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Yukon Conservation Society (YCS) Comments on Climate Change, Energy and Green Economy Strategy Initial Consultation

Prepared on the traditional territories of the Ta'an Kwäch'än Council and Kwanlin Dün First Nation.

Introduction

Thank you for inviting the public to provide comments and input on the Climate Change, Energy, and Green Economy Strategy before writing an initial draft. YCS recognizes that these consultations are a major effort and applauds the government for making an effort to consult at this early stage. We also support Yukon government's approach of collaborating with Yukon First Nations, transboundary Indigenous groups, and Yukon municipalities in the development of the strategy. We hope that this process is productive and beneficial for all parties involved.

Anthropogenic greenhouse gas emissions have increased since the pre-industrial era, driven largely by economic and population growth, and are now higher than ever. This has led to atmospheric concentrations of carbon dioxide, methane and nitrous oxide that are unprecedented in at least the last 800,000 years. – Intergovernmental Panel on Climate Change, 2014¹

We are the first generation to be able to end poverty, and the last generation that can take steps to avoid the worst impacts of climate change. Future generations will judge us harshly if we fail to uphold our moral and historical responsibilities. – Ban Ki Moon, former Secretary General of the United Nations

The Yukon Conservation Society hopes these quotations serve as a reminder of the urgency and historical importance of our actions and decisions as the Climate Change, Energy, and Green Economy Strategy (CCEGES) is developed. Though we are a small jurisdiction, we have a unique opportunity in that small actions can have a measurable impact. To tackle a challenge as massive and overwhelming as climate change it is helpful to break it down into smaller, solvable problems to help us all maintain our sanity and positivity through the effort. Under no circumstances must we allow Yukon's small size to be

¹ http://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf (page 4)



used as a shield to avoid action. The USA is the 3rd most populated country in the world, yet accounts for only 4.28% of the global population.² Does this give them reason to shirk responsibility? I trust that we agree it does not, and neither should Yukon shy away from our global responsibility.

YCS recognizes that many of the solutions necessary to address energy use, climate change and practicing a green economy require fundamental shifts in consumerism and societal priorities. The following information and recommendations are provided as necessary steps toward a paradigm shift that recognizes humans as part of ecosystems and that the ecosystems that support all life on the planet have limits and that they are under considerable threat now.

Our comments are organized as per the “Key areas of interest” presented by Yukon government in the discussion document.

A Note on Green Economy, Green Society, and Circular Economy

The term *green economy* is widely used yet is often loosely defined. The Discussion Document released by Yukon government for this consultation touches on a few terms including *resource efficient*, *low carbon*, and *resilient*. The United Nations Environment Programme (UNEP), defines a green economy as:

One that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. It is low carbon, resource efficient, and socially inclusive.³

The Green Economy Coalition defines it succinctly as follows:

A green economy is an economy that provides prosperity for all within the ecological limits of the planet.⁴

It is of note that social equity, inclusiveness, and prosperity for **ALL** are important aspects in each definition. In the context of global climate change, this means aggressive GHG reduction efforts not just for betterment of Yukoners, but to minimize the devastation that climate change will bring to developing countries in coming decades.

Both definitions include elements of social equity and ecology, both of which are missing from Yukon government’s key words. The term *green society* can be used in place of *green economy* to help us expand our thinking beyond economics and into the daily lives of normal people. Improving efficiency and switching to clean energy sources are absolutely critical steps, but there is much more that can be done to create a future that is equitable, prosperous, and ecologically sustainable.

From the second definition of *green economy* above, the words “within the ecological limits of the planet” bring us to the concept of a *circular economy*. Being resource efficient is an important and positive goal, yet achieving a truly sustainable society on a finite planet requires not just efficiency, but also a departure from the traditional make, use, dispose model. A circular economy is one that is

² <http://www.worldometers.info/world-population/population-by-country/>

³ <https://sustainabledevelopment.un.org/index.php?menu=1446>

⁴ <https://www.greenecomonycoalition.org/news-analysis/the-green-economy-a-primer>



“restorative and regenerative by design”⁵, and thus does not require the perpetual extraction of additional non-renewable resources. Circular economies rely on renewable energy, cradle-to-cradle design⁶, reuse, and recycling. For a *green economy* to function “within the ecological limits of the planet” it must simultaneously be a *circular economy* that doesn’t require endless resource extraction. Thus the green economy and circular economy are fundamentally linked and YCS implores the Yukon government to expand its thinking on green economy to include circular economic concepts, as well as the idea of a green society.

