VIETNAM'S CLIMATE TECH WORKFORCE REPORT

THE VIETNAM CLIMATE TECH ECOSYSTEM REPORT 2026

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NEW ENERGY NEXUS Vietnam

SNV

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FOREWORD

SNV is pleased to have supported the addition of a workforce chapter to this year's Vietnam Climate Tech Ecosystem Report. Through SHIFT's Green Innovation Grants Initiative (GIGI), we work closely with climate tech SMEs and have seen how much their growth depends on people as well as on technology and capital. Strong teams attract finance, and skilled staff turn that finance into products, customers and lasting businesses. This chapter explores the skills these enterprises need and how the workforce shapes their access to finance. We hope it proves useful to enterprises, training providers and funders, and thank our partners for their collaboration.



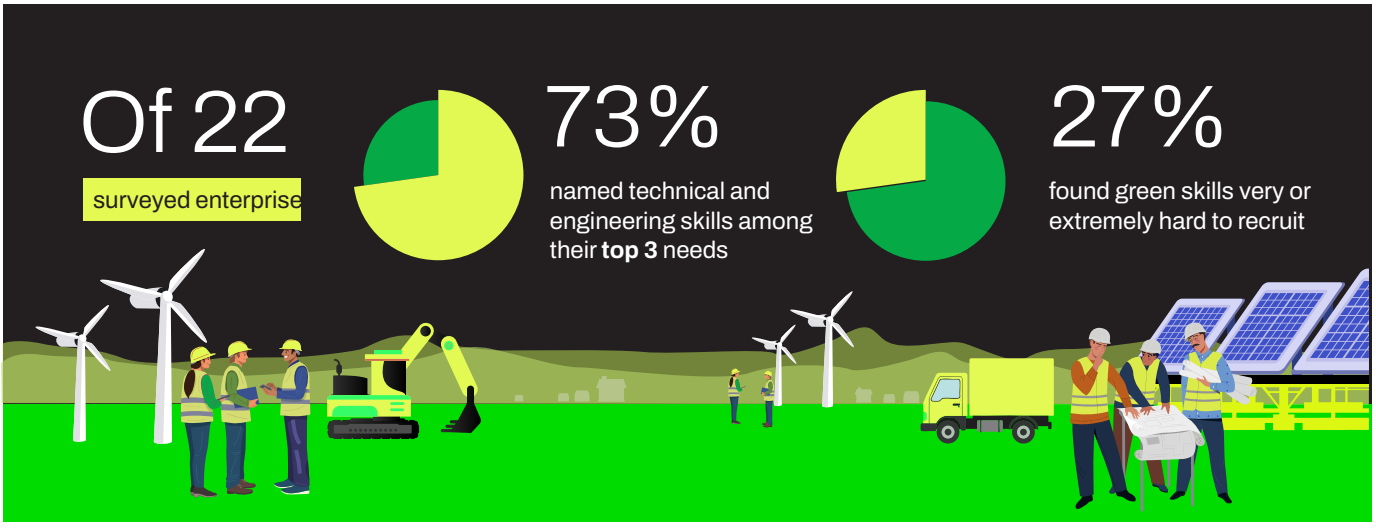
1. Executive Summary



Capital has entered Vietnam's climate tech sector faster than the workforce needed to deploy it. This report looks at the people behind enterprise growth. It asks which skills climate tech enterprises need, who trains them, and whether workforce quality affects investment decisions. It draws on 53 interviews and a survey of 61 ecosystem actors. The samples are small, so the findings are indicative only.

The shortage is specific, not general. Of 22 surveyed enterprises, 73% named technical and engineering skills among their top 3 needs, but only 27% found green skills very or extremely hard to recruit. What is scarce is not entry-level labour. It is experienced people who can combine skills across disciplines, such as engineering with data, finance, or business.

Enterprises also report gaps that are harder to train. They want staff who understand and believe in sustainability, and they most often name systems thinking, adaptability, and problem-solving as the soft skills they need. Specialised English remains a constraint for STEM graduates. Training is growing but poorly connected to employers. Universities, vocational colleges (known as TVET), support organizations,



and enterprises all train. Yet 86% of surveyed enterprises trained their own staff in the past 2 years, most often on the job. Universities and experienced hires from industry are the main sources of talent, and TVET institutions are among the least used.

A definition gap sits behind much of this. Vietnam defines "green" for projects and investments but not yet for skills or jobs. Without a working definition, training institutions have little basis for designing courses, and enterprises struggle to say what they are hiring for.

Workforce quality already shapes funding. When funders and support organizations were asked how they assess enterprises, they named the team and workforce more often than anything else, ahead of commercial viability, sector fit, and climate impact. But team capability rarely enters formal scoring, and enterprises seldom realize they are assessed on it.

Finance rarely builds a workforce directly. Dedicated workforce funding is largely absent from grants and investments, and worker-protection and social-inclusion terms appear mostly where development finance is involved. Small founding teams also struggle to use the funding they secure, and too much support at once can overload them.

AI has moved from a novelty to a baseline skill. It now handles part of reporting, analysis, and routine administration, while judgment, fieldwork, and relationship-building remain human-led. AI appears to be reducing the need for staff in some routine tasks, but it also adds to the workload of existing staff, who are expected to deliver more than before.

Women remain underrepresented in core technical and field roles and are more present in office-based roles. Respondents in the energy sector describe a retention problem as much as an entry one, and how employers see it is not yet documented.

Much of the legal framework is now in place. Laws passed in 2025 recognize enterprises as trainers, offer partial public support for in-house training, and bring green jobs into labour-market information systems. The priorities for 2026 and 2027 are a shared working definition of green skills, training tied to committed hiring, workforce criteria made explicit in investor checks (due diligence) for mature enterprises, and support paced to what small teams can absorb. Vietnam's climate tech enterprises are not short of entry-level labour. They are short of experienced people who can work across disciplines, and of the links between training, hiring, and finance that would develop them.



2. Context & Background

POSITIONING THE WORKFORCE REPORT IN THE CTE 2026 SERIES

Last year, while the Vietnam Climate Tech Funding Ecosystem 2025 Report (CT-FE 2025) mapped the ecosystem from the capital side,[1] five of its mentioned contextual background and findings point toward workforce matters:

- **Talent was named as a scaling constraint.** The CT-FE 2025 found that most climate tech enterprises remain early-stage and struggle to scale due to limited capital, technical talent, and commercialisation support.

- **The academia-enterprise link was flagged as a key opportunity area.** The report observed that few climate tech enterprises originate from academic environments and that research collaboration remains rare.

- **Capacity building was identified as the ecosystem's secondary supporting channel but remains mostly generic.** Fifty-four intermediary programs ran in 2024, yet the report concluded that many still emphasise general entrepreneurship training rather than hands-on technical or financial guidance.

- **Women's participation was measured, but the mechanisms behind it were not.** Women were reported as roughly 22% of the green workforce and under 30% of the energy sector, mostly in support roles.

- **Coordination was the report's central conclusion.** The CT-FE 2025 concluded that the sector's growth depends on stronger collaboration among key actors who often work in parallel rather than in coordination.

This report examines the workforce skills and capacity dimension of enterprise growth and investment readiness in Vietnam. Workforce capacity is the analytical focus, with workforce protection being treated where it bears on due diligence in green finance, and in turn, on investor decision-making.

1 *New Energy Nexus Vietnam, RMIT Vietnam, AGILE Project, Vietnam Climate Tech Funding Ecosystem - 2025 Report (2025).*



THE GREEN WORKFORCE DEVELOPMENT CONTEXT

The transition to green jobs is as much a workforce challenge as a technological one. Across global labour markets, the demand for green skills is outpacing their supply. Green hiring has been growing roughly twice as fast as the pool of green talent, and green skills are diffusing across a widening range of job titles rather than remaining confined to a few specialist roles.[2] The World Economic Forum ranks climate-change mitigation and adaptation among the largest drivers of net job growth to 2030,[3] while the International Labour organization projects up to 37.2 million additional jobs by 2030 under an energy-transition scenario and finds strong complementarity between green and digital skills.[4]

Regional employer surveys echo this pressure. In ManpowerGroup's 2026 Talent Shortage Survey, 71% of employers across Asia-Pacific and the Middle East reported difficulty filling roles, close to the global average of 72%, with AI development and AI proficiency ranking among the scarcest technical skills and adaptability and problem-solving among the most sought-after soft skills.[5]

Vietnam enters this transition from a broad but undercredentialled skills base. The 2023 Labor Force Survey records a labour-force participation rate of about 69%, yet roughly two-thirds of the workforce holds no technical qualification, 10.6% have vocational/professional training, and 16.6% hold college, university or higher qualification.[6] For a relative comparison, Vietnam generally exhibits lower attainment rates in both vocational training and tertiary education when compared to the OECD average and other neighbouring countries like China and Indonesia (Figure 1).[7]

RELATIVE COMPARISON OF VOCATIONAL TRAINING AND TERTIARY EDUCATION ATTAINMENT RATES BETWEEN VIETNAM AND OECD REGION, CHINA, AND INDONESIA

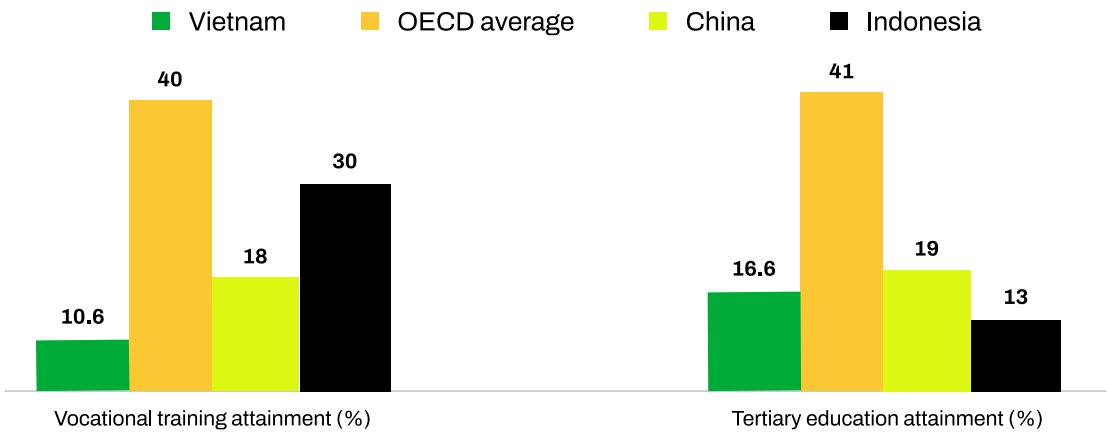


Figure 1. *Vocational training and tertiary education attainment rates of Vietnam, OECD region, China, and Indonesia in 2023*

Source: The authors' synthesis of secondary data from Vietnam's 2023 labour Force Survey and the report OECD, Education at a Glance 2024: OECD Indicators.

