## ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>BPC</td>
<td>Butwal Power Company Limited</td>
</tr>
<tr>
<td>CEA</td>
<td>Central Electricity Authority</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<tr>
<td>CERC</td>
<td>Central Electricity Regulatory Commission</td>
</tr>
<tr>
<td>COD</td>
<td>Commercial Operation Date</td>
</tr>
<tr>
<td>COR</td>
<td>Contracting Officer's Representatives</td>
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<tr>
<td>CTGI</td>
<td>China Three Gorges International</td>
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<td>CWE</td>
<td>China International Water and Electric Corporation</td>
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<tr>
<td>CY</td>
<td>Calendar Year</td>
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<tr>
<td>DFID</td>
<td>Department for International Development</td>
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<tr>
<td>DMP</td>
<td>Disaster Management Plan</td>
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<tr>
<td>DoED</td>
<td>Department of Electricity Development</td>
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<tr>
<td>DoS</td>
<td>Department of State</td>
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<tr>
<td>E&amp;S</td>
<td>Environmental and Social</td>
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<tr>
<td>EDC</td>
<td>Energy Development Council</td>
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<tr>
<td>EIA</td>
<td>Environment Impact Assessment</td>
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<tr>
<td>ERC</td>
<td>Electricity Regulatory Commission</td>
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<td>FC</td>
<td>Financial Closure</td>
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<tr>
<td>FDI</td>
<td>Foreign Direct Investment</td>
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<tr>
<td>FY</td>
<td>Fiscal/Financial Year</td>
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<tr>
<td>GESI</td>
<td>Gender and Social Inclusion</td>
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<tr>
<td>GMR</td>
<td>Grandhi Mallikarjuna Rao</td>
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<tr>
<td>GoI</td>
<td>Government of India</td>
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<tr>
<td>GoL</td>
<td>Government of Laos</td>
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<td>GoN</td>
<td>Government of Nepal</td>
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<tr>
<td>HIDCL</td>
<td>Hydroelectricity Investment and Development Company Limited</td>
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<td>Acronym</td>
<td>Term</td>
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<td>----------------------------------------------------</td>
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<tr>
<td>HPP</td>
<td>Hydropower Project</td>
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<tr>
<td>IFC</td>
<td>International Finance Corporation</td>
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<td>IPPs</td>
<td>Independent Power Producers</td>
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<td>JAPL</td>
<td>Jai Prakash Associates Limited</td>
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<td>Japan International Cooperation Agency</td>
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<td>JVA</td>
<td>Joint Venture Agreement</td>
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<td>LOE</td>
<td>Level of Effort</td>
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<td>MCA-N</td>
<td>Millennium Challenge Account-Nepal</td>
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<td>MoEWRI</td>
<td>Ministry of Energy Water Resources and Irrigation</td>
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<td>MoU</td>
<td>Memorandum of Understanding</td>
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<td>MW</td>
<td>Megawatt</td>
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<td>NEA</td>
<td>Nepal Electricity Authority</td>
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<td>NHDP</td>
<td>Nepal Hydropower Development Project</td>
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<td>NPR</td>
<td>Nepalese Rupee</td>
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<tr>
<td>NRB</td>
<td>Nepal Rastra Bank</td>
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<td>NWEDC</td>
<td>Nepal Water and Energy Development Company</td>
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<tr>
<td>OIBN</td>
<td>Office of the Investment Board of Nepal</td>
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<tr>
<td>PANI</td>
<td>Program for Aquatic Natural Resources Improvement</td>
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<tr>
<td>PAPs</td>
<td>Project Affected Populations</td>
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<tr>
<td>PDAs</td>
<td>Project Development Agreements</td>
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<td>PEI</td>
<td>Policy Entrepreneurs Inc.</td>
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<tr>
<td>PIU</td>
<td>Project Implementation Unit</td>
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<td>PMU</td>
<td>Project Monitoring Unit</td>
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<tr>
<td>POP</td>
<td>Period of Performance</td>
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<tr>
<td>PPAs</td>
<td>Power Purchase Agreements</td>
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<td>PPP</td>
<td>People Public Partnership</td>
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<td>PSAs</td>
<td>Public Service Announcements</td>
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<td>Acronym</td>
<td>Term</td>
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<tr>
<td>PSRSHD</td>
<td>Power Sector Reform and Sustainable Hydropower Development</td>
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<tr>
<td>PTA</td>
<td>Power Trade Agreement</td>
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<tr>
<td>PURC</td>
<td>Public Utility Research Centre</td>
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<td>R&amp;R</td>
<td>Resettlement and Rehabilitation</td>
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<tr>
<td>ROW</td>
<td>Right-of-Way</td>
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<tr>
<td>RPGCL</td>
<td>Rastriya Prasaran Grid Company Limited</td>
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<tr>
<td>SAARC</td>
<td>South Asian Association for Regional Cooperation</td>
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<td>SAPDC</td>
<td>SJVN Arun-3 Power Development Company</td>
</tr>
<tr>
<td>SARI/EI</td>
<td>South Asia Regional Initiative for Energy Integration</td>
</tr>
<tr>
<td>SASEC</td>
<td>South Asia Sub-regional Economic Cooperation</td>
</tr>
<tr>
<td>SEED</td>
<td>Social, Environmental and Economic Development</td>
</tr>
<tr>
<td>SJVNL</td>
<td>Satluj Jal Vidyut Nigam Ltd.</td>
</tr>
<tr>
<td>SOE</td>
<td>State-Owned Enterprise</td>
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<tr>
<td>SPV</td>
<td>Special Purpose Vehicle</td>
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<tr>
<td>SREP</td>
<td>Scaling-up Renewable Energy Program</td>
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<tr>
<td>TL</td>
<td>Transmission Line</td>
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<tr>
<td>Transco</td>
<td>Transmission Company</td>
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<tr>
<td>UK</td>
<td>Upper Karnali</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<tr>
<td>USD</td>
<td>United States Dollar</td>
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<tr>
<td>USG</td>
<td>United States Government</td>
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<tr>
<td>UT-1</td>
<td>Upper Trishuli 1</td>
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</table>
EXECUTIVE SUMMARY

For more than three years the Nepal Hydropower Development Project (NHDP) has provided transactional and policy support to the Government of Nepal (GoN) through technical assistance to Ministry of Energy, Water Resources and Irrigation (MoEWRI) and the Office of the Investment Board of Nepal (OIBN). More recently the project also has supported the Nepal Electricity Authority (NEA) and the Electricity Regulatory Commission of Nepal. Finally, it provides capacity building to a number of governmental and private stakeholders through the delivery of workshops, study tours and other training activities.

SUPPORT TO OIBN

During the period October-December 2018, NHDP provided technical assistance, resource, and policy related support to OIBN in the following areas:

1. Transactional support to OIBN’s large hydropower projects (HPPs):
   a. Arun-3 HPP:
      i. Updated the Risk Matrix for the Arun-3 HPP;
      ii. Provided technical assistance to OIBN to establish Arun 3-HPP Project Monitoring Unit (PMU);
      iii. Provided technical assistance to OIBN to develop and implement the Arun-HPP Project Dashboard, including the procurement of a new local resource person to coordinate NHDP support on the Dashboard and making the PMU fully operational;
      iv. Provided technical assistance to conduct a review of the Arun-3 Disaster Management Plan (DMP) and to develop a DMP template for OIBN to use on all future HPPs;
      v. Continued to support OIBN in its efforts to identify and mitigate Environmental, Social and Communication Risks associated with the Arun-3 HPP
   b. Other HPPs:
      i. Provided ongoing local legal and negotiation support to OIBN and GoN on contractual issues related to the West Seti and Upper Marsygandi-2 HPPs;
      ii. Provided local legal support to OIBN on project extension requests from the developers the Arun 3 and Upper Karnali HPPs;

2. Other support on issues affecting all large HPPs:
   a. Developed a standardized approach to the review and approval of DMPs for all large HPPs including a standard form project template for future DMPs overseen by OIBN;
   b. Continued to support the management by the GoN of foreign currency risks, including the implementation of a GoN-endorsed and supported hedging mechanism;
   c. Continued to support the development and implementation of a mechanism to allocate project shares of large and medium-sized HPPs to affected regions and PAPs;
   d. Supported the OIBN’s Communications Unit in support of issues arising related to all HPPs; and
   e. Finalized arrangements to conduct capacity building for OIBN on negotiation training during the next quarter; and
   f. Began logistical preparations to conduct a study tour to Laos for OIBN and other GoN stakeholders scheduled for April 2019.
SUPPORT TO MoEWRI

1. Transactional support to MoEWRI's medium-sized HPPs:
   a. Upper Trishuli-1 HPP:
      i. NHDP continued to support the management of foreign currency risks, including the implementation of a GoN-supported hedging mechanism, including the offer of specific personnel to assist OIBN and the GoN to properly address these issues.
   b. New Support to Khimti-1 HPP:
      ii. NHDP reached agreement with MoEWRI to provide additional legal and negotiation support to conclude a joint venture agreement (JVA) between the developer and NEA, and to ensure that the mechanism of sale of shares on this long-running project is accomplished according to Project Development Agreement (PDA) requirements.

2. Policy and Institutional Support:
   a. NHDP made final preparations to conduct next quarter a workshop for the MoEWRI and other associated government entities related to Comprehensive Disaster Management Planning for all HPPs, that will include: (i) compliance with contracts and local laws; (ii) essential features of risk identification; (iii) vulnerability analysis; (iv) resiliency measures; (v) disaster preparedness; (vi) risk mitigation; (vii) disaster response; and (viii) stakeholder engagement.
   b. NHDP made the final preparations to assist the MoEWRI to establish and make the Electricity Regulatory Commission operational, including the selection and appointment of commissioners, including donor coordination activities and briefings to USAID. Implementation will begin when the commissioners are appointed.
   c. NHDP conducted an analysis of the Government of India’s (GoI) new Cross-Border Trading of Electricity Guidelines (issued in mid-December 2018) which will require implementation by the GoN, pursuant to its PTA with the GoI.
   d. NHDP prepared Regulatory Preparedness Training modules for the benefit of NEA. Training will commence early next quarter.
   e. Together with Energy Development Council (EDC) NHDP co-sponsored a five-day capacity building MoEWRI, its related entities and private sector stakeholders on risk management, electricity sector regulation, and banking and insurance sector issues.
   f. Finalized arrangements to conduct capacity building next quarter for MoEWRI and its related entities on negotiation training; and
   g. NHDP began logistical preparations to conduct a study tour to Laos for MoEWRI and other GoN stakeholders scheduled for April 2019.

3. New Interventions identified by NHDP to support MoEWRI as required:
   a. NHDP offered to assist MoEWRI to develop new legal frameworks to support regional power trade and the devolution of administrative authority and power sector management activities, including the distribution function, from the center to the regions as required by Nepal’s Constitution.
   b. NHDP offered support in respect of the Memorandum of Understanding between Bangladesh and Nepal which will strengthen the energy links between the two countries and facilitate increased participation by Bangladeshi public and private entities in Nepal HPPs, including the Upper Karnali HPP.
   c. NHDP offered to support MoEWRI or other GoN entities including NEA on the implementation by NEA of “take or pay” contracts until Nepal’s installed capacity reaches 5,250 MW; and
   d. NHDP began collaboration with USAID’s PAANI Project to support to MoEWRI to rationalize issues of Water Resource Management and Electricity Sector Development.
INTRODUCTION

The Nepal Hydropower Development Project (NHDP) (# AID-367-TO-15-00003) agreement was initiated between USAID and Deloitte Consulting LLP on July 9, 2015.

This Quarterly Report (this Report) is for the Second Quarter (Q2) of NHDP’s Project Year 4 (this Quarter), which is also the First Quarter (Q1) of US Government Fiscal Year 2019. It describes NHDP’s activities and outputs during the quarter, together with plans and strategies going forward.