General Recommendations for a Sustainable Green Society

Yukon has abundant renewable and sustainable energy sources in the sun, wind, water, and forests of our territory. These resources are key to eliminating our reliance on fossil fuels. It is also critical for us to accept that we cannot continue with ‘business as usual’. We must use our resources much more efficiently. Invest in energy and resource conservation. Strive to transition to a sustainable economic model and a sustainable society. The Yukon government has a critical role to play in this transition and must lead by example as well as implement forward-thinking policy and programs to help Yukoners make more sustainable choices.

The most recent report from the United Nations Intergovernmental Panel on Climate Change (IPCC) provides significant information that must be foundational for any legitimate government action to mitigate climate change. It first states that limiting warming to 1.5°C is substantially better than allowing warming of even 2°C.

Climate models project robust differences in regional climate characteristics between present-day and global warming of 1.5°C, and between 1.5°C and 2°. These differences include increases in: mean temperature in most land and ocean regions (*high confidence*), hot extremes in most inhabited regions (*high confidence*), heavy precipitation in several regions (*medium confidence*), and the probability of drought and precipitation deficits in some regions (*medium confidence*).⁷

The report also provides a guideline for how emissions must be reduced to achieve a 1.5°C future.

In model pathways with no or limited overshoot of 1.5°C, global net anthropogenic CO₂ emissions decline by about 45% from 2010 levels by 2030 (40–60% interquartile range), reaching net zero around 2050 (2045–2055 interquartile range).

In other words, global emissions must decline by 45% from 2010 levels by 2030, and reach net zero by 2050 to limit global temperature rise to 1.5°C.⁸ In November of 2018, the European Union committed to

⁵ <https://www.ellenmacarthurfoundation.org/circular-economy/concept>

⁶ Cradle-to-cradle design mimics natural processes by ensuring that all aspects of a product are reusable or recyclable and thus the product never ends up generating waste. More information at: <https://www.epea.com/>

⁷ IPCC Special Report: Global Warming of 1.5°C, <https://www.ipcc.ch/sr15/chapter/summary-for-policy-makers/>

⁸ Ibid



carbon neutrality by 2050, aligning themselves with the IPCC's research.⁹ Yukon government must commit to the same target and establish ourselves as part of the global solution.

The following are general recommendations that YCS sees as imperative to the shift to a green economy and green society.

- 1. Commit to reducing territory wide GHG emissions by 50% by 2030 and 100% by 2050.¹⁰ Monitor GHG reduction efforts of leading jurisdictions around the world, and commit to being a global leader.**
- 2. Require all new mines to contribute new clean energy infrastructure to Yukon or finance energy efficiency and conservation initiatives that have lifetime GHG emissions reductions equal to the mine's lifetime emissions.¹¹**
- 3. Set measurable targets for GHG reductions within Yukon government's operations to match or exceed the territorial goals stated above in Recommendation 1.**
- 4. Commit to landscape-scale conservation planning to guide human development toward an ecologically sustainable green economy.**
- 5. Commit to recognizing ecosystem services as critical aspects of a green economy. An example is the water treatment and carbon sequestration provided by wetlands.**
- 6. Support Yukon's shift to a zero-waste, circular economy through education programs and incentives for people and industry to reduce waste.**

The interconnection between Electricity, Heating, and Transportation

Although Electricity, Heating, and Transportation are presented separately in the consultation documents, the Yukon Conservation Society would like to stress that these sectors are inextricably linked. There are only a few options for meeting or reducing energy demand in Yukon:¹²

- Energy conservation and efficiency
- Renewable heat (solar, biomass and geothermal)
- Renewable electricity (wind, solar, hydro, biomass, geothermal)
- Fossil Fuels

⁹ https://ec.europa.eu/clima/policies/strategies/2050_en

¹⁰ These targets are consistent with the European Union's most recent climate targets (https://ec.europa.eu/clima/policies/strategies/2050_en) and with the IPCC's 2018 Special Report: Global Warming of 1.5°C. (<https://www.ipcc.ch/sr15/>)

¹¹ This strategy is proposed as an option to achieve carbon neutrality in our mining industry, recognizing that a few mines can have a major impact on Yukon's total GHG emissions. It also provides an incentive for mines to reduce GHG's on site.

