Version 3 Aug

SDG7 Energy Compact of New Town, Kolkata, West Bengal, 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(s):** Continued100% electric power provision to all inhabitants **Time frame**: Continuous with base year in 2008 **Context for the ambition(s):** • New Town is a planned city • All households and institutions are connected to grid based stable electric power supply. • As a principle plots of land are handed over only after ensuring power connection from grid. • This has started from the inception of the city • The city is still under growth phase with a design population of 1 million residents and half a million floating population

☐ **7.2.** By 2030, increase substantially the share of renewable energy in the global energy mix.	**Target:** 2% of total electrical energy consumption from renewable sources from plants installed in New Town over and above renewable energy supplied in the grid by West Bengal State Electricity Distribution Corporation Limited for the city.
	
	Time frame: Target year 2030 with base line 2014-15
	
	Context for the ambition:
	• New Town is a growing planned city where people are migrating in and new habitations are being built
	• Energy demand is increasing with increasing population
	• New Town is a solar city under solar city mission of Government of India.
	• Installed capacity of 1252 KWp solar power plants under the Urban Local Body.
	• Another 500 KWp is under installation.
	• 600KWh power is being generated from one biomass convertor unit making use of segregated wet waste of 5 TPD
	• Further 6600 KWH power generation through biomass convertor is possible with 55 TPD more available segregated wet waste
	• Building rules have been amended to encourage use of solar energy in private buildings for power generation and water heating.
	  ○ All existing and new buildings exceeding 15.5 meter in height to have provision of solar heater and/or solar photo voltaic cells
	  ○ All commercial and business establishments with contract demand more than 1.5 MW required to install rooftop systems to meet at least 2% of electrical load
	  ○ All academic institutions, hospitals large housing societies and government establishments with more than 500 KW power demand, required to install solar rooftop systems to meet at least 1.5% Of total electrical load.
	• From non-government buildings with 14,23,752 Square meter of rooftop open space with potential of solar power installation
	• 21,29, 650 square meter water body surface is available for floating solar power plants
	• 19,97,650 square meter open ground space available for ground mounted solar power plants

	Target: Technology exploration and demonstration of hydrogen fueled heavy vehicles **Time frame**: By 2030 with base year 2020-21 **Context for the ambition(s**): • New Town is an ambitious green smart city trying and installing many innovative solutions • West Bengal state Electric Vehicle Policy has identified New Town as the pilot city for demonstration of innovative solutions • Installation and operation of Hydrogen fuel plant is one major target in the West Bengal Electric Vehicle Policy • Hence, introduction of hydrogen fueled heavy vehicle in New Town has a bright prospect
	Target: Exploration of Geothermal Energy prospects in New Town **Time frame**: 2030 **Context for the ambition(s**): • New Town is a futuristic city which has already installed Solar Power generation units and Biomass Convertor based power plant • Solar benches, solar trees have been installed in the city • Solar pavements are coming up in the town • Renewable energy and energy efficient constructions are encouraged with incentives like higher Floor Area Ratio and reduction in property tax • New Town intends to have hydrogen fueled vehicles • Matching this overall orientation towards a green renewable energy driven town is the active implementation of Non Motorized Transport facilities and greening of the town through adaptation of green zones by different institutions • In keeping with this New Town intends to explore Geothermal Energy to ensure appropriate mix of different sources in the power supply for the city

☐ **7.3.** By 2030, double the global rate of improvement in energy efficiency.	**Target(s):** Energy efficiency enhancement by 5%. **Time frame**: 2030 with base line 2015-16 **Context for the ambition(s):** • New Town is a solar city under the Solar City Mission of Government of India with a targeted energy efficiency gain of 5% • New Town is proactively taking implementation and policy support initiatives for enhancement of energy efficiency • Conversion of 4389 conventional streetlights to energy efficient street lights is being implemented which will lead to efficiency gain of 40% in the street lighting sector only without compromising on illumination. • Being a new planned city, most of the fittings are modern and energy efficient • New Town is an Indian Green Building Council(IGBC) certified platinum rated green city. • Higher Floor Area Ratio is allowed to pre certified green buildings in the city at the building plan sanction stage
☐ **7.a.** By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.	**Target(s)**: Not Applicable **Time frame**: **Context for the ambition(s):**
☐ **7.b.** By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programs of support.	Target(s): Not Applicable Time frame: Context for the ambition(s):

