YOUTH VOICES REPORT

THE PAN-CANADIAN YOUTH VISION FOR ENERGY IN CANADA

PREPARED BY STUDENT ENERGY + CITYHIVE ON BEHALF OF THE CANADA YOUTH CHAMPIONS

"Young people offer creative, innovative solutions and a fresh perspective to some of the most pressing challenges of our time, including climate change, and are deeply invested on a personal level in solving these problems."

- Generation Energy Youth Dialogue, Ottawa Ontario

EXECUTIVE SUMMARY

STUDENTENERGY + CityHive

With close to **300 young people from 11 provinces and territories** contributing, and **over 7,000 Canadians** participating online, the 2017 Youth Voices Report is a cohesive declaration of what the next generation of Canadians believe we need to achieve a sustainable energy future. Canada's youth have come together to reach a consensus on what steps the country should take to achieve this sustainable future, and how young people want to contribute to solutions.

The objectives are clear. By 2050 young people want Canada to: have a zero-carbon thriving economy, be a world leader in clean technology, have depoliticized, collaborative energy governance, and operate an equitable decolonized energy system that provides equal opportunities to all Canadians without negatively impacting our environment.

Young Canadians know that our sustainable energy future will not happen overnight, and we will need to work hard to ensure there is a just transition that provides Canadians with economic security and an enthusiastic outlook for the future ahead.

Young Canadians are ready and willing to work with the generations that have come before us, as the engines of innovation who will deliver on our energy future. We know that Pan-Canadian collaboration is the only way to overcome the challenges and seize the opportunities we face in undertaking this rapid transition.

STUDENT ENERGY

Student Energy is a global charity working to create the next generation of energy leaders who will accelerate our transition to a sustainable energy future. For eight years, Student Energy has proven its ability to deliver programs that accelerate young people's ability to innovate and take action on energy. From starting the world's largest global conference on energy for students, to delivering cutting edge Energy Literacy content, to launching university-level Chapters, Student Energy is known for inspiring student action, building youth skills, and succesfully shaping the future of energy.

CITYHIVE

CityHive is an organization on a mission to transform the way that young people are engaged in the planning, design, and shaping of cities. CityHive acts as a bridge-builder between cities and their youth to create win-win-win solutions for youth, their communities, and cities. We work with governments and civic institutions to create meaningful engagement processes to include youth in tackling complex urban sustainability challenges from energy to affordability. We work with youth to build their civic literacy and capacity to engage with their city decision-makers.

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7K

PARTICIPATED ACROSS CANADA

287 YOUTH ATTENDED DIALOGUES

ORGANIZATIONS REPRESENTED AT THESE DIALOGUES **67**

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CITIES **12**

GEOGRAPHIC REPRESENTATION

11
PROVINCES & TERRITORIES

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Nunavut
British Columbia
Alberta
Manitoba
Saskatchewan
Ontario
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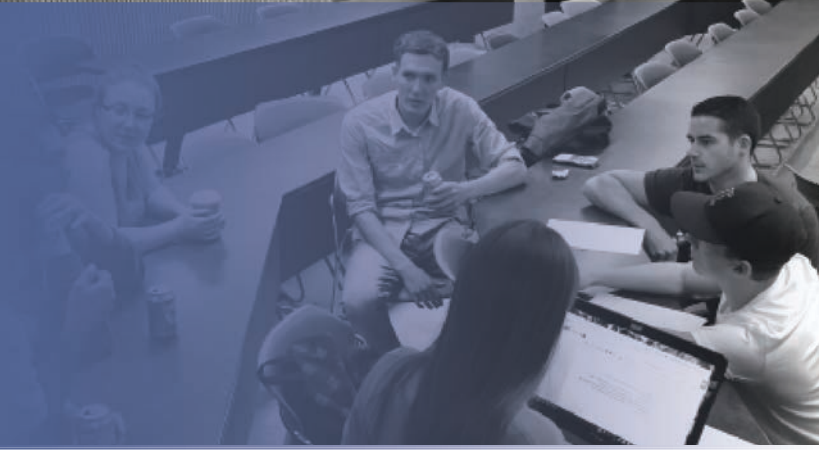

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OVERVIEW

Youth hold a critical perspective on Canada's energy future one they will shape as innovators, consumers, entrepreneurs, and policy-makers.

In cultivating a vision for the future of Canada's energy system, it was crucial to ensure youth were not only invited to participate in NRCAN's Generation Energy dialogues, but they were invited to lead and engage with their peers to collaboratively vision Canada's future energy system - building a network of youth across the country who are motivated to develop and be part of energy solutions for our future.

Student Energy and CityHive co-developed the Youth Energy Vision Project to empower youth to host dialogues and share their visions for Canada's energy future as part of Generation Energy. Through a rigorous application, interview and selection process, fourteen Youth Champions were chosen across Canada for their ability to convene, their experience, their knowledge in the energy field, and diversity.

