

2023 SUSTAINABILITY DISCLOSURES

Capital
Power 



TCFD alignment table

Task Force on Climate-related Financial Disclosures (TCFD)

This section reviews our strategy and its resiliency in relation to climate change scenarios and is structured in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) framework.

TCFD theme	Topic and recommended content	Reference
Governance	Describe Board's oversight of climate-related opportunities and risks	<ul style="list-style-type: none"> • 2023 Integrated Annual Report, Corporate governance • 2024 Management Proxy Circular, Sustainability and climate oversight • Who we are > Corporate governance (www.capitalpower.com)
	Describe management roles in assessing and managing climate-related opportunities and risk	<ul style="list-style-type: none"> • 2023 Corporate governance • 2024 Management Proxy Circular, Sustainability and climate oversight • Who we are > Corporate governance (www.capitalpower.com)
Strategy	Describe climate-related risks identified over the short, medium, and long-term	<ul style="list-style-type: none"> • TCFD Risks and opportunities tables • 2023 Integrated Annual Report, Our strategic focus
	Describe impact of climate-related opportunities and risks on the business strategy and financial planning	<ul style="list-style-type: none"> • TCFD Risks and opportunities tables
	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	<ul style="list-style-type: none"> • TCFD Scenario analysis
Risk management	Describe processes for identifying and assessing climate-related risks	<ul style="list-style-type: none"> • 2023 Integrated Annual Report, Risk overview • 2023 Integrated Annual Report, Risks and impacts • TCFD Risks and opportunities tables
	Describe processes for managing climate-related risks	<ul style="list-style-type: none"> • 2023 Integrated Annual Report, Risk overview • 2023 Integrated Annual Report, Risks and impacts • TCFD Risks and opportunities tables
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the overall risk management process	<ul style="list-style-type: none"> • 2023 Integrated Annual Report, Risk overview • 2023 Integrated Annual Report, Risks and impacts
Targets and metrics	Disclose metrics used to assess climate-related opportunities and risks aligned with the strategy and risk management process	<ul style="list-style-type: none"> • 2023 Integrated Annual Report, 2024 performance targets • 2023 Integrated Annual Report, Emissions management
	Disclose Scope 1, 2, and 3 GHG emissions and related risks	<ul style="list-style-type: none"> • 2023 Integrated Annual Report, Emissions management
	Describe targets used by the Company to manage climate-related opportunities and risks, and performance against targets	<ul style="list-style-type: none"> • 2023 Integrated Annual Report, 2024 performance targets

Scenarios and resilience

Scenarios analysis

Capital Power's strategy is established through rigorous review of the Company's competitive advantages, as well as market fundamentals, changing public policies and evolving long-term dynamics that are shaping the power sector. Through regular assessments, we test and review our strategy to ensure resiliency. This process includes Board oversight and extensive management review to ensure Capital Power's strategy and tactics are adjusted as the competitive environments in which we operate continue to change.

To support this process, Capital Power uses modeling and analysis that evaluates opportunities and risks under varying climate change scenarios. Scenario analysis is employed to understand the resiliency of our strategy as assumptions are varied.

The IEA scenarios and underlying assumptions are considered in Capital Power's analysis. The scenarios provide a high-level starting point for the assessment of climate change impacts and allow us to model scenarios in specific jurisdictions that result in equivalent outcomes. As we evaluate the risks and opportunities that may arise in these scenarios, our analysis focuses on the material risks that are relevant to our business.

IEA scenarios

The IEA scenarios make assumptions about technology advancement, policy, CO₂ prices, fuel prices, socio-economic drivers, and considers global trends towards increasing net zero commitments by governments and corporations. The IEA scenarios simulate the interactions among supply and demand fundamentals and output the resulting energy flows, CO₂ emissions and investments to 2050.

Note: The IEA's 2023 World Energy Outlook Report provides a framework for thinking about the future of global energy. It does not make predictions about the future. Instead, it sets out what the future could look like based on different scenarios or pathways, with the aim of providing insights to inform decision-making by governments, companies and others concerned with energy.

The following includes a summary of each of the three main scenarios from the 2023 IEA report used in Capital Power's analysis:

- **Stated Policies Scenario** (STEPS) assumes that existing and announced policy is implemented by governments. The cumulative contributions that result are material, however not sufficient to achieve the sustainable development goals or limit the worst effects of climate change.
- **Announced Pledges Scenario** (APS) assumes that climate-related commitments made by governments and implemented through Nationally Determined Contributions (NDCs) will be met in full and on time.
- **Net Zero Emissions by 2050 case** (NZE) sets out the pathway for the global energy sector to achieve the ambition of net zero CO₂ emissions by 2050. The IEA notes that this scenario is consistent with limiting global temperature rise to 1.5 degrees Celsius (with at least a 50% probability). We are working to align our actions with the objective of limiting global temperature rise to well below two degrees Celsius.

Scenarios and resilience

Overview of 2023 IEA scenarios and the resiliency of our strategy

The 2023 IEA scenarios are focused on the critical steps required to achieve net zero commitments and limit the effects of climate change. We are working to align our actions with the objective of limiting global temperature rise to well below 2 degrees Celsius. To achieve net zero emissions, carbon abatement must not wait. Contributions to emissions reductions by 2030 will rely heavily on technologies in the market today and new emerging technologies becoming viable over time. Capital Power is advancing the development of emissions-reduction technologies to contribute to a low carbon future. CCS, hydrogen, SMR, DAC and other low-carbon solutions will be essential components of our strategy and ensure our long-term resiliency.

Capital Power's strategy prioritizes the need for flexible sources of supply to maintain reliability. As predicted in the 2023 IEA Global electricity demand and generation mix by scenario, there will be increased penetration of intermittent generation, with the penetration growing as the ambition towards reducing emissions increases. Natural gas will continue to play an integral role in meeting this need as we progress towards net zero. As net zero objectives are pursued, energy storage is increasingly used along with abated natural gas generation and low-carbon fuels to maintain reliability. Additionally, Capital Power is exploring the development and deployment of grid-scale SMRs to provide clean and reliable nuclear energy. These assumptions are an important source of growth in our strategy, the pace will vary by scenario.

As global electricity demand grows, a mix of low carbon energy sources will be needed to power the global economy. Capital Power's renewable energy development will be resilient in all future scenarios, and our thermal generation will undergo an accelerated transformation in scenarios with greater emission reduction efforts. A transition in thermal generation from unabated generation towards combustion of low carbon fuels and operations paired with decarbonization technologies will be essential to long-term resiliency. The pace at which this transition occurs will vary by scenario.

Risk and opportunities tables

Transitional risks and opportunities

Transitional risks and opportunities to our business include risks associated with regulatory and government policy change, technology developments, changing market demands and reputational risks.

The tables below identify short- and long-term transitional risks that may materialize in scenarios where increasing measures are taken to mitigate the impacts of climate change. Similarly, transitional opportunities that may arise in these scenarios are evaluated over the short- and long-term.

Markets, policy and regulatory

Key assumptions

- Carbon pricing remains a central mechanism of climate policy in Canada and the U.S.
- Stimulus spending by governments is increasingly focused on energy and low-carbon infrastructure.
- Demand growth accelerates globally due to electrification.
- Carbon markets continue to expand across North America.

Risks

Short-term

- Changes in governments create policy uncertainty.
- Carbon pricing exposure.

Long-term

- Accelerated decarbonization of the power sector in Canada and the U.S.
- Adoption and escalation in carbon prices and more stringent benchmarks continue in response to pressure to reduce emissions through market mechanisms.

Mitigation

- Unmitigated thermal assets are increasingly expensive to operate. We pursue CCS, DAC, SMR and hydrogen blending to minimize exposure to carbon pricing.
- Actively manage compliance costs through participation in carbon markets, investments in operational efficiencies that reduce emissions.
- Carbon costs are passed through to counterparties on select power purchase agreements, minimizing exposure to carbon price.
- Costs and risks associated with emissions abatement from thermal assets are considered in commercial decision-making and due diligence.
- Active participation in industry groups to monitor and engage with government officials on emerging policy development relating to climate change and carbon pricing.
- Analysis relating to carbon prices and regulation is embedded in commercial decisions and due diligence.

Opportunities

Short-term

- Rising carbon prices may lead to increases in the wholesale price of power..
- Expansion of carbon markets continues across North America.

Long-term

- Demand growth accelerates as industries are increasingly using electrification as a means to reduce emissions.
- Emission-intensive assets with limited opportunities for abatement retire as rising carbon costs limit the economic viability of the assets.

Response

- Expertise in carbon markets leads to reduced compliance costs through hedging and origination, providing affordable energy for customers.
- Increase trading activity in environmental markets.
- Rising demand for power and the retirement of emission-intensive assets results in an increase in investment opportunities for Capital Power.

Risk and opportunities tables

Renewable energy development

Key assumptions

- Investment in renewables is pursued to decarbonize electricity grids.
- The cost of renewable technologies continues to decline; capacity values of renewables increase with technological improvements, expanded regional diversity and co-location with storage assets.
- Penetration of renewables continues to increase as demand grows and retirement of existing assets continues.
- Intermittency remains a concern for grid reliability; natural gas and storage are essential to integration in the long-term.
- New transmission development is required to expand the capacity of renewable generation.

Risks

Short-term

- Increasing penetration of intermittent renewable energy affects the profile of supply fundamentals.

Long-term

- Long-term declines in the cost of renewables, as well as reduced intermittency through the addition of storage, increases the relative competitiveness of these assets and result in increased development. Capital Power's existing fleet of thermal assets may be affected by this increased penetration.

Mitigation

- Capital Power operates a diverse fleet of assets that includes baseload and peaking units well-suited to varying market conditions.
- Capital Power invests strategically in assets that are expected to remain competitive with increasing levels of renewable penetration.

Opportunities

Short-term

- There are expanded opportunities in renewables across North America as cost declines and policy supports new development.
- Intermittent renewable generation increases the volatility of power prices and creates a need for flexible capacity to support integration.

Long-term

- Long-term declines in the costs of renewables increase the relative competitiveness of these assets and result in increased development.

Response

- Assesses development opportunities in renewables, including wind, solar and storage.
- Operate flexible natural gas assets that provide critical reliability services to the grid.
- Well-positioned to pursue development opportunities for new renewable assets.

Risk and opportunities tables

Natural gas competitiveness and decarbonization

Key assumptions

- Natural gas remains part of the supply mix long-term.
- Regulation of carbon emissions is gradually increased to limit emissions from thermal assets.
- Decarbonization of the fuel mix is expanded through policy and funding that supports innovation and deployment.
- Operating profiles of thermal assets change as they increasingly are used to meet the net demand from intermittent renewables; flexible assets in strategic locations remain competitive.

Risks

Short-term

- Policy and regulation directed at reducing carbon emissions from thermal assets may reduce margins on certain assets.
- Competitiveness of renewables and other low-emission sources of electricity may reduce market share for natural gas generation.

Long-term

- Policy that limits the use of natural gas as a fuel source for electricity generation poses a risk to long-term viability of new and existing thermal assets. Regulation of this nature would affect Capital Power's strategy, financial position and capital allocation decisions.

Mitigation

- Investment in critical natural gas assets that provide grid reliability and support renewable integration. These assets are expected to remain competitive under increasingly stringent carbon regulations and are at reduced risk due to their shorter operating life relative to new gas assets.
- Economic assessment of development of new gas assets assumes shorter asset lives to account for long-term uncertainty.
- Active engagement with policymakers and industry associations to ensure there is a long-term role for low emitting natural gas generation in the supply mix to support renewable integration and maintain reliability.
- Decarbonization of fuel through hydrogen production and blending. Investment in decarbonization technologies, such as CCS and SMRs.
- Advocacy to ensure policy support and widescale adoption of technologies that support decarbonization.

