SDG7 Energy Compact of the Government of India

A next Decade Action Agenda to advance SDG7 on sustainable energy for all, in line with the goals of the Paris Agreement on Climate Change

SECTION 1: AMBITION

1.1. Ambitions to achieve SDG7 by 2030. *[Please select all that apply, and make sure to state the baseline of each target]*
(Member States targets could be based on their NDCs, energy policies, national five-year plans etc. targets for companies/organizations could be based on their corporate strategy)

☒	**7.1.** By 2030, ensure universal access to affordable, reliable, and modern energy services.	Target 7.1

		dget FY 2021-22 provided for an additional 10 million deposit-free LPG connections under the PMUY 2.0 scheme for those low-income families who could not be covered under the first phase of PMUY. This will include first refill and a hotplate free of cost. PMUY 1.0, launched in May 2016 aimed to provide LPG connections to 50 million women members of below-poverty-line (BPL) households. PMUY 1.0 target was expanded in March 2018 to 80 million LPG connections, which was achieved in August 2019, seven months ahead of schedule. The LPG connections released under PMUY 1.0 have helped increase LPG coverage in India from 61.9 % as on 1 April 2016 to 99.5% as on 1 January 2021. PMUY 2.0 will help India move closer to 100% LPG coverage, ensuring universal access to clean cooking fuel. The objective is to make LPG as a clean cooking fuel available to rural and deprived households which otherwise use traditional cooking fuels such as firewood, coal, cow-dung cakes, etc. which have detrimental impacts on the health of the women, family members, and the environment.
	☒ **7.2.** By 2030, increase substantially the share of renewable energy in the global energy mix.	Target 7.2.1 **Increase the renewable energy installed capacity to 450 GW by 2030** Time frame: 2030 Baseline: as on 31st August 2021: 100.68 GW Context for the ambition One of s at the CoP21 Paris Agreement is to achieve 40% share of non-fossil-fuel based installed capacity by 2030. -fossil fuel based capacity today stands at more than 153 GW, which equates to more than 39% share of total installed power generation capacity as of August 2021. 62 GW of additional renewable energy capacity is already under implementation and 29 GW is under bidding. India has raised its ambition and enhanced its target to 450 GW of renewables based capacity by 2030. bioenergy, hydropower and emerging areas such as green hydrogen, geothermal, etc.
		Target 7.2.2: Develop and implement a National Hydrogen Energy Mission to scale up green hydrogen production and utilization across multiple sectors, with a target of ~1 million tonnes annual green hydrogen production by 2030.

		Time frame: 2030 Baseline: Launch of the National Hydrogen Energy Mission in 2021 Context for the ambition: Prime Minister of India, on 15th August 2021, had announced the launch of National Hydrogen Mission with a target to make India a global hub for production as well as exporting green hydrogen. The Ministry of New and Renewable Energy, Government of India is developing a National Hydrogen Energy Mission to scale up green hydrogen production and utilization across multiple sectors. The Mission will support development and commercialization of green hydrogen technologies with an aim to reduce dependence on imported fossil fuels and enable decarbonization of the economy.
		Target 7.2.3: Production Linked Incentive (PLI) Scheme for high-efficiency solar modules to create an additional 10,000 MW of integrated solar PV manufacturing capacity by 2025. Timeframe: 2025 Baseline: 5.7 GW solar module manufacturing capacity in 2015. Context for the ambition The Union Cabinet approved the Production Linked Incentive (PLI) Scheme in November 2020. It feeds manufacturing capacity, investments in R&D and process improvements to achieve higher Solar PV module efficiencies.
		Target 7.2.4: Create production capacity for 15 million metric tonnes (MMT) of compressed biogas (CBG) by 2024. Time frame: 2024 Baseline: Launch of national Sustainable Alternative Towards Affordable Transportation (SATAT) initiative in October 2018 to promote compressed biogas (CBG). Context for the ambition The Government of India launched the SATAT initiative in October 2018 to promote CBG as an

	alternative green transport fuel. The initiative will also help in efficient management of biomass and organic waste such as municipal waste, forest residues, and agri-waste including animal-husbandry and marine waste. CBG will replace a proportion of fossil based natural gas in transport sector. Reduced dependence on fossil based natural gas will lead to reduced imports, increased energy security, greater utilisation of organic wastes, and lower emissions.

