Canadian Hydrogen Association | Association Canadienne de L'hydrogène

Submission to Natural Resources Canada:

2026–2030 Sustainable Jobs Action Plan

Prepared by the

Canadian Hydrogen Association

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INTRODUCTION

The Canadian Hydrogen Association (CHA) is pleased to provide this submission to inform the Government of Canada's 2026–2030 Sustainable Jobs Action Plan. Representing Canada's hydrogen value chain—from production and distribution to technology, equipment, and end-use applications—the CHA is committed to advancing hydrogen as both a driver of industrial decarbonization and a cornerstone of sustainable job creation in every region of the country.

Canada has made commendable progress in recent years to support hydrogen deployment, including through the Hydrogen Strategy for Canada, the Clean Hydrogen Investment Tax Credit, and investments under the Strategic Innovation Fund. These initiatives have catalyzed some of the most advanced hydrogen projects in North America, such as Air Products' net-zero hydrogen complex in Alberta, EverWind Fuels' export hub in Nova Scotia, and HTEC's hydrogen transportation ecosystem in British Columbia. Yet, as global competition accelerates, Canada must ensure that its workforce development strategies keep pace with the rapid scaling of hydrogen industries worldwide.

The Sustainable Jobs Action Plan provides a pivotal opportunity to align Canada's hydrogen policy framework with workforce readiness, skills development, and inclusive growth. Hydrogen is not only a climate solution but also a foundation for industrial renewal, regional diversification, and long-term economic security. According to federal modelling, the sector could generate up to $50 billion in annual revenues by 2050 and support more than 350,000 jobs across the value chain. These opportunities span skilled trades, engineering, research, manufacturing, and operations, and they require targeted action today to ensure that Canadian workers are prepared to lead.

This submission highlights how hydrogen can underpin the Action Plan's objectives across workforce training and reskilling, economic diversification, equity and inclusion, and regional development. By embedding hydrogen in the Sustainable Jobs framework, Canada can secure high-quality jobs, strengthen its competitiveness, and ensure workers and communities thrive in the transition to a net-zero economy.

RESPONSES TO DISCUSSION QUESTIONS

1. **Priorities for 2026–2030:** *To advance opportunities for your region/sector and Canada more broadly, what should the 2026-2030 Sustainable Jobs Action Plan prioritize for the next five years? What foundational actions are needed for long-term success, including to ensure the sustainable jobs legislative principles are applied across government?*

The next five years are critical to positioning Canada's hydrogen economy as a driver of both decarbonization and sustainable job creation. With global competitors advancing rapidly, Canada must

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act decisively to capture investment, scale infrastructure, and develop the skilled workforce required to deliver on its net-zero commitments. The 2026–2030 Sustainable Jobs Action Plan should therefore focus on enabling conditions that allow the hydrogen sector to grow quickly while ensuring benefits are broadly shared across regions and communities.

Key priorities include:

- Accelerating permitting and approvals for hydrogen projects to attract investment and create near-term employment.
- Launching a national hydrogen workforce strategy, designed in partnership with provinces, industry, academia, and Indigenous communities, and tailored to regional strengths (e.g., Alberta industrial hubs, BC corridor, Atlantic export hubs).
- Providing predictable investment frameworks (tax incentives, grants, loan guarantees) to leverage private-sector capital and ensure long-term project viability.
- Aligning hydrogen and e-fuels deployment with industrial decarbonization pathways in steel, cement, fertilizer, marine, and heavy transport to secure jobs in existing industries.
- Leveraging existing infrastructure such as rail, tankage terminals and shipping, enabling hydrogen and hydrogen-derivates to serve demand and unlocking additional high skill jobs
- Embedding hydrogen in cross-government planning on infrastructure, skills, immigration, and trade to avoid fragmented policy approaches.

By clearly prioritizing hydrogen, the Action Plan can position Canada as a global leader in clean fuels, deliver thousands of well-paying jobs, and create a foundation for long-term industrial competitiveness and energy security.

