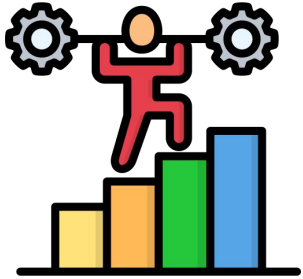


Aligning Commitments, Empowering People

Policy Pathways for Green Workforce Development

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Narrative Map: Clustering Discourse



CLUSTER 1:

What **challenge** do we face in aligning stakeholders, and what **lessons** can we **learn** from past transition such as automation and digitalization?

CLUSTER 2:

What **institutional mechanisms** can ensure that labour market forecasting, training investments, and job placement are aligned across the ecosystem?



CLUSTER 3:

How can Indonesia shift from short-term, fragmented Profram to a sustainable, adaptive and **systemic model** of workforce development for the energy transition?

CURRENT GAPS & LESSONS

Current Gaps – Lost Opportunities

(1) Fragmented coordination among regulator (ministries), demand side (private sector/ industry, SOEs), supply side (education and training institutions)

(2) Training often mismatched with labor demand

(3) Weak inclusion of vulnerable groups

Identity-based vulnerabilities
(women, youth, people with disabilities)

Context-based vulnerabilities
(mining-affected communities, informal sector workers, populations in remote/ rural areas)

Lessons from Past Transitions

Learning from Industrial automation & digitalization

Skills shape who wins

Reskilling came too late

Training often not demand driven

Concentrated displacement

Transition driven by tech, not people caused inequality

East Asia & Pacific (including ASEAN): Skills Matter (WB 2025)

- Robot adoption **raised overall manufacturing employment** via productivity/scale effects,
- but displaced **~1.4 million low-skill formal workers (2018–2022)** even as it **created ~2.0 million jobs for skilled formal workers** in five ASEAN countries.
- The *net* can be positive while **distributional losses** are real for certain groups

These gaps and lessons remind us that aligning commitments across actors is not optional, it is the foundation for empowering people in the energy transition



MECHANISMS FOR SYNCHRONIZATION (POLICY OPTIONS)

Alignment (standards, curricula,
financing, governance, and data
systems)

for **Coherent workforce ecosystem**

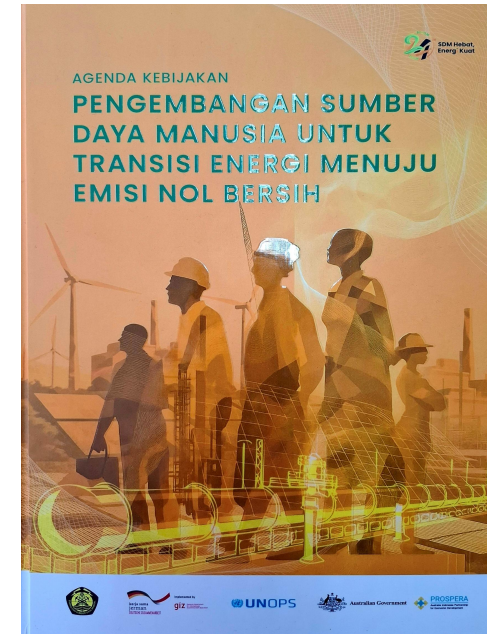
Policy Pathways Overview

RPJMN 2025 – 2029 Green Economy Green Jobs



The Green Workforce Roadmap (Bappenas, 2025)

- 1st National Policy framework to define green jobs
- Provides strategic direction & ensures political commitment



HRD Policy Agenda for the Energy Transition (MEMR, 2025)

- Builds on the roadmap by outlining *five strategic policy options*
- form an integrated system to align education, labor, and industry

Strengthening
TVET

Transforming
Fossil
Workforce

MSP &
Collaborative
Governance

Sustainable
Financing

Data for labor
planning

Strengthening TVET

Goal:

1. Aligned of competency standards, curricula (Kemendiktisainstek, Kemendikdasmen, Kemnaker) and industry demand
2. *Future-proofed skills* to anticipate emerging green technologies (e.g., hydrogen, carbon capture)

Mechanism:

- Green Skills standards embedded into schools & polytechnics
- Co-designing curricula with industry
- Harmonizing competency standards and certification system
- Expanding access to skilling, reskilling and upskilling (including linking Recognition of prior learning/ RPL with portable micro-credentials)

Transforming Fossil Workforce

Goal:

1. Synchronized short-course providers, certification bodies, and workers transitioning from fossil to renewable sectors
2. Valuable technical expertise is retained while reorienting skills

Mechanism:

- Ensuring availability of modular training with recognized certification
- Embedding workforce transition strategies into their corporate plans
- Public employment services to bridge displaced workers with green sector opportunities
- Support packages: relocation assistance, entrepreneurship support in renewable value chains.