Each Youth Champion was tasked with organizing a dialogue in their community to discuss the challenges, opportunities, future vision, values, possible pathways, and youth inclusion in Canada's energy systems. Student Energy and CityHive hosted three training webinars to orient the Youth Champions with the knowledge about Canada's current energy systems, to equip them with dialogue skills, and to prepare them for the planning of their dialogues.

The **14 dialogues** took place in September 2017 across Canada where the conversations were captured by notetakers and shared live via social media. Following individual dialogues, each Youth Champion submitted a summary report of the discussions and insights to be included in the Youth Energy Vision Report. This report summarizes all fourteen of the dialogues, and synthesizes Canada-wide themes for what young Canadians envision for Canada's energy future.

The key message heard from Canadians across the country is that youth are engaged in and passionate about their energy future. Their dialogues and results showed intricate systems-level analysis of what needs to be done and great hope for what we can achieve by working together.

MEET THE CHAMPIONS

These diverse fourteen Youth Champions were chosen through a rigorous selection process, each offering different backgrounds, perspectives and experiences which made them well-positioned to engage and convene youth in their communities.

SHAKTI RAMKUMAR
VANCOUVER, BC

JOSHUE GOODFIELD
TORONTO, ON

EMILY BARBER
REGINA, SK

KARA HENRIE
WINNIPEG, MB

KEVIN BELANGER
QUEBEC CITY, QC

NATHAN CANNATARO
EDMONTON, AB

JULIA BRONSON
VANCOUVER, BC

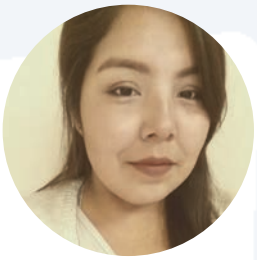
DANIEL MCLEAN
MONTREAL, QC

SARA GANOWSKI
WATERLOO, ON

MARY GRAMIAK
OTTAWA, ON

BEN DEROCHIE
WHITEHORSE, YK

MICHAEL JEWELL
IQALUIT, NT



DISA CROW CHIEF
SISIKA NATION, AB

JANE BURCHILL
SAINT JOHN, NB

PROCESS

Participants ranged from undergraduates to PhD students to young professionals. The participants were diverse representing everything from aspiring policy makers, to young entrepreneurs, to government employees, to artists, to people working for large corporations.

The fourteen dialogues across Canada varied in format and length, but all aimed to answer the same four core questions:

1. What will Canada's energy system look like in 2050?

2. What are the values that will guide the way?

3. What are the pathways and guide-posts to help us get to the vision?

4. How do youth want to be involved in delivering on our energy future and what resources do they need to do it?

Based on the summary reports created by each Youth Champion following their dialogue, there are a variety of themes, insights and priorities that were heard from Coast to Coast to Coast, and these are summarized below:

WHAT WILL CANADA'S ENERGY SYSTEM LOOK LIKE IN 2050?

Zero carbon
In 2050, Canada has taken fighting anthropogenic climate change, and its commitments to the Paris Climate Accord seriously. Therefore fossil fuels have been phased out of our energy system. Getting to zero carbon was not easy and the transition did not take place overnight, but the ultimate result is a resilient, reliable energy system that serves all people, facilitates economic growth, and does not adversely impact our climate.

100% renewable:
Our energy supply is completely or nearly all powered by renewables: including wind, solar, geothermal, hydro, and tidal. There is a diverse energy supply that accounts for the intermittency of some renewable sources. We have implemented micro and smart grid technologies, energy storage, and maximized opportunities for energy efficiency in order to support this primarily renewable energy system. Even though the energy system is predominantly renewable, energy generation may not be completely "zero-impact," and certain alternative energy sources such as nuclear may still remain as baseload power sources.

Canada is a leader in clean technology and renewables:
Canada is a global leader in renewable energy production, distribution and storage technologies. Domestically, it has a highly connected electricity grid which allows for distributed production, utilization of energy storage systems, secure energy access, and maximization of energy efficiency opportunities. Canadians understand and value their energy system and they are efficient in their consumption of energy through the use of smart home technologies. Individuals and industries have adopted clean technologies en mass as a result of subsidies, investment opportunities, and incentives. Major carbon-emitting sectors such as transportation and heating have been electrified.

Energy production is local and community-owned:
A critical component of the zero-carbon renewable future is smaller, community-based power generation and distribution. This reduces energy lost through transport, and harnesses local renewable resources where possible. Community autonomy and resilience has been increased and energy independence strengthens the local economies. This is especially key in rural areas and many remote Northern communities who were previously dependent on diesel, but have now transitioned to renewables, exploring off-grid and de-centralized renewable energy projects. In urban areas, buildings and large institutions are the hyper-localized hubs of production and consumption, many of which have connected district energy systems.

Citizens are highly energy literate consumers and producers:
Due to a combination of energy and climate change education programs integrated into Kindergarten-Grade 12 and post-secondary curriculums, policy changes, and smart technologies citizens are highly aware of and consciously minimizing their energy consumption. Citizens are not only energy consumers, but small-scale energy producers and storers. Demand for energy is lowered on a wide-scale.

