel.
- **Knowledge Mobilization Section** - supports Nunavummiut in learning about climate change, understanding its impacts, and providing resources to help them take action in their own lives and communities.

The following is a breakdown of activities undertaken by the Climate Change Secretariat (CCS) in the 2017/2018 fiscal year.

- The CCS continued its documentation of the impacts of climate change on Nunavut, including;
  - Damage to land infrastructure (buildings, roads, mines, and runways) from permafrost thaw and extreme weather events;
  - Damage to marine infrastructure (docks, wharves, and ports) from coastal erosion and extreme weather events;
  - Changes to traditional hunting routes from sea ice loss and snow melt;
  - Changes in wildlife patterns due to invasive species, extreme weather, and changing seasons;
  - Positive impacts to the tourism and shipping industry due to more ice-free time; and
  - Positive impacts for hunting and harvesting of certain species that are expanding their population and range with warmer temperatures
- The Climate Change Secretariat (CCS) held the training course, *Climate Change Adaptation for Nunavut Decision-Makers*, twice in 2017 on May 29 and May 30.
  - The course involved participation from 30 GN staff members from various departments including Health, Community and Government Services, Environment, Executive and Intergovernmental Affairs, and Nunavut Housing Corporation.

- CCS is working in partnership with Government of Nunavut (GN) Departments, and federal, provincial and territorial governments to support the implementation of the Pan-Canadian Framework (PCF). The CCS is currently addressing 9 sections of the PCF:
  - Electricity: by identifying areas in which alternative energies can be integrated into the electrical grid;
  - Built Environment: by developing and supporting programs for increased energy efficiency and conservation within the GN;
  - Transportation: by considering policy options to reduce emissions deriving from transportation in the territory;
  - Government Leadership: by conducting an assessment of GN sustainability in office spaces;
  - Translating scientific information and traditional knowledge into action: by promoting Inuit Societal Values as a significant source of climate information;
  - Infrastructure: by exploring funding opportunities with federal agencies to support stocktaking of climate change infrastructure standards in Nunavut;
  - Vulnerable Regions: by administering INACs Climate Change Preparedness in the North program to support adaptation;
  - Reducing climate-related hazards and disaster risks: by working pan-territorially with emergency services offices to share best practices and deliver stakeholder workshops around permafrost hazard mapping and land-based hazards from climate change; and
  - Clean Technology, Innovation and Jobs: by engaging with Nunavut communities to help identify funding opportunities, and support integration of clean technology into their programs.
- CCS is actively participating in the Climate Change Committee project teams of the Canadian Council of Ministers of the Environment. The project teams support the implementation of the PCF and they include:
  - International Mitigation Project Team: This team supports Canada's submission to the United Nations Framework Convention on Climate Change, the CCS is monitoring the groups drafting of options for international mitigation opportunities.
  - Inventories Project Team: The team worked to determine recommendations to provinces and territories on how to best align greenhouse gas emission inventory methodologies.
  - Emissions Projections Project Team: This team will oversee the development of a model for guiding technological change and investment in technology.
  - Adaptation Policy Committee: *This is the only adaptation related working group on the Climate Change Committee. This team oversees the implementation of adaptation-related commitments to the PCF.*

- The Climate Change Secretariat continues to work with Qulliq Energy Corporation and Nunavut Housing Corporation to deliver a long-term awareness campaign to address saving energy in the home and at work.
  - The *Energy Wise* campaign, launched in April 2017, helps Nunavummiut learn about easy ways to save energy in their own homes.
  - The Energy Wise @ Work campaign launched in March 2018 and will complement work being done as part of the *Energy Wise* campaign.
- The CCS updated the climate change website ([www.climatechangenunavut.ca](http://www.climatechangenunavut.ca)) to make it easier for Nunavummiut to access information related to climate change. The website is now mobile-friendly and generally much easier to navigate.
- The CCS continues to administer federal funding for both adaptation and mitigation activities. Projects under these funding programs include:
  - Assisting Nunavut Parks and Special Places (NP&SP) in identifying permafrost concerns and implementing adaptation measures for river erosion in Kugluk Territorial Park outside of Kugluktuk.
  - Assisting Economic Development and Transportation's Tourism and Cultural Industries Division in minimizing climate risks for the sea ice-based tourism industry in Arctic Bay. Leading the development of a Nunavut-wide Youth Advisory Committee to increase awareness, adaptive capacity, and climate resilience. Organized and held a pan-northern meeting on permafrost hazard mapping March 7-8, 2018 to discuss best practices and usability with developers and users. The report stemming from this meeting is currently under development.
  - Creating a database to showcase alternative energy projects across the territory.

