PYC International Energy Conference 2025

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

From Bonus Demography to Bonus Capability: Building Indonesia's Green-Skilled Workforce

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Why this matters (2025→2035)

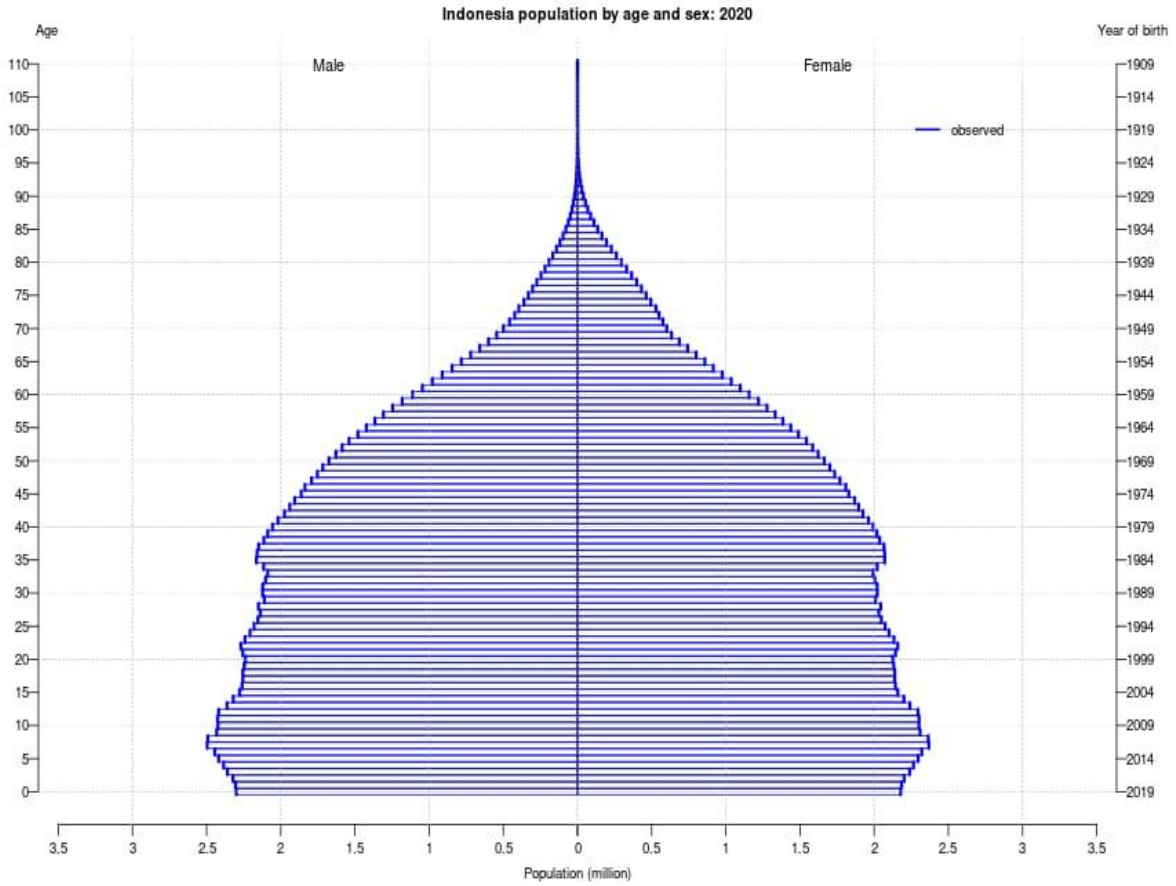
- Indonesia is mid-transition: young workforce now, rapid ageing by 2045.
- Green transition + automation will reshape jobs across energy, manufacturing, logistics, and services.
- Policy window: align skills, data, and finance to convert demographic dividend into productivity and inclusion.

