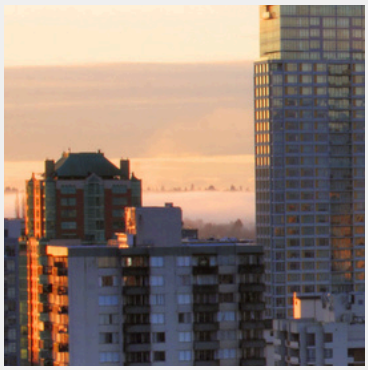
## Research Report

# Youth Workforce Attraction within British Columbia's Clean Energy Sector

In collaboration with the **Zero Emissions Innovation Centre (ZEIC)**



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# Introduction

Team 5 of the Student Energy Career Training Program collaborated with the Zero Emissions Innovation Centre (ZEIC) to research the strategies and skills essential for breaking into the sustainability sector. ZEIC, an independent non-profit within the Low Carbon Cities Canada (LC3) network, was established by the Government of Canada and the Federation of Canadian Municipalities (FCM) to support a just and equitable transition toward a net-zero economy in Metro Vancouver. This year, ZEIC is launching the Sustainable Workforce Coalition, an initiative aimed at identifying and implementing effective strategies to attract young talent to the sustainable workforce while addressing existing barriers.

Team 5 consists of five members, each leading a primary role and co-leading a secondary role. Ryan Yip served as team lead and co-led data analysis; Amanda Nogueira Moreira de Souza was the data analysis lead and co-lead for copy editing; Remedios Abrica led communications and co-led design; Blair Tran was the lead copy editor and team co-lead; and Victoria Lim took on the role of design lead and communications co-lead. The team worked under the mentorship of Andrea Balcazar from the Student Energy Career Training Program and Andrew Williamson from ZEIC.

Through this project, we aim to provide a comprehensive research synthesis and data analysis on the experiences of both employers and prospective employees in the sustainable workforce. The transition to a net-zero economy requires a skilled and resilient workforce, yet challenges persist in attracting, retaining, and supporting workers in the energy transition sector. Our research focused on industry interviews with key stakeholders, including hiring managers, recruiters, and HR professionals. Additionally, we developed a survey to capture insights from youth seeking opportunities in the sustainable workforce, ensuring a well-rounded understanding of workforce dynamics for ZEIC's Coalition 2025 Roadmap.

# Background Research

Canada's demand for energy transition is intensifying as the country seeks to meet ambitious climate goals and achieve net-zero emissions by 2050. With its abundant renewable energy resources, including hydro, wind, and solar power, Canada is uniquely positioned to lead the global shift to clean energy. This transition is not just an environmental imperative but an economic opportunity, driving innovation, creating green jobs, and enhancing energy security. The clean energy sector is expected to grow at an annual rate of 3.4% from 2020 to 2030, nearly four times faster than the national average, potentially generating around 559,400 jobs by 2030 (Canadian Chamber of Commerce, 2024). Investments in renewable energy technologies, such as wind and solar power, and energy-efficient infrastructure projects fuel this growth (Cloe Logan, 2024).

To capitalize on these opportunities, Canada has proposed a comprehensive net-zero workforce plan that emphasizes upskilling existing workers and attracting new talent to meet the demands of a rapidly evolving energy landscape (Energy Safety Canada, 2023). The Sustainable Jobs Act (Bill C-50), introduced in 2023, lays the groundwork for collaboration between government, industry, and educational institutions (Canadian Chamber of Commerce, 2024). Additionally, the plan seeks to address broader labor market challenges, such as an aging workforce and low birth rates, by implementing inclusive policies that engage Indigenous communities and promote diverse hiring practices (Clean Energy Canada, 2024). By fostering a skilled workforce, Canada can mitigate climate change while enhancing its competitive edge in the global market.

British Columbia (B.C.) exemplifies Canada's leadership in clean energy innovation, particularly in clean buildings, electricity, and transportation. The province boasts a 98% clean electricity grid and ambitious policies, such as the BC Energy Step Code, which aims for all new constructions to be zero-carbon by 2030. B.C. also leads in electric vehicle (EV) initiatives, offering substantial rebates and setting aggressive sales targets for EVs. Despite these advancements, challenges persist. The absence of a comprehensive clean energy strategy and slow resource procurement threaten to impede progress toward net-zero goals by 2050. Furthermore, while there is significant potential in the clean industrial sector, B.C. has yet to develop a strategic plan to capitalize on opportunities such as critical minerals.

Labor market development remains a critical challenge for B.C.'s clean energy transition. Although clean economy jobs in the province are projected to grow from over 105k in 2018 to over 222k by 2030, barriers such as inflexible education and training programs risk creating skill gaps as new technologies emerge (Government of British Columbia, 2020). High housing costs and competition from other sectors further complicate recruitment and retention, particularly in rural areas where access to training resources is limited (Pembina Institute, 2024). Additionally, the lack of incentives for lifelong learning hampers the ability of workers to adapt to evolving industry demands. It is essential for B.C. to address these issues when establishing a robust and equitable labor market that can support its ambitious clean energy goals.