### 1.3 RECOMMENDATION:

The Standing Committee further recommends that the Government of Nunavut, in its response to this report, include a copy of the report on "Energy use and greenhouse gas emission trends in the territory" that is referenced in paragraph 34 of the Auditor General's report.

---

### GN Response

The report mentioned above was prepared by EnviroVest Energy Ventures Inc., with information and feedback from the Petroleum Products Division of the Department of Community and Government Services, Qulliq Energy Corporation, Uqsuq Corporation and

Kitnuna Petroleum Limited. The report is titled *Nunavut Energy Use and Inventory of Greenhouse Gas Emissions- FY 2008/09 to FY 2015-16*, and is included in the GN response to the Standing Committee report.

## 1.4 RECOMMENDATION:

The Standing Committee further recommends that the Government of Nunavut, in its response to this report, provide a detailed description of what specific findings concerning gas emission estimates have been achieved by the “federal/territorial working group” that is referenced in paragraph 35 of the Auditor General’s report.

### GN Response (DOE)

The CCS continues to review GHG estimates and will work to finalize a formal annual reporting mechanism of Nunavut’s overall GHGs. The table below shows emissions data gathered from ECCC for all provinces and territories.

P/T	Population count 2016	GHG emissions for 2016	% of Canada's total GHG emissions in 2016	GHG kilotones /capita/yr	Rank (GHG/capita/yr) Highest to lowest
Canada	35,151,728	704,159	100.00	0.020	-
Newfoundland and Labrador	519,716	10,751	1.53	0.021	4
Prince Edward Island	142,907	1,813	0.26	0.013	10
Nova Scotia	923,598	15,592	2.21	0.017	7
New Brunswick	747,101	15,290	2.17	0.020	5
Quebec	8,164,361	77,251	10.97	0.009	13
Ontario	13,448,494	160,566	22.80	0.012	11
Manitoba	1,278,365	20,935	2.97	0.016	8
Saskatchewan	1,098,352	76,262	10.83	0.069	1
Alberta	4,067,175	262,891	37.33	0.065	2
British Columbia	4,648,055	60,069	8.53	0.013	9
Yukon	35,874	426	0.06	0.012	12
Northwest Territories	41,786	1,611	0.23	0.039	3
Nunavut	35,944	700	0.10	0.019	6

Data for population: "Population and Dwelling Count Highlight Tables, 2016 Census" (2018-02-08)

<http://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hltfst/pd-pl/Table.cfm?Lang=Eng&T=101&S=50&O=A>

Data for GHG emissions: ECCC, April 2018

[http://ec.gc.ca/pdges-ghg/p/Canada\\_PT\\_GHG%20emissions](http://ec.gc.ca/pdges-ghg/p/Canada_PT_GHG%20emissions)



## 1.5 RECOMMENDATION:

The Standing Committee further recommends that the Government of Nunavut, in its response to this report, include a copy of the “Assessment of climate change risks to Nunavut’s mining sector” that is referenced in paragraph 45 of the Auditor General’s report.

---

### **GN Response (DOE)**

The report referenced in the Auditor General’s report was produced by the Golder Corporation in March of 2012 for the Nunavut Regional Adaptation Collaborative (RAC) and titled *Vulnerability Assessment of the Mining Sector to Climate Change task 1 Report*. The report is included in the GN response to the Standing Committee Report.

## **2 PAN-CANADIAN FRAMEWORK ON CLEAN GROWTH AND CLIMATE CHANGE**

### 2.1 RECOMMENDATION:

The Standing Committee recommends that a copy of the joint federal-territorial study on carbon pricing that the *First Annual Synthesis Report on the Status of Implementation of the Pan-Canadian Framework on Clean Growth and Climate Change* indicated was “expected to be complete in fall 2017” be formally tabled in the Legislative Assembly by the responsible Minister.

---

### **GN Response (FIN)**

The report mentioned above, titled *Carbon Pricing in Nunavut-Potential Impact Analysis*, was drafted by Environment and Climate Change Canada (ECCC), with input from the Department of Finance and the Climate Change Secretariat of the Government of Nunavut. The Minister of Finance made this federal report publicly available on the Department of Finance’s website in May 2018, and made a statement in the Legislative Assembly to that effect.

