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Second Party Opinion

Ontario Power Generation Inc.'s Sustainable Finance Framework

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Location: Canada **Sector:** Power generation

Alignment With Principles

Aligned = ✓ Conceptually aligned = ○ Not aligned = ✗

- ✓ Social Bond Principles, ICMA, 2023
- ✓ Green Bond Principles, ICMA, 2021 (with June 2022 Appendix 1)
- ✓ Sustainability Bond Guidelines ICMA, 2021

See Alignment Assessment for more detail.

Strengths

Ontario Power Generation Inc. (OPG) expects to allocate most proceeds to eligible nuclear and hydro power projects. Projects that renovate and extend the useful life of these assets minimizes environment impacts and will maintain clean, baseload power on Ontario's largely decarbonized grid. This supports further deployment of new renewables by enhancing grid reliability. OPG has strong environmental and social risk management throughout their operations and supply chain.

Social investments for Indigenous peoples and businesses offer important social benefits to a key target population for OPG. Procurement spending, equity participation, educational support, and job skills training support better economic outcomes for Indigenous Nations and communities.

Weaknesses

No weaknesses to report.

Areas to watch

Nuclear power generation raises final waste disposal risks, the potential for weapon proliferation, and accidental radiation from plant operations. Canada's strict regulations limit these risks, the CANDU technology mitigates the possibility for weapon proliferation, and no significant controversies have been recorded.

The broad scope of the framework and project categories create uncertainty in terms of some eligible projects. Clean fuel storage, run-of-the river hydro, and climate adaptation, have broadly defined criteria to determine eligibility.

OPG can allocate proceeds to minority equity participation in eligible project types. In such cases, OPG may not have the same operational controls over environmental and social risks, including within the value chain.

Eligible Green Projects Assessment Summary

Eligible projects under issuer's green finance framework are assessed based on their environmental benefits and risks, using Shades of Green methodology.

Renewable energy	**Dark green**
Investments related to the construction, development, operation, acquisition, maintenance, refurbishment, and connection/transmission of the following renewable energy sources: solar photovoltaic (PV); wind; refurbishment, repowering, modernization, and/or maintenance of existing hydroelectric facilities; run-of-the river hydroelectric, and hydrogen (<36.4 grams of carbon dioxide equivalent per megajoule of energy {gCO_2e/MJ})	
Nuclear energy	**Medium green**
Research, development, construction, deployment, and safe operation of new or refurbishment of existing nuclear power facilities	
Energy efficiency and management	**Dark green**
Acquisition, connection, construction, development, installation, and operation of energy storage, or clean fuel storage solutions	
Clean transportation	**Dark green**
Development, procurement, operation, and maintenance of dedicated zero-emission vehicles and supporting clean transportation infrastructure, such as electric charging stations, hydrogen refueling stations, and hydrogen transportation trailers	
Climate adaptation and resilience	**Medium green**
Flood protection and stormwater management and extreme weather resistant infrastructure and other forms of flood mitigation	

See Analysis Of Eligible Projects for more detail.

Issuer Sustainability Context

This section provides an analysis of the issuer's sustainability management and the embeddedness of the financing framework within its overall strategy.

Company Description

OPG is a Canadian electricity generator wholly owned by the Province of Ontario, with $66 billion in assets and operations across Canada and the U.S. As of Dec. 31, 2023, OPG's in-service generating capacity was 18,236 megawatts (MW), of which around 73% comes from low-carbon power sources. In Canada, its generating footprint includes 66 hydroelectric stations, two nuclear stations, one solar facility, one biomass station, and one dual-fueled oil and gas station. Through its wholly owned subsidiary Atura Power, it also owns and operates four combined cycle natural gas stations. Atura Power is also constructing a large-scale hydrogen production site, the Niagara Hydrogen Centre, and a 250 megawatt four-hour battery energy storage system in Ontario. In the U.S., OPG wholly or jointly owns and operates 85 hydroelectric generating stations and holds minority interests in 14 hydroelectric and two solar facilities through its U.S.-based wholly owned subsidiary Eagle Creek Renewable Energy. OPG also owns two other nuclear generating stations in Ontario that are leased to Bruce Power L.P.