Project Focus and Background

NHDP’s mission is to assist the Government of Nepal (GoN):

- To expand the access of clean, high quality electricity services to Nepali citizens
- To realize the nation’s hydropower potential, both domestically and in international markets

NHDP is achieving these aims by providing transactional and policy support to the Ministry of Energy, Water Resources and Irrigation (MoEWRI) and the Office of the Investment Board of Nepal (OIBN). NHDP is also supporting Nepal Electricity Authority (NEA) on Power Purchase Agreement (PPA) transactions and assisting it in attaining knowledge to comply with the regulatory regime of the Electricity Regulatory Commission (ERC). NHDP will provide technical support to ERC once it becomes fully functional in the immediate future. Finally, NHDP continues to seek opportunities to support the wider set of HPP stakeholders through technical assistance, workshops, and other capacity building activities.

With respect to transactions, NHDP supports OIBN and MoEWRI as they manage the development of multiple medium and large hydropower projects (HPPs).1 Historically, five of these HPPs have fallen under OIBN’s jurisdiction. The other HPP, Upper Trishuli-1 (UT-1), is being developed under the authority of the MoEWRI.2 In addition to providing transactional support, NHDP assists the MoEWRI to develop policies and laws that, inter alia, facilitate regional electricity trading, promote sector restructuring, and make operational an independent electricity sector regulator.

The Risk Matrix

Since 2015, NHDP has identified approximately sixty distinct risks that hinder HPP development in Nepal. A full description of those risks can be found in NHDP’s Risk Baseline Matrix, which was revised in NHDP’s second year and continues, with NHDP support, to be updated on the micro level for each large HPP supported by NHDP. With the support of NHDP, periodic revision of specific project matrices affords a “moving picture” of risks mitigated, new risks encountered, and overall project progress.3

Many of the risks identified in this Report are cross-cutting in nature, meaning that they exist not only at OIBN and MoEWRI, but in all public and private bodies seeking to develop

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1 Originally, six HPPs were identified to fall within NHDPs scope of work, five of which remain under the control of OIBN: Arun 3, Upper Karnali, West Seti, Tamakoshi 3 and Upper Marsyangdi 2. To date, only the Arun 3 and Upper Karnali HPPs are currently under active development.

2 Over the past 3 years, NHDP has provided transactional and negotiation support to the MoEWRI in the development of a medium-sized HPP, Upper Trishuli-1 (UT-1). This Quarter, MoEWRI has also informed the Project that it may require transactional support on the long-operational Khimti-1 HPP.

3 Some frequently encountered risks relate to: (i) inadequate or incomplete project documents; (ii) country and sovereign risks; (iii) gaps or defects in the legal and regulatory framework; (iv) gaps or defects in the environmental and social framework; (v) communications risks; (vi) gaps in the cross-border electricity trading framework; (vi) risks arising from incomplete knowledge of international dispute settlement mechanisms; and (viii) risks arising from a lack of capacity, both in the public and private sectors.
hydropower assets or to expand or improve electricity services. The mitigation or removal of these risks will go far to improve HPP development generally. Specifically, reduced investment risks will improve the investment environment for large HPPs as well as other types of Public Private Partnership (PPP) projects.

This Report will:

(i) Address a number of the risk-related issues that have arisen under project components 1 and 2;
(ii) Describe the steps that NHDP has taken during this Quarter to assist project counterparts to mitigate these risks; and
(iii) Highlight NHDP’s plans to continue the work in each of these areas going forward.

Keynote Speakers for Seminar on Hydropower Financing and Risk Management in Nepal, November 2018, Kathmandu
PART 1: SUPPORT TO OIBN

(A) INTRODUCTION

Although discussions have been ongoing for more than two years, during this Quarter, the Cabinet approved the Ministry of Finance’s proposal to develop a draft bill related to the management of PPP projects in Nepal. It is anticipated that the passage of this legislation will have a significant and positive effect on Foreign Direct Investment (FDI) in the country. On the basis of the Cabinet’s approval, the Finance Ministry (with the support of the Asian Development Bank’s (ADB) Capital Market and Infrastructure Capacity Support Project), in collaboration with OIBN, hopes to have the bill endorsed by Parliament in the very near future. This may occur even before the Nepal Investment Summit in March 2019, thereby allowing the Finance Ministry to publicly announce the bill as a major legal reform to increase confidence in Nepal’s investment climate. If passed, this new legislation will supersede the existing Investment Board Act. The draft bill is expected to establish two departments at OIBN: a PPP Centre and an Investment Centre. The role of the PPP Centre will be to:

- Identify projects;
- Manage public financing;
- Control and oversee PPP projects;
- Develop PPP framework;
- Advise and support agencies to implement PPP projects;
- Act as a knowledge center; and
- In some cases, to work as a project bank.

The role of the Investment Centre will be to promote Nepal as an investment destination and to provide required investment approvals. The bill is expected to preserve existing provisions in the IBN Act that authorize OIBN to provide investment approvals for projects of a certain size. However, the precise MW threshold for HPPs to be subject to OIBN’s control may change from its existing size of 500 MW and above. With these changes, OIBN’s role and function in the promotion and realization of large projects, including HPP’s could be greatly strengthened.

NHDP endorses these welcome institutional changes. Their implementation will require significant donor support and time. Until they are realized, NHDP’s support to OIBN is expected to remain as planned.

(B) TRANSACTIONAL SUPPORT

NHDP has always maintained that one success in Nepal’s hydropower sector can change everything. While a number of HPPs, both at OIBN4 and MoEWRI5 have, for a number of reasons,6 not made significant progress, Arun 3 and UT-1 are expected to reach Financial

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4 West Seti, Tamakoshi 3, and Upper Marsyangdi 2.
5 The UT-1 HPP has experienced very little progress since that project’s PPA was concluded in December 2017.
6 Reasons cited often cited for the withdrawal of strategic developers includes: wet-dry season issues, lack of sector restructuring and sector regulation, slow progress in implementing the power trade agreement with India, uncertainty surrounding the allocation of local shares, political risks, transmission line and interconnection constraints, and the wariness of
Closure (FC) before the end of Calendar Year (CY) 2019. In recent months, the Upper Karnali (UK) HPP has also made progress. During the closing weeks of this Quarter, GMR, the UK HPP's developer, as well as the Government of Bangladesh (GoB) have signaled their intention to move rapidly to conclude a Power Purchase Agreement (PPA) with a utility in Bangladesh. If successful, this would clear a path to financial close during CY 2019. FC for the UK project may also remove some longstanding impediments to the development of the Upper Marsyangdi-2 HPP, which has also advanced during this Quarter. Of the remaining HPPs, there are encouraging signs that OIBN may make at least one of those projects the object of a public tender during CY 2019. A full discussion of the progress of each of these HPPs, each of which continues to be supported by NHDP, is provided below.

NHDP’s HPP support to OIBN and to the GoN runs to every transactional risk and issue that impedes Nepal’s major HPPs from achieving FC. Some of these risks include:

- Monitoring Risks (related to the fulfillment by the developer of *inter alia*, Project Development Agreement (PDA) conditions subsequent)
- Disaster Management Risks
- HPP Transactional and Legal Risks
- Financial Risks
- Communications Risks
- Social and Environmental Risks
- Risks Related to Lack of Capacity

During this Quarter, NHDP has provided support to OIBN on the HPP transactions described below.

**Table 1**

(i) **Upper Karnali HPP**

<table>
<thead>
<tr>
<th>Project</th>
<th>Overview</th>
<th>Progress To Date</th>
<th>Expected Outcomes for Next Quarter and NHDP Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upper Karnali</strong></td>
<td><em>(900 MW)</em></td>
<td>Numerous delays in reaching FC have caused the developer to request extensions to the PDA’s two-year deadline</td>
<td>Any legal support required by GoN instrumentalities related to the finalization of a Power Trade Agreement (PTA) between Nepal and Bangladesh</td>
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<tr>
<td>(900 MW)</td>
<td>• The UK HPP is in fact, 2 projects. Project 1 is to design and build power generation facilities; Project 2 is to build a dedicated transmission line for the evacuation of power to India</td>
<td>Recently GMR has requested another extension, through September 28, 2019. This extension may not be available under the PDA. If that is the case, the Board of OIBN could require the parties to amend the PDA to allow a final extension. A Board meeting is expected before January 2019</td>
<td>Any legal support required by GoN instrumentalities, specifically OIBN, related to the PPA between GMR and the Bangladesh utility</td>
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<td></td>
<td>• According to the PDA, the Project Special Purpose Vehicle (SPV) is responsible for the construction of the transmission line</td>
<td>On August 10, 2018, the GoN and the Government of Bangladesh (GoB) signed a Memorandum of Understanding (MoU) to take the steps required to implement power trade between the countries</td>
<td>Support, as required, to assist OIBN to set up a Project Monitoring Unit (PMU) for the UK HPP as it approaches FC</td>
</tr>
<tr>
<td></td>
<td>• The PDA provides ‘free’ power (12%) and equity (27%) to GoN, with 2 years to reach financial close after conclusion of the PDA</td>
<td>The developer, GMR, and a state-owned utility in Bangladesh have also indicated their intention to conclude a Power Purchase Agreement (PPA) before end 2018. Although the</td>
<td>Support to the PMU for UK to implement its Project Dashboard along the lines of the dashboard for Arun 3</td>
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<td></td>
<td>• Commercial operations are not expected before 2023 or 2024 at the earliest</td>
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<td></td>
<td>• The Project has faced violent attacks caused by inordinate delays and political unrest. The most recent of these events occurred on 10 February 2018</td>
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</table>

International lenders. This particular list was created by the Tamakoshi 3 developer, Statkraft (Norway) to OIBN, in the spring of 2016.
<table>
<thead>
<tr>
<th>Project</th>
<th>Overview</th>
<th>Progress To Date</th>
<th>Expected Outcomes for Next Quarter and NHDP Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>when explosions were detonated at the UK dam site in Dailekh and at the developer’s administrative office in Surkhet</td>
<td>deadline has passed with no PPA concluded, the Government of Bangladesh has indicated its willingness to provide a government guarantee to back the PPA when it is signed. This is expected to facilitate FC during CY 2019.</td>
<td>• Support as required on the PDA’s conditions subsequent and other project documents</td>
<td>• Support to OIBN/GMR on local benefits and compensation • Public outreach and communications to local communities through OIBN Communications Unit • Review of financing documents if requested</td>
</tr>
</tbody>
</table>

**Project Updates**

The UK HPP is the first project of its kind in Nepal to be financed on a non-recourse or limited-recourse basis. This means that in order for the UK HPP to proceed to construction, the project’s PDA and the Power Purchase Agreements (PPAs) must be fully bankable.7

During the previous quarter, after years of searching by the developer financing, the Power Minister of Bangladesh announced what appears to be a breakthrough. This was announced at an Interactive Session on “Power Sector Cooperation between Bangladesh and Nepal”, organized by the Embassy of Bangladesh in Kathmandu. At that event, the Power Minister of

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7 A hydropower project, like other PPP arrangements, funded on a project finance basis, is bankable if lenders are willing to finance it. Lending to PPP projects (usually referred to as non-/limited-recourse finance) looks to the cash flow of the project as the principal source of security. If a project faces bankability issues, a government backing the project may be required to provide a sovereign guarantee. While the characteristics that make a project bankable are nearly always reflected in the contractual and legislative frameworks underlying the project, this is not to imply that all contracts are bankable. For a case study on this point, see the discussion on the progress of the UT-1, HPP, below.
Bangladesh stated that the Bangladeshi utility would conclude a PPA. The Government of Bangladesh (GoB) also indicated its willingness to enter into such an arrangement in the Joint Steering Committee meeting held between officials of Nepal and Bangladesh on Dec 5, 2018. In addition, the Government of India (GoI) has also indicated its disposition to facilitate cross-border transmission issues, provided the necessary agreements are concluded and clearances are received. The Guidelines on Import/Export (Cross Border) of Electricity Power Trade Guidelines recently introduced by Ministry of Power (MoP) of the Government of India (GoI) on Dec 19, 2018 gives explicit recognition to tripartite arrangements for cross-border electricity sales.

The GoB has also indicated its interest in securing additional capacity from Nepal’s growing hydropower fleet. The GoB could do so by way of Foreign Direct Investment (FDI) through Bangladeshi commercial entities, or through direct equity participation under a government-to-government (G2G) arrangement. These issues, together with updates, are discussed in Part 2 (ii) (c) of this Report.

