

Creating a Clean Energy Act for the Yukon

Purpose

Energy plays a role in almost every aspect of our lives: our daily commutes, our homes and our computing and communications technologies. Our industrial and commercial operations all rely on energy. Producing the energy we need often requires burning fossil fuels. Every time we burn fossil fuels, we generate greenhouse gas emissions that contribute to climate change.

The Government of Yukon is committed to reducing the Yukon's greenhouse gas emissions, with the exception of mining emissions, by 45 per cent by 2030, reaching net-zero emissions across the Yukon's entire economy by 2050.

The purpose of the *Clean Energy Act* and associated regulations is to **legislate our greenhouse gas commitments, provide the Government of Yukon with the regulatory tools needed to meet those greenhouse gas commitments, and ensure long-term climate change accountability through public reporting.**

Note that the target-based provisions (including the renewable energy requirement) that make up the bulk of the proposed *Clean Energy Act* were part of the extensive public engagement activities during the development of *Our Clean Future* and are public commitments of the Government of Yukon. As such, these commitments are not expected to change in substance or in scale, e.g. by increasing the 2030 greenhouse gas target, as a result of this engagement.

By legislating greenhouse gas emissions targets and renewable electricity targets, clean energy legislation will bring the Yukon in line with the most progressive energy and climate change accountability legislation in North America. The legislation will ensure public accountability and transparency as we work towards our climate change objectives. Additionally, the associated regulations will enable the Government of Yukon to build on and maintain the momentum needed to deliver on our commitments.

Overview

The following provisions are proposed for inclusion in the Yukon's clean energy legislation, including in a Clean Energy Act and associated regulations:

1. Statement of clean energy objectives;
2. Reporting requirements;
3. Greenhouse gas emissions reduction targets;
4. Renewable electricity generation requirement;
5. Zero emission vehicle sales targets;
6. Renewable fuel content standards;
7. Renewable heating target; and
8. Ability to set energy efficiency criteria for products.

Roles and Responsibilities

While clean energy legislation plays an important role in ensuring the Government of Yukon delivers on several key climate change commitments, it is important to distinguish whose 'shoulders' these commitments fall on – in other words, who is responsible for implementing the actions to meet the legislated commitments. The Government of Yukon is responsible for establishing enabling policies and programs and working with Yukon public and businesses to meet greenhouse gas, renewable heating and zero emission vehicle sales targets. Yukon Energy Corporation is responsible for meeting the renewable electricity generation requirement.

While Yukon Energy Corporation is responsible for the renewable electricity requirement, it is an integral action in meeting the Government of Yukon's greenhouse gas emissions reduction targets. This overlap demonstrates the connection between clean energy and climate change at the core of this legislation (see the proposed provision on a renewable electricity generation requirement for further discussion on collaboration and factors needed to meet the renewable electricity target).

Achieving a 45 per cent reduction in emissions

Many of the targets and requirements that we are proposing to include in the Yukon's clean energy legislation were designed to achieve a 30 per cent reduction in greenhouse gas emissions, with the exception of mining emissions, by 2030. Recently, the Government of Yukon announced an increase to the Yukon's greenhouse gas reduction target to 45 per cent by 2030. As a result, some of the targets and requirements noted in this discussion document may need to be increased to remain in line with the new target.

Over the next few months, the Government of Yukon will work with the Yukon Climate Leadership Council to identify additional actions needed to reach the new greenhouse gas reduction target and to assess whether any of the targets and requirements set out in this discussion document need to be increased. Therefore, as you read this discussion document, we ask you to focus on the types of provisions we are proposing to include in the clean energy legislation rather than the specific numbers. For example, we would like to hear your thoughts on whether we should legislate sales targets for zero emission vehicles, rather than the specific level those targets should be set at.

Proposed elements of the new clean energy legislation

1. Statement of clean energy objectives

The Government of Yukon is proposing that the *Clean Energy Act* include a statement of objectives on the government's values and intentions relating to matters included in the legislation. These statements can point to and support future policymaking.

The following are examples of statements proposed for inclusion in the Yukon's clean energy legislation:

- To use and foster the development of innovative technologies in the Yukon that support energy conservation and efficiency, and the use of clean or renewable resources; and
- To support green economic development for Yukon First Nations governments, municipalities and rural communities through clean or renewable resources.

Questions:

- What objectives do you think are important to include in the clean energy legislation?

