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Canada's Role in the Coming Resource Boom

A. Introduction

Imagine a world where Artificial Intelligence (AI) reshapes many of our decisions, robots revolutionize industries, and electric vehicles (EVs) dominate our highways. This isn't science fiction anymore—it's our fast-approaching reality, and it's a reality that is ravenous for power. An enormous surge in global energy demand is looming, one poised to last for decades, fueled by breakthroughs in AI, digitization, cryptocurrencies, robotics, and EVs. We're on the brink of an energy revolution that will ignite a massive resource boom. This escalating hunger for power will test our resolve to produce and mine the resources necessary to meet this massive increase in demand and build the required large-scale infrastructure projects. Let's take a few moments to unpack the core drivers of this shift before turning our focus to Canada and asking the question: how does Canada fit into this resource renaissance?

1. Key Drivers of Energy Demand Increase

The primary catalysts for this energy boom are technological advancements that are reshaping our economies and societies. Let's look at three areas that are driving a large increase in the demand for energy.

(a) AI and Data Centres

AI is growing exponentially. This includes tools like chatbots and image generators that people use every day. These require massive amounts of computational power.

The Role of Data Centres

- Data centres are the main infrastructure supporting AI and digitization, they handle the heavy lifting for running the AI models.

Projected Electricity Use Due to Data Centres.

- By 2030, data centers' electricity consumption could double to 945 terawatt-hours (TWh), from a baseline in 2024, which is enough to power 90 million average U.S. households for a full year

Impact in the U.S.

- Currently, data centers use about 4% of U.S. electricity.
- By 2030, this could rise to 9%.

Long-Term Global Outlook

- In 2035, data centers are projected to use 4.5% of total global power.
- By 2050, this could increase to 9%. The US currently has 45% of world's data centres (5,426 out of a global count of 12,000). The percentage is expected to increase and hold firm at 55% (50,000 out of a global count of 90,000).
- By 2050 data centres would require the current electricity use of a country like Japan which is the 5th largest economy in the world.



- **Interesting Tidbit:** In 2023, Microsoft and Meta consumed a combined 10.9 billion liters of water. AI factories need 3-4x the water of traditional data centers. Chat-GPT has to "drink" a 500mL water bottle to write a 100-word email. (Marin Katusa)

(b) Digitization and Robotics

Digitization across industries, cloud computing for streaming services, IoT sensors in smart homes and appliances, and smart manufacturing for cheaper consumer products will dramatically increase our energy needs. The number of connected IoT devices is projected to hit 30 billion by 2030. Robotics used in automation, logistics and healthcare (such as surgical assistants) along with industrial electrification will drive up energy demand.

The total number of robots worldwide could grow from ~50 million in 2025 to billions by 2055, driven by humanoid robots in homes, factories, and services. Connected devices alone could drive up to 2,300 TWh of global electricity use by 2040, equivalent to powering over 200 million households annually.

(c) Electric Vehicles and Other Technologies (Cryptocurrencies)

EVs are a major driver, with global sales expected to reach 65% of new cars by 2050 and fleets expanding to over 1 billion vehicles; an average EV needs 2,500-4,000 kWh per year, similar to running a household's major appliances non-stop for a year.

The International Energy Agency notes AI and EVs as key factors in surging electricity use over the next two decades. Total Electricity Demand in 2025 is estimated at 31,900 TWh growing to 58,400 TWh in 2050 assuming modest Net Zero adoption. If we pursue aggressive Net Zero adoption we could need up to 80,200 TWh (2.5 times current electricity demand).

2. Total Projected Energy Needs to 2050 by Source

Global Energy Consumption: 2025 vs. 2050 Projections

Actual in 2025

- Total primary energy use is about 640 EJ (exajoules)¹ in 2025. This needs grows at 2-3% per year.
- **Breakdown:** Fossil fuels (oil, gas, coal) make up ~80%. Renewables (hydro, solar, wind) are 15-20%. Nuclear is ~5%. Hydrogen is very small.