The contractual deadline for Upper Karnali to achieve FC expired at the end of September 2018. During the previous Quarter, GMR informed OIBN that it would need a third extension of time under the PDA, through September 28, 2019. Because the PDA does not appear to allow for additional extensions, a contractual amendment may be required. The Board of OIBN is expected to make a determination on this point before January 2019. However, given the new relationship between the GoN and the GoB as reflected in the MoU on Power Sector Cooperation signed between the two countries, NHDP believes that an agreement to extend will be considered if GMR demonstrates that the PPA for export of electricity to Bangladesh is signed.

NHDP will continue to provide transactional support as needed to further advance this project.

### Table 2

<table>
<thead>
<tr>
<th>Project</th>
<th>Overview</th>
<th>Progress To Date</th>
<th>Expected Outcomes for Next Quarter and NHDP Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arun-3 (900 MW)</td>
<td>SJVN Arun-3 Power Development Company (SAPDC) and OIBN concluded the PDA for Arun 3 in November, 2014. Under the PDA, the developer is also responsible for building the transmission line</td>
<td>The reason for the delay in formally declaring FC was probably to avoid drawing down of as-yet unneeded funds which would have resulted in unnecessarily triggering interest payments. The funds are not yet required because a large portion of the funds have already been allocated by the Indian Cabinet. The developer intends not to withdraw on a loan until it is required—sometime in 2020. Interim cash will be raised by accessing developer equity</td>
<td>Support to Arun 3 Project Monitoring Unit (PMU), including Project Dashboard</td>
</tr>
<tr>
<td></td>
<td>Work is on schedule to achieve commercial operations in September 2022</td>
<td>A Letter of Award (LoA) for package-I (the main works) was issued to M/s Jai Prakash Associates Limited (JAPL) on 22nd Sept, 2017</td>
<td>Support on local benefits and compensation through OIBN ad hoc committee</td>
</tr>
<tr>
<td></td>
<td>The PDA Provides ‘free’ power (21.9%) to GoN, with 2 years to reach financial close</td>
<td>Contracts have also been awarded for civil works, hydro-mechanical works and electro-mechanical works</td>
<td>Continuing support on Disaster Management Plan</td>
</tr>
<tr>
<td></td>
<td>Land Acquisition transactions related to the construction sites are progressing on schedule</td>
<td></td>
<td>As requested, support for public outreach and communications to local communities</td>
</tr>
<tr>
<td></td>
<td>The energy from Arun 3 will be evacuated from Dhalkebar in Nepal to Muzaffarpur in India. SJVN Arun-3 Power Development Company (SAPDC), the special purpose vehicle of SAPDC in Nepal, has entered into a Memorandum of Understanding (MOU) for the lease of forest land with the Department of Forests</td>
<td></td>
<td>Assistance, if necessary, to complete the agreements and other transaction documents with lenders for FC</td>
</tr>
</tbody>
</table>

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8 In order for the energy from the UK HPP to be delivered in Bangladesh, it must pass through the GoI’s transmission network.

9 Two extensions have already been granted to GMR under the PDA.
On 22 February 2017, the Cabinet of the Government of India (GoI) approved the investment proposal for the generation component of Arun-3 Hydro Electric Project in Nepal by SJVN Limited along the following principal lines:

- Investment for generation component of Arun-3 HPP (900 MW) for an estimated cost of INRs. 5723.72 crore (USD 855 million) at May 2015 price level
- Completion period of Arun-3 HPP is 60 months from the date of financial closure, which is planned for May 2019
- Ex-post facto approval for works either completed or currently being undertaken by the implementing entity, SJVN Arun-3 Power Development Company Limited (SAPDC), registered in Nepal as a 100% subsidiary of SJVN Limited, must be formally granted by the Central Electricity Authority (CEA), India and accordingly deducted from Arun-3 HPP cost requirements

The FC deadline for the Project was extended until 30 September 2018 by the OIBN Board decision of 28 April 2018

- The project obtained Generation License on 04 May 2018
- A ceremony formally laying the project’s foundation stone was conducted by PM of Nepal KP Oli and PM of India Narendra Modi on 11 May 2018
- SJVN has lodged a request at OIBN to extend the deadline to achieve FC until March 2019
- SAPDC has applied for construction license for the transmission line
- SAPDC has offered to sell 10% percent of the energy available to export to Nepal

Project Updates

During the previous Quarter, the developer, SAPDC, requested OIBN to grant an extension on its obligation to reach FC until March 2019. This request, which is expected to be granted, is currently under consideration by the Board of OIBN. For its part, SAPDC has awarded all of the construction package contracts. Pre-construction civil works are currently being implemented.

NHDP Activities in support of Arun-3

1. Maintaining and updating the Risk Matrix for the Arun-3 HPP:

NHDP has examined in detail many of the risks and roadblocks that hydropower developers face on a daily basis, including country risks, policy risks, financial risks, legal and regulatory risks, environmental and social risks, utility and transmission risks. All of these risks are included in the Arun 3 Project Risk Matrix, a key element of OIBN’s suite of project management tools. During this Quarter, NHDP worked with OIBN staff and consultants to update that project’s risk matrix as a related activity to the establishment of the Arun-3 Project Monitoring Unit (PMU) and the development of the Arun-3 Project Dashboard discussed below.

2. Arun 3 PMU and the Project Dashboard

Section 4.1 of the Arun-3 PDA requires the GoN to delegate the management and administration of the PDA to a Project Monitoring Unit (PMU). During the previous quarter, NHDP assisted OIBN to begin the process of making the Arun-3 PMU operational. During the final week of the last quarter, the NHDP team made a presentation to OIBN’s Chief Executive officer (CEO), GoN officials, and Department for International Development.

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10 The delay in reaching FC was not financial; rather, because the drawdown of additional funds is not yet necessary in order to avoid paying interest on the next tranche it was decided to delay FC until funds were needed.
(DFID)-funded consultants. The presentation covered NHDP’s recommendations for the establishment of the PMU and next steps.

The objectives of the PMU are:

- To enable OIBN and GON to visualize and track project progress
- To help OIBN assess the status of compliance of the project developer with the PDA
- To alert stakeholders from time to time about project risks and enable stakeholders to make timely decisions to address the risks
- To facilitate OIBN in reporting to various stakeholders

To meet these objectives, the PMU structure must take into consideration:

- Periodic monitoring and tracking of the progress of the project
- The need for the PMU to support the developer as required, in the project execution
- The need to interface with other administrative bodies in Nepal
- The need periodically to report to GoN on project progress and any deviations from the agreed plan
- The need to articulate GoN’s position on technical, regulatory, commercial or legal issues which may arise from time to time
- The need to incorporate the Project Dashboard as a monitoring tool into the essential framework of the PMU

This Quarter:

On 25 October 2018, the NHDP Team, led by the project’s Senior Power Restructuring Advisors, made a presentation on the Outline of the PMU Dashboard to the OIBN team as well as members of the Steering Committee for the Arun-3 PMU.
Similarly, on 22 November 2018, the NHDP Team, led by the project’s financial specialist, made a presentation to the staff and consultants of OIBN, the Steering Committee for the Arun-3 PMU, and representatives of SAPDC, on the structure and function of the Project Dashboard. That presentation, a landmark event, was three years in the making, for in the spring of 2016 NHDP made its first presentation to OIBN on the need to implement a Project Dashboard for every HPP falling under the Investment Board’s control.

A number of factors have played a part in OIBN’s taking up the PMU and Dashboard work at this point in time:

- The OIBN’s increased stability and vision for the future
- The fact that amendments to the IBN Act are currently before the Cabinet of Ministers. If promulgated, these amendments will significantly strengthen OIBN’s status and obligations under a new institutional framework
- New momentum, driven by the fact that construction is under way at the site and that formal FC is expected by end March, 2019
- The prospective of new donor support to OIBN and the Arun-3 PMU which will support OIBN’s undertaking of numerous tasks that hitherto were impossible to manage

The fact that a comprehensive mechanism, a Project Dashboard, is being implemented by OIBN is encouraging; not only for HPP development but for the economy, generally. With the passage of time, the Project Dashboard for Arun-3 will evolve and be the subject of refinement for PPPs beyond the hydropower sector.

While the Project Dashboard has been designed to monitor projects during development and construction, it can also, if necessary, be expanded to cover the full life of the project. The Project Dashboard includes levels of detail that can be examined incrementally, at primary, secondary, and tertiary levels. In addition, because the tool has been developed in the Excel format, it allows open access by the developer; it can also be “sliced and diced” depending on the needs of the developer or OIBN, in order to monitor and display any number of indicators. There are three driving forces behind the detail that is included in a Project Dashboard:

- The Project’s PDA;
- Applicable law in Nepal which may supplement the obligations of the PDA; and
- Good Industry Practices--Where the law and the PDA are silent, OIBN should be driven by leading industry practices for managing, monitoring, and enforcing major infrastructure projects.

3. Arun-3 Disaster Management Plan

During the previous quarter, at OIBN’s request, NHDP added a disaster management expert from Deloitte, Washington, D.C. to the NHDP Team for the purpose of reviewing and making recommendations related to the Arun-3 Disaster Management Plan (DMP). The desk study comprises of a review not only of the DMP, but also Nepal’s applicable laws and policies. On 14 December, NHDP delivered to OIBN a Gap Analysis Report on the Arun-3 DMP. The Gap Analysis Report:

1) Identifies gaps in compliance with the local laws, policies, guidelines, and the widely accepted international leading practices for the hydropower industry;
2) Identifies gaps in the DMP’s disaster preparedness approach;
3) Identifies gaps in the DMP’s risk identification, assessment and vulnerability analysis conducted for various hazard scenarios;

4) Identifies gaps in the DMP’s risk prevention, reduction and mitigation measures;

5) Identifies gaps in the DMP’s procedures governing collaboration and cooperation with public and private agencies, as well as the local governments for preparations, response, recovery and reconstruction;

6) Identifies gaps in the DMP’s planning of resiliency measures related to hydropower infrastructure, effects of climate change and protection of local communities;

7) Identifies gaps in the DMP’s planning of public awareness and educational campaigns designed to proactively get the local population and businesses be familiar with all systems in the event of a disaster;

8) Identifies gaps in the DMP’s adequacy of early warning systems;

9) Identifies gaps in the DMP’s design of disaster response, recovery and restoration operations; and

10) Identifies gaps in the DMP’s action plans and the funding/budgets to support those action plans.

After OIBN has had an opportunity to review the Gap Analysis Report’s findings and recommendations, the expert will come to Nepal for discussions at OIBN, the developer, and other stakeholders.

4. Legal Support to OIBN on Arun-3

If the Board of OIBN grants the developer an extension to reach FC, OIBN may require local legal support to formalize the transaction. Going forward, NHDP expects to continue to provide support on each of these transaction-related issues as well as to provide support to the OIBN Communications Unit on a number of matters related to Arun-3 and other HPPs which are discussed below in “(B) Other Activities at OIBN.”

Arun River
### Project Updates

During this Quarter the Board of OIBN established a high-level committee comprised of the Ministers of Energy and Finance and the CEO of OIBN to make recommendations regarding how the project should be taken forward. In turn, that committee has formed a technical committee to look at current circumstances and make concrete recommendations.

### Table 5

<table>
<thead>
<tr>
<th>(iv) Tamakoshi-3 HPP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project</strong></td>
</tr>
</tbody>
</table>
| Tamakoshi-3 (650 MW) | • This HPP has not yet concluded a PDA  
• In January 2016 Tamakoshi 3’s major developer, Statkraft of Norway, withdrew from the project for technical and commercial reasons  
• IBN and MoEWRI have been claiming control over the Project. | • The Survey License for Generation was granted by Department of Electricity Development (DOED) to TBI Holding Co. Ltd. on 11 October 2017 | Assuming OIBN retains control:  
• NHDP, working with OIBN staff and consultants, have offered to provide transactional support to OIBN  
• No progress is expected in the near-term |
**Project Updates**

The Project's proponent TBI Holding Co. Ltd. has received a Survey License for License for Generation from DOED to on 11 October 2017.

No further updates on this project from OIBN or GoN during this Quarter.