2 *LinkedIn, LinkedIn Green Skills Report 2025 (2025).*

3 *Future of Jobs Report 2025 (2025).*

4 *Workforce 2030: Skills for Thriving in the Green and Digital Transition, [1st ed.] (ILO, 2025), https://doi.org/10.54394/XXZW7148.*

5 *ManpowerGroup, Báo Cáo Thiếu Hụt Nhân Tài Khu Vực Châu Á - Thái Bình Dương & Trung Đông (APME) (2026).*

6 *General Statistics Office, 2023 Labor Force Survey (2024).*

7 *OECD, Education at a Glance 2024, 60.*

Regarding the number of people engaging in scientific research and technological development,

at approximately

1,707 researchers

per million inhabitants in 2023

Vietnam's research workforce marginally exceeds the global average of

1,486 researchers

per million inhabitants

but remains below the Eastern and South-Eastern Asia regional average of

2,100 researchers

per million inhabitants in the same year[9]

Meanwhile, the regions that lead the world's innovation, namely Australia and New Zealand and Europe and Northern America, all had over four thousand researchers per million by 2023.[10] Resolution 71-NQ/TW (August 2025) sets national targets to shift that quality base for the workforce, aiming for 24% of the workforce to hold a college or university qualification and for half of the relevant age cohort to be in post-upper-secondary education by 2030.[11] Additionally, weak English compounds the skill gap, even though it is a practical precondition for international green certification and for working with foreign investors.[12]

Capital, meanwhile, has arrived quickly. The climate-tech funding mobilised in 2024 alone exceeded the cumulative total for 2015 to 2023, and the Energy Transition sector surged in 2025, leading the funding landscape.[13] **The power-sector workforce alone is projected to grow**

from **300,000** to **500,000** by 2035.[14]

With capital concentrated in a few sectors and a low skills base, it is enterprise and workforce capacity, rather than the supply of capital, that has emerged as a structural constraint on the sector's growth.[15]

The supply side has begun to respond. Green elements were written into technical and vocational education outcomes as of 2018,[16] and donor-supported programs in Ho Chi Minh City and the Central and Central Highlands regions have piloted curricula in renewable-energy installation, energy efficiency, and electromobility.[17] Recently, leading universities have launched new English-taught programs in fields such as digital technology, renewable energy, and the circular economy.[18]

8 *General Statistics Office, Viet Nam Statistical Yearbook 2024 (2025).*

9 *UNESCO Institute for Statistics (UIS), 2026 R&D Data Release, 18 March 2026, https://www.uis.unesco.org/en/news/2026-rd-data-release*

10 *UNESCO Institute for Statistics (UIS), 2026 R&D Data Release.*

11 *Nghị Quyết 71-NQ/TW về Đột Phá Phát Triển Giáo Dục và Đào Tạo (Resolution on Breakthroughs in Education and Training Development), 71-NQ/TW (2025).*

12 *Đoàn Thị Thu Hương, 'Việc Làm Xanh ở Việt Nam: Cơ Hội và Thách Thức (Green Jobs in Vietnam: Opportunities and Challenges)', Thông Tin Khoa Học Xã Hội (Social Science Information), no. 9 (2023).*

13 *New Energy Nexus Vietnam, Vietnam Climate Tech Funding Ecosystem - 2025 Report.*

14 *Hanna Fekete et al., Projection of Labour Force for Viet Nam's Energy Transition (CASE project, GIZ VNM, 2025).*

15 *New Energy Nexus Vietnam, Vietnam Climate Tech Funding Ecosystem - 2025 Report.*

16 *GIZ, Greening TVET Brochure (2018).*

17 *Nghiem Ba Hung et al., In-Depth Study on Skills Demands and Training Capacity for Renewable Energy Sector at Central and Central Highlands Areas in Viet Nam (GIZ, 2024).*

18 *Hà Lan, '4 Chuyên Ngành Mới Của Trường Đại Học Bách Khoa Đáp Ứng Nhu Cầu Phát Triển Kinh Tế Chiến Lược', VOH Online, 17 July 2025, https://voh.com.vn/huong-nghiep/4-chuyen-nganh-moi-cua-truong-dai-hoc-bach-khoa-dap-ung-nhu-cau-phat-trien-kinh-te-chien-luoc-605626.html.*

However, international experience cautions that an effective supply response requires far more than curriculum reform. There is also a need to develop graduate-placement pathways, qualified trainers, practical equipment, industry partnerships for internships, and portable accreditation.[19] Regional analysis suggests that Vietnam could capture a meaningful share of the Asia-Pacific's projected 5.5 million new green jobs by 2050 if its education capacity scales accordingly.[20] Yet the responses of domestic training institutions and other capacity builders remain under-documented, with no workforce database disaggregated by the climate-tech segment yet.

How capital reaches the workforce is as important as how much capital exists. The JETP partnership has embedded workforce development since 2023 as a stated priority.[21] Yet the financing required, estimated at USD 135B for the energy transition alone, far exceeds current flows.[22] Green finance also tends to favour tangible infrastructure and technology over people, meaning dedicated workforce investment remains the exception rather than the rule. International lenders are increasingly attaching workforce-related conditions to large project deals through instruments such as the IFC Performance Standard 2 and the Equator Principles.[23] In practice, however, these conditions apply unevenly with analysis showing that only about a fifth of the sustainability indicators firms report are actually embedded in their sustainability-linked finance contracts.[24] labour-protection clauses that are common in multilateral-bank projects are rare in private green financing.[25] Gender, social equity, and AI cut across this and could either narrow or widen existing gaps.

Within this context a shared understanding of the three types of roles in the green workforce is synthesised from previous research publications and technical reports as follows:[26]



Core green roles: direct green roles whose primary tasks contribute directly to environmental quality (e.g., solar installers, environmental engineers, MRV technicians).



Reskilled green roles: existing roles re-skilled with new green competencies (e.g., electricians upskilled for EV charging, accountants performing carbon disclosure).



Greened roles: the greening of pre-existing roles that incorporate sustainability awareness within their existing function (e.g., procurement officers, human resource personnel).

19 *ADECCO, Greening the Workforce: Net Zero Skills for a Sustainable Future (2023); World Bank Group, Green Jobs: Upskilling and Reskilling Vietnam's Workforce for a Greener Economy (2023).*

20 *Asialink, Briefing Paper 5: Green Skills for Vietnam's Climate Transition (2024).*

21 *JETP Viet Nam, 'Resource Mobilisation Plan - Implementing Viet Nam's Just Energy Transition Partnership (JETP)', 2023; Prime Minister, 'Quyết Định Số 458/QĐ-TTg Ngày 20/3/2026 Của Thủ Tướng Chính Phủ Phê Duyệt Đề Án Cập Nhật Triển Khai Tuyên Bố Chính Trị Thiết Lập Quan Hệ Đối Tác Chuyển Đổi Năng Lượng Công Bằng (Updated JETP Implementation Plan 2026)', 20 March 2026.*

22 *Melinda Martinus, Just Energy Transition Partnerships (JETPs) in Indonesia and Vietnam: Implications for Southeast Asia (ISEAS – Yusof Ishak Institute, 2024).*

23 *Equator Principles, 'Equator Principles EP 4', 2020; IFC, 'Performance Standard 2 - labour and Working Conditions', 2012.*

24 *JL Resendiz et al., Sustainability-Linked Finance: A Lever for Firm-Level Resilience Innovation, Grantham Research Institute on Climate Change and the Environment Working Paper no. 429 (London School of Economics and Political Science, 2025).*

25 *Thang Vu Nguyen, 'Sustainable Finance: The Environmental, Social, and Governance (ESG) Contractual Bargain: Case Study of Vietnamese Law', in Green Economic Development and Transition to Low-Carbon Economy in the East and Southeast Asia, ed. Pham Khanh Nam and Almas Heshmati, Frontiers in South and Southeast Asian Development Research (Springer Nature Singapore, 2025), https://doi.org/10.1007/978-981-96-0628-3_7.*

26 *NGranata, Julia and Josefina Posadas, Why Look at Tasks When Designing Skills Policy for the Green Transition?: A Methodological Note on How to Identify Green Occupations and the Skills They Require, Policy Research Working Paper no. 10753 (World Bank Group, 2024); World Bank Group, Green Jobs: Upskilling and Reskilling Vietnam's Workforce for a Greener Economy (2023); Asialink, Briefing Paper 5: Green Skills for Vietnam's Climate Transition (2024).*

3. Approach & Limitations

3.1 RESEARCH QUESTIONS

The overarching aim of this report is to explain how the availability and the quality of the green workforce shape the growth and investment readiness of Vietnam's climate tech enterprises, and to identify where the demand, supply, and financing sides of that system connect and where they do not. Five research questions (RQs) trace that system in sequence, from the drivers of change in the workforce landscape, to the gaps in the talent pipeline, who sustains them, and what would narrow them.

RQ1	What drives change in Vietnam's CT workforce landscape?
RQ2	What is changing in the CT workforce?
RQ3	What are the critical gaps in the CT workforce demand-supply-investment nexus, and who do they affect?
RQ4	Who shapes the pipeline and what limits them?
RQ5	How can the gaps between the CT workforce demand and supply sides be narrowed?

3.2 HOW THE ANALYSIS WORKED

The analysis in this report draws on primary data from 53 in-depth interviews and 61 survey respondents across a wide range of stakeholders, including climate tech enterprises, financial providers, intermediary actors, training institutions, and training alumni. Details of the samples are presented in the Appendices.

Interview transcripts were thematically analyzed descriptively against the following structure of the report:

- **Section 4** presents the findings across four sub-sections, tracing the CT workforce development pipeline from demand through to consequences:
  - 4.1 and 4.2 form the analytical core, moving from green skills demand and existing shortages to the supply side response, identifying the gaps and bottlenecks between the two.
  - 4.3 examines the workforce-investment nexus, exploring how green finance and workforce development relate to each other in Vietnam.
  - 4.4 considers gender and social equity, which determine who can enter, remain, and advance in the workforce. These same finance and technology dynamics can widen or narrow those gaps.

- **Section 5** presents case studies showing how these dynamics interact in practice across several organizations.

- **Section 6** provides an outlook for 2026-2027 and discusses emerging opportunities from the policy landscape for green workforce development in Vietnam in the short term.

- **Section 7** closes the report with recommendations for designing and implementing actions.

All interviewees provided informed consent for voluntary participation, and respondents indicated whether they wished to be cited with personal and organizational details or remain anonymous; citations in this report follow those preferences. Survey responses were analyzed descriptively. Where a stakeholder subsample falls below ten, cross-stakeholder analysis is used in preference to group-level claims.

3.3 LIMITATIONS

Appendix C.8 sets out the limitations that apply across the report series. Two are particularly relevant to this report.

