



# Salveo

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## Italian Trade Agency

Market Study on the Energy Transition in Canada





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# I. Macroeconomic Overview

## STABLE AND HIGH-INCOME ECONOMY

- **Area (total), 2024 : 9,984,670 sq km**
- **Population (total), 2024 : 38,794,813**  
→ **86,5%** of the country's population is concentrated in its four largest provinces : Ontario, Quebec, British Columbia, and Alberta.
- **Strong population growth : 2,9% - Population density: 4,2 inhabitants/km²**
- **High Urbanization, 2024 : 74,8%**  
→ Major urban areas : Ontario (15,996 million), Quebec (9,030 million), British Columbia (5.646 million), Alberta (4,849 million), Manitoba (1,484 million)
- **Real GDP (purchasing power parity), 2024 : \$2.515 trillion**
- **GDP growth (2024):1.6 %**  
→ Forecast (2025 – 2030) :1,5 %
- **Inflation rate : 2.4% ( 2024 est.)**
- **Top industries:** services, manufacturing, mining, construction, all high-energy users

## FOCUS ON THE ENERGY SECTOR

- **10.3% of Canada's GDP (2024) : \$220.4 billion**  
→ Direct : 8.9%  
→ Indirect : 1.4%
- **Energy exports, 2023 : \$199.1 billion** to 123 countries (with 89% to the United States)
- **Energy imports, 2023 : \$57.9 billion**
- **Energy demand expected to grow 20–40% by 2050**
- **Regional consumption:** Ontario, Alberta, and Quebec accounted for 73.7% of total energy use
- **Capital expenditures, 2023 : \$92 billion**  
→ Oil and gas extraction as the largest area (\$39.2 billion)  
→ Electrical power generation and distribution (\$27.6 billion)
- **Government revenues (2018-2022):** averaged \$19.3 billion per year from energy sector

## TRANSITION FROM FOSSIL FUELS TO LOW OR ZERO CARBON ENERGY

### Energy mix by province :

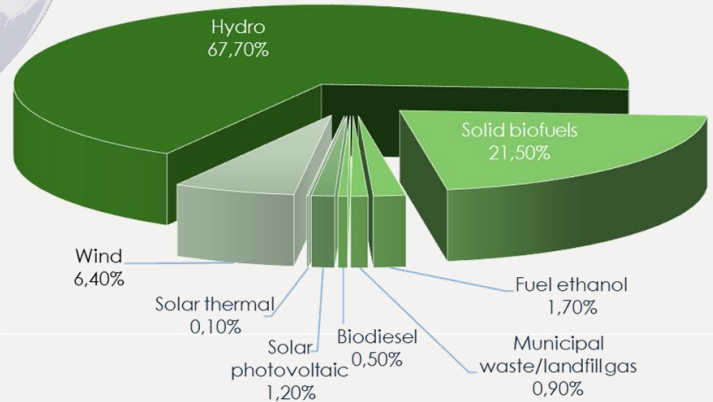
Ontario	Largest population & demand, nuclear-heavy, strong industrial base
Québec	Hydro-dominated, 99% renewable electricity, leading in green hydrogen, solar and wind
British Columbia	Renewable mix + LNG, active in carbon pricing
Alberta	Oil & gas base, investing in CCUS & renewables
Newfoundland & Labrador	Hydro + offshore wind potential

→ Provinces like Ontario, Québec, Alberta, BC, NL each offer different energy profiles and opportunities

- **The \$2 Trillion Transition: Canada's Road to Net Zero**
- **~ \$280 B of public Investments in infrastructure, clean energy & grid modernization**

## THE 7<sup>th</sup> LARGEST PRODUCER OF RENEWABLE ENERGY IN THE WORLD (2.44%)

- **Canada production : – 2,121 PJ or 50.7 MTOE (2022)**



- **Final renewable energy consumption across electricity, transportation, heating : 27%.**

# II. Canada’s Policy Landscape

## Key Milestones



### ▪ Strong Federal push with Provincials nuances

- Climate policy anchored by the Net-Zero Emissions Accountability Act (2021): legally binding **2050 target**.
- Rapid scale-up of clean electricity generation, primarily **solar and wind**, as they will form the backbone of future energy systems.
- Provinces manage energy, creating a patchwork of policies and opportunities :
  - Québec and BC: pioneers (hydro, carbon pricing, green hydrogen)
  - Ontario: hybrid approach, big on nuclear and EV supply chains
  - Alberta, SK: cautious, focused on CCS and fossil competitiveness

### ▪ Carbon Pricing

- Federal carbon tax: \$80/tonne (2024) → \$170 by 2030
- Revenues recycled: household rebates + funding for clean energy programs
- Key incentives (2023 Budget):
  - \$80B+ tax credits for clean tech, CCUS, hydrogen, renewables
  - \$15B Canada Growth Fund + \$35B Canada Infrastructure Bank

Canada has enshrined net-zero into law and created multiple layers of regulation, tax incentives, and sectoral mandates to drive the transition.