One of the most pertinent strategies to address labor demand is attracting young talent to the clean energy sector. Canada's aging workforce presents a significant bottleneck to progress, but young people are uniquely positioned to fill this gap. According to Student Energy's 2024 report, Youth Skills in the Energy Transition, younger generations are highly motivated by equality, purposeful work, and technological advancement—qualities well-suited to the clean energy industry. In fact, a 2023 study revealed that 38.87% of youth respondents were interested in working in the clean energy sector, with 41.5% indicating that renewable energy companies represented their ideal workplace (Student Energy, 2024). However, persistent barriers youth from accessing these opportunities. Challenges such as a lack of entry-level positions, inadequate salaries relative to living costs, limited professional networks, and scarce career development opportunities create significant obstacles. Unpaid internships and training programs are not always accessible.

These barriers disproportionately affect women, visible minorities, and Indigenous workers. Women account for only 31.3% of the clean energy workforce, and visible minorities make up 18.4% (Student Energy, 2024). Without targeted initiatives to improve access to skills training and job opportunities, women and minorities will remain underrepresented in the industry. Indigenous workers, who represent 6% of the clean energy workforce, contribute valuable knowledge and play a critical role in driving the energy transition. However, systemic barriers such as racism, colonialism, and generational trauma must be addressed to increase Indigenous representation and leadership in clean energy jobs.

Creating a more inclusive green labor market is not only a moral imperative but also a strategic need for Canada's energy transition. Governments and industries must dismantle systemic barriers and invest in accessible training, fair compensation, and career development opportunities. By doing so, Canada can empower its youth and underrepresented communities to lead the clean energy industry, ensuring an equitable and sustainable future for all.

# Research Methodology

To analyze workforce attraction and barriers in the sustainable job sector, we employed a mixed-methods approach, integrating both qualitative and quantitative data collection.

## 1. Industry Interviews with Recruiters and Sustainability Professionals

We conducted semi-structured interviews with hiring managers, recruiters, and sustainability professionals to examine recruitment strategies, hiring challenges, and workforce development efforts. Our questions focused on:

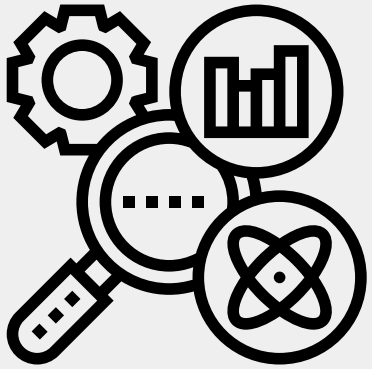
- Effective recruitment strategies for sustainability roles
- Barriers to entry for candidates
- Key skills and backgrounds employers seek
- Retention strategies and workforce development programs
- The role of partnerships in strengthening the green job sector

While cold outreach resulted in a low response rate, leveraging personal connections led to seven insightful interviews, shedding light on industry hiring trends.

## 2. Youth Survey on Green Job Interest and Challenges

To understand the perspectives of young professionals pursuing sustainability careers, we distributed a survey exploring their motivations, obstacles, and expectations from employers. Key areas included:

- Reasons for pursuing green jobs
- Barriers such as financial constraints and limited training access
- Employer support needs, including mentorship, career pathways, and wages



## 3. Youth Interviews

To complement the survey findings, we conducted in-depth interviews with young job seekers, gaining deeper insights into their experiences, challenges, and expectations. These discussions provided qualitative depth, enriching our understanding of workforce dynamics.

By integrating perspectives from both recruiters and young professionals, our research presents a comprehensive view of hiring challenges and workforce needs in the sustainability sector, offering actionable recommendations to bridge gaps in the green job market.

# Data Analysis

## Youth Survey

The SECT Youth Survey gathered **63** responses from young professionals interested in or currently working in the green job sector. The analysis highlights key demographic trends, employment patterns, motivations, challenges, and perceptions of the green job market.

## Demographic Overview

The survey data reflects a diverse respondent base, primarily consisting of young adults:

- The **majority of participants were between ages 25–30** (28 respondents, 44%) and 18–24 (28 respondents, 44%), indicating strong youth engagement in the green job sector.
- A smaller segment (7 respondents, 11%) was over 30, suggesting that while younger professionals dominate the field, some older individuals are also transitioning into sustainability careers.
- Geographically, the survey saw **strong representation from Canada (14 respondents) and the United States (17 respondents)**, with additional responses from other countries, highlighting significant North American interest in green jobs.

**46%**
Actively seeking employment in this sector

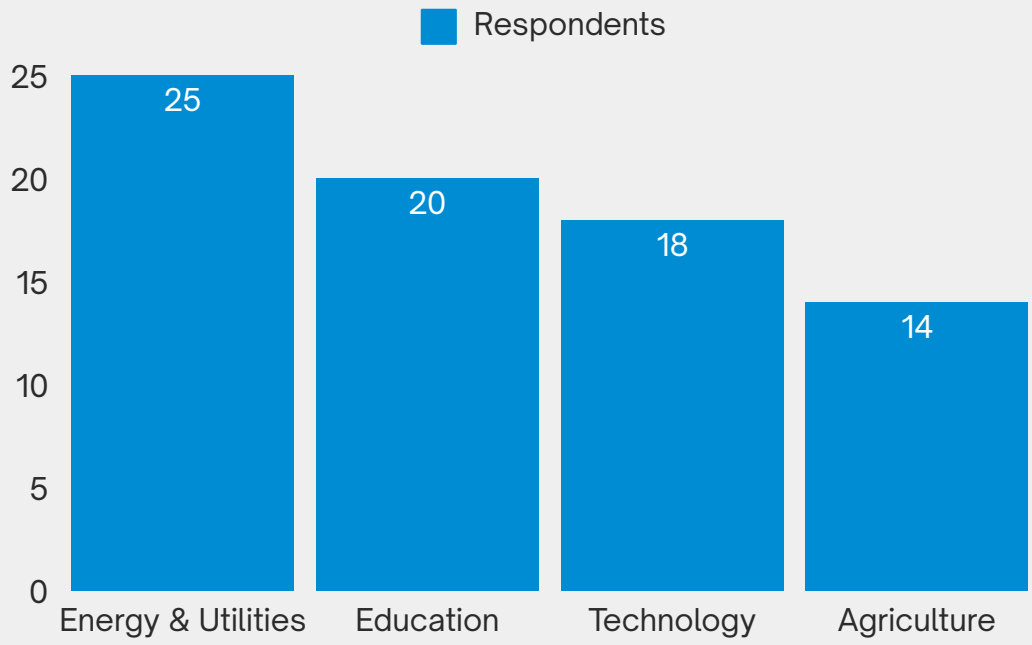
**11%**
Employed in non-green jobs but may be considering a transition