**Table 6**

(v) Upper Marsyangdi-2 HPP

<table>
<thead>
<tr>
<th>Project</th>
<th>Overview</th>
<th>Progress To Date</th>
<th>Expected Outcomes for Next Quarter and NHDP Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Marsyangdi-2</td>
<td>This HPP has not yet reached PDA</td>
<td>• Butwal Power Company (BPC) and 3 Chinese companies (Butwal Power Company, SCIG International Nepal Hydro Joint Venture Private Limited, SCIG International Limited, Xingchend International Investment Co. Ltd, QYEC International Co. Ltd.) have entered in Share Purchase Agreement to take over this project.</td>
<td>• On 14 November 2018 OIBN asked NHDP to provide transactional support to develop and negotiate a PDA with the project developer.</td>
</tr>
<tr>
<td>(600 MW)</td>
<td>Survey License issued to Himtal Hydropower Company Pvt Ltd. GMR owns majority shares of this company, and the rest of the shares are owned by Nepali local partner</td>
<td>• BPC, which is to have 19.4% shares, along with Chinese partners are planning to take over the project from GMR</td>
<td>• NHDP will provide legal and negotiating support to OIBN develop and negotiate the PDA.</td>
</tr>
<tr>
<td></td>
<td>The Equity breakdown initially envisioned is that GMR will take 90% and the IFC 10%</td>
<td>• Project originally had installed capacity of 600 MW and was meant for export of power to India. The Buyer group intends the project’s power to be supplied for domestic consumption, which may lead to downsizing of the project capacity.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This project has lain dormant while GMR focuses on achieving FC on the Upper Karnali Project</td>
<td>• BPC has also received a survey license for cascade projects with capacity of approximately 250 MW and 150 MW in the same river. These are in survey phase.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Successful completion of Upper Karnali has always been seen as a pre-condition to moving this project forward</td>
<td>• BPC has requested Project Development Agreements (PDAs) for all of these 3 projects</td>
<td></td>
</tr>
</tbody>
</table>

**Project Updates**

The joint venture for the Upper Marsyangdi-2 (UM-2) HPP is comprised of Butwal Power Company (BPC) and 3 Chinese companies identified in Table 6. BPC, which will own 19.4% shares, is buying the rights to the project from the previous developer, GMR. OIBN approved that sales transaction but the remaining approvals required from Nepal Rastra Bank (NRB) are on hold because of the inquiry being conducted by the Parliamentary Committee.

Although the UM-2 HPP was originally intended to be an export project with an installed capacity of 600 MW, the new developers intend the project to be for domestic use only. While this might require the project’s capacity to be downsized to accommodate the needs of the off-taker, the developer has also received a survey license for a cascade of projects just above UM-2, comprising a capacity of 250 MW and 150 MW respectively. If the UM-2 project’s capacity is downsized below 500 MW, the jurisdiction of OIBN might be in jeopardy. However, if the developers intend to develop all three projects concurrently, it is possible that they might be characterized as being three parts of a single project, thereby providing a
good argument for OIBN to maintain control over all three. From the point of view of efficiency, developing all three under the same PDA is also a good idea. However, these decisions are driven by political as well as technical considerations and as such, lie without NHDP’s remit.

On 14 November 2018, OIBN asked NHDP to provide transactional support to develop and negotiate a PDA with the project developer.

In late November, the sales transaction between the original developer, GMR, and its successor, BPC, fell under parliamentary scrutiny. GMR was found to have realized a substantial profit on the sale of its license to BPC after ten years of holding the license for the project. Calls to review the legality of the sale commenced. Whether this political storm will affect the project, going forward is not yet known.

(C) OTHER ACTIVITIES AT OIBN

(i) Support on the Allocation of Local Shares

The evolution and development of this work has been extensively documented in previous quarterly and annual reports. On numerous occasions, NHDP has advised OIBN and MoEWRI on the importance of developing a policy on local shares for medium and large projects. During NHDP’s Year 3, IFC conducted a comprehensive review of local shares policy and implementation in Nepal as a knowledge product for use in and beyond Nepal. NHDP subcontractor, Policy Entrepreneurs Inc. (PEI), was also a principal contributor to the IFC report.

In Nepal, project PDAs treat the obligations of developers related to local shares in a number of ways. This affects the timing of when projects elect to determine how they will address the issues of benefit sharing and the allocation of local shares.11

On 20 November 2018 OIBN informally indicated that it would like to re-commence the work with NHDP on local shares begun two years previously. This is a welcome turn of events. NHDP looks forward to recommencing this work with the Investment Board at its convenience.

(ii) Support to OIBN’s Communications Unit and Capacity Building

During this Quarter NHDP worked with the OIBN Communications Unit to develop and agree upon a comprehensive plan for Year 4, which includes:

- **Supporting Current Activities:** By supporting the Communications Unit to plan and execute media activities [Radio Public Service Announcements (PSAs) concluded in August and procurement is underway for documentary films] in support of large HPPs, specifically Upper Karnali and Arun-3, and also on the overall benefits of HPP development in Nepal.

- **Planning New Interventions:** By working with the Communications Unit to plan for specifically identified future activities such as stakeholder engagement activities in HPP affected districts, or domestic exchange visits across regions with varying stages of HPP development underway.

- **Capacity Building:** NHDP may support one or more study tours to regional countries with contextually relevant examples of HPP challenges, development and implementation.

11 For example, Arun 3 is not required to have an approved plan for local shares until two years after FC (now scheduled for end March). UT-1 on the other hand, has to have a plan approved (though not implemented) at the time of FC.
Last quarter, NHDP had arranged for an international trainer to come to Kathmandu to deliver training on Negotiation Skills. Because this training was postponed, both by MoEWRI and OIBN, it was necessary to reschedule the activity to a mutually agreeable time in the near future.

After further discussions, USAID agreed that for logistical reasons it would be more effective for NHDP to separate the OIBN and MoEWRI training. Upon receipt of confirmation from the international trainer, 2 sessions of negotiation training have now been proposed for delivery during the coming quarter:

- OIBN: 15-17 February 2019.

Because two sessions are now planned, it is probable that extra spaces will be available in each training session. If so, OIBN and MoEWRI will be invited to increase their numbers, or NHDP will identify other stakeholders for whom the training might be useful.

(iii) Support on Social and Environmental Issues

On 7 December 2018, NHDP met with OIBN consultants to discuss further support to the Arun-3 HPP on social and environmental issues. While the development of the Arun-3 PMU and all of the monitoring activities it requires will take the developer and the OIBN into unchartered waters, NHDP believes that by assisting the developer and OIBN to properly address these issues the first time, OIBN will be in a significantly stronger position to streamline, drive, and manage these processes in all subsequent projects. These matters are also driven by the PDA, applicable law and can be managed by the relevant project’s Project Dashboard.

NHDP met again late in December to review OIBN’s list of priority social and environmental interventions. Included in that discussion was NHDP’s sub-contractor, PEI, that will conduct the work. It is expected that the next survey work will begin upon request from OIBN next quarter.
PART 2: SUPPORT TO MOEWRI

(A) HPP TRANSACTIONAL SUPPORT

(i) Upper Trishuli-1 HPP (216 MW) – MoEWRI

Table 7
Upper Trishuli-1 HPP

<table>
<thead>
<tr>
<th>Project</th>
<th>Overview</th>
<th>Progress To Date</th>
<th>Expected Outcomes for Next Quarter and NHDP Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Trishuli-1</td>
<td>• The PDA was concluded by the MoEWRI for the GoN and the developer, Nepal Water and Electricity Development Company (NWEDC) on 29 December 2016</td>
<td>• The PPA was signed and approved by the NEA Board on 28 January 2018</td>
<td>• Possible support to the GoN to remove the hedging obstacle to FC</td>
</tr>
<tr>
<td>(216 MW)</td>
<td>• UT-1 is expected to generate 1.46 billion units of net electricity per year (1.15 billion units in the wet season and 306.7 million units in the dry season)</td>
<td>• Developers met with lenders in Seoul in February. IFC is the lead arranger for the debt financing</td>
<td>• Continue to work with UT-1 Project Implementation Unit (PIU) when it resumes work</td>
</tr>
<tr>
<td></td>
<td>• NWEDC is a joint venture between three Korean companies: the Korea South East Power Co Ltd, the International Finance Corporation (IFC) (the private sector lending arm of the World Bank Group), and a Nepali investor</td>
<td>• The developer is continuing to address social and environmental issues pending the achievement of FC.</td>
<td>• Specific focus on compensation, benefits and the plans to allocate local shares during CY 2019</td>
</tr>
<tr>
<td></td>
<td>• Under the PDA, the PPA must be concluded within six months of entry into force of PDA</td>
<td>• Work is under way in conjunction with DFID to use international legal support to template the PPA and to incorporate the PDA and the PPA into a single, standard-form contract for use with large domestic projects</td>
<td>• Other Social, Environmental, and Gender and Social Inclusion (GESI) support as required</td>
</tr>
<tr>
<td></td>
<td>• NWEDC is rebuilding the access road between Power House and the Weir</td>
<td>• The Project Implementation Unit at DOED has not been meeting regularly</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• GoN’s delay in establishing a hedging mechanism to cover exchange rate risk is pushing back its construction date</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• NWEDC has said that delays in construction may cause the company to abandon the project.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Ministry of Finance (MoF) has said that it may take several months more owing to its complexity.</td>
<td></td>
</tr>
</tbody>
</table>

Activities in connection with UT-1

Development of a Hedging Mechanism to make the PPA Bankable

NHDP has provided substantial support to this project since early 2016 and as such, has identified the hedging issue as a priority. Planning began during this Quarter to mobilize additional project support to that end. However, NHDP will probably not be able to support any such initiative in the absence of a formal request from the relevant GoN instrumentality and the developer.

The UT-1 PPA, concluded in December of 2017, followed the GoN guidelines for a dollar-denominated PPA. Those guidelines included a requirement that the foreign debt portion of the investment be hedged against foreign exchange rate risks and that the GoN, NEA, and the developer each contribute funds to cover the cost of the hedge. However, the guideline did not specify the amount that each party must contribute.

Pursuant to GoN instructions, Nepal Rastra Bank (NRB), Nepal’s central monetary authority, had prepared draft bylaws for the establishment of a fund. The NRB’s draft bylaws provides for the premium/fees to be made for a hedging facility from NRB but does not state in what ratio the premium paid will have to be shared between the developer, NEA and GON. NEA
in negotiations has asked the Developer to contribute 50 percent of the premium, saying that the GoN and NEA, a state-owned entity, jointly comprise the balance. The developers opposed this, saying that for it to carry 50 percent of the premium would significantly increase project costs. The parties have not yet reached an agreement.

Some observers see a smooth and timely resolution of these issues as a kind of litmus test for the appetite of the GoN and the developer to take the necessary steps to realize a project with a dollar-denominated PPA. It is well known that NEA, without the backing of the GoN, is not in favor of concluding PPAs with foreign exchange exposure. On the other hand, the GoN’s current policy is to produce 15,000 MW of new generation capacity over the next ten years. Such an aggressive policy simply cannot be accomplished in the absence of FDI. For its part, NWEDC’s struggles to get to this point have been well documented. Although the developer is publicly discontented with the delays, in the absence of changed circumstances, it has come too far to withdraw this close to the finish line.

During this and the previous Quarter, NHDP has supported the resolution of the hedging issues, an activity that is being led by the Ministry of Finance. Having completed what they consider to be their tasks in the process, the Finance Ministry and the NRB have both stepped back to allow the parties (NEA and NWEDC) to conduct their own negotiations.

While negotiations are taking place, the GoN is continuing to consider the hedging issue as a two-part puzzle. The first part is to get a hedging mechanism for the UT-1 project that is acceptable to the parties. The second part, much larger in scope, is to put a hedging mechanism in place that can be used to serve all FDI-related projects. In support of the Ministry of Finance, a Forex Hedging Recommendation Committee (the Committee), formed by Hydroelectricity Investment and Development Company Limited (HIDCL), has been asked to develop a briefing paper, with recommendations, and a hedging mechanism that can be used for all kinds of infrastructure projects. NHDP’s Legal Specialist sits as an observer in the deliberations of that Committee. Similarly, a member of NHDP subcontractor, VRock, is a sitting member of the Committee.
In early December 2018, NHDP discussed with one of the members of the Committee the possibility of assisting the Committee to develop such a mechanism. This Quarter, NHDP also made a similar offer to MoEWRI, in respect of the UT-1 hedging mechanism. If either the GoN or the MoEWRI respond favorably to NHDP’s offer, NHDP will identify the resources necessary to help.