2. **Access and Use of Labour Market Data:** *How do you or your organization currently access and use labour market data, including for future energy planning? What challenges do you face in doing so and what types of data are most valuable to your work or decision-making? (e.g. geographic level, industries, occupations, demographic groups, other forms of disaggregated data)*

The CHA and its members rely on a wide range of labour market data sources, but the information available today is fragmented and often not tailored to the needs of the hydrogen economy. Employers and training organizations reference data from Statistics Canada, provincial and territorial agencies, and international studies, but these sources frequently use different methodologies and definitions, making them difficult to reconcile.

At present, there are no hydrogen-specific national occupational classification (NOC) or workforce projections that capture the unique skills required in production, infrastructure, and end-use applications. Additionally, existing data on hydrogen and its derivatives is rarely disaggregated by region,

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industry, or demographic group, limiting its usefulness for planning equitable participation across Indigenous communities, women, youth, and other underrepresented groups.

For the hydrogen sector, the most valuable data would include regional labour projections tied to hydrogen projects and clusters, forward-looking occupational forecasts for both trades and emerging technical roles, and more detailed demographic information to ensure inclusive workforce strategies.

In summary, while CHA and its members make use of existing labour data where possible, the lack of hydrogen-specific, consistent, and disaggregated information poses a major challenge. A more coordinated federal approach to labour market intelligence would enable industry, governments, and training institutions to plan effectively for the workforce needs of Canada's growing hydrogen economy.

3. **Priority Data Needs:** *What data and information should be a priority for the federal government to analyze or collect to better track existing and future gaps in low-carbon skills and occupations, and related training?*

Robust, forward-looking labour market intelligence is essential if Canada is to align workforce development with the growth of the hydrogen economy. Without accurate data, it will be difficult for governments, educators, and industry to anticipate where shortages will occur, how training systems should be scaled, and which communities are best positioned to benefit. The Action Plan should therefore commit to filling current gaps in labour market information and establishing a coordinated, hydrogen-specific data framework that enables evidence-based decision making.

Priority data needs include:

- Demand forecasts for hydrogen production, infrastructure, distribution, and end-use applications in transport and industry.
- Regional workforce projections tied to export hubs, industrial clusters, and emerging hydrogen projects.
- Cross-sector analysis to map overlapping labour requirements with electricity, critical minerals, and construction sectors.
- Collection and reporting of salary / total compensation data for jobs related to low-carbon and those similar roles outside of low-carbon fields. In addition, comparison to salary / total compensation for related low-carbon roles in other countries and appropriate actions to ensure talent is attracted and/or remains in Canada.
- Training system capacity mapping to identify gaps in apprenticeship seats, college programs, and union-led training capacity.
- Equity and participation indicators to track inclusion of Indigenous Peoples, women, youth, and other underrepresented groups in hydrogen-related roles.

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By committing to these data priorities, the federal government can provide the visibility needed for employers, workers, and training institutions to plan ahead. A coordinated and transparent labour market framework will give Canada a competitive advantage, ensuring that workforce development keeps pace with the rapid growth of the hydrogen economy.

4. **Strengths and Weaknesses of Existing Federal Training Programs:** *What are the strengths and weaknesses of existing federal skills training programs to fill specific existing and future skills gaps in critical sectors, including energy, natural resources, low-carbon and resilience-enabling sectors? What models or mechanisms do you consider to be the most effective solutions?*

Canada has a strong foundation of federal training programs that provide broad supports for skills development across the economy. However, as the country moves rapidly toward net-zero, these programs must evolve to meet the specific needs of emerging low-carbon sectors such as hydrogen. The current system is well positioned to build on existing strengths, but without sector-specific adaptations and improved coordination, it risks leaving critical gaps unaddressed. The Sustainable Jobs Action Plan offers an opportunity to modernize training supports so that workers are equipped with the specialized skills required for a hydrogen-enabled economy.