# II. Canada’s Policy Landscape

## Stakeholders and their positions on ET

Stakeholders	Type	Role
<ul style="list-style-type: none"><li>Government</li><li>Canada Energy Regulator (CER)</li><li>Key Regions (Quebec, British Colombia, Alberta &amp; Saskatchewan, Ontario)</li></ul>	Government & Regulatory Bodies	<ul style="list-style-type: none"><li>Advocates full alignment with Paris Agreement &amp; net-zero 2050; drives policy innovation and funding</li><li>Public relationship &amp; communication strategy input</li><li>Pro-clean growth, legally binding targets, strong funding</li></ul>
<ul style="list-style-type: none"><li>Hydro-Québec, OPG, BC Hydro</li></ul>	Utilities Companies	<ul style="list-style-type: none"><li>Renewable energy generation, electrification of transport</li><li>Actively involved in expanding interprovincial and international transmission lines to export clean energy and support grid decarbonization.</li></ul>
<ul style="list-style-type: none"><li>Energy Utilities Boards (AUC, BCUC, OEB)</li></ul>	Regulatory Authorities	<ul style="list-style-type: none"><li>Approve/disapprove energy projects and pricing</li><li>Protect consumer interests while encouraging clean energy integration</li></ul>
<ul style="list-style-type: none"><li>Metropolitan communities (Vancouver, Montreal, Toronto)</li></ul>	Municipal Governments	<ul style="list-style-type: none"><li>Implement local transition plans, retrofit programs</li><li>Promote district energy systems, building codes for net-zero housing</li></ul>
<ul style="list-style-type: none"><li>Banks</li></ul>	Financial Institutions	<ul style="list-style-type: none"><li>Provide capital for energy infrastructure projects</li><li>Integrate climate risk assessments into lending and investment decisions</li></ul>
<ul style="list-style-type: none"><li>Indigenous communities</li></ul>	Indigenous Governments / Rights Holders	<ul style="list-style-type: none"><li>Stewardship of traditional territories</li><li>Participate in co-development of renewable energy projects</li><li>Assert consultation and consent rights under Canadian law (e.g., Duty to Consult)</li></ul>
<ul style="list-style-type: none"><li>Industrial &amp; Commercial energy users</li></ul>	Private Sector / Industry	<ul style="list-style-type: none"><li>Invest in industrial decarbonization</li><li>Commit to purchasing renewable energy through Power Purchase Agreements (PPAs)</li></ul>
<ul style="list-style-type: none"><li>NGOs &amp; Civil Society</li></ul>	Civil Society Organizations	<ul style="list-style-type: none"><li>Advocate for equitable transition policies</li><li>Raise awareness and push for environmental justice and community participation</li></ul>
<ul style="list-style-type: none"><li>Academia &amp; Research Centers</li></ul>	Universities / Think Tanks	<ul style="list-style-type: none"><li>Provide innovation, modeling, and policy advice</li><li>Support workforce skills development for the green transition</li></ul>

# III. Canada's energy transition: from fossil to clean energy

▪ Key insights

- Canada's **net-zero target (2050)** requires **\$2 trillion in investment over 20 years**.
- A “dual strategy”: **emissions reduction + modernized fossil infrastructure**.
- Key regulatory levers: **carbon pricing, CER, CCUS incentives, tax credits...**
- **Regional differences: Alberta/Saskatchewan more fossil-dependent, vs. Quebec/BC almost 100% low-carbon.**
- Skills transition: **~200,000 workers may need upskilling/reskilling by 2030.**
- Indigenous partnerships: **200+ Indigenous clean energy projects operating .**

Source	Share of Renewables	Capacity	Facts
Hydro	67,7 %	85 GW	609 sites; 60% of electricity
Wind	6,4 %	18 GW	341 projects; 30 GW by 2030
Solar	2,5 %	5 GW	48 000+ installs
Energy Storage	/	330 MW	8 GW needed by 2035
Nuclear	13 %	18,7 GW	19 reactors; SMR roadmap
CCUS	/	11 active/storage	743 Mt/year goal
Hydrogen	4,5 Mt prod.	100+ projects	\$50B sector by 2050
Biomass	24,6 %	1 800 PJ	640 bioheat systems
Tidal	0,1 %	20 MW	Bay of Fundy focus

▪ Takeaways:

- Hydro remains the backbone of Canada's low-carbon electricity mix
- Wind and solar are expanding rapidly, but face storage and integration challenges
- CCUS and hydrogen are emerging to decarbonize heavy industry
- Grid modernization is critical to support growing renewables
- Indigenous partnerships are central to a just and inclusive transition

▪ Business Opportunities

- **Hydro & Transmission Upgrades**  
→ Modernization of hydropower plants, advanced turbines, interprovincial interconnections
- **Wind & Solar**  
→ EPC contracts, equipment supply (towers, blades, inverters), operations & maintenance services
- **Energy Storage**  
→ Battery storage solutions, system integration, engineering
- **CCUS & Hydrogen**  
→ Engineering expertise, CO<sub>2</sub> transport and storage technologies, electrolyzers, project design
- **Industrial Decarbonization**  
→ Efficiency retrofits for cement, steel, and mining industries
- **Digital & Smart Grids**  
→ Smart metering, digital grid management, cybersecurity