¹² YCS recognizes that there are other energy sources such as nuclear and tidal, but for the purposes of this document we feel that the options listed are the most realistic and readily available.



If we are to stop using fossil fuels for a specific task we must apply conservation and efficiency measures to reduce the total energy demand and then replace the remaining energy with renewable electricity or heat. Energy conservation should always be the first approach – regardless of the energy source – but to move to a truly low carbon economy, fuel switching is absolutely required. Thus, making impactful reductions to our use of fossil fuels will require making investments in low impact renewable electricity and biomass energy.

Electricity

Mission Statement: Collaborate with Yukon Energy, First Nations, and the federal government to plan and fund the additional clean energy generation infrastructure required to shift Yukon off of fossil fuels.

The heating sector is ready for a rapid transition away from fossil fuels, and much of this energy should be replaced with electricity. The transportation sector is on the brink of a massive industry disruption from electric vehicles (EVs), and within the lifetime of the CCEGE Strategy EV's will almost certainly become more economical than gasoline and diesel vehicles. Our electrical system must be bolstered to prepare for and accelerate this transition. 'Local, low-impact, diversified, and renewable' must be the guiding principles for new electricity developments. Energy conservation initiatives and intelligent demand side management (DSM) are critical to enabling this transition, as is the deployment of mature, proven energy storage systems.

The following are specific recommendations that YCS sees as critical to creating a sustainable future powered by clean electricity.

[Direct the YUB to consider the environment and climate change](#)

Yukon Energy and ATCO Electric Yukon are regulated by the Yukon Utilities Board (YUB). The YUB has a narrow mandate that requires the electrical utilities to justify all projects and expenditures in purely financial terms. The YUB does not consider local environmental impacts or GHG emissions in their assessment of utility initiatives. This makes DSM programs very challenging for the utilities to justify and is unacceptable considering Yukon government's commitment to renewable energy. As a reminder of this commitment, the goals in the Premier's mandate letter to Minister Ranj Pillai include:

Increase the availability of renewable energy solutions, while reducing the reliance on non-renewable sources and lessening energy consumption by:

- Developing energy policies and programs that meet future needs from renewable sources.¹³

Yukon's Public Utilities Act simply does not contain any form of the words *renewable*, *environment* nor any related terms. The current operation of the YUB is utterly inconsistent with both the spirit and letter of Yukon government's commitments to a clean energy future. Changing the function of this regulator is

¹³ https://yukon.ca/sites/yukon.ca/files/eco/eco-mandate-ranj-pillai_en.pdf



one of the most impactful actions that Yukon government could take to prepare Yukon for a long-term shift to a low carbon and low-impact energy future.

- 7. YCS recommends that Yukon government direct the YUB to consider environmental and social impacts of electricity projects along with the financial aspects. This may be through amendment of the Public Utilities Act or via an Order In Council.**

Collaborate with utilities and communities to develop energy storage

Energy storage is a critical piece of a low-carbon electrical grid and is vital to increasing the penetration of intermittent renewables (wind and solar). Energy storage systems can be either behind the meter or utility-scale, and YCS recognizes both as valuable. Our research indicates that Electric Thermal Storage (ETS) is the most appropriate, affordable, and mature behind-the-meter energy storage technology currently available. This technology can provide economic benefits to rate-payers, tax-payers, and the utilities by trimming daily electrical demand peaks.

- 8. YCS recommends that Yukon government increase its support for behind-the-meter energy storage systems by providing financial incentives to electricity customers, collaboration on a pilot program with YEC and YDC, and direct mandates to YDC and the Yukon Utilities Board (YUB).**

Utility-scale storage can also be valuable and should be considered in particular as a lower cost, lower impact alternative to building a transmission line to British Columbia. The Yukon Conservation Society has performed significant research demonstrating that a pumped hydro storage facility would provide a similar service as a transmission line interconnection, at approximately 15% of the cost, and with a fraction of the geographical footprint. The energy storage facility would also bolster the economics for local wind and solar projects, rather than hinder them as the interconnection would do.