Material Sustainability Factors

Climate transition risk

Power generation is the largest direct source of greenhouse gas emissions globally, making this sector highly susceptible to the growing public, political, legal, and regulatory pressure to accelerate climate goals. Public awareness of the urgency for climate action has reached a turning point. In turn, policymakers and regulators are more often pushing for faster transition to lower-carbon energy, especially as these technologies become more mature and cost competitive. Over the past decade, we have seen multibillion-dollar impairments for most polluting assets, reflecting their weaker economics as taxes increase and they are displaced by new, cleaner technologies. In addition, more stringent decarbonization rules may sometimes restrict their license to operate. OPG's framework also includes clean transportation related investments. The transportation sector is the fastest growing source of emissions worldwide. Regulation on fuel efficiency, powertrains, or emissions has begun emerging in some markets and may further tighten to address climate goals.

Physical climate risks

Given fixed assets, generators are relatively more exposed to physical climate risks compared to other sectors. For stakeholders, extreme weather events, including wildfires, hurricanes, and storms, are becoming more frequent and severe and can result in power outages for large populations of users. As water is often a significant resource for hydro, nuclear, and fossil-fuel based power plants, exposure to flooding, drought, or warmer temperatures can also negatively affect operations. In turn, these dynamics, coupled with regulatory pressure to preserve security of supply, are driving players to enhance the resilience of assets. The physical climate risks generally involve significant financial losses for operators due to repairs, but more importantly from exposure to extreme power price spikes or claims due to business disruption. We expect these dynamics to continue but vary regionally depending on regulatory responses.

Waste & recycling

The power generation sector constructs and operates large generating assets that generate large quantities of waste. Nuclear power, in particular, generates hazardous radioactive waste that has a long half-life and lacks viable disposal options, which can prompt community resistance for disposal sites. Additionally, end-of-life management--the dismantling, and recycling or processing of waste--exposes companies to financial, reputational, or litigation risks if not properly planned and provisioned, especially for nuclear plants.

Impact on communities

The impact on communities is a material consideration, especially for large infrastructure construction projects. Some projects require significant land use and at times cross through rural and Indigenous communities. Construction and power infrastructure can enhance economic and social development, but they can also be highly disruptive because of noise, air emissions, water discharge, and harmful waste, among others, which can lead to local community pushback. Renewable development related to climate goals, in particular, intensifies the materiality for stakeholders. Sites with high renewable potential are often in or near communities unaccustomed to power technology and near Indigenous Nations and communities, which can prompt strong local opposition.

Safety

Safety is an important risk in the power generation sector that is generally well managed. However, nuclear generation can lead to low-probability/high-impact risks associated with the potential for weapon proliferation along with maximum credible accidental radiation from the operation of plants, with devastating workforce and regional consequences.

Issuer And Context Analysis

The framework's project categories target OPG's most significant sustainability factors. Investments in renewable energy, nuclear power, energy efficiency and management, and clean transportation address climate transition risk while investments in climate adaptation and resilience target physical climate risk. Its social investments, which focus on Indigenous relations, support its impact on communities. Nuclear power projects introduce risks related to long term waste storage and safety concerns, but these are well managed under the Canadian regulatory regime.

OPG's Climate Change Plan includes a commitment to reach net zero carbon emissions for its own operations, including the use of offsets, by 2040. The plan also includes a commitment to catalyze efforts to achieve net zero in the markets where it operates by 2050. OPG plans to meet the balance of its carbon commitments not met by direct actions through the offset credit market, which will be available in 2040. Most emissions are Scope 1 and stem from its thermal power plants. Emissions performance has been somewhat volatile over the past several years due to the flexible nature of its natural gas power supply in response to changing electricity market demand. OPG sees natural gas as an enabler of their climate change plan to provide flexible response to electricity demand. OPG plans to update its Climate Plan in 2024.