Upon the resolution of the hedging issues and the resumption of the work of the PIU, NHDP is prepared to support the GoN and to collaborate with the developer on a number of issues that remain outstanding, including:

- Disaster Management Planning issues;
- Local Shares issues;
- Social, environmental, and GESI issues; and
- Other matters as they arise.
(ii) Additional Transactional Support to MoEWRI

**Table 8**

**Khimti-1 HPP**

<table>
<thead>
<tr>
<th>Project</th>
<th>Overview</th>
<th>Progress To Date</th>
<th>Expected Outcomes for Next Quarter and NHDP Year 4</th>
</tr>
</thead>
</table>
| Khimti-1 HPP (60 MW) | • The Project Agreement (Concession) between the Project Company, Himal Power Limited (HPL), and GoN (originally His Majesty’s Government) was signed 15 January 1996  
• Concession is for a period of 50 years  
• Majority shareholders of HPL are Statkraft (Norway) and Butwal Power Company (BPC)  
• PPA concluded between Himal Power Limited (HPL) 15 January 1996  
• Commercial Operation commenced on 11th July 2000 | • PPA has a provision requiring transfer of 50 percent of the shares for nominal consideration (NPR 1) to NEA, 20 years after Commercial Operation Date (COD)  
• 20 Year Deadline will be reached on 10th July 2020 | • NHDP support to MoEWRI and NEA to conclude a Joint Venture Agreement (JVA) and other transaction documents to ensure that the sale is accomplished |

**Activities in connection with the Khimti-1 HPP**

During this Quarter MoEWRI mentioned it will request NHDP’s transactional support for the Khimti-1 HPP. The details of that legal/transactional support are described below.

The Khimti-1 HPP, located in Dolakha District, has an installed generating capacity of 60 MW. The Project Agreement and the PPA between the Project Company, Himal Power Limited (HPL) and Government of Nepal (originally His Majesty’s Government) were signed on 15 January 1996. The majority shareholders of HPL are Statkraft of Norway and Butwal Power Company.

The Khimti-1 HPP concession term is fifty years from the date of issuance of Generation License (13 February 1995). The PPA has a clause providing that twenty years after COD, HPL would arrange the transfer of 50% of the project equity to NEA at a nominal cost of One Nepali Rupee. The twenty-year deadline will be reached in approximately 18 months. This means that NEA and HPL must conclude a Joint Venture Agreement (JVA) and other transaction documents to give effect to the transfer before that time.

NHDP will support MoEWRI and NEA to negotiate and conclude a joint venture agreement (JVA) and to ensure that the mechanism of sale is accomplished.

(B) OTHER SUPPORT TO MoEWRI

**SUPPORT TO ELECTRICITY REGULATORY COMMISSION (ERC)**

This Quarter saw considerable progress towards the establishment of ERC.

a. **Briefing of Joint Secretary (JS), MoEWRI:**

During the month of October 2018, prior to the establishment of the Recommendation Committee, NHDP held discussions on ERC progress with Toya Nath Adhikari, Joint
Secretary and Head of Legal Division at MoEWRI, who currently is a committee member for the selection of the Chair and Members of ERC. Prior to that meeting, NHDP also shared its report on an action plan to make the ERC operational with him. NHDP expects and looks forward to working closely with him on ERC matters as well as on ERC/MoEWRI relations after the ERC is operational.

b. Recommendation Committee:

In November 2018, the GoN formed a three-member Recommendation Committee (Recommendation Committee), the task of which was to prepare a shortlist of prospective commissioners. The Recommendation Committee, headed by Irrigation Secretary Sanjay Sharma, included Megh Bahadur Bishwokarma, electricity expert, and MoEWRI Toya Nath Adhikari, Joint Secretary. On 16 November 2018, a public notice inviting applications for the Commissioner’s positions was published. The invitation for applications closed on December 6. By that date, a number of qualified applicants had lodged applications. The Recommendation Committee conducted interviews of the qualified applications on 24 December 2018. This was followed by the preparation of a shortlist of recommended candidates to submit to the Cabinet. On the basis of time frames set out in the ERC’s Implementing Regulation, commissioners could be appointed in January 2019, and the ERC could be constituted in January or February of 2019.

c. Instructions from MoEWRI to NHDP:

In November, NHDP also conducted a detailed round of discussions with MoEWRI Joint Secretary Dinesh Ghimire, who informed NHDP that the GoN welcomes all of the technical and capacity building support that NHDP can provide to ERC, subject to consent of the commissioners. JS Ghimire also indicated that the MoEWRI considered NHDP’s support to ERC as a first priority for project support to the ministry. Joint Secretary Dinesh Ghimire was promoted to the post of Energy Secretary of MoEWRI on 24 December 2018 following the resignation of Anup Kumar Upadhyaya. Prior to his appointment as Secretary, NHDP had been coordinating all its activities at MoEWRI with Mr. Ghimire.

d. Nature of the ERC Work Plan:

In mid-December, NHDP assured MoEWRI that the detailed work plan to make ERC operational was merely advisory in nature and in no way binding on ERC. From the moment the Commissioners are appointed, the Commissioners themselves will determine what in the way of technical assistance it requires from NHDP, USAID, or any other Donor Partner.

e. Study Tour Planning:

During the early days of this Quarter, NHDP had planned to make arrangements to send all five of the commissioners to be appointed to the two-week international training program on Utility Regulation and Strategy organized by the Public Utility Research Centre (PURC) and World Bank at the University of Florida on January 14-25 of 2019. Toward that end, discussions were initiated with the World Bank office in Nepal to fund that training tour. Unfortunately, delays in the appointment process required this approach to be abandoned. In lieu of the Florida training, NHDP has identified another international training, a four-day program on ratemaking at Michigan State University for April 7-10 of 2019. NHDP will continue to coordinate with the Millennium Challenge Corporation (MCC) and the World Bank to ensure funding and access of the best quality training to the commissioners at the earliest possible moment.

f. Donor Coordination:

Also during this Quarter, NHDP’s Contracting Officer’s Representative (COR), Shanker Khagi, was tasked to guide donor coordination between the World Bank, the Asian Development Bank and other Donor Partners as they reach a consensus of what support will be required for ERC and when.
On 26 November 2018, the NHDP Team, Shanker Khagi and representatives from the Asian Development Bank met to review NHDP’s implementation plan and proposed budget, and to answer any questions ADB might have regarding funding requirements.

During the week of 10 December 2018, the NHDP team met with MCC representatives from Washington to discuss with GoN stakeholders and those Donor Partners active in the electricity sector the assistance needs of NEA and NHDP’s plans to make ERC operational.

g. Regulatory Preparedness Training for NEA:

On 17 December 2018, NHDP received the formal acceptance and approval to conduct training for NEA on matters of regulatory preparedness. The proposed training, comprised of four-modules (13 sessions) of presentations, a workshop for senior managers at NEA, and a study tour to India to visit a private utility dealing with hydropower, was approved by NEA. The training is scheduled to begin by 17 January 2019 in Kathmandu. This is discussed in further detail in Part 3 (a) of this Report.

h. Briefing to SEED Partners, USAID:

Finally, on 26 October 2018, NHDP was pleased to be invited to the US Embassy to make a presentation to the SEED Partners and other interested embassy staff to discuss cross-border electricity trade. This was a continuation to the earlier meetings of 18 September and 25 September 2018, in which NHDP presented on the benefits of sector regulation, progress to date, and prospects going forward.

Activities related to ERC are expected to be accelerated in the next quarter, including actual commencement of technical assistance and capacity building assistance.

LEGISLATIVE, POLICY, AND TRANSACTIONAL SUPPORT

a. Development of new Legal Frameworks

If distribution companies are going to be established in Nepal’s provinces under Nepal’s new Constitution and if regional power trade is to be expanded, it is widely understood that the legal framework for Nepal’s electricity sector will require significant revisions. During this Quarter, the MoEWRI clearly expressed its intentions on both of these points.12 NHDP played a significant role in that workshop. Prior to and during the workshop, NHDP again expressed its willingness to support the MoEWRI in the development of the required legal framework. NHDP looks forward to working with the newly-appointed Secretary of Energy, Dinesh Ghimire as he seeks to implement these policies and legal obligations.

b. Facilitating Cross-Border Trade and Implementing the Power Trade Agreement

While a great deal of progress has been made in implementing the Power Trade Agreement (PTA) between the Government of India (GoI) and the GoN, during this Quarter, the contractual framework that will underlie PTA arrangements has raised internal concerns on the Nepal side of the border.

The MoEWRI and NEA are currently struggling to agree on the form of PPAs for run-of-river type hydropower projects. During this Quarter, the MoEWRI asked NEA to convert all of its take and pay PPAs to ‘take or pay’ contracts; it also instructed NEA that going forward, all PPAs should be ‘take or pay’ contracts until Nepal’s installed capacity reaches 5,250 MW, projected to occur sometime in FY 2027/28. While the ‘take and pay’ model allows NEA to buy electricity on an as needed basis, the ‘take or pay’ approach requires the buyer to pay the contracted amount even if it cannot sell (or cannot evacuate) the energy. NEA is currently contracted to purchase 1,247 MW under the take and pay format. While the take or

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12 World Bank Consultative Workshop on Strategic Energy Policies, 5 and 6 November 2018.
pay structure raises risks to NEA if power lines to evacuate power are not completed on time, the take or pay model is essential for foreign investment in large projects. In NEA’s view, all such agreements will require a government guarantee to cover NEA’s contingent liabilities.

The MoEWRI’s white paper, issued in May 2018, calls for Nepal’s generation capacity to reach 15,000 MW (10,000 MW for domestic consumption and 5,000 MW for export) in 10 years. Most of that increase will come from run-of-river projects. Although the MoEWRI has publicly said that the GoN will cover contingent liabilities for these projects, NEA has approached the Ministry of Finance for further assurances.

On 18 December 2018 the MoP of the GoI rescinded the previously issued cross-border trading of electricity guidelines (the 2016 Guidelines) and issued new Guidelines for Import/Export (Cross-Border) of Electricity, 2018 (Cross-Border Guidelines). The Cross-Border guidelines substantially address comments and concerns raised by Nepal related to non-discriminatory access by Nepali power producers to the Indian electricity market. The 2016 Guidelines contained restrictive provisions that permitted export of power from Nepal to India only from projects owned by the GoI or having a majority Indian share. NHDP provided technical support both to MoEWRI and IBN as they prepared their comments to the 2016 Guidelines. Those comments were submitted by GoN to GoI, which led to removal of the restrictive provision in new guidelines issued by GoI.

The Cross-Border Guidelines are significantly less restrictive than the 2016 Guidelines. The severe qualification criteria linked to equity ownership for participating entities have been relaxed; nevertheless, each time an approval from the Designated Entity must be secured. The grant of such an application is by no means certain and requires an assessment of each project’s equity ownership characteristics. An approval to export to India might, for example, be refused if the Designated Entity is not satisfied with project’s equity ownership scheme, or if the GoI does not concur. While the language in the Cross-Border Guidelines appears more lenient than in the previous version, the leeway for discretion on the Indian side remains intact.

The Cross-Border Guidelines also provide for trilateral arrangements which can foster power trade between Nepal and Bangladesh. However, such arrangements are only possible if there are pre-existing bilateral agreements between India and the other two countries and a concluded transmission agreement with India’s Central Transmission Utility.

NHDP will continue to support the GoN as it seeks to interpret the import of these PTA implementing arrangements and to develop comments thereto.

c. Support as required to Support the MoU between Nepal and Bangladesh

Reference is made to the brief discussion on this issue provided in Part 1 (B) Table 6 of this Report.