- 9. YCS recommends that Yukon government immediately halt its investigation of a transmission line to BC and instead focus on a pumped hydro storage facility to remedy our seasonal energy disparity.**

Prepare the electrical system for fuel switching

Yukon's electrical grid must take a primary role in reducing GHGs from the space heating sector. Unlike transportation, where going electric introduces some technical challenges, electric heating technology is well established and directly competitive with fossil fuel space heating. Without any government support or incentives, electric heating has become ubiquitous in all new residential construction in Yukon.¹⁴ Rather than seeing this as a challenge for the electricity sector, we must view it as an opportunity. Energy conservation, demand side management, energy storage, and deployment of intermittent renewables are the keys to a sustainable electricity grid for the future, and Yukon government must play a significant role in directing and supporting our electrical utilities to make the necessary changes and upgrades.

¹⁴ <http://www.energy.gov.yk.ca/pdf/Shifting-Demand-in-Yukon-Heating.pdf>



- 10. YCS recommends that Yukon government set goals for clean electricity supply (and storage) growth that coincide with goals for energy conservation, electric transportation, replacement of fossil fuels with electric heat, and aggressive demand side management.**

Heating

Mission Statement: Eliminate the use of fossil fuels for heating in grid-connected Yukon communities to reduce Yukon’s total GHG emissions by nearly 18%.

Market forces have already shifted nearly all new home heating installations in Whitehorse from fossil fuels to electric. Electric heating technology is readily available, economically competitive with fuel heating, and creates a path towards a clean energy future. Space heating is responsible for 18% of Yukon’s GHG emissions and nearly 100% of this energy can and should be replaced with a combination of energy conservation, efficiency upgrades, and electric or biomass heating systems. Yukon government has a major role to play in educating and incentivizing Yukoners to reduce their energy use and switch to low carbon heating. Government of Yukon also has a role in supporting the utilities to ensure that the additional electricity sources are sustainable, low carbon, and environmentally responsible.

The Energy Branch (Energy Solutions Centre) has outstanding programs to support energy retrofits and upgrades, but these programs can and should be expanded to reach the commercial sector, renters, and lower-income Yukoners who can’t afford the capital expenses of major energy retrofits. A percentage funds from the upcoming carbon tax would be well spent if used to enhance these types of programs to help Yukoners reduce their costs and climate footprint. Yukon government must also look to our neighbours in BC and learn from their new “Clean BC” plan which includes a building code that strengthens over time.¹⁵

By simultaneously reducing our heating energy requirements and shifting from fossil fuels to clean alternatives, Yukon can massively reduce our GHG emissions while becoming more self-sufficient and keeping money within the Yukon economy rather than exporting our dollars to import fossil fuels.

The following are specific recommendations that YCS sees as critical to heating Yukon homes and businesses sustainably.

[Yukon government to eliminate the use of fossil fuels for heating its buildings](#)

Yukon government should immediately introduce policy banning the selection and installation of fossil fuel heating systems in any territorial government buildings. Electric heating options (heat pumps, resistive, and ETS) are readily available and provide a path to a clean energy future. Biomass and geothermal are valid options. Yukon government has a responsibility to lead by example, and under no circumstances should oil or propane heat be considered an acceptable choice for a government conscious of climate change and supporting a ‘Green Economy’.

¹⁵ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/construction-industry/building-codes-and-standards/guides/bcenergystepcode_guide_v1.pdf



- 11. YCS recommends that Yukon government implement policy banning the selection and installation of fossil fuel heating systems in all territorial government buildings. This should apply to new buildings as well as retrofits and upgrades.**

Expand Property Assessed Clean Energy (PACE) financing model for energy efficiency upgrades and low carbon heating technology in Yukon municipalities

The PACE model has been used very successfully in Yukon as part of the Rural Electrification and Telecommunications Program (RETP). This model currently allows rural property owners to finance clean energy generation projects with \$0 down and low interest repayments tied to the annual property tax bill. This financing model can and should be expanded to support insulation and energy efficiency upgrades, as well as low-carbon heating systems (heat pumps are a prime example). In most cases the financial savings on reduced energy consumption more than make up the annual loan repayment, so there is an immediate financial gain for the property owner without having to invest significant capital. This program must also be expanded into Yukon municipalities where the majority of our population lives. It is of note that the PACE model is key to tackling energy efficiency in the rental market, where renters typically pay the heating bill so the landlord has no incentive to upgrade the building. By enabling \$0 down upgrades, the owner can pass on the loan cost to the renters, and the renters will still save money overall due to reduced heating bills.

