A. Introduction

1. Climate change is a global issue that demands policies addressing both mitigation and resilient infrastructure. While carbon emissions from power generation and transportation are major contributors worldwide, the transition from fossil fuel dependency to clean energy also presents complex social challenges. A key priority from the G20 Energy Ministers meeting held in July 2023 under India's G20 Presidency, as reflected in the *Outcome Document and Chair's Summary*, is ensuring "Just, Affordable, and Inclusive Energy Transition Pathways." This commitment emphasizes the need to prioritize social dimensions, including promoting zero and low-emission technologies, job creation, and social dialogue that address the unique needs of workers from affected sectors, Indigenous Peoples, local communities, women, youth, children, migrants, persons with disabilities, those living in poverty, and other vulnerable groups. Furthermore, the document underscores the importance of women's empowerment and gender equality throughout the transition process, signaling a strong commitment to inclusive policies that protect vulnerable populations while building a sustainable energy future.

2. The Government of India is prioritizing clean energy to meet growing demands while reducing its carbon footprint. This transition is guided by ambitious targets outlined in the Nationally Determined Contributions, including increasing the share of non-fossil power capacity to 50% by 2030, reducing emissions intensity by 45% from 2005 levels by 2030, and achieving net-zero emissions by 2070. To support these goals, the government has proposed amendments to laws and policies, such as the introduction of a National Renewable Energy Policy in the Electricity Bill, 2022, and the inclusion of energy storage, demand response, and electric vehicle charging stations in the draft National Electricity Policy[1].

3. Energy access remains a priority for the government, with approximately 99% of households now connected to the electricity grid. The government also supports cross-border grid interconnections to extend energy access to neighboring South Asian countries. Technology has played a vital role in integrating renewable energy sources into the grid, enhancing system efficiency through smart grid devices, and enabling effective regulations.

4. This transition presents significant opportunities for local economies to diversify and generate employment in green industries. For instance, India's solar sector alone could create an estimated 281,400 jobs, with 201,400 in on-grid solar and 80,600 in off-grid settings (International Renewable Energy Agency, 2023). Programs for economic diversification and skill development are essential to leverage these opportunities, engaging youth, fostering a diverse workforce, and promoting active community participation—all crucial for an equitable and sustainable energy future.

[1] Other initiatives include the *Kisan Urja Suraksha Evam Utthaan Mahabhiyan* (KUSUM, or 'Farmer Energy Security and Upliftment Scheme') for solarizing agricultural pumps and the *Pradhan Mantri Surya Ghar: Muft Bijli Yojana* (Prime Minister's Sun Home: Free Electricity Scheme), which provides subsidies for residential rooftop solar photovoltaic installations

5. However, the transition also brings challenges, particularly for India's highly informal workforce. Many fossil fuel workers are employed on short-term or informal contracts with limited social security benefits, complicating efforts to protect their livelihoods. Tracking, retraining, and supporting these workers through the transition is critical to ensuring that the shift to green energy does not come at their expense.

B. Objectives and Participants

6. The National Conference is part of an ADB technical assistance project aimed at promoting inclusive strategies for a low-carbon energy transition in India and other South Asian Member Countries. The conference will facilitate knowledge sharing and collaboration among government agencies, ADB project implementers, and other key energy stakeholders.

C. Key Conference Sessions

- **Session 1: Innovative Policies and Institutional Frameworks for Energy Transition**. This session will explore the latest policy innovations, regulatory changes, and national goals that are driving India's clean energy transition, including an overview of sector transformation, standards to support implementation, and schemes to enable access to and affordability of solar systems for low income households.

- **Session 2: Clean Energy Frontiers - Transition Technologies: Addressing Techno-Economic and Social Challenges**.This session will discuss emerging technologies and clean energy solutions, as well as their economic and social challenges. Topics will include energy efficiency, resilience building, cross-sectoral initiatives related to the energy transition, including the solarization of agriculture.