Soon, Nepal’s rising hydropower capacity will, for the first time, result in Nepal’s generation capacity being sufficient to meet and even exceed domestic demands. New regional markets will be required to purchase that surplus if the HPP industry is to fully support Nepal’s economic potential. Bangladesh has long been identified as an attractive market for Nepal’s surplus energy. By accessing Nepali production, Bangladesh can not only meet its rapidly expanding energy needs, it can also substitute its current production with clean energy. From the perspective of the GoB, these advantages are made even more attractive by the respective countries’ seasonal complementarities, namely, that Bangladesh requires increased amounts of electricity during the summer months when power generation is at its peak in Nepal.
Strengthening the energy links between the GoN and the GoB continued this Quarter, when on December 3 and 4, officials of the respective countries’ Joint Steering Committee and the Joint Working Group met in Kathmandu to further discuss the export of electricity to Bangladesh using Indian power lines, the possibility of attracting Bangladeshi investment in Nepal’s hydropower sector, and progress by Bangladesh’s state-owned power utility in concluding PPAs with GMR and Indian trading companies for the purchase of power from the Upper Karnali HPP. The meetings also discussed the possibility of using Bangladeshi investments to develop two HPPs comprising 1600 MW of capacity: the 1,110 MW Sunkoshi II HPP and the 536 MW Sunkoshi III HPP.

d. Support to MoEWRI to rationalize Water Resource Management Issues and Electricity Sector Development Issues

Since its inception, NHDP has recognized the importance of reconciling the use of water resources for all lawful uses, including hydropower development. Such competing interests suggest the need for an appropriate legal, regulatory and administrative framework, inter-sectoral allocations, investment policies, and the harmonization of regulations on one part of a river basin that may affect sector activities on other parts of the same basin.

The establishment and operationalization of ERC, together with the consolidation of water resources and electricity sector development competencies within the MoEWRI, now opens the door to NHDP continuing that work with other Development Partners to meet this mutually-acknowledged end.

During the previous Quarter, NHDP began consultations with USAID’s PANI Project to learn more about the mechanisms of water allocation that are included in the work plan, with the goal of presenting case studies on how water resources and electricity planning are conducted in other countries throughout the region. Now that the Ministry of Energy has merged with the Ministry of Water Resources and Irrigation, it is hoped that such support can open pathways to new dialogues which will benefit the new ministry and both sectors.
PART 3: CROSS-CUTTING ACTIVITIES

As HPP development gains momentum in Nepal and as the number of projects increase, conflicts between HPP developers and other water resource stakeholders are inevitable.13 During NHDP’s Second Year, members of the NHDP team spoke on these issues, both at the Nepal Power Summit and at an IFC-sponsored workshop on local shares at the Gokarna Resort. During Year 3, NHDP contracted with local experts to support NHDP on cross-cutting environmental and social (E&S) issues, both in the transactional and policy spheres.

During this Quarter, on November 5 and 6, NHDP participated in the World Bank’s two-day Workshop on Strategic Energy Sector Policies in Nepal held at the Gokarna Resort in Kathmandu. NHDP also co-sponsored a five-day training on Hydropower Financing and Risk Management as discussed below.

On December 3, Rob Taylor, Chief of Party, joined the Chief Justice of the Supreme Court of Nepal at the office of the Nepal Bar Association, making a presentation on the public marking of the publication of a book by Nepali Lawyer Rudra Sharma, comparing Nepal’s new federalism model with those of India and the United States. The book, published by Adroit Publishers, India, is a first of its kind dealing with evolving federalism issues in Nepal. There will be many such books to follow and NHDP was pleased to be invited to participate.

The evolution of Nepal’s hydropower sector, particularly unbundling of the distribution function, will be driven in the near term by the constitution’s requirements that the center devolve power to the provinces.

(A) PREPARING NEA FOR REGULATION UNDER THE ELECTRICITY REGULATORY COMMISSION

The ERC is expected to be operational in early 2019. Since the passage of the ERC Act, NEA, a licensed entity,14 is now subject to the regulatory jurisdiction of the Commission in matters that include tariff determination, the approval of power purchase agreements, protection of consumer interests and complying with license conditions. Since the transition to independent regulation is perhaps the greatest change in the restructuring of Nepal’s electricity sector, it will be necessary for NEA to take a number of institutional and procedural measures to comply with the requirements of the evolving regulatory framework.

Taking into account that NEA is the principal player in Nepal’s electricity industry, and the importance of having a smooth transition to independent regulation, in November 2018, NHDP formally offered capacity building support to NEA as it prepares for regulatory oversight and compliance monitoring.

Prior to lodging the formal offer, NHDP worked closely with its subcontractor, VRock, to plan and begin to execute a series of trainings and workshops to assist NEA to prepare itself for regulation under the ERC. For the avoidance of doubt, in this work NHDP does not act on behalf of the new regulator, ERC, but rather as a generic trainer on the roles and

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13 Following international practices, Nepal’s applicable law, the Water Resources Act, prioritizes the use of water for hydropower fifth, following drinking, irrigation, livestock, and fisheries.

14 “Licensed Entity” or “licensee” generally means the holder of a license issued by the sector regulator to provide electricity services. In Nepal, however, the Electricity Regulatory Commission (ERC) is not authorized to issue licenses. In the absence of a work-around, this results in a lacuna of regulatory jurisdiction. In this case, the work around is found in the ERC Act. That legislation defines the term “licensed entity” to be an entity holding a license from DoED. The work around stipulates that such an entity is subject to the regulatory jurisdiction of the ERC, despite the fact that such license is not issued by the regulatory body.
responsibilities of regulators and regulated entities. The training program, as designed, includes:

- A four-module/13 session training designed specifically for mid-level managers, which may last for 2 calendar months (once a week, two sessions each day);
- A one-day/half-day workshop for senior and middle managers; and
- A study tour to visit a private utility, preferably having substantial hydropower purchase contracts in India.

The training will be conducted principally by NHDP with heavy support from VRock. VRock will also be extensively trained on the subject matter using a "train the trainer" approach, which will build local capacity and enable the subcontractor to carry on similar trainings in the future.

The training is scheduled to begin on 17th January 2019, in Kathmandu. The tentative training schedule is attached as Appendix 1.

(B) NEGOTIATION SKILLS TRAINING FOR OIBN AND MOEWRI

As previously discussed in section (C)(ii), NHDP plans to support Negotiation Skills training conducted by an international trainer for OIBN, MoEWRI and other relevant stakeholders or GoN senior officials in the first quarter of CY 2019.

(C) STUDY TOUR TO LAOS

During the previous quarter, at OIBN's request, NHDP and OIBN held discussions on the possibility of using the country of Laos as a case study, in lieu of the previously envisioned country of Bhutan for the 2019 HPP study tour. As dam safety has become a big issue in Nepal over the previous year, it was thought that more value-add could be derived from Laos, which might be a more attractive location for several reasons.

Laos, like Nepal, is landlocked and derives most of its energy from hydropower. Being a member of the Greater Mekong Sub-region (GMS) Economic co-operation, Laos is an active power trader in the South East Asia region. The hydropower potential of both countries and the potential electricity market opportunities provided by a larger neighbor (Thailand for Laos and India for Nepal) all support a visit to Laos by the Nepal delegation. With 52 power plants now operation, Laos is poised to realize its electricity ambitions. With an installed capacity of approximately 7,000MW which is approximately 75% of its technically exploitable capacity (only from hydropower resources), the Lao government expects to achieve 27,000 MW, from all sources, by 2030. This, plus the opportunity to understand how the power sector contributed to Laos’ national growth15 makes the visit beneficial.

The study visit to Laos is intended to realize the following objectives:

- To understand the policy level issues that have been addressed to enable the sector to grow as rapidly as it has over the last decade.

15 Lao PDR, a lower-middle income economy with a GNI per capita of $2,270 in 2017, is one of the fastest growing economies in the East Asia and Pacific region and the 13th fastest growing economy in the world. GDP growth averaged 8 percent over the last decade.
To understand the relationship between the state-owned generation assets and Independent Power Producers (IPPs).

To see and understand how the Government of Laos (GoL) has managed to implement and monitor the country’s numerous IPP’s.\(^{16}\)

To understand the legal and regulatory requirements related to due-diligence, independent reviews of the project components/project documents, to meet best industry practices, and social and environmental issues.

To learn about leading international practices related to the technical standards for hydropower development.

To understand the technical issues that often emerge during the periods of construction and post-construction.

To understand the technical approaches being employed in Laos for hydropower project development.

To learn understand the safety aspects of hydropower projects, including, without limitation dam safety, and powerhouse safety and other critical issues, both pre-and during construction; especially what steps have been taken by GoL after the collapse of Saddle Dam D in Laos’ Champasak Province in July 2018.

To understand the socio-economic aspects of the hydropower development, including Laos’ approach to involuntary resettlement and issues of livelihood restoration.

To understand mechanisms employed in Laos related to project compliance monitoring and enforcement of social and environmental requirements.

To understand innovative PPP project and financial structuring of hydropower projects.

To understand how Laos’ rapid hydropower development relates to the development of regional power markets, issues of grid code, harmonization of power system etc.

The study tour will include a discussion of policies, legislation and sub-legislation related to hydropower issues, the allocation of projects, comprehensive river basin planning, regulatory activities and the need for independence, and cross border trade issues.

A principal goal of the study tour will be to share experiences on a number of possible approaches to hydropower development and approaches to ensure the timely completion of projects to reduce cost overrun. The specific areas of emphasis would include hydrological and hydro-meteorological studies, advanced forecasting tools and methodologies, project planning and execution, cost estimation, contract management, and social benefits issues.

In late November, NHDP began the process of identifying counterparts and reached out to the USAID mission in Vientiane. Since, OIBN and MoEWRI have not confirmed the date for Laos study tour, formal requests have not yet commenced, but this study tour may be organized somewhere in spring 2019.

**D) RISKS RELATED TO LACK OF CAPACITY**

NHDP has always taken the position that lack of capacity is itself a kind of project risk which inevitably delays and potentially can ruin an HPP’s chance for success. For that reason,

\(^{16}\) 27 HPP are managed by independent power producers and have an installed capacity of 5,652.45MW
NHDP continues to dedicate a substantial portion of its time and resources to build the capacity of HPP-related public and private institutions.¹⁷

Most, though not all, of NHDP trainings have been aimed at raising the capacity of GoN staff and consultants only, not private developers or lenders. However, training only one side of the table (government) on risks and financing is not enough. Private sector developers and lenders must also be aware of new developments and have the same skills.

(i) "Hydropower Financing and Risk Management in Nepal";

On November 26, NHDP co-sponsored, together with the Energy Development Council (EDC) of Nepal, Nepal Bankers’ Association and the International Centre for Hydropower (ICH) for a five-day seminar for bankers and HPP developers entitled "Hydropower Financing and Risk Management in Nepal". The week of training attracted more than 100 participants from Nepal, South Asia, and Africa. During the seminar, NHDP delivered training sessions on (i) the Electricity Regulatory Commission and the emerging legal, policy and regulatory framework for hydropower in Nepal; (ii) regional cross-border and South Asian Association for Regional Cooperation (SAARC) model Regulations; (iii) local benefit sharing in hydropower projects; and (iv) hydropower financing options in Nepal, including EPC-F projects.

¹⁷ To date, capacity building has included (i) on-the-job training on transactional issues at OIBN; (ii) modular training for MoEWRI, NEA, DoED, OIBN, and law students from the University of Kathmandu Law School; (iii) advanced financial modeling training for OIBN; (iv) financial training and modeling for MoEWRI; (v) lectures on location at Kathmandu Faculty of Law; (vi) a study tour to Vietnam for OIBN and Nepali Parliamentarians; (vii) a study tour to Delhi for the ERC Regulation Drafting Committee; (viii) support for and participation in journalist training workshops and other local stakeholder support in project-affected areas; (ix) workshops for public and private stakeholders on local banking and insurance issues; and (x) multi-media support at OIBN.
During the week of 26-30th November 2018, NHDP joined forces with the Energy Development Council (EDC) of Nepal, Nepal Bankers’ Association and the International Centre for Hydropower (ICH-Norway) to conduct a five-day training for bankers and HPP developers entitled “Hydropower Financing and Risk Management in Nepal”. The event brought all three stakeholder groups--sponsors, lenders and government officials together to consider and discuss financing and risk management issues.

During the seminar ICH focused on Nepal’s banking community, whose job it is to conduct due diligence and risk assessment for HPP proposals prior to making any decisions on funding. The seminar provided an opportunity for NHDP to balance the international experiences of ICH with real-time developments in HPP structuring and financing, the allocation of local shares (a constitutional mandate), regional cross-border and model regulations issued by the South Asian Association for Regional Cooperation (SAARC), and hydropower financing options.