## **2.2 RECOMMENDATION:**

**The Standing Committee recommends that the Government of Nunavut, in its response to this report, clarify its formal position on the proposed federal *Greenhouse Gas Pollution Pricing Act*.**

---

### **GN Response (DOE)**

The Government of Nunavut will not be imposing its own carbon tax, but rather rely on the federal carbon price “backstop”, which will be imposed on January 1<sup>st</sup>, 2019. The GN has continued to argue that carbon pricing is unfair to northern and remote communities and continues to lobby for exemptions from the backstop’s coverage. Canada has recently announced that it would exempt aviation fuel consumed in the territories and is also considering special measures to reduce carbon tax payable by northern electrical utilities. The GN maintains that solutions must be found that consider Nunavut’s unique circumstances, including high costs of living and energy, as well as challenges with food security.

## **2.3 RECOMMENDATION:**

**The Standing Committee recommends that the Government of Nunavut, in its response to this report, provide a detailed update on the status of its work to study “potential options to green government operations”.**

---

### **GN Response (DOE)**

There has not been any coordinated approach or action taken as of yet in terms of looking at feasible options to greening Government of Nunavut operations. Determining feasible and realistic options to greening government can be accomplished with relative ease, but implementing those initiatives successfully will take a well-coordinated, collaborative approach, as well as strong leadership and commitment.

In order to meet its internal environmental commitments, the Government of Canada created the Centre for Greening Government in November of 2016, which led to the release of the Greening Government Strategy in 2017. The strategy sets ambitious targets for reducing GHG emissions from federal operations by 80% by 2050 relative to 2005 levels. The strategy focuses on a number of areas, including;

- Mobility and fleets;
- Real property;
- Procurement;
- Sustainability partnerships;
- Policies; and
- Oversight and performance measurement.

Although not all of the strategy will be relevant or practical for the Government of Nunavut, there are definitely areas that may be feasible. There are also lessons to be learned from other territories and provinces greening initiatives.

There is currently a Federal/Provincial/Territorial working group looking at Greening Government initiatives, and a report is scheduled to be released soon. The DOE, through the Climate Change Secretariat, and with guidance from the Sustainable Development Committee, will develop an options paper outlining best practises for greening government, and determining which of these options may be feasible to implement in Nunavut. Such a paper will need to be developed in close collaboration with CGS, as they would be the department largely responsible for leading the implementation of any greening government initiatives.

## **2.4 RECOMMENDATION:**

**The Standing Committee recommends that the Government of Nunavut, in its response to this report, provide a detailed update on the status of its work to “assess the economic and technical feasibility of electrification through hybrid power generation in Nunavut’s communities.**

---

### **GN Response (QEC)**

Nunavut’s electricity rates are comprised of fixed and variable components. The fixed component is comprised of the cost of infrastructure, investments and ongoing operations across the territory. The variable component is dependent on the amount QEC pays for diesel fuel. Fluctuations in the price of diesel fuel impacts what QEC charges its customers for power. Over the last four years, the variable component for the territory has averaged approximately \$0.31/kWh. For example, the residential cost of power in Arviat is approximately \$0.79/kWh. The fixed component is \$0.48/kWh and the variable component is approximately \$0.31/kWh.

For hybrid power generation to be economically viable for Nunavummiut (i.e. no increase in electricity rates), the cost to consumers for power generated by clean technology cannot exceed the variable rate (approximately \$0.31/kWh). To date QEC has not found a clean technology that meets this threshold without significant outside investment in capital or increased subsidies from governments. Furthermore, QEC is mandated to supply Nunavummiut with reliable power. Regardless of GHG targets and goals, the corporation must maintain existing diesel plants until proven, reliable and clean technologies are developed. As outlined below, there are some long-term options in development, but many technical and financial challenges remain. For the foreseeable future, QEC will need to maintain and operate its diesel power plants to ensure Nunavut's continued access to reliable power.

Working within these technical and financial limitations, incorporating a larger share of renewable energy in Nunavut's generation capacity mix is a jointly held goal of QEC and the GN. To date, QEC has completed, or is in the process of undertaking, multiple feasibility and cost surveys for renewable and alternative technologies. Most prominently, these technologies include Wind and Solar, Hydroelectric, Geothermal, Biomass/Waste, and Nuclear.

