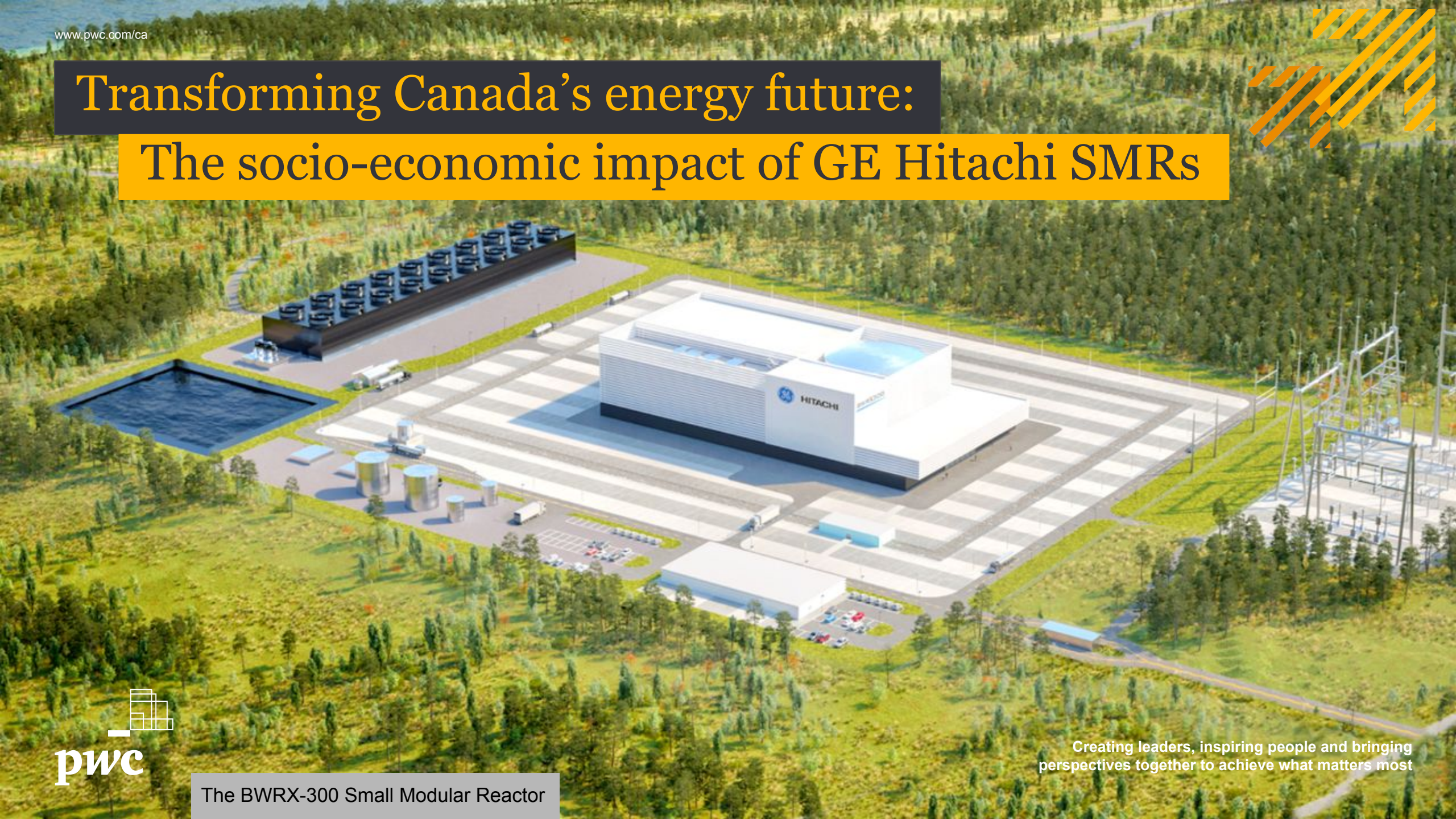


Transforming Canada's energy future: The socio-economic impact of GE Hitachi SMRs



Notice to Reader

This slide deck has been prepared by PricewaterhouseCoopers LLP (PwC) for the use of GE to provide an assessment of the manufacturing, construction, and deployment of GE's BWRX-300 small modular reactor in Ontario.

The analysis and observations presented in this document are based on information provided by GE, which has not been verified by PwC. Any statement in this report regarding the technical aspects of the BWRX-300 Small Modular Reactor reflects our understanding based on discussions with GE.

All dollar values are in 2020 Canadian dollars, unless otherwise specified.

Limitations on use of this report are found in Appendix A and form an integral part of this report.

Contents

	page
1 Summary of key findings	4
2 Introduction and background	12
3 Economic footprint of GE's BWRX-300 SMR	16
4 Broader benefits of GE's BWRX-300 SMR	24
<i>Appendices</i>	
A Limitations	41
B Input-output methodology	42
C Economic footprint results for Ontario	44



Summary of Key Findings

This study assesses the benefits of GE deploying SMR technology with OPG in Ontario



Background

GE is seeking to commercialize and manufacture its small modular reactor (SMR) technology, the BWRX-300, in Ontario, in partnership with Ontario Power Generation (OPG).

- GE's plans to **bring the BWRX-300 to commercial readiness in partnership with OPG**
- If these plans move forward, the BWRX-300 will be **developed and constructed in Ontario**, with efforts to engage local suppliers
- OPG's initiative would be the **first commercial deployment of a grid-scale SMR in Canada**
- GE's work with OPG would be a base for future SMR deployment in Ontario, other parts of Canada, and internationally

Structure

Core areas assessed by PwC

Economic footprint

The jobs, GDP, labour income, and tax revenue associated with GE's first SMR with OPG, and future Canada-based BWRX-300 production

Broader impacts

The broader benefits of GE's BWRX-300 SMR through its contribution to Canada meeting its climate change commitments, promotion of diversity and inclusion, engagement of Indigenous communities, development of workers' skills, and technical excellence.

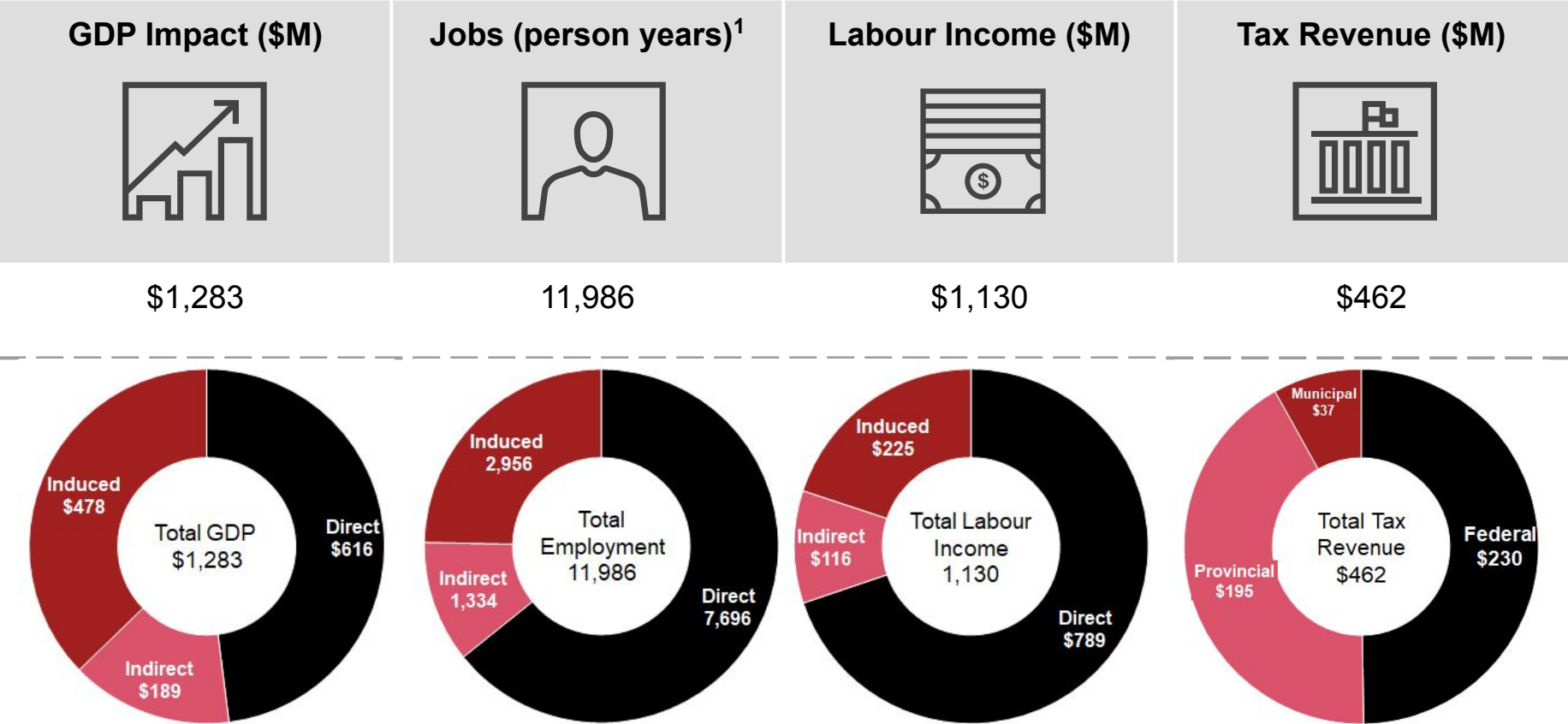
GE's SMR with OPG is expected to spend \$2 billion over seven years and create nearly \$1.3 billion in GDP and over 1,700 jobs in Canada during the manufacturing and construction phase



Total economic footprint of BWRX-300 manufacturing and construction in Canada, 2022-2028 (undiscounted)

Of the \$2 billion in total spending for GE's First-of-a-kind SMR, 71% would be in Ontario and 78% would be in Canada.

