SOUTH ASIA SUBREGIONAL WORKSHOP

INCLUSIVE CLEAN ENERGY TRANSITIONS
IN BANGLADESH, MALDIVES AND SRI LANKA

26-27 May 2025 • Dhaka, Bangladesh

Sri Lanka: Emerging Green Industries:
Policies for Human Resource Preparation

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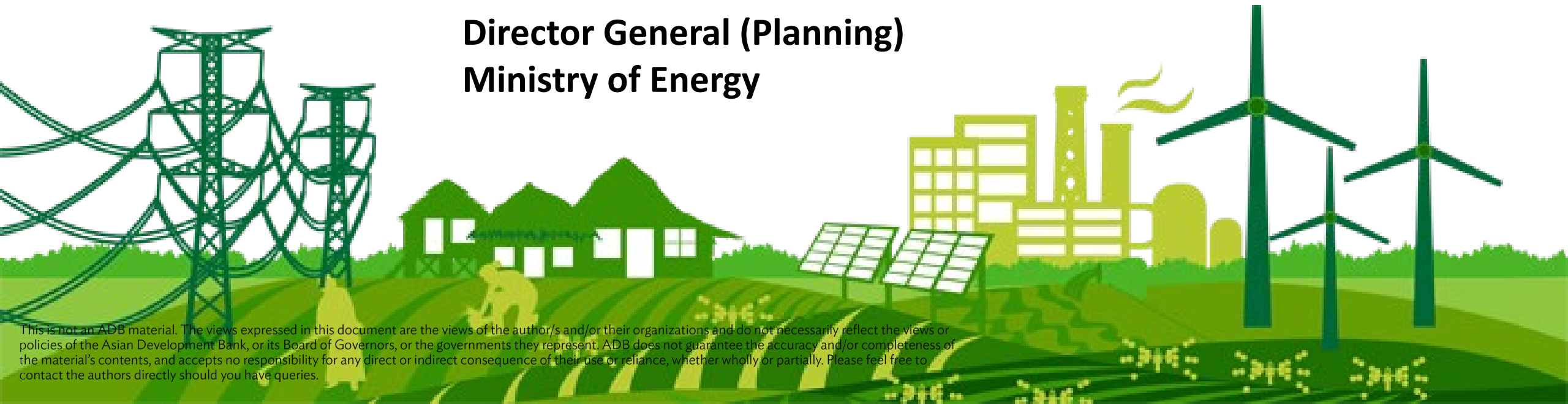

Introduction

- Sri Lanka has recognized the importance of preparing its human resources for the transition to green industries, particularly in the context of sustainable development, climate change mitigation, and green economic growth.
- While there is no single, unified policy exclusively focused on green human resource development, several policy frameworks and initiatives address aspects of workforce preparation for greening industries.
- Lack of proper labour market surveys to identify industrial needs and trends that affect the planning of new courses and programs for skill development and capacity building.
- Human Capital development component has been included in all foreign funding projects and TA to ensure the proper implementation and operation of RE developments.

Policy Directives on Environmental Commitments-

- C Net Zero 2050 Roadmap & Strategic Plan
- Carbon Neutrality in the Energy Sector by 2050
- Develop 70% of electricity generation capacity from renewable energy sources by 2030
- New capacity addition from clean energy sources such as liquefied natural gases (LNG) and Cease building of new Coal-fired power plants
- Promoting E-mobility
- Promote RE usage in Agriculture
- Energy efficiency improvement in Industry sector and decarbonization/ fuel switching

- The NDC commitments of the country accelerated the RE addition and Green Energy industry development in Sri Lanka. NDC 3.0 significantly enhances NDC 2.0 by considering recent developments in the electricity sector with the Sri Lanka's economic reality, and the need for finance, technology transfer, and capacity building.
- The NDCs align with the SDGs and emphasize social inclusion and gender responsiveness, promoting equality and women's role in climate resilience and decision-making.