OPG carries out physical climate risk analysis. Ontario is susceptible to extreme weather, including storms. OPG has developed an internal climate change adaptation working group, conducts climate risk and vulnerability assessments for existing generation assets and for specific nuclear and renewable projects, and participates in research studies with external consortiums and industry groups to develop adaptation strategies. OPG has invested in improving their hydroelectric assets to address some aging and reliability issues which also enhance their resilience to changing weather conditions. This includes increasing flow capacity to enable management of more severe precipitation events and automating a number of sluice gates to enable more timely responses to control water systems. We expect the company to provide more transparency into its physical risk assessments in the future.

OPG manages the storage and disposal of nuclear waste under strict Canadian regulations and has programs to minimize the production of nuclear waste. OPG's Nuclear Sustainability Services (NSS) is responsible for nuclear waste and radioactive materials, which are managed at three NSS facilities. Low and intermediate-level materials from the Darlington, Pickering, and Bruce Power nuclear stations are transported in Canadian Nuclear Safety Commission (CNSC) licensed steel containers or specially reinforced and shielded transportation packages and stored on an interim basis in steel-lined, in-ground storage structures at the NSS Western Waste Management Facility in Bruce County. Nuclear used fuel, which accounts for about 3% of total

volume of waste from nuclear operations, is placed in dry storage containers and handled carefully and safely managed on-site at the Pickering, Darlington, and Bruce Power stations. OPG is working to reduce waste volumes from their operations through research and innovative technologies. OPG follows strict regulations from the Canadian Nuclear Safety Commission for Canadian nuclear sites, including the use of nuclear energy and materials to safeguard health and the environment, to ensure safety and security, and to respect Canada's international commitments on the peaceful use of nuclear energy. The Nuclear Waste Management Organization, which oversees the planning and implementation for safe disposal of intermediate-level waste and used fuel, is currently undertaking a site selection process for long-term storage of used fuel deep geological repositories and has indicated it intends to select a preferred site in late 2024.

OPG ensures the radiological safety of its workforce, the public, and the environment for its nuclear sites. These measures are part of OPG's operating license. As required by the Canadian Nuclear Safety Commission, exposure and dose limits for all nuclear energy workers is closely tracked. There are also dose limits calculated for members of the public living near a nuclear power plant. The dose is determined through third-party studies and the data from constant monitoring of emissions releases to the air and water and monitoring of plants, animals, air, and water. The regulatory maximum dose a member of the public can receive from living near a power plant is 1 millisievert (mSv) per year and none of OPG's plants has exceeded this limit. No material accidental radiation events or other harmful impacts on the environment have been recorded. Still, there is residual risk associated with a maximum credible accident with devastating consequences. Weapon proliferation is mitigated by Canadian regulations and the use of the CANDU technology at its sites, which uses heavy water as a moderator and therefore requires natural versus enriched uranium.

OPG has included uses of proceeds focused on enhancing relationships with Indigenous communities. OPG's generating facilities are located within the traditional territories of Indigenous Nations and communities and OPG works with all Nations and communities near its current and future work. It identifies key Indigenous Nations and communities through a proactive process, researching proximity and treaty territory, leveraging internal and external legal counsel, and where appropriate government direction to determine which communities are included in the Consultation process. Historical hydroelectric development on First Nations land over the 20th century had adverse impacts on many Indigenous Nations and communities in Ontario. In 1992, OPG developed a formal framework called the "Past Grievance Process" for assessing and resolving historic grievances, largely related to flooding of First Nation reserve lands and displacing local residents. Since then, it reached final settlement agreements and delivered formal apologies to 21 First Nations communities. OPG established an Indigenous Relations Policy which articulates principles of respect, integrity, and mutual responsibility and it implements this policy through ongoing relationships with the Indigenous Nations and communities, regular meetings, ongoing outreach, capacity building support, employment opportunities and training, prioritized business and procurement, and employee training.

