

## **SCF – SREP (Scaling Up Renewable Energy Program)**

**PROJECT TITLE:** SOUTH ASIA SUBREGIONAL ECONOMIC COOPERATION  
ELECTRICITY TRANSMISSION AND DISTRIBUTION STRENGTHENING PROJECT  
**COUNTRY:** NEPAL **MDB:** ASIAN DEVELOPMENT BANK

Cover Page for Project/Program Approval Request <sup>[a]</sup> Scaling Up Renewable Energy Program in Low Income Countries			
Country/Region	Nepal/South Asia	CIF Project ID#	Auto Generated by CCH
Type of CIF Investment:	<input checked="" type="checkbox"/> Public <input type="checkbox"/> Private		
Project/Program Title (same as in CCH)	South Asia Subregional Economic Cooperation Electricity Transmission and Distribution Strengthening Project		
Sector/Pillar (Please select all that apply)	<input checked="" type="checkbox"/> Renewable Energy <input type="checkbox"/> Agriculture and Landscape Management <input type="checkbox"/> Climate Information Systems and Disaster Risk Management <input type="checkbox"/> Coastal Zone Management <input type="checkbox"/> Enabling Environment <input type="checkbox"/> Infrastructure <input type="checkbox"/> Urban Development <input type="checkbox"/> Water Resources Management <input type="checkbox"/> Agriculture and Food Security <input type="checkbox"/> Agroforestry <input type="checkbox"/> Capacity Building / Institutional Strengthening and Governance Reform <input type="checkbox"/> Forest Monitoring / MRV <input type="checkbox"/> Indigenous Peoples / Local Communities <input type="checkbox"/> Landscape Approaches <input type="checkbox"/> Sustainable Forest Management <input checked="" type="checkbox"/> Other (transmission and distribution system improvement)		
Technology/Area (Please select all that apply)	<input type="checkbox"/> Bioenergy <input type="checkbox"/> Capacity Building <input type="checkbox"/> Cookstoves <input type="checkbox"/> Geothermal <input type="checkbox"/> Hydropower <input type="checkbox"/> Mixed RE <input type="checkbox"/> Multiple <input checked="" type="checkbox"/> Solar <input type="checkbox"/> Waste to Energy <input type="checkbox"/> Wind <input checked="" type="checkbox"/> Other (transmission and distribution system)		
Project Lifetime (MDB Board/Management approval to project closure)	20 years (minimum)		
Is this a private sector program composed of sub-projects?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Financial Products, Terms and Amounts (same as CCH)			
	USD (million)	EUR (million) <sup>[b]</sup>	
PPG (Project Preparation Grant)			

[a] This cover page is to be completed and submitted together with the MDB project/program proposal when requesting funding approval by Committee.

[b] For products denominated in EUR, please also provide USD equivalent in the column to the left.

[c] Please provide high-level information/appropriate links to relevant project documents and/or annexes as applicable.

[d] Insert (n/a) if not applicable to the project/program or cannot be determined at the time of submission.

[e] Per MDBs' own Paris alignment climate finance tracking methodologies.

Grant (technical assistance)	1.00	
MDB Project Implementation and Supervision Services (MPIS) <sup>1</sup>		
Public sector loan	10.00	
First loss guarantee		
Second loss guarantee		
Equity		
Senior loan		
Senior loan in local currency hedged		
Senior loan in local currency unhedged ( <b>EXCEPTIONAL REQUEST</b> )		
Subordinated debt/loan/ mezzanine instrument with income participation		
Subordinated debt/loan / mezzanine instrument with income participation local currency unhedged ( <b>EXCEPTIONAL REQUEST</b> )		
Subordinated debt/loan /mezzanine instrument with convertible features		
'Convertible/contingent recovery' grant/loan/guarantee (loans convertible to grants or vice versa)		
Convertible Loans (convertible to equity only)		
For loans and guarantees – is this a revolving structure? <sup>[2]</sup> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>Specify local currency type here</b>		
Other (please specify)		
<b>Total</b>		
<b>Co-financing</b>		
	<b>Please specify as appropriate</b>	<b>Amount (in million USD)</b>
MDB 1	Asian Development Bank	270.00
MDB 2 (if any)	OPEC Fund for International Development loan SAARC Development Fund loan	100.00 25.0
Government		177.40
Private Sector		
Bilateral	Norwegian government grant European Union Grant	31.00 22.60

<sup>1</sup> MPIS - CIF Operational Modalities For New Strategic Programs [here](#)

<sup>2</sup> With a revolving structure, after the loan or guarantee matures, instead of returning the funds to the Trustee, the funds are redeployed as a new loan or guarantee.