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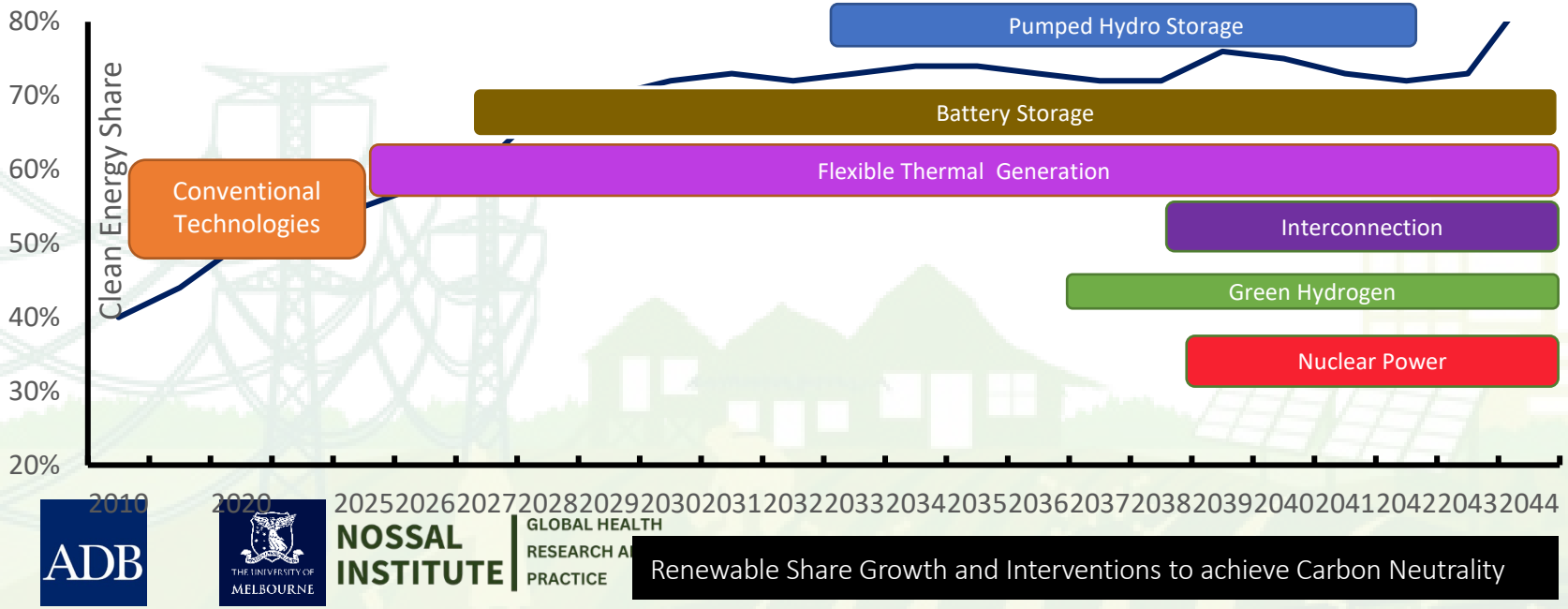
Background

In 2024, Sri Lanka had 6,048 MW of installed power generation capacity, with 64% from renewables (large and small hydro, wind, solar, and biomass). Out of the 17,365 GWh generated, 55% came from renewable sources in 2024.
Individual and Institutional capacities should be developed to cater the future demand and supply which is forecasted in the LTGEP (RE Share of The Base Case Plan For Next 20 Years –draft LTGEP 2025-2044)

Addition of rooftop solar exceed the targets in 2025 and the installed capacity is more than 1200 MW up to now. The large number of new companies providing PV installation and maintenance services with the increasing penetration of solar roof tops.
Vast potential of employments in solar, wind, hydro and biomass industries will be created in future.