Opportunities

Short-term

- Policy and regulation directed at carbon emissions from thermal assets affect supply fundamentals and, in certain jurisdictions, may increase the wholesale price of power.
- Increasing penetration of intermittent sources of energy increases the need for flexible assets.

Long-term

- Uncertainty over long-term opportunities in natural gas assets limits competition for acquisitions.

Response

- Investment in operational efficiencies and enhancements that improve emissions performance allow assets to realize increased margins through reduced compliance costs and improved competitiveness.
- Capital Power allocates capital to critical natural gas assets situated at strategic locations. These assets have potential to realize increased margins as flexibility services are in higher demand.
- Capital Power pursues acquisitions of critical natural gas assets to support reliability and integration of renewables.
- Deployment of technologies that achieve decarbonization, including hydrogen blending, DAC, SMR and post-combustion CCS technologies.
- In jurisdictions where competitiveness of natural gas is significantly reduced, shift capital allocation to alternative assets including renewables. Capital Power would rebalance the portfolio of assets accordingly as fundamentals evolve.

Risk and opportunities tables

Disruptive technology and energy transition

Key assumptions

- Climate change will drive significant innovation and transformation of the power sector.
- Awareness and concern among end-use consumers of their contribution to climate change will drive behavioural changes in energy consumption.
- Decarbonization, decentralization and digitalization will drive transformation of energy production and consumption.
- Use of technologies for emissions abatement is increasingly deployed across the power sector; CCS is commercially viable in the long-term with increasing carbon prices.

Risks

Short-term

- Decentralized sources of non-emitting energy, including demand response, reduce overall demand that could impact wholesale prices.
- New sources of competition for dispatchable natural gas emerge from non-emitting resources and demand response; this may reduce competitiveness of natural gas generation.

Long-term

- Development and improved competitiveness of non-emitting technologies that fall outside of Capital Power's current core competencies may affect strategy and capital allocation.
- Competition among emission abatement technologies may reduce viability of hydrogen, DAC and CCS as mechanisms to extend the useful life of strategic natural gas assets.

Mitigation

- Actively monitor policy and market fundamentals that may drive investment in disruptive technologies that could affect asset competitiveness and financials.
- Due diligence assessments identify site-specific impacts that may arise from trends in decentralization and decarbonization.
- Monitor emerging technologies and evaluate their potential economic impact.
- Actively monitor emission abatement technologies and assesses opportunities to expand our portfolio of technologies that may have direct application in reducing emissions in natural gas generating assets.

Opportunities

Short-term

- Commercial-scale deployment of emissions abatement technology is supported through policy and regulation and public funding is available to encourage adoption.
- Policy support for early-stage development of emission abatement technology encourages the pursuit of new innovations.

Long-term

- Technological advancement and digitalization allow greater control of energy generation and consumption by demand-side market participants.
- Emission abatement technologies that support long-term viability of natural gas proliferate and expand development opportunities.

Response

- Actively pursue technologies that are assessed to be commercially deployable at scale in the power sector to reduce emissions from natural gas generation, including CCS, hydrogen and direct air capture applications.
- Seek funding for projects to reduce emissions in line with the Company's strategy.
- Establish partnerships to advance innovations and early-stage emissions abatement technologies.
- Consider pursuing partnerships with companies that are pursuing technologies that have a high likelihood of commercial deployment in electricity generation for emissions abatement.

Risk and opportunities tables

Reputational

Key assumptions

- Climate change creates material reputational risks. We actively manage our exposure and transparently report on the risks and mitigation.

Risks

Short-term

- Investors are increasingly averse to investments that exhibit higher risks from exposure to climate change. Cost of capital could increase due to changing investor sentiment.
- Stakeholders are increasingly focused on exposure to the impacts of climate change, and risks related to our portfolio, which includes carbon-intensive assets.
- Attracting and retaining employees becomes challenging as preferences for employment favour companies with reduced exposure to climate change and fewer or no carbon-intensive assets.
- Counter parties and off-takers favour generators with lower exposure to climate change.

Long-term

- Increasing frequency and severity of climate change-related events may affect company assets and create reputational and investor risk.

Mitigation

- Pursuing opportunities to tie our environmental performance to our financing activities to demonstrate our commitment and leadership in achieving our corporate objectives.
- Coal-fired generation will be phased out.
- ESG criteria is integrated into our investment decisions to ensure appropriate consideration of climate change-related risks.
- Commitment to transparent reporting and disclosure to help address concerns and risks among investors and stakeholders.
- Dedicated subject matter expertise is retained in areas related to disaster management, risk management, regulatory compliance and community engagement to proactively manage the impacts of climate change-related events on physical assets, financial position and reputation.
- Consideration of changes to capital allocation where long-term reputational risks arising from climate change cannot be mitigated with decarbonization strategies. Our portfolio of assets would be rebalanced accordingly as fundamentals evolve.

Opportunities

Short-term

- Climate change-related impacts that affect operations may also affect Capital Power's reputation as a reliable power generator in the communities where we operate.
- The pursuit of credible decarbonization strategies demonstrates leadership that builds trust with investors and stakeholders.

Long-term

- Companies that actively manage their exposure to climate change-related risks are expected to outperform those that do not adequately address the risks.
- Achieving ambitious reductions in emissions through aggressive pursuit of decarbonization strategies helps to ensure long-term sustainability.

Response

- Leadership is responsible for the construction, operation and maintenance of power-generating facilities that ensures resiliency from increasing climate change-related risks that could negatively affect the Company's reputation.
- Transparent communication and reporting of progress toward the deployment of decarbonization strategies.

Risk and opportunities tables

Physical risks and opportunities

The following tables assess physical risks and opportunities that may be realized in scenarios where the impact of climate change is increasingly observed in the power sector.

Acute

Key assumptions

- Climate change will cause an increase in extreme weather, affecting Capital Power's current and future assets, and extreme weather events will become increasingly frequent and severe.

Risks

Short-term

- Extreme weather events caused by climate change could have an impact on our operations and critical infrastructure and trigger increased insurance costs and potential liabilities.

Long-term

- A persistent and material increase over time in the frequency and severity of extreme weather events caused by climate change may affect insurance costs and the ability to secure coverage on specific high-risk assets.

Mitigation

- Increases in extreme weather are included in our risk assessment process.
- Monitor the insurance market for material changes to policies that may affect our ability to seek coverage for high-risk assets.
- Emergency Preparedness and Response plans are in place for our facilities, with responses tested through simulated disasters in tabletop exercises. Continuous improvement processes ensure learnings are incorporated in future responses.
- Sustaining capital is directed to enhancements that mitigate risk.
- Capital Power assesses climate change-related physical risk in the due-diligence process for new acquisitions.

Opportunities

Short-term

- Increasing the frequency and severity of acute climate impacts may affect delivery of energy through wire infrastructure from assets situated on remote parts of the transmission system, and that are at risk due to single points of failure, increasing the value of our strategically located assets.

Long-term

- Increasing the frequency and severity of acute climate impacts may affect delivery of energy through wire infrastructure from assets situated on remote parts of the transmission system, and that are at risk due to single points of failure, increasing the value of our strategically located assets.

Response

- Capital Power invests in strategically located assets that minimize the risks related to energy delivery that may arise from acute climate change-related events. The value of these assets may increase as they are increasingly used to maintain grid reliability.

Risk and opportunities tables

Chronic

Key assumptions

- Water resources are increasingly affected by climate change (impacts vary by jurisdiction).
- Water conservation and use are increasingly scrutinized and subject to more stringent regulation.
- Long-term changes in weather patterns will affect the design and operation of new and existing renewable assets.

Risks

Short-term

- Requirements are strengthened to mitigate the chronic impacts of climate change on water resources.

Long-term

- Physical risks associated with climate change, such as changing wind patterns and extreme weather, may reduce the capacity factor of renewable assets.
- Water use and conservation requirements may limit physical access to water resources.
- Additional investments may be required to manage cooling requirements and operations may be limited due to restrictions on water use.

Mitigation

- Approved and is executing a Water Management Strategy that will mitigate risks associated with increasing scarcity of water resources.
- Actions to move off coal will reduce overall water consumption.
- Monitor developments in policy and regulatory frameworks that address management of water resources.
- Risks relating to the regulation and management of water are identified and mitigated in due-diligence processes.
- Actively seek opportunities to optimize production from our wind assets.
- Monitors water use and implements strategies consistent with our Water Management Strategy to reduce consumption at our facilities, which may result in new capital investments and operational costs. Where long-term risk cannot be mitigated, capital allocation may be directed away from high-risk assets and jurisdictions.

Opportunities

Short-term

- Potential changes in wind patterns and wind regimes may impact operations at our wind facilities and may enable us to generate wind power more efficiently and deliver more renewable energy.
- Costs associated with increasing water management requirements may affect supply fundamentals.

Long-term

- Technological advancements in renewables will allow for improved operations in response to persistent changes in climate and weather conditions.
- Where long-term changes in climate reduce potential energy output from certain types of assets, there may be increasing value attributed to dispatchable assets with secure fuel sources.

Response

- Incorporates climate change-related risk mitigation in the engineering, design and operation of our assets.
- Our Data Operations Centre (DOC) optimizes the energy output and financial performance of our wind assets by increasing our remote monitoring and analytics capabilities.
- Proactively manage water resources in line with our Water Management Strategy to ensure we remain competitive in jurisdictions where increasing costs may limit dispatch and competitiveness.
- Monitor and invest in operational efficiencies and enhancements that capture additional revenues or mitigate risks that arise from long-term climate-related changes in weather patterns.
- Investments in strategically located natural gas assets that are critical to renewable integration and grid support are pursued.
- Pursue strategies to ensure assets remain competitive with decarbonization through deployment of CCS technologies, SMR, hydrogen blending and direct air capture.

Risk and opportunities tables

Upstream	
Key assumptions	<ul style="list-style-type: none"> Climate change will affect Capital Power's upstream operations and financial results through changing availability and security of fuel sources. Disruptions to supply chains will become more frequent due to climate change-related events.
Risks	<p>Short-term</p> <ul style="list-style-type: none"> Increased compliance costs attributed to natural gas use could negatively affect competitiveness of assets and decrease revenues. Increasing stringency of methane regulation could increase costs of production for natural gas and reduce access to reliable fuel sources. Disruption of supply chains due to climate change-related impacts may result in development, operational or financial impacts. <p>Long-term</p> <ul style="list-style-type: none"> Long-term changes that affect production of natural gas may reduce security of supply and increase cost of fuel. Development of new pipeline infrastructure may be limited due to regulatory delays and reduced social acceptance. Changes to wind regimes and solar resources may reduce the revenues and competitiveness of existing resources. <p>Mitigation</p> <ul style="list-style-type: none"> Monitor regulatory developments relating to fugitive methane emissions to assess risks to fuel supply and costs. Approval and implementation of a Sustainable Sourcing Strategy that will support the resiliency and sustainability of our operations. Disruptions to supply chains are managed through contractual provisions for liquidated damages. Alternative supply routes and delivery points are considered to mitigate delivery risk and local sourcing is used where possible. Direction of capital to optimal locations for renewable development.
Opportunities	<p>Short-term</p> <ul style="list-style-type: none"> Pursuing digitalization and artificial intelligence technologies will allow companies to capitalize on upstream physical and commercial opportunities associated with climate change and improve adaptation or reduce vulnerability to climate change events. Development and expansion of markets for products derived from carbon emissions may improve the economics and deployment of CCS and direct air capture technologies. Securing and optimizing supply chains may mitigate upstream climate risk and improve competitiveness of Capital Power's assets. <p>Long-term</p> <ul style="list-style-type: none"> Low-carbon fuels are increasingly adopted as an alternative fuel source for new and existing thermal assets. Sequestration associated with post-combustion capture or direct air capture mitigates the risks of long-term use of natural gas. <p>Response</p> <ul style="list-style-type: none"> Optimize the engineering, design and operation of our assets through the deployment of artificial intelligences strategies at our sites. Commitment to operational excellence and asset optimization through innovation efforts. Exploring advanced pattern recognition to use data and artificial intelligence to detect patterns that can lead to more advanced maintenance strategies. Local sourcing is used, where possible, positively affecting the communities in which we operate through increased economic opportunities. Benefits are realized through reduced travel times for supplies and lower environmental impacts of transportation and delivery. Capital Power is developing strategies to assess and integrate low-carbon fuels, such as hydrogen, as a fuel source at existing facilities through production and blending. Capital Power continues to advance CCS strategies where low-carbon fuels may not achieve decarbonization of the fuel source.