In 2021, OPG published a Reconciliation Action Plan to serve as a roadmap for working in partnership with Indigenous peoples to foster positive and mutually beneficial relationships. The key commitments under this plan include growing OPG's economic impact for Indigenous communities and businesses to $1 billion by 2031. The plan focuses on working in partnership with Indigenous Nations and communities to facilitate economic benefits, increasing participation of Indigenous businesses in major projects, and partnering with Indigenous Nations and communities on new greenfield generation projects under equity arrangements that provide stable revenue streams. So far, it has completed equity partnerships with five First Nations on four new generation projects. These steps are in line with the Call to Action #92 of the Truth and Reconciliation Commission of Canada, which calls upon the corporate sector in Canada to adopt the United Nations Declaration on the Rights of Indigenous Peoples as a reconciliation framework and to "apply its principles, norms, and standards to corporate policy and core operational activities involving Indigenous peoples and their lands and resources." This includes ensuring Indigenous people have equitable access to jobs, training, and education.

Alignment Assessment

This section provides an analysis of the framework's alignment to the Social and Green Bond principles and the Sustainability Bond Guidelines.

Alignment With Principles

Aligned = ✓ Conceptually aligned = o Not aligned = ×

- ✓ Social Bond Principles, ICMA, 2023
- ✓ Green Bond Principles, ICMA, 2021 (with June 2022 Appendix 1)
- ✓ Sustainability Bond Guidelines ICMA, 2021

✓ Use of proceeds

OPG is committed to allocating an amount equivalent of the net proceeds from the sustainable financing instruments to finance or refinance eligible green and social projects related to renewable energy, nuclear energy, energy efficiency and management, clean transportation, climate adaptation and resilience, socioeconomic advancement and empowerment, and employment generation and programs designed to prevent and/or alleviate unemployment stemming from socioeconomic crises. We assess all the framework's green project categories as green and all social project categories are considered aligned. The maximum refinancing look-back period is 36 months after issuance, in line with market practice. Please refer to the Analysis of Eligible Projects section for more information on our analysis of the environmental and social benefits of the expected use of proceeds.

✓ Process for project evaluation and selection

OPG's treasury team is responsible for reviewing and selecting eligible projects in consultation with internal experts and stakeholders, including operations, environment, Indigenous relations, and the supply chain teams. The environmental and social objectives are clearly identified. Additionally, OPG identifies and manages the environmental and social risks associated with the financed projects through its formal risk management policies, procedures, and systems. Moreover, the framework includes an exclusion for assets or projects that primarily use fossil fuels to generate electricity.

✓ Management of proceeds

OPG commits to deposit proceeds raised by OPG or its subsidiaries into general accounts and earmark an amount equal to the net proceeds for eligible green and social projects. The treasury group will track and monitor proceeds and OPG commits to periodically adjust proceeds to match eligible projects. Unallocated proceeds could be held in cash or short-term money market instruments. OPG commits to allocating all proceeds to eligible projects within 36 months from the issuance date and its look-back period for eligible projects is 36 months prior to the date of issuance.

✓ Reporting

OPG commits to reporting annually on the allocation of proceeds and actual impacts of financed projects, until full allocation and in case of significant changes. The information will be shared publicly on their website. Allocation reporting will include information on major eligible projects to which proceeds have been allocated, a brief description for the major eligible projects, amounts allocated, and the remaining balance of funds not yet allocated. OPG will also provide information on relevant green and social impact metrics on a proportion-funded basis and disclose the measurement methodology. Example indicators include GHG emissions avoided, grid emissions factor, annual energy production, annual value/rate of procurement spend with Indigenous suppliers, number of Indigenous-owned businesses that are supplying products/services to OPG, number and/or award value of procurement contractors with Indigenous-owned businesses or bursaries scholarships and awards. OPG commits to have third-party verification of its allocation post-issuance, which adds to the transparency.

Analysis Of Eligible Projects

This section provides details of our analysis of eligible projects, based on their environmental benefits and risks, using the "Analytical Approach: Shades Of Green Assessments," as well as our analysis of eligible projects considered to have clear social benefits and to address or mitigate a key social issue.

Over the three years following issuance of the financing, OPG expects to allocate most proceeds to green project categories, particularly new nuclear power projects and refurbishing existing nuclear power works and hydroelectric power.