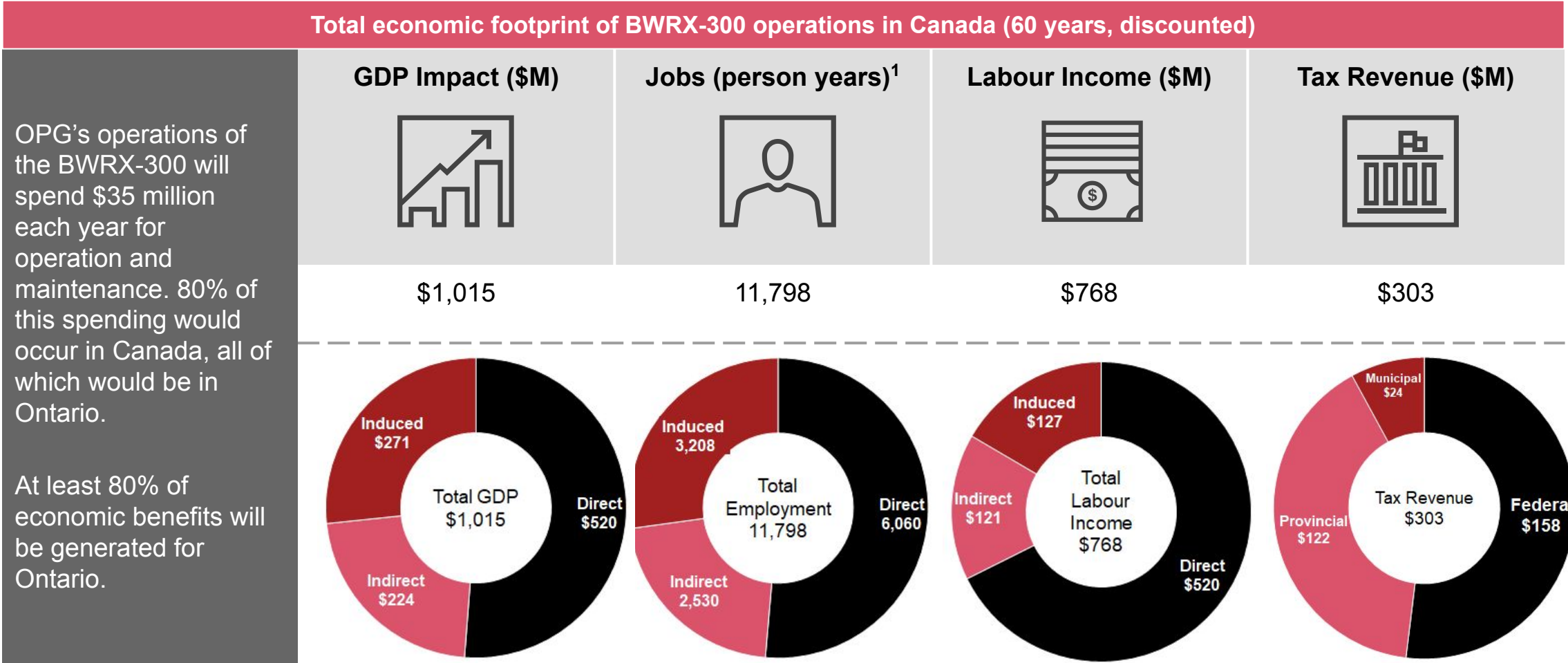
Over 90% of the total economic footprint of BWRX-300 manufacturing and construction will occur in Ontario.



Source: PwC analysis

¹ 11 986 person years is equivalent to 1,712 jobs sustained over seven years. Jobs are expressed as full-time equivalents.

... and over \$1 billion in GDP and sustaining 197 jobs over 60 years of operations in Canada



Source: PwC analysis

¹ 11 798 person years is equivalent to 197 jobs sustained over sixty years. Jobs are expressed as full-time equivalents.



GE’s first reactor with OPG lays the groundwork for future SMR production in Canada, creating additional economic benefits

GE’s first-of-a-kind SMR installation with OPG will be a starting point for future SMR installation in Ontario and elsewhere in Canada.

As of April of 2021 four Canadian provinces (Alberta, Ontario, New Brunswick, and Saskatchewan) have signed a Memorandum of Understanding (MOU) for Canadian SMR advancements, affirming their commitment to SMR deployment in those provinces.

This SMR deployment will **support economic activity** in Ontario and Canada, as shown below. These footprints refer to the manufacturing and construction period of future Ontario and Canadian reactors only, and exclude operating impacts.

Scenario	Total economic footprint in Canada
Future Ontario reactors: per-reactor benefits of subsequent SMRs that GE will install alongside partners in Ontario	\$1.1 billion in GDP, \$728 million in labour income, \$312 million in tax revenue, and sustain 1,951 jobs per year over four years
Future Canadian reactors outside of Ontario: per-reactor benefits of subsequent SMRs that GE will install alongside partners elsewhere in Canada	\$1.1 billion in GDP, \$730 million in labour income, \$313 million in tax revenue, and sustain 1,956 jobs per year over four years

* undiscounted, does not include operations



GE's work with OPG will also lay the groundwork for export activity and international SMR deployment, generating further benefits to Canada

GE's SMR activity in Ontario and across Canada will support future opportunities for global deployment and installation of BWRX-300s internationally, generating more benefits to Canada.

- The global market for SMRs is expected to grow to \$150 billion between 2025 and 2040¹
- GE's established technology and relationships will help Canada to become a significant global exporter of SMRs
- The expected economic footprint in Canada for each exported GE SMR is shown below

Scenario

Export activity: per-reactor benefits to Canada of GE's BWRX-300 SMRs installed internationally

Total economic footprint

\$98 million in GDP, \$110 million in labour income, \$46 million in tax revenue, and sustain 217 jobs per year over four years

* undiscounted, does not include operations
1. *Canadian SMR Roadmap*



Broader benefits of GE's BWRX-300 include diversity and inclusion at GE and among suppliers, as well as skill development in a range of roles . . .



Diversity and Inclusion

GE has a diverse and inclusive workforce and is committed to increasing Canadian diversity in STEM fields.

GE demonstrates its commitment to diversity and inclusion through:

- 36% female participation on the GE Board of Directors and 50% in leadership roles across extended GE Hitachi leadership roles
- Policies and targets to enhance supplier diversity
- KPIs for diversity among workforce, particularly for leadership roles
- Funding scholarships to encourage female participation in STEM fields of study, including nuclear energy



Skill Development

GE's long history of technical excellence in the nuclear sector has created significant know-how that will contribute to the safety and efficiency of SMR operations in Canada, and will create a strong base of engineering expertise in Ontario and Canada.

Opportunities associated with GE's plans for the BWRX-300 include:

- A mature training, operations, and maintenance system pioneering use of virtual reality technology
- Field Engineering Training Program for mid-level career operator employees to manage BWR outages
- BWR training for executives and upper management to increase overall knowledge of plant and system design, operation, and maintenance



... helping Canada meet its climate change commitments, and creating opportunities for Indigenous communities



Climate Change

GE will support Canada in meeting its climate change goals and target of net zero emissions economy-wide by 2050.

Specific GE initiatives include:

- Internal commitments to net zero emissions in its own operations by 2030 through operational investments, smart power sourcing, and elimination of waste
- Deployment of commercial SMR technology, which could help Canada transition away from remaining carbon-emitting energy sources in its electricity grid



Indigenous Involvement

GE is committed to partnering, engaging and collaborating with Indigenous communities.

GE's presence will strengthen local Indigenous communities by:

- Respectfully engaging Indigenous communities to gather views on the SMR project
- Working to identify opportunities with Indigenous suppliers and service providers, particularly for the development and deployment of GE's SMR technology



Technical Excellence

Leaders of the project bring decades of collective experience that will help position Ontario as a hub for SMR technology.

GE's technical experience will contribute to:

- Safe operations for employees and communities
- R&D opportunities in Ontario and Canada
- Concentration of engineering talent in Ontario and Canada
- Alignment with the Government of Canada's priorities for Canada to become a global SMR leader

2

Introduction and background



Parts retrieval at GE Hitachi's global headquarters

This report assesses the potential socio-economic benefits of GE’s BWRX-300 for Ontario and Canada

Background

Ontario Power Generation (OPG) is advancing work on Small Modular Reactors (SMRs) with GE Hitachi, along with two other firms. SMRs are aligned with OPG’s goals of providing clean, reliable, and affordable power to Ontarians, and becoming a leader in nuclear power.

If selected, GE would bring its SMR technology, the BWRX-300, to commercial readiness in Ontario. The SMR would then be constructed and installed at the Darlington Nuclear Generating Station, where it would be connected to Ontario’s power grid. GE and its supply chain partners will then continue to support manufacturing of the BWRX-300 in Ontario and Canada for future sales and exports.

PricewaterhouseCoopers LLP (“PwC”) was engaged by GE to assist in assessing how GE’s BWRX-300 will create value for Ontario and Canada.

Note: this study uses the name “GE” interchangeably to refer to all GE entities, particularly:

- The General Electric Company (GE), an American multinational company.
- GE Hitachi Nuclear Energy (GEH), a provider of advanced reactors, fuel and nuclear services. Based in Wilmington, N.C., GEH is an alliance created by GE and Hitachi to serve the global nuclear industry.
- GEH SMR Technologies Canada, Ltd., based in Markham, Ontario, which supports the deployment of the BWRX-300 Small Modular Reactor (SMR) in Canada.
- Global Nuclear Fuel (GNF), a GE-led joint venture, operates fuel manufacturing facilities in Wilmington and Kurihama, Japan.