## Employment Status and Sectoral Interests

The survey examined respondents' employment status and areas of interest within the green job sector:

- 43% (27 respondents) currently work in a green job.
- 46% (29 respondents) are actively seeking employment in the sector.
- 11% (9 respondents) are employed in non-green jobs but may be considering a transition.

Interest areas varied, with the most frequently cited sectors being Energy & Utilities, Education, Technology and Agriculture.




This diversity underscores the broad scope of green jobs across industries and the need for sector-specific career development pathways.

## Motivations for Pursuing Green Jobs

Respondents shared the key factors driving their interest in green careers:

- **Environmental passion** (53 respondents) and **desire to combat climate change** (50 respondents) were the strongest motivators, highlighting the sector's alignment with personal values.
- **Opportunities to work in innovative fields** (30 respondents) and **job stability & growth potential** (13 respondents) suggest that financial and professional security also play a role in career decisions.
- **Alignment with personal and ethical values** (46 respondents) further emphasizes that green careers offer fulfillment beyond traditional employment considerations.

## Challenges in Accessing and Working in Green Jobs

Despite a strong interest in sustainability careers, respondents identified several barriers to securing and succeeding in green jobs:

- **Lack of information about job opportunities and career pathways** was the most commonly cited challenge. Many respondents felt that green job roles are not clearly defined, making it difficult to identify viable career trajectories.
- **Financial constraints** (such as low wages, lack of funding for training, and limited financial aid for education) were also significant obstacles. Respondents expressed concerns that green jobs, despite their importance to the world, often do not offer competitive compensation.
- **Workplace challenges**, including lack of diversity, inadequate professional support, and unclear career progression, were also identified as issues that may deter youth from fully committing to sustainability careers.

## Support Needed from Employers

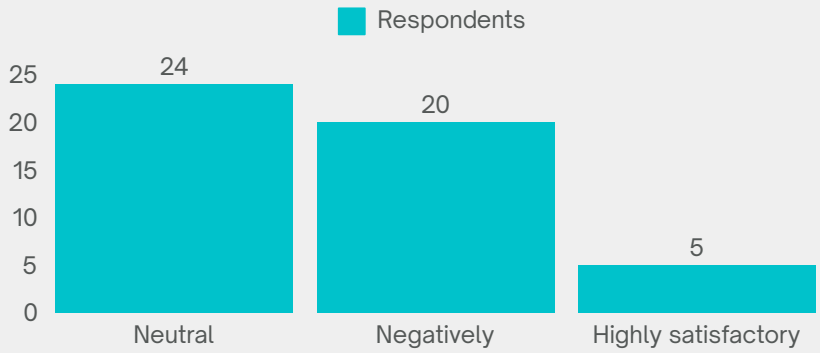
To address these challenges, respondents highlighted key areas where companies and organizations can provide greater support:

- **Training and skill-building programs:** Many respondents emphasized the need for structured training initiatives to bridge the gap between education and practical job experience.
- **Clear career pathways and advancement opportunities:** A major concern was the lack of visibility into long-term career prospects in the green job sector. Respondents suggested that clearer progression routes within companies would make these roles more attractive.
- **Higher wages and benefits:** Competitive compensation packages were repeatedly mentioned as a way to enhance job stability and increase youth participation in the sector.
- **Mentorship and networking opportunities:** Establishing stronger professional networks and mentorship programs was seen as crucial in helping young professionals navigate the green job landscape.
- **Greater alignment between company values and environmental goals:** Respondents felt that companies should authentically integrate sustainability into their mission rather than merely branding themselves as "green."