#### **Wind/Solar**

QEC will be evaluating acceptable and practical penetration levels of wind and solar energy generation sources with existing diesel power plants. QEC has enlisted the help of Yukon College in developing a computer model to analyze existing data to determine the maximum integration of wind and solar energy in the Corporation's current energy mix. Anecdotally, third parties have informed QEC that they will require a significant portion of their capital funding from governments for their solar and wind projects in the territory. With more data, these numbers can be refined but outside funding will be required for these projects to move forward.

#### **Hydroelectric**

QEC has been exploring the potential use of hydroelectric power since 2005. Iqaluit is preferred for this option as small consumer bases with small electricity demand in other communities will not be able to support this capital-intensive option. Previous preliminary studies identified two sites, Jaynes Inlet and Armshow South, but these have proven too costly for QEC to build without significant external funding.

#### **Geothermal**

QEC issued a Request for Proposal in December 2017 for the collection of data related to the geothermal potential in Nunavut. QEC received the study in summer 2018 and it is currently undergoing internal review.

### **Waste/Biomass**

QEC is at the very early stages of exploring waste treatment options with Natural Resources Canada that can generate energy from landfill waste. QEC is in the process of discussing the newly announced waste treatment facility in Iqaluit with stakeholders to determine next steps for this option. The size of most communities in the territory limit the application of this technology to Iqaluit.

### **Nuclear**

QEC is a member of the Inter-Utility, Provincial and Territorial Consultative Committee on Nuclear (ICCN). The committee has been formed to establish a roadmap on Small Modular Reactor (SMR) potential development and use in Canada. SMRs are nuclear fission reactors that are being designed to be built at a smaller size but in larger numbers than most of the world's current nuclear fleet, portable and scalable, and able to be integrated with renewable energy systems. This would be a potential option for remote Nunavut communities, with district heating and desalination being particularly applicable. The final SMR roadmap report will be completed in fall 2018.

Multiple other technologies, including tidal power, are under review by QEC and will be monitored as they develop commercial viability.

QEC is exploring the feasibility of developing and implementing any energy source determined to be practical and financially viable for the territory. Nunavummiut pay for upgrades and maintenance to their power infrastructure, and they pay significantly more than the average Canadian due to the high cost of operation in Nunavut. Funding even a few of these capital-intensive projects through internal funding mechanisms would consume all of QEC's remaining debt cap and a significant portion of the GN's total debt cap. Until costs decrease or external capital is secured, most of these capital-intensive projects will remain economically prohibitive for Nunavut's small customer base to support.

## **2.5 RECOMMENDATION:**

**The Standing Committee further recommends that the Government of Nunavut, in its response to this report, provide a detailed update on the status of its work to “develop a retrofit program to increase the energy efficiency of public and private housing.”**

---

## **GN Response (NHC)**



On June 15, 2017, Environment and Climate Change Canada announced the Low Carbon Economy Fund (LCEF) as part of the *Pan-Canadian Framework on Clean Growth and Climate Change*. The NHC has worked with the Department of Environment to make use of the LCEF via a proposal to accelerate replacements and retrofits targeted at energy efficiency improvements in NHC units.

The proposed project would utilize \$8 million of the total \$31 million available to the Government of Nunavut toward these improvements over a four-year period. When developing projects to improve the energy efficiency of housing in Nunavut, it is important to consider the context and realities of housing in the territory.

High costs of housing construction, maintenance, and operations make the development of energy efficient technology increasingly important for the territory, as it reduces GHG emissions and leads to long term costs savings.

If Nunavut's application to the LCEF is approved, the resulting "Accelerated Replacement and Retrofit Program" would target the following:

- Building Envelope Upgrades (Insulation / Weather Stripping / Venting Barrier/ Ventilation/Windows/Doors): \$5M
- Hot Water Tank Upgrades: \$1M
- Furnace/Boiler Upgrades: \$1.2M

Estimated Costs: \$7.2M (+ \$800k Salaries and Disbursements) = \$8M

The allocation of resources among project targets will be adjusted based on ongoing NHC assessment and viability of older stock.

## **2.6 RECOMMENDATION:**

The Standing Committee further recommends that the Government of Nunavut, in its response to this report, clarify what specific renewable energy technologies are eligible for funding under the Nunavut Housing Corporation's current Home Renovation Program.

---

### **GN Response (NHC)**

Energy efficiency is one of the priority allocation categories under the Home Renovation Program. The Home Renovation Program guidelines set out that "energy efficiency improvements may include modifications to the following:

- Building Envelopes;
- Window and Door Systems;
- Heating Systems;
- Electrical Systems; and
- Plumbing Systems.