[a] This cover page is to be completed and submitted together with the MDB project/program proposal when requesting funding approval by Committee.

[b] For products denominated in EUR, please also provide USD equivalent in the column to the left.

[c] Please provide high-level information/appropriate links to relevant project documents and/or annexes as applicable.

[d] Insert (n/a) if not applicable to the project/program or cannot be determined at the time of submission.

[e] Per MDBs' own Paris alignment climate finance tracking methodologies.

Others (please specify)		
<b>Total Co-financing</b>		<b>626.00</b>
<b>CIF Funding</b>	<b>SREP loan (\$10m) and TA grant (\$1m)</b>	<b>11.00</b>
<b>Total Financing (Co-financing + CIF Funding)</b>		<b>637.00</b>
<b>Proportion of Total Financing for Adaptation</b>		<b>40.00</b>
<b>Proportion of Total Financing for Mitigation<sup>[e]</sup></b>		<b>160.00</b>
<b>CIF Financial Terms and Conditions Policy</b>	<a href="#">Link</a> Is this request in accordance with the CIF Financial Terms and Conditions Policy? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (if no, please specify detailed information under the justification section)	
<b>Justification (exceptional request) <sup>[c][d]</sup></b>		
n/a		
<b>Implementing MDB(s) (please enter full name, job title and email address)</b>		
MDB Headquarters-Focal Point:	Christian Ellermann, CIF Focal Point <a href="mailto:cellermann@adb.org">cellermann@adb.org</a>	
MDB Task Team Leader (TTL)	Jiwan Acharya, Principal Energy Specialist <a href="mailto:jacharya@adb.org">jacharya@adb.org</a>	
<b>National Implementing Agency (please enter full name, job title and email address)</b>		
Country Focal Point/s	Tara Pradhan, Deputy Managing Director, Nepal Electricity Authority <a href="mailto:tppradhan.nea@gmail.com">tppradhan.nea@gmail.com</a>	
<b>Brief Description of Project/Program (including objectives and expected outcomes) <sup>[c][d]</sup></b>		

[a] This cover page is to be completed and submitted together with the MDB project/program proposal when requesting funding approval by Committee.

[b] For products denominated in EUR, please also provide USD equivalent in the column to the left.

[c] Please provide high-level information/appropriate links to relevant project documents and/or annexes as applicable.

[d] Insert (n/a) if not applicable to the project/program or cannot be determined at the time of submission.

[e] Per MDBs' own Paris alignment climate finance tracking methodologies.

**Project objective:** The main objective of the proposed project is to support the installation of distributed solar PV generation facilities to supply electricity to government agencies / municipalities on a net metering basis.

The Government of Nepal, with assistance from the ADB is working towards expanding and modernizing electricity transmission and distribution systems to stimulate new electricity demand and help in decarbonizing the sector; and promote regional power trade. Decarbonization requires additional renewable energy development to displace electricity imports from India. The most readily available renewable resource is solar energy, which can be harnessed for productive end-uses using solar photovoltaic (PV) systems as well as solar thermal technologies. As of now, solar energy remains underdeveloped in Nepal compared to hydropower and wind power.

The Government of Nepal has requested technical assistance (TA) from the Government of Norway and the Climate Investment Fund (CIF) for an amount of \$6 million and \$1 million respectively. The TA from the Government of Norway is expected to assist in the following areas: (a) productive uses of electricity; (b) commercial and technical support for connection of mini- and micro-hydros to the grid; (c) last-mile connectivity; d) GESI support to regional offices; (e) build-for-skill program support; and (f) environmental and social safeguards capacity building. The TA from CIF will support development and monitoring of grid connected distributed solar in Karnali Province and other places and support scaling up such initiatives, especially through net metering.