## Job Search Satisfaction

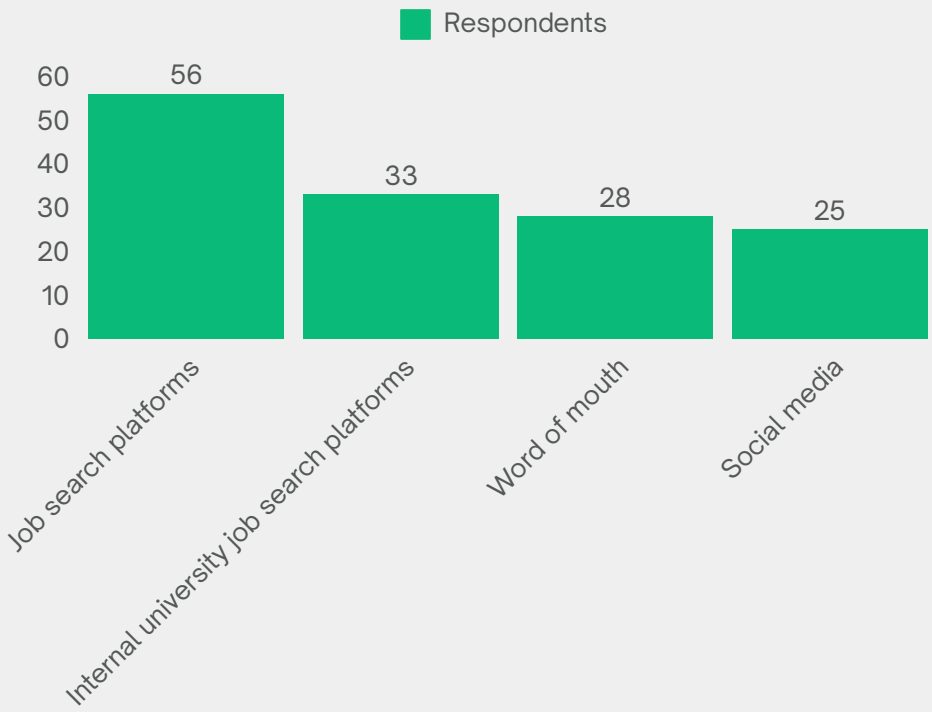
When asked to rate their satisfaction with the job search experience within the sustainability landscape (on a scale of 1 to 5, where 3 is neutral):

- **24 respondents (38%) rated their experience as neutral (3).**
- **20 respondents (31%) rated it negatively (2)**, indicating dissatisfaction with the accessibility and availability of green job opportunities.
- **Only 5 respondents (8%) rated their experience as highly satisfactory (5).**
- This data suggests that **while there is considerable interest in green jobs, many job seekers face significant barriers in securing employment,** highlighting the need for improved hiring practices, clearer job listings, and better recruitment efforts by green companies.



## Platforms Used to Look for Green Jobs

The most common platforms used by the responders were:




## Perceptions of Soft Skills in the Green Job Market

The survey also assessed respondents' views on the importance of soft skills in the green job sector.

Based on a 1–5 scale (where 5 indicates strong agreement):

- **26 respondents (41%) agreed (4) that soft and communication skills are highly valued in the sector**, while **12 respondents (21%) strongly agreed (5)**.
- **7 respondents (11%) disagreed (2), while only 2 respondents (3%) strongly disagreed (1).**
- Many respondents elaborated that **soft skills such as communication, teamwork, and adaptability are critical for success in sustainability-focused careers**, but some felt that since the market has become more competitive, **technical skills are currently receiving greater emphasis**.

## Interviews

The qualitative insights gathered from interviews with young professionals and job seekers in the green job sector reveal critical themes related to career accessibility, challenges, skills, and employer expectations. The responses highlight both structural barriers and opportunities within the sustainability job market.

## Recruiters

Despite outreach efforts, recruiter participation in this study was notably low, with only one recruiter agreeing to an interview. This lack of engagement itself provides valuable insights, suggesting potential gaps in accessibility and transparency within the green job recruitment space. The limited response may indicate:

- A lack of structured outreach to early-career professionals.
- Insufficient dedicated hiring pathways for youth.
- A disconnect between recruiters and job seekers in sustainability fields.

## Key Insights from the Recruiter Interview

The participating recruiter highlighted major challenges in sustainability hiring, particularly in **engagement and retention**. Many young professionals see sustainability roles as **stepping stones** rather than long-term careers. Additionally, **nonprofit funding constraints** significantly impact hiring and retention, leading to high turnover rates.

A key factor in this instability is the nature of **short-term, highly restricted funding** cycles, which create uncertainty. In contrast, **unrestricted, multi-year agreements** (e.g., three-year funding vs. short-term project-based grants) provide greater job stability. The recruiter emphasized the importance of **trust-based funding models,** which allow organizations to allocate resources more flexibly, fostering a more sustainable work environment.

Furthermore, **only a small percentage of available funding is directed toward youth climate organizations,** limiting long-term job security for young professionals.

## Addressing Hiring Challenges

To improve engagement and retention, the recruiter stressed the need for:

- **Mentorship programs** to support young professionals.
- **Stronger networking opportunities** to facilitate career development.
- **More structured hiring pathways** to create clear entry points into sustainability careers.

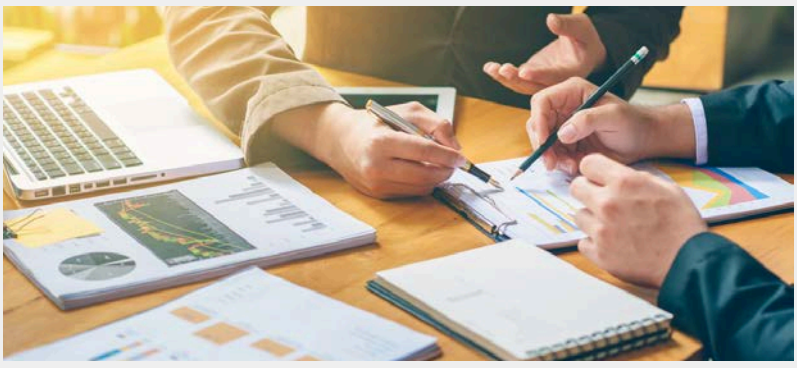
The overall recruitment landscape for green jobs remains fragmented, and the low recruiter participation in this study underscores the need for stronger connections between employers and job seekers.