# III. Canada's energy transition: from fossil to clean energy

## Focus on renewable energy sectors

### a) Hydro, backbone of Canada's electricity

#### ▪ Key figures

- Canada is the **#2 hydro producer in the world**
- Hydro = **60% of national electricity**,
- 609 hydro facilities nationwide
- 130,000 direct and indirect jobs
- Hydropower GDP contribution: \$35+ billion
- Untapped hydro potential: 155,000 MW (nearly twice current capacity)

#### ▪ Key insights

- **Six out of ten Canadian homes are powered by hydro**
- Provinces with **over 90% hydro electricity: Quebec (93.6%), Manitoba (97%), Newfoundland & Labrador (95.8%), BC (89%)**
- **Major assets:** Hydro-Québec (41.5 GW), Romaine Complex (1.55 GW), Site C (1.1 GW)
- **Main challenges :** climate change (variability of water resources) and aging infrastructure
- Growing Export opportunities : to the U.S. and interprovincial transfers

#### ▪ Takeaways:

- Hydropower is critical for achieving Canada's net-zero goals
- Significant investment needs for modernization, refurbishing, and grid integration
- Highly reliable and dispatchable renewable source compared to variable wind/solar

#### ▪ Business Opportunities

- Refurbishment and modernization of existing hydro plants (turbines, digital controls, efficiency upgrades)
- Engineering and design of new projects (including small hydro and run-of-river)
- Consulting on climate resilience for hydro infrastructure
- Grid connection and interconnection equipment
- Environmental and social impact assessments for new hydro sites
- Partnerships with Indigenous communities for hydro developments

# III. Canada's energy transition: from fossil to clean energy

## Focus on renewable energy sectors

### b) Wind, Solar, Biomass — Fast Growth, Local Challenges

Wind	<ul style="list-style-type: none"><li>– 18 GW installed capacity (2023)</li><li>– 9th largest in the world</li><li>– 341 projects across Canada</li><li>– Target: 30 GW by 2030</li><li>– Potential investment: \$79B, 52,000 jobs</li><li>– Expected growth rate: ~8.8% CAGR (2025–2030)</li></ul>
Solar	<ul style="list-style-type: none"><li>– 5 GW installed capacity today</li><li>– Target: 35 GW by 2050</li><li>– 314 MW installed in 2024 alone</li><li>– Over 48,000 individual installations</li><li>– Market revenue (2022): CAD 975.4 million</li></ul>
Biomass	<ul style="list-style-type: none"><li>– Total primary energy: ~1,800 PJ</li><li>– Heating for approximately 7 million households</li><li>– 640 operational bioheat systems</li><li>– Bioenergy revenue: CAD 8 billion</li><li>– 83% of systems under 1 MW capacity</li></ul>

#### ▪ Key insights

- Canada is a top-10 wind and solar market globally but faces regional permitting bottlenecks.
- Solar and wind are highly seasonal and geographically dependent, stressing the importance of storage and grid upgrades.
- Biomass remains underexploited despite huge resource potential, with prospects for advanced biofuels (e.g., Enerkem's Varennes Carbon Recycling plant).
- Indigenous communities are increasingly involved in wind, solar, and biomass partnerships.
- Strong government incentives (e.g., tax credits, SREPs funding) are accelerating renewable projects.

#### ▪ Takeaways:

- Wind and solar are growing fast, but require more storage and flexible grid connections
- Permitting and community engagement are critical for accelerating renewable deployment
- Biomass has untapped potential, especially in advanced biofuels and bioheat
- Consistent policy support is helping Canada meet clean electricity targets

#### ▪ Business Opportunities

- **Wind & Solar**
  - EPC contracts, advanced blades, towers, inverters, operations & maintenance solutions
  - Engineering and design services for integrating variable renewables
  - Support for microgrid and hybrid renewables in remote communities
- **Biomass**
  - Supply of advanced bioenergy equipment (boilers, gasifiers, CHP systems)
  - Engineering and technology for advanced biofuels
  - Partnerships with pulp & paper mills for cogeneration retrofits
- **Cross-cutting**
  - Digital grid integration tools
  - Permitting, environmental and social impact assessments
  - Skills and workforce training services
  - Co-development with Indigenous communities





# III. Canada's energy transition: from fossil to clean energy

## Focus on renewable energy sectors

### c) Carbon Capture & Storage (CCS)

#### ▪ Key figures

- **11 major CCS projects, including:**  
Quest (Shell): 9 Mt CO<sub>2</sub> captured since 2015  
ACTL (240 km CO<sub>2</sub> pipeline)  
Polaris CCS (FID 2024)  
ACTL (Alberta Carbon Trunk Line): 240 km CO<sub>2</sub> pipeline
- **National storage goal: 743 Mt of CO<sub>2</sub> per year by 2030**
- **Global share: Canada represents 5.8% of world CCS capacity**
- **CCUS market revenue forecast (2030): ~\$400 million**
- **Gov't support:** tax credits, Canada Growth Fund
- **Risks:** cost, permitting, opposition