2. Reporting requirements

Requirements for regular and transparent reporting ensure the Government of Yukon will share information on progress, whether we are on track or falling short of meeting our climate change commitments. These requirements are essential to ensure long-term transparency and accountability to the public. The Government of Yukon is proposing that the Yukon's clean energy legislation require the Government of Yukon to table a report in the Legislature each year that includes:

- The territory's most recent greenhouse gas emissions and energy data;
- The most recent information on the risks the Yukon faces from climate change, updated through a climate risk assessment every five years;

- Progress on current and newly proposed actions to reduce greenhouse gas emissions, enhance energy security, and manage climate risks; and
- How current and newly proposed actions are expected to achieve the climate change and energy objectives and targets set in legislation or policy.

Questions:

- What information do you want to see when the Government of Yukon reports on its climate change and energy commitments?

3. Greenhouse gas emissions reduction targets

Legislating greenhouse gas emissions reduction targets ensures long-term government accountability and sets the benchmark for developing measures to reach those targets. Although legislating emissions reduction targets does not guarantee the Government of Yukon will meet these targets, it binds the government to a standard, and sets the course for implementing policies and programs to achieve those standards.

The Government of Yukon is proposing to include the following greenhouse gas reduction targets in the Yukon's clean energy legislation:

- Reducing the Yukon's greenhouse gas emissions from transportation, heating, electricity generation, waste and other areas by 45 per cent by 2030 compared to 2010 levels; and
- Reducing the Yukon's total greenhouse gas emissions to achieve net-zero emissions by 2050.

In addition to the two targets above, we propose that the Clean Energy Act give the Government of Yukon the authority to set sector specific emissions targets as a regulation under the Act.

Questions:

- Do you have any considerations for the Government of Yukon relating to legislating greenhouse gases emissions targets?

4. Renewable electricity generation requirement

The Yukon faces a unique set of circumstances and challenges regarding energy generation. The Yukon Integrated System (Yukon's main grid) is islanded, meaning we are not connected to the North American grid. This means all electricity used in the Yukon must be generated here. Historically, the Yukon met over 90 per cent of Yukoners' electrical needs using clean, renewable power from hydroelectricity. This percentage can fluctuate from year to year depending on energy demands, winter temperatures, and water levels (e.g., in a dry year the utility generates less hydroelectricity).

As the Yukon's economy and population continue to grow and Yukoners increasingly invest in electric heat and electric technologies, such as electric cars, the demand for electricity grows too. Legislating a renewable electricity generation requirement provides direction and empowers the Government of Yukon and Yukon Energy Corporation to implement the measures required to meet the Yukon's renewable energy goals.

The following renewable energy generation provision is proposed for inclusion in the Yukon's clean energy legislation:

- A regulatory requirement that at least 93 per cent of electricity generated on the Yukon Integrated System comes from renewable resources, calculated as a 25-year long-term rolling average.

While we are proposing to legislate a minimum of 93 per cent renewable electricity generation, the Government of Yukon aspires to reach a long-term average of 97 per cent of electricity generated through renewable resources on the Yukon's main grid by 2030. Achieving 97 per cent generation of renewable electricity in the Yukon, along with significant uptake of zero-emission vehicles, accounts for a large proportion of the Yukon's emissions reduction goals by 2030.

The renewable electricity requirement of 93 per cent was developed with the Yukon Energy Corporation and is consistent with its [10-year Renewable Electricity Plan](#). The 10-year plan is Yukon Energy Corporation's roadmap to meeting this target. Legislating a renewable electricity requirement will enable the Yukon Utilities Board to approve Yukon Energy Corporation's renewable energy initiatives. This will empower the utility to maintain and generate the high percentage of renewable electricity needed to meet increasing demands.

Major investment in new large-scale renewable energy projects, as outlined in the Yukon Energy Corporation's 10-year plan, has implications for electricity rates in the Yukon. The Yukon Energy Corporation recognizes that the investment in the Yukon's electrical system in excess of \$500 million laid out in the 10-year plan is too much for Yukon ratepayers to bear on their own. The utility will be developing collaborative partnerships with First Nations governments and development corporations, securing federal funding, and gaining Yukoners' support. These are all key factors to the 10-year plan's success.

Questions:

- Do you have any considerations for the Government of Yukon relating to legislating the proposed renewable electricity requirement?

5. Zero emission vehicles sales targets

Transportation is the largest source of greenhouse gas emissions in the Yukon at 61 per cent. Road transportation is the source of nearly 90 per cent of transportation emissions and those emissions are roughly split between personal vehicles and commercial and industrial vehicles transporting food, fuel and other products to the Yukon.