Projected in 2050

- Total energy demand grows modestly to 725-800 EJ, a 15-25% increase from today.
- **Key shift:** Electricity demand nearly doubles from ~31,900 terawatt-hours (TWh) today to 58,000-80,000 TWh (3-4% annual growth).
- **Oil and gas still dominate at 60-67% share**, similar to today in absolute terms. Most estimate we will still need 100 million barrels a day.
- **Renewables grow quickly starting from a small base.** This includes nuclear as a baseload power and hydrogen.

¹ 1 exajoule is 1 quintillion joules or 10 to the power of 18 joules.



3. High-Demand Metals Driven by Data Centers and Growth in Energy

Overview of Critical Metals Demand Surge

The large increase in the demand for energy will spike demand for key metals and minerals.

- **Overall Projections (IEA Sustainable Scenario):** Demand for energy transition minerals in some cases are expected to grow by 6x from 2025 to 2050.
- **AI/Data Centers Impact:** Adds 3-5% annually to copper demand by 2050; this will strain other metals needed for cooling, servers, and power backups. At 3% annual growth we will need 80% more copper to be produced annually in 20 years.
- **Nuclear Power Role:** Uranium is poised for substantial growth from 2025 to 2050, driven primarily by the global push to triple nuclear energy capacity, supported by 30 countries and tech giants, Microsoft, Google and Amazon. From current global demand of 65,000 -70,000 metric tons annually in 2025 this is expected to rise to over 200,000 metric tons in 2050.

4. Key Metals and Simplified Growth Projections

Here's a summary of the projected demand growth for each metal using 2024 as the baseline and estimating the growth by 2050.

- Cobalt - 100%
- Copper - 50-80%
- Graphite - 250-300%
- Lithium - 600% plus
- Nickel - 100%
- Rare Earths - 200%
- Silver - 100%
- Uranium - 200%

5. Conclusion

In essence, advancements in AI, digitization, electric vehicles, robotics, and other technologies such as cryptocurrencies will fuel an extraordinary surge in energy needs, necessitating a diverse blend of oil and gas (LNG), renewable sources, nuclear power, and hydrogen. Urgent grid overhauls, valued in the trillions, are essential, coupled with a massive increase in the demand for key metals such as lithium, nickel, silver, and copper. As thousands of new data centers emerge, targeted investments in supply chains and cutting-edge innovations are vital to secure a sustainable path forward.

A. Where is Canada?

Canada is a nation of staggering natural abundance, blessed with immense resource wealth. This divine endowment testifies to its providential favour, with God's provision evident across the landscape. Beyond its third-largest oil reserves in the world, 20% of global freshwater, the fourth largest hydropower capacity in the world and vast timberlands, one must consider the sheer scale and strategic importance of these blessings and so many more.



The Canadian Shield, that magnificent geological creation covering nearly half the country, is a veritable vault of mineral wealth. It is one of the world's richest sources of nickel, cobalt, copper, zinc, and diamonds, the very building blocks of modern industry and technology.

The province of Saskatchewan alone possesses over half of the world's high-grade uranium reserves, a critical resource for both energy and national security in an uncertain world. The longest coastline provides sustainable seafood for exports, matched by prairie agriculture as a global breadbasket, yielding wheat, canola, and pulses for food stability. With the second-largest landmass, Canada has abundance of room for growth and pristine wilderness, a rare inheritance for prosperity and strength, awaiting wise stewardship.

1. The Impact of Canadian Legislation and Regulations on the Resource Sector

Over the past decade, under the Liberal government led by Prime Minister Justin Trudeau and now by Prime Minister Mark Carney, a series of environmental, climate, and investment policies have reshaped the landscape for Canada's resource industries—including oil, gas, mining, and related sectors. While these measures are often promoted as steps toward sustainability, reconciliation with Indigenous peoples, and national security, critics from industry, think tanks like the Fraser Institute and Macdonald-Laurier Institute, argue they have created insurmountable barriers. These include increased regulatory complexity, prolonged approval timelines, heightened uncertainty, and escalating costs, ultimately deterring capital investment and stifling economic growth. Let's examine the major laws and regulations implemented between 2015 and 2025, along with their impacts on capital inflows and Canada's GDP during the last decade. We'll also review forward-looking estimates and the consequences for the labour market and job creation over these same periods.