Energy efficiency upgrades can include renewable energy-related technologies. For energy efficiency/renewable energy related upgrades, the Home Renovation Program is non-prescriptive with respect to technologies, meaning applicants have flexibility to choose technologies that meet those objectives. However, it is important to note that choice of technology may be impacted on by local planning by-laws. Program funding is provided on a sliding scale, based on applicant income, to a maximum of \$65,000. However, for applicants who qualify for the maximum \$65,000 amount, a minimum of \$15,000 of that funding must be used towards energy efficiency upgrades.

## 2.7 RECOMMENDATION:

**The Standing Committee further recommends that the Government of Nunavut expand the use of tax credits and other incentives to encourage private homeowners and businesses to take measures to reduce their carbon footprints, including the installation of solar panelling and other renewable energy technologies.**

---

### **GN Response (FIN)**

The Government will take this recommendation under consideration. While we recognize tax credits as possible mechanisms to create incentives for homeowners and businesses, it is not clear that they are the most effective policy tools in Nunavut given our low home ownership rates, small private sector, low levels of financial literacy, high administrative costs, and relatively low personal income taxes.

### **GN Response (DOE)**

There are “other incentives” to encourage private homeowners and businesses to take measures to reduce their carbon footprints. In May of 2018, the Climate Change Secretariat, in collaboration with the Arctic Energy Alliance (AEA), held a Clean Energy Rebate Program Workshop. The Government of Nunavut Energy Secretariat (now the Climate Change Secretariat) joined the Arctic Energy Alliance Board of Directors in 2013. The mission of the AEA is “To promote and facilitate the adoption of efficient and renewable energy practices by all members of NWT society.”

The workshop participants looked at current GN programs, types of rebates and models, motivation for rebates, potential coordinating bodies, and rebate administration. A report was produced to summarize the workshop, including recommendations on moving forward. As part of next steps, the Climate Change Secretariat will be putting together a proposal in the fall of 2018 for a project to take place next fiscal year. A copy of the summary report is included with the GN response to the Standing Committee report.

### **3 FEDERAL FUNDING FOR GREEN INFRASTRUCTURE, CLIMATE CHANGE AND RENEWABLE ENERGY INITIATIVES**

The Standing Committee made three recommendations regarding federal funding for green infrastructure, climate change and renewable energy initiatives. The GN departmental responses attempt to deal with the recommendations in one response, as there were challenges in responding to 3.1 as there are no clear mechanisms to identify unsuccessful proposals. In addition, there are other available funding programs that were not listed in the recommendations, but that are included in responses below.

#### **3.1 RECOMMENDATION:**

The Standing Committee further recommends that the Government of Nunavut, in its response to this report, provide a detailed description and breakdown of what proposals it has submitted to date for consideration under the federal Climate Change Preparedness in the North Program, the Climate Adaptation and Resilience Program, the Emerging Renewable Energy Technologies Program, the Clean Energy for Rural and Remote Communities Program, the Improving Indigenous Communities Program, the Arctic Energy Fund and Green Infrastructure Bilateral Agreements.

#### **3.2 RECOMMENDATION:**

The Standing Committee further recommends that the Government of Nunavut, in its response to this report, provide a detailed description and breakdown of the amounts of federal funding approved to date under the federal Climate Change Preparedness in the North Program, the Climate Adaptation and Resilience Program, the Emerging Renewable

Energy Technologies Program, the Clean Energy for Rural and Remote Communities Program, the Improving Indigenous Communities Program, the Arctic Energy Fund and Green Infrastructure Bilateral Agreements.

### **3.3 RECOMMENDATION:**

The Standing Committee further recommends that the Government of Nunavut, in its response to this report, provide a detailed description and breakdown of how it has spent the federal funds received to date under the federal Climate Change Preparedness in the North Program, the Climate Adaptation and Resilience Program, the Emerging Renewable Energy Technologies Program, the Clean Energy for Rural and Remote Communities Program, the Improving Indigenous Communities Program, the Arctic Energy Fund and Green Infrastructure Bilateral Agreements.

---

## **GN Response (CGS)**

### **Integrated Bilateral Agreement – green funding stream**

1. Detailed description and breakdown of proposals CGS has submitted to date:

The only project submitted to date under the Integrated Bilateral Agreement – green funding stream is the City of Iqaluit Solid Waste Facilities Project. The current City of Iqaluit landfill does not meet new environmental requirements and its maximum capacity will be reached before the year 2020. In addition, there are no permanent facilities to initiate recycling, waste reduction or valorization activities.

