1. Country and Sector Background

Country. Nepal is a land-locked country that is transiting from conflict to peace and facing major development challenges. Nepal attained the first Millennium Development Goal, to halve extreme poverty, ahead of time. In 2011, Nepal ranked 157 in the world in the Human Development Index. With 26.5 million people, Nepal has a per capita income of US$735. Of the population, 24.8 percent live on less than US$1.25 per day, and 82 percent of the population lives in rural areas. Poverty is much more severe in rural areas (27 percent) compared to urban areas (15 percent) and particularly severe in mountainous areas (42 percent) with ethnicity remaining a dominant factor in these differences.

Energy Sector. As per national census published in 2013, about 75 percent of the population in Nepal is estimated to have access to electricity (grid and off-grid), with a significant disparity between access levels in urban Nepal (around 90 percent) and rural Nepal (around 30 percent). Individual consumption remains very low at about 70 kWh per capita, even for urban Nepal, compared to 733 kWh for India and 2,600 kWh for China. Nepal’s grid-connected generation capacity is low. While the country is endowed with huge hydropower potential relative to the size of the population, about 84,000 MW theoretically, the installed hydropower generation capacity is merely 701.9 MW, of which only 660.58 MW is grid-connected. Since most of the hydropower plants are of run-of-river type, the available generating capacity is low in dry seasons when the demand is high. In January 2012, the available capacity was only about 300 MW while the peak demand was 1026 MW. The massive gap between power supply and demand resulted in load shedding of 16-18 hours a day in the grid-covered areas in dry seasons in 2012-2013.

Institutional. The Ministry of Energy (MoE) is in charge of sector policy formulation and regulation as well as overseeing planning, investment, and development of the power sector. The MoE is also responsible for issuing licenses for electricity generation, transmission and distribution and is supported by the Department of Electricity Development (DoED). In addition, the Investment Board was established...
in November 2011 and entrusted with the responsibility of facilitating the development of large infrastructure projects including hydropower projects above 500 MW.

The NEA was formed in August 1985, under the Nepal Electricity Authority Act of 1984 as a vertically-integrated government-owned utility responsible for generation, transmission and distribution of electricity in Nepal. The NEA’s mandate also includes formulating policy recommendations to the Government on power sector development, sector regulation and tariffs. The NEA owns a generation capacity of 531 MW (90 percent hydropower), equivalent to 75 percent of the country’s total installed capacity, and holds 1,087 MW of survey licenses for new hydropower generation. For domestic consumption the NEA serves as single buyer for a large part of the power generated by Independent Power Producers (IPPs). NEA’s financial situation limits its investment capacity in new generation facilities, or distribution and transmission infrastructure. It also undermines the credibility of the national utility as a reliable off-taker for IPPs.

2. Objectives

The project development objectives of the original Nepal-India Electricity Transmission and Trade Project (NIETTP) are to: (a) establish cross-border transmission capacity between India and Nepal of about 1,000 MW to facilitate electricity trade between the two countries; and, (b) increase the supply of electricity in Nepal by the sustainable import of at least 100 MW.

With the proposed Additional Financing, no change in objectives is proposed.

3. Rationale for Bank Involvement

The Addition Financing is proposed for supporting the following new activities
(a) Conductors, dropped from the ongoing Bank-supported Power Development Project (PDP), for the Hetauda-Dhalkebar-Duhabi (H-D-D) line under NIETTP;
(b) Bharatpur-Bardaghat (B-B) and Hetauda-Bharatpur (H-B) 220 kV transmission lines and substations under PDP currently, for continued implementation after PDP closing; and
(c) Integrated Financial management and Information System (IFMIS) dropped from PDP.

The activities for the proposed Additional Financing are in line with the new Country Assistance Strategy under preparation now. These activities will support Pillar I: Increasing Accessibility and Growth of the strategy. The proposed Additional Financing was requested recently by GoN together with the request for PDP restructuring as a packaged solution for both NIETTP and PDP. Anticipating the proposed Additional Financing to NIETTP, the PDP was restructured in December 2012 to: (i) drop the conductor of the H-D-D line under NIETTP; (ii) cancel $42.47 million IDA funds that could not be disbursed by the PDP closing; (iii) extend the closing date by one year to December 31, 2013, to allow time for preparation of this Additional Financing to NIETTP and make resources available for both the supply of conductors and continued construction of the H-B and B-B transmission lines after PDP closing; and (iv) to close the long-lasting PDP by December 2013. The PDP was approved in April 2003, restructured in January 2008 including addition of the H-B line, processed with an additional financing in May 2009 including addition of the B-B line and the conductors for H-D-D, and restructured in December 2012.

Without the proposed Additional Financing, the original Project would have a financing gap of US$ 23 million for the H-D-D 400 kV line conductors, the H-B and B-B lines would only be partially (about 80%) completed, these 400 kV and 220 kV lines would become stranded assets and the development objectives of NIETTP would not be achieved.
4. Description

The original NIETTP includes investments financed by IDA (Components B and C) as well as linked investments not financed by IDA (Component A).