Strengths:

- Skills for Success program supports foundational and digital skills relevant across sectors.
- Union Training and Innovation Program strengthens apprenticeship training capacity and access.
- Flexible design allows support for regional and sectoral initiatives.

Weaknesses:

- Lack of hydrogen-specific or low-carbon targeted training streams.
- Insufficient supports for mid-career and displaced workers transitioning from high-carbon industries.
- Limited coordination between federal, provincial, and industry training programs, resulting in duplication and gaps.

Effective models to build on:

- Industry-led and union-led training centres with hydrogen specializations.
- Hydrogen-specific micro-credentials developed in partnership with colleges and universities.
- Work-integrated learning models that combine classroom education with project-based experience in hydrogen, synthetic fuels, carbon capture, and CO_2 utilization technologies.

Federal training programs provide an essential platform, but targeted adaptation is needed to ensure workers are prepared for hydrogen's unique technical and safety requirements. By integrating

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hydrogen-specific skills into existing initiatives and strengthening collaboration with industry, Canada can ensure that training programs directly support the growth of sustainable jobs in this sector.

5. **Priority Actions to Support Upskilling:** *What priority actions should the federal government take to support workers to efficiently upskill their existing credentials, and support low-carbon industries to find skilled workers? How should the federal government collaborate with external partners to address low-carbon skills and training gaps?*

As Canada accelerates its transition to a net-zero economy, the ability of workers to quickly and efficiently upgrade their skills will be a decisive factor in meeting labour market demand. For the hydrogen sector, this means ensuring that existing tradespeople, engineers, and technicians can transition seamlessly into new roles while maintaining high safety and technical standards. Mid-career workers from carbon-intensive industries must also be supported in shifting to hydrogen-related opportunities without unnecessary delays or retraining burdens. The Sustainable Jobs Action Plan should therefore focus on creating flexible, accessible pathways for workers to adapt their credentials and for industry to secure the talent needed to scale up projects.

Key actions:

- Establish hydrogen skills hubs in partnership with industry, unions, and post-secondary institutions to deliver sector-specific training and certification.
- Expand recognition of prior learning frameworks so experienced tradespeople can transfer skills into hydrogen without repeating training.
- Fund co-development of curricula between employers, training providers, and unions to ensure relevance to real-world project needs.
- Provide targeted mid-career transition supports for workers moving from high-carbon industries into hydrogen and other clean energy sectors.
- Enhance immigration pathways for specialized hydrogen expertise, complementing domestic training while filling urgent gaps.
- Introduce a stream under the Union Training and Innovation Program (UTIP) to support hydrogen skills training
- Support the development of micro-credentials to upskill or reskill current workers, engineers, and plant operators with hydrogen-specific knowledge.

By prioritizing upskilling and credential recognition, Canada can accelerate the movement of workers into hydrogen roles, ensuring that economic opportunities are not delayed by labour shortages. These actions will both protect workers through career continuity and strengthen Canada's position as a global leader in the clean hydrogen economy.

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6. **Workforce Diversification:** *What federal actions are most important in the near term to support diversifying the workforce in key sectors? What initiatives (by industry, government, or other organizations) are successfully supporting the inclusion, recruitment, retention, and leadership of Indigenous Peoples, Employment Equity groups, women, and youth in the low-carbon economy and workforce?*

The growth of Canada's hydrogen economy represents not only an opportunity to create jobs but also to shape a more inclusive workforce from the outset. Historically, energy and resource sectors have struggled with underrepresentation of Indigenous Peoples, women, racialized Canadians, persons with disabilities, and youth. As hydrogen projects expand across regions, there is a chance to embed diversity and equity directly into training, hiring, and leadership practices, ensuring that all communities benefit from the transition to net-zero. The Sustainable Jobs Action Plan should take deliberate steps to make diversification a defining feature of the hydrogen workforce.