Collaborative energy governance and ownership models:
A national collaborative energy strategy has enabled the localization of energy systems, which has spurred the creation of new energy governance and ownership models. Provinces now readily trade grid-tied electricity where necessary; simultaneously, energy co-operatives, community-owned and controlled energy supply are the norm. Citizens are both consumers and producers of energy through a highly connected electrical grid and feel supported by holistic policy frameworks that support collaboration and cooperation. These new energy governance models enable local stakeholders and minority groups, including youth and indigenous populations, to participate directly and equitably in decision making. These models bridge the gap between science, research, policy government, and the general public's needs and interests.

Jobs are booming in the renewable energy sector:
Through major investments in R&D, entrepreneurship programs, and funding for training, the clean energy technology sectors have become one of Canada's largest industries and exports. Workers were retrained from extractive, fossil-fuel based projects to work on building renewable energy infrastructure and on increasing energy efficiency of existing infrastructure across Canada. People are part of the energy transition because their skills are adaptable as energy systems transform and transition. Transition programs and jobs were funded and supported by industry, NGOs, and government.

Energy is Depoliticized:
Canadians have set targets for energy and climate and there are programs and policies in place to meet them. Energy is not an abstract, political issue, but rather something readily understood and valued by the public, similar to our healthcare system. Long-term energy goals, targets, and strategies extend beyond election cycles, and are thus achieved in a consistent and more timely manner.

Decolonized energy systems:
Indigenous communities have excellent renewable infrastructure that is accessible, affordable, community-owned and reliable. Federal, provincial and municipal governments work in partnership with Indigenous peoples in the development and adaptation of energy systems and acquire their consent in decision making processes. Indigenous people are very knowledgeable about our energy system and are active decision makers and collaborators in energy decisions that impact their communities. Indigenous knowledge and worldviews are valued as central to how Canada approaches energy, the environment, and the economy.

Financial systems support environmental progress:
The Canadian Gross Domestic Product is growing despite a decrease in energy consumption. Carbon emissions and economic growth are no longer assumed to relate to one another. Decisions are guided by a principle of minimizing negative environmental impacts acknowledging that long-term preservation of our environment is of great monetary value to Canadians as it is essential to our economic opportunities, the health of our citizens, and the well-being of our planet. Financial systems and incentives operate so that the most economically reasonable decisions are often also the most environmentally sound.

More holistically, reimagining the Canadian energy system for 2050 also requires the re-imagination of other systems that are heavily dependent on energy.

Fast, reliable, zero or low carbon transportation systems:
Canada has switched from primarily fossil-fuel based transportation to a primarily electrified or hydrogen-based transportation, and has built interprovincial mass transportation infrastructure. Canadians now have access to fast, zero-carbon and efficient transportation systems which allow for travel within cities and between provinces.

A zero waste, circular economy:
Our energy usage is tied to the production and consumption of material goods. Canadian zero waste communities have closed the loop on linear material life cycles creating cradle-to-cradle products and increasing the durability of our products, which in turn has significantly minimized waste production and energy consumption. Effective management and reduction of food waste has decreased emissions from this sector and added new forms of energy, such as biogas, to our system.

Relocalized and seasonal food systems:
Food systems are relocalized and more seasonal. Beyond the economic benefits of sourcing food from a region, sourcing food locally and seasonally also reduces the embodied energy and carbon associated with food production

Inclusive Systems:
As the energy system was transformed, we rebuilt the supporting policies, institutions, and financial structures mindfully to avoid perpetuating systems of marginalization and continued oppression. Energy autonomy and independence freed many citizens from the boom and bust cycles and empowered them to have a stronger sense of agency in their communities.

WHAT ARE THE **VALUES** THAT WILL HELP GUIDE THE WAY?

In order to make this vision a reality, the following values and principles need to be adopted:

PLANNING & DECISION-MAKING PRINCIPLES

Holistic, long-term view of sustainability:
When designing solutions and new energy systems, a holistic view of the concurrent impacts, both positive and negative, on adjacent social, environmental, and economic systems is adopted. This understanding of systemic impacts should draw on the wealth of knowledge from the diverse communities which exist in Canada, particularly Indigenous peoples.

Depoliticized, science-based decision-making:
Energy policy should be driven by science and traditional ways of knowing rather than political cycles and public appetite.

Forward-thinking, long-term planning:
Canada's national energy strategy must be forward-thinking and embrace new technologies and the rapid pace of change required to meet our climate targets, international commitments, and responsibility to contribute to solutions that will keep warming below 1.5 degrees Celsius. Long-term planning and scientific prowess must be prioritized over political changes so Canadians can have a stable roadmap of progress to follow.

Climate justice:
Exploring the development of energy policy not only through sustainability or greenhouse gas emission targets, but with the goal of ensuring a 'just' and equitable transition. Climate justice prioritizes people who are most impacted by the impacts of both climate change and the shift in the social and economic systems necessary to transition our energy system.