Impacts assessed by PwC

Economic footprint

Quantification of the jobs, GDP, labour income, and tax revenue associated with GE’s first SMR with OPG, and future Canada-based SMR production

Broader impacts

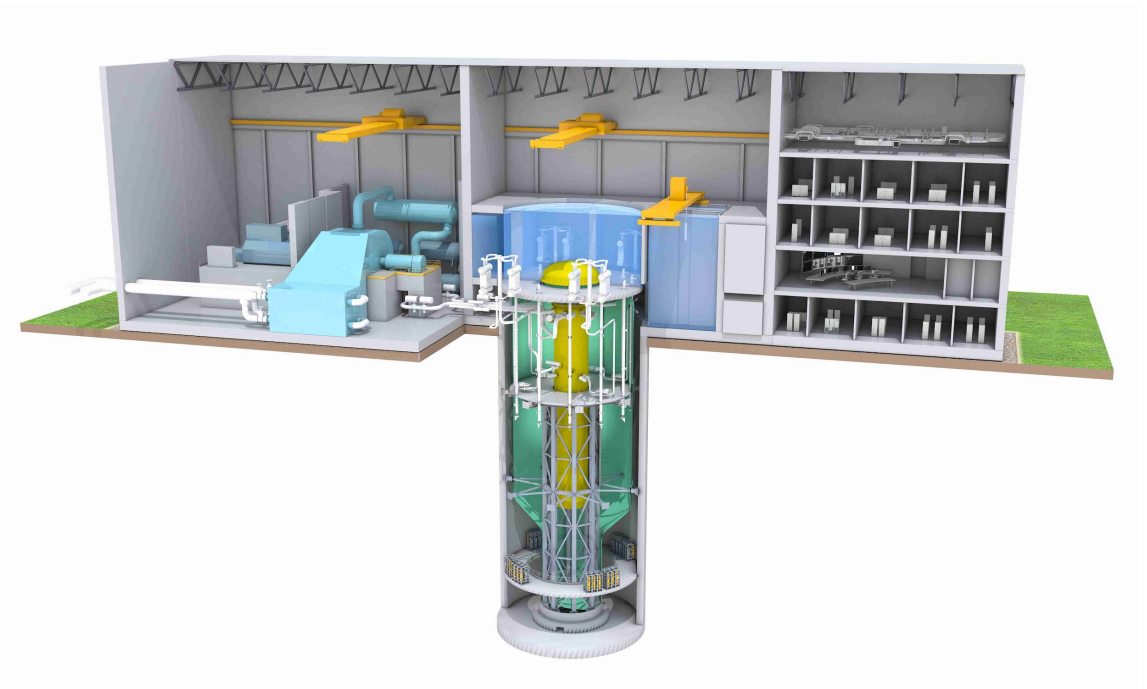
Assessment of how GE’s SMR will contribute to broader economic and social well-being through:

- Helping Canada achieve its climate commitments
- Diversity and inclusion initiatives
- Inclusion of Indigenous people
- Supporting development of in-demand skills
- Providing technical excellence

The BWRX-300 is GE's innovative SMR model



- The BWRX-300 is a 300 MWe boiling water reactor (BWR)
- GE plans to **bring the BWRX-300 to commercial readiness in partnership with OPG**
- If these plans move forward, the BWRX-300 will be **constructed and manufactured in Ontario**, with efforts to engage local suppliers
- The **design is innovative**, with dramatic simplification and elimination of unnecessary systems
- The reactor technology builds on existing BWR technology with a **proven track record**
- Key regulatory actions are in progress:
 - A patent has been issued **for the BWRX-300's integral isolation valve**
 - U.S. Nuclear Regulatory Commission issued Final Safety Evaluation Report for **three** licensing topical reports
 - Undergoing vendor design review process with the Canadian Nuclear Safety Commission (CNSC). To date, feedback has been positive and no barriers have been identified
- OPG's initiative would be the **first commercial deployment of a grid-scale SMR in North America**

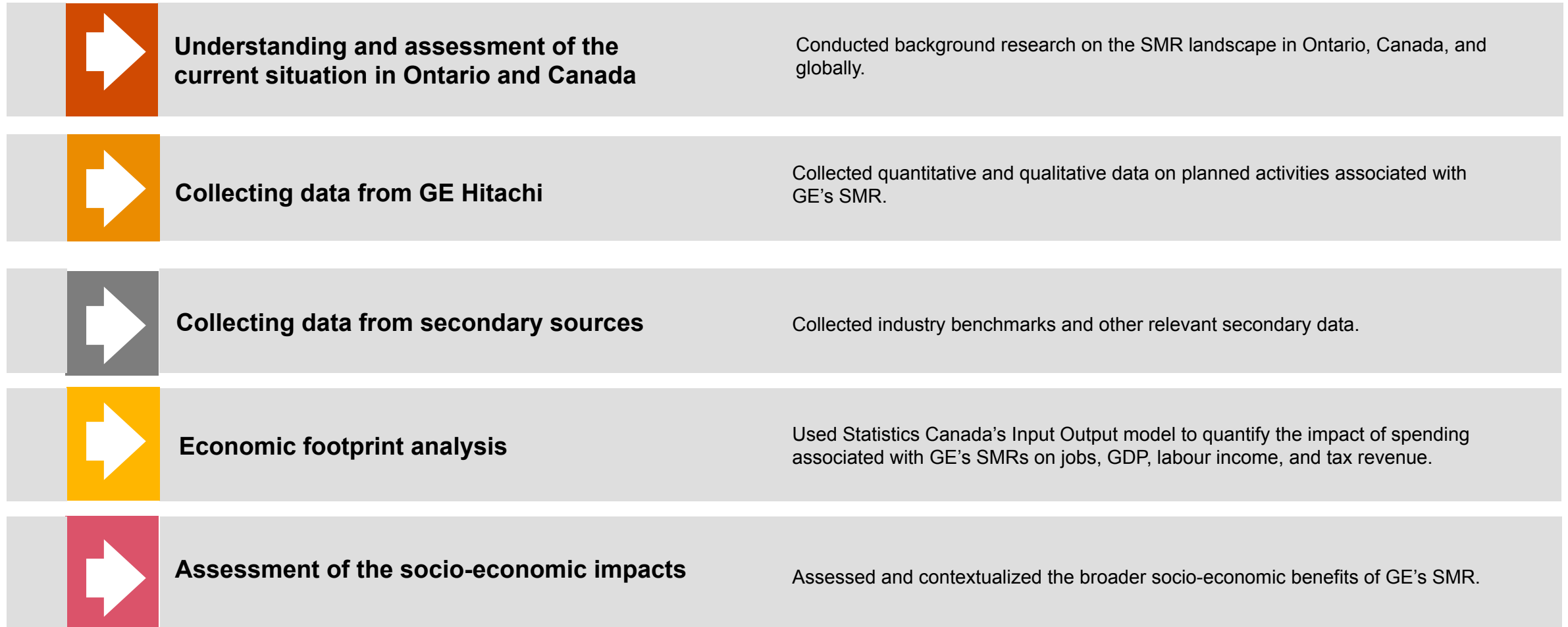


BWRX-300 is GE's SMR that would be developed in partnership with OPG. Key advantages are commercial readiness with proven technology, innovative design features, and the ability to integrate Canadian supply chains.

Source: GE



PwC's approach to assessing the impact of GE's SMR involved a 5-step process





Economic footprint of the GE SMR

Fuel channel fabrication at GNF's manufacturing facility

PwC's approach assesses the direct, indirect, and induced economic footprint of development, manufacturing, and operations of GE's SMR with OPG



The total economic impact of GE's first-of-a-kind SMR in Ontario is presented for two phases:

1. Manufacturing and construction



2. Ongoing operations at Darlington



GE's planned spending on the first-of-a-kind BWRX-300 generates economic impact through the following channels:

- **Direct impacts** result from companies' spending on suppliers and employees.
- **Indirect impacts** arise from the activities of the firms providing inputs to a company's suppliers (in other words, the suppliers of its suppliers).
- **Induced impacts** are the result of consumer spending by employees of the businesses stimulated by direct and indirect expenditures.
- The **total economic impact** is equal to the sum of the Direct, Indirect, and Induced economic impacts.

These estimates were developed through a combination of Statistics Canada's published input-output multipliers and PwC's economic modelling. These values represent gross estimates of the economic footprint of the SMR activity.

PwC has estimated the economic footprint for four separate GE SMR capital expenditure scenarios



Scenario

Total economic footprint*

First-of-a-kind: the first SMR that GE will develop in Ontario in partnership with OPG

During manufacturing and construction: \$1.3 billion in GDP, \$1.1 billion in labour income, \$460 million in tax revenue, and sustain 1,712 jobs per year over seven years

During operations: \$1 billion in GDP, \$768 million in labour income, \$303 million in tax revenue, and sustain 197 jobs per year over 60 years (discounted)

Future Ontario reactors: per-reactor benefits of subsequent SMRs that GE will install alongside partners in Ontario

\$1.1 billion in GDP, \$728 million in labour income, \$312 million in tax revenue, and sustain 1,951 jobs per year over four years

Future Canadian reactors outside of Ontario: per-reactor benefits of subsequent SMRs that GE will install alongside partners elsewhere in Canada

\$1.1 billion in GDP, \$730 million in labour income, \$313 million in tax revenue, and sustain 1,956 jobs per year over four years

Export activity: per-reactor benefits to Canada of GE's BWRX-300 SMRs installed internationally

\$98 million in GDP, \$110 million in labour income, \$46 in tax revenue, and sustain 217 jobs per year over four years

*All values undiscounted unless otherwise noted. Does not include operations except where indicated.



GE’s first BWRX-300 SMR with OPG is expected to create a GDP impact of almost \$1.3 billion in Canada during the manufacturing and construction phase

Economic footprint of **first-of-a-kind** capex (manufacturing and construction) period in Canada, undiscounted, in millions of dollars

Impact: First-of-a-kind SMR	Direct	Indirect	Induced	Annual Total	Total over 7 years
GDP	\$88.0	\$27.0	\$68.4	\$183.3	\$1,283.2
Employment (FTE, person-years)	1,099	191	422	1,712	11,986
Labour income	\$112.7	\$16.6	\$32.2	\$161.4	\$1,129.6
Federal taxes	\$21.3		\$11.6	\$32.9	\$230.4
Provincial taxes	\$14.8		\$13.0	\$27.8	\$194.7
Municipal taxes	\$1.0		\$4.4	\$5.2	\$37.3
Total taxes	\$37.0		\$29.0	\$66.0	\$462.3

Over the manufacturing and construction period of seven years (2022-2028), GE’s first SMR would, on average, create \$183 million to GDP, \$161 million in labour income and \$66 million in total taxes in Canada each year, when taking into account direct, indirect, and induced effects.

An average of 1,712 jobs will be sustained in Canada each year of manufacturing and construction.

* Federal and provincial taxes include taxes on products and production, corporate income taxes, and personal income taxes.
** Due to rounding, total impact value may not equal the sum of direct, indirect and induced footprints.