Target 7.2.5: Achieve 20% ethanol blending in petrol by Ethanol Supply Year (ESY) 2025-26.

Time frame: By ESY2025-26

(ROSHANEE), released in 2019, includes all current and potential areas of energy efficiency in each sector.

The Bureau of Energy Efficiency (BEE) of the Ministry of Power is the implementing agency for ROSHANEE. Enhanced energy efficiency will lead to lower energy consumption across agriculture, buildings, industries and transportation and concomitant mitigation of GHG emissions.

Under the unique Perform, Achieve and Trade (PAT) scheme, energy efficiency targets are set for industry. If they achieve higher efficiencies than their targets, they get Energy Savings Certificates (ESCerts) equivalent to the extra efficiencies generated. The ESCerts are purchased by industries falling short of their Energy Efficiency target in a particular year. These ESCerts are tradable on the Power exchange. The PAT scheme has resulted in energy savings of 23 Million Tonne of Oil Equivalent (MTOE) and accounted for emission reduction of 102

Description of action (please specify for which ambition from Section 1) **Target 7.2.5: Achieve 20% ethanol blending in petrol by Ethanol Supply Year (ESY) 2025-26.** Action: Bioethanol feedstock has been expanded to include damaged food grains in addition to sugar-based sources. The Government of India is encouraging sugar mills and distilleries to enhance distillation capacities by facilitating loans from banks with interest subvention up to 6%. This Ethanol is procured by public sector Oil Marketing Companies.	*Start and end date* Ethanol Supply Year (ESY) 2014-15 to 2025-26
Description of action (please specify for which ambition from Section 1) **Target 7.3.1: Enhance energy efficiency in agriculture, buildings, industries and transportation sectors while also promoting energy efficient appliances/equipment** Action: Extend PAT to more sectors, S&L to more appliances; 100% LED street lighting; Ensuring compliance with ECBC; enable data, technologies, finance for demand side management; promote energy efficient technologies across sectors; create standardised sectoral Monitoring, Reporting and Verification (MRV) protocols; create knowledge sharing platforms; capacity building and awareness creation.	*Start and end date* 2015 2030

SECTION 3: OUTCOMES

3.1. Please add at least one measurable and time-based outcome for **each** of the actions from section 2. *[Please add rows as needed]*.

Outcome Target 7.1 **Ensure sustained universal energy access** Outcome: Achieve universal access to LPG in India as a clean cooking fuel; reduction in ambient air pollution and corresponding reduction in exposure to indoor air pollution of women and families Impact Jobs: Greater participation of women in formal economic activities; additional jobs in the Oil Marketing Companies and their channel partners Impact Growth: Improved workforce productivity due to lower exposure to air pollution and associated co-morbidities Impact Health: Reduction in premature deaths and morbidity due to indoor air pollution Impact Sustainability: Reduction in forest degradation and emissions intensity due to lower dependence on firewood Impact Other Countries: Reduction in transboundary air pollution associated with the use of firewood and biomass Impact SDGs: SDG 3: Good health and well-being | SDG 5: Gender equality | SDG 7: Affordable and clean energy | SDG 8: Decent work and economic growth | SDG 11: Sustainable cities and communities | SDG 13: Climate action	*Date* 2022
Outcome	*Date*