Federal priorities:

- Create dedicated funding streams for Indigenous-led hydrogen projects and training programs, ensuring capacity development and community benefits.
- Expand scholarships, mentorships, and apprenticeships for women, youth, racialized workers, and persons with disabilities entering hydrogen-related fields.
- Support Indigenous equity participation models in hydrogen production, infrastructure, and export projects.
- Require federally supported projects to include diversity and inclusion strategies as part of their workforce development plans.

Examples of effective initiatives to build on:

- Indigenous-led ownership models in renewable energy that can be adapted for hydrogen.
- Women in Hydrogen and Women in Renewable Energy (WiRE), which have successfully expanded opportunities and networks for women in clean energy.
- Youth-focused apprenticeship and STEM outreach programs that prepare the next generation for skilled trades and technical careers.

Embedding equity and inclusion into the hydrogen workforce from the beginning will strengthen Canada's labour supply, build trust with communities, and ensure that the benefits of the net-zero transition are broadly shared. By prioritizing diversity now, Canada can set a global example of how clean energy industries can deliver both economic and social progress.

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7. **CHA Contributions:** *Actions to foster the move to a net-zero economy and the creation of sustainable jobs exist across all levels of government and society. What actions can your organization contribute to support achieving the changes needed?*

The Canadian Hydrogen Association and its members are committed to ensuring that the growth of the hydrogen economy translates into sustainable, high-quality jobs for Canadians. As the national voice of the sector, CHA plays a convening role between governments, industry, training providers, and communities, helping to identify workforce needs and shape effective responses. The Association and its members are well positioned to contribute expertise, partnerships, and data to support the federal government in delivering on the objectives of the Sustainable Jobs Action Plan.

Key contributions include:

- Sharing industry-driven labour market intelligence and insights on hiring trends, project timelines, and skills demand.
- Partnering with post-secondary institutions and unions to co-develop hydrogen training curricula and pilot new credentialing approaches.
- Supporting federal and provincial governments in testing workforce development initiatives, ensuring they align with real project requirements.
- Promoting Indigenous and community partnerships in hydrogen projects, including opportunities for equity participation and local employment.
- Increasing awareness and education among the public and potential workers regarding careers and opportunities within the hydrogen industry through digital communications and outreach

By leveraging its national network of members and partners, CHA can serve as a vital bridge between industry and government. This collaborative approach will ensure that workforce development efforts are practical, inclusive, and responsive to the realities of Canada's growing hydrogen sector.

8. **Additional Comments:** *Does this discussion paper target the right themes and areas requiring change? Do you have anything else to add that has not been covered above or in previous engagements?*

Hydrogen is not simply another clean technology—it is a cross-cutting enabler of Canada's entire net-zero strategy. It has the potential to decarbonize heavy industry, long-haul transport, and energy systems while opening new trade opportunities through clean fuel exports. By anchoring hydrogen within the Sustainable Jobs Action Plan, the federal government can provide clarity to investors, signal stability to international partners, and create confidence for workers and communities looking to participate in this new economy. Recognizing hydrogen as a national priority will also ensure that Canada keeps pace with global competitors who are rapidly scaling their own hydrogen industries.

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Explicitly embedding hydrogen as a core pillar of the Action Plan will demonstrate Canada's commitment to building a resilient, inclusive, and competitive clean economy. Doing so will not only accelerate decarbonization but also guarantee that Canadian workers and communities benefit fully from the sustainable jobs hydrogen will create.

CONCLUSION

The CHA urges that the Sustainable Jobs Action Plan explicitly recognize hydrogen as a cornerstone of Canada's clean economy strategy. Hydrogen creates well-paying jobs across the value chain—from research and development to trades, infrastructure, and operations—while contributing to Canada's emissions reduction goals and energy security.

The Canadian Hydrogen Association stands ready to collaborate with the Government of Canada in shaping a Sustainable Jobs Action Plan that leverages hydrogen as a driver of sustainable employment, industrial competitiveness, and inclusive economic growth.

Sincerely,
David Billedeau
President and CEO
Canadian Hydrogen Association