1.2. Other ambitions in support of SDG7 by 2030 and net-zero emissions by 2050. ***[Please describe below e.g., coal phase out or reforming fossil fuel subsidies etc.]***

Target(s): 50% non-motorized transport in intra city travel
Time frame: 2030
Context for the ambition(s):

- New Town is situated on a major thoroughfare connecting the kolkata city with the airport and Northern Suburbs
- The major transport activities are to and from the town and are outside the scope of city administration
- Hence in transport sector the city intends to target intra city transport
- New Town is one of the top cycling cities of India as recognized by Ministry of Housing and Urban Affairs through the Cycle for Change Challenge
- App based public bicycle sharing system with 100 bicycles and 400 electric bicycles in place with more than 9000 membership
- 16 electric vehicle charging stations are already installed and 25 more are coming up.
- 36 Km of cycling lanes in 30 square Km city
- Electric buses run by city authorities for intra city transport

SECTION 2: ACTIONS TO ACHIEVE THE AMBITION

2.1. Please add at least one key action for each of the elaborated ambition(s) from section 1. *[Please add rows as needed].*

2% of power consumption from renewable sources: *Action plan:* • Close target-oriented monitoring of compliance with amended provisions of building rules for solar energy use in non-government buildings • Convert available canal top spaces and shadow free ground spaces suitably to generate solar power • Laying of solar pavements at different locations • Ensure complete segregation of waste at source to increase availability of biomass and utilization in biomass converter-based power generation units	*2022-23 to 2029-30*
Energy efficiency enhancement by 5%. Action Plan • Check appliances and pumps for scope of enhancing energy efficiency • Introduction of more solar pumps wherever possible • Appliances to be replaced/retrofitted for efficiency enhancement • Pumps to be retrofitted or replaced for gaining energy efficiency	*2030*
50% non-motorized transport in intra city travel Action Plan: • IEC activities to popularize non-motorized travel • Organize informal sector non-motorized vehicle operators to provide improved service availability	2030
Liquid hydrogen fueled heavy vehicles. Action Plan: • Capacity Building of engineers for selection of appropriate technology • Evaluation and selection of appropriate technology • Exploration of financing options	2030

Version 3 Aug

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	*Date*
Additional renewable generation capacity installed in KW	2030
Energy efficiency increase measured through power saved with same level of output/performance	2030
Fleet size increase in number	2030
Liquid Hydrogen generated	2030

SECTION 4: REQUIRED RESOURCES AND SUPPORT

4.1. Please specify required finance and investments for **each** of the actions in section 2.

INR 1 billion (USD 13.70 million) for renewable energy
(Exchange rate taken at INR 73 per USD)

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.
[Examples of support for Member States could include: Access to low-cost affordable debt through strategic de-risking instruments, capacity building in data collection; development of integrated energy plans and energy transition pathways; technical assistance, etc.]

☒Financing	Financing required for fresh renewable energy interventions in the form of PPP participation for public projects and affordable debt instruments for private solar power plants.
☐ In-Kind contribution	*Description*
☒ Technical Support	Technical support in (i) Handholding, (ii)capacity building and (iii) technology transfer for hydrogen fueled heavy vehicles and Geothermal Energy.
☒ Other/Please specify	Wireless charging of Electric Buses

SECTION 5: IMPACT

5.1. Countries planned for implementation including number of people potentially impacted.

At present 63,000 people will be impacted in the city

5.2. Alignment with the 2030 Agenda for Sustainable Development – Please describe how **each** of the actions from section 2 impact advancing the SDGs by 2030.
[up to 500 words, please upload supporting strategy documents as needed]