Target 7.2.1 **Increase the renewable energy installed capacity to 450 GW by 2030** Outcome: Increase in the share of renewables in grid-interactive installed capacity and resultant decarbonisation of the grid leading to reduced emissions; increase in domestic manufacturing capacity, etc. Impact Jobs: Estimated ~7,00,000 new jobs to be created - time skilled and unskilled workers as of 2019-20). Impact Sustainability: Decarbonisation of electricity generation, which contributes 40% of India's GHG emissions. Impact Other Countries: Reduction in transboundary air-pollution; experience, technology and services sharing with ISA Member Countries. Impact SDGs: SDG 3: Good health and well-being | SDG 7: Affordable and clean energy | SDG 8: Decent work and economic growth | SDG 9: Industry, innovation and infrastructure | SDG 11: Sustainable cities and communities | SDG 13: Climate action	2030

Outcome

Target 7.2.2: Develop and implement a National Hydrogen Energy Mission to scale up green hydrogen production and utilization across multiple sectors, with a target of ~1 million tonnes annual green hydrogen production by 2030.

Outcome:

Impact Growth: The PLI scheme will incentivise domestic and global players to build large scale capacity in India. Expected outcomes include an additional 10,000 MW of integrated solar PV manufacturing capacity; direct investment of about INR 17,200 crore (USD 2.36 billion) in projects and in materials such as solar glass, back-sheets, and junction boxes. Impact SDGs: SDG 7: Affordable and clean energy | SDG 8: Decent work and economic growth | SDG 9: Industry, innovation and infrastructure	
Outcome **Target 7.2.4: Create production capacity for 15 million metric tonnes (MMT) of compressed biogas (CBG) by 2024.** Outcome: Will reduce dependence on fossil natural gas, leading to increased energy security, greater utilisation of organic wastes, and lower emissions. Impact Jobs: 75,000 direct job opportunities and hundreds of thousands of indirect jobs; additional local jobs in biomass supply chains - collection, storage, processing and transportation. Impact Growth: Circular economy benefits in developing productive uses of organic waste streams; enhanced energy security through reduced import of natural gas and crude oil and consequent buffer against crude oil/gas price fluctuations; increasing farmer incomes. Impact Sustainability: Avoided use of fossil natural gas in various demand centres; can sustainably utilise and treat organic fractions of municipal solid waste, animal waste, organic industrial waste, and other organic waste streams. Impact SDGs: SDG 6: Clean water and sanitation | SDG 7: Affordable and clean energy | SDG 8: Decent work and economic growth | SDG 9: Industry, innovation and infrastructure | SDG 11: Sustainable cities and communities	*Date* 2024
Outcome **Target 7.2.5:**	

15 MMT of CBG production capacity by 2024.
Description of action (please specify for which ambition from Section 1) **Target 7.2.5: Achieve 20% ethanol blending in petrol by Ethanol Supply Year (ESY) 2025-26.** **Finance/investments**: The Government of India expects INR 41,000 crore (USD 5.6 billion) investment in capacity addition and new distilleries to meet the target.
Description of action (please specify for which ambition from Section 1) **Target 7.3.1: Enhance energy efficiency in agriculture, buildings, industries and transportation sectors while also promoting energy efficient appliances/equipment** **Finance/investments**: Expenditure of ~INR 4202.71 crore (USD 0.60 billion) from 2021-22 to 2025-26 for agriculture, buildings, industries and transportation sectors; Around Rs 8,000 crores till 2024 for LED Street lighting; public/private partnerships, incubators and accelerators; ICT tools for energy efficiency; financial products to mobilise private investment in energy efficiency; capacity building among utilities, professionals and financial institutions on energy efficiency (1 INR = 0.013 USD). Promote low-cost finance, instalment schemes, etc. to enable adoption of energy-efficient products by all socioeconomic segments.

4.2. [For countries only] In case support is required for the actions in section 2, please select from below and describe the required support and specify for which action.

SECTION 5: IMPACT

5.1.

SECTION 6: MONITORING AND REPORTING

6.1. Please describe how you intend to track the progress of the proposed outcomes in section 3. Please also describe if you intend to use other existing reporting frameworks to track progress on the proposed outcomes.

All Energy Compact targets will be measured, regulated and reported through designated Government of India sources.

Outcome

Target 7.1 **Ensure sustained universal energy access**

Reporting methodology:

SECTION 7: GUIDING PRINCIPLES CHECK LIST

Please use the checklist below to validate that the proposed Energy Compact is aligned with the guiding principles.