#### ▪ Key insights

- CCS is essential to decarbonize hard-to-abate sectors (cement, steel, oil & gas).
- Strong federal support: tax credits, Canada Growth Fund guarantees, and carbon pricing framework
- Regulatory frameworks evolving to allow underground storage (notably in Alberta and Saskatchewan)
- Public and NGO opposition present due to links with continued fossil fuel production
- High CAPEX and OPEX are barriers for wider deployment
- Provinces are coordinating CCS hubs to pool resources and infrastructure

#### ▪ Takeaways:

- CCS is positioned as a pillar of Canada's industrial decarbonization pathway
- National and provincial governments are backing CCS with incentives and funding
- Infrastructure build-out (pipelines, hubs, monitoring systems) is key for achieving 2030 climate goals
- Long-term acceptance will depend on public trust and transparent governance

#### ▪ Business Opportunities

- **Engineering & technology**  
→ CO<sub>2</sub> capture systems, compressors, pipelines, well completions for injection sites
- **Project development & consulting**  
→ Feasibility studies, environmental permitting, risk analysis, monitoring services
- **Equipment supply**  
→ Materials, storage tanks, control systems, CO<sub>2</sub> transport and injection technologies
- **Digital & data**  
→ Software for monitoring CO<sub>2</sub> flows, environmental reporting, performance tracking
- **Collaboration**  
→ Joint ventures for pilot CCS sites, especially in Alberta and Saskatchewan  
→ Expertise transfer in carbon credit certification and carbon **market design**

# III. Canada's energy transition: from fossil to clean energy

## Focus on renewable energy sectors

### d) Nuclear — the quiet pillar of Net Zero

#### ▪ Key figures

- 19 CANDU reactors → 13% of electricity
- OPG, Bruce Power = key players (ON + NB)
- SMR roadmap = Darlington SMR, Monark Reactor, Chalk River MM
- RNew builds & refurbishments key to future capacity

#### ▪ Key insights

- Canada's nuclear fleet supports a stable low-emissions baseload
- SMRs are seen as a flexible, scalable zero-carbon solution for remote or industrial sites
- OPG and Bruce Power are leading operators with experience in refurbishment projects
- Safety and waste management remain top public concerns
- Federal and provincial governments are aligning policy to streamline licensing of new builds and SMRs
- Strong international recognition of Canadian CANDU technology

#### ▪ Takeaways

- Nuclear is crucial for achieving net-zero while ensuring grid reliability
- SMRs are a growth sector for off-grid and industrial decarbonization
- Refurbishments and modernization of reactors will sustain capacity to 2050
- Social acceptance and waste strategies are critical for future growth

#### ▪ Business Opportunities

##### ➤ Engineering & Components

- Equipment, robotics, and control systems for reactor refurbishment and SMR construction
- Instrumentation, sensors, safety equipment, and advanced materials

##### ➤ Design & Consulting

- Feasibility studies for SMR deployment
- Support for nuclear waste management and decommissioning

##### ➤ Digital

- Digital twins, predictive maintenance, and cybersecurity solutions for nuclear assets

##### ➤ Supply Chain Partnerships

- CANDU component supply, replacement parts, joint-ventures with Canadian OEMs

##### ➤ Training & Skills

- Workforce development programs for nuclear engineers and technicians

# III. Canada's energy transition: from fossil to clean energy

## Focus on renewable energy sectors

### e) Energy Storage & Hydrogen: Twin Enablers

- **Key figures**

Storage	<ul style="list-style-type: none"><li>– Market size: CAD 1.3B (2023) → CAD 5B by 2035</li><li>– 330 MW installed; 8 GW required by 2035</li><li>– Flagships : Oneida (250 MW), Tara (400 MW), Hydrostor (CAES)</li></ul>
Hydrogen	<ul style="list-style-type: none"><li>– 4.5 Mt/year today</li><li>– CAD 527M sector revenue (2021)</li><li>– 80+ projects with &gt;\$100B potential value under development</li><li>– Target: 30% of end-use energy by 2050</li><li>– 350,000 jobs expected by 2050</li></ul>

- **Key insights**

- Hydrogen's growth tied to green export markets and heavy industry
- Energy storage key to integrating renewables
- Provincial strategies and tax credits encourage investment
- Infrastructure gaps and permitting delays are challenges

- **Takeaways**

- Both sectors are critical enablers of net-zero
- Funding and policy supports are robust
- Skills and local capacity needed

- **Business Opportunities**

- Battery systems, flow batteries, safety systems
- Hydrogen electrolyzers, distribution pipelines
- EPC services for storage projects
- Certification, permitting, and consulting
- Joint ventures with Canadian developers

# IV. Canadian energy market

## ▪ Key figures

- \$220 billion → 10.3% of Canadian GDP from the energy sector (2024)
- 66% renewable share in electricity generation
- 166,000 km of high-voltage transmission lines
- \$400 billion investment required by 2050 for net-zero grid
- 697,000 total jobs in the energy sector (direct + indirect)

## ▪ Key insights

### Canada's energy system: fragmented, regulated, and full of opportunity

- Canada has no national energy system: electricity is regulated at the provincial level.
- Each province = its own utility model, regulatory agency, and grid strategy.
- Hydro dominates in QC, NL, BC, MB. Nuclear in ON, Gas in AB/SK.
- 66% of generation is renewable – but transmission is a key barrier. Currently well over 166,000 kilometers of high voltage transmission lines in Canada.

