



Committee: The High-Level Political Forum on Sustainable Development (HLPF)

Country: Canada

Topic: Accelerating sustainable energy production

School: _____

Delegate: _____

Topic Background:

The UN General Assembly develops, manages, and monitors 17 Sustainable Development Goals (SDGs) via its High-Level Political Forum on Sustainable Development. These 17 SDGs are urgent calls to action by the entire world striving to end poverty and other deprivations; to improve health and education, reduce inequalities, spur economic growth, and to tackle climate change. Specifically, SDG 7, “Affordable and Clean Energy,” focuses on providing reliable, affordable, sustainable, and modern energy for all. The widespread utilization of non-clean energies such as coal and oil are contributing to the ongoing issue of global warming, triggering significant consequences such as poverty, unstable food supply and competition over resources. Increased violence is therefore inevitable, leading to poor governance and inadequate social investment in education, health, and the rule of law, especially in less developed countries. As of 2022, energy production and its utilization are the dominant contributors to climate change. For example, in Canada, greenhouse gas emissions primarily originate from non-renewable electricity production, transportation, and heating and cooling of buildings. Clean and affordable energy is essential to Canada’s and the world’s aspirations to decarbonize the economy and achieve net-zero greenhouse gas emissions. Canada is committed to using numerous different pathways to decarbonize energy.

Country Policies - Canada

Canada reduced its energy consumptions per dollar by about 17% by 2020, but it remains one of the largest per-capita consumers of energy. Approximately 80% of its greenhouse gas emissions originate from energy production. Canadians use more energy per capita due to the country’s extreme temperatures, vast landscape, and dispersed population. The country ranks in the top five with CO₂ emissions of 15.4 metric tons per capita. Fortunately,

Canada has access to some of the world's cleanest sources of electricity generation. Today, Canada can produce 83% of its electricity from renewable resources (zero greenhouse gas emissions). Electrification will be the foundation of Canada's decarbonization (e.g., non- utilization of oil and coal): electrified transportation, heating and cooling of buildings, and the powering of industrial applications. Canada is rich in a variety of feedstocks that can be used as clean fuels, rendering Canada a clean energy leader. For example, waterpower already accounts for over 60% of Canada's total electricity generation, making it the largest source of electricity. In 2020, the Canadian government issued its Emission Reduction Plan (ERP), outlining approximately \$9 billion in spending to reduce its emissions by 40% by 2030 and to achieve net- zero emissions by 2050. Due to Canada's vast landscape and dispersed population, more than 200 communities currently rely completely on diesel fuel for heat and power, consuming 680 million litres of diesel annually. Canada is committed to the shift from diesel fuel to renewables in such communities, investing \$300+ million.

Canada is also working to enhance global energy supply and efficiency. As a founding member of the International Energy Agency (IEA), Canada shares its expertise with other countries that do not have the means to leverage the shift to zero-emission energy efficiently. Canada is also a member of the Clean Energy Ministerial, the Powering Past Coal Alliance, the International Mission Innovation Initiative, and the International Renewable Energy Agency.

Proposed Solutions

To address these issues, the delegation of Canada suggests the following solutions:

First, Canada should target to only generate electricity from renewable and non-emitting resources by 2030. Electricity will be generated via solar, tidal, geothermal, biomass, wind, and hydroelectricity. A modern, digital, smart electricity grid, integrated across Canada will allow for shared electricity at times and in places as needed. Additionally, off-grid locations need to be converted to renewable electricity generation to achieve the conversion goals. Economic methods of generating renewable electricity in these off-grid locations will be implemented. To prevent reversal to non-renewable electricity, appropriate regulations and legislations will be implemented.

Second, Canada needs to increase energy efficiency by establishing codes and best practices. Building strategies need to be upgraded and enforced. For example, houses need to be better insulated and have double and triple pane windows installed. Additionally, builders need to use energy efficient materials and architectural styles chosen according to the location. These building styles need to apply to residential, commercial, and institutional buildings.

Finally, Canada will continue to convert fuel production towards clean fuels. Clean fuels include the expansion or conversion to electric vehicles (EVs), hydrogen generation, and biomass utilization. Renewable electricity can not only be used to power all EVs, but it will also be the energy source of hydrogen generation. This also requires new standards and regulations to ensure that successful and complete energy conversion towards electrical energy is accomplished.

Canada's expertise in electrifying energy by all renewable means can then be exported to assist the conversion in other countries that do not have the expertise and resources to successfully convert on their own. With the establishment of a smart, digital power grid, not only could electricity exports be easily increased to the United States, offsetting non-renewable energy production in the United States, but also grid resiliency can be increased.

Works Cited:

Canada Energy Regulator. *Market Snapshot: Canadian Electricity Exports to the U.S. Focused on Renewable Power Exports to Specific Markets*. Canada Energy Regulator, 2017, www.cer-rec.gc.ca/en/data-analysis/energy-markets/market-snapshots/2017/market-snapshot-canadian-electricity-exports-u-s-focused-renewable-power-exports-specific-markets.html

Deloitte. *Next-Gen Advanced Metering Infrastructure*. Deloitte, www2.deloitte.com/us/en/pages/energy-and-resources/articles/next-gen-advanced-metering-infrastructure.html

Electricity Canada. *Vision 2050*. Electricity Canada, Apr. 2014, www.electricity.ca/wp-content/uploads/2014/04/Vision2050.pdf

Energy Monitor. *How Indigenous Communities Became Major Players in Canada's Energy Transition*. Energy Monitor, www.energymonitor.ai/policy/just-transition/how-indigenous-communities-became-major-players-in-canadas-energy-transition/

Government of Canada. *2022 to 2026 Federal Sustainable Development Strategy*. Government of Canada, www.fsds-sfdd.ca/downloads/2022%20to%202026%20Federal%20Sustainable%20Development%20Strategy.pdf

International Institute for Sustainable Development. *Canadian Energy Security: Renewables*. IISD, www.iisd.org/articles/deep-dive/canadian-energy-security-renewables

Microsoft News Canada. *Canada's Energy Industry Technology Trends in 2023*. Microsoft, 18 Jan. 2023, news.microsoft.com/en-ca/2023/01/18/canadas-energy-industry-technology-trends-in-2023

United Nations. *Goal 7: Affordable and Clean Energy*. United Nations Sustainable Development Goals, sdgs.un.org/goals/goal7

WaterPower Canada. *WaterPower Canada*. WaterPower Canada, waterpowercanada.ca

World Bank. *CO₂ Emissions (Metric Tons per Capita)*. World Bank Open Data, data.worldbank.org/indicator/EN.ATM.CO2E.PC?name_desc=false