I. Stepping up ambition and accelerating action - Increase contribution of and accelerate the implementation of the SDG7 targets in support of the 2030 Agenda for Sustainable Development for Paris Agreement

I. 1. Does the Energy Compact strengthen and/or add a target, commitment, policy, action related to SDG7 and its linkages to the other SDGs that results in a higher cumulative impact compared to existing frameworks?

☒Yes ☐No

I.2. Does the Energy Compact increase the geographical and/or sectoral coverage of SDG7 related efforts? ☒Yes ☐No

I.3. Does the Energy Compact consider inclusion of key priority issues towards achieving SDG7 by 2030 and the net-zero emission goal of the Paris Agreement by 2050 - as defied by latest global analysis and data including the outcome of the Technical Working Groups? ☒ Yes ☐No

II. Alignment with the 2030 agenda on Sustainable Development Goals Ensure coherence and alignment with SDG implementation plans and strategies by 2030 as well as national development plans and priorities.

II.1. Has the Energy Compact considered enabling actions of SDG7 to reach the other sustainable development goals by 2030? ☒Yes ☐ No

II.2. Does the Energy Compact align with national, sectoral, and/or sub-national sustainable development strategies/plans, including SDG implementation plans/roadmaps? ☒Yes ☐No

III.3. Has the Energy Compact considered alignment with reaching the net-zero emissions goal set by many countries by 2050? ☐Yes ☐No
N/A India does not have a net-zero target.

IV. Leaving no one behind, strengthening inclusion, interlinkages, and synergies - Enabling the achievement of SDGs and just transition by reflecting interlinkages with other SDGs.

IV.1. Does the Energy Compact include socio-economic impacts of measures being considered? ☒Yes ☐No

IV.2. Does the Energy Compact identify steps towards an inclusive, just energy transition? ☒Yes ☐No

IV.3. Does the Energy Compact consider measures that address the needs of the most vulnerable groups (e.g. those impacted the most by energy transitions, lack of energy access)? ☒Yes ☐No

V. Feasibility and Robustness - Commitments and measures are technically sound, feasible, and verifiable based a set of objectives with specific performance indicators, baselines, targets and data sources as needed.

V.1. Is the information included in the Energy Compact based on updated quality data and sectoral assessments, with clear and transparent methodologies related to the proposed measures? ☒Yes ☐No

V.2. Has the Energy Compact considered inclusion of a set of SMART (specific, measurable, achievable, resource-based and time based) objectives? ☒Yes ☐No

V.3. Has the Energy Compact considered issues related to means of implementation to ensure feasibility of measures proposed (e.g. cost and financing strategy, technical assistant needs and partnerships, policy and regulatory gaps, data and technology)? ☒Yes ☐No

SECTION 8: ENERGY COMPACT GENERAL INFORMATION

8.1. Title/name of the Energy Compact

Energy Compact of the Government of India

8.2. Lead entity name (for joint Energy Compacts please list all parties and include, in parenthesis, its entity type, using entity type from below)

Ministry of New and Renewable Energy, Government of India

8.3. Lead entity type

☒ Government
☐ Local/Regional Government
☐
☐ Non-Governmental Organization (NGO)
☐ Civil Society organization/Youth
☐ Philanthropic Organization
☐ Private Sector

SECTION 9: ADDITIONAL INFORMATION (IF REQUIRED)

Please provide additional website link(s) on your Energy Compact, which may contain relevant key documents, photos, short video clips etc.

Ministry of New and Renewable Energy: mnre.gov.in
Ministry of Petroleum and Natural Gas: petroleum.nic.in
Ministry of Power: powermin.gov.in
PM Ujjwala Yojana: pmuy.gov.in
Bureau of Energy Efficiency: beeindia.gov.in
Energy Efficiency Services Limited: https://eeslindia.org/
energytransition.in
-book on *Citizen-Centric Energy Transition: The India Story*