**Part A: Dhalkebar-Muzaffarpur (D-M) Transmission Line**
- Component A1: Muzaffarpur-Sursand 400 kV Transmission Line.
- Component A2: Dhalkebar–Bhitamod 400 kV Transmission Line.

**Part B: Hetauda-Dhalkebar-Duhabi (H-D-D) Transmission Line and Grid Synchronization**

**Part C: Technical Advisory Services**
- Component C1: Owners’ Engineer.
- Component C2: Transmission System Master Plan.
- Component C3: Lenders’ Engineer.
- Component C4: Capacity Development.

The proposed changes with the proposed Additional Financing:

**A) Adding New Activities, for the proposed Additional Financing:**

<table>
<thead>
<tr>
<th>No.</th>
<th>Activities</th>
<th>Cost Estimation ($ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conductors for the H-D-D 400 kV Line</td>
<td>23.00</td>
</tr>
<tr>
<td>2</td>
<td>H-B and B-B 220 kV Lines and Substations</td>
<td>10.47</td>
</tr>
<tr>
<td>3</td>
<td>System Integrator for IFMIS</td>
<td>3.00</td>
</tr>
<tr>
<td>4</td>
<td>Contingency</td>
<td>2.53</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>39.00</strong></td>
</tr>
</tbody>
</table>

Note: all these activities are proposed to be added to the Part B of NIETTP under implementation by NEA.

**B) Drop Component C3: Lenders’ Engineer, from the original Project - NIETTP.**

5. Financing

<table>
<thead>
<tr>
<th>Source:</th>
<th>($million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) BORROWER/RECIPIENT</td>
<td>0</td>
</tr>
<tr>
<td>b) International Development Association (IDA)</td>
<td>39.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>39.00</strong></td>
</tr>
</tbody>
</table>

6. Implementation

All the activities to be funded by the proposed Additional Financing will be implemented by NEA, which is also the Implementing Agency for the Part B and C of the NIETTP. Implementation arrangements for the activities for the proposed Additional Financing, including disbursement, financial management, procurement and safeguards, remain the same as those under the on-going NIETTP. NEA’s current project teams, notably the Project Managers for the individual H-B and B-B lines and the IFMIS project under PDP, will be kept unchanged to avoid interruption of project implementation, and will be under the coordination of the Project Director for the NIETTP.

7. Sustainability

NEA, which will own and operate the transmission facilities financed under both the NIETTP and the proposed Additional Financing, has sufficient technical capacity for system operation and maintenance.
NEA is in a weak financial position—tariff charge is below the cost of services—but so far it has received budget allocations from the Government for (i) paying its Power Purchase Agreement (PPA) obligations without default; (ii) investing in generation, transmission and distribution projects; and (iii) operating and maintaining its operational assets, including major rehabilitations of generation plants and distribution networks. The investment activities with the proposed Additional financing will bring a Financial Internal Rate of Return to NEA at about 16 - 18 percent. The NEA/GoN and the Bank is in review of an updated financial restructuring plan to improve the operational efficiency / reducing the cost of services and increasing the retail tariff for NEA to reach cost recovery and profitability in short to medium terms.

8. Lessons Learned from Past Operations in the Country/Sector

The transmission link project has suffered major delays due to delays in (i) procurement and (ii) compensation for land acquisition and securing the Right-of-Way (ROW). The latter is also linked to effectiveness of consultation, communication with the local communities to gain their support. Based on these key lessons, procurement and consultation and land acquisition have been started early with sufficient lead time. Under the NIETTP, the critical contract for supply, construction and commissioning of the H-D-D was signed in February 2013; survey on ROW was started immediately after the contract signing and the consultation and compensation for land acquisition were planned to follow immediately after confirmation of the RoW an specific locations of the tower foundations. For the D-M line not financed by IDA, procurement was started and bids were expected by April 10th and contract signing by June 2013. All these projects are expected to be commissioned by September 2015, well within the project closing by December 2016. For the activities proposed for the Additional Financing, the two transmission line are under implementation now under the current PDP and project completion is likely to be achieve by March 2014. The bidding documents for the supply of conductors and the IFMIS are ready for review by the Bank and completion by December 2014 is achievable. Supervision on social safeguard action plans also needs to be enhanced.

9. Safeguard Policies (including public consultation)

<table>
<thead>
<tr>
<th>Safeguard Policies Triggered by the Project</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Assessment OP/BP 4.01</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Natural Habitats OP/BP 4.04</td>
<td>X</td>
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<tr>
<td>Forests OP/BP 4.36</td>
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<td>Pest Management OP 4.09</td>
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<tr>
<td>Physical Cultural Resources OP/BP 4.11</td>
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</tr>
<tr>
<td>Indigenous Peoples OP/BP 4.10</td>
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<td>Involuntary Resettlement OP/BP 4.12</td>
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<td>Safety of Dams OP/BP 4.37</td>
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<tr>
<td>Projects on International Waterways OP/BP 7.50</td>
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<td>X</td>
</tr>
<tr>
<td>Projects in Disputed Areas OP/BP 7.60</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
10. Contact point

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