... and over \$1 billion in GDP in Canada over 60 years of ongoing operations

Total economic footprint of **SMR operating period** in Canada over 60 years, discounted, in millions of dollars

Impact: SMR operations	Direct	Indirect	Induced	Total
GDP	\$519.7	\$224.3	\$270.5	\$1,014.5
Employment (FTE, person-years)	6,060	2,530	3,208	11,798
Labour income	\$519.7	\$121.2	\$127.3	\$768.2
Federal taxes	\$108.3		\$49.2	\$157.6
Provincial taxes	\$69.6		\$52.1	\$121.7
Municipal taxes	\$6.8		\$17.2	\$24.1
Total taxes	\$184.8		\$118.6	\$303.4

During ongoing operations of the BWRX-300, GE’s SMR, which will be overseen by OPG, the annual (undiscounted) economic footprint would be \$32 million to GDP, \$25 million in labour income, and \$10 million in total taxes in Canada each year, when taking into account direct, indirect, and induced effects.

An average of 197 jobs will be sustained in Canada each year of ongoing operations.

* Federal and provincial taxes include taxes on products and production, corporate income taxes, and personal income taxes.
** Discounted over 60 years using a real-term discount rate for nuclear plants engineering and construction industry of 2.5%.
*** Due to rounding, total impact value may not equal the sum of direct, indirect and induced footprints.



Any additional BWRX-300 SMR installed in Ontario alongside partners is expected to create a GDP impact of over \$1.1 billion in Canada during the manufacturing and construction phase

Economic footprint of **future Ontario reactor** capex (manufacturing and construction) period in Canada, undiscounted, in millions of dollars

Impact: Future Ontario reactors	Direct	Indirect	Induced	Annual Total	Total over 4 years
GDP	\$154.3	\$47.4	\$77.1	\$278.8	\$1,115.0
Employment (FTE, person-years)	1,140	334	477	1,951	7,803
Labour income	\$116.8	\$29.0	\$36.3	\$182.1	\$728.5
Federal taxes	\$25.4		\$13.1	\$38.5	\$154.1
Provincial taxes	\$18.1		\$14.7	\$32.9	\$131.4
Municipal taxes	\$1.7		\$4.9	\$6.6	\$26.5
Total taxes	\$45.3		\$32.7	\$78.0	\$312.0

Over a manufacturing and construction period of four years, a BWRX-300 SMR installed in Ontario would, on average, create \$279 million in GDP, \$182 million in labour income, and \$78 million in total taxes in Canada each year, when taking into account direct, indirect, and induced effects.

An average of 1,951 jobs will be sustained in Canada each year of manufacturing and construction.

* Federal and provincial taxes include taxes on products and production, corporate income taxes, and personal income taxes.
** Due to rounding, total impact value may not equal the sum of direct, indirect and induced footprints.



Any additional BWRX-300 installed alongside partners elsewhere in Canada is expected to contribute more than \$1.1 billion in GDP during the manufacturing and construction phase

Economic footprint of **future Canadian reactor*** capex (manufacturing and construction) period in Canada, undiscounted, in millions of dollars

Impact: Future Canadian reactors	Direct	Indirect	Induced	Annual Total	Total over 4 years
GDP	\$156.3	\$48.0	\$77.3	\$281.6	\$1,126.5
Employment (FTE, person-years)	1,140	339	478	1,956	7,825
Labour income	\$116.8	\$29.4	\$36.4	\$182.6	\$730.4
Federal taxes	\$25.5		\$13.1	\$38.7	\$154.7
Provincial taxes	\$18.2		\$14.8	\$33.0	\$131.9
Municipal taxes	\$1.7		\$4.9	\$6.6	\$26.6
Total taxes	\$45.5		\$32.8	\$78.3	\$313.3

Over a manufacturing and construction phase of four years, a BWRX-300 installed in Canada outside of Ontario would, on average, create \$282 million in GDP, \$183 million in labour income, and \$78 million in total taxes in Canada each year, when taking into account direct, indirect, and induced effects.

An average of 1,956 jobs will be sustained in Canada each year of manufacturing and construction.

*In a province other than Ontario.
** Federal and provincial taxes include taxes on products and production, corporate income taxes, and personal income taxes.
*** Due to rounding, total impact value may not equal the sum of direct, indirect and induced footprints.



Every BWRX-300 deployed globally is expected to generate \$98 million in GDP for Canada and sustain 217 jobs over 4 years

Economic footprint of **export activity** capex (manufacturing and construction) period in Canada, undiscounted, in millions of dollars

<u>Impact:</u> Export activity	Direct	Indirect	Induced	Annual Total	Total over 4 years
GDP	\$9.2	\$4.2	\$11.2	\$24.5	\$98.2
Employment (FTE, person-years)	120	29	69	217	870
Labour income	\$19.6	\$2.6	\$5.2	\$27.4	\$109.5
Federal taxes	\$3.9		\$1.9	\$5.8	\$23.0
Provincial taxes	\$2.8		\$2.1	\$4.9	\$19.6
Municipal taxes	\$0.3		\$0.7	\$0.9	\$3.8
Total taxes	\$6.9		\$4.7	\$11.6	\$46.4

Over a manufacturing and construction period of four years, the purchase of fuel, reactor machinery and equipment in Canada that will be used for GE’s installation of GE SMRs internationally will, on average, create \$25 million in GDP, \$27 million in labour income and \$12 million in total taxes in Canada each year, when taking into account direct, indirect, and induced effects.

An average of 217 jobs will be sustained in Canada each year of manufacturing and construction.

* Federal and provincial taxes include taxes on products and production, corporate income taxes, and personal income taxes.
** Due to rounding, total impact value may not equal the sum of direct, indirect and induced footprints.
*** Export scenario includes direct labour income in Canada for engineering and management, leading to relatively larger labour income and associated taxes.



Broader benefits of the BWRX-300, GE's SMR



GE's BWRX-300 deployment will have positive economic and social impacts on Ontario and Canada

The benefits of GE's plan to deploy the BWRX-300 go beyond the economic footprint presented in this report. The following slides highlight how it will contribute to the following impacts, starting with its partnership with OPG, and are based on information provided by GE.

1. **Canada fulfilling its climate change commitments** in a cost-effective way through SMR deployment, and through GE's actions to reach net zero emissions for its operations by 2030
2. **Diversity and inclusion** at GE, through its success in increasing representation of women and other marginalized groups in the nuclear sector, and in senior positions, as well as **responsible sourcing practices**
3. **Engagement with Indigenous communities** as part of the SMR deployment, including creating opportunities for employment and suppliers
4. **Skill development** for employees that will enhance safety and technical excellence, and increase the technical skills of workers in Ontario and Canada
5. **Technical excellence** that will enhance concentration of engineering talent and know-how in Ontario and Canada



GE will support Canada's climate change goals by achieving carbon neutrality in its own operations by 2030, and by generating carbon-free nuclear power using the BWRX-300

Key benefits

- GE **contributes to GHG reductions in Canada and globally** through its clean energy businesses that produce wind turbines, hydroelectric equipment, nuclear technology, and grid equipment and software
- GE is targeting net zero emissions by 2030 for its operations through absolute reductions of direct emissions and energy use, achieved using **operational investments, smart power sourcing, and elimination of waste**.
- GE has already made significant progress toward a carbon neutrality commitment; between 2011 and 2019 GE reduced GHG emissions by 21%, **exceeding a goal of 20% reduction** by 2020. GE has also announced an exit from the new build coal power market.
- **Sustainability** is embedded in GE's culture: GE employees use lean to hold site-driven sustainability workouts, identify energy reduction opportunities, and calculate and track the costs and paybacks.



GE's BWRX-300 will be able to provide carbon-free base-load power.

The BWRX-300 can be deployed as early as **2028**, allowing for **accelerated deployment of smart, clean energy** across Ontario and Canada.

GE's BWRX-300 will support making Canada a world leader in clean energy technology and help achieve Canada's commitments to combating climate change.

BWRX-300, GE’s SMR, will support the transition to non-emitting energy sources in other provinces and territories



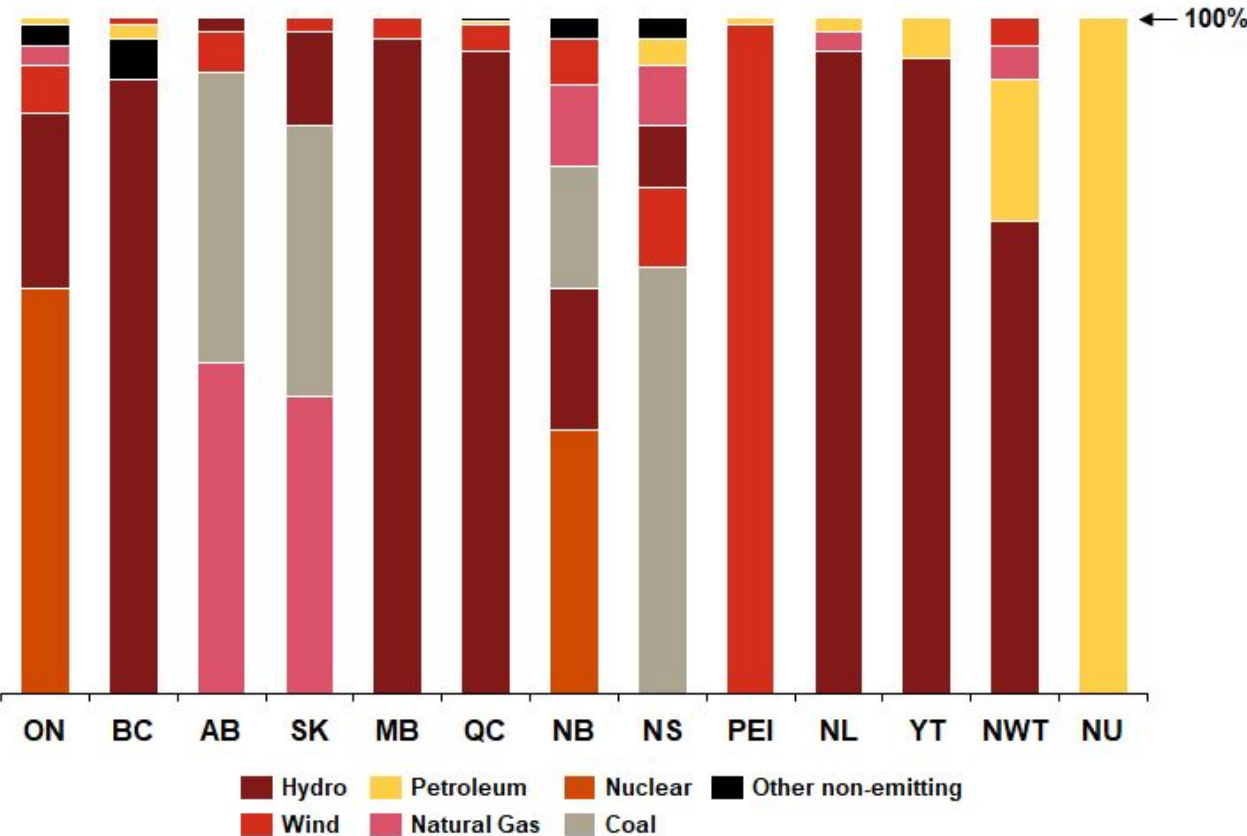
Current power generation

Currently, more than 96% of electricity generation in Ontario is based on non-carbon based sources, with **60% coming from nuclear power** (representing the largest source of the low-carbon energy). In Canada, 82% of the total electricity generation comes from non-GHG emitting sources, while nuclear constitutes **only 15%**¹.