Renewable Share Growth and Interventions to achieve Carbon Neutrality

Year	RE Share (%)	RE Spillage Share out of RE Generation (%)
2025	55%	0%
2026	58%	0%
2027	61%	1%
2028	69%	2%
2029	70%	4%
2030	72%	5%
2031	73%	6%
2032	72%	7%
2033	73%	7%
2034	74%	4%
2035	74%	5%
2036	73%	5%
2037	72%	6%
2038	72%	7%
2039	76%	4%
2040	75%	4%
2041	73%	5%
2042	72%	5%
2043	73%	7%
2044	71%	7%

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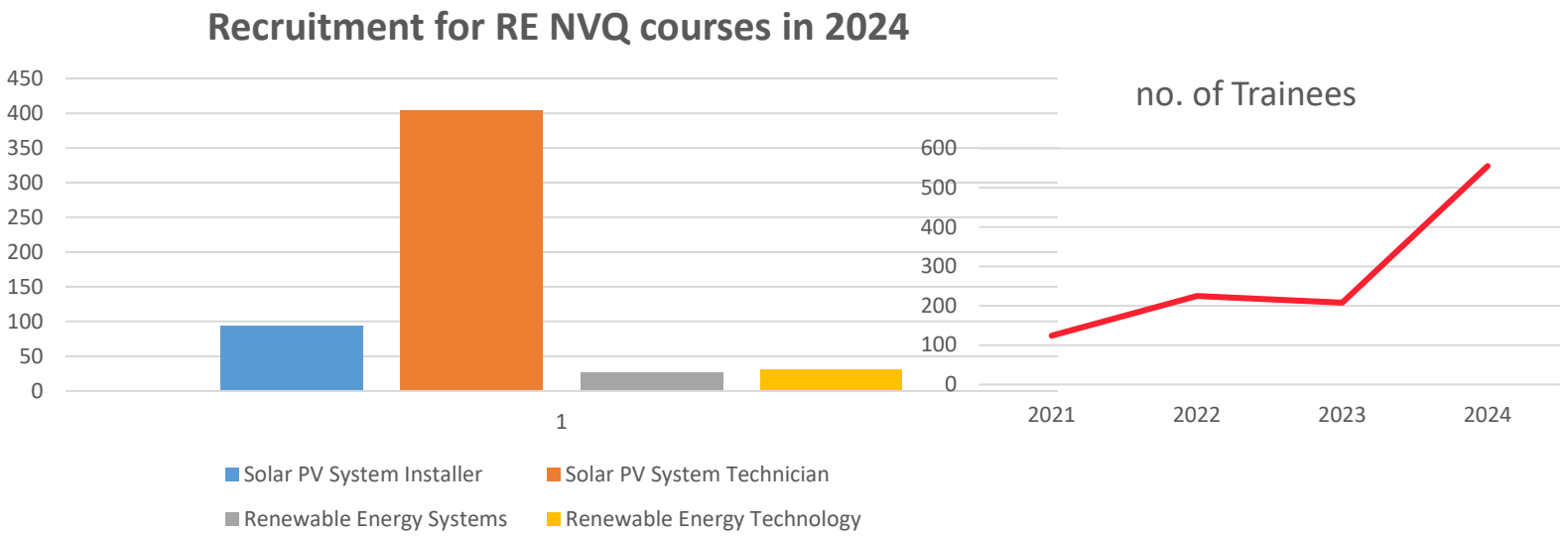
Key Policies and Policy interventions facilitate Green Industry

Policy/Strategy	How it address HR preparations
Energy policy of the new government 2025	• Initiate energy sector Techno-Commercial collaboration programs among national higher educational institutes, industries, utilities and regulator
TVET Policy	• Training, Up-skilling, Re-skilling, EBT, RPL, TOT and other capacity development modes with curricular development, regulation and standardization
National Climate Change Policy (2023) – Ministry of Environment	• Main objective is to mainstream and integrate resilience building and GHG emission reductions in all sectoral policies and programs at all levels • Encourages capacity building and awareness among stakeholders, including public servants and the workforce. Promote training and education programs to develop technical skills required for climate-resilient and low-carbon industries.
National Policy on Sustainable Consumption and Production (2019) – Ministry of Environment	• Focuses on transforming key economic sectors into more sustainable models. • Calls for capacity development in sustainable practices. Promote education and training to equip the workforce with skills for cleaner production, energy efficiency, and waste management.
Sri Lanka's Nationally Determined Contributions (NDCs) to the Paris Agreement – Ministry of Environment	• The updated NDC identifies capacity building and skill development as key enablers. • Encourages government and private sector collaboration to develop training programs and curricula aligned with mitigation and adaptation goals.
National Human Resources and Employment Policy of Sri Lanka (2012)	• Encourages green jobs creation and skills development. • Calls for integrating green skills training into vocational education and training (TVET) curricula. • Emphasizes the need for labour market information systems to monitor trends including green jobs.
National Innovation and Entrepreneurship Strategy (2018–2022)	• Promotes innovation in clean technologies and eco-friendly practices. • Encourages skills development for youth and entrepreneurs in green business models
National Green Reporting System (NGRS) – Ministry of Environment	• Training and capacity building programs for Green Reporting