Collaboration across parties and industries, domestically and internationally:
Collaboration across different levels of jurisdiction, industries and stakeholders, is needed in order to create solutions that work for everyone. We must enable open access and knowledge sharing across various scales and between actors. Multiple perspectives must also be represented in creating solutions to ensure new ideas will work and can be readily adopted. The general public should feel invested in the energy transition. Canada should lead in collaboration with international partners to increase global ambition.

Adaptable and resilient energy systems:
Energy technologies and systems which improve our readiness in the face of natural disasters and unpredictable change must be applied. The diversification of our energy supply and increasing connectivity of our electricity grid will add this systemic resilience.

WHAT ARE THE **VALUES** THAT WILL HELP GUIDE THE WAY?

In order to make this vision a reality, the following values and principles need to be adopted:

INCLUDING THE VOICES THAT MATTER

Indigenous leadership, governance, and ownership:
First Nations, Inuit, and Metis must have decision-making power, ownership, and stewardship of energy projects and systems. The implementation of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) must be respected in the development of energy projects and systems.

Reconciliation with Indigenous Peoples:
Canada's new energy strategy and systems must not perpetuate systems of oppression and colonization, but should rather support reconciliation.

Youth Empowerment:
Tangibly including younger people in decision making processes should be second nature, and not an afterthought. Supporting young people's inclusion in the energy future is important through opportunities for involvement in the green economy, professional development and access to policy and planning. Inter-generational solutions ensure long-lasting ownership over our energy future.

Equity:
Governance and planning must also be conscious of including rural and urban perspectives, and prioritize intergenerational equity, where future generations are considered important stakeholders in decision making.

Representation:
Valuing the contributions of marginalized groups is a necessary cultural shift. This extends beyond simply consulting marginalized groups and legitimately including them in the decision-making and development process. Indigenous peoples, immigrants, visual minorities, women, and members of the LGBTQ+ community all hold valuable insights into not only the challenges, but also the solutions and the vision to transform our energy landscape, and should be treated as such.

WHAT ARE THE **VALUES** THAT WILL HELP GUIDE THE WAY?

In order to make this vision a reality, the following values and principles need to be adopted:

INCREASING ROLE OF THE CITIZEN

Prioritize community-energy security and decentralization:
Citizens are not just consumers of energy, but also the main producers and co-owners of local community energy projects. Part of this culture change is the shift from private ownership to collective, cooperative community ownership and stewardship. For example, prioritizing public transportation systems over individual car ownership or community-owned power utilities or generation projects over privatized ones.

Higher energy democratization:
As citizens become increasingly energy literate, their responsibilities as conscious consumers, producers, and decision-makers should also increase. Openness, communication, transparency, and high accountability between energy regulators, governments, and their citizens is critical. People should be well prepared by formal and informal education systems to understand the energy system and our transition.

A cultural shift:
A key component of the energy transition is facilitating a change in cultural priorities, narratives, and paradigms relating to consumerism and markers of individual success. The acknowledgement that alternative economic systems, ways of valuing socio-ecological resources and ways of co-existing with the natural world are worth further exploration. A sustainable vision for 2050 is contingent on the mindsets and priorities of diverse individuals who make up our society.

WHAT ARE THE **VALUES** THAT WILL HELP GUIDE THE WAY?

In order to make this vision a reality, the following values and principles need to be adopted:

THE ECONOMY & ENVIRONMENT GO HAND-IN-HAND

Right to a healthy environment & climate:
The right to a healthy environment and climate for people and all species should be enshrined in law and must be respected in the development of energy projects. Respecting and using natural, ecosystem services and biomimicry applications can decrease the consumption of energy through increased efficiency.

Economically viable:
The development of new energy systems must be made viable through financial mechanisms and resources. The jobs created through the green energy sector must also provide an adequate livelihood for those involved.

Energy is accessible, affordable, and reliable:
Energy must be accessible, affordable, and reliable for consumers from all socioeconomic backgrounds. Further, we must eliminate and mitigate regional discrepancies where possible in order to create guaranteed reliability and affordability, and equal access to the economic opportunities provided by our energy system and transition to clean energy.

Investments in renewable energy R&D and start-ups:
There is a need for increased funding for research and development regarding sustainable energy technologies and programs. Investments in startups and entrepreneurs will also allow new market players to scale solutions and develop programs to accelerate adoption of technologies. Accessible and fair regional distribution of funding to support this innovation across provinces will therefore be required. Viewing youth as innovators, who are worthy of investment, will help ideas manifest into practical solutions for a cleaner energy future.

WHAT ARE THE **PATHWAYS AND GUIDE-POSTS** TO HELP US GET THERE?

INCREASE ENERGY & CLIMATE CHANGE EDUCATION AT ALL LEVELS

Education is an essential tool to instill personal responsibility, build collective knowledge of and instill value for our energy systems, create capacity for future energy leaders, and harness opportunity for more cohesive conversations on how we are going to transform Canada's energy system.