## Demographic & Career Backgrounds of Respondents

Survey respondents came from diverse academic and professional backgrounds, including:

- **Public policy, environmental management, engineering, social sciences, and sustainability consulting.**
- Many transitioned from **non-traditional fields** (e.g., software engineering, humanities) into sustainability roles.
- Most gained **internship and volunteer experience** before securing full-time employment, with **networking playing a critical role** in career advancement.
- **International job seekers** faced additional hurdles, including **visa restrictions, language barriers, and employer preference for local hires**.

To address these challenges, the recruiter underscored the need for **mentorship, networking, and support systems** to keep young professionals engaged and committed to sustainability careers. The **recruitment landscape for green jobs remains fragmented**, and the **low recruiter participation in this study further underscores the need for stronger employer-job seeker connections** in the sector



## Challenges in Finding Green Jobs

a. Unclear Career Pathways & High Experience Requirements

- Many entry-level jobs require **3–5 years of experience**, making it difficult for recent graduates to break into the field.
- Job seekers struggle with **deciphering industry expectations** and determining **which skills are essential**.

b. Limited Access & Financial Barriers

- **Unpaid internships** make it difficult for candidates from lower-income backgrounds to gain experience.
- **Economic downturns** have led to **budget cuts in ESG and biodiversity roles**, reducing available opportunities.
- Many **green job markets are highly competitive**, with limited openings compared to demand.

c. Networking Over Job Boards

- **Personal connections, referrals, and industry events** were the most effective ways to secure employment.
- While job boards (LinkedIn, university portals) were used, **most opportunities came through informal channels**.

d. Underrepresentation & Impostor Syndrome

- Many, especially **women and professionals from non-traditional backgrounds**, felt **underqualified** despite meeting job requirements.
- A **lack of diversity and inclusion** remains an issue in some sustainability fields.

## Employer Expectations & Skill Gaps

a. Most Valued Skills

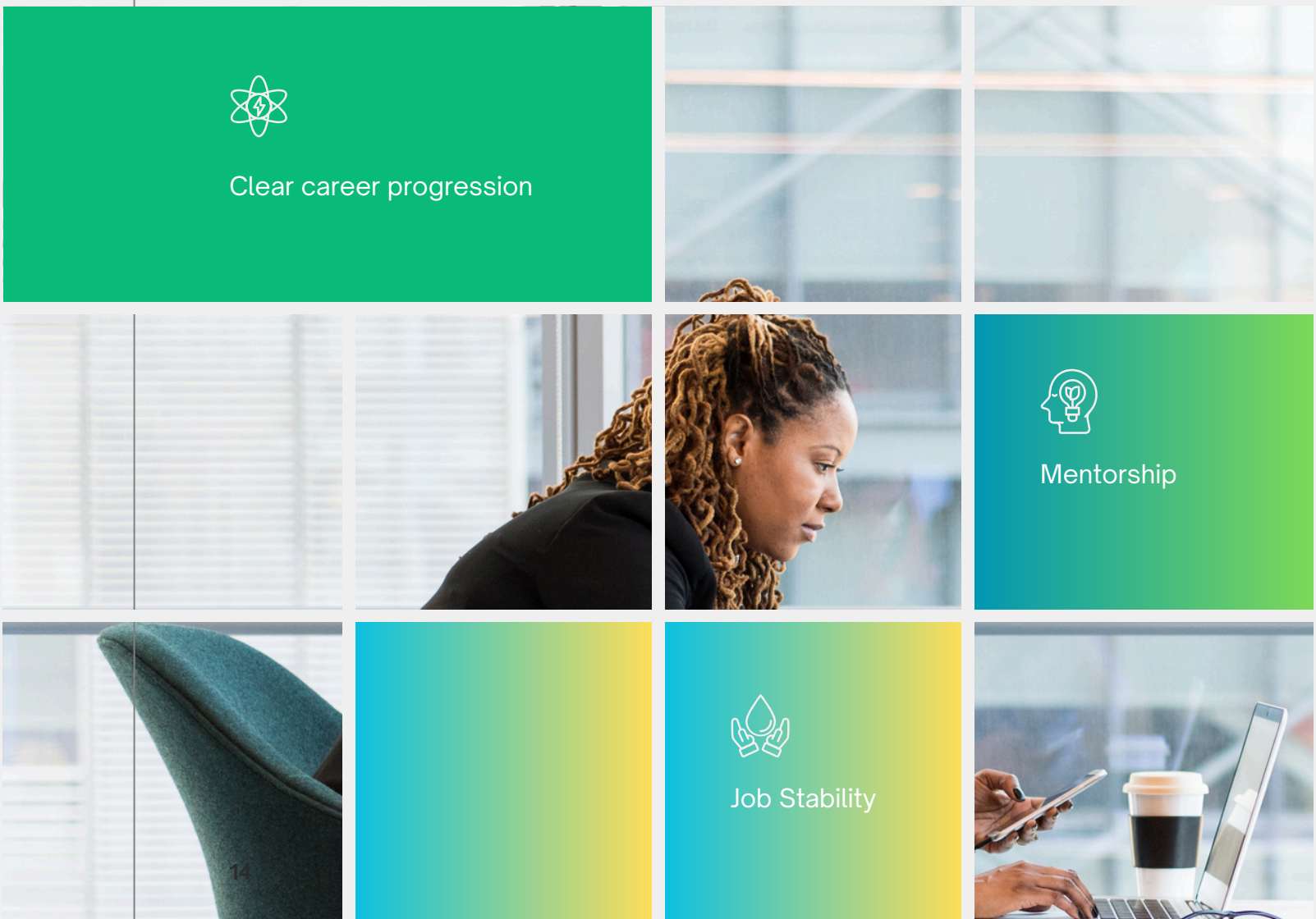
- Employers prioritize **soft skills** like **communication, adaptability, and stakeholder engagement,** especially in consulting and policy roles.
- **Technical skills** (e.g., sustainability reporting, carbon accounting, GIS, ESG frameworks) are critical for specialized roles.

b. Gaps & Training Needs

- Many job seekers **lacked technical expertise,** making it hard to compete in the job market.
- **Formal mentorship and structured training** were cited as crucial for career development.