2. Key Legislation and Regulations Overview

To understand the damaging impact, we must first examine the core policies implemented since 2015. These have cumulatively transformed Canada's resource sector from a global investment magnet into a cautionary tale of regulatory overreach.

First, the Impact Assessment Act (IAA) and Canadian Energy Regulator Act, part of Bill C-69 in 2019 and amended in 2024. This overhauled federal environmental assessments, replacing older frameworks with broader criteria encompassing climate change, social, health, and economic impacts. It mandated extensive Indigenous consultations and granted ministerial discretion in approvals. The result? Project review timelines ballooned, introducing politicization and veto powers. Capital spending in energy and mining plummeted, with projects canceled.

Second, the Oil Tanker Moratorium Act (Bill C-48) in 2019. This banned tankers carrying over 12,500 metric tons of crude or persistent oils along British Columbia's north coast. This restricted export routes for Western Canadian oil to lucrative Asian markets, undermining projects and eroding market access.

Third, the Arctic Offshore Oil and Gas Moratorium, announced in 2016 and extended in 2023 to at least 2028. This imposed an indefinite ban on new exploration licenses in Arctic waters. This froze development in resource-rich areas, halting potential investments due to abrupt policy shifts.

Fourth, the Clean Fuel Regulations Act passed in 2022. This requires fuel producers to cut carbon intensity by 15% by 2030 through credits, biofuels, or tech investments. This adds compliance costs and raises operational expenses.

Fifth, the 2023 Methane Emissions Regulations. This demanded 40-45% reductions by 2025 and 75% by 2030 via controls on venting and flaring. These necessitate costly upgrades, curtailing production.



Sixth, drafted in 2024, the Oil and Gas Greenhouse Gas Emissions Cap. This aims for 35-38% reductions below 2019 levels by 2030. Projections indicate production could be curtailed by up to 1 million barrels per day.

3. Impact on Capital Flows

These regulations have profoundly disrupted capital flows into Canada's resource sector. From 2014 to 2022, business investment in the resource sector declined by over 50%, with Canada capturing a shrinking share of global energy investment.

Analyses from the Macdonald-Laurier Institute estimate that \$670 billion in capital investments were missed due to canceled or suspended projects between 2015 and 2024 (add another \$60 billion this year??). This figure is tied directly to regulatory barriers such as emissions caps and clean fuel rules which impose ongoing costs, making returns unpredictable and less competitive compared to jurisdictions like the U.S. The future is bleak, without policy reversals, projections suggest continued outflows: Canada could lose another \$500-800 billion in potential investments by 2035, as investors pivot to less regulated and more capital friendly markets. This is perpetuating a cycle of underinvestment.

4. Impact on GDP - Past 10 Years (2015-2025)

Turning to GDP, the missed \$670 billion in investments has inflicted staggering economic losses. Over the past decade, these foregone projects would have injected direct spending, amplified by economic multipliers. The resource sector boasts a GDP multiplier of 2.32. Applying this to the \$670 billion yields \$1.55 trillion in total missed GDP from 2015 to 2025 and beyond. Canada's average annual GDP growth stood at a mere 1.8% between 2015 and 2025—lagging behind the G7 average—mainly because of stagnation in the resource sector (this is not adjusted for the massive increase in immigration which means on a per-capita basis we have had zero to negative growth).

5. Impact on GDP - Current (2025) and Future

In 2025, Canada's annual GDP falls short by at least \$60-\$75 billion compared to its potential, as resource production stagnates under emissions limits and development bans. This hampers economic expansion, exacerbating budgetary strains through elevated deficits and diminished income streams, such as \$20-30 billion in annual forgone royalties. Projecting to 2035-2045, the scenario worsens absent policy changes. The execution of sidelined initiatives could contribute \$67 billion to yearly GDP by the mid-2030s. By 2045, the total lost GDP might surpass \$3 trillion, hindering advancements in sustainable technologies. Rivals like the United States are now seizing opportunities that Canada has passed on, eroding Canada's 1.5% portion of global GDP.