Short-term (0-5 years):

- K-12 education: Federal incentives and local mandates are to include energy and climate change education in curriculum in every province from elementary to high schools.
- Higher education: Foster interdisciplinary research and knowledge by providing learning opportunities about energy systems across various disciplines and program specializations. Developing pathways and frame works across various bodies of knowledge (e.g. natural sciences, social sciences, arts) will allow for cross-collaboration and integration of multiple perspectives in developing energy solutions.
- Experiential and applied learning: Deliver energy and climate change education with an emphasis on hands-on, experiential education that builds people's skills (e.g. building community solar projects, development of policy, engagement campaigns)

Medium-term (5-10 years)

- Public accessibility: Energy data, projections, and research should be available and accessible to the public. Formats should be easily digestible and engaging for audiences.

Long-term (10-30 years)

- Expand post-secondary education to include job training in the green/ renewable energy economy (eg: trades, energy management, etc.)

WHAT ARE THE **PATHWAYS AND GUIDE-POSTS** TO HELP US GET THERE?

EXPAND SUPPORT FOR THE RESEARCH AND DEVELOPMENT OF RENEWABLE ENERGY

Increased and more accessible funding for R&D, for energy technologies, and for investments is needed to spur the development, diffusion and adoption of sustainable energy technologies.

Short-term (0-5 years):

- Increase investment: Increased funding from public and private sectors into renewable energy and clean technologies to further support the research, development and expansion across the country. Provide financial incentives and support to companies that are leading the way in advancing renewables, while ensuring funding is also accessible to innovative startups, students, and community groups.

Medium-term (5-10 years)

- Policy and regulatory frameworks: Develop policies and regulatory frameworks that enable the deployment of renewable energy technologies, energy storage and smart grids. Initially, these frameworks should be 'technology neutral' as to enable a wide range of clean energy solutions to participate in markets and procurements.
- Local energy: Create mandates and support mechanisms to boost the expansion of localized energy and community energy systems. The introduction of new institutional models and low-carbon energy procurements should focus on deploying grid-scale energy storage and other decentralized energy resources. These technologies will help support growth in renewable energy generation.
- New opportunities for innovation: Develop entrepreneurship programs and innovation incubation centers that will help youth innovation grow into practical solutions, such as business and policy development.

Long-term (10-30 years)

- Provide Adaptive Support: Provide continued, flexible financial and political support that adapts to the country's changing and unforeseen needs as the transition unfolds.
- Lower risk for future investment: Work to ensure policy creates stable markets so that private sources of capital confidently invest in Canada's clean energy future.

WHAT ARE THE **PATHWAYS AND GUIDE-POSTS** TO HELP US GET THERE?

SUPPORT FOR INDIVIDUAL LEVEL CHANGES

To make the transition financially feasible for citizens, support may need to be provided for the adoption of more efficient or otherwise cleaner energy practices in everyday life.

Short-term (0-5 years):

- Incentives: Provide greater financial incentives (i.e. subsidies, rebates) for individual-level transitions to more energy efficient or low-energy lifestyle changes (e.g. electric vehicles, energy efficient appliances, home energy systems such as solar, etc).
- Mandates: Create mandates for companies, such as car dealerships, to hit quotas of green technologies including electric cars and energy efficient appliances. This way, retailers will be partners in incentivizing the transition.

Medium-term (5-10 years)

- Conduct regular consultations with key demographic segments to assess the effectiveness of individual-level support vis-a-vis public policy and infrastructure.
- Partner with key community and municipal-level civil society groups to assess consumer behaviour changes.
- Bi-annual assessments of mandate undertakings in the private industry; conduct assessment of consumer purchasing and production changes.

Long-term (10-30 years)

- Ten-year comprehensive audit of public policy, infrastructure, and mandate effectiveness, measuring key areas such as consumer and private sector adoption of clean energy practices and clean energy purchasing power of citizens.
- Adopt flexible framework for adapting citizen support to changes in economy, technology, and industry changes

WHAT ARE THE **PATHWAYS AND GUIDE-POSTS** TO HELP US GET THERE?

INFRASTRUCTURE TO SUPPORT THE ENERGY TRANSITION

Core to a transition in energy systems is a transition of infrastructure to enable renewable energy systems, and adoption of clean technology.

Short-term (0-5 years):

- Increase efficiency standards for new and existing buildings, building practice during construction, as well as operations, including demolition projects.
- Fund development and implementation of smart grid and storage technologies.
- Plan for more walkable infrastructure and active transportation in order to support low-carbon cities (e.g. pedestrian-friendly communities).
- Cities to mandate mandatory organic waste management programs.
- Mandate that all new buildings are ready to support the energy transition with publically-accessible amenities such as electric vehicle charging stations.

Medium-term (5-10 years):

- Energy efficiency standards: Increase cross-Canada energy efficiency standards in buildings and in particular on all new construction projects. Create incentives for building retrofits and create nation-wide policy on net zero buildings.
- Current infrastructure: Repurpose and recycle current carbon-oriented infrastructure and materials for different uses.
- Smart grid and storage: Expand the implementation of smart grid technologies. As energy storage technologies continue to develop, create shared energy storage opportunities such as storage co-ops.