Retention & Job Satisfaction

- Sustainability jobs in nonprofits and research roles have **high turnover rates due to low wages and limited career growth.**
- Employees felt most satisfied when they had **clear career progression, mentorship, and job stability.**



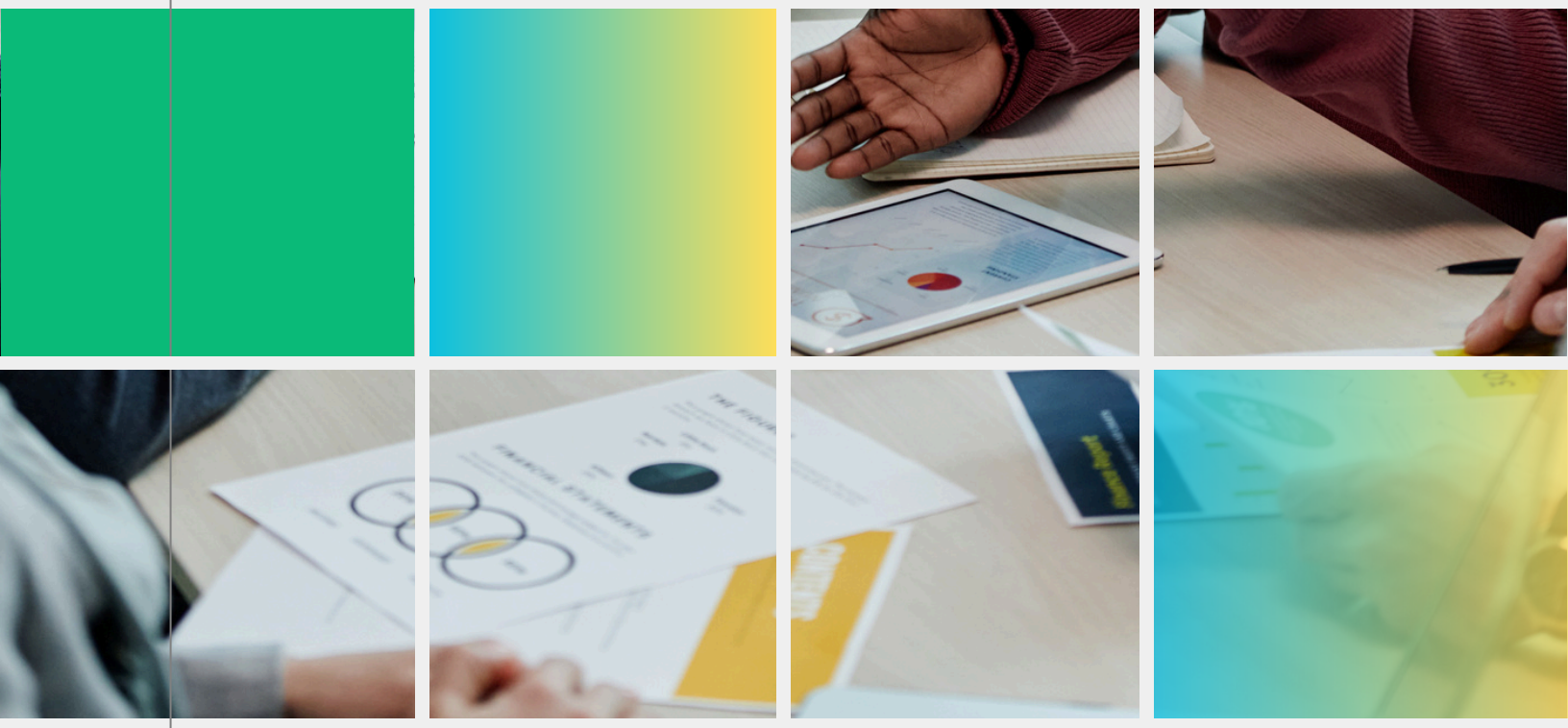
# Assumptions

Our research methodology relied on interviews and surveys, based on the assumption that these were the most effective and efficient methods for gathering insights from both job seekers and recruiters in the sustainability sector.

## Survey Distribution & Engagement

We primarily distributed the survey through LinkedIn, Slack communities, university career departments, and word of mouth.

- LinkedIn proved highly effective, with one of our fellows' posts garnering over 1.5K impressions.
- The strong representation of Canadian respondents suggests that promotion via Canadian youth-focused Slack platforms like The Starfish Canada and Propel Impact was particularly successful.