The Project would result in:

- New collection methods for residential, commercial and industrial waste;
- A new state of the art landfill;
- A modern recycling and eco-center;
- The introduction of composting activities;
- The self-management of household hazardous waste;
- The construction of a new access road to the new landfill; and
- Decommissioning of the existing landfill.

2. Detailed description and breakdown of the amounts of federal funding approved to date to CGS:

- The City of Iqaluit Solid Waste project is the only project to date that has been approved by INFC. The total project budget is \$34,965,000. The City is responsible for contributing the minimum of \$8,741,250 to meet the 25/75% cost share requirements with the Government of Canada (GoC) contributing an amount to the maximum of \$26,223,750.
  - The federal funding will flow through an Ultimate Recipient Agreement between the City and GN-CGS.
3. Detailed description and breakdown of how federal funds have been spent to date:
- No expenditures have been incurred to date under the ICIP – green funding stream.

#### **The Arctic Energy Fund**

1. Detailed description and breakdown of what proposals CGS has submitted to date:
- No proposals have been submitted to date. CGS is working with QEC on the submission of a multi-site project which will replace or upgrade power plants across the territory.
2. Detailed description and breakdown of the amounts of federal funding approved to date to CGS.
- No funding has been approved to date.
3. Detailed description and breakdown of how it has spent the federal funds received to date.
- Not applicable at this time.

#### **Low Carbon Economy Fund (LCEF)**

1. Detailed description and breakdown of what proposals CGS has submitted to date:
- CGS and Climate Change Secretariat are coordinating the submissions of projects to Environment and Climate Change Canada (ECCC);
  - Project submissions from QEC and NHC are detailed in the table below; and
  - The CGS project is part of the 2019-20 Capital Plan and as such cannot be submitted to ECCC as a formal project at this time.
2. Detailed description and breakdown of the amounts of federal funding approved to date:
- No funding has been approved to date.



- Under the LCEF, the funding is cost-shared with QEC and NHC as the ultimate recipients being responsible for contributing a minimum of 25% of the total budget. If the budget for the CGS project is approved in the fall, CGS will be responsible for the cost-shared portion.
- The contribution agreements between GoC and GN and the ultimate recipient agreements between CGS and QEC and CGS and NHC have not been signed to date.

3. Detailed description and breakdown of how federal funds received have been spent.

- No federal funds have been received to date.

**LCEF – Proposed projects** (note: QEC may submit an additional project once the Ultimate Recipient Agreement is signed and projects are approved)

Partners	Community	Project Name	Canada Vote 4 (\$)	Nunavut Vote 2 (\$)	Total Project (\$)	Funding Source	Notes
QEC	Sanikiluaq Taloyoak	Installation of District Heating System	5,551,087	1,850,363	7,401,450	QEC Capital Budget	Initial heat exchangers to recover and use part of the wasted heat energy from burning fuel to space and water heating in nearby buildings.
NHC	Nunavut	Accelerated Public Housing Modernization & Improvement project	6,347,971	2,115,990	8,463,961	NHC Modernization and Improvement Program Budget	Energy efficiency upgrades and retrofits to approximately 3,300 public housing units constructed prior to 2000.
CGS	Cape Dorset Hall Beach Igloodik Kimmirut Pangnirtung Sanikiluaq Iqaluit	South Baffin Energy Management Project	18,304,059	8,601,000	26,905,059	Pending 2019/20 Capital Plan	Energy efficiency and renewable energy project. Expected outcomes- reduced utility costs and GHG emissions. Addresses all GN owned commercial and

							institutional facilities in the Qikiqtaaluk Region.
Total LCEF Projects			31,000,000	12,832,980	43,832,980		

## GN Response (QEC)

Program Proposals Submitted by QEC in 2017/2018 (*does not include rejected submissions*)	Funding Approved or Requested (\$)	Project Status	Notes
Northern REACHE through INAC	INAC funded 56% of \$932,999 total cost (shared w/QEC)	Project complete	LED streetlights were installed in Cambridge Bay, Rankin Inlet, Iqaluit, Kugluktuk by March/18.
Arctic Energy Fund (11 power plant rebuild intent)	\$175M+ 25% QEC	Pending approval?	CGS overseeing bilateral agreements
Low Carbon Economy Fund (LCEF)- 2 DHS projects	\$2.92M (Sanikiluaq) & 4.48M (Taloyoak) for (75% funding)	Decision expected Sept 2018	CGS is lead on joint submission
LCEF Challenge – Exhaust Gas Recovery unit	\$4.1M	Pending approval?	Advised July 9 selected for further consideration
NRCan Clean Growth-business case study-small nuclear reactors	\$1M	Project advancing to next stage, application submitted Aug 8	Ontario Power Generation is lead- QEC has committed \$150K for 2 years.
NRCan- Clean Energy for Rural Communities-Solar PV panel	\$8.5M (Kugluktuk)	Decision expected in fall of 2018	Applied both under demonstration and deployment stream
Northern REACHE through INAC	\$1.7M from INAC of total cost of \$2.3M	Project completed	Connection of Aquatic Centre with DHS to QEC's power plant in Iqaluit