To elaborate, the SREP cofinancing will be used for technical assistance and innovative approaches for (a) deployment of solar street lighting, (b) distributed solar on public lands and buildings (e.g., schools/colleges/offices properties with vacant land, government buildings with available rooftops), and (c) reinvention of the net metering program. This will include design and implementation of new integrated business models, procedures and governance arrangements that create win-win proposition for both the utility and public agencies / government departments.

***The project will be first-of-its-kind in Nepal and has potential for setting a trend and replication across South Asia***

- (a) Development of solar power can play an important role in realizing some of the long-term goals of Nepal such as decarbonization, clean environment and overall geopolitical stability through reduced electricity imports.
- (b) Decentralized solar power delivered through innovative business models can result in improved financial situation of Nepal Electricity Authority (NEA) by improving recoverability from specific consumer segments, particularly government agencies and municipal departments.
- (c) At present, servicing the government agencies and municipal departments is unremunerative for NEA, as these segments are prone to significant delays and non-payment issues. Therefore, following initiatives are suggested:
  - i. Solar leasing model for public lands and buildings: Under the proposed project, NEA will lease space on public lands and buildings (provided by government agencies and municipal

[a] This cover page is to be completed and submitted together with the MDB project/program proposal when requesting funding approval by Committee.

[b] For products denominated in EUR, please also provide USD equivalent in the column to the left.

[c] Please provide high-level information/appropriate links to relevant project documents and/or annexes as applicable.

[d] Insert (n/a) if not applicable to the project/program or cannot be determined at the time of submission.

[e] Per MDBs' own Paris alignment climate finance tracking methodologies.

departments) to host solar energy systems. The typical installation is expected to be 0.5 – 1.0 MWp of solar PV per site. A cost-sharing program will be developed wherein lease payments and solar offtake payments achieve a mutually beneficial outcome for all parties. This will require developing a business model based on cost sharing arrangements agreed among the project proponents, including cost of solar generation, NEA's average cost of supply, and government agency arrears. A win-win model developed through SREP support can create a strong foundation for country wide scale-up.

i. **Solar for street lighting program:** Under the proposed project, various approaches are being considered to promote the deployment of solar energy to meet the electricity demand of street lighting in municipalities. One approach involves municipalities leasing out their unused land to NEA for the installation of solar panels dedicated to street lighting (either virtually co-located or pole-mounted). Alternatively, NEA could construct solar plants on municipality-owned unused land and then transfer ownership of the system to the municipality, recovering the actual costs incurred during construction. The primary objective of this model is to enable municipalities to offset their street lighting electricity expenses through solar power generation, alleviating the persistent challenge of monthly electricity bill payments to NEA. To facilitate this initiative, a mutually agreeable cost-sharing program will be developed, that will foster a partnership between NEA and municipalities. This model aims to serve as a replicable and scalable intervention, encouraging similar collaborations between NEA and municipalities across the country.

ii. **Net metering<sup>3</sup>:** The above programs (solar leasing for public lands and buildings program, and solar street lighting program) will be supplemented with net metering solutions. Net metering in Nepal was introduced in 2018 but is yet to be fully implemented. The proposed design will eliminate the need for subsidies and crowd in private sector participation towards unlocking similar projects across private housing, private buildings, etc.

These initiatives will create new market avenues and validate new business models which are first of its kind. Several regimes in the South Asian region have shared challenges and aspirations in the field of power distribution, where utilities are dealing with delayed payments and recovery issues. Therefore, these models can be trend setters towards scaling up distributed solar PV and net metering initiatives not only in Nepal but in South Asia overall.

**Consistency with investment criteria (please refer to design document)<sup>4</sup>[c][d]**

---

<sup>3</sup> Under net metering, excess generation from the site is fed into the grid and the owner of the site is compensated.

<sup>4</sup> Link to SREP Design Document [here](#)

[a] This cover page is to be completed and submitted together with the MDB project/program proposal when requesting funding approval by Committee.

[b] For products denominated in EUR, please also provide USD equivalent in the column to the left.

[c] Please provide high-level information/appropriate links to relevant project documents and/or annexes as applicable.

[d] Insert (n/a) if not applicable to the project/program or cannot be determined at the time of submission.