6. Impact on Job Market - Past 10 Years (2015-2025)

The job market has endured significant hardship. The \$670 billion in forgone investments translates to \$67 billion in annual capital expenditures, potentially creating a total of 670,000 jobs, based on 10 jobs per \$1 million, encompassing direct construction roles, indirect supply chain positions, and induced economic spending. Western Canada felt the greatest impact: Alberta's unemployment rates surged during the downturns from 2016 to 2020. In the mining and energy sectors, net job losses reached 57,000 between 2014 and 2016, with economic multipliers extending the fallout to other industries. Lost opportunities included high-paying resource jobs and positions for Indigenous communities, worsening existing inequalities.



7. Impact on Job Market - Current (2025) and Future

In 2025, the job market remains sluggish, with national unemployment stuck at 7-8% and resource-reliant regions faring even worse. The sector currently underpins 3 million positions—accounting for 15% of all employment. Looking ahead to 2026-2045, these initiatives could maintain around 435,000 operational roles each year, amounting to more than 8 million job-years in total. Factoring in economic multipliers, this could drive annual growth by 0.5-1%, creating an additional 200,000-400,000 jobs outside the resource field. In contrast, failing to advance these projects would exacerbate long-term unemployment, diminish workforce skills, spur population exodus from affected areas, and potentially forfeit an extra \$1-2 trillion in GDP by 2045.

8. Canada at a Crossroads

The Liberal government's legislation from 2015-2025 has ravaged Canada's resource sector, deterring \$670 billion in capital and growing everyday, forgoing up to \$1.55 trillion in GDP over the decade and erasing millions of job opportunities. Currently and into the future, these policies threaten sustained underperformance. It's time for balanced reforms to reclaim Canada's resource potential and secure prosperity for all.

B. Reversing Canada's Decline - What went wrong?

Canada has lost its way by abandoning the very principles that once made it strong—its deeply rooted Christian foundation, grounded in the sovereign decrees of God as revealed in Scripture. The West was built upon the Biblical truths found in Genesis 1-3: human dignity as image-bearers of God, liberty under His lordship, work as a divine calling to exercise dominion, stewardship of creation as a covenantal responsibility, moral accountability before a holy God, private property as a reflection of His provision, free markets as the outworking of individual responsibility, and strong, faithful families as the cornerstone of society ordained by the Creator.

These principles are not merely social ideals or arbitrary constructs—they are God-given mandates built into the very fabric of the creation, reflecting God's providential order. When followed, they foster innovation, responsible resource development, and limited and just governance that honours divine authority rather than usurping it. They affirm that the earth was created with abundant resources and designed for human cultivation and productivity, all under the sovereignty of the Triune God.

Since the Fall, which introduced sin's curse and human depravity, wealth creation requires effort and diligence in the face of scarcity. Yet, competition, personal responsibility, and free enterprise—rooted in the Christian work ethic—have consistently proven the most effective means of producing wealth for the benefit of all citizens, redeeming labour as a means of glorifying God.

Over the last 50 years, this robust Christian worldview has been steadily replaced by a secular worldview—one that often treats the material world as divine, and elevates subjective identity over biological and divine reality, echoing the idolatry warned against in Romans 1. This shift has given rise to radical environmentalism, which idolizes creation rather than honouring and worshipping the Creator, violating the first commandment and leading souls astray from true worship. Under the banner of climate ideology, industries like mining and energy have been unjustly vilified, even as we face a massive technological revolution that requires trillions of dollars of capital to be invested in the mining industry—an amazing opportunity for stewardship that secularism and globalism are squandering in our country. The tension in Canada is palpable, revealing the conflict between God's abundant design and humanity's rebellious distortions. In Canada and much of the West, we are surrounded by an anti-materialist worldview that is fueling a degrowth agenda, which stands in



direct opposition to the biblical command to "fill the earth and subdue it" (Genesis 1:28). We see this in the push toward "you'll own nothing and be happy," 15-minute cities, EV mandates, the elevation of vegan diets, and even in the absurd attack on cows in order to reduce their flatulence! State-enforced carbon rationing, carbon taxes, and tracking carbon footprints—none of these things have anything to do with stewarding the environment; rather, they have everything to do with top-down control, fostering an increasing authoritarianism and subjugation to the State.