First, the report has limited direct evidence from workers. Time and resource constraints prevented data collection from labourers and training alumni at scale, limiting the supply-side analysis in Section 4.2 in particular. As a result, the workforce pipeline is described primarily from the perspective of those who build and hire from it, rather than those who progress through it. To partially address this limitation, interviews with early-stage founders explored alumni experiences, complemented by one interview with a training alumnus.

Second, several stakeholder subsamples are small. Banks, grant-makers, academic institutions, development agencies, and ESOs each contributed fewer than ten survey responses. Findings for these stakeholder groups should therefore be considered illustrative rather than representative and should not be generalized beyond the sample.



4. Key Findings

4.1 GREEN SKILLS DEMAND AND SHORTAGES

The analysis distinguishes between which skills are most needed and which are hardest to actually recruit for. Across these roles the findings point to three distinct kinds of skills shortages:

1. Differentiated shortages in core technical skills and their combination.
2. Shortages in interdisciplinary expertise beyond core technical skills.
3. Shortages in sustainability mindset and soft skills.

1. Differentiated shortages in core technical skills and their combination

According to the survey, 73% of Vietnamese climate tech enterprises (n = 22) named technical and engineering skills among their top three most-needed competencies, and 50% identified them as the most difficult to recruit for. However, when responding to the question of how difficult it is for them to recruit personnel with climate tech-specific or green skills, only 27% of those enterprises found it extremely or very difficult, while over 68% found it just slightly or not difficult at all. Figure 1 sets the reported top skills demand against the skills these enterprises found hardest to recruit, whereas Figure 2 demonstrates that technical skills are the most needed as a whole but with differentiated recruitment difficulty levels.

THE MOST NEEDED SKILLS ARE NOT ALWAYS DIFFICULT TO RECRUIT

(% VCTIEs, n = 22)

Source: CTE 2026 Survey.

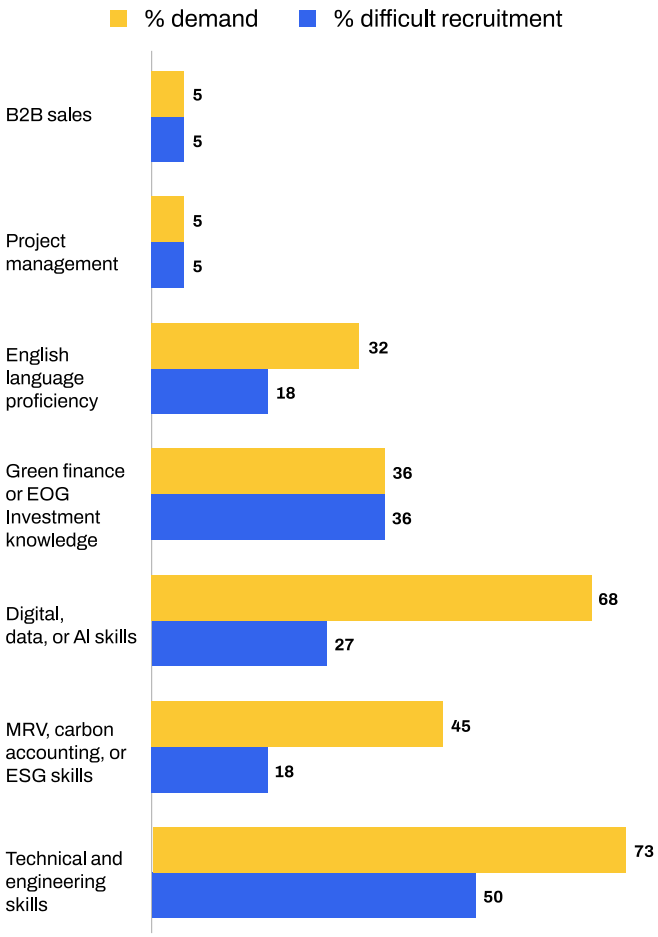
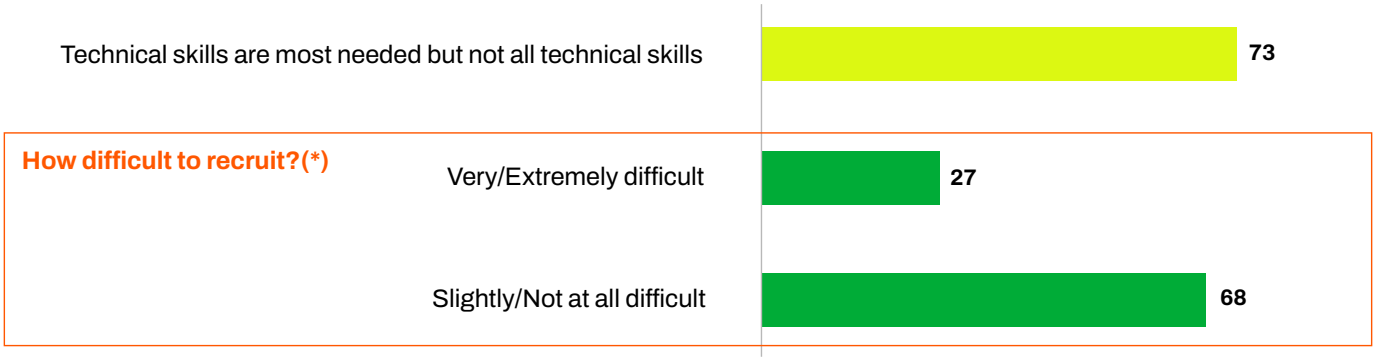


Figure 2. *Reported skills demand versus top skills difficult for recruitment (% enterprises) (n = 22)*

TECHNICAL SKILLS ARE MOST NEEDED BUT NOT ALL TECHNICAL SKILLS ARE EQUALLY DIFFICULT TO RECRUIT

(% VCTIEs, n = 22)

Source: CTE 2026 Survey.



The remaining 4.5% (rounded up to 5% in this graph) of the respondents did not attempt to recruit CT or green skills personnel and hence did not report a recruitment difficulty level.

Figure 3. *The difference between viewing technical skills as demanded and difficult recruitment with actual perceived levels of recruitment difficulty (% VCTIEs, n = 22)*

While there is an understanding of the overall shortage of technical talents in Vietnam, there is no database that tracks specific types and levels of expertise that are lacking. The scarcest resource is not entry-level labour but experienced, cross-disciplinary talents. To avoid one-size-fits-all strategies for investing in technical workforce development, it is crucial to identify what specific skills and expertise levels are facing shortages.

2. Shortages in interdisciplinary expertise beyond core technical skills

The expertise shortage in the climate tech workforce has two distinct aspects: a shortage of deep core technical talent in advanced technologies, and a shortage of the interdisciplinary competency needed to engage in novel climate-tech innovation models. Both stem from the same underlying shift — the increasingly interdisciplinary nature of modern climate innovations is driving demand for combined expertise, whether combining several core technical skills or pairing technical skills with non-technical ones.

Investor perspective: A recurring observation across respondents is that ventures led by technology scientists tend to be framed in a rigid technical model, with limited business-oriented thinking to make their products relatable and commercially viable. Investors echo this: Wavemaker Capital values a founder's demonstrated results and adaptive local understanding over credentials, while Sarona stresses that the founding team, not the copyable business model, is the true differentiator.

Training side: A HEPC lecturer observed that students "are excellent at calculations" but cannot estimate the payback period of a solar or wind project, because the engineering track "doesn't cover even the basic financial knowledge" — creating a disconnect between technical training and project profitability (Mr. Nguyen Huu Khoa, HEPC).

Learner side: Some students are already compensating for this gap on their own. Lam, a recent graduate from the Faculty of Geology and Petroleum Engineering, Ho Chi Minh City University of Technology (HCMUT), took on additional coursework outside his program to prepare for risk management in his field. He described self-learning as essential to filling gaps that the university curriculum could not cover.

Business side: IoT Solution (VIIS) founder Phu Loc identified marketing personnel as the most challenging to recruit since recent graduates often lack the conceptual agility to translate novel, highly technical machinery features into practical value propositions for end-users from diverse backgrounds, such as agricultural workers. He described the mismatch:

"I notice that people working in marketing rarely see it as a mindset. […] the way of approaching value creation, or the link between the ultimate values and the technical side—these are values that don't yet exist in the market. […] If we look at marketing only as "I can run ads, I can write posts, I can make images and so on," then it's just a set of very basic skills for a much bigger story." — Mr. Phu Loc, founder of VIIS



Phu Loc
Founder of VIIS

Phu Loc of VIIS points to a related gap among students close to graduating. Many think like researchers, not product builders. They are not yet in the habit of thinking across disciplines, seeing the whole system, or communicating and working with people outside their own field.

The first driver is the curricula themselves. For example, HEPC electric-power courses do not yet teach environmental-protection modules, while non-tech courses do not widely deliver foundational modules on sustainable development. Consequently, interdisciplinary and integrated thinking is not cultivated.

The second driver for the gap is a lack of institutional and program-level mechanisms to incentivize and nurture these mindsets early on. Innovation competitions and grants are dominated by teams formed within the same cohort or faculty, and inter-institutional collaboration remains rare. One national-university lecturer attributed this to institutional reputation and reward incentives which can restrict innovation-contest participation to internal students, rather than opening cross-institutional collaboration, limiting students opportunities for interdisciplinary brainstorming.

3. Shortages in sustainability mindset and soft skills

Beyond specific technical and combined competencies, respondents identify work mindset, together with a range of non-technical soft skills, as skills in their own right, while technical skills can largely be acquired through the existing education and vocational system. The work mindset, especially regarding sustainability, is far harder to build, because it is not a single teachable module but a broad bundle of values. Surveyed enterprises describe wanting employees with a passion for sustainability, a proactive and adaptable work attitude, a tolerance for risk and imperfection, and the ability to spread a sustainability culture through the organization and to customers.

The co-founder of the Green Transition Hub, Mr. Bao Nguyen, observed that firms which internalise sustainability values tend toward stronger, more sustained ESG performance, while those with only surface-level awareness tend toward reactive compliance.

Five soft skills recur most often as shortages or hiring priorities within climate tech enterprises:

- self-directed learning/adaptability
- accountability and ownership
- communication (presentation, pitching, writing)
- teamwork/collaboration
- leadership for embedding sustainability culture

This aligns with the CTE 2026 Survey (Figure 3), where enterprises most frequently named systems thinking, adaptability and learning agility, and problem-solving/critical thinking as most required, followed by collaboration and cross-sector partnership and stakeholder engagement. Furthermore, the respondents representing the GIZ Technical and Vocational Education and Training (TVET) program particularly emphasised other critical deficits in soft skills regarding professional independence, task planning, self-evaluation, and documentation.

PROBLEM-SOLVING AND CRITICAL THINKING, ADAPTABILITY AND LEARNING AGILITY, AND SYSTEM THINKING LEAD THE SKILLS DEMAND OF VCTIES

(% VCTIEs, n = 22)

Source: CTE 2026 Survey.



Figure 4. *Soft skills most required by surveyed VCTIEs (%, n = 22)*

Soft skills are often built informally inside technical training, but not as a stated objective. At EPU, for instance, students routinely deliver presentations and practice systems thinking while completing their technical coursework.