- **Session 3: Social Dimensions of India's Green Energy Transition: Strategies for an Inclusive Change**. This session will focus on the social dimensions of the energy transition, particularly on the impacts on the workforce and local communities. It will cover challenges related to the role of informal workers in the fossil fuel sector, the need for ensuring social equity in the transitions, and strategies to ensure no one is left behind.

- **Session 4: Knowledge and Insights: Charting the Path Forward from the Conference** This concluding session will summarize key insights from the conference and outline actionable steps for advancing a just and sustainable energy transition. It will encourage collaboration among stakeholders to build on shared knowledge and implement solutions.

A. Program at a Glance

	DAY 1	DAY 2
09:00-09:45	**WELCOME, OPENING REMARKS & SPECIAL ADDRESS**	**SESSION 3** **SOCIAL DIMENSIONS OF INDIA'S GREEN ENERGY TRANSITION: STRATEGIES FOR AN INCLUSIVE CHANGE**
09:45-10:15	**CONFERENCE SESSIONS** Conference Chair: Reihana Mohideen, Principal Advisor, Just Energy Transition (JET), Nossal Institute for Global Health, The University of Melbourne (UoM) **SESSION 1** **INNOVATIVE POLICIES AND INSTITUTIONAL FRAMEWORKS FOR ENERGY TRANSITION** **FIRESIDE CHAT** **Policy and Policy Dialogue: How ADB Programs Support Inclusive Energy Transitions** Priyantha Wijayatunga, Principal Director, SG-ENE, ADB	**PANEL PRESENTATION 3** Topics include: *Overview and Context of Need, Demand, and Challenges for an Inclusive Transition; Workforce Development and Re-skilling in the Energy Sector; and the Role of Social Protection in Workforce Development.*
10:15-10:45	**NETWORKING BREAK**	
10:45-11:30	**PANEL PRESENTATION 1** Topics include: *Policy and Policy Dialogue; A Historical Overview of Sector Transformation; Policy Innovation, and Regulatory Frameworks and Standards.*	**CASE STUDY 3** This case study will highlight the social dimensions of energy access and affordability through the projects implemented by the NGO, Hand in Hand. **OPEN FORUM & LIVE POLLING OF SESSION 3**
11:30-12:00	**CASE STUDY 1** This case study examines the PM - Surya Ghar Muft Bijli Yojana rooftop solar scheme's subsidy and loan mechanisms, to make installation more affordable and provide access to clean energy solutions for low-income households. **OPEN FORUM & LIVE POLLING OF SESSION 1**	**SESSION 4** **KNOWLEDGE AND INSIGHTS: CHARTING THE PATH FORWARD FROM THE CONFERENCE** **INTERACTIVE PANEL** **OPEN FORUM & LIVE POLLING OF SESSION 4**
12:00-13:30	**LUNCH NETWORKING BREAK**	**LUNCH NETWORKING BREAK**
13:30-14:20	**SESSION 2** **CLEAN ENERGY FRONTIERS - TRANSITION TECHNOLOGIES: ADDRESSING TECHNO-ECONOMIC AND SOCIAL CHALLENGES** **INTERACTIVE LECTURE** **Techno-Economic Challenges of the Energy Transition: International Experiences** Pierluigi Mancarella, Energy Program Research Lead, Melbourne Energy Institute, UoM **OPEN FORUM**	**FIELD VISIT TO: RENEWABLE ENERGY MANAGEMENT CENTRE (REMC), TAMIL NADU ENERGY BOARD HEADQUARTER, CHENNAI** Participants will gain a firsthand understanding of the crucial role of the REMC within the State Load Dispatch Centre (SLDC) in ensuring the integrated operation of the power system within the state and will provide insights into the management practices adopted by the SLDC.
14:20-15:30	**PANEL PRESENTATION 2** Topics include: *Smart Grid; Distributed Energy for Access and Livelihoods*	
15:30-16:00	**NETWORKING BREAK**	
16:00-16:20	**PANEL PRESENTATION 2** Topics include: *Cross-sectoral Initiatives; Solarization of Agriculture*	
16:20-17:00	**CASE STUDY 2** This case study examines the implementation of the KUSUM scheme to ensure the energy security of farmers and the solarization of agriculture in the state of Maharashtra. **OPEN FORUM & LIVE POLLING OF SESSION 2** **SUMMARY OF THE DAY**	
17:00-20:00	**DINNER RECEPTION AND NETWORKING**	