Long-term (10-30 years):

- Urban infrastructure: Redesign and implement urban infrastructure improvements for less car-reliant and more pedestrian-friendly cities. This should also include more green spaces, sustainable transit and active transportation, and net zero/net positive buildings. As these changes happen, foster greater social equity and inclusion amidst higher-density living (e.g. avoid and reverse gentrification) and focus on connecting communities through sustainable transit networks, economic flows, and food systems while balancing foreign investments, and creating new frameworks for sustainable growth.
- Community-energy ownership: Create opportunities (e.g. via institutional support, legal frameworks, government and market incentives) for all citizens to be able to sell back energy to the grid, allowing Canadians to become active participants in energy decision making and generation.

WHAT ARE THE **PATHWAYS AND GUIDE-POSTS** TO HELP US GET THERE?

CATALYZE A GREEN ECONOMY

The development and implementation of renewable energy systems provides an opportunity for an economy that also positively impacts the environment. Economic decisions do not need to be made at the cost of environmental decisions.

Short-term (0-5 years):

- Target setting: Set metrics for desired percentage of green jobs in the economy and track and incentivize this growth over time.
- Transition training for green jobs: Greater government support in job transition to more sustainable jobs through paid skills training programs, professional development and the creation of new jobs and opportunities in renewable energy sectors.
- Green companies: Fund and incentivize companies that are leading the way in renewables and clean energy technologies to invest Canada's energy transition. Create an economic environment which also encourages the growth of emerging economic paradigms, such as the sharing economy.

Medium-term (5-10 years):

- Transition planning: Plan for skills and labour transitioning for workers in the fossil fuel based industries through offering change management workshops, skills training programs and knowledge seminars.
- Retrain and recertify citizens working in fossil-fuel sectors so that they can succeed in green sector jobs. These measures should be taken with the ultimate goal of helping Canada become a leader in the global green economy.
- Corporate targets: Set specific renewable energy, clean technology, carbon, and green procurement targets for corporations.

Long-term (10-30 years):

- Develop and implement new university programs that continue to prepare people to be part of our future green economy and enable Canadian innovation.

WHAT ARE THE **PATHWAYS AND GUIDE-POSTS** TO HELP US GET THERE?

STRINGENT POLICY AND REGULATORY FRAMEWORKS

Energy policy should be driven by science and traditional ways of knowing rather than political cycles and public appetite.

Short-term (0-5 years):

- Canada becomes a member of the International Renewable Energy Agency (IRENA)
- Carbon pricing: Make pollution more expensive and implement an ambitious approach to carbon pricing Canada-wide. Use market forces to regulate emissions and thoughtfully roll out a rigorous program, making sure that those that shouldn't be paying the most aren't negatively impacted (i.e. low income families).

Medium-term (5-10 years):

- Environmental assessment frameworks: Modify the Environmental Assessment Act to consider upstream and downstream impacts, as well as embodied carbon emissions.
- Project development: Develop a more comprehensive, rigorous project approval process for fossil fuel projects, including Environmental Assessment and National Energy Board processes
- International targets: Commit to international targets such as the Paris Accord at all levels of government, and develop the policies that match and deliver on our international commitments.

Long-term (10-30 years):

- Policy should continue to foster and enforce our low carbon transition while increasing Canada's ambition and leadership.

WHAT ARE THE **PATHWAYS AND GUIDE-POSTS** TO HELP US GET THERE?

DECREASE RELIANCE ON FOSSIL FUEL ENERGY

As renewable energy sectors grow, the role of fossil fuels should decrease in Canada's energy system.

Short-term (0-5 years):

- Strategic resource development in the North: Develop strategies to supply electricity needs of communities without a reliance on large scale use of fossil fuels

Medium-term (5-10 years):

- Discontinue oil subsidies: Revoke direct and indirect government support for fossil fuel industries and eliminate incentives for fossil fuel industries to further develop in Canada. Restructure these financial incentives and support to instead support renewable energy, and restructure carbon-intensive industries through electrification and deployment of low-carbon technologies.
- Transition incentives and divestment: Provide companies currently developing fossil fuels incentives to develop clean energy technologies. Divest public investments like the Canada Pension Plan from fossil fuel industries.

Long-term (10-30 years):

- Smooth the economic transition: By using existing knowledge, technology and labour capacity in fossil fuel industries, enable growth in clean technology and information sectors (e.g. mining to geothermal).

WHAT ARE THE **PATHWAYS AND GUIDE-POSTS** TO HELP US GET THERE?

REDISTRIBUTION OF POWER

A critical component to the scope, scale and depth of the transition is the de-centralization of power production through re-localization and new models of ownership.

Short-term (0-5 years):

- Community and shared energy: Provide all residents with the ability to sell excess energy back to the grid. Provide more support for community-based energy systems where energy is shared on a more localized scale in smaller grids.