One soft-skill gap stands apart, and that is specialized English. Many STEM graduates lack it, which holds them back in the climate tech market, both during their studies and after they graduate. English-based programs and jobs are generally rewarding for career development. This year's and CT-FE 2025 report also found that the lack of English proficiency can influence the fundraising capacity of start-ups as their representatives (usually their founders) cannot effectively pitch their products to international investors.[27]

Although English has been incorporated into formal curricula as compulsory modules, and English proficiency has become criterion for both the entry and the graduation assessment, the qualitative evidence emphasises that general English is not adequate for STEM graduates in job-seeking and workplace realities with high demand for specialized English.

27 *New Energy Nexus Vietnam, Vietnam Climate Tech Funding Ecosystem - 2025 Report (2025).*

4.2 SUPPLY SIDE: A DIVERSIFYING SYSTEM WITH A CONNECTION GAP

This section examines the actors shaping green-skills supply in Vietnam, discussing the findings within the green-skills training pipeline.

Emerging stakeholder landscape on the supply side

The supply side is active and diversifying with the engagement of multiple stakeholders delivering different skill capacity-building opportunities. Four groups are actively engaging in climate tech workforce development in Vietnam:

1. Universities provide technological knowledge bases with a strong theoretical and principle-based foundation.
2. The technical and vocational education and training system (TVET, including colleges and vocational training institutions) provides hands-on technical skills development with a higher practical application level than university education.
3. Training support organization s complement the training with related activities such as incubation, business-matching, ESG advisory, and investment-readiness support.
4. Enterprises act as de facto trainers to match foundation skillsets with actual ad-hoc business demand.

TVET INSTITUTIONS HAVE LOW PRESENCE IN THE RECRUITMENT LANDSCAPE WHILE UNIVERSITIES ARE THE TOP HIRING CHANNEL FOR VCTIES

(% VCTIEs, n = 22)

Source: CTE 2026 Survey.

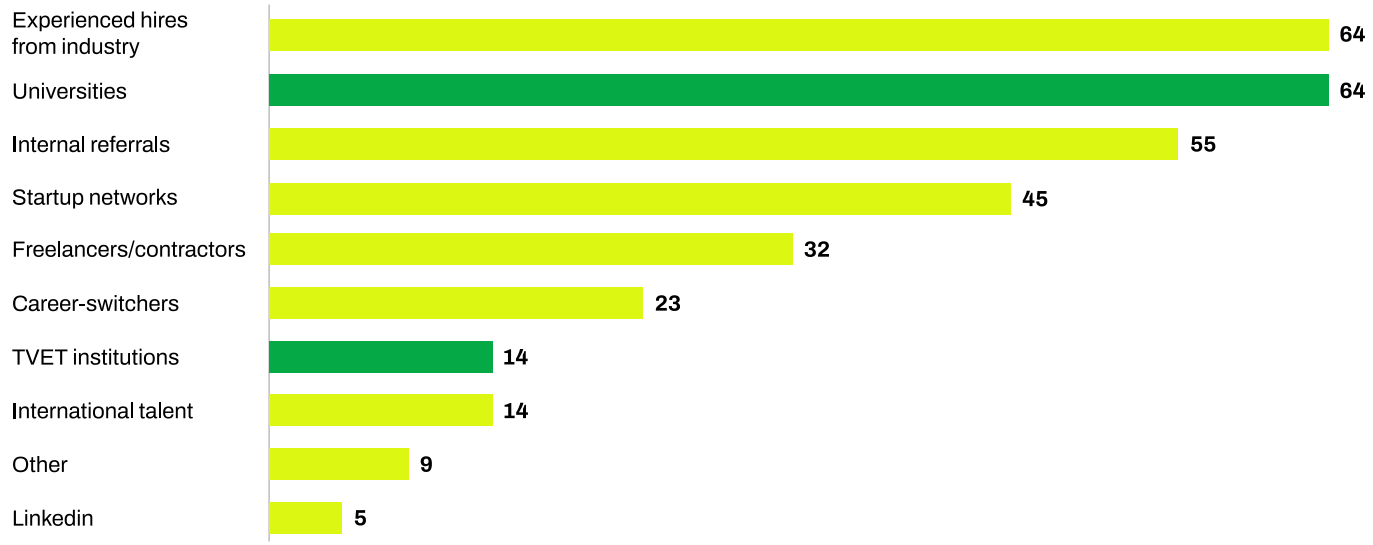


Figure 5. *Talent sourcing channels (% VCTIE respondents) (n = 22)*

Figure 4 shows where the 22 surveyed enterprises recruit their staff. Universities and experienced hires from industry are the main sources, and TVET institutions are among the least used. This may say more about how little contact TVET institutions have with climate tech recruiters than about how employers rate their graduates.

The need to define green skills

'Green' is defined in Vietnamese policy for projects and investments — most visibly through the national green taxonomy (Decision No. 21/2025/QD-TTg),[28] which sets environmental criteria for green-credit, green-bond, and tax incentives — but not for skills or jobs. No equivalent framework exists for the education and training system, and this gap creates downstream problems for workforce development.

Institutions lack a basis to design or fund training: Even where a green-skills objective has been signalled by ministries, it has rarely been operationalised. A HEPC lecturer noted that green-skill training targets reached the college from the Ministry of Industry and Trade and the Ministry of Education and Training, but the college still has no specific definition of what a green skill is. A lecturer from the National Economics University (NEU) confirmed that green skills and jobs carry "no concrete definition" in current university programs — making it challenging for institutions to develop content and leaving them with little basis to claim support under green-development policy (Interviews with HEPC and NEU).

Curriculum reform is bounded by cost and structural constraints, compounding the ambiguity: A HEPC lecturer explained that adding a green-skills subject would raise credit count, study time, and tuition beyond what "financial and education-law standards" allow, requiring institutions to cut another subject's teaching periods instead. Some institutions place green skills as a stand-alone subject, while others favour embedding green content within existing modules.

The ambiguity extends to the private sector, not just the supply side: Enterprises themselves often cannot specify the competency they are hiring for. As Dear Our Community put it, "even the company isn't sure what a green skill is, so how do they recruit?" — with sustainability often experienced as "something imposed from outside" rather than an internalised capability. Without a shared definition on either side, providers cannot calibrate training to demand, and firms cannot articulate what they need (Dear Our Community and SATY).

In brief, green skills are politically endorsed in green finance policy but operationally undefined for workforce development.

Where formal training and enterprises fail to connect

Formal training does not yet connect well with climate tech employers. Three breaks stand out.

1. Curriculum change is uneven, so many students are left to fill the gaps themselves.
2. Training institutions generally approach enterprises, not the other way around, and few enterprises get involved.
3. Vocational training still carries a lower status than university, so many students do not consider it.

Curriculum change is uneven. Some institutions are updating their courses. The Geopet Faculty (HCMUT) has revised modules to incorporate sustainability considerations and replaced outdated content with renewable-energy modules, under pressure to reduce fossil-fuel reliance (Dr. Bui Trong Vinh, RISE, HCMUT). EPU's New Energy Faculty, recognizing that enterprises prioritise hands-on experience and soft skills, has expanded field trips and placements and added modules in IT, automation, and specialized English (Lecturer at the NE Faculty, EPU).

28 *Decision 21/2025/QD-TTg on Environmental Criteria and Verification of Investment Projects under the Green Taxonomy, 21/2025/QD-TTg.*

At other institutions, little has changed and self-learning is treated as an acceptable substitute for curriculum change. VIIS founder Phu Loc, an HCMUT alumnus, noted that "a few sectors have received more investment than before, such as the semiconductor industry or newer fields like artificial intelligence", but there has been little curriculum change in his field. He did not see this as a drawback, since "students can learn a great deal on their own." An EPU lecturer echoed this, framing self-initiative and internships, not formal curriculum, as the decisive factor in student outcomes.

"The most important thing is that students study on their own initiative, work hard, and combine theory with internships — that is the decisive factor… The school is integrating these skills into the program, but it requires students to learn proactively."
— an EPU lecturer

Even when green skills are present in the curriculum, the gaps are in the depth and application of the skills.

The school-to-enterprise relationship is asymmetric, with training institutions actively reaching out to enterprises. The Geopet Faculty (HCMUT) holds technical days and job fairs. It invites enterprises to interview students, sponsor research groups, and sit on graduation-project panels, and strong students are often hired on the spot (Dr. Bui Trong Vinh, RISE, HCMUT). A lecturer from the New Energy Faculty (EPU) added that lecturers needed to use their connections with firms to seek internship opportunities for students. Enterprises are typically invited to these events. Few approach universities as partners. Dr. Vinh describes the relationship as one-sided.

"Both sides must find each other's resources to support each other; neither side is more important than the other… The share of firms that fund the school before recruiting from it is quite low… they often treat it as a form of charity… Firms must be more proactive, because without high-quality talent they can't compete with other firms; if they want [to get talents], they must prepare from the start — training from the internship stage, sponsoring scholarships and funding research."
— Dr. Bui Trong Vinh, RISE, HCMUT



Bui Trong Vinh
Director, Research Institute for Sustainable Energy (RISE)

Beyond the constraints discussed above, TVET institutions carry a persistent credential prejudice, with vocational training treated as a second choice by parents despite the improvements in quality (Interviews with an HEPC lecturer and GIZ TVET). Part of this is due to the absence of TVET institutions on the national enrollment portal. Prior to March 2025, TVET was managed by the Ministry of Labour, War Invalids and Social Affairs (MOLISA). A HEPC lecturer explained that, up to that time, high school students did not have convenient access to learn about what TVET institutions can offer when navigating the national enrollment portal. Now, with the merger of TVET into the Ministry of Education and Training (MOET), TVET institutions are visible as educational opportunities on the same portal as higher education institutions.

Vietnamese climate tech enterprises are reliant on in-house and on-the-job training

The vast majority of enterprises interviewed emphasised the necessity of in-house training, with most SMEs interviewed preferring to hire technicians at a general technical level and training them further on the job. This is for two reasons: they cannot afford to hire elite technicians or scientists, and most climate tech businesses have specialized processes that require on-the-job training regardless of a hire's starting skill level.

In-house training is an essential demand of climate tech enterprises, and that demand goes beyond merely coping with the shortages from formal training. Support and finance programs should recognize that in-house training carries real costs.

Intermediary actors patch the supply-demand gap

Several non-traditional training mechanisms have emerged to fill gaps the formal pipeline leaves open. These arrangements share a common feature. An external catalyst like a development partner, a larger corporation, or the enterprise itself, absorbs the cost and coordination that neither schools nor firms can easily carry alone. Among 17 surveyed organization s with capacity-building activities (i.e., development agencies, ESOs, incubators, accelerators, and innovation hubs), training coverage varies considerably by sector, with agriculture and food production most served and forestry least (Figure 5).