The Government of Yukon established ambitious targets for zero-emission vehicle sales in *Our Clean Future* to reach the 2030 emissions reduction target. Specifically, we are aiming for 10 per cent of light-duty vehicles sold by 2025 and for 30 per cent sold by 2030 to be zero-emission. Legislating these targets will set the stage for long-term government accountability, empowers the Government of Yukon to develop measures to reach them and signals to the private sector the growing demand for zero emission vehicle production.

The following zero emissions vehicle sales targets are proposed for inclusion in the Yukon's clean energy legislation:

- 10 per cent of light duty vehicles sold in the Yukon will be zero-emission vehicles by 2025; and
- 30 per cent of light duty vehicles sold in the Yukon will be zero-emission vehicles by 2030.

The Government of Yukon is also committed to establishing a system to ensure these sales targets are met. Many other jurisdictions have zero-emission vehicle sales targets and there are two types of approaches to reaching them:

Voluntary reporting system: The government works collaboratively with the auto industry, dealerships, charging infrastructure companies, and research organizations through a voluntary reporting system. Auto manufacturers report information to a third-party research organization about their zero-emission vehicle sales. The manufacturers are recognized as leaders when they meet the jurisdiction-wide sales target. In some cases, the government encourages manufacturers to meet the targets by only providing rebates to manufacturers who are taking action to make zero-emission vehicles available to the public.

Regulatory system: This is known as a “ZEV sales mandate.” A ZEV (zero-emission vehicle) sales mandate establishes a system whereby manufacturers are required to obtain a certain number of zero-emission vehicle sales credits per year. They obtain the credits by selling zero-emission vehicles, purchasing credits from other manufacturers that have sold a high number of zero-emission vehicles, or by paying a fine. British Columbia, Québec, California and several other US states have all legislated a regulatory approach to meet zero-emission vehicle sales targets.

There are pros and cons to each type of system. The Government of Yukon is looking for input on the best way for the territory to reach our zero-emission vehicle sales targets.

Questions:

- Which approach would you prefer for reaching the Yukon's zero-emission vehicle sales target:
 - a voluntary approach? or
 - a regulatory approach?
- Why do you prefer this approach?

6. Renewable fuel content standards

Liquid fossil fuels such as gasoline and diesel will continue to be the main source of energy for transportation in the Yukon over the next 10 years, despite an increase in the use of zero emission vehicles and alternative forms of transportation. Diesel and liquefied natural gas will also be used to support the Yukon's electricity production during peak times, when backup power is needed, and to provide electricity in off-grid communities whose main source of power is diesel generators.

A key way to reduce greenhouse gas emissions from fossil fuels is to blend them with ethanol, biodiesel, or renewable diesel that produce fewer greenhouse gas emissions than fossil fuels across their lifecycle. These renewable fuels are produced from organic matter such as agricultural waste and plant oils. Renewable fuels also contribute to healthier air quality because their emissions contain fewer harmful pollutants.

We propose that the *Clean Energy Act* include language that will enable the Government of Yukon to establish renewable fuel requirements in regulation at a later date. The regulations under the Act will then specify the requirements and details. The Government of Yukon will engage with experts, stakeholders, industry members and the public during the development of the regulations for renewable fuels in addition to this broader engagement on the *Clean Energy Act*.

Engagement opportunity

- You will have an opportunity to provide input on this topic during a separate future engagement on the development of renewable fuels regulations under the *Clean Energy Act*.

7. Renewable heating

Heating is the Yukon's second largest contributor of greenhouse gas emissions at 21 per cent. Meeting the heating needs through local renewable resources such as renewably sourced electricity and biomass will reduce greenhouse gas emissions and contribute to a local green

economy. Over the long-term, introducing new renewable resources, such as geothermal energy, could bolster the renewable energy supply to meet the Yukon's heating demand. By increasing the use of renewable heating sources, coupled with energy efficiency programming, such as retrofit rebates for homes, commercial and industrial buildings, the Government of Yukon will significantly decrease the reliance on fossil fuels for heating. Legislating a renewable heating target ensures long-term government accountability and ongoing action to meet the Yukon's renewable heating objectives.

The following renewable heating target is proposed for inclusion in the Yukon's clean energy legislation:

- The Yukon will meet 50 per cent of its heating demand through renewable resources by 2030.

Questions:

- Do you have any considerations for the Government of Yukon relating to legislating the renewable heating target?

8. Ability to set energy criteria for energy efficient products

Clean Energy legislation will enable the Government of Yukon to set energy efficiency criteria into legislation. This will enable the Energy Branch to develop policies that reflect new and improved technologies available for public consumption.