The issuer expects the majority of proceeds will be directed to finance new investments, as opposed to refinancing.

Green project categories

Renewable energy

Assessment	Description
Dark green	Investments related to the construction, development, operation, acquisition, maintenance, refurbishment, and connection/transmission of the following renewable energy generation sources: • Solar PV • Wind • Refurbishment, repowering, modernization, and/or maintenance of existing hydroelectric facilities with the purpose of increasing generation efficiency, operational life span, and/or renewable energy output while maintaining or improving the level of operational safety • Run-of-river hydroelectric power • Hydrogen (<36.4g CO2e/MJ)

Analytical considerations

- Renewable energy projects such as solar PV, wind, and hydroelectric power are key elements in the transition to a lower carbon economy and we assign a Dark green shade to these projects. Potential environmental risks, including impacts on local biodiversity, are well managed using a variety of on-site and entity-level screening tools along with policies and governance procedures.
- Considering OPG's project pipeline, we expect proceeds used for large hydro in the near-term will focus on refurbishment and that projects will have no additional land flooding beyond current parameters, which limits biodiversity impacts. Moreover, OPG complies with regulatory regimes and permitting authorities to manage flows and levels, fisheries, recreational interests, and public safety. For example, OPG has installed fish ladders in some stations to facilitate migration. Refurbishment also avoids emissions associated with decommissioning.
- OPG includes run-of-the river hydro projects, which rely on the natural flow of rivers or streams without major alteration to the natural flow regime, in the framework. These projects are smaller in size than traditional hydroelectric plants and are designed to minimize environmental impacts. While run-of-the river do not typically include large artificial reservoirs, it is possible for these types of projects to have small-scale reservoirs or diversion structures to regulate flow and ensure consistent power generation. OPG currently does not have any significant new developments planned and does not expect to use proceeds for artificial reservoirs. We therefore do not expect proceeds to be allocated to this project type. Even so, the framework is not explicit about the scope of run-of-the river projects but all future projects undergo screening for environmental risks in line with Canadian regulation.

- We view green hydrogen production as an important element in the green energy transition, particularly for use in sectors that are hard to electrify. We assess this project as Dark green given hydrogen production will be based entirely on hydroelectric renewable energy, the framework includes an explicit emissions threshold, and the risk of hydrogen leakage is limited. OPG expects to use proceeds to finance the Niagara Hydrogen Center, a green hydrogen project owned by OPG subsidiary Atura, that will use a 20MW electrolyzer to produce low-carbon hydrogen using hydroelectricity. Hydrogen will be supplied to the Niagara Region and likely be used by heavy industrial consumers in Ontario, heavy-duty trucking, municipal mobility, and also to test the viability of blending hydrogen with Atura Power's natural gas plants to reduce emissions. All facilities are expected to include minimal leak point locations, and high tech detection sensors and controls to limit leakage. Other technologies, such as pyrolysis or electrochemical hydrogen production could be considered in the future, but we view the explicit CO_2e emissions threshold favorably.

Nuclear energy

Assessment	Description
Medium green	Investments in new build nuclear power projects and existing nuclear power works, including: • Research, development, construction, deployment, and safe operation of new facilities that directly produce, or are required to support the production of, safe and reliable generation of electricity or heat using a nuclear source • Maintenance and/or refurbishment of existing facilities