CAPACITY-BUILDING ACTIVITIES BY NON-ACADEMIC INSTITUTIONS COVER UNEQUALLY ACROSS THE CLIMATE TECH SEGMENTS WITH A SUBSTANTIAL GAP BETWEEN THE LEAST SUPPORTED (MOBILITY AND BLUE ECONOMY) AND THE MOST SUPPORTED (FARMING & FOOD PRODUCTION)

Source: CTE 2026 Survey.

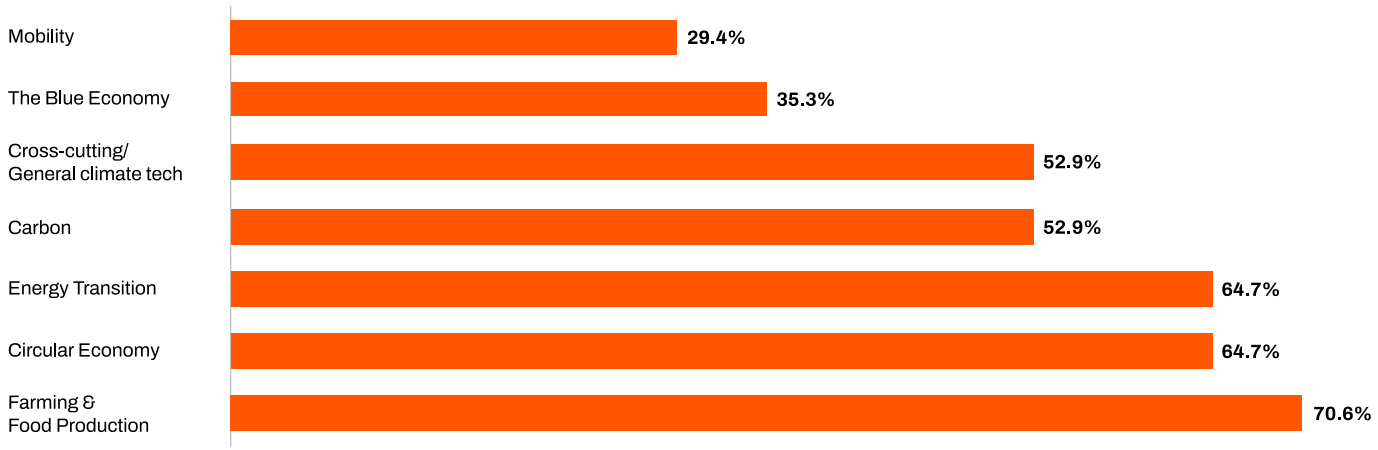


Figure 6. *Climate tech segments covered by non-academic training (% of supporting organization s, n=17)*

Development partners have helped colleges build practical, work-based links the formal system struggles to create alone. Under the RENEW Skills program, a collaboration of GE Vernova Foundation, the Asia Society for Social Improvement and Sustainable Transformation (ASSIST), and Electric Power University (EPU), Khanh Hoa Energy Technology College sent lecturers to work inside wind farms for one to two months before placing students there for internships.

Corporate social responsibility engagement produces similar effects. LC Tech's Next Gen green-careers program, for instance, gives collaborating companies a steady talent pipeline while opening green-career pathways for students, a genuine two-way exchange rather than a favour from either side (LC Tech).

Enterprise-built bridges also occur. VIIS hosts students for fieldwork in its own labs and factories while conducting research commissioned by partner universities, developing student skills and meeting university research needs simultaneously (VIIS).

These mechanisms patch the supply-demand gap, but through the presence of an external catalyst rather than a routine, institutionalised link. Therefore, the coverage stays uneven and dependent on whoever chooses to invest in human resource development.

Collaborative and networked models are emerging. Intermediaries are increasingly positioning themselves as 'ecosystem builders' that connect the public sector, private firms, universities, and international partners. InnoEx runs cross-sector 'business matching' between corporates, multinational corporations (MNCs), and startups; HueIDS's Hue Innovation Hub plays a similar role in a state-led model, also enabling students to practice cross-disciplinary collaboration through joint incubation and competitions; the National Innovation Center (NIC) connects Vietnam's domestic ecosystem with global networks (InnoEx, HueIDS, and NIC).

These models are still early and unevenly funded, and barriers persist, including limited English competency of STEM trainees, the high cost of specialized equipment (e.g., wind-turbine simulators), and the concentration of resources in the regions surrounding Hanoi and Ho Chi Minh City (HueIDS).

Gaps in training coverage

Despite the rising efforts from diverse stakeholders, table 1 shows a heatmap of the coverage of green skills training (in terms of support types, technical skills, and soft skills) offered by academic and research institutions (n = 5) and by supporting organization s (n = 17), to identify the unpatched gaps in the CT talent pipeline — areas covered by 40% or less of both groups. The hotter the colour code, the less the coverage. This heatmap is, however, not representative because sampling was neither randomised nor sufficiently large, and is just to illustrate gaps among the surveyed actors.



Types of support offered		
Support Type	**Academic & Research institutions**	**ESOs**
Technical assistance	100%	71%
Mentorship and coaching	80%	76%
Business training / capacity building	80%	65%
Policy or regulatory advisory	100%	53%
Reskilling or upskilling programs	80%	47%
Market access facilitation	20%	59%
Investor connections / pitching events	40%	47%
Non-repayable grant funding	20%	41%
Connections to talent networks	20%	35%
Repayable grant or loan	0%	29%
Prototyping / lab facilities	20%	18%
Equity investment	0%	24%
Technical skills trained		
Technical Skill	**Academic & Research institutions**	**ESOs**
Green finance or ESG investment knowledge	20%	47%
MRV, carbon accounting, or ESG skills	60%	29%
Digital, data, or AI skills	60%	24%
Soft skills trained		
Soft Skill	**Academic & Research institutions**	**ESOs**
Collaboration and Cross-sector Partnership	100%	29%
We do not offer soft skills training	0%	47%
Stakeholder Engagement	60%	29%
Problem-solving and Critical Thinking	40%	35%
System thinking	40%	29%
Adaptability and Learning Agility	20%	24%
English language proficiency	20%	0%

Source: CTE 2026 Survey.

Table 1. *The coverage of support for VCTIEs and skills training offered by academic and research institutions (n = 5) and by supporting organization s, i.e. development agencies and ESOs combined (n = 17)*

Training does not always lead to jobs

Training built for expected demand carries two risks. First, sponsored training rarely comes with a hiring commitment. In one renewable energy training project funded by a renewable energy company, trainees are free to seek work with other firms once they finish. They are not tied to one employer, but no job is guaranteed either. Second, demand can shift. As policy moves from fossil fuels toward renewables, technicians trained for fossil fuels face narrowing job prospects while still in training. Nuclear power carries the reverse risk. HEPC is training nuclear technicians for planned facilities, but plans may change and nuclear power is likely to be limited to a few locations, so transferable skills matter more than nuclear-specific training alone.

4.3 THE WORKFORCE–INVESTMENT NEXUS

Drawing chiefly on responses from investors, this section examines how workforce quality shapes access to capital, and whether that capital actually reaches enterprises that employ green talent.

Team capability leads investor priorities

Across the funder interviews, the most consistent message is that investors weigh team composition before committing to a technology or business model. This is also reflected in the survey, which asked 34 funders and support organizations how they assess Vietnamese climate tech enterprises. Respondents selected workforce-related characteristics most often (29%) (Figure 6), ahead of commercial/financial viability, sector fit, and climate impact and sustainability. Notably, innovation/technology differentiation (4%), green-lending documentation (3%) and ecosystem and co-investment situation (2%) were ranked the lowest of all categories.

TEAM COMPOSITION AND WORKFORCE CHARACTERISTICS ARE AMONG THE TOP ASSESSMENT CRITERIA TO FUND VCTIES

Source: CTE 2026 Survey.

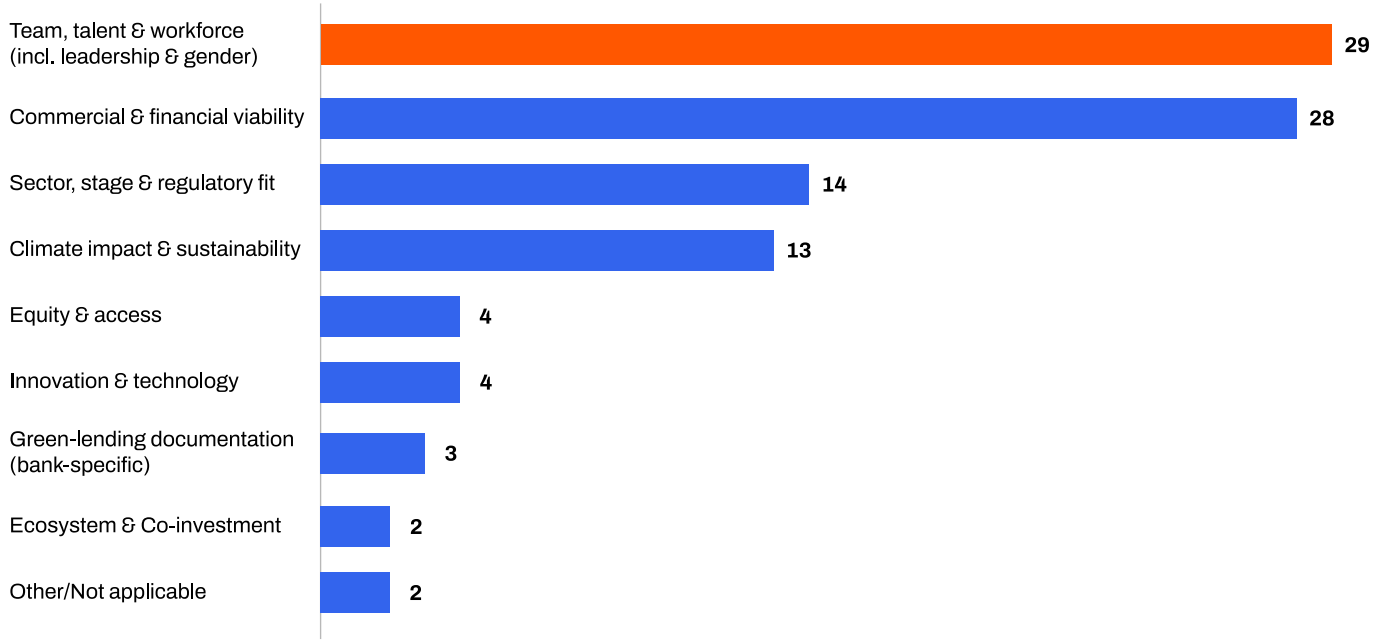


Figure 7. *The top priorities to assess VCTIEs (% of the selections) (n = 166 selections)*

Among the 32 organizations asked about workforce criteria (excluding 2 commercial banks), strength and experience of the founding team, overall team strength, and the availability of competent CT-specific talent are the top assessment priorities.