### Grid and Transmission insights

- Most infrastructure is intra-provincial, not national.
- Intertie expansion (QC-ON, MB-SK, AB-BC) is urgent for electrification goals.
- New investments required: \$400B by 2050 to meet net-zero grid needs.
- Utilities = key gatekeepers: Hydro-Québec, OPG, BC Hydro, SaskPower...

## ▪ Takeaways

- Canada's energy market is fragmented, requiring tailored provincial approaches
- Major opportunities driven by clean electricity, grid modernization, and interties
- Utilities act as gatekeepers, with strong control over grid access
- Long-term, stable policy frameworks and climate targets provide predictability

## ▪ Business Opportunities

### How to access the market for ANIE members: Utilities, Tenders & Partnerships

- **Utilities and grid operators are primary clients.** Study each province individually because energy policy, clients, and grid access vary significantly. Get listed on utility vendor registries (Hydro-Québec, OPG, BC Hydro...) for procurement.
- **Public procurement varies:** prequalification, local registration, tender portals. Québec, Ontario, Alberta offer the best mix of public contracts + B2B opportunities.
- **Private B2B market = work with EPCs, local partners,** engineering firms and integrators to avoid direct regulatory burden
- **Transmission projects** → often in joint ventures with Indigenous partners

# V – Canada’s clean energy value chain

## Pipeline of clean energy projects by Province

- **Ontario:** 7.5 GW storage RFPs, SMRs (OPG x AtkinsRealis x Aecon), nuclear refurbishments
- **Québec:** 10 GW new wind, new pumped hydro, HVDC line for export and remote regions
- **British Columbia:** 10 projects accounting for 1.6 GW renewables (wind & solar), Site C Dam in progress
- **Alberta:** Pathways CCS hub (\$16B), 5 GW renewables pipeline (solar / wind)
- **Manitoba:** 600 MW wind RFP w/ Indigenous partners, grid reinforcement

## Who buys? Your future clients in Canada

Province	Utilities	IPPs	EPC's	Distributors
ON	OPG	Bruce Power Northland Power	Aecon Hatch	Graybar Wesco Sonepar Guillevin
QC	Hydro-Québec	Boralex Innergex	AtkinsRealis	
BC	BC Hydro	Innergex	Ledcor	
AB	TransAlta	Capital Power	Borea	
MB	MB Hydro	Indigenous Power Partners	PCL	

### Keys insights

Each clean energy sector (storage, hydro, solar, wind, CCS) has a clearly defined value chain:

**feasibility → design → procurement → installation → operation.**

Italian firms can insert themselves at different stages, where equipment, engineering services, and components are most in demand. Most tenders involve **EPC contractors or project developers** who source internationally. Partnering with them is essential.

### Sector's components

**Solar & Wind (Alberta, Québec, Ontario, Manitoba):** panels, inverters, trackers, cabling, turbines, blades, steel towers, switchgear

**Hydro (Québec, BC, MB):** turbines, gates, transformers, relays

**Storage (Alberta, Ontario):** batteries (Li-ion), PCS, CAES tech, cables, EPC contracts (battery farms)

**CCS (Alberta, SK):** compressors, pipelines sensors, absorbers

# VI – Financing, subcontracting and procurement policies

## How public procurement works in Canada’s Energy Sector

- Procurement is mostly provincial, with federal guidelines
- Projects often led by Public utilities (Hydro-Québec, BC Hydro...) and Independent system operators (IESO, AESO)
- **Public Sector:** open to international bidders via CETA & other treaties. Key portals: CanadaBuys, SEAO (Québec), MERX (Ontario), BC Bid.
- **Private Sector:** RFP-driven but more flexible, EPC & IPP manages project while Subcontractors handle equipment supply, O&M, logistics, engineering

### PPPs & PPAs

- Public-Private Partnerships (P3):  
Common in infrastructure, emerging in energy (e.g., storage, EV).  
Long-term contracts, shared risk model.
- Power Purchase Agreements (PPAs):  
Used for generation: wind, solar, hydro.  
Utility PPAs – Regulated with RFPs : 20–30 years (e.g., Hydro-Québec, SaskPower, IESO Ontario).