DAY 1		
08:30–09:00	**ARRIVAL & NETWORKING**	
09:00-09:35	**WELCOME, OPENING REMARKS & SPECIAL ADDRESS**	
	• Conference Chair: Reihana Mohideen, Principal Advisor, Just Energy Transition (JET), Nossal Institute for Global Health, The University of Melbourne (UoM)	
	• Francesco Tornieri, Principal Social Development Specialist (Social Inclusion) Human and Social Development Sector Group (SG-HSD), ADB	
	• Priyantha Wijayatunga, Senior Director, Energy Sector Group (SG-ENE), ADB	
	• Special Address: Beela Venkatesan, Principal Secretary, Energy Department, Government of Tamil Nadu, India - Introduced by Sujata Gupta, Director, SG-ENE (South Asia), ADB	
	• Special Address: Sudeep Jain, Additional Secretary, Ministry of New and Renewable Energy India - Introduced by Sujata Gupta, ADB (Online)	
09:35-10:15	**CONFERENCE SESSIONS**	
	Program overview by Reihana Mohideen, UoM	
	GESI Laboratory Initiative Introduction by Francesco Tornieri, ADB	
	SESSION 1	**INNOVATIVE POLICIES AND INSTITUTIONAL FRAMEWORKS FOR ENERGY TRANSITION**
	Policy innovation and effective institutional arrangements are crucial for managing and implementing a smooth transition to renewable energy.	
	***Objective**: To examine the role of innovative policy development, including related schemes and institutional frameworks, in facilitating an inclusive transition. This includes identifying key challenges and opportunities associated with this process.*	
	***Topics**: Innovative Policies and Policy Dialogue; Historical Overview of Sector Transformation; Regulatory Frameworks and Standards; Access and Affordability; Rooftop Solar Scheme for Low-Income Households*	
	FIRESIDE CHAT	
	Moderator: Sujata Gupta, ADB	
	Policy and Policy Dialogue: How ADB Programs Support Inclusive Energy Transitions	
	• Priyantha Wijayatunga, ADB	
10:15-10:45	**NETWORKING BREAK**	
10:45-11:30	**PANEL PRESENTATION 1**	
	Moderator: Jaimes Kolantharaj, Principal Energy Specialist, ADB	
	Overview: Historical Overview of Sector Transformation	
	• Pankaj Batra, Energy Transition and Reform Expert, former Chair Central Electricity Authority (CEA)	
	1.a: Policy Innovation, Regulatory Frameworks, and Standards	
	This session will discuss the current and emerging policy scenarios, including India's National Renewable Energy Policy and the National Electricity Policy, the initiatives being undertaken by the IEEE Standards Association to enable inclusive energy solutions to inform industry and key stakeholders, and a case study, an innovative scheme to improve access and affordability to rooftop solar PV systems to low-income households.	
	Overview: Current and Emerging Scenarios	• Ashok Rajput, Member (Power System), Central Electricity Authority, GoI (Online)
	IEEE GESI Technical Standards Project: Implications for Industry	• Reihana Mohideen, Chair, GESI Workstream, IEEE-SSIT SA
11:30-11:50	**CASE STUDY 1**	
	Moderator: Jyotirmoy Banerjee, Senior Project Officer, INRM, ADB	
	Access and Affordability with Rooftop Solar for Low-Income Households: Pradhan Mantri Surya Ghar: Muft Bijli Yojana This case study examines the PM - Surya Ghar Muft Bijli Yojana rooftop solar scheme's subsidy and loan mechanisms, to make installation more affordable and provide access to clean energy solutions for low-income households	• Anjli Prakash, Assistant General Manager, State Bank of India • Abhishek Shah, Partner, KPMG
11:50-12:00	**OPEN FORUM**	
	LIVE POLLING OF SESSION 1	