While there are well-established national energy efficiency programs, such as ENERGY STAR®, these energy efficiency criteria are often developed for southern jurisdictions and are not-aligned with our cold climate needs and circumstances in the Yukon. For example, ENERGY STAR® ratings for air-source heat pumps are skewed towards a cooling performance minimum, whereas heat pumps in the Yukon need to have a heating performance minimum. The purpose of developing our own criteria for energy efficiency products is to ensure those products meet Yukon-specific energy needs.

The following provision is proposed for inclusion in the Yukon's clean energy legislation:

- Authority to set energy efficiency standards or criteria in policy for products manufactured or sold in the Yukon.

Questions:

- What should the Government of Yukon consider in developing made-in-Yukon energy efficiency criteria?

Concluding engagement questions:

- Overall, do you agree with the proposed clean energy provisions?
- Why do you agree or disagree, overall, with the proposed clean energy provisions?

- Is there anything else you think should be included in the clean energy legislation?
- How do you think the clean energy legislation will affect you and other Yukoners and explain why?

Thank you for participating and providing feedback on the development of a the Yukon Clean Energy Act. The Government of Yukon will compile the feedback into a *What We Heard* report that will be publicly available late fall of 2021.

Background

On September 14, 2020, the Government of Yukon released *Our Clean Future: A Yukon strategy for climate change, energy and a green economy*. *Our Clean Future* sets out the Yukon's goals over the next 10 years to address the climate change emergency and set the Yukon on a path towards a cleaner, more sustainable future. The Yukon-wide strategy is organized into seven areas: transportation, homes and buildings, energy production, people and the environment, communities, innovation and leadership. Each area includes several objectives and accompanying actions.

A crucial objective of the strategy is to reduce the greenhouse gas emissions that cause climate change. This challenge cannot be accomplished in isolation from government policy. For more information on the Government of Yukon's objectives and actions to reduce greenhouse gas emissions visit [Our Clean Future](#).

The Government of Yukon has committed to develop a *Clean Energy Act* and regulations by 2022 to help hold ourselves accountable and ensure the commitments in *Our Clean Future* are met. This timeline was recently modified from the initial commitment under *Our Clean Future* to complete the Act by 2023 in recognition of the importance of this legislation.

The Yukon currently has no legislation establishing greenhouse gas reduction targets, renewable energy targets, or the authority to regulate activities and products to reduce emissions. The *Yukon Clean Energy Act* will be the first multifaceted energy legislation for the Yukon as well as, the territory's first climate change legislation. The previous Yukon legislation related to energy is specific to a singular need, ranging from establishing agencies such as the Yukon Development Corporation and the Yukon Utilities Board, to ensuring the safety of electrical installations. This legislation leaves gaps that the Government of Yukon can address through a new *Clean Energy Act* and associated regulations.

Prior to, and following the release of *Our Clean Future*, a working group comprised of employees from the Government of Yukon and the Yukon Development Corporation worked together to research and propose provisions to be included in *Clean Energy* legislation. By reviewing the legislative landscape across Canada and in international jurisdictions, and by drawing from actions set out in *Our Clean Future*, the working group has proposed provisions

for inclusion in the Clean Energy legislation. These proposed provisions are presented in this discussion document to obtain feedback from stakeholders, First Nations, and the public.

Target modeling

The development of the goals and actions in *Our Clean Future* was done through consultation with Navius Research, a leading expert in modeling the environmental and economic impacts of energy and climate policy. Using historical data, expected economic growth rates, and by factoring in existing policies from the governments of Yukon and Canada, Navius' energy-economy model developed projections of the Yukon's future greenhouse gas emissions.

By inputting green policy alternatives into the model, Navius Research also forecasted how the Yukon's greenhouse gas emissions could be decreased through government policy and programs, and provided a blueprint for the Yukon to strive towards a cleaner future. The data collected through the model's forecast was used to inform the ambitious targets set out in *Our Clean Future* and the actions needed to achieve those targets. We are proposing to implement key actions from the modelling work through the Yukon's Clean Energy legislation. As noted at the beginning of this document, some of the targets and requirements stemming from the Navius modelling may need to be increased to align with the new 45 per cent greenhouse gas reduction target. However, we know that the types of legislative provisions proposed in this document will continue to be key to reaching the new greenhouse gas reduction target.

Prior engagement

The Government of Yukon staff conducted extensive engagement across the Yukon on proposed content for *Our Clean Future*. This engagement included public meetings, a survey, and one-on-one meetings with stakeholders, industry members, Yukon First Nations, transboundary Indigenous groups and Yukon municipalities. Feedback received through the engagement process informed revisions and improvements to finalize the strategy and continues to help guide the implementation of the actions in *Our Clean Future*. For more information, see *Our Clean Future's* [What We Heard](#) report.