- 12. YCS recommends that Yukon government expand its use of the PACE model to enable all property owners in Yukon access to \$0 down financing to install clean energy systems, upgrade their building envelopes, and install non-fossil fuel heating systems.**

Introduce mandatory Energy Performance Certificates (EPCs)

Energy Performance Certificates (EPCs) have been used successfully in many jurisdictions¹⁶ to enable potential renters and buyers to accurately anticipate and compare the energy costs associated with buildings. These certificates compile information collected during energy audits and present it clearly for the public to understand. By making this information available, it allows people and businesses to accurately predict their energy costs, and thus make better decisions about which property is more affordable to rent or own. Simply by making this information available, the real estate market will shift towards more efficient structures. When paired with the availability of PACE financing for energy upgrades, the owners of low-efficiency buildings can improve their buildings to stay competitive without the financial burden of major capital investment.

- 13. YCS recommends that Yukon government implement a mandatory Energy Performance Certificate (EPC) program whereby the energy performance of a building is captured on an EPC document and must be made available to any potential renter or purchaser.**

Transportation

Mission Statement: Invest in Yukon's transportation system to shift our territory to low carbon transportation methods.

¹⁶ EPCs are mandatory in the United Kingdom, and are common practice throughout Europe.



Transportation accounts for 62% of Yukon’s GHG emissions. Installing electric charging stations in our communities and highways opens the door to long–distance electric vehicle travel throughout Yukon. Densification of our municipalities promotes commuting on foot and bicycle. Ride-sharing services and improved transit provide alternatives to driving. These are all aspects of the shift to a green society, one that is less impactful on the world around us. Low carbon alternatives (such as transit) must be made more affordable than the polluting option (driving) to stimulate broader uptake. Yukon government must make strategic investments in these areas to reduce our consumption of fossil fuels by fuel switching (Electric Vehicles) and energy conservation (transit, walking, and biking). It is of note that semi-trucks are major GHG emitters, and strategies to electrify or otherwise reduce emissions from the trucking industry are an important aspect.

The following are specific recommendations that YCS sees as critical to creating a sustainable future for transportation in Yukon.

[Invest in level 3 charging stations for electric vehicles](#)

The availability of fast chargers for electric vehicles are key to enabling long distance EV transportation. As the EV industry develops, it is Yukon government’s responsibility to provide the initial infrastructure to enable the use of EVs between communities. The range of electric vehicles is improving every year, with many vehicles already achieving 350-500km of range, making inter-community electric transportation a very practical reality once level 3 charging stations are available.

- 14. YCS recommends that Yukon government invest in level 3 charging stations for Electric Vehicles (EVs) to allow electric transportation between Yukon communities.**

[Create incentives for individuals and businesses to invest in electric vehicles](#)

- 15. YCS recommends that Yukon government provide grants or other financial support for Yukoners and businesses to invest in new and used electric vehicles.**

Land and Resources

Mission Statement: Implement landscape-scale conservation planning to ensure species connectivity across the landscape.

Yukon is renowned for its vast and wild landscapes. A land of unspoiled beauty and intact environments. These traits are far from guaranteed however, and we must learn from the experiences of our southern neighbours. Not so long ago, northeastern BC was similarly wild, yet it is now pockmarked and crisscrossed with the drill pads and roads of oil and gas development. Yukon has an abundance of one of the earth’s scarcest resources: wild land. We must work to protect this legacy for future generations. To implement effective protection, we need to plan on a landscape scale and fully understand ecosystem functions such as natural forest renewal.

To move towards a green economy, we must drastically reduce our reliance on fossil fuels. Along with that we must accept that some fossil fuels will be left in the ground. We must also move away from a linear, extractive economy towards a circular economy that reduces and finds uses for waste materials.