Potential of SMRs

- Implementation of SMR technology will support the Canadian government in its efforts to become **90%** non-carbon emitting for power generation by **2030**, and carbon-neutral by **2050**.
- **Production and operation of SMRs in Ontario can support other provinces in transitioning away from carbon-based power sources** and provide economic and social benefits in Ontario.

Some provinces and territories rely on carbon-emitting sources of electricity



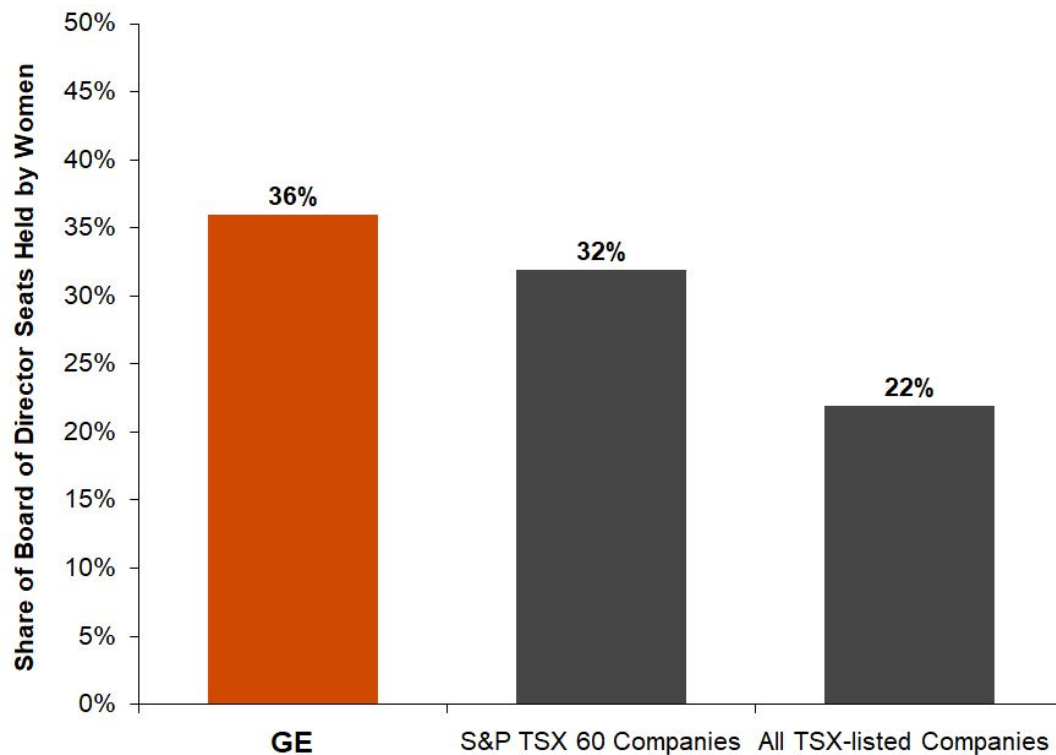
Source for Figure: Canada Energy Regulator. (2021) Provincial and Territorial Energy Profiles - Canada.

1. Energy and Greenhouse Gas Emissions (GHG). Natural Resources Canada.
<https://www.nrcan.gc.ca/science-data/data-analysis/energy-data-analysis/energy-facts/energy-and-greenhouse-gas-emissions-ghgs/20063>



GE promotes gender diversity through higher-than-average representation on its board, creating benefits

GE has higher than average female board representation



Sources for Figure: Osler, Hoskin & Harcourt LLP. 2020 Diversity Disclosure Practices: Diversity and leadership at Canadian public companies, GE Annual Diversity Report 2020.

GE promotes gender diversity through higher representation of women on its Board of Directors compared to other public companies, as shown in the figure to the left.

Gender diversity in leadership roles has a very positive impact on **business performance**. Studies have shown that higher female diversity on boards leads to:

- Higher financial returns
- Better corporate decision-making
- Improved recruiting and brand image
- Employee and client satisfaction¹
- Economic growth and social progress
- Economic security and financial independence for women²

Because women are more affected by poverty due to lower labour force participation and gaps in wage levels, increased female participation can also have a broad, positive effect on the wellbeing of Canadian society.

1. Canadian Women's Foundation.

2. "The Power of Parity: Advancing Women's Equality in Canada." McKinsey Global Institute Report, June 2017

GE's plan to deploy the BWRX-300 presents an opportunity to increase female participation in technical and engineering fields



GE works to advance gender equality, and the targets set for a fair balance between men and women within GE Hitachi include:

- **20%** female representation for 2021 (up from the current ratio of 17%)
- **50%** female hires by 2030
- **<1%** female voluntary attrition¹
- **30%** female promotions¹

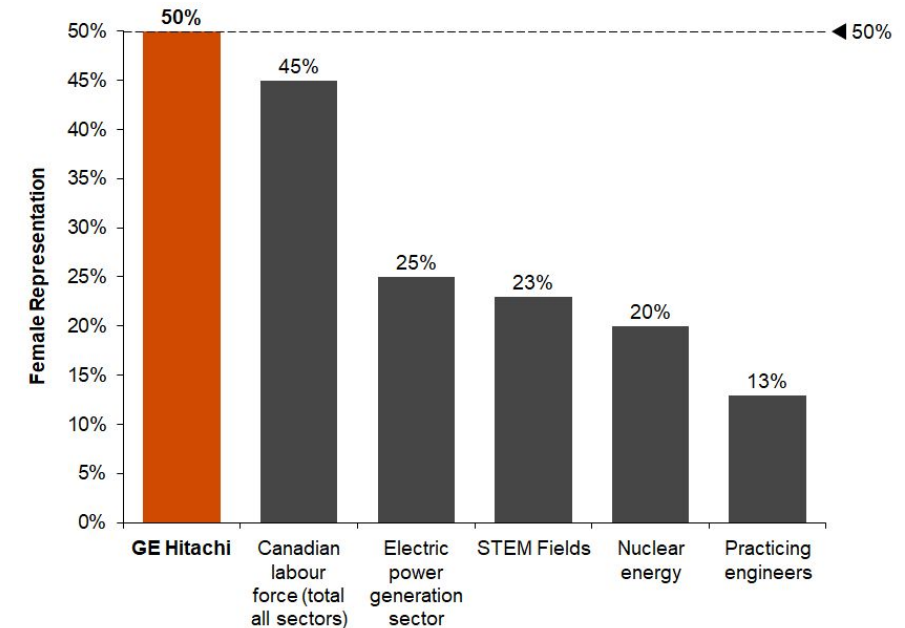
Women in GE Hitachi and Engineering

To promote opportunities for women and encourage female participation in STEM:

- GE Hitachi hosts an annual **Girls in Technology Summit**
- In 2019, **GE Women's Network** funded 15 **Society of Women Engineer Scholarships** of \$5,000 each for female post-secondary students in STEM fields.
- In 2020, GE Women's Network raised over \$37,000 for women pursuing careers in STEM.
- GE Hitachi is active in the **Equal by 30** Campaign, aiming to achieve a **50%** female workforce by 2030, supporting **equal pay, opportunities and leadership** for women in clean energy.

These initiatives will have direct benefits for Canada and Ontario through GE's deployment of the BWRX-300.

The extended GE Hitachi leadership team is 50% female, which is significantly above industry benchmarks



Sources for Figure: Statistics Canada; Engineers Canada; Women in Nuclear (WiN) Canada; GE 2020 Annual Diversity Report..

GE actively works to support a culture of integrated diversity for its employees and suppliers



Supplier diversity

In 2020, GE Hitachi spent over **US\$46.8 million**, or **16%** of its total supplier spend, on goods and services from diverse suppliers; that is, suppliers that are:

- Small businesses
- Minority owned
- Women owned
- Veteran owned
- Service disabled veteran owned
- Businesses participating in the HubZone program (small businesses operating in underutilized business areas)

Workers with disabilities

GE has developed a **Disability Advocacy Network (DAN) employee program**. In GE Hitachi, the DAN program aims to create a culture of recruiting, promoting and retaining of employees with disabilities, which **would be available to employees supporting GE's deployment of the BWRX-300 in Canada**.

Main focus areas include the following initiatives:

- **Promoting hiring and retaining initiatives** of people with disabilities;
- Creating **accessible workplaces** for people with disabilities, as well as to **develop resources** which will allow them to achieve high performance;
- **Increasing awareness and educate business leaders** about challenges faced by people with disabilities.



The initiatives that led to GE's diverse supplier and employee profile would also be part of GE's deployment of the BWRX-300 in Canada, ensuring that benefits are spread equitably.