Medium-term (5-10 years):

- Support indigenous communities: Following UNDRIP, Indigenous peoples have greater power in project development, and provide dedicated funding sources to support Indigenous communities to upgrade poor existing infrastructure.

Long-term (10-30 years):

- Enable municipal power: Enable cities and urban areas through added support and resources that will allow municipalities to take leadership in pathways for transportation, grids and green building development within the low-carbon transition.

WHAT ARE THE **PATHWAYS AND GUIDE-POSTS** TO HELP US GET THERE?

REGIONAL COHESION

Cohesive energy strategy: Create a comprehensive and cohesive energy strategy that establishes clear regional, provincial and national frameworks based on a total predicted energy need and ceiling of emissions. Rather than planning energy projects on a one-by-one basis, seek out overall energy needs. Targets should also be supported by robust policy, while focusing on more incremental, but implementable solutions where appropriate, and enabling a wide set of solutions to participate in markets and procurements.

Short-term (0-5 years):

- Cohesive energy strategy: Create a comprehensive and cohesive energy strategy that establishes clear regional, provincial and national frameworks based on a total predicted energy need and ceiling of emissions.
  Rather than planning energy projects on a one-by-one basis, pursue cohesive plans to meet long-term energy needs.
- Support long-term strategy with short-term mandates: Targets should also be supported by robust policy, while focusing on more incremental but implementable solutions where appropriate and enabling a wide set of solutions to participate in markets and procurements.

Medium-term (5-10 years):

- Governance and planning is well integrated between local, regional and national levels of government – e.g. long-term energy goals and visions across jurisdictions should complement and support one another.
- National energy strategies are regionally and provincially supported by major funding bodies. At the same time, regional and provincial energy strategies are financially supported by federal government.

Long-term (10-30 years):

- National implementation of energy strategy and on-going tracking of metrics and adaptation to ensure we meet targets.

HOW DO YOUTH WANT TO BE INVOLVED IN DELIVERING ON OUR ENERGY FUTURE & WHAT RESOURCES DO THEY NEED TO DO IT?

Included in government and decision making:
Young people want more opportunities to have a seat at the table and have their voice heard in government and decision making. Youth want to be directly involved in policy planning and development processes, which can be done through:

- Participation in conferences and forums (such as Generation Energy) and other opportunities to interact with different sectors and decision makers
- Inclusion on boards, advisory committees and other decision-making bodies
- Consultations on university campuses, and with young people in communities.
- Open discussions with elected officials (e.g. online town halls)
- Easier access to politicians and decision makers.

Youth also advocated to include their peers who are not currently engaged in energy issues, and ensure that greater transparency and feedback is provided regarding the outcomes and process of public and youth consultations.

Environmental Education:
Young people want the opportunity to learn about energy systems and issues earlier in their education, in K-12, so that by the time students graduate high school, they have a better understanding of the Canadian energy context. They want more hands-on opportunities to gain skills, and opportunities for new education programs and degrees in environmental and energy disciplines to create new subject matter experts and pathways for green jobs. Lastly, they want to be active participants in boosting energy literacy, and in delivering energy education.

HOW DO YOUTH WANT TO BE INVOLVED IN DELIVERING ON OUR ENERGY FUTURE & WHAT RESOURCES DO THEY NEED TO DO IT?

Private sector opportunities:
Young people want to work in the clean technology and service sector. They expressed a desire for more 'green collar' job opportunities, and improved capacity building to foster skillsets for these jobs. Through increased support or grants for programs in these sectors, young people see themselves playing diverse roles in the energy sector, whether it be through engineering, policy-making, project management, or other private sector roles. Young people also expressed a desire for local utilities to be more attractive places to work in the future.

Networks and partnerships:
There is a strong appetite to be connected to other young people and to different sectors to work collaboratively on energy issues. Initiatives such as the Youth Champions program, as well as regional and cross-regional clusters, were expressed as ideas to continue to stay connected to one another. Youth also expressed a desire for there to be greater connections between youth from remote communities, Indigenous communities, and urban areas, and saw that as a framework for how energy issues would be tackled in the years to come. Another idea was a comprehensive website, web platform or database that would house different youth initiatives across Canada. This tool would ensure new energy-related ideas and solutions are more efficiently enabled and cost effective, as youth would have better access to existing energy youth groups and projects taking place across the country. Ultimately, this resource would allow youth to support one another in learning and sharing of best practices.

Innovation:
Youth see themselves as innovators. They expressed a desire for more support in energy innovation and technology development, and greater funding for research opportunities. With a focus on universities as living laboratories, there is opportunity to support existing entrepreneurship programs or establish new ones, with a focus on innovation in the green economy to support youth innovation and grow into business and policy development.

Individual level support:
With higher education costs, higher costs of living and lower proportional wages than ever before, youth expressed a need for support from government for larger individual investments, for example purchasing an electric vehicle, installing renewable energy on homes, or grants for retrofits. They also expressed a desire for incentives or support in responsible investment (i.e. investment in renewables).