There will be challenges as we make this transition but future generations depend on us to take steps now towards a more sustainable future.

Commit to Landscape-Scale Conservation Planning

- 16. YCS recommends that the Yukon government commit to landscape-scale conservation planning across Yukon that minimizes linear disturbances and increases species connectivity and community resiliency.**

Understand the value of the land

- 17. YCS recommends that Yukon government prioritize and invest in understanding the value of the land (ecological, traditional, spiritual, socio-cultural, and economic) and ensure that the significance of different values is considered in planning for a circular economy and a green society.**

Create networks of well-connected protected areas

- 18. YCS recommends that Yukon government fund and create networks of well-connected protected areas and Other Effective Conservation Measures (OECMs) that contain climate change refugia.**

Use adaptive management to better understand climate impacts on Yukon species

- 19. YCS recommends that Yukon government prioritize and invest in the development of adaptive management tools, disseminate them and apply them to better understand and accommodate species range shifts in the face of climate change.**

Ban oil and gas exploration and development in Yukon

As Yukon transitions away from fossil fuels, it would be utterly unethical to continue to support an industry that is known to be causing a global catastrophe. Yukon's thriving economy in the absence of a fossil fuel industry demonstrates that the industry isn't needed. The impacts of climate change in Yukon are significant, but they pale in comparison to the human suffering that climate change will cause around the globe. The International Organization on Migration estimates that up to **200 million people** could be displaced by climate change by 2050¹⁷. The only morally acceptable action is to ban fossil fuel extraction in Yukon and focus our efforts on finding alternative energy sources.

- 20. YCS recommends that Yukon government implement a permanent ban on fracking and other fossil fuel development throughout Yukon.**

Modernize mining royalties to support green economy initiatives

Quartz mining royalties must be tied to the amount of product extracted (Net Smelter Return) rather than tied to the company's profits as they are now. Net Smelter Return is common around the globe and mining companies are familiar with this royalty system. Placer mining royalties are well known to be woefully out of date in Yukon. The royalty structure is based on an assumed gold price of \$15 per ounce, which was accurate in the early 1900s. Today's gold prices are around \$1600 per ounce, over 100 times

¹⁷ <https://friendsoftheearth.uk/climate-change/climate-refugees>



higher. Most placer mining currently takes place on the traditional territory of the Tr'ondëk Hwëch'in First Nation, and yet the First Nation received a grand total of about \$65 in placer mining royalties in 2017.¹⁸ Yukon has a long history of placer mining, but we must acknowledge that it is one of our most environmentally impactful industries. The money raised from the modernized royalties could be used to support a range of green economy initiatives.

- 21. YCS Recommends that Yukon government modernize mining royalties, being sure to fairly include affected First Nations in the agreement, and use the raised funds to support our transition to a green economy.**

Communities

Mission Statement: Invest in resiliency and adaptation measures to ensure that Yukon communities can continue to thrive while supporting local, sustainable, low-carbon community-based initiatives.

For Yukon communities, resiliency and adaptation to a changing climate are of utmost importance. Melting permafrost, changing precipitation patterns, and increased forest fire risk will all have impacts on Yukon's communities. Alongside adaptation, a green economy transition means the development of local, sustainable industries and reduced reliance on imported fuels and products.

The following are specific recommendations that YCS sees as critical to creating a sustainable future for Yukon communities.

[Build on the FireSmart program to increase wildfire safety](#)

- 22. YCS recommends that a more comprehensive wildfire risk management program, taking into account species habitat requirements and landscape connectivity, be implemented to reduce wildfire risk in Yukon communities and create opportunities for sustainable wood harvest.**

[Support and reduce barriers for local food production](#)

Producing food locally has many benefits to Yukon including local employment, reduced GHGs from transportation, food security, and community resiliency. Educating the public about the real cost of food production will encourage more local support. All of these are relevant to the CCEGE Strategy, and thus finding opportunities to support local food production should be a key aspect of the strategy. This may take the form of subsidies, reduction of regulatory barriers, promotion and support for urban farms, or other initiatives. In this effort, it is paramount that Yukon government ensure that it promotes sustainable small farms rather than factory farming and monoculture mentality.