GE works to improve racial and ethnic diversity in its workforce by setting targets and tracking performance

GE Hitachi has the following targets for 2021 to ensure a diverse and inclusive workforce:

- 50% ethnic minority hires
- <1% ethnic minority voluntary attrition²
- 30% ethnic minority promotions²

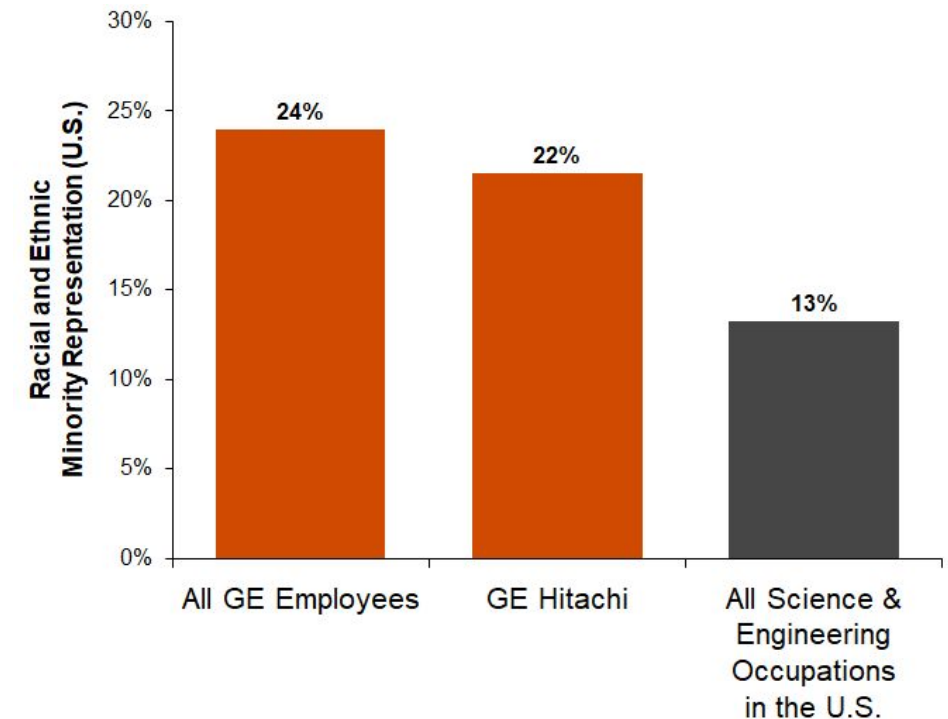
GE works to increase external hiring of racial and ethnic minorities for leadership positions, through:

- **Proactive recruiting of diversity**
- **Enhancing reactive processes**
- **Building value proposition**
- **Planning and resource with diversity as a priority**
- **Breaking down barriers**

Key initiatives associated with GE's deployment of the BWRX-300 include:

- GE Hitachi's **Diversity Week**, composed of workshops, panels and activities focused on strengthening GE's culture of diversity and inclusion.
- **Inclusion and Diversity Advisory Council**, comprised of GE Canada employees representing the diverse Canadian employee base.
- A pledge with the **BlackNorth Initiative**, increasing its efforts to recognize and address anti-Black systemic racism in Canada.

GE has higher than average racial and ethnic minority representation in its GE Hitachi workforce in the U.S.



Sources for Figure: NCSES, 2017 NSCG; Census Bureau, 2017 ACS public use microdata; GE Annual Diversity Report 2020.



GE is committed to providing opportunities for Indigenous employees, suppliers and service providers through the deployment of the BWRX-300

GE believes in establishing strong relationships with Indigenous communities and is committed to **partnering, engaging and collaborating** with those communities. GE has a **proven track record** of working successfully with Indigenous communities in Canada, having previously collaborated with First Nations in British Columbia on a wind farm project.¹ **Through its manufacturing and construction of the BWRX-300, GE will work to find opportunities with Indigenous suppliers and service providers.** In addition, GE is exploring near-term opportunities to develop nuclear experience for Indigenous workers.

Furthermore, GE is also committed to ensuring the company has the appropriate internal, education and awareness on:

- The **history** of Indigenous people in Canada;
- **Recognition of treaties** in Canada;
- **Traditions**;
- **Reconciliation** – the history and the importance of Canada's commitment to reconciliation and GE's responsibility for actions toward reconciliation;
- **Culture and cultural practices**;
- **Cultural events and celebrations** of the community or communities GE will be engaging with;
- **Lessons learned**: how to not repeat past mistakes, especially within the energy industry.

GE employees participate in Indigenous knowledge training.

As a part of the BWRX-300 development and deployment process, GE has conducted benchmarking on Indigenous engagement with Canada's Nuclear Waste Management Organization (NWMO).

In addition, in November 2020, GE Hitachi participated in a webinar hosted by the Canadian Council for Aboriginal Business (CCAB) to encourage **Indigenous participation in the Canadian production and supply-chain activities of GE's BWRX-300.**

GE's proven track record of skills training supports efficient and safe operations and provides opportunities for employees



GE's first of a kind BWRX-300 is expected to create 1,099 direct annual jobs during the manufacturing and construction phase and 101 direct jobs during ongoing operations. Many of these roles will involve skills training that helps employees conduct their jobs efficiently and safely.

GE has a **proven track record of successful skill development initiatives** for boiling water reactor (BWR) technology.

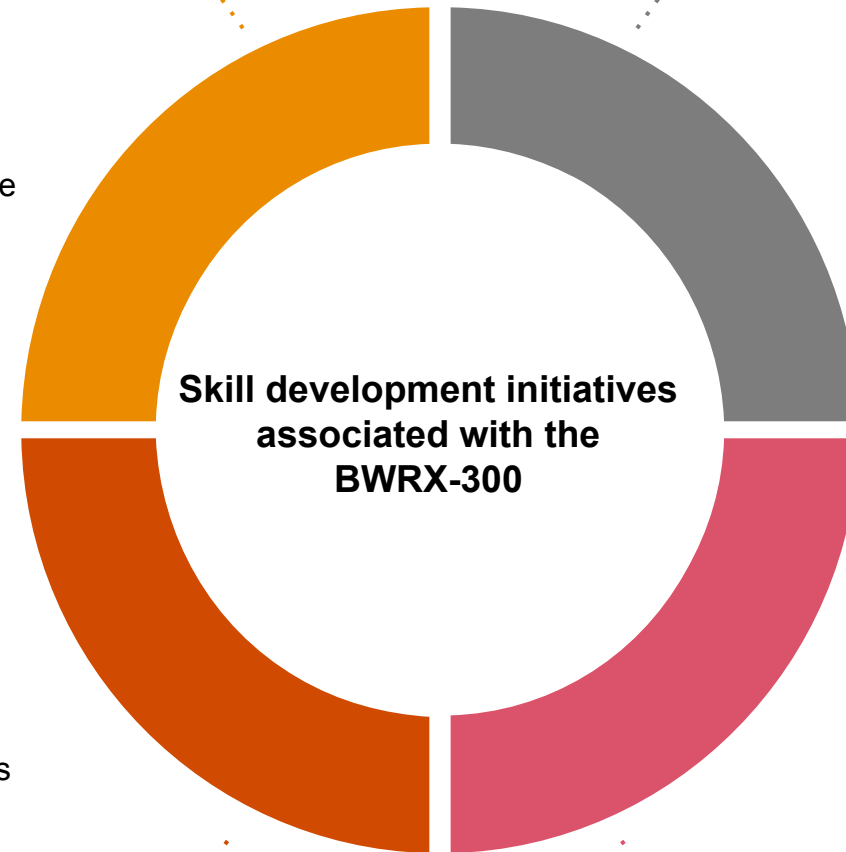
The initiatives are expected to add to the technical knowledge of GE's employees and to **increase the pool of workers in Canada who are qualified to work in the nuclear sector.**

Cutting-edge nuclear training

- A mature training, operations, and maintenance system
- A **global pioneer in using virtual reality** for training in the nuclear sector

Partnerships with educational institutions

- Developing working relationships with McMaster University, Queen's University, the University of Ontario Institute of Technology, the Royal Military College, the University of Regina, the University of Saskatchewan.
- Past collaborations with colleges local to GE operations have included on-the-job training for coop students



Customer training

- A successful Field Engineering Training Program for mid-level career employees at utilities including OPG
- This program has a **proven track record** in Japan and is expected to be applied with the BWRX-300

Leadership training

- Nuclear-specific training for early career individuals in leadership skills
- BWR training for executives and upper management

GE will contribute to the development of technical excellence in Canada by leveraging its decades-long track record in the global nuclear sectors and BWR technology

GE’s long history of technical excellence in the nuclear sector has created significant know-how that will contribute to the safety and efficiency of SMR operations in Canada, and will create a strong base of engineering expertise in Ontario.

Key features of GE Hitachi

1,538	Number of active nuclear patents held by GE globally, with another 256 pending (14 active and 18 pending in Canada)
14	Average years of experience of a GE Hitachi engineer
4,155	Combined years of experience of GE Hitachi engineers
25 years	Length of membership in Carolina Star, a government program that recognizes GE Hitachi’s global headquarters as an employer with effective safety and health management systems and that maintains injury and illness rates at least 50 percent below industry rates.

What it means for Ontario and Canada

- 1

Safe operations for employees and communities
- 2

Opportunities for R&D development as BWRX-300 is commercialized, both in-house and through partnerships
- 3

Concentration of engineering talent, leading to spillover benefits for suppliers and peers

The BWRX-300's project leadership has decades of collective experience in the nuclear sector...

Lisa McBride, Canadian Country Leader, SMRs



Lisa McBride is the Canadian Country Leader for GE's SMRs. She brings 18 years of experience in a wide range of roles in the nuclear industry in Canada.

Lisa is the president of Women in Nuclear (WiN) Canada, chair of the Women for STEM Council at Ontario Tech University and a member of the Board of Directors for the Canadian Nuclear Association. In this role she will collaborate with Canadian customers, stakeholders, suppliers and partners in GE's pursuit to bring the first grid-scale SMR to market by 2028.

Jon Ball, Executive Vice President, Advanced Nuclear



Jon has been a leader in the nuclear industry for nearly 30 years and has a wide-range of experience in manufacturing, global operations, services, quality and P&L leadership.

Jon previously served as Senior Vice President, Global Supply Chain, where he led more than 1,000 employees worldwide in manufacturing and logistics. Jon also spent seven years with Global Nuclear Fuel, a joint venture majority owned by GE, serving in several positions including global supply chain leader, quality manager and lab manager. Jon's deep experience will support the development of world-class operations in Ontario.

“

With the establishment of our Canadian SMR business we look forward to building on this legacy and bringing the world's first grid-scale SMR to Canada, positioning Ontario as a hub for SMR technology.

- Jon Ball

... contributing to world-class technical quality

Suzanne Karkour, Canadian Product Regulatory Affairs Manager



In her role, Suzanne will oversee the licensing of new products including managing strategic efforts to accelerate deployment of the BWRX-300.

Suzanne joins GE Hitachi from the Canadian Nuclear Safety Commission and brings 10 years of extensive expertise in understanding and applying the Canadian regulatory framework. Suzanne also served as Senior Advisor, Regulatory Projects for Ontario Power Generation, New Nuclear Development.