## Assumptions in Data Collection

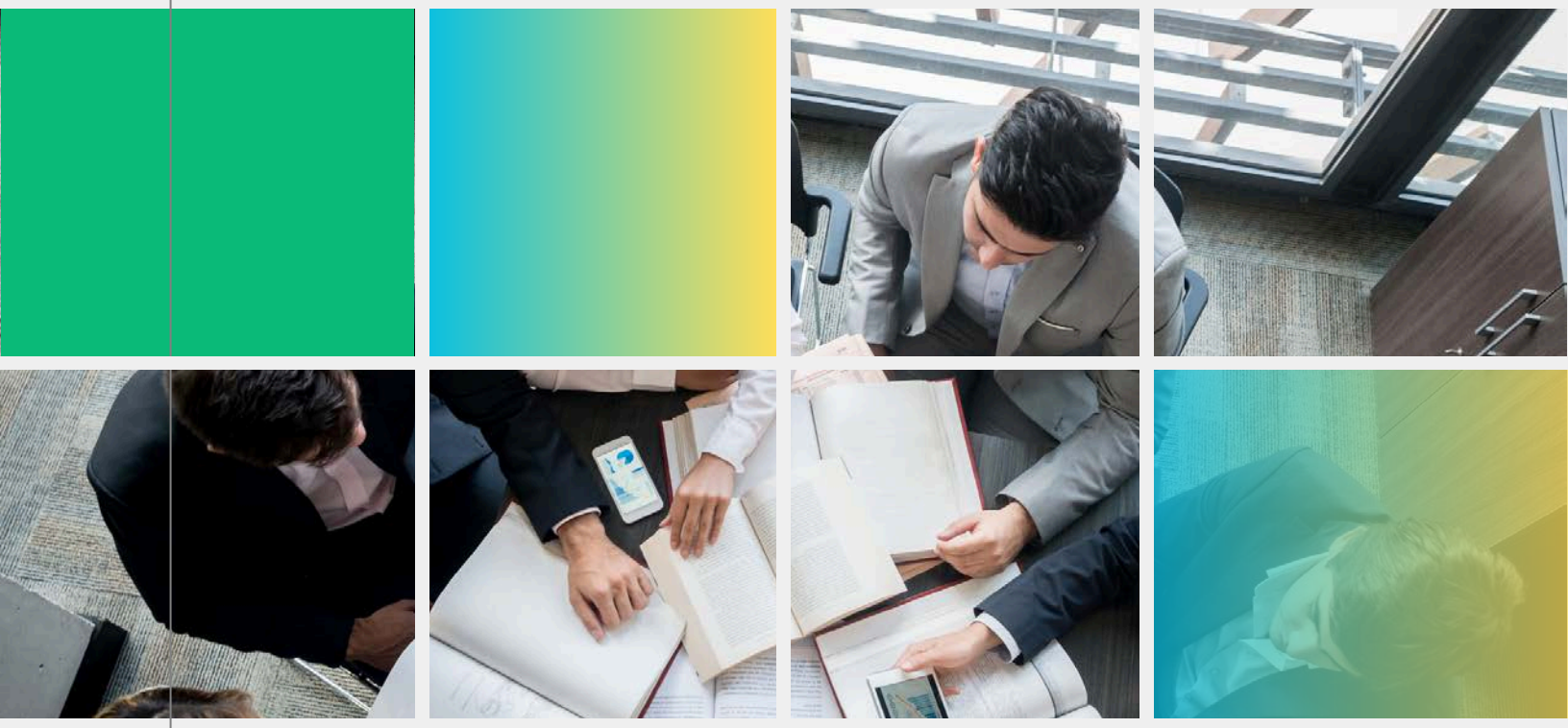
- **Respondent Accuracy & Honesty:** We assume that participants provided truthful and accurate responses, reflecting their genuine opinions and experiences.
- **Comprehension**: It is assumed that respondents fully understood the survey and interview questions, answering based on their interpretation of the wording provided.
- **Voluntary Participation:** Since no monetary incentive was offered, we assume that all participants were genuinely willing to share their insights, and their responses represent their actual viewpoints.
- **Accessibility:** We assume that the platforms used—Google Forms for surveys and Google Meet/Zoom for interviews—were accessible to all participants. No technical issues were reported during the interview process.
- **Consistency in Interviews:** While individual responses varied, we assume that all interviews followed a structured format, ensuring consistent data collection across participants.

By leveraging these insights, we can refine future research approaches and enhance engagement strategies to further explore workforce dynamics in the green job sector.

# Limitations and Challenges

## Survey Limitations

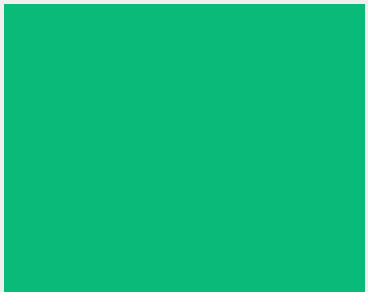
- **Survey Length & Complexity:** The length or complexity of the survey may have led some participants to rush through responses, potentially impacting data quality.
- **Self-Selection Bias:** Since no monetary incentive was offered, the survey may have attracted respondents with strong opinions on the topic, potentially leading to a skewed response set.