- 23. YCS recommends that Yukon government provide incentives for sustainable local food production and seek out opportunities to reduce our reliance on imported food.**

[Help communities transition away from diesel](#)

The transition away from diesel includes both the generation of electricity and the use of home heating fuel. Solar and wind electricity projects throughout the territory are demonstrating how we can reduce reliance on diesel for electricity, and the Teslin Biomass Project is an excellent example of eliminating

¹⁸ <https://thenarwhal.ca/gold-seekers-flooding-yukon-wreaking-havoc-rivers/>



fossil fuels with biomass heat. Viable solutions exist, and Yukon government should enable proponents through a combination of funding, barrier reduction, and connection to relevant expertise. Improving the energy efficiency of homes and buildings is also a major opportunity that has been largely untapped outside of Whitehorse. Resources must be dedicated to the communities to help residents reduce their heating costs without requiring major upfront expenses. Property assessed financing (as discussed under the “Heating” section) could be a useful enabling mechanism.

- 24. YCS recommends that Yukon government actively engage with communities and First Nations to help them transition away from diesel by improving efficiency of buildings and generating electricity from low-impact renewable energy sources.**

Skills and Innovation

Mission Statement: Transition from a linear extractive economy to a circular economy by providing skills training and supporting innovation in sustainable industries.

Yukon has a history of mining and resource extraction, but that does not commit us to a similar future. Rather, the realities of anthropogenic climate change and global environmental degradation require that we improve our economic model to remain prosperous into the future. The recently opened Innovation Hub in Whitehorse is an excellent example of how government can support innovation and alternative skills in Yukon, and YCS encourages Yukon government to continue down this path. Skills training for industries such as local agriculture, energy efficient construction, and renewable energy could all help Yukoners find work in non-extractive industries. Focusing on waste diversion and recycling could greatly improve our utilization of resources.

The following are specific recommendations that YCS sees as critical to creating an innovative and sustainable future for Yukon.

[Develop a strategy to reduce construction waste](#)

Waste reduction and diversion are important aspects of creating a thriving green economy. Construction waste is an example of a group of materials that are regularly landfilled despite having significant potential for reuse. While recycling is always encouraged, the direct reuse of construction materials such as insulation, lumber cutoffs, shingles, and drywall is much more efficient than sending these materials out for recycling. These materials should be sorted and made available to Yukoners at reduced rates. Habitat for Humanity’s ReStore model is a prime example of the potential to reuse construction materials. Yukon government should implement regulations and/or incentives for contractors to sort their waste and ensure that this material makes it back into the market for reuse.

- 25. YCS recommends that Yukon government (in collaboration with municipalities if appropriate) implement a construction waste diversion program to incentivize the sorting of construction waste for reuse.**

[Expand designated materials program and implement Extended Producer Responsibility](#)

YCS applauds the recent improvements and addition of e-waste to the Designated Materials Regulation, but also recognizes that Yukon still lags far behind other jurisdictions and has much work to do to



become a respected participant in the shift to a green economy. The recycling fee on aluminum cans is an excellent example of the positive impact that recycling programs can have. Whitehorse's Raven Recycling employs approximately 30 people and one of their largest revenue streams is the recycling charges applied to aluminum cans.¹⁹ This small surcharge was a key enabler for local employment and waste diversion simultaneously. Similar programs can and should be introduced so that the costs of recycling are born by consumers and producers rather than taxpayers and the environment. The recent report from the (Yukon) Ministerial Committee on Solid Waste provides some good initial recommendations for action. One of these recommendations was to examine and report on the feasibility of Extended Producer Responsibility (EPR) in Yukon. This was stated as a short-term objective to be completed in 2018; YCS hopes that Yukon government is committed to pursuing this objective. EPR is a critical instrument for guiding industry towards more sustainable product design and recycling practices. YCS suggests that Yukon government seriously explore joining British Columbia's cutting-edge EPR program, rather than trying to reinvent the wheel ourselves.

26. YCS recommends that Yukon government aggressively expand the designated materials recycling program and implement Extended Producer Responsibility (or join British Columbia's program) to move us closer to a sustainable zero waste society.

Knowledge

Mission Statement: The Climate Change, Energy, and Green Economy Strategy must set measurable, time-bound goals and Yukon government must incorporate local, traditional, and scientific knowledge to assess and reduce human impacts through an ecosystem based management approach.