Risk and opportunities tables

Downstream

Key assumptions

- Downstream risks from climate change will affect the delivery of energy with operational and financial impacts to the power industry.
- Corporate entities will increasingly look to procure power from low-emitting sources; the market for corporate power purchase agreements will expand.
- Electrification of end-use sectors will support long-term decarbonization.

Risks

Short-term

- Outages on downstream electricity grids from climate change-related events may cause disruptions to operations, resulting in negative financial impacts to Capital Power.

Long-term

- Markets and operating environments may become more difficult to forecast due to changing climate-driven regulations and policies, which could, in turn, increase volatility of Capital Power's operations and financial results.

Mitigation

- Actively manage delivery risks and ensures contingency plans are in place to manage shut-down and short-term cessation of operations as a result of outages on the grid that affect energy delivery.
- Strategically located assets are well-suited to supply critical services for restoration events.
- Dedicated subject matter expertise, including energy traders, origination specialists, market forecasters, and regulatory and commercial managers who, assist in stewarding key issues related to downstream physical risks.

Opportunities

Short-term

- Increasing investment by corporate entities to secure contracted sources of renewable power to meet their own demand requirements increases the opportunities for development of renewable assets.

Long-term

- Decarbonization through increased electrification will support long-term emission reduction objectives, including net zero commitments.

Response

- Pursue contracting opportunities with corporate off-takers to secure the output of new and existing assets.
- Development opportunities will grow as electrification of end-use sectors grows. Capital Power is well-positioned to pursue new development opportunities to meet this growing demand.

GRI 2: General disclosures 2023

Disclosure number	Disclosure title	2023 response
The organization and its reporting practices		
2-1	Organizational details	Capital Power Corporation 2023 Annual Information Form > Corporate Structure 2023 Integrated Annual Report > About us
2-2	Entities included in the organization's sustainability reporting	For all GRI Standards and material topics included, we report only on assets that we operate (unless otherwise stated) and provide year-over-year trending, where possible. Data from each plant represents the entire plant, not only our financial share of the operation, including York Energy and Midland Cogeneration (50/50 joint venture). Energy production and emissions data from Joffre and Shepard Energy Centre, units we hold an ownership interest in, are not included because we do not hold the operating permits. For the Genesee Mine, we report emissions and environmental data, as we hold the environmental operating approval for the facility. We do not report any other information for this facility because it is independently operated by a separate entity, which Capital Power has no authority over. Frederickson 1 was acquired on December 28, 2023 (see Significant events) and is excluded from environmental, health and safety, employee and innovation spend data. Capital Power follows GHG Protocol guidance to report emissions and other environmental data for the entire report, however Frederickson 1 data availability was limited at the time of report development, and is therefore excluded. Frederickson 1 emissions data will be included in the 2024 reporting period. 2023 Integrated Annual Report, Business report > Notes to the consolidated financial statements
2-3	Reporting period, frequency and contact point	Our report is published annually, covering the reporting period January 1, 2023 – December 31, 2023 The report was published on February 28, 2024 Organization details: Capital Power 1200 – 10423 101 St. N.W. Edmonton, AB T5H 0E9 info@capitalpower.com www.capitalpower.com
2-4	Restatements of information	We follow GHG Protocol guidance to restate historic emissions in the event of structural changes to the organization (acquisitions, divestments, mergers), changes in calculation methodology and/or discovery of errors in previously reported data that would otherwise compromise the consistency and relevance of the reported GHG emissions information. We restate emissions if the effect of expected changes exceeds our quantitative threshold of +/- 10 per cent of base year or other historical emissions. 2020 and 2021 Scope 1 emissions and emissions intensity have been restated to reflect the acquisition of Midland Cogeneration, resulting in an increase in reported emissions when compared to reporting from previous years. 2020 absolute Scope 1 emissions have been restated from 11,527,603 to 16,053,699 tCO ₂ e and 2021 emissions restated from 10,430,443 to 13,742,607 tCO ₂ e. For emissions intensity, 2020 has been restated from 0.58 to 0.55 tCO ₂ e/MWh and from 0.53 to 0.52 tCO ₂ e/MWh for 2021. These adjustments are reflected in Scope 1 absolute emissions and intensity only, other metrics have not been adjusted. Timing of the 2020 and 2021 restatements were dependent on gaining access to historical Midland Cogeneration emissions data, and therefore emissions were restated in 2023 rather than 2022 annual reporting. Scope 3 emissions reported in the 2022 IAR have also been restated as a result of refinement to our Scope 3 methodology. Improvements to our methodology included applying industry-specific supply chain emissions factors used to quantify emissions under Category 1: Purchased Goods and Services and updating natural gas emissions factors for Category 3: Fuel- and Energy-Related Activities. Scope 3 emissions for 2022 were previously reported as 3,133,661 tCO ₂ e and have been restated to 2,034,932 tCO ₂ e.

GRI 2: General disclosures 2023

Disclosure number	Disclosure title	2023 response
2-5	External assurance	<p>2023 Integrated Annual Report > Assurance</p> <p>Definitions of subject matter and applicable criteria related to assured sustainability performance indicators:</p> <p>Scope 1 Greenhouse gas intensity (tCO₂e / MWh): Total scope 1 absolute emissions, as defined by the GHG Protocol, divided by net generation (MWh) for all facilities included within our emissions reporting boundary.</p> <p>Total Scope 1 GHG emissions (tCO₂e): Scope 1 emissions, as defined by the GHG Protocol, for all facilities included within our emissions reporting boundary.</p> <p>Innovation spend (millions \$): Annual capital and operating expenditures that: (1) Increase data digitalization, availability, and connectivity to enable information-based decisions, (2) Advance innovative solutions that contribute to Capital Power's carbon reduction target such as carbon capture utilization or sequestration, hydrogen and direct air capture technologies or projects, (3) Advance storage technologies or projects where the application of the technology is innovative or unique; and, (4) Advance innovative solutions that minimize our impact to air, water, waste, and land.</p> <p>Total recordable incident frequency (TRIF): Total recordable injury frequency (work-related injury / 200,000 hours worked). TRIF includes both contractors and employees, but excludes construction projects.</p> <p>Women by employee category (%)</p> <ul style="list-style-type: none"> • Women: Employees that self-identified as a woman at the time of employee onboarding. • Executive: Members of the Executive Team. • Upper management: Employees in non-executive leadership roles, such as Vice Presidents, Directors, and Senior Managers, are considered as upper management. • Professional: Non-upper management employees, excluding those in administration, operations and commodity trading roles. • Administration: Employees in administration roles, excluding upper management. • Operations: Employees in operations and front line roles, excluding upper management. • Traders: Employees in commodity trading roles, excluding upper management. <p>Women new hires (%)</p> <ul style="list-style-type: none"> • Permanent employees hired from January 1, 2023, through to December 31, 2023, that self-identified as a woman at the time of employee onboarding.
Activities and workers		
2-6	Activities, value chain and other business relationships	<p>2023 Integrated Annual Report > About us</p> <p>2023 Integrated Annual Report > Our business model</p> <p>2023 Integrated Annual Report > Managing risks and impacts</p> <p>2023 Annual Information Form > Business of Capital Power</p> <p>2023 Integrated Annual Report > Business report, Significant events</p>

GRI 2: General disclosures 2023

Disclosure number	Disclosure title	2023 response																																																																																		
Activities and workers																																																																																				
2-7	Employees	<table border="1"> <thead> <tr> <th colspan="4">Total employees</th> <th colspan="3">Employees by contract type and gender</th> <th colspan="3">Employees by contract type and region</th> </tr> <tr> <th></th> <th>Women</th> <th>Men</th> <th>Total</th> <th></th> <th>Women</th> <th>Men</th> <th>Total</th> <th></th> <th>Canada</th> <th>United States</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Canada</td> <td>209</td> <td>498</td> <td>707</td> <td>Permanent</td> <td>207</td> <td>536</td> <td>743</td> <td>Permanent</td> <td>662</td> <td>81</td> <td>743</td> </tr> <tr> <td>United States</td> <td>18</td> <td>141</td> <td>159</td> <td>Temporary</td> <td>12</td> <td>22</td> <td>34</td> <td>Temporary</td> <td>34</td> <td>0</td> <td>34</td> </tr> <tr> <td>Total</td> <td>227</td> <td>639</td> <td>866</td> <td>Non-guaranteed hours</td> <td>8</td> <td>81</td> <td>89</td> <td>Non-guaranteed hours</td> <td>11</td> <td>78</td> <td>89</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>Full-time</td> <td>214</td> <td>626</td> <td>840</td> <td>Full-time</td> <td>685</td> <td>155</td> <td>840</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>Part-time</td> <td>13</td> <td>13</td> <td>26</td> <td>Part-time</td> <td>22</td> <td>4</td> <td>26</td> </tr> </tbody> </table> <p>Data was gathered as of December 31, 2023, using our Workday System. It includes all permanent employees, temporary and temporary extended employees, casual employees and employees on maternity/parental leave. It excludes pensioners, Board members, students, and employees on long-term (LTD), as of December 31, 2023. Casual employees are included in the part-time non-guaranteed hours and full-time non-guaranteed hours categories. It excludes any Frederickson employees.</p> <p>Data was collected for employees only, by gender as specified by employees themselves, as either woman or man at the time of employee onboarding, full time/part time, and casual/permanent/ temporary. It excludes contingent workers.</p> <p>There were no significant fluctuations of headcount.</p>	Total employees				Employees by contract type and gender			Employees by contract type and region				Women	Men	Total		Women	Men	Total		Canada	United States	Total	Canada	209	498	707	Permanent	207	536	743	Permanent	662	81	743	United States	18	141	159	Temporary	12	22	34	Temporary	34	0	34	Total	227	639	866	Non-guaranteed hours	8	81	89	Non-guaranteed hours	11	78	89					Full-time	214	626	840	Full-time	685	155	840					Part-time	13	13	26	Part-time	22	4	26
Total employees				Employees by contract type and gender			Employees by contract type and region																																																																													
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2-8	Workers who are not employees	<p>170</p> <p>Data was gathered as of December 31, 2023, using our Workday System. It includes all contingent workers (excluded from employee headcounts). It excludes any Frederickson employees.</p> <p>The most common type of worker who is not an employee are temporary full-time contractors hired through staffing agencies for the purposes of projects and shutdowns. Fluctuations therefore occur based on the timing of projects and shutdowns.</p>																																																																																		
Governance																																																																																				
2-9	Governance structure and composition	<p>2023 Integrated Annual Report > Corporate governance</p> <p>2024 Management Proxy Circular > Board committees</p> <p>Website > Corporate Governance</p> <p>As above</p> <p>As above</p>																																																																																		
2-10	Nomination and selection of the highest governance body	<p>2024 Management Proxy Circular > About our nominated Directors</p> <p>2024 Management Proxy Circular > Recruitment, assessment and tenure</p> <p>2024 Management Proxy Circular > Diversity</p> <p>2024 Management Proxy Circular > Shareholder proposals</p>																																																																																		
2-11	Chair of the highest governing body	<p>Our Board Chair, Jill Gardiner, is not an Executive officer.</p>																																																																																		
2-12	Role of the highest governance body in overseeing the management of impacts	<p>2024 Management Proxy Circular > Sustainability and climate oversight</p> <p>2023 Integrated Annual Report > TCFD alignment table</p>																																																																																		