## Procurement Models by Province

Province	Authority / Model
ON	IESO (RFP), Infrastructure Ontario (P3)
QC	Hydro-Québec (tenders + PPAs)
BC	BC Hydro (EPA calls), Partnerships BC
AB	AESO, Market-based RFPs
MB	MB Hydro (tenders, indigenous partners)



# VI – Financing, subcontracting and procurement policies

## Subcontracting & Consortia: a strategic entry path

### Key Models:

- Joint ventures, consortia, or subcontracting roles are common
- Provincial programs often require Indigenous partnerships (e.g., SaskPower, Hydro-Québec)
- Many large projects use multi-layered supply chains: entry possible even without leading bid
- Tip for SMEs: join consortia with Canadian primes to build track record & qualify for bids

## Financing clean energy projects in Canada

### Banking Environment:

- Strong, open, stable system — project finance widely used
- Top lenders: RBC, TD, Scotiabank, Desjardins
- Canada Infrastructure Bank (CIB): co-invests in clean energy (e.g., \$97M for wind farm)
- Grants: SREP, Clean Investment Tax Credits (up to 30%).
- Tip for SMEs: partner with local developers to access public grants & simplify financing

### Keys to success for Italian SMEs

Use trade agreement access (CETA)

Seek Subcontracting & JV pathways (**EPC, IPPs, etc.**) – Build **Indigenous & local** partnerships

Monitor provincial RFPs closely: **MERX, SEAO, BC Bid, etc.**  
**Procurement Desk at ICE Montreal (Osservatorio Gare e Appalti)**

Engage early with Canadian banks or project sponsors

# VII – Regulatory and legal requirements for suppliers

## Who regulates energy in Canada?

Canada's regulatory model is provincial, not national. Each province has its own energy board:

- Ontario: Ontario Energy Board (OEB)
- Québec: Régie de l'énergie + Ministry
- Alberta: Alberta Utilities Commission (AUC)
- BC: BCUC + BC Energy Regulator (LNG/oil)

Each province has its own permitting rules and authorities → adapt strategy per province

Federal Canada Energy Regulator (CER) handles cross-border and interprovincial lines, export/import licences. Impact Assessment Act and Indigenous rights consultation are also key.

## Key Regulatory Areas

Area	Canada Requirement
Certifications	CE ≠ CSA/UL. Must certify to <b>CSA</b> or UL standards to enter the market
Licensing	No “business license” needed to sell, but project-specific permits may apply
Environmental Review	Large projects require federal or provincial EA, especially if >10 MW or >2km line
Public Consultation	Mandatory for large projects, especially where Indigenous rights are involved

# VII – Regulatory and legal requirements for suppliers

## Licensing requirements for suppliers

- Register business in Canada (federal + extra-provincial registration)
- Certain electrical contractors may need **provincial licences** (e.g., ESA in Ontario)
- Engineering work must be reviewed by a **licensed P.Eng**
- Developers of energy projects need **generation licences** (e.g., OEB in Ontario, AUC in Alberta)

## Import documentation & procedures

- **CETA eliminates most tariffs** → duty-free entry if origin declaration is provided + access to public tenders
- Require: **invoice, origin declaration (with REX if >€6,000), CSA mark, efficiency verification**
- Québec: product labels/manuals must be in **French**
- Must consult Indigenous communities if project affects rights
- Public consultation is legally required in most provinces

### Keys to Success for Italian SMEs

Know provincial **rules and regulators** (OEB, AUC, Hydro-Québec, etc.)

Align your product with **CSA/UL** standards (not just CE)

Plan for customs, energy efficiency declarations, bilingual documentation

Be proactive with Indigenous/public consultations → essential for project approval

**Soft local content expectations:** utilities value job creation & support

## VIII – Successful Market Entry

### How to enter the Canadian energy market: A 360° Strategy

- Having a **1<sup>st</sup> business trip** to get a sense of the market and meet potential partners
- **Trade shows and sector associations** to build presence, contacts, and being informed of upcoming opportunities
- **Local partnerships** (EPCs, Industrial clusters and innovation hubs, agents, Indigenous businesses) for fast access
- Participation in **pilot/demo projects** to build **references**
- Monitoring **tenders** and regional strategies
- Success requires local trust, technical compliance, and proactive visibility