MSP & Collaborative Governance

Goal:

1. A *systemic trust-based governance* where ministries, industries, and training providers share responsibilities, not just coordinate.
2. Strengthened regional-local ownership in skills planning

Mechanism:

- Establish *Partnership Forums on Human Resource Development for the Energy Transition* at national and provincial levels.
- Convene ministries, SOEs, private companies, vocational institutions, industry associations, and civil society to co-develop curricula, align certification, and map priority skills.
- Pilot collaborative governance models at the provincial level before scaling to the national system.

Sustainable Financing Model (for Training)

Goal:

1. Predictable, long-term funding for continuous green skilling, reskilling and upskilling
2. Balance public support with private responsibility.

Mechanism:

1. Shared responsibility for financing skills development (Public–private cost-sharing for high-cost training e.g., renewable energy technicians)
2. Explore blended finance: CSR + donor grants + government matching schemes.
3. Fiscal and non-fiscal incentives that encourage companies to invest in their own (green) workforce development.
4. Earmark a portion of energy transition funds or carbon pricing revenues to support training for vulnerable groups and SMEs.


Data-driven Workforce Planning

Goal:

1. Forward-looking projections of green job creation and skill needs
2. Evidence base for policymaking and investment decisions

Mechanism:

- Strengthen and link existing labor market information systems (BPS, Kemnaker, certification bodies, job portals) toward an integrated green workforce data hub
- Gradually build a national *Green Workforce Observatory* to consolidate data and generate insights for policymaking.
- Pilot use of big data (job portals, company reporting, certification records) to complement official statistics.
- Develop simple monitoring tools as first steps toward early warning for sectors at risk of job decline.

A hand with blue nail polish holds a white, triangular piece of paper that acts as a visual divider. To the left of the paper, the background shows a clean energy landscape with wind turbines and solar panels under a clear blue sky. To the right, behind the paper, is a dark, industrial scene with smokestacks emitting thick grey smoke. The text is centered over the white paper.

**Alone, each effort is fragile.
Together, woven into a system,
they become the backbone of a just and lasting energy
transition**

SYSTEMS-BASED MODEL

From Programs to Systems

(1) Build a Living Laboratory

- Select 2–3 regions as testbeds (e.g., solar in Java, geothermal in Sulawesi)
- Use these as “learning zones” for green skills development, job creation models, and community inclusion
- Rapid prototyping : document successes and failures transparently

South Africa’s Renewable Energy Development Zones (REDZs)

(2) Institutionalize the Pioneers’ Alliance

- Formalize a coalition of government, SOEs, and industry that commit to workforce transition targets
- Shared investments in training, apprenticeships, and certification programs
- Become a platform for aligning incentives (policy support, blended financing, and SOE leadership in transition)

Spain’s ‘Just Transition Agreements’ where government, utilities, and unions co-signed regional plans

(3) Make Green Workforce Governance Self-Sustaining

- Transition from project funding to institutionalized financing (levies, green funds, SOE cross-subsidies)
- Establish a permanent “Green Workforce Council” that coordinates across ministries and industry
- Build adaptive monitoring (data hubs, early warning systems) into the ‘DNA of planning’. The system runs beyond donor cycles

Germany’s BIBB system in TVET governance. Once established, it sustained itself for decades with minimal donor involvement

Aligning Commitments for a Just Transition

Government : Champion enabling policies and convene ministries into one voice; embed accountability in national planning

SOEs: Set the pace with bold workforce transition strategies and inclusive recruitment — show what is possible at scale.

Private Sector: Co-invest in training, expand apprenticeships, and build direct TVET partnerships

Civil Society: Guard fairness, amplify community voices, and ensure that no group is left behind

**The energy transition is a *people transition*,
success depends on collective action, not isolated roles!**



**Energy Transition is possible. Justice makes it lasting.
Alignment makes it ours**



THANK YOU

PYC International Energy Conference 2025

Towards Visi Indonesia Emas 2045: Aligning Energy Security, Economic Growth, and Environmental Sustainability