Gerry Goldner, OPG Project Director



Gerry is the Project Director for GE's SMR opportunity with OPG. He has worked for over 13 years in engineering and project management roles for GE Hitachi and GE Nuclear in the U.S. and in Asia.

Previously, Gerry worked for 10 years at Hitachi, Ltd, including in operations management, project management, and business management, including in Japan. Earlier in his career, he worked for Exelon Corporation, the largest operator of nuclear power plants in the United States – at the Limerick Generating Station.

GE is positioned to support Canada's path to SMR leadership...



Natural Resources Canada's SMR Roadmap Statement of Principles lays out six actions Canada needs to take to become a global leader in SMR technology

#	Intention	PwC assessment of potential GE impact	Main GE contributions
1	Development, deployment and operation <i>"Act together and within our jurisdictions and areas of authority to support the development and deployment of various SMR technologies in Canada, with first units in operation by the late 2020s."</i>	HIGH <i>GE's SMR deployment would be the first-to-market commercial, scalable and proven SMR demonstration in Canada</i>	<ul style="list-style-type: none"> GE's BWRX-300 has the potential to be deployed by 2028, and in operation quicker than competitor technologies. GE is the only technology partner with an existing global installed base of reactors. GE is able to reach demonstration of SMR technologies at multiple sites.
2	International influence <i>"Unite as 'Team Canada' to engage international partners to seize export opportunities, influence international standards and secure investments in Canada's future."</i>	HIGH <i>GE's global market presence and reputation would be a key factor in promoting and developing Canada as an export base for SMRs around the world</i>	<ul style="list-style-type: none"> GE Hitachi specifically is a global leader in nuclear services, with successful establishments in Europe, North America and Asia. More than 65 GE and GE Hitachi reactors have been built in 10 different countries. GE's strong network among industry and nuclear organizations can be leveraged to establish strategic partnerships both locally and internationally.

... through alignment with the Government of Canada's goals for SMR Roadmap Statement of Principles...



#	Intention	PwC assessment of potential GE impact	Main GE contributions
3	Clean energy integration <i>"Seek out opportunities to integrate SMRs with other clean energy sources, storage technologies and applications to accelerate Canada's low-carbon future."</i>	MODERATE <i>GE's long-standing experience in renewable energy technologies enables potential synergies between electricity produced by SMRs and global decarbonization goals, for example by using hydrogen</i>	<ul style="list-style-type: none"> GE's deep experience in clean energy technologies (e.g. wind, hydro equipment, grid equipment, and grid software) provide opportunities for clean energy integration. GE Hitachi's location in Ontario can be a base that produces SMRs to help other provinces transition away from carbon-emitting electricity sources, and commercial readiness by 2028 accelerates the timeline for this transition. GE has three patents showing how electricity generated by nuclear reactors can be used to produce hydrogen. GE sees hydrogen as a long-term enabler for deep and sustained decarbonization across multiple sectors. GE has engaged with the government of Ontario in the development of its "Ontario Low-Carbon Hydrogen Strategy Discussion Paper."
4	Safe waste management <i>"Pursue opportunities to minimize nuclear waste and potentially reuse nuclear fuel, complementing Canada's existing practices for safe, long-term management of radioactive waste."</i>	HIGH <i>GE has decades of experience and safety records in nuclear waste management techniques and processes, that are easily transferable to SMRs</i>	<ul style="list-style-type: none"> GE has proven abilities to manage nuclear waste. GE has acquired new techniques and services for decommissioning and dismantling nuclear energy plants and equipment.

... which will build on Canada's strengths to help it become an SMR leader



#	Intention	PwC assessment of potential GE impact	Main GE contributions
5	Diversity and inclusion <i>"Strengthen diversity and representation in the nuclear industry through greater inclusion of women, minority communities and youth, and exploring meaningful and long-term economic partnership opportunities with Indigenous, rural, remote and northern communities."</i>	MODERATE <i>GE performs above industry averages on diversity and inclusion at the staff and leadership levels</i>	<ul style="list-style-type: none"> • Deployment of the BWRX-300, combination with other GE diversity and inclusion initiatives, has significant opportunity to increase female participation in STEM fields and the nuclear sector. • Deployment of the BWRX-300 will provide opportunity for Indigenous-owned businesses, suppliers, and subcontractors to partner with GE • Proven track record of public confidence and stakeholder engagement, particularly Indigenous engagement
6	Leverage Canada's strengths <i>"Leverage Canada's extensive capabilities in academia, research, engineering and manufacturing in the deployment and export of SMRs."</i>	HIGH <i>GE is significantly involved with Canadian suppliers and research institutions</i>	<ul style="list-style-type: none"> • Deployment of the BWRX-300 will both leverage and significantly contribute to the manufacturing supply chain in both Canada and Ontario by purchasing equipment and materials from local suppliers. • Leveraging Canada's strength in academia, GE has close partnerships with Canadian post-secondary institutions. • Leveraging Canada's R&D strengths to conduct the research required to bring the BWRX-300 to commercial readiness.

GE as a vendor is well-prepared to support power utility partners of the SMR Action Plan and Roadmap. GE's SMR technology is suited to pursue the Government of Canada's interests in **clean energy, economic development, and innovation.**



Appendices

Appendix A: Limitations

Receipt of new data or facts: PwC reserves the right at its discretion to withdraw or revise this report should we receive additional data or be made aware of facts existing at the date of the report that were not known to us when we prepared this report. The findings are as of May 2021 and PwC is under no obligation to advise any person of any change or matter brought to its attention after such a date that would affect the findings.

Information verification: All the technical, financial and projected data/information related to the BWRX-300 Small Modular Reactor was provided by GE. In addition, PwC has relied on GE for information about its operations, including on diversity and inclusion, environmental commitments, Indigenous inclusion, skill development, and technical abilities. PwC has not verified this information.

Technology assessment: We are not technical experts and are not in a position to assess the technical aspects of the BWRX-300 Small Modular Reactor. Thus, any statement in this report regarding the technical aspects of the BWRX-300 Small Modular Reactor reflects our understanding based on discussions with GE.

Input-output analysis: Input-output analysis (a model used to estimate GDP and employment impact) does not address whether the inputs have been used in the most productive manner or whether the use of these inputs in this industry promotes economic growth by more than their use in another industry or economic activity. Nor does input-output analysis evaluate whether these inputs might be employed elsewhere in the economy if they were not employed in this industry at the time of the analysis. Input-output analysis calculates the direct, indirect and induced economic impacts that can reasonably be expected to affect the economy based on historical relationships within the economy. This analysis does not take into account fundamental shifts in the relationships within the economy that may have taken place since the last estimation of multipliers by Statistics Canada, nor shifts that may take place in the future.

Use limitations: This report has been prepared solely for the use and benefit of, and pursuant to a client relationship exclusively with GE Canada. We understand that General Electric Canada may share this report with third parties. GE Canada can release this report to third parties only in its entirety and any commentary or interpretation in relation to this report that GE Canada intends to release to the public either requires PwC's written consent or has to be clearly identified as GE Canada's own interpretation of the report or GE Canada is required to provide a link to the full report. PwC accepts no duty of care, obligation or liability, if any, suffered by GE Canada or any third party as a result of an interpretation made by GE Canada of this report.

Further, no other person or entity shall place any reliance upon the accuracy or completeness of the statements made herein. In no event shall PwC have any liability for damages, costs or losses suffered by reason of any reliance upon the contents of this report by any person other than GE Canada.

Appendix A: Limitations

This report and related analysis must be considered as a whole: Selecting only portions of the analysis or the factors considered by us, without considering all factors and analysis together, could create a misleading view of the findings. The preparation of this analysis is a complex process and is not necessarily susceptible to partial analysis or summary description. Any attempt to do so could lead to undue emphasis on any particular factor or analysis.

We note that significant deviations from the above listed major assumptions may result in a significant change to this analysis.

Appendix B: Input-output methodology

Input-Output modelling: overview

The fundamental philosophy behind economic impact analysis is that spending on goods and services has attendant impacts throughout the economy. For instance, mining will generate demand for the inputs to this process (such as tools and labour) that in turn generates additional demand that extends beyond the initial spending. This analysis permits the estimation of this cascading effect by using the input-output model of the Canadian economy.

Spending used for the economic footprint assessment is the GE's spending on capital expenditure and operating expenditure associated with the development and manufacturing of the BWRX-300 in Ontario.

The input-output model used for the purpose of this report estimates the relationship between economic activity for a given good or service and the resulting impacts throughout the economy (including demand for other goods and services and tax revenues). For the purpose of this report, economic impacts were estimated for the following measures of economic activity:

- **GDP** – the value added to the economy, or the output valued at basic prices less intermediate consumption valued at purchasers' prices. GDP includes only final goods to avoid double counting of products sold during a certain accounting period.
- **Employment** – the number of FTE jobs created or supported.
- **Labour income** – the amount earned by the employment expected to be generated from existing operations.
- **Government revenue** – the amount of revenue collected by the provincial, local and federal government. It includes personal and corporate income taxes collected on a provincial level and territorial, as well as other direct and indirect taxes.

Economic footprint was estimated at the direct, indirect and induced levels:

- **Direct impacts** are those that result directly from the company's expenditures on labour and capital as well as gross operating profits.
- **Indirect impacts** arise from the activities of the firms providing inputs to the company's suppliers (in other words, the suppliers of its suppliers).
- **Induced impacts** are the result of consumer spending by employees of the businesses stimulated by direct and indirect expenditures.

The input-output model used for the purpose of this assessment is the Statistics Canada model.

Appendix B: Input-output methodology

Input-Output modelling: corporate income tax adjustment

Statistics Canada's Input Output model does not calculate corporate income tax. To calculate the corporate income tax associated with the economic footprint of GE's BWRX-300, PwC used a combination of results from the Input Output model and secondary data. The Input Output model provides gross operating surplus from the economic footprint, which is used as a proxy for profit. PwC applied the ratio of gross operating surplus to corporate income tax paid in the overall economy in order to estimate the corporate income tax paid. Gross operating surplus is from Statistics Canada. Table 36-10-0221-01 Gross domestic product, income-based, provincial and territorial, annual (x 1,000,000), and corporate income tax paid is from Statistics Canada Table 36-10-0450-01 Revenue, expenditure and budgetary balance - General governments, provincial and territorial economic accounts (x 1,000,000).