### How to position your offer:

**Certifications:** CSA/UL, NRCAN, grid compatibility

**Bilingual packaging and docs** (QC)

**Competitive pricing:** long tender cycles = high price sensitivity

**Maintenance strategy:** local technicians, response time

**Proof of concept:** pilot first → scale after



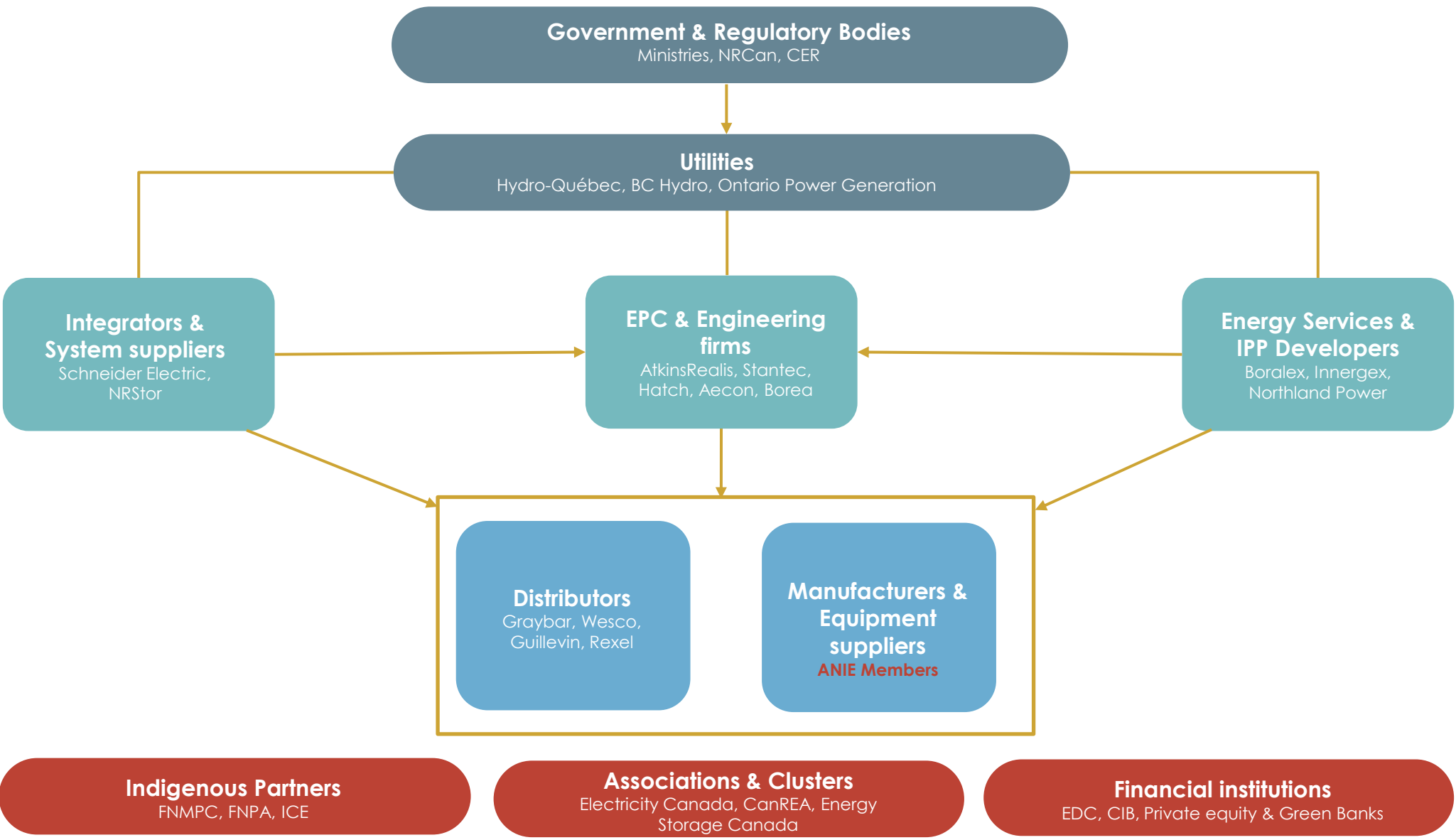
# VIII – Successful Market Entry

Sales Channels & Business Models: Which one fits you ?

Model	Strengths	Risks
Local Subsidiary	Full control, local trust, subsidies access	Costly to set up, complex compliance, longer time to scale
Direct Sales	Full control, brand-building	High investment, long sales cycles
Distributors / agents	Fast training, low risk, easy market access, local support	Less control, shared margin, dependency on partner
EPC/JV Partnering	Access to big projects, reliable delivery, technical expertise	Margin erosion, dependency
Public Procurement x Tenders	Visibility, volume, local benefits	Costly bidding, high risk, strong competition

Use hybrid approaches based on region, product maturity, and certification status

Who can help you? Your strategic allies – Ecosystem Map





## VIII – Successful Market Entry

### Final Takeaways for ANIE Members

Canada **is not just 1 energy market, but 10+ energy systems** – think by province

Focus on **partnerships**: EPCs, utilities, agents, Indigenous orgs

Adapt your products to **local expectations**: standards, language, support

Build **presence and credibility**: events, pilot projects, cluster engagement

Monitor **tenders, subsidies, and infrastructure plans** proactively

# IX – Interviews

## The approach

To reinforce this market study with real-world intelligence, we conducted interviews with a diverse group of professionals actively involved in Canada's energy transition.

We spoke with leading stakeholders across the following sectors:

- **Utilities**
- **EPC firms (engineering, procurement & construction)**
- **Independent Power Producers (IPPs) and energy service companies**
- **Industry associations**
- **Indigenous organizations**

## 10 tips we sorted out from the interviews

1. Adapt to **CSA/UL** certification standards early.
2. Work through **local EPCs or project developers**.
3. Use **demonstration projects** to establish credibility with Canadian buyers.
4. Invest in a **local footprint (even minimal)** to ensure post-sale support and trust.
5. Understand **each province's market individually**, e.g., Ontario ≠ Québec ≠ Alberta.
6. Build **joint ventures or licensing partnerships** to reduce risk and accelerate entry.
7. **Engage Indigenous partners** from day one when land or permitting is involved.
8. Focus on **long-term ROI and stable pricing**, not just CapEx; Canadian buyers are risk-averse.
9. Tailor communications to **Canadian market values**: trust, transparency, public benefit.
10. Show how your EU-based expertise aligns with Canadian economic and regulatory goals.