1. Increased proportion of renewable energy in the city will advance the SDG goal of clean energy composition will impact SDG 7.2, (increase substantially the share of renewable energy in the global energy mix)
   The higher level of use of renewable energy will further the goal of increased share of renewable energy as a direct impact in energy mix in the city.
2. Higher efficiency in energy use will impact advancing the SDG 7.3 (By 2030, double the global rate of improvement in energy efficiency)
   Higher efficiency gain will substantially impact the improvement in energy efficiency. The gain in energy efficiency will be two pronged. While replacement of conventional streetlights will increase the energy efficiency in municipal service sector, IEC activities and enforcement of green building norms will increase the energy efficiency gain in the household sector.
3. Increased non-motorized transport will impact advancement of net zero emissions by reducing considerably the emissions from transport activities. Intra city transport is one of the major sources of emission in a small (30 square Km) city. Increasing non-motorized transport to 50% will ensure emission reduction considerably.

5.3. Alignment with Paris Agreement and net-zero by 2050 - Please describe how **each** of the actions from section 2 align with the Paris Agreement and national NDCs (if applicable) and support the net-zero emissions by 2050.

[up to 500 words, please upload supporting strategy documents as needed]

1. The major source of power in the city is from grid power which is predominantly from fossil fuel-based power plants. Increase of proportion of renewable energy in the overall power mix in the town will reduce dependence on grid power sourced from fossil fuel-based power plants. This will in turn reduce emission from the power plants and hence align with the net zero target of Paris agreement of keeping the global warming under control within the limits of preindustrial level.
2. Increased use of non-motorized transport for intra city travel to an extent of 50% will reduce emissions from transport sector. This will reduce the local temperature rise, contributing to limiting the global warming within targeted level. Also, the target of net zero emissions by 2050 will be strengthened.
3. Use of hydrogen generated through using renewable energy will reduce green house gas emissions in both ways. Hydrogen being a green fuel, its use will reduce the emission of green house gases and lead to keeping temperature levels within control. Use of renewable energy for generation of liquid hydrogen will further improve the emission level as the entire cycle will be carbon neutral.

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.

1. Additional renewable energy use will be monitored through tracking the installation level power output monitoring through net metering devices and periodic updates in the reporting system.
2. Efficiency gain in the municipal sector (streetlights) will be monitored through monthly power consumption data for same output of illumination.
3. The use of nonmotorized transport will be tracked through periodic survey of vehicles operating and end user response on usage survey.

Version 3 Aug

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

II.3. Has the Energy Compact considered a timeframe in line with the Decade of Action? ☒Yes ☐No

III. Alignment with Paris Agreement and net-zero by 2050 - Ensure coherence and alignment with the Nationally Determined Contributions, long term net zero emission strategies.

III.1. Has the Energy Compact considered a timeframe in line with the net-zero goal of the Paris Agreement by 2050? ☒Yes ☐No

III.2. Has the Energy Compact considered energy-related targets and information in the updated/enhanced NDCs? ☒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

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

Version 3 Aug

SECTION 8: ENERGY COMPACT GENERAL INFORMATION

8.1. Title/name of the Energy Compact

Energy Compact for New Town Kolkata, West Bengal, 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)

New Town Kolkata Green Smart City Corporation Limited

8.3. Lead entity type

☐ Government ☒ Local/Regional Government ☐ Multilateral body /Intergovernmental Organization

☐ Non-Governmental Organization (NGO) ☐ Civil Society organization/Youth ☐ Academic Institution /Scientific Community

☐ Private Sector ☐ Philanthropic Organization ☐ Other relevant actor

8.4. Contact Information

ceonkgsccl@gmail.com

8.5. Please select the geographical coverage of the Energy Compact
☐Africa ☒Asia and Pacific ☐Europe ☐Latin America and Caribbean ☐North America ☐West Asia ☐Global

8.6. Please select the Energy Compact thematic focus area(s)

☐ Energy Access ☒ Energy Transition ☐ Enabling SDGs through inclusive just Energy Transitions ☐ Innovation, Technology and Data ☒ Finance and Investment.

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.
https://www.newtowngreencity.in