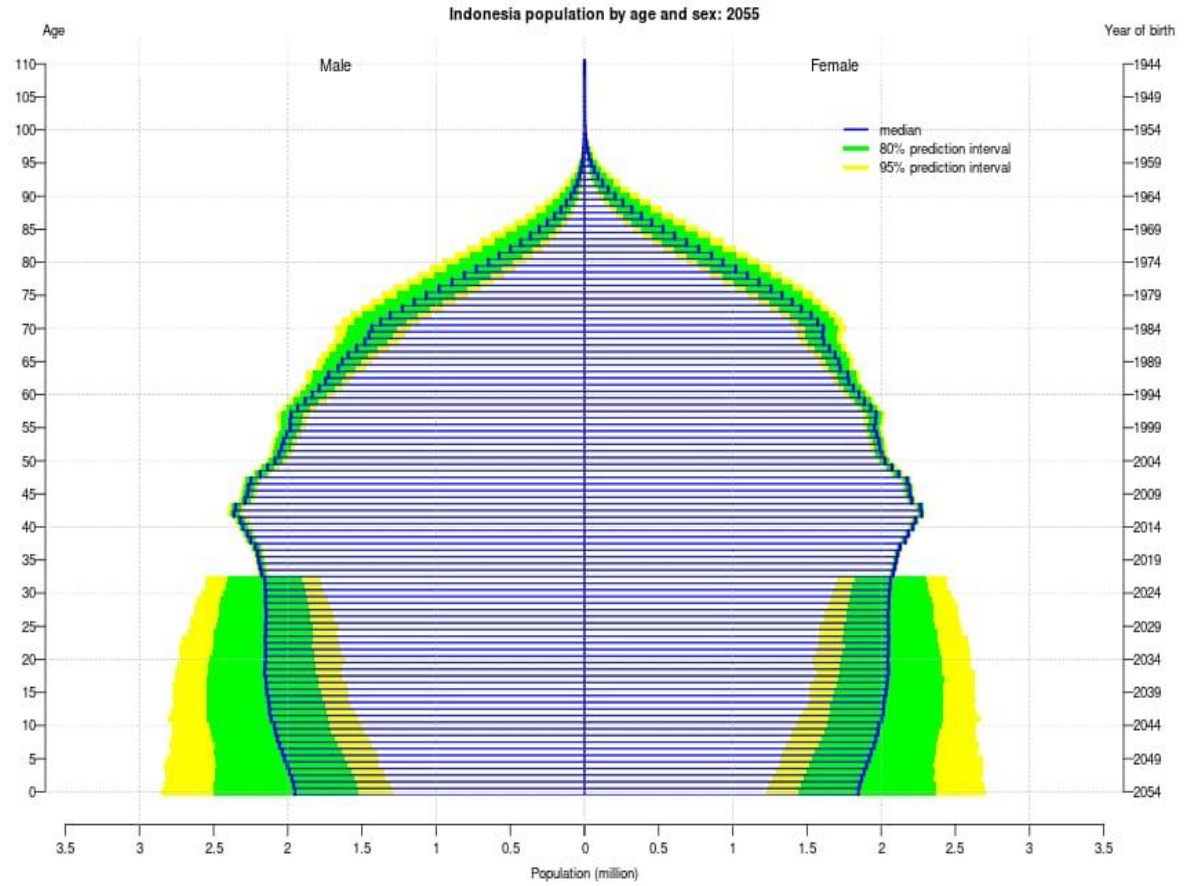
Sources: UN DESA World Population Prospects 2024; IEA (2023) World Energy Employment; ILO (2016) ASEAN in Transformation.

Indonesia in 2025: demographic snapshot

- Median age ≈ 30.4 years; window for demographic dividend narrowing towards 2035–2045.
- Urbanisation and education rising, but informality remains high.
- Strategic implication: skill now, before ageing accelerates.

Sources: UN DESA WPP 2024; Worldometers (citing UN WPP 2024).





The arc to 2045: workforce shifts

- Growing older cohorts → higher care needs and reallocation of labour.
- Electrification & renewables expansion accelerate demand for green skills.
- Digitalisation and AI change the task content of jobs, raising the complementarity of skills.

Sources: UN DESA WPP 2024; World Bank (2025) Future Jobs in EAP.

Threats and opportunities

- High automation exposure across ASEAN-5; ILO estimates ~56% of jobs at high risk over the next decades.
- Coal value chain employment faces decline as transition proceeds; significant regional impacts.
- Opportunity: green projects in coal regions can create ~96k jobs by 2030 with targeted investments.

Sources: ILO (2016) ASEAN in Transformation; IEA (2023) World Energy Employment; Ember (2024) Indonesia coal-region green jobs potential.

Leverage the demographic dividend

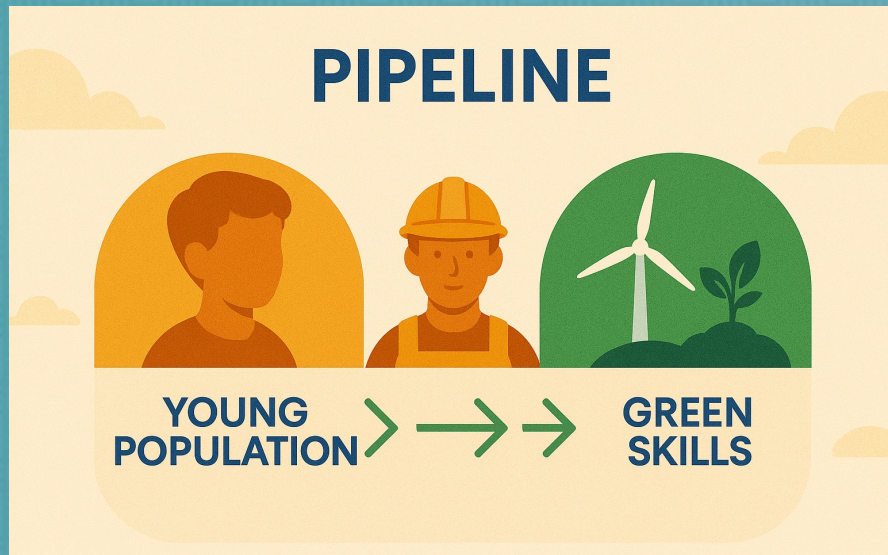
- Green TVET 2.0: embed climate, energy, and circular-economy modules across polytechnics and SMKs.
- Apprenticeships & dual training with RE/energy-efficiency firms; prioritize provincial coal regions.
- Recognition of Prior Learning (RPL) for informal workers to fast-track certification.
- Women's participation: bundle training with childcare, safe transport, and stipends.
- Regional skill deals: target clusters (EV, solar, waste, mangroves, ecotourism, retrofits).