GOING FORWARD

The Youth Energy Vision Project was a successful pilot project in youth-led participation to inform public policy through community dialogues, which moved beyond tokenistic youth inclusion and facilitated personal development and professional growth. It was clear that there was high interest and engagement from youth to participate in conversations about Canada's energy future. Youth were eager to invest their energy and knowledge into these dialogues, especially knowing that their ideas were going to be listened to and used to shape policy. Many conversations ran over time because the participants had so much to say and in many cases, the participants stayed long after the event had ended to continue the conversations.

It was important that the Youth Energy Vision Project was designed and run by youth-led organizations and that the youth dialogues were planned and facilitated by youth champions. Participants expressed that if the dialogues had been hosted by a big institution or organization, it would have felt more intimidating to attend, and may have discouraged them from attending.

This invitation to co-create a vision for Canada's energy future was exciting and energizing for the youth involved, particularly because their ideas and the possibilities imagined were being captured and were going to be taken into consideration at the national level.

Moving forward, the next step in building youth agency and capacity would be to embed youth onto advisory and decision-making bodies who will continue to guide the Generation Energy process and continue to support programs that build the capacity of youth to engage with and be part of energy solutions for our future.

““By remaining nonpartisan but open to discussing politics, and not requiring a technical background but also open to discussing the technological aspect of energy issues, the open-ended structure of the dialogue allowed participants to listen and learn from each other and built a collective field of knowledge using their different backgrounds. ”

- Generation Energy Youth Dialogue, Vancouver British Columbia

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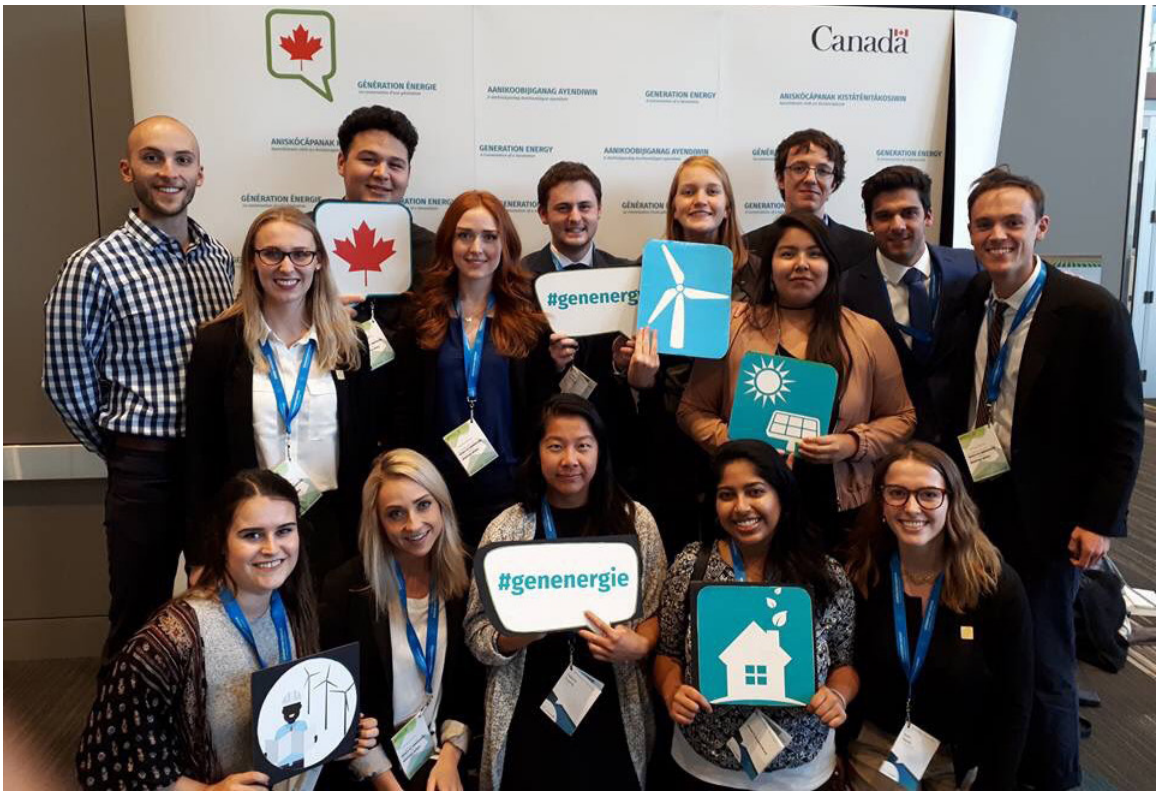
“It was inspirational to see individuals from such diverse backgrounds – from PhDs to filmmakers – come together and share such concern for the future of sustainable energy in Canada.”

- Generation Energy Youth Dialogue, Montreal Quebec

I am most excited to showcase our talents, and really demonstrate to members of government and private industry that youth are worth investing in, and worth having at the decision-making table.”

- Generation Energy Youth Dialogue, Ottawa Ontario



Canada Youth Champions at Natural Resource Canada’s Generation Energy Forum