HR Development framework for Green Energy Industry in Sri Lanka

Sector	Level of Programs	Programs/ Courses	Implementation
General Education	Advanced Level Vocational Stream Introduced	Electrical/ Electronic, etc	Selected schools
Higher Education	Degree and above	Engineering faculties in five state universities and all have subjects on energy systems and RE	UoM has increased the electrical engineering undergraduate intake from 50 in 2005 to 100 in 2020
	Diploma/ Higher diploma/ Degree and above	There are many private universities too teaching electrical engineering including RE.	Deakin University, Curtin University and several other foreign universities are also offering electrical and RE degree programs
Vocational Education	National Diploma in Technology	Diploma in electrical engineering	Institution of Technology, UoM,etc
	National Vocational Qualification (NVQ) 3&4	Solar PV Technician Wind Power/ Hydro Power/ Biomass	DTET, VTA, NAITA and many other technical colleges producing large number of technicians to assist the companies providing renewable energy services
	NVQ 5	RE Technology / RE Systems	Ceylon-German Technical College
	Capacity building	TOT, RPL, EBT, Re-skilling, Up-skilling, Awareness, etc	Technical knowhow, Green financing, Green Procurement-Ministries, Institutes, Projects, etc.
Industrial Capacity Building	Capacity development training programs	Energy Management System Trainings, Motor Systems Optimization, Steam System Optimization, Pump Systems Optimization, Compress air System Optimization, Solar PV	AICRSL project and other training assistance for industries focusing on energy efficiency

HR Development Outputs



Training performance in Electricity related Vocational Courses in 2024

	Recruited	Completed (from 2023)
Male	630	950
Female	11	15
Total	641	965

Awareness and Training programs conducted by Sustainable Energy Authority from 2021 to 2024

Program	Target Participants	Approx. No.
Awareness on Energy Conservation	Hotel sector	70
Awareness on Energy Conservation in office buildings	Energy Managers of Super Markets, Banks, Gov. inst.	430
Capacity building on Energy conservation & Energy Auditing	Tea manufacturing sector, Navy	130
Energy Benchmark regulation & Web Portal	Super Markets, Banks, Financial inst.,Gov. inst.	250
Awareness on Energy Management	High energy consumers, Gov. inst., Students	240
Energy Efficiency Building Design	Engineers, TOs, Draftsmen in construction industry	150

Challenges/ Next Step

Challenges and Gaps-

- Fragmentation: Multiple agencies involved, Institutional coordination is limited.
- Disconnect between private and public sector in information sharing.
- Lack of data on green jobs demand and supply.
- Need for Updated Curricula: TVET and university programs require more up-to-date green skills content.
- Insufficient engagement of industries in shaping skills development for green transitions.
- Operationalize the existing policies.
- Lack of standard deal structures and concessional capital for investment promotion.
- Lack of country level climate data and information for investment needs of RE.
- Negative impacts of economic crisis.

Next Step-

- Introduce concessional funding mechanisms for green industry/ product development
- Enhance the RE absorption capacity to the National Grid by implementing projects with ADB assistance; Power System Strengthening and Renewable Energy Integration Project (PSSREIP) and Virtual Net Metering Project under the Solar PV Initiative of ADB
- Establishment of RE Sector Council
- Preparation of RE Sector Vocational Education & Training (VET) Plan
- Publishing of Greening TVET Policy and action Plan
- Implementation of National Competency Standards (NCS) and Curriculum for NVQ level 3&4; Hydro power, Solar power, Wind power & Biomass

Thank You

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