References: LinkedIn Global Green Skills (2023–2024); IEA (2023); BPS (2025).

Illustration: Green talent pipeline

- Pathway from school → bootcamps → apprenticeships → certified jobs → careers.

School/SMK/Polytechnic → Bootcamp & Short Courses → Apprenticeship → Certification (RPL)



Conceptual pathway for program design; align with national certification systems (BNSP).

Preparing informal workers

- Micro-credentials + modular training tied to real vacancies (OEVS/LMIS).
- Mobile-first learning blended with on-the-job practice.
- Wrap-around supports: stipends, childcare, devices, and mentoring.
- Community hubs (*BLK Komunitas*) to reach women and youth outside urban centres.

Sources: World Bank/OEVS (2020); WB & partners (various).

Illustration: Ladder for informal→green

- Start from current skills → bridge modules → certification → placement → progression.

Designed for care, construction retrofits, e-waste, solar O&M, mangrove restoration.

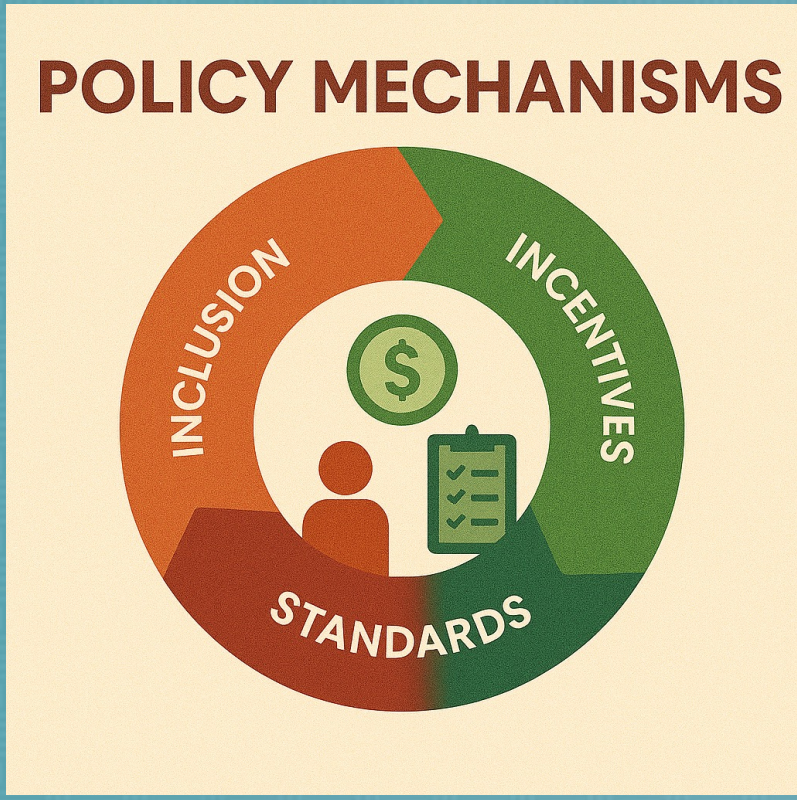
Data to anticipate displacement

- Build an ‘Early Warning Dashboard’: combine vacancy trends, O*NET-style task profiles, and plant closures.
- Map coal workforce & supplier SMEs; overlay with proximity to critical minerals and RE project pipeline.
- Publish transition counts: at-risk workers, training slots funded, placements, wage recovery.

Sources: IEA (2023) World Energy Employment; WB-Bappenas (2020) Occupational Employment Outlook; JETP CIPP materials.

Policy mechanisms

- Finance: Braided funding from JETP CIPP, Dana Alokasi Khusus (DAK), and levy–grant pilots.
- Targeting: training vouchers/learning accounts for women, youth, and coal-region households.
- Quality: outcome-based contracts with providers; report placement & wage gains.
- Protection: integrate JKP (unemployment benefit) with rapid re-skilling offers.
- Standards: green occupational standards with industry co-design (BNSP/LSP).



References: JETP Indonesia (2023–2024); IEA Just Transitions guidance (2023); Government programs incl. Prakerja, JKP.

“Green skills are the bridge between today’s workforce and tomorrow’s economy.”

- From bonus demography → bonus capability → bonus productivity.
- Proposal: Train and certify 1 million green-skilled workers by 2030, with parity for women and coal-region households.
- Measure success by placements, wage gains, and emissions avoided per trained worker.

Sources: IEA (2023) World Energy Employment; WB-Bappenas (2020) Occupational Employment Outlook; JETP CIPP materials.

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Sources: IEA (2023) World Energy Employment; WB-Bappenas (2020) Occupational Employment Outlook; JETP CIPP materials.

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