[e] Per MDBs' own Paris alignment climate finance tracking methodologies.

**Increased installed capacity from renewable energy sources:**

The \$10 million loan from SREP will support demonstration of the project concept with at least 8 MW<sub>p</sub> of solar PV capacity.

**Increased access to energy through renewable energy sources:**

Solar deployment will be on-grid, focusing on improving electric power quality and reliability, and reducing losses in the “last mile” of distribution systems.

**Low Emission Development:**

Solar capacity expansion complements hydropower development through diversification and will help create a virtuous cycle of renewable energy deployment.

**Affordability and competitiveness of renewable sources:**

Solar PV systems are inherently modular and exhibit continued cost declines; in effect, as more solar is deployed, the cost declines, creating a virtuous cycle of renewable energy development. Nepal has no indigenous fossil fuel resources and has relied primarily on hydropower for electricity supply. The proposed solar deployment activities will contribute to energy security through supply diversification.

**Productive use of energy:**

The street lighting activity will directly use solar energy to improve public safety and security.

**Economic, social and environmental development impact:**

The envisioned solar energy deployment will support inclusive development by prioritizing underserved areas which might otherwise rely on diesel generation for electricity. It will also improve personal safety and security, particularly for women, and will improve amenities for all.

**Economic and financial viability:**

Distributed solar power is financially and economically viable when competing against diesel generation but may not be financially viable when compared to electricity imported from India. Therefore, concessional finance is warranted so that economic benefits can be realized.

**Leveraging of additional resources:**

The solar deployment activities will complement the grid expansion and upgrade components and are expected to lead to additional private financing of solar energy systems in the foreseeable future.

**Gender:**

A gender equality and social inclusion (GESI) plan is being developed for the project. This will include provisions for the SREP cofinanced activities to achieve effective gender mainstreaming (EGM) to the extent practical.

**Co-benefits of renewable energy scale-up:**

Expanded solar deployment will help create a virtuous cycle of renewable energy development including other resources such as wind and biomass in addition to Nepal’s hydropower resources.

[a] This cover page is to be completed and submitted together with the MDB project/program proposal when requesting funding approval by Committee.

[b] For products denominated in EUR, please also provide USD equivalent in the column to the left.

[c] Please provide high-level information/appropriate links to relevant project documents and/or annexes as applicable.

[d] Insert (n/a) if not applicable to the project/program or cannot be determined at the time of submission.

[e] Per MDBs’ own Paris alignment climate finance tracking methodologies.

<b>Social Inclusion and Stakeholder Engagement</b> [c][d]
A gender equality and social inclusion (GESI) plan is being developed for the project. This will include provisions for the SREP cofinanced activities to achieve effective gender mainstreaming (EGM) to the extent practical.
<b>Gender Considerations</b> [c][d]

[a] This cover page is to be completed and submitted together with the MDB project/program proposal when requesting funding approval by Committee.

[b] For products denominated in EUR, please also provide USD equivalent in the column to the left.

[c] Please provide high-level information/appropriate links to relevant project documents and/or annexes as applicable.

[d] Insert (n/a) if not applicable to the project/program or cannot be determined at the time of submission.

[e] Per MDBs' own Paris alignment climate finance tracking methodologies.



<p><b>Gender Analysis</b>  (Please insert the text from the project document on the analysis of gaps in access to services, markets, and jobs by women in relation to the project sectors)</p>	<p>In Nepal, participation of women and disadvantaged groups in public sphere is low, including in energy sector, and often they lack awareness on alternative energy sources, and on safe and efficient use of available resources.</p> <p>The absence of modern energy service provision leaves women technologically disadvantaged and are forced to resort to manual and inefficient means. And 82% of the total households in the Karnali province use firewood as the main source of fuel for cooking. During the rapid Gender and Social Inclusion assessment conducted in Karnali province in March 2024, it is confirmed that the households are heavily dependent on fuel wood for cooking (more than 90% households) and Liquefied Petroleum Gas (LPG) penetration is very low and electric cooking is not observed. It also revealed that most of the population (men) go to neighboring countries in search of employment because of lack of employment and livelihood opportunities while women at home are mostly engaged in agriculture and care work. Lack of access to reliable electricity supply is found as a main challenge for the overall productive use of electricity promotion in all the visited areas. Unreliable electricity supply is predominantly substituted by expensive diesel-powered generators and solar panels back up at hospital, school and commercial hotels, with minimal facility provisions. The survey also showed that newly electrified households have limited knowledge on safety and hazards related to electricity. From the experience of other energy projects, it is validated that contractors and laborers have limited understanding on SEAH and its prevention in construction works.</p> <p>The project will explore potential practical gender-specific initiatives, including promulgating livelihood support programs to enhance income of women and disadvantaged groups and reduce poverty.</p>
--	--