Analytical considerations

- We assign a Medium green shade to OPG's nuclear energy projects. Nuclear power is a low-carbon source of electricity with a land footprint that is smaller than other low-carbon sources, such as renewables. Maintenance and refurbishment of nuclear reactors helps to expand the useful life of plants and increases incremental output and avoids emissions associated with decommissioning. New nuclear facilities add capacity to the grid, displacing natural gas generation to meeting growing energy demand and helps support Canada's climate goals. Nuclear power plants in Canada are heavily regulated, leading to a strong risk management culture, including the impacts of climate change.
- We expect OPG will allocate most of the proceeds to new nuclear projects and the refurbishment of Darlington and Pickering to extend nuclear power supply for at least 30 more years. OPG's reactors use CANDU (Canada Deuterium Uranium) technology which use 30%–40% less mined uranium than light-water reactors per unit of electricity produced. This is a major advantage of the heavy-water design; it not only requires less fuel, but as the fuel does not have to be enriched, it presents lower safety and proliferation risks.
- Investments in new nuclear facilities could involve four Small Modular Reactors (SMR) at its Darlington Nuclear Site. Unlike traditional reactors, SMRs are smaller in generating capacity (generally under 300 MW), require less land and resources, and generate smaller amounts of radioactive waste. Moreover, strict Canadian regulations ensure robust environmental assessment across all stages of the lifecycle of nuclear power plants.
- Long-term storage of spent fuel is a key concern for nuclear power that remains unresolved in Canada. OPG stores high-level waste in dry storage containers (DSCs) which are located at the three nuclear generating sites. The permanent disposal of this high-level waste is managed by the Nuclear Waste Management Organization (NWMO), as governed by Canada's Nuclear Fuel Waste Act. The NWMO is currently in the process of siting a location for a Deep Geological Repository (DGR) to permanently dispose of high-level waste (irradiated fuel) and indicates that it plans to select a preferred site in late 2024. The lack of long-term storage limits the shade we assign.
- OPG sources its uranium from suppliers around the world under uranium purchase and sale agreements that include language that stipulate that the seller must ensure that supply complies with applicable local laws including those that are applicable to safety and to the ecological protection and environmental control of soil, vegetation, water, and air. These could, however, have varying degree of stringency and enforcement levels. OPG states that it applies a ESG supplier evaluation and monitoring initiative across the supply chain which includes screening criteria and direct engagement to assess their suppliers. OPG states that they are incorporating a continuous improvement process in its procurement practices and is expected to continue to incorporate screening criteria and assessing suppliers' ESG practices.

Energy efficiency and management

Assessment	Description
Dark green	Acquisition, connection, construction, development, installation, and operation of energy storage, or clean fuel storage solutions

Analytical considerations

- Energy storage projects include lithium-ion phosphate-based battery energy storage. These systems will connect to Ontario's grid which is largely supplied by clean power. Reliable storage is an effective way to increase the flexibility and adaptability of the grid, and there is a positive climate impact in terms of helping to decarbonize the Canadian grid.
- Batteries are required for the storage of energy and utilize high volumes of environmentally sensitive materials. This can introduce environmental and social risks into the supply chain that need to be appropriately managed. Like other supply chain risks, these are managed through supply chain management plans, which outlines selection criteria and monitoring of suppliers.
- While OPG anticipates nearly all energy storage investment to be in batteries, the framework leaves open the possibility for other technology types such pumped hydro, thermal energy storage, capacitors, flywheels, and compressed air to be included. These other storage technologies may entail risks to climate, hydrology, biodiversity, and ecosystems that need to be carefully managed if financed.
- We expect clean fuel storage projects to involve hydrogen and OPG has plans to develop facilities with minimal leak point locations and sensors and controls to limit hydrogen leakage. However, the framework does not clearly define clean fuel storage and therefore leaves open financing the storage of biogas and biofuels, which carry with them greater environmental risks.

Clean transportation

Assessment	Description
Dark green	Development, procurement, operation, and maintenance of dedicated low-carbon assets • Zero-emission vehicles • Supporting clean transportation infrastructure, such as electric charging stations, hydrogen refueling stations, hydrogen transportation trailers

Analytical considerations

- Zero-emissions vehicle and related infrastructure are important transport solutions for Ontario's climate future given the transportation sector is the province's largest source of emissions at over 30%. Electric power in Ontario is largely generated through hydroelectric and nuclear power, ensuring electrified transport is low carbon.
- Supporting clean transportation infrastructure is an important enabler for the sector's decarbonization and we view these types of projects as Dark green.
- OPG is assessing its fleet program but expects that zero-emissions vehicles financed under the framework will not include bio-gas vehicles. However, the framework does not explicitly exclude this technology type, which carries greater environmental risks.
- Battery component sourcing for electric vehicles can have environmental and social impacts for local communities, and OPG relies on the battery manufacturer's diligence processes.