## GN Response (DOE)

Many of the available funding programs get administered through the CCS but the funds flow to other GN departments, with oversight and assistance from CCS. This requires close collaboration between the CCS and GN departments, with CCS often playing an oversight and support role as needed.

Funding Proposal	Funding Approved or Requested	Program Status	Notes
Climate Change Preparedness North Program	\$1.7M over 4 years ending in 2021.	<p>This is an ongoing program with multi-year projects and carry-over of some of last year's funds.</p> <p>The 2017/2018 fiscal year had \$700,000 in funds. Some of this has been carried over to the next fiscal year due to changes in project scope and capacity issues.</p>	<p>Project based:</p> <ul style="list-style-type: none"> <li>Youth Advisory Committee</li> <li>Kugluk Territorial Park</li> <li>SmartICE</li> <li>Pan-Northern Meeting on Permafrost Hazard Mapping</li> </ul> <p>The funding covers: salaries, wages, travel, accommodations, professional fees</p>
Northern REACHE Program	\$300,000	Salaries, wages	<ul style="list-style-type: none"> <li>\$150,000 per year for 2 years</li> <li>Climate Change Mitigation Specialist with DOE (CCS)</li> </ul>

**NOTE:**

Some of the funding programs listed below are also referred to in the tables above. They are listed here as well to illustrate the extent of funding programs being accessed and administered by CCS.

The following is a list of current funding overseen by CCS:

**Indigenous & Northern Affairs Canada (INAC) Northern REACHE Program:**

- Nunavut is expecting to receive roughly \$2 million per year over 4 years beginning in 2018/19.
- These funds are for planning and construction of renewable energy and energy efficiency projects. These funds do not require in-kind financial contributions from the GN.

**Environment Canada, Low-Carbon Economy Fund (LCEF):**

- Nunavut is expecting to receive approximately \$31 million over 5 years.
- These funds are for infrastructure projects that increase energy efficiency and reduce greenhouse gas emissions (GHGs). They require 25% in-kind financial contributions.

- The CCS worked with NHC, QEC, & CGS to prepare a single GN project submission to the LCEF this year.
- The program's total funds allocated to all provinces and territories are \$1.4 billion with an additional \$600 million allocated to non-government groups.

#### **INAC Climate Change Preparedness in the North Funds:**

- This program will provide \$1.7 million to the GN from 2017-21.
- These program funds are for GN departments to develop measures that address climate change impacts in Nunavut communities.
- The GN received \$700,000 for 2017-18 for climate change adaptation projects.
- Projects currently underway include:
  - Developing community-based sea ice monitoring in Arctic Bay to support the local tourism industry
  - Identifying and implementing adaptation measures for river erosion in Kugluk Territorial Park
  - Developing a Nunavut Youth Advisory Committee on Climate Change
  - Hosting a pan-northern meeting on permafrost hazard mapping

#### **The CCS is supporting CGS in the administration of additional energy infrastructure funding programs across the GN, including:**

##### **Arctic Energy Fund:**

- This is administered by Infrastructure Canada with \$175 million allocated for Nunavut starting in 2018-19 over 12 years; total funds available across the 3 Territories is \$400 million.
- These funds are to address existing diesel infrastructure.
- The department of CGS is coordinating the AEF for the GN with support from the CCS.

##### **Green Infrastructure:**

- This is administered by Infrastructure Canada with \$207 million allocated for Nunavut starting in 2018-19 over 12 years.
- Funding focuses on infrastructure to reduce greenhouse gas emissions, enabling climate change resilience and ensure reliability of water and wastewater in communities.