[a] This cover page is to be completed and submitted together with the MDB project/program proposal when requesting funding approval by Committee.

[b] For products denominated in EUR, please also provide USD equivalent in the column to the left.

[c] Please provide high-level information/appropriate links to relevant project documents and/or annexes as applicable.

[d] Insert (n/a) if not applicable to the project/program or cannot be determined at the time of submission.

[e] Per MDBs' own Paris alignment climate finance tracking methodologies.

<p><b>Gender Activities</b>  (Please insert the text describing gender-specific activities included in the project)</p>	<p>The project has the potential to contribute to gender equality and women’s empowerment under one (or more) of the five pillars of Strategy 2030’s operational priority 2.</p> <p>The project aims to strengthen the distribution capacity, improve the reliability and quality of electricity, and help reduce technical losses in the project areas. The project will create employment opportunities for skilled and unskilled labor during the construction phase, and in the medium- to long-term by promoting energy-based enterprises in poor communities. Moreover, using cleaner energy will improve urban and rural air quality, people’s health, living conditions, and overall quality of life.</p> <p>The project is categorized effective gender mainstreaming. A GESI action plan has been prepared and focuses on: a) economic empowerment of women and disadvantaged groups by capacity development on livelihoods opportunities and job skill training; b) orientation on Sexual Exploitation, Abuse and Harassment (SEAH) and its prevention to contractors, laborers, consultants and NEA staff; c) capacity building and support to NEA on institutionalization of GESI; d) capacity building of NEA staff on topics like safeguards, project management, financial management, new technologies; and e) last mile electrification and pilot of clean cooking in Karnali Province. The action plan will be implemented by NEA with the resources and technical support of technical assistance.</p> <p>The outreach and awareness campaigns will strengthen energy and financial literacy to ensure disadvantaged groups can benefit from energy conservation and renewable energy sources, including provision of micro loans where applicable. As mentioned, technical training will be provided to prepare them for employment, particularly during the construction phase. The conduct of a needs assessment will also inform</p>
---	--

[a] This cover page is to be completed and submitted together with the MDB project/program proposal when requesting funding approval by Committee.

[b] For products denominated in EUR, please also provide USD equivalent in the column to the left.

[c] Please provide high-level information/appropriate links to relevant project documents and/or annexes as applicable.

[d] Insert (n/a) if not applicable to the project/program or cannot be determined at the time of submission.

[e] Per MDBs’ own Paris alignment climate finance tracking methodologies.

	the awareness raising activities. It will be ensured that the outreach campaigns are accessible to women and disadvantaged groups by employing a participatory approach, collaborating with community leaders, and using inclusive media channels.
<b>Gender Indicators</b> (Please insert the text on selected gender specific indicators, including annual targets. from the Project Log Frame that the project is committing to report on)	<ul style="list-style-type: none"> <li>At least 300 energy-based entrepreneurs (50% women) trained on business and technical skills, and related energy-based enterprises established (2023 baseline: 0)</li> <li>2,000 people (30% women and disadvantaged people) reporting increased knowledge on safe and efficient electricity use (2023 baseline: 0) by 2032 (baseline = 0)</li> <li>At least 25 persons (10% women) of project staff, consultants and contractors oriented on SEAH and its prevention.</li> </ul>
<b>Just Transition</b> <sup>[c][d]</sup>	
<b>Just Transition Analysis</b>	n/a
<b>Just Transition Activities</b>	n/a
<b>Just Transition Indicators</b>	n/a
<b>Expected Results (M&amp;R)</b>	
<b>Project/Program Timeline</b>	
Expected MDB Board Approval date <sup>[d]</sup>	September 2024
Expected project closure date <sup>[d]</sup>	March 2033
Expected lifetime of results in years (including beyond project closure)	20 years (minimum)
<b>SREP Core Indicators</b>	<b>Project-Defined Indicators/Targets</b>
Please identify which of the indicators below are relevant to the project proposal, list the corresponding project-defined indicator(s), and report all targets, including disaggregated targets. (See the <a href="#">SREP Monitoring and Reporting Toolkit</a> for additional guidance.)	