### Keys to Success for Italian SMEs

There is the full transcripts of all interviews in the study, allowing you to explore direct feedback and market expectations from experienced stakeholders across Canada's energy landscape.

# X – Case Studies

Event	Country	Technology	Location	Partnership x Client	Drivers
Universal Kraft	Portugal	Solar (10 MW) + 1 200 homes	New Brunswick	Neqotkuk First Nation	Indigenous equity (51%), local grid connection
Vestas	Denmark	Wind (140 MW)	Alberta	Capital Power, Indigenous equity	Tech leadership, service contract (10 yrs), local trust
ABO Energy	Germany	Wind 15 000 homes	New Brunswick	Pabineau First Nation	Siting expertise, grid access, local buy-in
Prysmian	Italy	20km Submarine Cable	New Brunswick	New Brunswick Power	Niche expertise, marine logistics, on-time delivery
ATB Group	Italy	5 100 gigawatts / year Hydro equipment	British Columbia	BC Hydro	Full scope supply, Canadian subsidiary, localization
EDP Renewables	Portugal	BESS (300 MWh)	Ontario	Caldwell First Nation	First storage in Canada, revenue sharing model
Hitachi Energy	Switzerland	1 500 MW HVDC transmission	Québec → New York	Hydro-Québec	Grid modernization, Canadian R&D investment
Prysmian	Italy	9 km of new 25 kV underground feeders	Québec	Hydro-Québec	New distribution to increase local capacity & support growth
Landis+Gyr	Switzerland	4.4 million electricity smart meters	Québec	Hydro-Québec	Grid modernization

# XI – Directory of key stakeholders

Understanding the Canadian energy ecosystem is essential for successful market entry. The following categories summarize the most relevant B2B actors:

Category	Examples of key players
Energy Utilities	Hydro-Québec, BC Hydro, Ontario Power Generation, Manitoba Hydro
EPC contractors	Hatch, Borea, AtkinsRéalis, Stantec, Aecon, Aecom, WSP, BBA
Technology & Equipment	Siemens, ABB, Vestas, Nexans, Prysmian, ATB Group, Schneider, Veolia, Canadian Solar
Integrators & IPPs	Northland Power, Innergex, Boralex, BluEarth Renewables, TransAlta, Bruce Power
Distributors & Wholesalers	Rexel, Wesco, Sonepar, Graybar
Associations & Clusters	CanREA, Electricity Canada, Electric Mobility Canada, Propulsion Québec, WaterPower Canada
Indigenous Organizations	Indigenous Clean Energy, FNPA, AFN, FNMP Coalition
Regulatory & Government	Canada Energy Regulator, Natural Resources Canada

# XII – Trade shows

Event	Focus	When / Where
Global Energy Show	All energy incl. O&G	June 9 – 11 2026, Calgary
Electricity Transformation Canada (CanREA)	Renewables & Clean Tech	October 6 – 8 2025, Toronto
Globe	Multiple events on clean economy	Canadian Climate Week November 24 – November 30, 2025, Toronto
CanREA 2026 Events Series	Electricity Transition, Energy Storage, Clean Power	TBC for 2026 – All provinces
Energy Storage Canada	Energy Storage	September 25 – 26 2025, Toronto
Canadian Nuclear Association (CNA)	Nuclear	TBC for 2026
SMR Small Modular Reactor Canada	Nuclear	March 2026
Enercom Expo	Electricity Distribution	March 22 – 26, 2026, Toronto
Carbon Capture Canada	Carbon Capture	September 23 – 25 2025, Edmonton
EV & Charging Expo	Electric Automotive	April 8 – 9 2026, Toronto
EV Charging Summit & Expo	Electric Automotive	March 17 – 19, 2026, Las Vegas
Canadian Hydrogen Convention	Hydrogen	April 21 – 23 2026, Edmonton
Hydrogen East Halifax	Hydrogen	April 13, 2026, Halifax
Hyvolution	Hydrogen	October 1 – 2, 2025, trois-Rivières
Smart Energy	Clean Energy	April 14 – 15, 2026, Halifax
Clean Fuels Canada	Low Carbon	May 5 – 6, 2026, Strathcona
Smart Grids Canada	Electricity distribution	TBC for 2026
CIGRE Canada	Power & Infrastructure	September 29 – October 3, 2025, Montreal
EDIST	Electricity distribution	January 19 – 22, 2026, Toronto January 18 – 21, 2027, Toronto
Americana	Largest multisectoral environmental trade show in North America	TBC for 2026
P3 Annual Conference	PPP Infrastructure	October 27 – 28, Toronto

A pair of hands is shown holding a glowing Earth globe. The globe is illuminated from within, showing continents and oceans in a warm, golden light. The background is a dark, deep blue sky filled with numerous small, white stars, creating a cosmic atmosphere. The hands are positioned at the bottom of the frame, with fingers gently cupping the globe.

# Thank you!





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