As our climate and environment changes rapidly around us and we strive to adapt and mitigate our human impacts, it is critical that knowledge of all forms be shared and valued. Humans are changing the world around us and no one has all the answers. Openness, transparency, and the courage to work together are critical not just for Yukon, but for the health and prosperity of humanity and all life on earth. We must think outside the box. Challenge the status quo. Face the tough issues head on and consider all forms of knowledge in our quest for solutions. Yukon government has a responsibility to lead by example through collaboration with First Nations, public-private partnerships, and transparency with the public at large. An important part of this is setting measurable, time-bound goals and being upfront and honest with the public about the progress being made.

The following are specific recommendations that YCS sees as critical to ensuring that the integrated strategy is robust and that Indigenous knowledge is valued when studying human impacts and the world around us.

Time-bound, measureable objectives.

27. YCS recommends that all objectives and commitments in the Climate Change, Energy, and Green Economy Strategy be measurable, budgeted, and time-bound with progress tracked and publicly available.

¹⁹ From personal communication with Joy Snyder, Executive Director with Raven Recycling.



Financial reserve set aside to support objectives that fall behind schedule

- 28. YCS recommends that Yukon government maintain a monetary ‘climate reserve’ to be able to fund initiatives as needed to ensure that GHG reduction targets are met.**

Expand knowledge sharing with First Nations and support engagement with ‘citizen scientists’

- 29. YCS recommends that Yukon government increase use of local and Indigenous knowledge alongside scientific knowledge as we work towards a sustainable circular economy and green society.**

Conclusion

Yukon government’s Climate Change, Energy, and Green Economy Strategy has the potential to become a pivotal document to guide our territory toward a thriving and ecologically sustainable future. The Yukon Conservation Society believes that the above recommendations are necessary actions or highly valuable tools to leave fossil fuels behind and move decisively toward a sustainable society in Yukon. We draw your attention to BC’s recent climate action plan, as well as major commitments from the European Union this November towards a zero carbon future by 2050.²⁰ Yukon government has an opportunity to meet and exceed these commitments through bold leadership and political will. Separate from GHG emissions, a green economy also requires that we move away from the linear economic model of extract, use, dispose; we instead must adopt a circular economy where ‘waste’ is no longer part of the vocabulary. Through these changes, fundamental shifts in how society understands the role of the economy will occur. We live on a finite planet and thus must respect ecological limits and plan our developments on a landscape scale.

The Yukon Conservation Society believes that the following three broad elements must be focal points of the strategy:

- **Supporting and accelerating the transition from fossil fuels to low carbon energy sources**

These efforts must be consistent with the latest climate research from the IPCC and other climate experts. Both the European Union and the Province of British Columbia have released ambitious plans in 2018 to combat climate change. Let us join their effort as bold leaders. There are myriad options to tackle GHG emissions. Set ambitious goals and timelines, select initiatives that can meet those goals, and budget for them appropriately.

- **Create a clean, efficient energy system**

Implement intelligent tools to accelerate efforts on energy efficiency. Support the development of small-scale renewable energy systems. Understand that heating, electricity, and transportation are interconnected; a major shift from fossil fuels in one sector will require planning and action in another.

²⁰ https://ec.europa.eu/clima/policies/strategies/2050_en



Support local, community-based energy systems, not by building a transmission 'lifeline' to BC, but by enabling local proponents and energy independence.

- **Keep Yukon wild**

The Yukon's land, water and wildlife are unique, and a green society must exist within ecosystem limits as well as carbon limits. Commit to landscape-scale conservation planning to preserve our wild places while we move away from boom-and-bust resource extraction towards a more sustainable economic model. Support the shift to a circular economy that keeps resources in use as long as possible through programs and incentives for people and industry to reduce waste.

Thank you for taking the time to read and consider our comments. We have invested significant effort in researching and preparing this document and hope for the opportunity to discuss our recommendations further with you. We would be pleased to dig deeper into any questions you may have.

Thank you to the Government of Yukon for initiating this discussion. We look forward to being part of the discussion as the Climate Change, Energy and Green Economy Strategy takes shape.

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