12:00-13:30	**LUNCH NETWORKING BREAK**	
13:30-14:10	**SESSION 2**	**CLEAN ENERGY FRONTIERS - TRANSITION TECHNOLOGIES: ADDRESSING TECHNO-ECONOMIC AND SOCIAL CHALLENGES**
	A social and techno-economic analysis is key for ensuring the feasibility of smart energy systems for an inclusive energy transition	
	Objective: *Discuss the key transition technologies and the social and techno-economic challenges and opportunities presented for inclusive clean energy solutions.*	
	Topics: *Smart Grid, Distributed Energy for Access and Livelihoods, Cross-sectoral Initiatives; Solarization of Agriculture*	
	INTERACTIVE LECTURE	
	Techno-Economic Challenges of the Energy Transition: International Experiences	
	• Pierluigi Mancarella, Energy Program Research Lead, Melbourne Energy Institute, The University of Melbourne; Introduced by Francesco Tornieri, ADB	
14:10-14:20	**OPEN FORUM**	
14:20-15:30	**PANEL PRESENTATION 2**	
	Moderator: Bouadokpheng Chansavat, Regional Head, Operations Coordination, South Asia, ADB	
	2.a: Smart Grid	
	This session will examine the socio-technical aspects of emerging new grid solutions and how 'smarter resilience' is also socially inclusive.	
	Demand Response, Energy Storage, and Enhancing Energy Efficiency	• Anil Choudhary, Chief General Manager, Energy Efficiency Services Limited • Pankaj Batra, Energy Transition Expert
	Fostering Smarter Resilience in Energy Systems	• Samrat Ray, Senior Project Officer, Energy, INRM ADB
	2.b: Distributed Energy for Access and Livelihoods	
	This session provides a perspective on some key aspects of social inclusion in India– rural communities, tribal communities, women and gender – and energy system modelling to incorporate socio-technical approaches.	
	Solar Microgrids for Rural Electrification	• Manoj Gupta, Chief Executive Officer, Tata Power Renewable Microgrid Company
	Enhancing Livelihoods of Vulnerable Groups: An Overview of ADB Energy Initiatives Design	• Deepa Ahluwalia, Senior Social Development Officer, India Resident Mission (INRM) ADB; • Jigar Bhatt, Senior Project Officer, Energy, INRM, ADB
15:30-16:00	**NETWORKING BREAK**	
16:00-16:20	**2.c: Cross-sectoral Initiatives**	
	This session will discuss the implications of ADB projects in the transport and urban sectors for an inclusive clean energy transition in India.	
	Greening Urban Tamil Nadu: Inclusive, Resilient and Sustainable Housing for the Urban Poor	• Sourav Majumder, Senior Project Officer (Urban), ADB
	Transforming Transport: The Role of Mass Transit, Electric Vehicles, and Micromobility in the Clean Energy Transition	• Saugata Dasgupta, Transport Sector Office INRM, ADB (Online)
16:20-16:40	**CASE STUDY 2**	
	Moderator: Bouadokpheng Chansavat, ADB	
	Solarizing Agriculture: Insights into the KUSUM Scheme in Maharashtra This case study examines the implementation of the KUSUM scheme and the solarization of agriculture in the state of Maharashtra to ensure the energy security of farmers.	• Lokesh Chandra, Chairman and Managing Director, MSEDCL (Online) • Jaimes Kolantharaj, ADB
16:40-16:50	**OPEN FORUM**	
	LIVE POLLING OF SESSION 2	
16:50-17:00	**SUMMARY OF DAY 1**	
17:00-20:00	**DINNER RECEPTION AND NETWORKING**	