Instead of attacking private property, we must champion it as a God-ordained institution that protects against tyranny and enables faithful stewardship. No economic system rivals the free market in generating wealth and managing resources efficiently, as it aligns with the biblical principles of diligence and reward. God created a world full of resources, entrusted it to humanity under His covenant, and called us to develop and steward it wisely, multiplying talents for His glory (Matthew 25). In an age dominated by climate alarmism and zero-sum economics, we must return to the truth: God's creation is abundant and designed for human flourishing, not scarcity imposed by fallen ideologies. Cultures that embrace artificial scarcity, deify nature, and adopt a stagnant view of economics will always favor redistribution over production, perverting justice and ignoring the sinfulness of mankind that makes such systems ripe for abuse. They will stifle innovation, discourage investment, and ultimately cause economic decline, as they rebel against God's providential abundance. Redistribution doesn't just rearrange wealth—it destroys it. When people know their work will be seized, they produce less. They invest less, save less, and innovate less. Redistribution doesn't create a bigger pie—it shrinks it, undermining the biblical ethic of work and reward.

None of this can change without dramatically reducing the size of government, restoring it to its God-ordained limits of upholding justice rather than playing provider. Over the past sixty years, the state's share of the economy in Western nations has ballooned from around 20% to over 45%. Such expansion is unsustainable and idolatrous, elevating the state above God. The state is inefficient, unaccountable, and wasteful. How can nearly half of all resources be controlled by government without crippling the private sector under taxes and regulation, and without violating the commandment against theft?

For Canada to thrive again, we must return to our Christian foundation— exalting Christ as King over all spheres—and slay the Leviathan of big government. Only then can we restore economic freedom, rebuild prosperity, honour the created order that made Canada a powerful and prosperous country, and be worthy of the immense physical blessings that God has bestowed on this country in His sovereign grace.

Practically speaking, Canada must act decisively to reclaim its position as a global resources powerhouse.

First, we need to slash bureaucratic red tape and streamline permitting processes—reversing the shameful slide from three to five years to a decade or more, which inflates capital costs and strangles project viability. The result, capital is leaving the country. Government must get out of the way. Bill C-5, which grants the PM and his cabinet discretionary power to decide which projects undergo full regulatory assessments and which get fast-tracked, based on their perceived contribution to the "national interest" is outrageous. Rather than providing predictable rules for all entrepreneurs and businesses, Ottawa has created an opaque process where companies must lobby cabinet to prove their projects meet subjective criteria to circumvent the laws and regulations that apply to everyone else. This creates more uncertainty, not less.

Second, we cannot afford to hemorrhage our brightest minds in the resources sector; retaining and attracting world-class talent is essential to averting a catastrophic long-term brain drain.

Third, we must halt the hollowing out of our homegrown resource powerhouses, before foreign buyers and a mass exodus strip us of control over our own future.



Lastly, we must save Canada from the destructive forces of socialism and globalism. This can only begin with each individual humbly turning their heart to Jesus Christ in repentance. A nation cannot be healed unless its people are first healed spiritually, forsaking the false gods of statism and global tyranny. Only by returning to the Lordship of Christ can we restore the foundational Christian values that built a strong and sovereign Canada, casting off the chains of collective idolatry and reclaiming our God-given identity. “May he have dominion from sea to sea, and from the River to the ends of the earth!” (Ps. 72:8)

Canadian politicians and academics have vilified our vital resource and mining sectors, eroding the profound national pride we once cherished in the global enterprises that forged our great nation's prosperity. It is time to reclaim that legacy and restore Canada's rightful place on the world stage. The time for bold reform is now—our future prosperity demands it.