It also gave NHDP’s four presenters an opportunity to discuss the ways that electricity sector regulation under the new regulator, ERC, will affect the work of the banking community and private investors. Since the government’s issuance of Regulations to establish ERC in September 2018, bankers are now required to be aware of the “new world” in which, investments will be made, and the issues that they will have to incorporate into their due diligence reports. Private investors also need to understand the new regulatory framework under which they will operate. Specifically, they need to understand the benefits of regulation.

NHDP has, in the past two years, conducted workshops for the local banking and insurance sectors. This seminar also provided NHDP with an opportunity to reconnect with a number of participants from those workshops, and to re-emphasize the project’s findings and recommendations regarding how both the banking and insurance sectors can grow by developing new products for a regulated sector. Master’s Degree candidates from the Kathmandu University School of Law also participated in the seminar as guests of NHDP.
(ii) Planning for other Capacity Building Interventions:

During this Quarter NHDP also continued working with OIBN and MoEWRI to refine their capacity building requirements, including interventions in- and outside of Kathmandu, and a study tour to Laos.

On 20th December, the NHDP team had a meeting with Mr. Netra Prasad Gyawali (CEO, Rastriya Prasaran Grid Company Limited-RPGCL). Mr. Gyawali mentioned that RPGCL is looking for technical assistance; specifically, capacity building training (e.g., training in designing transmission line towers and routes, and substation building). NHDP will continue to work with RPGCL to identify where NHDP can provide value to the new company in the future.

As a result of the legal support that NHDP is providing to various bodies in the GoN, NHDP’s Chief of Party, Rob Taylor and project legal specialist, Semanta Dahal have been appointed visiting faculty members to the Kathmandu University School of Law as it inaugurates its new Master’s Degree program entitled “Masters by Research in Energy and Infrastructure Law”.

Rob Taylor, Chief of Party, delivering his review during book launch, Kathmandu December 2018
PART 4: DONOR COORDINATION

(A) WORK WITH DEVELOPMENT PARTNERS

Since the project’s commencement, NHDP has expanded the scope of its activities to include nearly daily support to many of the GoN’s principal electricity development HPP development institutions depicted in Figure 1. Because Nepal’s Development Partners work closely with each of these institutions, NHDP constantly crosses paths with a number of significant sector supporters, including DFID, the World Bank, the IFC, the Asian Development Bank, JICA, GiZ, and the three branches of USG donor support, USAID, Department of State (DoS), and the Millennium Challenge Corporation (MCC).

During this Quarter, NHDP continued to work with Donor Partners, including the Asian Development Bank (ADB), DFID, MCC, IFC and the World Bank (WB), in the following areas:

- Continuing to refine the Road Map to make the regulator operational and to allocate funds for that purpose
- Continuing to support the Arun 3 PMU
- Continuing to mobilize expertise for stakeholder outreach initiatives related to
  - The Allocation of Local Shares for large HPPs, with possible wider application to small and medium-sized HPPs
  - Hedging issues related to the UT-1 HPP
  - Developing Support to NEA to prepare itself for ERC regulatory compliance
- Continuing to revise and update the Risk Matrices for Arun 3 and Upper Karnali
- Continuing to strengthen E&S and GESI interventions related to PAFs

Most importantly, during this Quarter, NHDP continued to be at the forefront of stakeholder engagement seeking to support the making of ERC operational and other sector restructuring matters.

(a) World Bank Workshop on Strategic Energy Sector Policies

On November 5 and 6, NHDP participated in the World Bank’s Workshop on Strategic Energy Sector Policies in Nepal held at the Gokarna Resort in Kathmandu. The workshop was attended by members of the World Bank and other Donor Partners, the Minister, Secretary and Joint Secretaries from MoEWRI, and the Managing Director and senior management of NEA. Chief of Party, Robert Taylor represented NHDP on the program presenting comments and moderating a session on tariffs and pricing of electricity services. NHDP’s Senior Restructuring Expert, Tushar Sud, also actively participated in this program.
as a presenter, and spoke on making regional power trade operational. The workshop gave an opportunity to continue NHDP’s close coordination with the World Bank and many other Donor Partners on issues including the establishment and role of ERC and sector restructuring.

World Bank Consultative Workshop on Strategic Energy Sector Policies

On November 5 and 6, NHDP participated in the World Bank’s Workshop on Strategic Energy Sector Policies in Nepal held at the Gokarna Resort in Kathmandu. The purpose of the workshop was to take stock of the progress in energy sector reforms in Nepal and to discuss the way forward.

Present were members of the World Bank teams from Nepal and Washington, including Faris Hadad-Zervos, Country Manager, Xiaoping Wang, Energy Lead for Nepal, and Senior Energy Specialists, Rabin Shrestha, Pedro Antmann and Gallius Draugellis. All Donor Partners supporting the electricity sector were also in attendance, as were the Minister, Secretary and Joint Secretaries from the Ministry of Energy, Water Resources, and Irrigation, the Managing Director and senior management of the Nepal Electricity Authority (NEA).

Chief of Party, Robert Taylor represented NHDP on the program presenting comments and moderating a session on tariffs and pricing of electricity services. NHDP’s Senior Restructuring Expert, Tushar Sud, also actively participated on this program as a presenter who spoke on making regional power trade operational. They were supported by team members Hari Prasad Subedi and legal specialist Semanta Dahal.

The workshop gave an opportunity to continue NHDP’s close coordination with the World Bank and many other Donor Partners on issues including the establishment and role of ERC, sector Restructuring, regional power trade, and improving the viability of NEA.
(b) MCC Needs Assessment Workshop:

On 10 December, the NHDP team participated in a training needs assessment workshop sponsored by MCC to discuss the technical assistance (TA) needs of NEA. Participants at the workshop included MCC, MCC consultants engaged to draft the Terms of Reference (TORs) for TA to NEA, the Millennium Challenge Account-Nepal (MCA-N), a senior delegation from NEA, and NHDP. The aim of the workshop was to kick off what is expected to be a several-month process of counterpart and stakeholder engagement.

MCC intends to have TORs for TA to NEA prepared in August or September 2019; the TA is expected to begin in January 2020 and last for five years. While NEA is seeking as much technical assistance as possible during the compact term, for two reasons, it is very important for MCC not to abandon ERC support to other Donor Partners. First, as was clearly stated by MCC representatives, it is important for MCC to maintain control over any risk to the MCC compact that are raised by failure to properly launch ERC. MCC cannot rely on other donors to protect MCC’s interests. Second, because MCC has identified a number of pre-conditions to commencing the Compact; one of those is that concrete steps be taken by GoN to ensure that proper electricity sector regulation is going forward.

Owing to delays in commencing the Compact, it is clear that MCC will not be able to begin deploying funds to support either NEA or ERC prior to 2020. That means that it will be necessary to fill the ERC’s early funding gaps through non-MCC funds. At this early stage in the process, it is far too early to know with any precision what support ERC will require in 2020. It is hoped that much will be accomplished for ERC during 2019, and that work in 2020 can seamlessly continue. During 2019 it is certain that MCC will conduct the same kinds of TA needs assessments with ERC that began in December with NEA. NHDP will continue to engage with the Asian Development Bank and the World Bank to ensure that there is sufficient coverage to meet the immediate needs of the new regulator.
### Table 8
Development Partners in Nepal's Hydropower Sector

<table>
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<tr>
<th>Donor Program</th>
<th>Areas of Current Activity / Potential Future Collaboration</th>
<th>Risk Focus</th>
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| **USAID: South Asian Regional Initiative/Energy Integration (SARI/EI)** | - Collaboration on training and twinning services, particularly cross-border Nepal-India electricity trading, capacity building for the future Nepal electricity regulator, and additional transaction advisory services to OIBN  
- Collecting outputs and requirements asked of the GoN from the three SARI/EI Joint Committees as potential areas for NHDP to support with technical assistance and capacity building  
- Co-sponsored Vietnam Study Tour for GoN officials in 2017 | Utility Risk, Trading Risk, and Regulatory Risk |
| **USAID: Water Resources Management NHDP (PANI)** | - Collaboration on Environmental and Social (E&S) issues to mitigate negative impacts of hydropower projects on rivers, river basins, and communities, particularly those populations most vulnerable such as female-headed households  
- Training at the MoEWRI on E&S matters over and above basic Environment Impact Assessment (EIA) issues. Flag major E&S issues that arise out of PDAs or project reviews and communicate with Program for Aquatic Natural Resources Improvement (PANI) to potentially provide mitigating solutions  
- Recommend additional changes on revised water resources act, carrying out by MoEWRI | Environmental, Social and Planning Risks |
| **Millennium Challenge Corporation (MCC) Energy Compact Preparatory Work** | - MCC signed its Compact with GoN on 14 September 2017  
- NHDP has collaborated closely with MCC on the drafting of legislation to establish a regulator. The Act to establish the Electricity Regulatory Commission of Nepal was passed by the Parliament in August and signed by the President on 4 September 2017. NHDP will continue to work with MCC and other Donor Partners to make the institution operational during the balance of Project Year 4 and beyond | Policy Risk, Country Risk |
| **Department of State Regional Activities** | - Coordination with the Department of State on energy sector regulatory reform in Nepal to enable synergies particularly as it relates to establishing the Transmission Company (Transco) | Policy Risk, Restructuring Risk, Utility Risk |
| **World Bank** | - Support to Kabeli-A HPP  
- Nepal: Power Sector Reform and Sustainable Hydropower Development (PSRSHD)  
- Additional Financing for Nepal-India Electricity Transmission and Trade NHDP  
- Nepal-India Electricity Transmission and Trade  
- Nepal - Village Micro Hydro  
- Scaling-up Renewable Energy Program (SREP)-Supported Extended Biogas Project  
- Nepal: Grid Solar and Energy Efficiency  
- Nepal Energy Sector Development Policy Credit  
- During Year three NHDP has collaborated closely with the World Bank on repurposing Kabeli-A HPP funding to OIBN; developing an effective legal framework for the ERC, funding the ERC during its Roll-Out Phase | Policy Risk, NHDP Completion Risk, Trading Risk |
| **DFID** | - At OIBN, monitoring and mitigating various project risks for the Upper Kamali HPP and the Arun 3 HPP  
- At OIBN, supporting the Communications Unit  
- At OIBN, implementing a more rational phasing of project work  
- At OIBN, addressing issues related to local benefits and investment participation  
- Continuing to develop other template contracts that can be used on all large HPPs  
- At the MoEWRI, supporting the establishment and training the Ministry’s project implementation unit for the UT-1 HPP  
- At the MoEWRI, supporting the development of a workable PPA for UT-1 and transforming that document into a bankable standard form template for all subsequent domestic HPPs | Policy Risk, NHDP Completion Risk |
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>GIZ</strong></td>
<td><strong>Energizing Development (EnDev) Nepal</strong>&lt;br&gt;Advisory services for energy efficiency in Nepal</td>
<td>Policy Risk and Energy Savings</td>
</tr>
</tbody>
</table>
PROJECT MANAGEMENT AND ADMINISTRATION

NHDP completed the following activities related to the management and administration of NHDP over the course of this Quarter:

- Submitted timely quarterly accruals, quarterly reports, weekly reports, invoices and other required and ad-hoc deliverables
- Worked closely with Contracting Officer's Representatives (COR) to appropriately manage budget and project priorities
- Continued discussions on NHDP expenditures and level of effort with COR, with a plan to revisit in early 2019 in case of possible need for Level of Effort (LOE) contractual revisions or no-cost extension
- Successfully completed USAID Data Quality Assessment (DQA) with positive results and no material issues or findings
- Continued ongoing activity related to procurement, international travel, financial management, compliance, and monitoring and evaluation
- Successfully organized and supported capacity building events for counterparts (including SIAC workshop on arbitration, and EDC event on hydropower financing)
- Continued work with OIBN and subcontractors as appropriate to refine and implement Annual Activities Plan and Year 4 Work Plan
- Met with counterparts to discuss execution of Year 4 work plan
- Successfully obtained Branding and Marking waivers, when appropriate, with regards to recent security-related restrictions, and co-branding with GoN counterparts
- Renewed and funded annual contracts as appropriate
- Continued to meet financial obligations, reporting deadlines and daily activities
- Participated in USAID Implementing Partner meeting, Ambassador reception, SEED and M&E meetings

FORECAST FOR NEXT QUARTER

Table 9 summarize how NHDP expects to concentrate project efforts during the next quarter and throughout the remainder of NHDP's Year 4. These activities are divided into three parts: (i) support to OIBN; (ii) support to MoEWRI; and (iii) support to cross-cutting Issues.