DAY 2		
08:30-09:00	**ARRIVAL & NETWORKING**	
09:00-10:15	**SESSION 3**	**SOCIAL DIMENSIONS OF INDIA'S GREEN ENERGY TRANSITION: STRATEGIES FOR AN INCLUSIVE CHANGE**
	***Overview**: This session will explore the social dimensions of India's transition to green energy, with a focus on workforce development and local communities. As India embraces a cleaner, more sustainable energy future, the discussion will address key challenges and opportunities related to workforce reskilling, equitable access, and affordability of renewable energy (RE).*	
	***Objective**: To examine the social dimensions of India's green energy transition, particularly workforce development, reskilling, and equitable access to RE, while providing actionable insights to inform ADB's policy dialogue and operational strategies in the energy sector.*	
	***Topics:** The session will address challenges faced by informal workers in the fossil fuel sector, the importance of ensuring inclusivity and social equity in the energy transition, strategies for supporting vulnerable workers—particularly in rural areas—through robust social protection systems, and approaches to enhancing access and affordability in RE.*	
	PANEL PRESENTATION 3	
	Moderators: Gi Soon Song, Director, Human and Social Development (SG-HSD) Sector Group, ADB; Francesco Tornieri, ADB	
	Overview and Context: Need, Demand, and Challenges for an Inclusive Transition	
	• Ajay Mahal, Economist, Health Economics and Social Protection, Nossal Institute, UoM	
	3.a: Workforce Development and Reskilling in the Energy Sector	
	This session will focus on the social implications of transitioning to green energy, particularly for rural populations. It will emphasize the role of social protection mechanisms and effective risk management strategies in strengthening local economic resilience.	
	Training and Skill Development Initiatives	• Gi Soon Song, ADB • Francesco Tornieri, ADB
	3.b: The Role of Social Protection in Workforce Development	
	Social Protection Initiatives for Workforce Reskilling	• Mariko Ouchi, Senior Technical Specialist on Social Protection, Decent Work Technical Team - South Asia, International Labour Organization (ILO) • Pradip Swarnakar, Coordinator Just Transition Research Centre, Indian Institute of Technology, Kanpur • Oleksiy Ivaschenko, Senior Social Protection Specialist, SG-HSD, ADB (Online)
10:15-10:45	**NETWORKING BREAK**	
10:45-11:00	**CASE STUDY 3**	
	Moderator: Somesh Kumar, Energy Sector Lead Partner, Ernst and Young, India	
	Social Dimensions of Access to and Affordability of RE: Impactful Grassroots Initiatives This case study will highlight the social dimensions of energy access and affordability through the projects implemented by the NGO, Hand in Hand.	• Kalpana Sankar, Managing Trustee of Hand in Hand India, Founder and Mentor of Hand in Hand Inclusive Development and Services
11:00-11:10	**OPEN FORUM & LIVE POLLING**	
11:10-11:50	**SESSION 4**	**KNOWLEDGE AND INSIGHTS: CHARTING THE PATH FORWARD FROM THE CONFERENCE**
	This session will feature a moderated group discussion with key stakeholders and participants focusing on how the conference has enriched understanding and provided valuable insights. Attendees will explore significant lessons learned and their implications for future strategies, fostering a collaborative dialogue to identify actionable steps moving forward. *(Sri Chandrasekaran, Country Head IEEE India and Lead Standards Association, will join this session providing comments on the role of ethical AI in the transition.)*	
	INTERACTIVE PANEL	
	Moderators: Reihana Mohideen, UoM and Francesco Tornieri, ADB	
11:50-12:00	**OPEN FORUM** **LIVE POLLING**	

12:00-13:00	**LUNCH NETWORKING BREAK**
13:00-18:00	**FIELD VISIT TO: RENEWABLE ENERGY MANAGEMENT CENTRE (REMC), TAMIL NADU ENERGY BOARD HEADQUARTER, CHENNAI** *The field visit offers participants a unique opportunity to gain firsthand understanding of the crucial role of the REMC within the State Load Dispatch Centre (SLDC) in ensuring the integrated operation of the power system within the state. On-site presentations will discuss advanced technology systems employed by the SLDC, including the integration of renewable energy sources into the grid. Participants will also have the chance to observe the impressive high-voltage AC 765KV transmission line, the highest transmission voltage in India. Furthermore, the visit will provide insights into the management practices adopted by the SLDC, highlighting the strategies and techniques employed to maintain a reliable and efficient power supply throughout the state.*