STRENGTH AND EXPERIENCE OF THE FOUNDING TEAM AND CT COMPETENCY OF THE VENTURE'S TEAM ARE THE TOP WORKFORCE ASSESSMENT PRIORITIES

Source: CTE 2026 Survey.

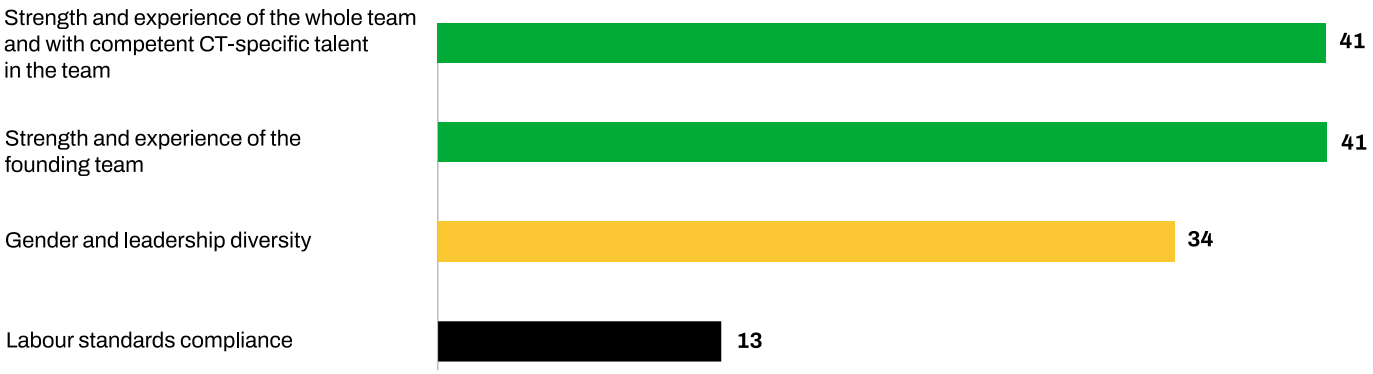


Figure 8. *Workforce-specific assessment priorities among the surveyed financial providers and supporting organizations (excluding commercial banks) (% respondents, n = 32)*

"The founding team is the most important point we look at. The business model is something that can be copied, frankly speaking, but the founding team is not easy to replicate."
— Ms. Amy Do, Sarona Asset Management



Amy Do
Private Equity at Sarona Asset Management

Wavemaker Capital reaches a similar conclusion, weighing demonstrated results above credentials. Its team looks for founders who "roll up their sleeves and see their mission through", valuing sector-relevant skills and adaptability to the local market over an overseas employment record (Wavemaker Capital).

Team capability rarely enters formal due diligence

Despite being widely valued, team capability enters an investment decision inconsistently. Sarona treats team depth and durability as part of due diligence, looking at whether the team has the capacity to "carry their work scope" and whether its members are fairly compensated. Wavemaker and Arup, conversely, acknowledged that workforce and social-impact factors "do not sit within our scoring," even though they both ask about workforce characteristics in funding discussions (Sarona Asset Management, Wavemaker Capital and Arup).

This inconsistency produces a perception gap. Program implementers see workforce quality shaping which firms get funded — over 70% said workforce limitations had possibly or explicitly affected their portfolio firms' ability to raise capital.[29] Enterprises see this far less clearly: none reported a definitive "yes," while equal shares (36% each) either suspected workforce competencies had weighed on their investability, or believed investors never raised the issue at all (Figure 8). Workforce quality already shapes funding outcomes, but enterprises themselves have not widely recognized it.

29 CTE 2026 Survey

IMPLEMENTERS SEE WORKFORCE AS A GREATER INVESTMENT CONCERN THAN VCTIES

Influence of workforce limitations on investment attraction (% of respondents)

Source: CTE 2026 Survey.

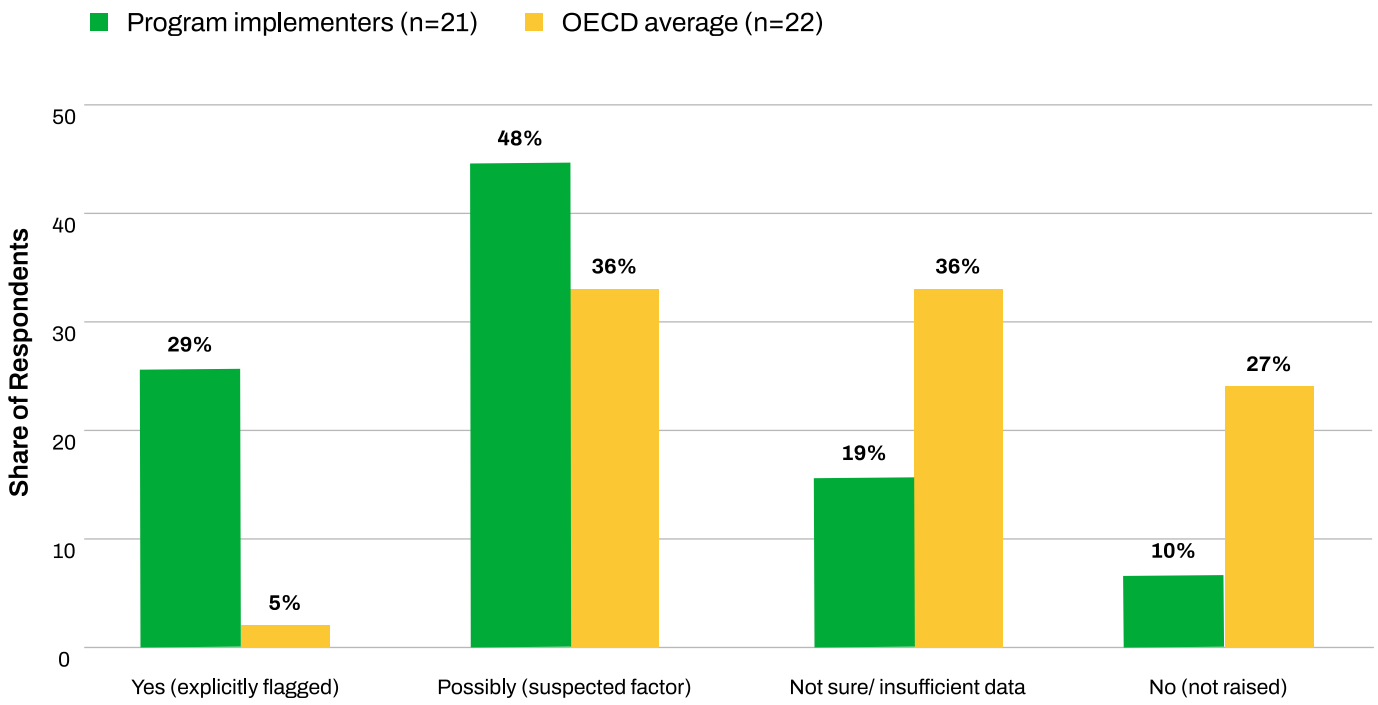


Figure 9. *Comparing the views on the influence of workforce limitations on investment attraction by program implementers and by VCTIEs (% respondents)*

Beyond the diligence question, very little finance is designed to build a workforce in the first place. Across the interviews with financial providers and intermediary actors, workforce-related support is mostly aimed at individuals, through mentorship or incubation schemes for start-up founders. Dedicated workforce finance is largely absent from the grant-based and investment instruments, which are usually given to firms as a whole package and leave workforce decisions to the enterprise. Organizations that provide technical support for start-ups, such as Arup Ventures, are generally not involved in decisions regarding how companies allocate or utilise capital received from other funding sources. Accordingly, while Arup Ventures may provide input in certain circumstances as a board advisor, workforce planning and related decisions are primarily the responsibility of the company.

Workforce standards mostly in development-based deals

Worker-protection and social-inclusion terms do enter some deals, but only where the nature of the capital demands it, not as a blanket requirement. Of 15 funders (investors/funders and grant-making organizations) asked whether their most recent Vietnam climate tech deals include worker-protection or social-inclusion terms, most reported at least partial inclusion, with development-related financing the common thread behind the strongest cases (Figure 9).

OVER 60% OF THE SURVEYED FINANCIAL PROVIDERS INCLUDE WORKFORCE PROTECTION AND SOCIAL INCLUSION TERMS AT LEAST IN SOME OF THEIR RECENT DEALS

Source: CTE 2026 Survey.

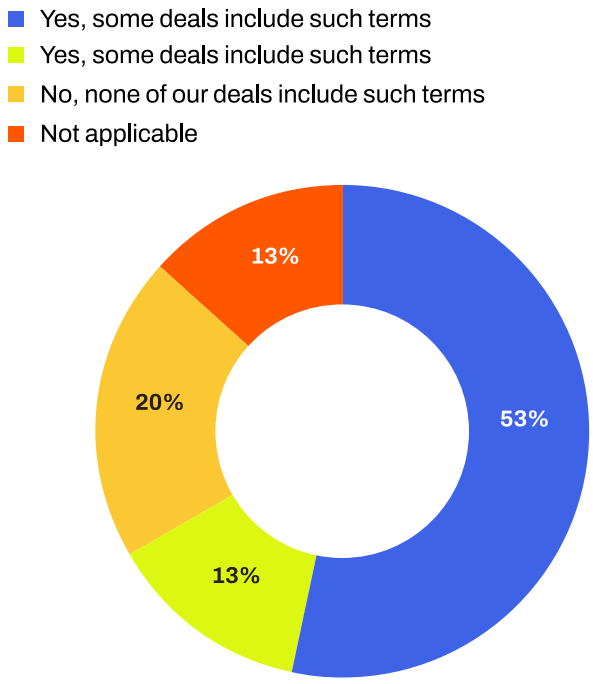


Figure 10. *The rate of including/excluding workforce protection and social inclusion terms in the most recent deals of the surveyed financial providers (% respondents, n = 15)*

The Stride case (Section 5) illustrates how concrete these obligations become when the capital requires them, with DFI-linked investors demanding IFC-aligned management systems and 2X gender criteria and raising the bar at each successive round.

This linkage matters for the workforce itself. Where development-linked capital requires labour, ESG, and gender standards, it can push the enterprises that want such finance to build the skills and actual implementation capacity for reporting and compliance discussed earlier, from MRV and carbon accounting to social and gender safeguards. Access to certain pools of capital is a driver of workforce and skills development, tying the financing findings back to the demand for green skills.

Personnel capacity to absorb primary investments and sustain business models

Another finding in this theme is the link between personnel capacity of enterprises and their capacity to absorb the primary investments and sustain their business models. Even after successfully obtaining primary investments, SMEs, and especially start-ups, face another challenge of how to effectively utilise the investments and sustain their business plans due to the shortage of capable personnel. Having experience in mentoring founders of start-ups and small enterprises, Mr. Cuong of HueIDS sees that this group usually has "continuous personnel shortage" and very small teams to sustain their innovation business plans, and that partially explains the high drop-out rate after joining their incubation programs (Mr. Cuong, Director of HueIDS).