Climate adaptation and resilience

Assessment	Description
Medium green	• Flood protection and stormwater management • Extreme weather resistant infrastructure and other forms of flooding mitigation

Analytical considerations

- Adaptation and resilience measures are important for large generation projects. The wide scope of this category with uncertain climate footprints and assessment methodologies leads us to assign a Medium green shade in an otherwise Dark green category.
- Projects could relate to adaptation projects associated with OPG's nuclear, hydroelectric, and solar facilities, but not with the fossil fuel powered facilities given the frameworks exclusion criteria for fossil-fuel related power systems.
- OPG has developed an internal climate change adaptation working group and initiatives around climate risk and vulnerability assessments for existing generation assets and for specific nuclear and renewable projects. However detailed information on how financed projects are assessed for physical climate risks is not made publicly available.

S&P Global Ratings' Shades of Green

Assessments	Dark green	Medium green	Light green	Yellow	Orange	Red
Description	Activities that correspond to the long-term vision of an LCCR future.	Activities that represent significant steps toward an LCCR future but will require further improvements to be long-term LCCR solutions.	Activities representing transition steps in the near-term that avoid emissions lock-in but do not represent long-term LCCR solutions.	Activities that do not have a material impact on the transition to an LCCR future, or, Activities that have some potential inconsistency with the transition to an LCCR future, albeit tempered by existing transition measures.	Activities that are not currently consistent with the transition to an LCCR future. These include activities with moderate potential for emissions lock-in and risk of stranded assets.	Activities that are inconsistent with, and likely to impede, the transition required to achieve the long-term LCCR future. These activities have the highest emissions intensity, with the most potential for emissions lock-in and risk of stranded assets.
Example projects	Solar power plants	Energy efficient buildings	Hybrid road vehicles	Health care services	Conventional steel production	New oil exploration

Note: For us to consider use of proceeds aligned with ICMA Principles for a green project, we require project categories directly funded by the financing to be assigned one of the three green Shades.

LCCR--Low-carbon climate resilient. An LCCR future is a future aligned with the Paris Agreement; where the global average temperature increase is held below 2 degrees Celsius (2 C), with efforts to limit it to 1.5 C, above pre-industrial levels, while building resilience to the adverse impact of climate change and achieving sustainable outcomes across both climate and non-climate environmental objectives. Long term and near term--For the purpose of this analysis, we consider the long term to be beyond the middle of the 21st century and the near term to be within the next decade. Emissions lock-in--Where an activity delays or prevents the transition to low-carbon alternatives by perpetuating assets or processes (often fossil fuel use and its corresponding greenhouse gas emissions) that are not aligned with, or cannot adapt to, an LCCR future. Stranded assets--Assets that have suffered from unanticipated or premature write-downs, devaluations, or conversion to liabilities (as defined by the University of Oxford).

Social project categories

Socioeconomic advancement

- Expenditures and program investments related to enabling opportunities for Indigenous communities and majority-owned Indigenous businesses and organizations. Examples include but are not limited to:
    - Procurement of products and services from Indigenous-owned businesses; and
    - Programs that empower Indigenous-owned businesses through training, education on potential business opportunities, and mentoring (including internal OPG capacity building and developing a supply chain dedicated to increasing Indigenous procurement).
- Financing provided to Indigenous communities, Indigenous-owned corporations or partnerships, etc. to enable equity participation in projects of OPG or its subsidiaries