GRI 2: General disclosures 2023

Disclosure number	Disclosure title	2023 response
Governance		
2-13	Delegation of responsibility for managing impacts	2024 Management Proxy Circular > Roles and responsibilities 2024 Management Proxy Circular > PCG Committee 2024 Management Proxy Circular > HSE Committee 2024 Management Proxy Circular > Sustainability and climate oversight
2-14	Role of the highest governance body in sustainability reporting	The Audit Committee is responsible for reviewing public disclosure documents, including sustainability reporting in the IAR, and recommends them to the Board for approval. 2024 Management Proxy Circular > Audit Committee
2-15	Conflicts of interest	2024 Management Proxy Circular > Material interests > Conflicts of interest and related-party transactions 2023 Annual Information Form > Directors and officers > Conflicts of interest
2-16	Communication of critical concerns	Capital Power maintains frequent dialogue with the Board. With respect to critical concerns, the Board meets at least quarterly through regularly scheduled meetings to discuss issues, and/or as appropriate, based on the nature of the issue. The Audit Committee receives quarterly reports and the HSE Committee meets three times per year, and at each meeting they receive HSE Quarterly Status and Environmental Regulatory Update reports, as well as verbal operations reports. We do not disclose what is discussed in Board meetings due to confidentiality constraints. Critical concerns are taken to the Board and discussed. Actions are taken or policies are updated, as needed.
2-17	Collective knowledge of the highest governance body	2023 Integrated Annual Report > Corporate governance 2024 Management Proxy Circular > Director education
2-18	Evaluation of the performance of the highest governance body	2024 Management Proxy Circular > Board assessment 2024 Management Proxy > Assessing performance
2-19	Remuneration policies	2024 Management Proxy Circular > Compensation Discussion and Analysis
2-20	Process to determine remuneration	2024 Management Proxy Circular > Compensation Discussion and Analysis Shareholders vote, on an advisory basis, on our approach to executive compensation, which is included in the 2024 Management Proxy Circular. The vote at the 2023 AGM was 97.20% for and 2.80% against.
2-21	Annual total compensation	Annual total compensation ratio: 28.6:1 Increase in annual total compensation ratio: 9.1:1 Notes: Includes all employees reported under disclosure 2-7. Compensation for all applicable employees is valued as a full-time equivalent. Compensation types include salary, target STIP (if applicable), and target LTIP (if applicable). The title of the highest-paid individual is Chief Executive Officer. CEO annual total compensation is excluded from the median annual total compensation used to calculate the ratio. The increase in annual total compensation ratio is in part due to a change in the incumbent of the CEO position.

GRI 2: General disclosures 2023

Disclosure number	Disclosure title	2023 response																				
Strategy, policies and practices																						
2-22	Statement on sustainable development	2023 Integrated Annual Report > Board Chair Letter 2023 Integrated Annual Report > CEO Letter																				
2-23	Policy commitments	<p>When any Canadian statutory decision maker, court or tribunal applies the Precautionary Principle in making its determination, we consider this principle in the conduct of our activities in like circumstances. The Precautionary Principle says that when an activity raises threats to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.</p> <p>At Capital Power, we act with integrity and take responsibility for our decisions and actions. The foundations of this culture are our Ethics and Respectful Workplace Policies.</p> <p>Our Indigenous Relations Policy outlines our commitment to work with Indigenous communities in a manner that is respectful and honours the diversity and rights of each community and culture.</p> <p>Our Sustainable Sourcing Policy outlines our firm stance against the use of forced or compulsory labor and any form of slavery and human trafficking, as well as child labor, in our upstream supply chains or any part of our operations.</p> <table border="1"> <thead> <tr> <th>Policy</th> <th>Approved</th> <th>Approval date</th> <th>Review period</th> </tr> </thead> <tbody> <tr> <td>Ethics</td> <td>Board</td> <td>2009</td> <td>Annually, or more frequently when circumstances dictate</td> </tr> <tr> <td>Respectful workplace</td> <td>Board</td> <td>2018</td> <td>Annually, or more frequently if an incident occurs or changes in law dictate</td> </tr> <tr> <td>Indigenous relations</td> <td>Executive team</td> <td>2022</td> <td>Biennially</td> </tr> <tr> <td>Sustainable sourcing</td> <td>Board</td> <td>2022</td> <td>Annually</td> </tr> </tbody> </table> <p>Policy commitments are available on our public website and are incorporated into contractual agreements with external parties. Any changes made to these policies are communicated to all employees and agents through internal newsletters and meetings.</p>	Policy	Approved	Approval date	Review period	Ethics	Board	2009	Annually, or more frequently when circumstances dictate	Respectful workplace	Board	2018	Annually, or more frequently if an incident occurs or changes in law dictate	Indigenous relations	Executive team	2022	Biennially	Sustainable sourcing	Board	2022	Annually
Policy	Approved	Approval date	Review period																			
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Indigenous relations	Executive team	2022	Biennially																			
Sustainable sourcing	Board	2022	Annually																			
2-24	Embedding policy commitments	<p>Our policy commitments apply to our Board of Directors and all Capital Power employees, as well as consultants and contractors. Compliance with these policies is a material condition of ongoing employment and relationship with Capital Power. All Capital Power managers are responsible for incorporating the implementation of these policies into their operations and procedures.</p> <p>Capital Power manages supplier policy compliance assessment in advance of procurement during the execution of the work and upon completion. Capital Power's approach uses policy, third-party administered screening questionnaires, criteria relevant to the specific work set out in procurement documents, and standardized terms and conditions setting out Capital Power expectations.</p>																				
2-25	Processes to remediate negative impacts	Website > Ethics policy																				
2-26	Mechanisms for seeking advice and raising concerns	Website > Ethics																				

GRI 2: General disclosures 2023

Disclosure number	Disclosure title	2023 response
Strategy, policies and practices		
2-27	Compliance with laws and regulations	<p>There were no significant instances of non-compliance with laws and/or regulations in 2023.</p> <p>No significant fines or non-monetary sanctions for non-compliance with laws and/or regulations were levied in 2023.</p> <p>Capital Power reviews several data points to assess the materiality of a non-compliant event, including impact to business operations, reputational implications, prior events of a similar nature, any referrals to enforcement agencies, and/or penalties/fines assessed and associated dollar amount.</p> <p>Note: This excludes Frederickson, which will be included in the 2024 reporting period.</p>
2-28	Membership associations	<p>Capital Power maintains organizational-level memberships in the following associations:</p> <ul style="list-style-type: none"> • Powering Past Coal Alliance • International Emissions Trading Association • Business Council for Sustainable Energy • Business Renewables Center • American Clean Power Association • Western Power Trading Forum • Mid-Atlantic Renewable Energy Coalition • Clean Grid Alliance • Ontario Chamber of Commerce Energy Council • Clean Energy BC • Solar Energy Industries Association • Canadian Renewable Energy Association • American Council on Renewable Energy • Alberta Chamber of Resources • Catalyst • Boston College Center for Corporate Citizenship • Construction Owners Association of Alberta • Independent Power Producers Society of Alberta • Association of Power Producers of Ontario • Canadian Electricity Association • Canadian American Business Council • Edmonton Chamber of Commerce • The Conference Board of Canada • Advanced Power Alliance • Business Ethics Leadership Alliance • Edmonton Integrity Network • Canadian Council for Aboriginal Business

GRI 2: General disclosures 2023

Disclosure number	Disclosure title	2023 response
Stakeholder engagement		
2-29	Approach to stakeholder engagement	2023 Integrated Annual Report > Community and stakeholder engagement 2024 Management Proxy Circular > Shareholder engagement
2-30	Collective bargaining agreements	33% of Capital Power employees are covered by collective bargaining agreements. Capital Power uses market data, which includes both unionized and non-unionized companies, to determine working conditions and terms of employment in addition to collective agreements.

GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response
Disclosures on material topics		
3-1	Process to determine material topics	Our material topics were identified during our 2018 ESG materiality assessment. For a description of our 2018 ESG materiality assessment, please see our 2020 Integrated Annual Report, p.12.
3-2	List of material topics	Climate change and carbon footprint Innovation Sustainable sourcing Water management There are no changes to our material topics from the previous reporting year.
GRI 201: Economic performance (2016)		
3-3	Management of material topics	Discussion around economic performance can be found throughout the 2023 Integrated Annual Report > Business report
201-1	Direct economic value generated and distributed	Economic value generated and distributed: Direct economic value generated: <ul style="list-style-type: none"> • Revenues and other income: \$4,282M Economic value distributed: <ul style="list-style-type: none"> • Staff costs and employee benefits expense: \$179M Payments to providers of capital: <ul style="list-style-type: none"> • Interest paid: \$152M • Dividends paid: \$290M • Income taxes paid: \$227M Other operating costs: \$2,478M Community investments: \$3.4M 2023 Integrated Annual Report > Financial statements > Statement of changes in equity Segmented revenues split between USA and Canada are included within the 2023 Integrated Annual Report > Business report > Consolidated net income and results of operations
201-2	Financial implications and other risks and opportunities due to climate change	2023 Integrated Annual Report > Business report > Risks and risk management > Climate change 2023 Integrated Annual Report > TCFD alignment table

GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response
GRI 201: Economic performance (2016)		
201-3	Defined benefit plan obligations and other retirement plans	<p>Capital Power employees hired prior to July 1, 2009, participate in the Local Authorities Pension Plan (LAPP), a multi-employer, contributory pension plan for employees of municipalities, hospitals and other public entities in Alberta, governed by the Public Sector Pension Plans Act (Alberta). No liability accrues to participating employers like Capital Power, as the plan is governed by the LAPP Corporation who manage liabilities through contributions collected from employers and plan participants.</p> <p>Employees hired after July 1, 2009, participate in a defined contribution arrangement, a registered pension plan for Canadian employees and a 401(k) for American employees, which do not amass liabilities by design.</p> <p>Certain Canadian employees are eligible to participate in the Supplemental Retirement Plan (SRP), a non-registered plan that provides pension benefits in excess of the maximum limits prescribed by the Income Tax Act (Canada). The plan is funded through general revenues of Capital Power on a pay-as-you-go basis. The defined benefits component of the SRP has an estimated liability of \$38M as of December 31, 2023. This retirement plan is governed by the PCG Committee of the Board.</p> <p>Percentage of salary contributed by employee or employer:</p> <ul style="list-style-type: none"> • LAPP – Employer contributes 9.39% up to the yearly maximum pensionable earnings (YMPE) and 13.84% above the YMPE. Employee contributes 8.39% up to the YMPE and 12.84% over the YMPE. • Defined Contribution Pension Plan (DC) – Employee/Employer each contribute 5% (in cases of <5 years of service), 6.5% (for 5–10 years of service), 8% (>10 years of service). • 401(k) (U.S. employees only) – Employee voluntary deferral, up to 7% employer match. • Savings Plan (eligible employees only) – Employee voluntary deferral, up to 5% employer match. Level of participation in retirement plans: • LAPP/DC – 100% – Mandatory participation (Canada) • 401(k) – 100% voluntary participation rate (U.S.) • Savings Plan – 91% voluntary participation rate (Canada)
201-4	Financial assistance received from government	<p>2023 Integrated Annual Report > Business report > note 6 (Other income)</p> <p>2023 Integrated Annual Report > Business report > note 16 (Government compensation)</p>
GRI 204: Procurement practices (2016)		
3-3	Management of material topics	<p>Capital Power manages the procurement of goods and services, both locally at each of its facilities, and centrally through head office oversight. Factors that most often impact procurement decisions include overall value, cost, experience, familiarity, skill, lead time, supplier location, reputation, and environmental and social performance.</p> <p>Risks and impacts associated with our supply chain include both environmental and social factors, these risks and impacts were identified and highlighted as part of our sustainability materiality assessment. To address these risks and impacts Capital Power developed a Sustainable Sourcing Strategy, based on strategy deliverables work has been completed to elevate the importance of environmental and social factors in our supply chain decision-making process.</p> <p>2023 Integrated Annual Report > Sustainability in action</p>
204-1	Proportion of spending on local suppliers	<p>Capital Power's Sustainable Sourcing Policy defines local suppliers as those that are headquartered in, and/or wholly or partially owned and controlled by one or more individuals that have a substantial connection to, communities in which we operate. Of Capital Power's top 20 suppliers by spend, thirteen met the criteria for local suppliers, including our largest supplier by spend.</p>

GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response																		
GRI 302: Energy (2016)																				
3-3	Management of material topics	<p>The environmental program is monitored on a regular basis by the HSE Committee, including compliance with regulatory requirements and the use of internal environmental specialists and independent external environmental experts. The Company continues to invest in environmental infrastructure related to energy and to ensure that environmental requirements are met, or while implementing procedures to reduce the impact of operations on the environment.</p> <p>All plants are subject to an internal review process, which includes an environmental component. Internal audit has developed an Integrated Site Assurance Team (ISAT) program whereby all plants are subject to a multi-disciplinary assurance review on a rotating schedule, which includes a health, safety and environment component. The environmental focus of these audits is the plant's permits and regulatory compliance and/or a management system approach to assessing environmental risk management. In addition, Capital Power's Health, Safety, Security and Environment corporate group is subject to an internal audit every three years where it takes a risk-based approach to determine the scope of the audit. The results of internal audit engagements are distributed to management, who provide responses to each finding, including committed dates for actionable items. Internal audit follows up with management on actionable items until they are completed and reports the status of findings quarterly to the HSE Committee of the Board.</p> <p>External compliance verifications have been initiated on the majority of Canadian thermal facilities around greenhouse gas (GHG) compliance. These verifications look at energy input. Verifications that have covered energy use have found no discrepancies to date.</p> <p>In 2023, Capital Power obtained limited assurance on Scope 1 GHGs disclosed in this report based on absolute emissions and emissions intensity from a third-party independent verifier.</p> <p>The internal reviews performed in 2023 did not result in significant findings that required changes to our management approach.</p>																		
302-1	Energy consumption within the organization	<table border="1"> <thead> <tr> <th>2023 Coal Consumption (GJ)</th> <th>2023 Natural Gas Consumption (GJ)</th> <th>Total Non Renewable Energy Consumption</th> </tr> </thead> <tbody> <tr> <td>59,683,763</td> <td>210,508,871</td> <td>270,192,635</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Non-Renewable Energy Consumption by Country</th> <th>2023 Coal Consumption (GJ)</th> <th>2023 Natural Gas Consumption (GJ)</th> </tr> </thead> <tbody> <tr> <td>Canada</td> <td>59,683,763</td> <td>74,062,794</td> </tr> <tr> <td>U.S.</td> <td>0</td> <td>136,446,077</td> </tr> <tr> <td>Total</td> <td>59,683,763</td> <td>210,508,871</td> </tr> </tbody> </table>	2023 Coal Consumption (GJ)	2023 Natural Gas Consumption (GJ)	Total Non Renewable Energy Consumption	59,683,763	210,508,871	270,192,635	Non-Renewable Energy Consumption by Country	2023 Coal Consumption (GJ)	2023 Natural Gas Consumption (GJ)	Canada	59,683,763	74,062,794	U.S.	0	136,446,077	Total	59,683,763	210,508,871
2023 Coal Consumption (GJ)	2023 Natural Gas Consumption (GJ)	Total Non Renewable Energy Consumption																		
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U.S.	0	136,446,077																		
Total	59,683,763	210,508,871																		

GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response					
GRI 302: Energy (2016)							
302-1 (continued)	Energy consumption within the organization	Non-renewable Energy Consumption by Facility					
		Country	Prov/State	Facility	Type of Facility	2023 Coal Consumption (GJ)	2023 Natural Gas Consumption (GJ)
		Canada	Alberta	Halkirk	Wind	0	0
		Canada	Alberta	Whitla 1	Wind	0	0
		Canada	Alberta	Whitla 2	Wind	0	0
		Canada	Alberta	Strathmore	Solar	0	0
		Canada	Alberta	Clydesdale	Solar	0	0
		Canada	British Columbia	Quality Wind	Wind	0	0
		Canada	British Columbia	Island Generation	Natural gas	0	13,839
		Canada	Alberta	Genesee 1 & 2	Coal/Natural gas	49,518,336	18,119,037
		Canada	Alberta	Genesee 3	Coal/Natural gas	10,165,427	28,505,846
		Canada	Alberta	Genesee Mine	Mining	0	0
		Canada	Alberta	Clover Bar	Natural gas	0	7,223,640
		Canada	Alberta	Clover Bar LFG	Landfill gas	0	0
		Canada	Ontario	East Windsor	Natural gas	0	126,502
		Canada	Ontario	York Energy	Natural gas	0	468,450
		Canada	Ontario	Goreway	Natural gas	0	19,605,480
		Canada	Ontario	Kingsbridge	Wind	0	0
		Canada	Ontario	Port Albert	Wind	0	0
		Canada	Ontario	Port Dover & Nanticoke	Wind	0	0
		U.S.	Alabama	Decatur Energy Center	Natural gas	0	17,179,802
		U.S.	Arizona	Arlington	Natural gas	0	26,962,897
		U.S.	Michigan	Midland Cogeneration	Natural gas	0	92,303,378
		U.S.	New Mexico	Macho Springs	Wind	0	0
		U.S.	North Carolina	Beaufort Solar	Wind	0	0
		U.S.	Kansas	Bloom	Wind	0	0
		U.S.	North Dakota	New Frontier	Wind	0	0
		U.S.	Illinois	Cardinal Point	Wind	0	0
		U.S.	Texas	Buckthorn	Wind	0	0
		Total				59,683,763	210,508,871

GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response				
GRI 302: Energy (2016)						
302-1 (continued)	Energy consumption within the organization					
		2023 Biomass Consumption (GJ)	2023 Landfill Gas Consumption (GJ)	2023 TDF Consumption (GJ)	2023 Total Generation from Waste Heat (GJ)	Total Renewable Energy Consumption
		0	320,703	0	0	320,703
Renewable Energy Consumption by Country						
	Country		2023 Biomass Consumption (GJ)	2023 Landfill Gas Consumption (GJ)		2023 TDF Consumption (GJ)
	Canada		0	320,703		0
	U.S.		0	0		0
	Total		0	320,703		0

GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response						
GRI 302: Energy (2016)								
302-1 (continued)	Energy consumption within the organization	Renewable Energy Consumption by Facility						
		Country	Prov/State	Facility	Type of Facility	2023 Biomass Consumption (GJ)	2023 Landfill Gas Consumption (GJ)	2023 TDF Consumption (GJ)
		Canada	Alberta	Halkirk	Wind	0	0	0
		Canada	Alberta	Whitla 1	Wind	0	0	0
		Canada	Alberta	Whitla 2	Wind	0	0	0
		Canada	Alberta	Strathmore	Solar	0	0	0
		Canada	Alberta	Clydesdale	Solar	0	0	0
		Canada	British Columbia	Quality Wind	Wind	0	0	0
		Canada	British Columbia	Island Generation	Natural gas	0	0	0
		Canada	Alberta	Genesee 1 & 2	Coal/Natural gas	0	0	0
		Canada	Alberta	Genesee 3	Coal/Natural gas	0	0	0
		Canada	Alberta	Genesee Mine	Mining	0	0	0
		Canada	Alberta	Clover Bar	Natural gas	0	0	0
		Canada	Alberta	Clover Bar LFG	Landfill gas	0	320,703	0
		Canada	Ontario	East Windsor	Natural gas	0	0	0
		Canada	Ontario	York Energy	Natural gas	0	0	0
		Canada	Ontario	Goreway	Natural gas	0	0	0
		Canada	Ontario	Kingsbridge	Wind	0	0	0
		Canada	Ontario	Port Albert	Wind	0	0	0
		Canada	Ontario	Port Dover & Nanticoke	Wind	0	0	0
		U.S.	Alabama	Decatur Energy Center	Natural gas	0	0	0
		U.S.	Arizona	Arlington	Natural gas	0	0	0
		U.S.	Michigan	Midland Cogeneration	Natural gas	0	0	0
		U.S.	New Mexico	Macho Springs	Wind	0	0	0
		U.S.	North Carolina	Beaufort Solar	Solar	0	0	0
		U.S.	Kansas	Bloom	Wind	0	0	0
		U.S.	North Dakota	New Frontier	Wind	0	0	0
		U.S.	Illinois	Cardinal Point	Wind	0	0	0
		U.S.	Texas	Buckthorn	Wind	0	0	0
		Total				0	320,703	0

GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response
GRI 302: Energy (2016)		
302-1 (continued)	Energy consumption within the organization	
		2023 Consumption
		GJ
	Electricity	4,662,909
	Heating	NA
	Cooling	NA
	Steam	NA
	** conversion: 1 MWh = 3.6 GJ	
		2023 Sold
		GJ
	Electricity	121,741,688
	Heating	NA
	Cooling	NA
	Steam	5,356,550
	** conversion: 1 MWh = 3.6 GJ	
	Total Energy Consumption (GJ)	148,078,036
	Notes:	
	Conversion of fuel to GJ based on higher heating value of fuel.	
	Conversion of MWh to GJ based on 1 MWh = 3.6 GJ (steam enthalpy).	
	Net MWh generation (sold electricity) is net "revenue-quality" MWh, unless otherwise noted.	
	Sold electricity and steam are subtracted in the calculation of total energy consumption as per GRI guidance.	
	Electricity consumption is based on unit parasitic load (gross generation minus net generation).	
	Higher heating value based on fuel analysis or published values.	

GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response
GRI 302: Energy (2016)		
302-2	Energy consumption outside the organization	At this time we do not track or set targets for energy consumption.
302-3	Energy intensity	<p>Energy intensity 4.19</p> <p>Notes: Organization metric (denominator) is Net Generation (MWh). Fuel inputs are included in the ratio (GJ). Fuel, electricity, and steam are included in the intensity ratio as per GRI guidance. Only energy consumption within the organization is used to calculate the energy intensity.</p>
302-4	Reduction of energy consumption	Efforts to reduce energy consumption are not tracked or targeted within the business.
302-5	Reduction in energy requirements of products and services	Capital Power's energy consumption from products and services is tracked in our Scope 3 emissions, however we do not track downstream emissions. At this time we are not setting reduction targets.
GRI 303: Water and Effluents (2018)		
3-3	Management of material topics	<p>Capital Power's Regulatory and Environmental Policy (R&EP) group, in consultation with government relations, is responsible for early identification of emerging regulatory issues, as well as proposed and forthcoming regulatory changes, including water-related issues. They work proactively with internal stakeholders at Capital Power to ensure that the corporate growth strategy is executed within the constraints imposed by current and expected environmental policies in Canada and the U.S. The R&EP group:</p> <ul style="list-style-type: none"> • Provides details about Canadian and U.S. environmental policy initiatives to internal stakeholders; • Leads an internal multi-disciplinary team to develop Capital Power's positions about environmental policies, including water; • Coordinates the analysis of potential environmental regulations and policies on Capital Power's existing assets, new projects and acquisitions; • Represents and advocates Capital Power's environmental policy positions with industry committees, governments and other stakeholders; and • Coordinates regular communication of environmental policy issues and positions. The R&EP group reports regularly to the Executive Team. <p>All plants are subject to an internal review process, which includes an environmental component, focusing on either a plant's permits and regulatory compliance or a management system approach to reviewing environmental risk management. The internal reviews performed in 2023 did not result in significant findings that required changes to management approach.</p>
303-1	Interactions with water as a shared resource	Standards for the quality and quantity of effluent discharges are determined by applicable regional regulatory agencies. In all cases, our approvals include regulatory requirements, which involve studies, limits, monitoring and reporting. We comply with all conditions in our operating water approvals and participate in watershed alliances and multi-stakeholder watershed management planning initiatives. Capital Power sits on the Alberta Water Council (AWC) Board (a multi-stakeholder partnership to engage industry, NGOs and governments to achieve the outcomes of the Water for Life strategy) as industry vice president, and is a member of the Canadian Electricity Association (CEA), which advocates for the electricity industry positions to the federal government, including protection of fisheries.
303-2	Management of water discharge-related impacts	The minimum standards for the quality of effluent discharges are determined by applicable regional regulatory agencies in the form of operating water approvals, permits and licenses that take into consideration any regional watershed concerns. In addition to meeting the regulatory thresholds, we continue to explore and utilize best management approaches for clean water for operational efficiencies.

GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response
GRI 303: Water and Effluents (2018)		
303-3	Water withdrawal	57,284 ML Notes: Total includes: surface waters, groundwater, seawater, produced waters and third-party waters. Additional contextual information relating to the provided data is outlined in the sites' operating permits, approvals or licenses issued by the regional regulator or from local water quality objectives. We assume water consumed is equal to water withdrawal minus water discharge.
303-4	Water discharge	39,091 ML Notes: Total includes: surface waters, groundwater, seawater, produced waters and third-party waters. All waters discharged were considered to be <1,000 mg/L Total Dissolved Solids. Operating approvals, permits and/or licenses identify any "discharge consents" or priority substances to be treated specific to each operational site.
303-5	Water consumption	18,193 ML Notes: Total includes: surface waters, groundwater, seawater, produced waters and third-party waters. Operating approvals, permits and/or licenses identify any "discharge consents" or priority substances to be treated specific to each operational site. According to the WWF water risk filter, the only facility in a region with High or Extremely High Baseline Water Stress is our Arlington Valley facility. Arlington withdrew 415 ML (0.7% of total water withdrawals) of water in 2023.
GRI 305: Emissions (2016)		
3-3	Management of material topics	Responsibilities around energy management are outlined in our HSSE Policy, Investment Policy, and Enterprise Risk Policy. 2023 Integrated Annual Report > Emissions management 2023 Integrated Annual Report > TCFD alignment table 2024 Management Proxy > Governance at Capital Power

GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response				
GRI 305: Emissions (2016)						
305-1	Direct (Scope 1) GHG emissions	Gross Direct GHG Emissions (tonnes CO₂e)				16,234,470.24
GHG By Facility						
Country	Prov./State	Facility	Type of Facility	GHG excluding Biomass & LFG CO ₂ e (tonnes/yr)	GHG including Biomass & LFG (tonnes/yr)	
Canada	Alberta	Halkirk	Wind	0	0	
Canada	Alberta	Whittle 1	Wind	0	0	
Canada	Alberta	Whittle 2	Wind	0	0	
Canada	Alberta	Strathmore	Solar	0	0	
Canada	Alberta	Clydesdale	Solar	0	0	
Canada	British Columbia	Quality Wind	Wind	0	0	
Canada	British Columbia	Island Generation	Natural gas	711	711	
Canada	Alberta	Genesee 1 & 2	Coal/Natural gas	5,549,683	5,549,579	
Canada	Alberta	Genesee 3	Coal/Natural gas	2,412,870	2,412,870	
Canada	Alberta	Genesee Mine	Mining	31,010	31,010	
Canada	Alberta	Clover Bar	Natural gas	365,937	365,937	
Canada	Alberta	Clover Bar LFG	Landfill gas	85	9,651	
Canada	Ontario	East Windsor	Natural gas	6,435	6,435	
Canada	Ontario	York Energy	Natural gas	23,781	23,781	
Canada	Ontario	Goreway	Natural gas	994,907	994,907	
Canada	Ontario	Kingsbridge	Wind	0	0	
Canada	Ontario	Port Albert	Wind	0	0	
Canada	Ontario	Port Dover & Nanticoke	Wind	0	0	
U.S.	Alabama	Decatur Energy Center	Natural gas	840,507	840,507	
U.S.	Arizona	Arlington	Natural gas	1,387,560	1,387,560	
U.S.	Michigan	Midland Cogeneration	Natural gas	4,620,986	4,620,986	
U.S.	New Mexico	Macho Springs	Wind	0	0	
U.S.	North Carolina	Beaufort Solar	Solar	0	0	
U.S.	Kansas	Bloom	Wind	0	0	
U.S.	North Dakota	New Frontier	Wind	0	0	
U.S.	Illinois	Cardinal Point	Wind	0	0	
U.S.	Texas	Buckthorn	Wind	0	0	
Total				<input checked="" type="checkbox"/> 16,234,470	16,243,931	

GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response																														
GRI 305: Emissions (2016)																																
305-1 (continued)	Direct (Scope 1) GHG emissions	<p>GHG By Country</p> <table border="1"> <thead> <tr> <th>Country</th> <th>GHG excluding Biomass & LFG CO₂ (tonnes/yr)</th> <th>GHG including Biomass & LFG (tonnes/yr)</th> </tr> </thead> <tbody> <tr> <td>Canadian totals</td> <td>9,385,418</td> <td>9,394,879</td> </tr> <tr> <td>U.S.Totals</td> <td>6,849,052</td> <td>6,849,052</td> </tr> <tr> <td>Total</td> <td>16,234,470</td> <td>16,243,931</td> </tr> </tbody> </table> <p>GHG By Fuel Type</p> <table border="1"> <thead> <tr> <th>Emission</th> <th>GHG excluding Biomass & LFG CO₂ (tonnes/yr)</th> <th>GHG including Biomass & LFG (tonnes/yr)</th> </tr> </thead> <tbody> <tr> <td>Coal</td> <td>4,470,334</td> <td>4,470,275</td> </tr> <tr> <td>Gas</td> <td>11,733,041</td> <td>11,732,995</td> </tr> <tr> <td>Renewables</td> <td>85</td> <td>9,651</td> </tr> <tr> <td>Total</td> <td>16,203,460</td> <td>16,212,922</td> </tr> <tr> <td colspan="2">Biogenic GHG Emissions (tonnes CO₂e)</td> <td>9,461.25</td> </tr> </tbody> </table> <p>Notes: Gases included in gross direct GHG emission calculation include CO₂, CH₄, N₂O and SF₆. Global warming potential rates used are from IPCC Guidelines (AR5) for Greenhouse Gas Inventories. We use a combination of mass balance and emission factors in the calculation of CO₂ emissions. Quantification requirements are dictated by the operational jurisdiction. Information that was not available for December due to timing of the report was estimated. This information represents our generation associated with our operating approvals regardless of our financial interest in the facility. Data from owned capacity at facilities where we do not hold the operating permits is not included in this report. Organization-specific metric (the denominator) chosen to calculate the ratio: Net MWh. GHG by Fuel Type excludes the Genesee Mine as it is not part of generation.</p>	Country	GHG excluding Biomass & LFG CO ₂ (tonnes/yr)	GHG including Biomass & LFG (tonnes/yr)	Canadian totals	9,385,418	9,394,879	U.S.Totals	6,849,052	6,849,052	Total	16,234,470	16,243,931	Emission	GHG excluding Biomass & LFG CO ₂ (tonnes/yr)	GHG including Biomass & LFG (tonnes/yr)	Coal	4,470,334	4,470,275	Gas	11,733,041	11,732,995	Renewables	85	9,651	Total	16,203,460	16,212,922	Biogenic GHG Emissions (tonnes CO₂e)		9,461.25
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Biogenic GHG Emissions (tonnes CO₂e)		9,461.25																														
305-2	Energy indirect (Scope 2) GHG emissions	32,883 (tonnes CO ₂ e)																														
305-3	Other indirect (Scope 3) GHG emissions	2,589,787 (tonnes CO ₂ e)																														

GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response																																																																																																																																																	
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305-4	GHG emissions intensity	<p>GHG Intensity (tonnes CO₂e/MWh) 0.48</p> <p>* This intensity includes GHG emissions related to MWh production only and excludes steam production at East Windsor. * This intensity includes emissions from generation only. It does not include Genesee Mine emissions (does not generate electricity).</p> <p>GHG Intensity By Facility</p> <table border="1"> <thead> <tr> <th>Country</th> <th>Prov/State</th> <th>Facility</th> <th>Type of Facility</th> <th>GHG Intensity (tonnes CO₂e/MWh)</th> </tr> </thead> <tbody> <tr><td>Canada</td><td>Alberta</td><td>Halkirk</td><td>Wind</td><td>0.000</td></tr> <tr><td>Canada</td><td>Alberta</td><td>Whitla 1</td><td>Wind</td><td>0.000</td></tr> <tr><td>Canada</td><td>Alberta</td><td>Whitla 2</td><td>Wind</td><td>0.000</td></tr> <tr><td>Canada</td><td>Alberta</td><td>Strathmore</td><td>Solar</td><td>0.000</td></tr> <tr><td>Canada</td><td>Alberta</td><td>Clydesdale</td><td>Solar</td><td>0.000</td></tr> <tr><td>Canada</td><td>British Columbia</td><td>Quality Wind</td><td>Wind</td><td>0.000</td></tr> <tr><td>Canada</td><td>British Columbia</td><td>Island Generation</td><td>Natural gas</td><td>0.448</td></tr> <tr><td>Canada</td><td>Alberta</td><td>Genesee 1 & 2</td><td>Coal/Natural gas</td><td>0.851</td></tr> <tr><td>Canada</td><td>Alberta</td><td>Genesee 3</td><td>Coal/Natural gas</td><td>0.597</td></tr> <tr><td>Canada</td><td>Alberta</td><td>Genesee Mine</td><td>Mining</td><td>0.000</td></tr> <tr><td>Canada</td><td>Alberta</td><td>Clover Bar</td><td>Natural gas</td><td>0.498</td></tr> <tr><td>Canada</td><td>Alberta</td><td>Clover Bar LFG</td><td>Landfill gas</td><td>0.016</td></tr> <tr><td>Canada</td><td>Ontario</td><td>East Windsor</td><td>Natural gas</td><td>0.561</td></tr> <tr><td>Canada</td><td>Ontario</td><td>York Energy</td><td>Natural gas</td><td>0.627</td></tr> <tr><td>Canada</td><td>Ontario</td><td>Goreway</td><td>Natural gas</td><td>0.430</td></tr> <tr><td>Canada</td><td>Ontario</td><td>Kingsbridge</td><td>Wind</td><td>0.000</td></tr> <tr><td>Canada</td><td>Ontario</td><td>Port Albert</td><td>Wind</td><td>0.000</td></tr> <tr><td>Canada</td><td>Ontario</td><td>Port Dover & Nanticoke</td><td>Wind</td><td>0.000</td></tr> <tr><td>U.S.</td><td>Alabama</td><td>Decatur Energy Center</td><td>Natural gas</td><td>0.396</td></tr> <tr><td>U.S.</td><td>Arizona</td><td>Arlington</td><td>Natural gas</td><td>0.397</td></tr> <tr><td>U.S.</td><td>Michigan</td><td>Midland Cogeneration</td><td>Natural gas</td><td>0.466</td></tr> <tr><td>U.S.</td><td>New Mexico</td><td>Macho Springs</td><td>Wind</td><td>0.000</td></tr> <tr><td>U.S.</td><td>North Carolina</td><td>Beaufort Solar</td><td>Solar</td><td>0.000</td></tr> <tr><td>U.S.</td><td>Kansas</td><td>Bloom</td><td>Wind</td><td>0.000</td></tr> <tr><td>U.S.</td><td>North Dakota</td><td>New Frontier</td><td>Wind</td><td>0.000</td></tr> <tr><td>U.S.</td><td>Illinois</td><td>Cardinal Point</td><td>Wind</td><td>0.000</td></tr> <tr><td>U.S.</td><td>Texas</td><td>Buckthorn</td><td>Wind</td><td>0.000</td></tr> <tr> <td colspan="4">Total</td> <td><input checked="" type="checkbox"/> 0.479</td> </tr> </tbody> </table>	Country	Prov/State	Facility	Type of Facility	GHG Intensity (tonnes CO ₂ e/MWh)	Canada	Alberta	Halkirk	Wind	0.000	Canada	Alberta	Whitla 1	Wind	0.000	Canada	Alberta	Whitla 2	Wind	0.000	Canada	Alberta	Strathmore	Solar	0.000	Canada	Alberta	Clydesdale	Solar	0.000	Canada	British Columbia	Quality Wind	Wind	0.000	Canada	British Columbia	Island Generation	Natural gas	0.448	Canada	Alberta	Genesee 1 & 2	Coal/Natural gas	0.851	Canada	Alberta	Genesee 3	Coal/Natural gas	0.597	Canada	Alberta	Genesee Mine	Mining	0.000	Canada	Alberta	Clover Bar	Natural gas	0.498	Canada	Alberta	Clover Bar LFG	Landfill gas	0.016	Canada	Ontario	East Windsor	Natural gas	0.561	Canada	Ontario	York Energy	Natural gas	0.627	Canada	Ontario	Goreway	Natural gas	0.430	Canada	Ontario	Kingsbridge	Wind	0.000	Canada	Ontario	Port Albert	Wind	0.000	Canada	Ontario	Port Dover & Nanticoke	Wind	0.000	U.S.	Alabama	Decatur Energy Center	Natural gas	0.396	U.S.	Arizona	Arlington	Natural gas	0.397	U.S.	Michigan	Midland Cogeneration	Natural gas	0.466	U.S.	New Mexico	Macho Springs	Wind	0.000	U.S.	North Carolina	Beaufort Solar	Solar	0.000	U.S.	Kansas	Bloom	Wind	0.000	U.S.	North Dakota	New Frontier	Wind	0.000	U.S.	Illinois	Cardinal Point	Wind	0.000	U.S.	Texas	Buckthorn	Wind	0.000	Total				<input checked="" type="checkbox"/> 0.479
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GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response																		
GRI 305: Emissions (2016)																				
305-4 (continued)	GHG emissions intensity	<p>GHG Intensity by country</p> <table border="1"> <thead> <tr> <th>Country</th> <th>GHG Intensity (tonnes CO₂e/MWh)</th> </tr> </thead> <tbody> <tr> <td>Canadian totals</td> <td>0.575</td> </tr> <tr> <td>U.S. Totals</td> <td>0.390</td> </tr> <tr> <td>Total</td> <td>☑ 0.479</td> </tr> </tbody> </table> <p>GHG By Fuel Type</p> <table border="1"> <thead> <tr> <th></th> <th>GHG Intensity (tonnes CO₂e/MWh)</th> </tr> </thead> <tbody> <tr> <td>Coal</td> <td>0.766</td> </tr> <tr> <td>Gas</td> <td>0.502</td> </tr> <tr> <td>Renewables</td> <td>0.000</td> </tr> <tr> <td>Total</td> <td>☑ 0.479</td> </tr> </tbody> </table> <p>Notes: This intensity includes GHG emissions related to MWh production only and excludes emissions related to the Genesee Mine. Organization-specific metric (the denominator) chosen to calculate the ratio: Net MWh. Types of GHG emissions included in the intensity ratio: Scope 1. Gases included: CO₂, CH₄, N₂O, HFC's, SF₆. Capital Power follows the recommendations of the GHG Protocol for the timing of recalculations for structural changes, however Frederickson data availability was limited at the time of report development due to acquisition timing and is therefore excluded. Frederickson data will be included in the 2024 reporting period.</p>	Country	GHG Intensity (tonnes CO ₂ e/MWh)	Canadian totals	0.575	U.S. Totals	0.390	Total	☑ 0.479		GHG Intensity (tonnes CO ₂ e/MWh)	Coal	0.766	Gas	0.502	Renewables	0.000	Total	☑ 0.479
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Gas	0.502																			
Renewables	0.000																			
Total	☑ 0.479																			
305-5	Reduction of GHG emissions	<p>GHG emission reductions (tonnes CO₂e): 2,134,308.72</p> <p>Notes: Reduction initiatives include Genesee Performance Standard and co-firing with natural gas. Denominator used is Net Generation (sold MWh). Gases included: CO₂, CH₄, N₂O. Base year for calculation: 2016. Reductions are for direct (Scope 1) emissions. Reduction calculations compared the 2016 (base year) GHG intensity and the 2023 GHG intensity and the reduction in intensity was applied to the 2023 generation. It is assumed that any reduction in intensity is due to efficiency improvements, co-firing with natural gas on Genesee 1/2 and fuel switch on G3. 2016 was selected as a baseline year for this metric because this was the year preceding the reduction initiatives related to the Genesee Performance Standard.</p>																		
305-6	Emissions of ozone-depleting substances (ODS)	We had no ODS emissions in 2023.																		
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	<table border="1"> <thead> <tr> <th>Parameter</th> <th>2023 Emissions</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>NOx</td> <td>18,914</td> <td>tonnes</td> </tr> <tr> <td>SO₂</td> <td>14,719</td> <td>tonnes</td> </tr> <tr> <td>Particular Matter (PM)</td> <td>1,045</td> <td>tonnes</td> </tr> <tr> <td>Mercury</td> <td>22</td> <td>kg</td> </tr> </tbody> </table>	Parameter	2023 Emissions	Units	NOx	18,914	tonnes	SO ₂	14,719	tonnes	Particular Matter (PM)	1,045	tonnes	Mercury	22	kg			
Parameter	2023 Emissions	Units																		
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GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response							
GRI 305: Emissions (2016)									
305-7 (continued)	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	Emissions By Facility							
		Country	Prov./State	Facility	Type of Facility	NO _x (tonnes/yr)	SO ₂ (tonnes/yr)	Total PM (tonnes/yr)	Hg (kg/yr)
		Canada	Alberta	Halkirk	Wind	0	0	0	0
		Canada	Alberta	Whitla 1	Wind	0	0	0	0
		Canada	Alberta	Whitla 2	Wind	0	0	0	0
		Canada	Alberta	Strathmore	Solar	0	0	0	0
		Canada	Alberta	Clydesdale	Solar	0	0	0	0
		Canada	British Columbia	Quality Wind	Wind	0	0	0	0
		Canada	British Columbia	Island Generation	Natural gas	0	0	0	0
		Canada	Alberta	Genesee 1 & 2	Coal/Natural gas	12,856	13,721	755	18
		Canada	Alberta	Genesee 3	Coal/Natural gas	2,275	956	224	4
		Canada	Alberta	Genesee Mine	Mining	0	0	0	0
		Canada	Alberta	Clover Bar	Natural gas	192	2	1	0
		Canada	Alberta	Clover Bar LFG	Landfill gas	21	1	1	0
		Canada	Ontario	East Windsor	Natural gas	3	0	0	0
		Canada	Ontario	York Energy	Natural gas	10	0	0	0
		Canada	Ontario	Goreway	Natural gas	160	5	2	0
		Canada	Ontario	Kingsbridge	Wind	0	0	0	0
		Canada	Ontario	Port Albert	Wind	0	0	0	0
		Canada	Ontario	Port Dover & Nanticoke	Wind	0	0	0	0
		U.S.	Alabama	Decatur Energy Center	Natural gas	61	4	39	0
		U.S.	Arizona	Arlington	Natural gas	93	7	22	0
		U.S.	Michigan	Midland Cogeneration	Natural gas	3,241	23	0	0
		U.S.	New Mexico	Macho Springs	Wind	0	0	0	0
		U.S.	North Carolina	Beaufort Solar	Solar	0	0	0	0
		U.S.	Kansas	Bloom	Wind	0	0	0	0
		U.S.	North Dakota	New Frontier	Wind	0	0	0	0
		U.S.	Illinois	Cardinal Point	Wind	0	0	0	0
		U.S.	Texas	Buckthorn	Wind	0	0	0	0
		Total				18,914	14,719	1,045	22

GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response																																													
GRI 305: Emissions (2016)																																															
305-7 (continued)	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	<p>Emissions By Country</p> <table border="1"> <thead> <tr> <th>Country</th> <th>NOx (tonnes/yr)</th> <th>SO₂ (tonnes/yr)</th> <th>Total PM (tonnes/yr)</th> <th>Hg (kg/yr)</th> </tr> </thead> <tbody> <tr> <td>Canadian totals</td> <td>15,519</td> <td>14,685</td> <td>983</td> <td>22</td> </tr> <tr> <td>U.S. Totals</td> <td>3,395</td> <td>34</td> <td>62</td> <td>0</td> </tr> <tr> <td>Total</td> <td>18,914</td> <td>14,719</td> <td>1,045</td> <td>22</td> </tr> </tbody> </table> <p>Emission By Fuel Type</p> <table border="1"> <thead> <tr> <th>Emission</th> <th>NOx (tonnes)</th> <th>SO₂ (tonnes)</th> <th>PM (tonnes)</th> <th>Hg (kg)</th> </tr> </thead> <tbody> <tr> <td>Coal</td> <td>15,132</td> <td>14,677</td> <td>979</td> <td>22</td> </tr> <tr> <td>Gas</td> <td>3,761</td> <td>41</td> <td>64</td> <td>0</td> </tr> <tr> <td>Renewables</td> <td>21</td> <td>1</td> <td>1</td> <td>0</td> </tr> <tr> <td>Total</td> <td>18,914</td> <td>14,719</td> <td>1,045</td> <td>22</td> </tr> </tbody> </table> <p>Notes: The majority of these emissions are calculated using direct measurement (Continuous Emissions Monitoring Systems). Some parameters are calculated using source emission testing or mass balance. Where emission factors are utilized, the source of the emission factors is typically source testing or EPA-published emission factors. Calculation methodologies are dictated by jurisdiction.</p>	Country	NOx (tonnes/yr)	SO ₂ (tonnes/yr)	Total PM (tonnes/yr)	Hg (kg/yr)	Canadian totals	15,519	14,685	983	22	U.S. Totals	3,395	34	62	0	Total	18,914	14,719	1,045	22	Emission	NOx (tonnes)	SO ₂ (tonnes)	PM (tonnes)	Hg (kg)	Coal	15,132	14,677	979	22	Gas	3,761	41	64	0	Renewables	21	1	1	0	Total	18,914	14,719	1,045	22
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GRI 3: General disclosures 2023

Disclosure number	Disclosure title	2023 response
GRI 308: Supplier Environmental Assessments (2016)		
3-3	Management of material topics	<p>Capital Power manages supplier environmental assessment in advance of procurement during the execution of the work and upon completion. Capital Power's approach uses policy, third party-administered environmental questionnaires, work specific procurement criteria/processes, standardized terms and conditions, standardized environmental standards, and active site management.</p> <p>Key policies related to supplier environmental performance include Capital Power's HSSE Policy and Sustainable Sourcing Policy, which are available on our website.</p>
308-1 and 308-2	New suppliers that were screened using environmental criteria, and negative environmental impacts in the supply chain and actions taken	All new Capital Power suppliers performing work at an operating facilities and constructions sites are asked to provide responses to an online questionnaire through our third-party contractor management service provider pertaining to the suppliers' environmental maturity, performance, and procedures. Suppliers not performing physical work on site are not included. Responses to the questionnaire are optional at this time and results are primarily used in aggregate by Capital Power to evaluate supply chain environmental maturity and for baselining. Capital Power did not use this information to assess individual supplier performance in 2023.
GRI 414: Supplier Social Assessments (2016)		
3-3	Management of material topics	<p>Capital Power manages supplier social assessment in advance of procurement during the execution of the work and upon completion. Capital Power's approach uses policy, third party-administered social screening questionnaires, social criteria relevant to the specific work set out in procurement documents, and standardized terms and conditions setting out Capital Power expectations.</p> <p>Key related policies include Capital Power's Ethics Policy and Sustainable Sourcing Policy, which are available on our website.</p>
414-1 and 414-2	New suppliers that were screened using social criteria, and negative social impacts in the supply chain and actions taken	All new suppliers performing work at an operating facilities and constructions sites are asked to provide responses to an online questionnaire through our third-party contractor management service provider pertaining to the suppliers' environmental maturity, performance, and procedures. Suppliers not performing physical work on site are not included. Responses to the questionnaire are optional at this time and results are primarily used in aggregate by Capital Power to evaluate supply chain environmental maturity and for baselining. Capital Power did not use this information to evaluate individual supplier performance in 2023.

SASB Index

SASB disclosure	Category	Unit of measure	SASB disclosure reference	2023 response															
Greenhouse gas emissions and energy resource planning																			
Gross global Scope 1 emissions	Quantitative	Metric tons (t) CO ₂ -e	IF-EU-110a.1	16,234,470.24															
Percentage of gross global Scope 1 emissions covered under emissions-limiting regulations	Quantitative	Percentage (%)	IF-EU-110a.1	58%															
Percentage of gross global Scope 1 emissions covered under emissions-reporting regulations	Quantitative	Percentage (%)	IF-EU-110a.1	100%															
Greenhouse gas (GHG) emissions associated with power deliveries	Quantitative	Metric tons (t) CO ₂ -e	IF-EU-110a.2	See GRI 305-1															
Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and analysis	n/a	IF-EU-110a.3	Responsibilities around energy management are outlined in our HSSE Policy, Investment Policy, Enterprise Risk Policy and Management Proxy. See GRI 302-1 and GRI 305-1. 2023 Integrated Annual Report, Emissions management Website, HSSE Policy															
Air quality																			
Air emissions of the following pollutants: (1) NO _x (excluding N ₂ O), (2) SO _x , (3) particulate matter (PM10), (4) lead (Pb), and (5) mercury (Hg); percentage of each in or near areas of dense population	Quantitative	Metric tons (t), Percentage (%)	IF-EU-120a.1	<p>Air emissions and the percentage of each in or near areas of dense populations</p> <table border="1"> <thead> <tr> <th></th> <th>NO₂ (tonnes/a)</th> <th>SO₂ (tonnes/a)</th> <th>Total PM (tonnes/a)</th> <th>Hg (kg/a)</th> </tr> </thead> <tbody> <tr> <td>Air emissions</td> <td>18,914</td> <td>14,719</td> <td>1,045</td> <td>22</td> </tr> <tr> <td>% near areas of dense population</td> <td>20%</td> <td>0%</td> <td>6%</td> <td>0%</td> </tr> </tbody> </table>		NO ₂ (tonnes/a)	SO ₂ (tonnes/a)	Total PM (tonnes/a)	Hg (kg/a)	Air emissions	18,914	14,719	1,045	22	% near areas of dense population	20%	0%	6%	0%
	NO ₂ (tonnes/a)	SO ₂ (tonnes/a)	Total PM (tonnes/a)	Hg (kg/a)															
Air emissions	18,914	14,719	1,045	22															
% near areas of dense population	20%	0%	6%	0%															
Water management																			
(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Quantitative	Thousand cubic meters (m ³), Percentage (%)	IF-EU-140a.1	See GRI 303-3 and GRI 303-5 According to the WWF water risk filter, the only facility in a region with High or Extremely High Baseline Water Stress is our Arlington Valley facility. Arlington withdrew 415 ML (0.7% of total water withdrawals) of water in 2023.															
Number of incidents of non-compliance associated with water quantity and/or quality permits, standards, and regulations	Quantitative	Number	IF-EU-140a.2	There were no fines or government enforcement actions related to water in 2023.															
Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and analysis	n/a	IF-EU-140a.3	See GRI 303-1															

SASB Index

SASB disclosure	Category	Unit of measure	SASB disclosure reference	2023 response	
Coal ash management					
Amount of coal combustion residuals (CCR) generated, percentage recycled	Quantitative	Metric tons (t), Percentage (%)	IF-EU-150a.1	Coal Ash Management	
				tonnes	%
				Ash Disposed	423,600
Ash Recycled	246,859	37%			
Total number of coal combustion residual (CCR) impoundments, broken down by hazard potential classification and structural integrity assessment	Quantitative	Number	IF-EU-150a.2	Not applicable – Capital Power does not have any impoundments that meet the definition for this topic.	
Energy affordability					
Average retail electric rate for (1) residential, (2) commercial, and (3) industrial customers	Quantitative	Rate	IF-EU-240a.1	Capital Power does not have any residential customers. We do have commercial and industrial customers, however we do not disclose information about these electric rates due to confidentiality constraints.	
Typical monthly electric bill for residential customers for (1) 500 kWh and (2) 1,000 kWh of electricity delivered per month	Quantitative	Reporting currency	IF-EU-240a.2	Not applicable – Capital Power does not have any residential customers.	
Number of residential customer electric disconnections for non-payment, percentage reconnected within 30 days	Quantitative	Number, Percentage (%)	IF-EU-240a.3	Not applicable – Capital Power does not have any residential customers.	
Discussion of impact of external factors on customer affordability of electricity, including the economic conditions of the service territory	Discussion and analysis	n/a	IF-EU-240a.4	Not applicable – Capital Power does not sell to a material number of direct customers.	
Workforce health and safety					
(1) Total recordable incident rate (TRIR), (2) fatality rate, and (3) near miss frequency rate (NMFR)	Quantitative	Rate	IF-EU-320a.1	TRIF: 0.97 Fatality rate: 0 NMFR: 9.55 Note: All rates include all contractors in operations and Capital Power employees. They do not include construction projects. The average hours of health, safety and emergency response training for full-time employees is 27 hours. We do not currently track health, safety and emergency response training hours for contract employees.	
End-use efficiency and demand					
Percentage of electric utility revenues from rate structures that (1) are decoupled and (2) contain a lost revenue adjustment mechanism (LRAM)	Quantitative	Percentage	IF-EU-420a.1	Not applicable – Capital Power does not sell to a material number of direct customers.	

SASB Index

SASB disclosure	Category	Unit of measure	SASB disclosure reference	2023 response
End-use efficiency and demand				
Percentage of electric load served by smart grid technology	Quantitative	Percentage (%) by megawatt hours (MWh)	IF-EU-420a.2	Not applicable – Capital Power does not sell to a material number of direct customers.
Customer electricity savings from efficiency measures, by market	Quantitative	Megawatt hours (MWh)	IF-EU-420a.3	Not applicable – Capital Power does not sell to a material number of direct customers.
Nuclear safety and emergency management				
Total number of nuclear power units, broken down by U.S. Nuclear Regulatory Commission (NRC) Action Matrix Column	Quantitative	Number	IF-EU-540a.1	Not applicable – Capital Power does not own or operate any nuclear power units.
Description of efforts to manage nuclear safety and emergency preparedness	Discussion and analysis	n/a	IF-EU-540a.2	Not applicable – Capital Power does not own or operate any nuclear power units.
Grid resilience				
Number of incidents of non-compliance with physical and/or cybersecurity standards or regulations	Quantitative	Number	IF-EU-550a.1	Capital Power has not experienced any financial losses related to technology failure, cyber-attacks or security breaches.
(1) System Average Interruption Duration Index (SAIDI), (2) System Average Interruption Frequency Index (SAIFI), and (3) Customer Average Interruption Duration Index (CAIDI), inclusive of major event days	Quantitative	Minutes, number	IF-EU-550a.2	SAIDI, SAIFI, and CAIDI are not applicable to Capital Power's business, as Capital Power does not sell to a material number of direct customers. Capital Power's fleetwide availability in 2023 was 95%.
Activity metrics				
Number of: (1) residential, (2) commercial, and (3) industrial customers served	Quantitative	Number	IF-EU-000.A	Capital Power has 128 number of commercial and industrial customers.
Total electricity delivered to: (1) residential, (2) commercial, (3) industrial, (4) all other retail customers, and (5) wholesale customers	Quantitative	Megawatt hours (MWh)	IF-EU-000.B	See 2023 ESG Performance
Length of transmission and distribution lines	Quantitative	Kilometers (km)	IF-EU-000.C	Not applicable – Capital Power does not own or operate any transmission or distribution lines.
Total electricity generated, percentage by major energy source, percentage in regulated markets	Quantitative	Megawatt hours (MWh), Percentage (%)	IF-EU-000.D	See 2023 ESG Performance
Total wholesale electricity purchased	Quantitative	Megawatt hours (MWh)	IF-EU-000.E	Not applicable – Capital Power does not purchase a significant amount of wholesale electricity for physical consumption.



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