When start-ups climb up the funding ladder, they will also face higher, or even overwhelming, expectations. Those expectations can come from donors/investors' higher requirements or from the received support packages themselves. Ms. Jessica Nga Tran of Clime Capital noted that sometimes when they created deals, they proposed "so much support that [the start-ups] become overloaded and can't take it all in". She elaborated on the challenge that start-ups usually do not have founders or founding teams who can master everything required. Besides knowing about their products, they should have knowledge of value chains, policy, ESG, and even how the financial market operates, and that is usually beyond the capacity of small enterprise teams.

4.4 GENDER ISSUES IN CLIMATE TECH WORKFORCE DEVELOPMENT

Women remain markedly underrepresented in the core technical and field roles, even as they appear more readily in outward-facing and office-based functions, including technical and non-technical ones. SATY describes the share of women on its technical team as "very low," with sales and external roles drawing more women while drone-operation and technology-assembly work is filled by men, an outcome it attributes to physical demands and extensive field travel (SATY). Arup recognizes a similar pattern in certain disciplines, such as structural or infrastructure teams, while specific services such as Environment, Climate and Sustainability tend to be dominated by women (Arup).

This pattern extends into retention, not just entry. Respondents in the energy sector commonly noted that women who do enter the field, including those with specialized higher education, tend to move into office roles over time and some even exit the sector eventually, commonly after marriage (synthesised from interviews with diverse stakeholders in the energy sector).

How stakeholders explain the gap also reveals gender biases. The most common explanation naturalises it as a matter of physical demands of the work, but some intermediary actors locate the cause in the conditions surrounding women rather than in women's capability.

"Women's professional capability is not the barrier. The issue is the conditions and the opportunities. In construction and infrastructure, women feel isolated for lack of peers and role models, so they end up limited to office roles."
— Representative at WISE Vietnam

This report found those gender biases to be rooted in the narrow hardware-centric framing of the climate tech sector. When the industry is defined primarily by infrastructure and on-site operations, physical strength and mobility-readiness are inherently prioritised alongside expertise levels. This mindset reinforces the perception that technical field roles are mostly unsuitable for women. However, as the sector matures and particularly with increasing digitalisation, such as remote monitoring for power systems and office-based analysis, those traditional physical barriers become less relevant, opening more climate tech jobs to women.

5. Case studies

The cases below are not representative in a statistical sense. Each was selected to show how the demand, supply, financing, and equity dynamics traced across this report play out inside a single firm.

LC TECH, BUILDING THE TALENT PIPELINE IN-HOUSE

LC Tech Co-founders hold concurrent teaching posts at several universities, recruiting and training students from their third and fourth year onward. A peer-to-peer "train-the-trainer" model has each student master one topic, then teach it to the rest. The goal is to convert trainees into LC Tech's own workforce before they can drop out, a common outcome cited across the sector.

"We prepare our workforce early, from when students are in their third and fourth year… so we do not run into the problem of specialist staff now. And… retaining them is not really a challenge for us either." — Mr. Cong Nguyen, Founder and CEO, LC Tech



Cong Nguyen
Founder and CEO
at LC Tech

VIIS, LINKING RECRUITMENT TO UNIVERSITY FIELDWORK

This Da Lat-based IoT smart-farming manufacturer, founded by electronics and agroforestry engineers, hosts university students for fieldwork in its own labs and factories, while carrying out research commissioned by partner institutions. The arrangement builds students' practical skills and meets universities' research needs at once — a two-way pipeline of talent and knowledge that neither side could easily build alone. VIIS's hardest roles to fill remain senior technical talent and mindset-driven marketing hires.



STRIDE, EMBEDDING LABOUR PROTECTION AND GENDER IN FINANCE

This rooftop-solar financing platform shows how far international labour standards can travel when an enterprise absorbs the translation cost. DFI-linked investors required IFC-aligned management systems and 2X gender criteria from the seed round onward. Stride exceeded this gender criteria without deliberately pursuing gender-diverse hiring as a strategy. Since Stride's installer network is made up of informal subcontractors, the company built a Vietnamese-language safety framework and a dedicated management role, and now delivers weekly contractor training.

"A lot of these funds get their money from Europe and say you have to adhere to their standards, so they tend to support only large projects. Local owners generally will not spend the extra money to be compliant, so we hired a full-time ESMS manager and trained our contractors ourselves."
— Mr. Andrew Fairthorne, Founder and CEO, Stride



Andrew Fairthorne
Founder and CEO
at Strike

KLINOVA, SPECIALIZING IN COMPLIANCE SUPPORT

KLINOVA is a sustainability consultancy. Its case shows how tighter carbon-reporting rules create demand for green skills, and why enterprises often meet that demand with outside specialists as well as in-house training. The Decision No. 42/2026/QD-TTg, issued on August 10, 2026, requires thousands of high-emission enterprises to carry out carbon inventories. In response, KLINOVA launched a practical certification course on greenhouse gas inventories. One client shows how in-house capacity can be built over time. For its first MRV cycle, the client chose to learn by doing, with coaching from KLINOVA, but found the work too technical to manage alone. By working closely with KLINOVA on its own case, the client built up its skills. In later cycles it took the lead, and KLINOVA moved to a review and support role.

KLINOVA's representative said MRV and related social and environmental reporting are often too complex for 1 or 2 people to handle alongside other duties. This is the usual staffing barrier for small enterprises, so specialist consultancies remain an important source of support. The survey points the same way. Of the surveyed enterprises, 45% name MRV, carbon accounting, or ESG skills among their most needed technical skills. One possible answer is shared services that let enterprises, especially smaller ones, meet compliance requirements without each building its own in-house team.



Photo by klinova.vn

6. 2026-2027 Outlook and Emerging Opportunities

EMERGING GREEN WORKFORCE DISCUSSIONS IN 2025-2026

Some recent discussions on green workforce development in 2025 and 2026 indicate three dominant themes.

1. Green jobs are becoming measurable.
Under Vietnam–Denmark cooperation, the National Institute for Economic and Financial Strategy and Policy, together with the General Statistics Office, is developing a set of green employment statistical indicators.[30] Pilot surveys in Quang Ninh and Phu Tho have already been conducted, and the work is now advancing from pilot stage toward institutionalisation. This advancement potentially opens opportunities to close the definitional gap for green skills mentioned in this report, as well as to improve monitoring of green workforce development progress in Vietnam.

2. Employers prefer short, work-based training to degrees.
The APVIA Solar Workforce Survey found apprenticeships (57%), formal vocational training (55%) and on-the-job training (53%) far ahead of university degrees (13%) as preferred routes, with 57% favouring courses of two to four weeks.[31] That matches the supply-side evidence closely, with 86% of surveyed enterprises training their own staff, most often on the job, and the intermediaries that patch the pipeline through placements and short practical programs. The Asia Foundation reports a similar preference from the delivery side, describing short enterprise-oriented courses that combine soft skills, English and green skills with workplace practice and post-placement follow-up.[32]

3. Green skills and AI skills are converging.
ManpowerGroup's 2026 survey of 12,193 employers across Asia-Pacific and the Middle East found AI model development and AI proficiency to be the two hardest technical skills to recruit, with training and upskilling existing staff being the most common employer response, and adaptability and learning agility among the most valued soft skills.[33] The World Economic Forum expects 39% of workers' core skills to change by 2030.[34] This report found the same pattern in Vietnam: 77% of surveyed enterprises already embed AI, two in three expect it to let smaller teams do more, and enterprises are absorbing the technology faster than the formal training system teaches it.

30 *Đỗ Trang, 'Bộ Tiêu Chí Việc Làm Xanh - Từ Thí Điểm Đến Thể Chế Hóa (Green Jobs Indicators - From Pilots to institutionalisation)', Báo Pháp Luật Việt Nam (Vietnam Legal News), 7 March 2026, https://baophapluat.vn/bo-tieu-chi-viec-lam-xanh-tu-thi-diem-den-the-che-hoa.html.*

31 *APVIA, 'Solar Workforce Outlook in Asia'.*

32 *The Asia Foundation, 'Từ Giáo Dục Đến Việc Làm: Hỗ Trợ Thanh Niên Yếu Thế Trong Kỷ Nguyên Số (From Education to Employment: Supporting Vulnerable Youth in the Digital Era)', Thematic Workshop:*

33 *ManpowerGroup, Báo Cáo Thiếu Hụt Nhân Tài Khu Vực Châu Á - Thái Bình Dương & Trung Đông (APME).*

34 *World Economic Forum, Future of Jobs Report 2025.*

EMERGING OPPORTUNITIES FROM THE POLICY LANDSCAPE

The table below synthesizes the policy instruments that have influence and can open opportunities for green workforce development (Table 2).

Discussion theme	Instrument, date and legal weight	Opportunity opening in 2026-2027
Making green jobs definable and measurable	Law on Employment No. 74/2025/QH15. Law passed 16 June 2025, in force 1 January 2026.	Brings green-jobs language into labour-market information systems. This is the legal basis on which the green employment indicators now being piloted can be collected nationally.
	Statistics Law No. 138/2025/QH15. Law; passed 10 December 2025, in force 1 January 2026.	Revises the national statistical indicator system, the vehicle through which the Quang Ninh and Phu Tho pilots would be institutionalised. Together with the Law on Employment, it makes a national green-jobs baseline achievable within the 2026-2027 window or just slightly later.
	Law amending the Law on Energy Saving and Efficiency No. 77/2025/QH15. Law passed 18 June 2025, in force 1 January 2026.	Creates statutory energy manager and energy auditor certificates, with curricula, examinations and accredited providers regulated by MOIT. This is the first fully specified green occupation in Vietnamese law and the readiest template for defining others.
Funding and recognizing short, work-based training	Law on Vocational Education No. 124/2025/QH15. Law; passed 10 December 2025, in force 1 January 2026.	Recognizes enterprises as trainers rather than merely end users, widens the range of institutions permitted to deliver training, and gives vocational upper-secondary diplomas equal legal standing with a route into university. This is the statutory basis for the apprenticeship and on-the-job routes that many employers prefer.
	Law on Science, Technology and Innovation No. 93/2025/QH15. Law passed 27 June 2025, in force 1 October 2025.	Provides partial public support toward hiring high-quality personnel and toward training, reskilling and upskilling inside firms, giving enterprises that train their own staff a co-funding partnership opportunity.
	Resolution 198/2025/QH15 on special mechanisms for private economic development. National Assembly resolution; 17 May 2025.	Makes training that large enterprises provide to SMEs in their value chain deductible against corporate income tax, and waives personal income tax for two years.
	Resolution 248/2025/QH15 on education and training mechanisms. National Assembly resolution; 10 December 2025, in force 1 January 2026.	Adds preferential student credit and a national doctoral training program tied to state science and technology priorities, addressing the senior-expert end of the same pipeline.
Building AI and green capability together	Resolution 57-NQ/TW on science, technology, innovation and digital transformation. Politburo resolution; 22 December 2024.	Targets a shift from assembly toward designing and owning core technology, which raises demand for design-level rather than operator-level talent, and directs universities and research institutes to combine research, application and training.
	Law on Digital Technology Industry No. 71/2025/QH15. Law passed 14 June 2025, in force 1 January 2026.	Provides the first legal framework for artificial intelligence and semiconductors, with incentives for developing digital-technology personnel, giving AI competence a statutory basis alongside green skills.
	Resolution 71-NQ/TW on education and training. Politburo resolution; 22 August 2025.	Grants institutions greater autonomy and promotes innovation- and technology-based university models, with 2030 targets of 24% of the workforce holding a college or university qualification and half the age cohort in post-upper-secondary education.