Analytical considerations

- Indigenous communities in Canada are a disadvantaged group that face higher levels of unemployment (8.8% Indigenous vs 5.3% non-Indigenous populations in 2023), lower median income and wealth levels, and higher prevalence of poverty (11.8% poverty rate, excluding First Nations people living on reserve, vs 7.9% for non-Indigenous population in 2020) than the average Canadian population. The framework explicitly defines the term Indigenous people's (or Aboriginal peoples) as per the Canadian Constitution as First Nations, Métis, and Inuit peoples.
- Procurement practices dedicated to supporting Indigenous-owned businesses expand opportunities for Indigenous people and supports better economic inclusion. Investing in and providing capacity building support for Indigenous-owned businesses has a multiplier effect for the broader Indigenous community economies. This greater access to capital supports the scaling up of businesses which in turn promotes employment generation, rising wages, and catalyzes greater economic activity in these traditionally disadvantaged areas. These practices ultimately help bring greater resilience to these communities.
- Commercial partnerships in OPG projects also provides Indigenous Nations and communities with direct access to revenue streams and enables meaningful participation and ownership in power generation projects.
- In 2022, OPG delivered approximately $77 million in economic benefits to Indigenous communities and businesses, with $56 million in Indigenous procurement and $21 million in distributions from equity partnerships to Indigenous partners. In 2023, OPG awarded an additional $140 million in procurement contracts to Indigenous businesses.

Employment generation, and programs designed to prevent and/or alleviate unemployment stemming from socioeconomic crises

Expenditures and program investments to provide specialized training, development, mentorship, and employment opportunities to Indigenous persons. Examples include but are not limited to:

- Develop and support recruitment strategies for Indigenous students with post-secondary institutions;
- Bursaries, scholarships, and awards program to expand the John Wesley Beaver Memorial Scholarship program as well as subsidiary scholarship programs; and
- Initiatives related to OPG's Indigenous Opportunities Network (ION).

Analytical considerations

- Canada has identified an educational achievement gap for Indigenous people compared to non-Indigenous Canadians, evidenced by lower graduation rates for high school and post-secondary studies than non-Indigenous populations. This contributes to weaker employment prospects, lower wages, and greater incidence of poverty.
- OPG's initiatives support job and skills training for the Indigenous Nations and communities through direct recruitment, educational scholarships, and ION. These provides Indigenous people more equitable access to jobs, training, and education opportunities to facilitate greater employment access.

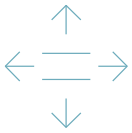
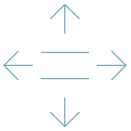
- Its ION initiatives aim to increase Indigenous representation at all levels within OPG's workforce and offers well-paying jobs and upward mobility. OPG regularly communicates and identifies training opportunities and places Indigenous participants in jobs in the energy sector building trades, such as carpenters, boilermakers, and millwrights.
- Training initiatives are a direct intervention to give job skills that can lead to higher paying jobs, addressing an important need for the community.

Mapping To The U.N.'s Sustainable Development Goals

Where the Financing documentation references the Sustainable Development Goals (SDGs), we consider which SDGs it contributes to. We compare the activities funded by the Financing to the International Capital Markets Association (ICMA) SDG mapping and outline the intended linkages within our SPO analysis. Our assessment of SDG mapping does not impact our alignment opinion.

This framework intends to contribute to the following SDGs:

Use of proceeds	SDGs
Renewable Energy	 **7. Affordable and clean energy***  **8. Decent work and economic growth***  **9. Industry, innovation and infrastructure***  **13. Climate action**
Nuclear Energy	 **3. Good health and well-being**  **7. Affordable and clean energy**  **8. Decent work and economic growth**  **9. Industry, innovation and infrastructure**  **13. Climate action**
Energy Efficiency and Management	 **7. Affordable and clean energy***  **8. Decent work and economic growth***  **9. Industry, innovation and infrastructure***  **13. Climate action**
Clean Transportation	 **9. Industry, innovation and infrastructure**  **13. Climate action**

Climate Adaptation and Resilience	 **9. Industry, innovation and infrastructure**	 **13. Climate action***	
Socioeconomic Advancement and Empowerment	 **8. Decent work and economic growth***	 **10. Reduced inequalities***	 **12. Responsible consumption and production**
Employment Generation, and Programs Designed to Prevent and/or Alleviate Unemployment Stemming from Socioeconomic Crises	 **4. Quality education**	 **8. Decent work and economic growth***	 **10. Reduced inequalities**

*The eligible project categories link to these SDGs in the ICMA mapping.

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