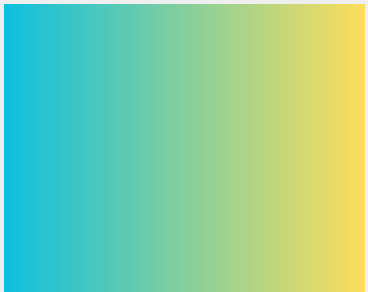


## Interview Challenges

- **Low Recruiter Engagement:**
  - We conducted cold outreach to professionals in HR/recruiting roles and founders/directors of sustainability organizations.
  - Among HR/recruiters contacted via LinkedIn, only 1% responded, and none agreed to an interview despite follow-up messages.
- **Limited Sample Size & Geographic Representation:**
  - Outreach to personal connections in non-HR sustainability roles was more successful, yielding seven interviews.
  - However, only two interviewees were based in Canada, limiting geographic representation.
  - A sample size of seven may not fully capture the diversity of perspectives within the green job sector.
- **Selection & Response Bias:**
  - Interviewees were not randomly selected, which may have led to a non-representative sample.
  - As many interviewees were personal connections, there is a risk that familiarity with the interviewer influenced responses, potentially leading to social desirability bias.
- **Limited Generalizability:**
  - Given the small number of interviews and lack of diversity in participants' backgrounds, our findings may have limited applicability to the broader sustainability job market.

Despite these limitations, the study still provides valuable insights into youth engagement, job market challenges, and employer perspectives in the sustainability sector. Future research could benefit from broader outreach strategies, monetary incentives, and randomized participant selection to enhance data reliability and representativeness.





# Key Takeaways and Implications

This analysis reveals several key findings:

1. **Strong youth interest in green jobs:** Most respondents are either employed in or actively seeking careers in sustainability, underscoring the sector's appeal to young professionals.
2. **Barriers to entry remain a significant challenge:** Lack of information about career pathways, financial constraints, and workplace diversity issues hinder access to green jobs.
3. **Employers need to provide more structured support:** Training programs, clear career advancement pathways, and competitive wages would enhance job satisfaction and retention.
4. **Job seekers have mixed experiences in the sustainability job market:** While many find opportunities aligned with their values, challenges such as unclear hiring processes and limited job openings create frustration.

In conclusion, while green jobs offer promising opportunities for youth engagement, **addressing structural barriers will be essential in ensuring a more accessible and rewarding career landscape in the sustainability sector.**

# Recommendations

To support young professionals and bridge the skills gap in the green job market, energy actors—including organizations, companies, governments, and educational institutions—should implement the following strategies:

## 1. Human-Centered Hiring Processes

- **Enhance Transparency & Communication**: Employers should provide **clear expectations** regarding job roles and qualifications.
- **Make Hiring More Engaging**: The process should feel **welcoming and interactive**, reducing the impersonal nature of many applications.
- **Collaborate with Educational Institutions**: Strengthening partnerships can help better align job seekers' skills with industry needs.

## 2. Clear & Accessible Job Descriptions

- Use **straightforward language** to describe roles, ensuring clarity for early-career professionals.
- Explain **how each role directly supports sustainability goals**, making positions more appealing to mission-driven job seekers.

## 3. Support for Diverse Youth in the Energy Workforce

- **Highlight Career Growth**: Clearly outline **short-term and long-term development opportunities** in job postings.
- **Showcase Impactful Work**: Employers should communicate **how young professionals contribute** to meaningful energy transition projects.

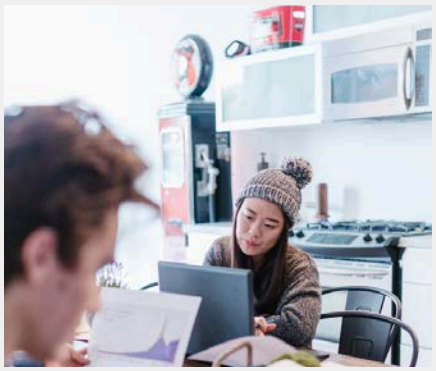
## 4. Emphasizing Environmental & Social Impact

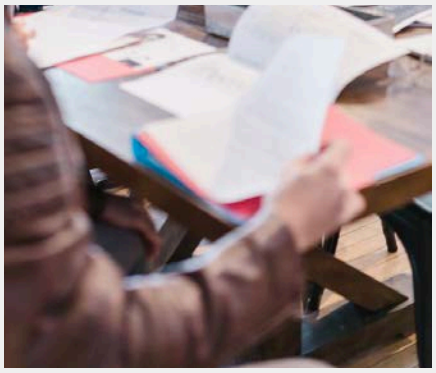
- Quantify Impact: Companies should share measurable sustainability achievements and goals through reports, case studies, and public disclosures.
- Link Roles to Broader Sustainability Objectives: Job descriptions should highlight how each position contributes to environmental and social progress.

## 5. Expanding Candidate Pools Beyond Traditional Majors

- Encourage Interdisciplinary Talent: Employers should welcome candidates from diverse academic backgrounds, not just sustainability-specific degrees.
- Recognize Transferable Skills: Many sustainability roles require adaptability and cross-sector knowledge rather than narrow expertise.
- Provide Training & Upskilling: Investing in on-the-job learning opportunities can help diverse candidates transition into green careers successfully.

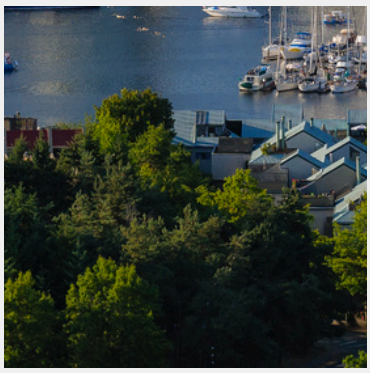
By implementing these strategies, energy actors can foster a more inclusive, transparent, and dynamic job market, making it easier for young professionals to enter and thrive in the sustainability sector.









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