Input-Output modelling: personal income tax adjustment

Statistics Canada's Input Output model does not calculate personal income tax. PwC estimated personal income tax paid on labour income that is part of the economic footprint using the ratio of personal income tax to labour income in the economy. Direct labour income (i.e. for employees of GE) was estimated by GE. Indirect and induced labour income is provided by the Input Output model. Labour income and personal income tax paid is sourced from Statistics Canada. Table 36-10-0224-01 Household sector, current accounts, provincial and territorial, annual (x 1,000,000). This approach takes into account deductions and credits that may reduce an individual's personal income tax paid (vs using the statutory rate).

Appendix C: First-of-a-kind Economic footprint results for Ontario



GE's first SMR is expected to create a GDP impact of over \$1 billion in Ontario during the manufacturing and construction phase...

Economic footprint of **First-of-a-kind** capex (manufacturing and construction) period in Ontario, undiscounted, in millions of dollars

Impact	Direct	Indirect	Induced	Annual Total	Total over 7 years
GDP	\$70.7	\$18.3	\$57.8	\$146.8	\$1,027.5
Employment (FTE, person-years)	1,099	131	354	1,584	11,090
Labour Income	\$112.7	\$11.4	\$26.9	\$150.9	\$1,056.4
Federal taxes	\$21.1		\$10.9	\$32.0	\$224.1
Provincial taxes	\$12.8		\$11.7	\$24.6	\$172.1
Municipal taxes	\$0.7		\$4.0	\$4.7	\$33.0
Total taxes	\$34.6		\$26.7	\$61.3	\$429.2

Over the manufacturing and construction period of seven years (2022-2028), GE's first-of-a-kind BWRX-300 would, on average, create an annual footprint of \$147 million in GDP, \$151 million in labour income and \$61 million in total tax revenue in Ontario each year, when taking into account direct, indirect, and induced effects.

An average of 1,584 jobs will be sustained in Ontario each year of manufacturing and construction.

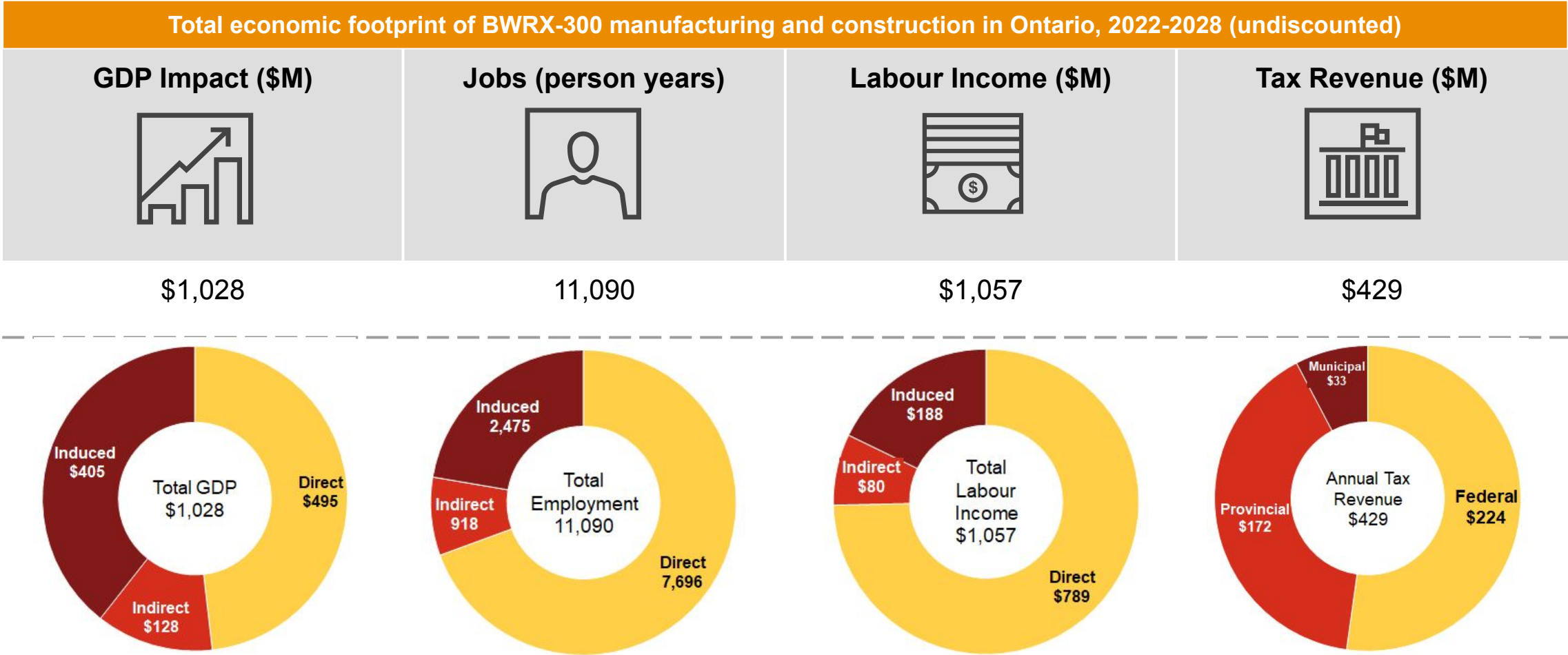
* Federal and provincial taxes include taxes on products and production, corporate income taxes, and personal income taxes.

** Due to rounding, total impact value may not equal the sum of direct, indirect and induced footprints.

Appendix C: First-of-a-kind Economic footprint results for Ontario



... and \$429 million in tax revenue in Ontario



Source: PwC analysis

¹ 11,090 person years is equivalent to 1,584 jobs sustained over seven years. Jobs are expressed as full-time equivalents.

Appendix C: First-of-a-kind Economic footprint results for Ontario



Over 60 years of ongoing operations, GE's first SMR is expected to generate an total GDP impact of over \$900 million in Ontario...

Total economic footprint of **SMR operating period** in Ontario over 60 years, discounted, in millions of dollars

Impact	Direct	Indirect	Induced	Total over 60 years
GDP	\$519.1	\$172.0	\$226.7	\$917.8
Employment (FTE, person-years)	6,060	2,040	2,640	10,740
Labour Income	\$494.7	\$96.1	\$105.5	\$696.2
Federal taxes	\$101.9		\$42.9	\$144.8
Provincial taxes	\$64.4		\$46.1	\$110.4
Municipal taxes	\$5.7		\$15.8	\$21.5
Total taxes	\$171.9		\$104.8	\$276.7

During ongoing operations of the SMR, which will be overseen by OPG, the annual economic footprint (undiscounted) would be \$29 million in GDP, \$22 million in labour income, and \$9 million in total taxes in Ontario each year, when taking into account direct, indirect, and induced effects.

An average of 179 jobs will be sustained in Ontario each year of ongoing operations.

* Federal and provincial taxes include taxes on products and production, corporate income taxes, and personal income taxes.





** Discounted over 60 years using a real-term discount rate for nuclear plants engineering and construction industry of 2.5%.

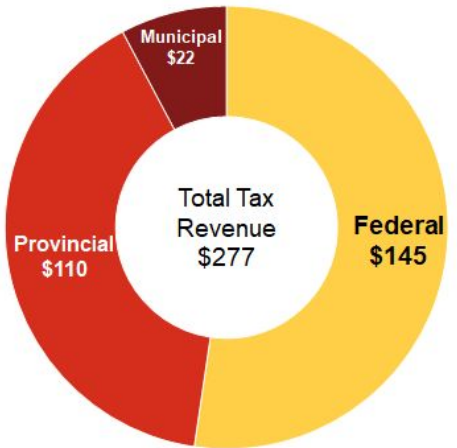
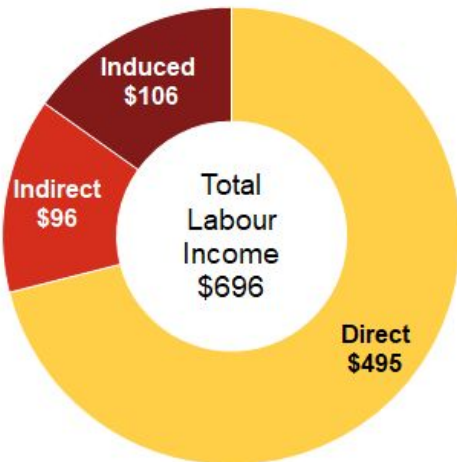
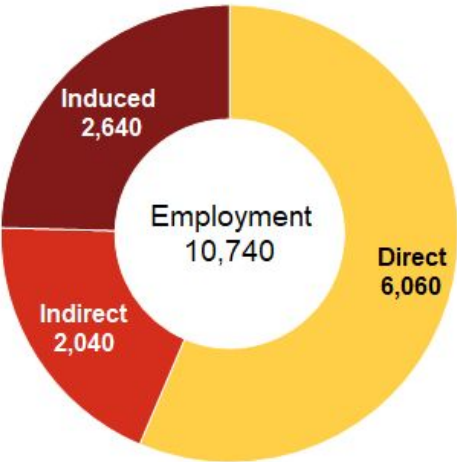
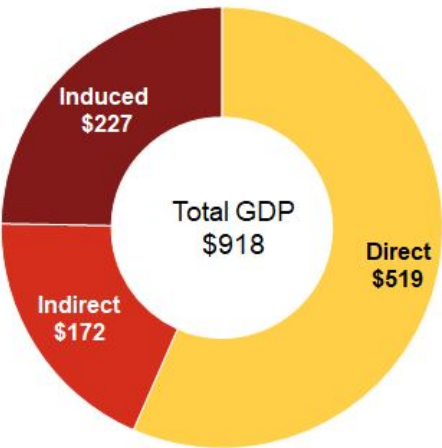
***Due to rounding, total impact value may not equal the sum of direct, indirect and induced footprints.

Appendix C: First-of-a-kind Economic footprint results for Ontario



.... and sustain a total of 179 jobs each year

Economic footprint of BWRX-300 operations in Ontario (60 years, discounted)			
GDP Impact (\$M)	Jobs (person years) ¹	Labour Income (\$M)	Tax Revenue (\$M)
			
\$918	10,740	\$696	\$277



Source: PwC analysis

¹ 10,740 person years is equivalent to 179 jobs sustained over sixty years. Jobs are expressed as full-time equivalents.