##### **NRCan – Green Infrastructure Phase II**

- NRCan launched 4 new funding programs in fall 2017 to be shared across all provinces and territories:
  1. *Next Generation Clean Energy Infrastructure:*

- up to \$49.3M over 8 years for new building codes to retrofit existing buildings and build new net-zero energy buildings; and
  - up to \$30M over 4 years to support innovative electric vehicle (EV) projects.
2. *Promoting Clean Energy for Remote Communities:*
    - This area aims to reduce the use of diesel fuel in remote communities.
    - Amounts for each jurisdiction still to be determined.
  3. *Smart Grids:*
    - up to \$100M over 4 years to support larger scale demonstrations of near-commercial smart grid technologies and deployment of smart grid systems to reduce GHG emissions.
  4. *Clean Growth in Natural Resource Sectors Program:*
    - This program will provide \$144M over 4 years to support clean tech research, development and demonstration in energy, mining and forestry sectors.

It is clear that there is substantial funding available for climate change related initiatives in Nunavut. In addition to the sources listed in this report, there are many other programs that CCS will be able to access in the future. There exists a tremendous opportunity for the CCS, working with other GN departments, to access significant funding for a range of initiatives. Writing proposals, administering, overseeing and ensuring accountability for funding requires sufficient human resource capacity. With additional staff, the CCS will be able to ensure that the department capitalizes on existing opportunities, maximizing the benefit for Nunavummiut.

## 4 LEGISLATION AND ANNUAL REPORTING

### 4.1 RECOMMENDATION:

The Standing Committee recommends that the Government of Nunavut introduce legislation during the life of the 5<sup>th</sup> Legislative Assembly that would, at a minimum:

- Require the Government of Nunavut to report annually to the Legislative Assembly on its actions and expenditures related to climate change adaptation and mitigation, including actions and expenditures taken to implement territorial commitments made under any intergovernmental agreement, framework or analogous mechanism to which it is a party, including the Pan-Canadian Framework on Clean Growth and Climate Change; and



- **Authorize the Government of Nunavut to make regulations concerning energy efficiency standards, the sale and lease of energy devices and related matters.**
- 

## **GN Response (DOE)**

With adequate capacity, the CCS will be capable of leading the production of an annual report that would include details of all initiatives undertaken by different GN departments. Also, putting together a long-term Strategic Framework, such as the NWT, would inform all future work, priorities and initiatives.

Once a Strategic Framework is established, the GN will consider all its legislative and policy options.

## **4.2 RECOMMENDATION:**

**The Standing Committee further recommends that the Government of Nunavut, in its response to this report, provide a detailed update on the status of the proposed amendments to the *Qulliq Energy Corporation Act* and the development of an “independent power producers policy.”**

---

## **GN Response (QEC)**

On January 11, 2018, QEC’s Board of Directors approved the draft Legislative Proposal (LP) to amend the *QEC Act* (Resolution #2018-01-01) to enable the Corporation to purchase power from Independent Power Producers. On June 1, 2018, after pre-consultation with the appropriate GN departments and officials, Maligaksanik Qimirrujiit reviewed and recommended that the LP proceed directly to Cabinet Committee on Legislation (CCL) for review.

CCL approved the LP on June 14, 2018. The Corporation anticipates that the Bill will be ready for the Minister Responsible for QEC to present to the Legislative Assembly during the 2018 Fall sitting.

In anticipation of the amendment to the *QEC Act*, the Corporation is working on developing an Independent Power Producers (IPP) Program. The program will outline the commercial conditions and technical requirements for IPPs to sell power from renewable energy generating systems to QEC. Pending amendment to the Act, QEC plans to launch the IPP Program in 2019.

## 5 MEETING OUTCOMES

### 5.1 RECOMMENDATION:

The Standing Committee further recommends that the Government of Nunavut, in its response to this report, include a copy of the final report on the activities and results of the January 31, 2017 – February 2, 2017 meetings on climate change resilience that it jointly hosted with Nunavut Tunngavik Incorporated.

---

#### **GN Response (DOE)**

The report *Climate Change Adaptation Regional Workshop- Summary Report* was prepared by Stratos Inc., and submitted to Yves Thériault, Manager of Climate Change Preparedness in the North, INAC. It is included in the GN response to the Standing Committee report.

### 5.2 RECOMMENDATION:

The Standing Committee further recommends that the Government of Nunavut, in its response to this report, include a copy of the final report on the activities and results of the March 2018 Pan-Northern meeting on permafrost hazard mapping.

---

#### **GN Response (DOE)**

The report referred to above is still in development and will be completed by the end of the 2018 calendar year.

THE [illegible] OF [illegible]

BY [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]