Source: The authors' synthesis of Vietnamese legal and policy documents.

Table 2. *Policy instruments shaping green workforce development in 2024-2026*

7. Implications & Recommendations

The evidence shows that workforce support is more meaningful when capability is paired with access to markets. The legal basis for acting on this is now largely in place, but practical implementation requires considerations and multistakeholder engagement. Twelve groups of stakeholders shape green workforce development in Vietnam, each with its own role, influence, interests, and barriers (Table 3).

7.1 SUMMARY OF THE STAKEHOLDER MAPPING FOR CLIMATE TECH WORKFORCE DEVELOPMENT

No.	Skateholder type	Role	Influence & interest	Barriers to functioning
1	Climate tech innovative enterprises (VCTIEs)	Demand	Interest: direct hiring/ operational stake; Influence: fragmented, mostly SMEs with limited bargaining power over training providers or policy.	Recruit for scarce, loosely defined 'green' skill sets; under-invest in training given thin margins; little influence over curricula design. AI is also reshaping headcount and skill needs, adding a further layer to recruitment and workforce planning; and firms' own perceptions and practices on gender-responsiveness remain largely undocumented, limiting evidence-based tracking of progress.
2	Universities	Supply	Influence: curriculum authority; Interest: green skills are one of several priorities.	Slow curriculum-change cycles (2.5-5 years); challenging to perform systematic employer-needs assessment; remain ambiguous about how to integrate green-skill content due to the lack of a common definition framework and guidelines for the education and vocational training sector.
3	TVET / vocational colleges	Supply	Influence: large graduate pipeline, incumbent placement channel; Interest: mandated to support a 'just transition'.	Disconnected from climate-tech employers specifically, weaker public image than the university track; funding and curricula lag sector change.
4	Program implementers / ESOs	Supply / Enabling	Influence: pilot curricula, policy advice; Interest: mission-driven.	Donor-dependent, time-bound funding; covers only part of the skills gap. As co-evaluators of VCTIEs for program admission, ESOs mirror funders' pattern of prioritizing team capability over compliance mandates.

No.	Skateholder type	Role	Influence & interest	Barriers to functioning
5	labourers, graduates, and job seekers	Supply	Low individual influence; Interest: livelihoods and career path establishment.	Limited access to climate-tech career information, especially limited gender-related knowledge in new tech fields; mismatch between formal training and enterprise needs; gender-based entry and procedural barriers in technical roles. Even where women do enter technical or field roles, they often move into back-office functions over time and exit the sector altogether, commonly after marriage - pointing to a retention problem as much as an entry one.
6	Policy-makers	Governance	Influence: binding regulation and curricula frameworks; Interest: varies as the green workforce is not always a standalone priority.	Recent institutional reorganization and the demand for fast-paced policy-making require managing cross-ministerial coordination between labour, education, environment, and industry mandates. There could be pilot ideas in CT that require ad-hoc regulatory adjustments to enable the trial processes.
7	Local authorities	Governance	Influence: implementation, local licensing; Interest varies with local industrial mix.	Facing resource constraints. There could be pilot ideas in CT that require ad-hoc regulatory adjustment to enable the trial processes, and that is beyond the jurisdiction of local authorities.
8	Policy advocates/ research institutes	Governance / Enabling	Influence: insights (research and practical examples), bridging perspectives and connecting stakeholders; Interest: pave the way for new CT ventures and promote CT workforce development.	Findings not systematically channeled into policy design; limited convening power.
9	Investors & funders (VC, impact funds)	Enabling	Influence: capital allocation, setting due diligence criteria; Interest: the workforce affects portfolio returns.	Rarely hold dedicated workforce-finance instruments; how workforce factors enter formal due diligence is uneven across investors.
10	Commercial banks	Enabling	Influence: credit allocation; Interest: green-credit portfolios remain small.	Collateral and underwriting requirements are challenging for SMEs to meet.
11	Ecosystem intermediaries/ accelerators	Enabling	Influence: mentorship, pipeline-building; Interest: mobilising resources and bridging investments, creating social impacts, filling in/patching the talent pipeline gaps.	Reach is limited to enterprises already inside their networks; capacity-building remains voluntary rather than systematized.
12	Development partners / DFIs	Enabling	Influence: funding with social-environmental impact conditions; Interest: mission-mandated, mobilising resources and bridging investments, creating social impacts, filling in/patching the talent pipeline gaps.	Conditionality reaches mainly DFI-linked enterprises, not the broader SME population; coordination across multiple partners is ad hoc.

Source: The authors' synthesis from the interviews and desk research.

Table 3. *Stakeholder analysis for climate tech workforce development*

7.2 RECOMMENDATION

Joint action

- **Jointly develop an operational definition framework of green skills with specific classification and qualification levels.** This framework will identify what skills are needed, what gets funded, how, and by whom.

- **Jointly develop targeted workforce databases alongside the definition framework.** After developing specific classification and qualification levels for green skills and green workforce development, nationwide workforce databases should be developed in line with that framework to inform targeted workforce development strategies for both the public and the private sectors.

- **Open student innovation contests across institutions and disciplines.** Contests convened jointly by several universities, TVET colleges, ESOs and enterprises, with mixed-discipline teams as a condition of entry, would build interdisciplinary product-oriented thinking.

- **Tie training to commit demand.** Pairing each project-based program with potential employers offering internships or hiring quotas would give trainees a clearer employment prospect.

For universities, TVET institutions and research institutes

- **Promote co-designed placement and partnership with enterprises rather than relying on event-based engagement.** Commissioned research, sponsored final-year projects and scholarships from the third year of study give firms a reason to engage beyond goodwill.

- **Integrate interdisciplinary and sustainability mindset training into existing technological training modules.** Climate tech enterprises expect a default sustainability mindset in their employees. These skills should be trained within specialized technical modules that teach students about sustainability with a direct link to their technical skills.

- **Promote sustainability modules in non-tech training courses.** Climate tech is often seen as a field for engineers only. Teaching sustainability in courses such as marketing and business management would bring more non-technical graduates into the sector, for example in marketing for sustainability or managing circular economy businesses.

- **Promote transferable skills to support employment prospects for graduates of niche tracks.** Students in niche technological programs need alternative career paths if projected demand shifts.

For enterprises

- **Use the new public support for in-house training.** Law 93/2025 provides partial public support toward training, reskilling and upskilling, and Law 124/2025 recognizes enterprises as trainers, so enterprises should explore those opportunities.

- **Proactively join two-way partnerships with training institutions.** Early engagement with the training process can create multidimensional benefits, e.g., more suitable on-demand training and more available recruitment options.

For investors, funders and banks

- **Embed workforce criteria in due diligence.** This action should be paired with supporting schemes for SMEs that are struggling to enhance their workforce capacity at the early stage.

- **Design and provide instruments that fund capability directly.** Dedicated workforce finance is largely absent from current grant and investment instruments, and Law 93/2025 offers a co-funding for those willing to design such instruments.

- **Sequence technical assistance to match portfolio companies' absorption capacity.** Founding teams in early-stage SMEs are usually too small to take up multiple support offers at once. Investors, funders and banks should stage technical assistance against an assessed skills gap, prioritizing the areas most binding for the company's next milestone rather than offering the full menu upfront.

For ESOs, development partners and intermediaries

- **Extend reach beyond existing networks.** Support currently reaches enterprises already inside intermediary networks. This leaves the broader SME population unserved. Outreach efforts should include measures to raise awareness of green support among SMEs

- **Provide focused workforce support.** For SMEs to use the funding they receive, they need people who can carry out the business plan. Many SMEs and start-ups secure initial funding without that capacity in place.

- **Study women's retention from the employer side.** Most gender equality programs for women in STEM focus on the women, through training and mentoring. How enterprises see the issue, and what they do about it, is far less understood.

Abbreviations

2X	2X Global criteria for gender-lens investment
ADB	Asian Development Bank
AI	Artificial intelligence
APME	Asia-Pacific and the Middle East
APVIA	Asian Photovoltaic Industry Association
ASSIST	Asia Society for Social Improvement and Sustainable Transformation
CEO	Chief executive officer
CSR	Corporate social responsibility
CT	Climate tech
CT-FE 2025	Vietnam Climate Tech Funding Ecosystem 2025 Report
CTE 2026	Vietnam Climate Tech Ecosystem 2026 Report
DFI	Development finance institution
EE	Energy efficiency
EPU	Electric Power University
ESG	Environmental, social and governance
ESMS	Environmental and social management system
ESO	Entrepreneurship support organization
EU	European Union
GHG	Greenhouse gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German development agency)
GSO	General Statistics Office
HCMC	Ho Chi Minh City
HCMUT	Ho Chi Minh City University of Technology
HEPC	Ho Chi Minh City Electric Power College
HueIDS	Hue Institute for Development Studies
IFC	International Finance Corporation
ILO	International Labour organisation
IoT	Internet of Things
IT	Information technology
JETP	Just Energy Transition Partnership
MNC	Multinational corporation
MOET	Ministry of Education and Training
MOIT	Ministry of Industry and Trade
MOLISA	Ministry of Labour, War Invalids and Social Affairs (dissolved March 2025)
MRV	Monitoring, reporting and verification

NE Faculty	Faculty of New Energy, Electric Power University
NEU	National Economics University
NIC	National Innovation Center
NIEF	National Institute for Economic and Financial Strategy and Policy
OECD	Organisation for Economic Co-operation and Development
PDP8	National Power Development Plan VIII
R&D	Research and development
RE	Renewable energy
RISE	Research Institute of Sustainable Energy, HCMUT
RQ	Research question
SME	Small and medium-sized enterprise
STEM	Science, technology, engineering and mathematics
TVET	Technical and vocational education and training
UIS	UNESCO Institute for Statistics
UNESCO	United Nations Educational, Scientific and Cultural organization
USD	United States dollar
VC	Venture capital
VCTIE	Vietnamese climate tech innovative enterprise
VUFO	Viet Nam Union of Friendship organization s
WEF	World Economic Forum
WEVN	Women in Energy Vietnam
WISE	Women's Initiative for Startups and Entrepreneurship