[a] This cover page is to be completed and submitted together with the MDB project/program proposal when requesting funding approval by Committee.

[b] For products denominated in EUR, please also provide USD equivalent in the column to the left.

[c] Please provide high-level information/appropriate links to relevant project documents and/or annexes as applicable.

[d] Insert (n/a) if not applicable to the project/program or cannot be determined at the time of submission.

[e] Per MDBs' own Paris alignment climate finance tracking methodologies.

<b>SREP 1:</b> Annual electricity output from renewable energy, as a result of SREP interventions (MWh)	
<i>Wind</i>	
<i>Solar</i>	13,000 - 14,000 MWh
<i>Hydro</i>	
<i>Geothermal</i>	
<i>Other/Mixed</i>	
<i>TOTAL</i>	
<b>SREP 2:</b> Number of women, men, businesses and community services benefitting from improved access to electricity and/or other modern energy services, as a result of SREP interventions	
<i>Male</i>	
<i>Female</i>	
<i>Businesses</i>	
<i>Women-Owned Businesses (if feasible)</i>	
<i>Community Services</i>	8
<i>TOTAL (i.e., in persons)</i>	8
<b>SREP 3:</b> Increased public and private investments in targeted subsectors, as a result of SREP interventions (\$)	<i>Indicator calculated from the co-financing section below</i>
<b>SREP 4:</b> Installed capacity from renewable energy, as a result of SREP interventions (MWp)	
<i>Direct</i>	8
<i>Indirect</i>	500
<i>TOTAL</i>	508

[a] This cover page is to be completed and submitted together with the MDB project/program proposal when requesting funding approval by Committee.

[b] For products denominated in EUR, please also provide USD equivalent in the column to the left.

[c] Please provide high-level information/appropriate links to relevant project documents and/or annexes as applicable.

[d] Insert (n/a) if not applicable to the project/program or cannot be determined at the time of submission.

[e] Per MDBs' own Paris alignment climate finance tracking methodologies.

SREP Co-Benefit Indicators	Project-Defined Indicators/Targets
<i>Please identify one or more co-benefit indicators that the project will track and report. Add lines as needed.</i>	
<b>SREP Co-Benefit 1:</b> Increased/strengthened regulatory, institutional, and policy frameworks to support the use of renewable energy	
<b>SREP Co-Benefit 2:</b> Gender	
<b>SREP Co-Benefit 3:</b> GHG emissions avoided (mt CO <sub>2</sub> eq)	
<b>Other SREP Co-Benefit:</b> <i>(Please specify)</i>	Annual per capita electricity consumption increased to [750] kWh by 2033 (2022 baseline: [380] kWh)
<b><i>Please also submit the full project results framework to the CIF Secretariat upon MDB Board approval of the project.</i></b>	
<b>Expected Date of MDB Approval</b>	September 2024
<b>Additional Details (to Members)</b>	

**Version: February 2024**

Link to Documents Management – [here](#)

CCH – [here](#)

CIF Website – [here](#)

CIF Pipeline Management and Cancellation Policy - [here](#)

CIF Financial Terms and Conditions Policy updated for FY24 - [here](#)

CIF Operational Modalities For New Strategic Programs - [here](#)

SREP Programming Modalities and Operational Guidelines - [here](#)

[a] This cover page is to be completed and submitted together with the MDB project/program proposal when requesting funding approval by Committee.

[b] For products denominated in EUR, please also provide USD equivalent in the column to the left.

[c] Please provide high-level information/appropriate links to relevant project documents and/or annexes as applicable.

[d] Insert (n/a) if not applicable to the project/program or cannot be determined at the time of submission.

[e] Per MDBs' own Paris alignment climate finance tracking methodologies.