Component 1: Advisory support to facilitate the development and financial closure of large and medium hydroelectricity projects

Table 9 provides a summary of the work NHDP proposed to carry out at OIBN during the following quarter, and throughout Year 4. As directed, this will include, as counterparts, GoN officials, various ad hoc committees, and DFID-funded consultants. This work was finalized with OIBN Staff during the month of October 2018.

Table 9

Proposed NHDP Support to OIBN Going Forward

<table>
<thead>
<tr>
<th>Proposed NHDP Support to OIBN Going Forward</th>
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</thead>
<tbody>
<tr>
<td>Legal and transactional support for existing projects</td>
</tr>
<tr>
<td>• Arun-3 (see below)</td>
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<tr>
<td>• Upper Karnali (see below)</td>
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<tr>
<td>• Upper Marsyangdi 2 (see below)</td>
</tr>
<tr>
<td>• Develop initial risk matrices for new projects and assist OIBN to update existing matrices</td>
</tr>
</tbody>
</table>

Table 9
| Arun 3: NHDP will continue to support OIBN on the operationalization of the Project Monitoring Unit (PMU) for Arun 3, including | • Develop a project dashboard for use on all HPPs  
• Draft By-laws and other process documents  
• Develop reporting templates  
• Assist OIBN to review submissions by the developer on matters identified in the Arun 3 PDA and as agreed by the parties |
| --- | --- |
| Upper Karnali | • Support to OIBN as required to support achievement of FC  
• Social and Environmental support as required  
• PAP/locally affected people support  
• Local Shares |
| Upper Marsyangdi-2 | • Prepare PDA and PPA template for negotiation |
| Repackage existing HPPs for retendering | • NHDP offers to OIBN, upon request, specific support related to project phasing or to package or repackage existing projects for public tenders (Subject to approval by USAID) |
| Social and Environmental Support to Arun 3 or other ongoing HPPs | • Stakeholder engagement activities as identified by OIBN (e.g., assisting OIBN to verify conformity of environmental studies) and approved by USAID  
• Other social and environmental data collection activities, including surveys |
| Local Shares Mechanism Report and Recommendations | • Continuing support to OIBN, as requested, on specific matters related to the adoption by OIBN of a mechanism for the allocation of local shares, compensation principles or benefit sharing principles for large HPPs |
| Capacity Building (discussed in Part 3 of this Report: Cross-Cutting Issues): | • Modular training for OIBN staff and consultants, as requested  
• Negotiation Skills Training: At the request of OIBN and other GoN counterparts, NHDP organized and contracted for a three-day negotiation training course led by an international instructor in Kathmandu. The program was canceled at the request of OIBN in June. NHDP re-offered this training to OIBN and OIBN has confirmed the date from 15 to 17 February 2019.  
• Financial and Excel Training for Staff and Consultants at OIBN. As it did in 2017, NHDP is prepared to support OIBN staff and consultants on financial issues and excel modeling  
• Workshop on Disaster Management Plan with gap analysis on Disaster Management Plan of Arun-3 HPP (which was submitted by SAPDC to OIBN), has been scheduled for 18 January 2019.  
• Other relevant trainings as requested related to HPP projects |
| Working with the OIBN Communications Unit, continue to support OIBN’s stakeholder engagement activities. | • Pursuant to requests from OIBN, NHDP will continue to support stakeholder engagement interventions, including workshops, and the production of a number of PSAs and documentary films on HPP development |
| Study Tour to Laos | • The study tour will include a discussion of principal policies, legislation and sub-legislation related to hydropower issues, project management and monitoring, disaster management, managing safeguards and Resettlement and Rehabilitation (R&R) issues, including communication with Project Affected Populations (PAPs). |
**Component 2: Advisory support to the MoEWRI, the NEA, other key sector stakeholders with designing and implementing targeted electricity sector reforms**

Table 10 provides a summary of the Transactional support to MoEWRI that NHDP has proposed to provide at MoEWRI during the following quarter, and throughout Year 4. As directed, this will include, as counterparts, GoN officials, various ad hoc committees, and DFID-funded consultants. This has not been formally approved by MoEWRI owing to the appointment of Joint Secretary Ghimire to the position of Secretary. NHDP will pursue formal approval from new appointees at the MoEWRI in the next quarter.

**Table 10**  
Proposed Transactional Support to MoEWRI Going Forward

<table>
<thead>
<tr>
<th>Proposed Transactional Support to MoEWRI Going Forward</th>
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<tbody>
<tr>
<td><strong>Continuing Support to bring UT-1 to FC</strong></td>
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<tr>
<td><strong>Support to Khimti-1 HPP</strong></td>
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<tr>
<td><strong>Disaster Management Planning</strong></td>
</tr>
</tbody>
</table>
| **Local Shares work with NWEDC through UT-1 PIU** | • Leverage the work already accomplished at OIBN together with the work of the entire NHDP team on local shares and benefits  
  • With the concurrence of MoEWRI, work with NWEDC (the developer) to produce a mechanism for the allocation of local shares |
| **Other HPP Transactional Support to MoEWRI as required** | • Provide additional support to MoEWRI (as requested) as other projects are allocated to DoED or any other department under MoEWRI |
| **Facilitating Cross-Border Trade and Implementing the Power Trade Agreement** | • Facilitate enabling framework for implementation of cross-border regulations issued by Central Electricity Regulatory Commission (CERC) in Nepal (as requested)  
  • Include in as requested, training or other types of capacity building |
| **Project Templates** | • Working with DFID and its implementing partners, and with the assistance of international legal support, finalize a PPA template on the basis of the finalized UT-1 PPA that can be used to support other domestic PDAs and PPAs (dollar denominated). Requires approval by banks of the hedging mechanism for dollar PPAs. |
| **Social and Environmental Support to UT-1 or other ongoing HPPs** | • Assist MoEWRI to conduct stakeholder engagement activities as identified by MoEWRI (e.g., to verify conformity of environmental studies with PDA or other legal requirements) and approved by USAID  
  • Conduct other social and environmental data collection activities, including surveys |
| **Capacity Building** | • Conduct workshop on hedging policy options (if requested by MoEWRI)  
  • Conduct workshop on Transmission Line (TL) Right-of-Way (ROW) compensation models to MoEWRI  
  • Conduct workshop on Negotiation Skills and other relevant training for MoEWRI  
  • Organize other relevant workshops, some of those in association with the PANI project and IFC |
| **Study Tour to Laos** | • The study tour will include a discussion of principal policies, legislation and sub-legislation related to hydropower issues, project management and monitoring, disaster management, managing safeguards and Resettlement and Rehabilitation (R&R) issues, including communication with PAPs. |
Table 11 provides a summary of the Policy and Legislative support to MoEWRI that NHDP has proposed to provide at MoEWRI during the following quarter, and throughout Year 4. As directed, this will include, as counterparts, GoN officials, various *ad hoc* committees, and other consultants.

**Table 11**  
**Proposed Policy and Legislative Support to MoEWRI Going Forward**

<table>
<thead>
<tr>
<th>Proposed Policy and Legislative Support to MoEWRI Going Forward</th>
</tr>
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</table>
| **Continuing Support to ERC (through end of project term)** | • As detailed in the ERC Road Map  
• Continue to support and drive Donor Coordination for the benefit of ERC Commissioners and staff are appointed |
| **Other Legislative Support** | • Additional support to MoEWRI to frame the issues and possible outcomes provided under a number of different legislative scenarios  
• Support to MoEWRI on other interventions suggested by White Paper / Roadmap  
• May result in new legislation for the electricity sector |
| **Local Shares work with NWEDC through PIU** | • Leveraging on the work already accomplished at OIBN and the work of NHDP’s consultants, who worked on the IFC study  
• Possible roll-out to UT-1 and other HPPs |
| **Facilitating Cross-Border Trade and Implementation of the Power Trade Agreement** | • Continue to support the development and implementation of an enabling framework on the Nepal side to implement cross-border regulations issued by CERC.  
• May include capacity building across all electricity sector public bodies |
| **Support to implement the MoU between Nepal and Bangladesh on cross-border trade to support UK HPP** | • Possible support to finalize the MoU between the GoN and the GoB  
• Possible support to implement the MoU through a multi-party Power Trade Agreement (PTA) |
| **Support to MoEWRI to rationalize Water Resource Management Issues and Electricity Sector Development Issues** | • Possible support to MoEWRI or other counterparts as identified by PANI, to frame the issues and possible outcomes provided under a number of different legislative scenarios  
• May result in new legislation for water resource management  
• Possible linkages with ERC |
Summary of NHDP Support on Cross-Cutting Issues Going Forward

Support on Cross-Cutting Issues Going Forward

Table 12 provides a summary of the Cross-Cutting support to OIBN and MoEWRI that NHDP has proposed to provide during the following quarter, and throughout Year 4. As directed, this will include, as counterparts, GoN officials, various ad hoc committees, and other consultants. NHDP’s support to ERC has been informally approved by MoEWRI, subject to ratification by the Commissioners when they are appointed. This Quarter, NEA has approved the regulatory preparedness training. All cross-cutting activities that affect OIBN have been formally approved by the Investment Board this Quarter.

Table 12
Proposed NHDP Support on Cross-Cutting Issues Going Forward

<table>
<thead>
<tr>
<th>Proposed NHDP Support on Cross-Cutting Issues Going Forward</th>
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<tbody>
<tr>
<td>Preparing NEA for Regulation</td>
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<tr>
<td>• 4 modules/13 sessions of training for NEA commencing in January 2019.</td>
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<tr>
<td>• Workshop for senior managers at NEA</td>
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<tr>
<td>• Study Tour for NEA and other GoN stakeholders to Delhi, India to see regulatory compliance by a Distribution Utility in action</td>
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<tr>
<td>Disaster Management</td>
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<tr>
<td>• Stakeholder workshop on development of DMP for all HPPs</td>
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<tr>
<td>Support to Develop Hedging Mechanism</td>
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<tr>
<td>• Specific support to MoEWRI related to UT-1 HPP (as requested)</td>
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<tr>
<td>• Also to provide support to Ministry of Finance and the Nepal Rastra Bank</td>
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<td>• May be relevant for future projects at OIBN</td>
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<tr>
<td>Local Shares Issues</td>
<td></td>
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<tr>
<td>• Mobilize NHDP team to support ad hoc committee at OIBN as required</td>
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<tr>
<td>• Future work anticipated at MoEWRI for the UT-1 HPP through the PIU (DoED)</td>
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<tr>
<td>Social, GESI and Environmental Issues</td>
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<tr>
<td>• Use of Cash Study finalized at OIBN may lead to similar work for the UT-1 or UK projects going forward</td>
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<tr>
<td>• If USAID separately funds and designates a GESI advisor, as per NHDP Task Order, the project will coordinate closely with that person</td>
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<tr>
<td>Continuing Support on International Arbitration Issues</td>
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<tr>
<td>• The successful 2-day workshop conducted in August 2018 may lead to subsequent, more narrowly drawn interventions for the Nepal HPP community</td>
<td></td>
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<tr>
<td>Study Tour to Laos</td>
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<tr>
<td>• The study tour will include a discussion of principal policies, legislation and sub-legislation related to hydropower issues, project management and monitoring, disaster management, managing safeguards and Resettlement and Rehabilitation (R&amp;R) issues, including communication with PAPs.</td>
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</tbody>
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IMPLEMENTATION ISSUES, OBSTACLES, AND DELAYS

OIBN: Relationship with NHDP Clearer and More Consistent

During Year 3, NHDP’s support to OIBN waned, owing to a lack of movement on existing projects and projects in the pipeline, and a refocus by OIBN on non-HPP PPPs.

During this Quarter, following the interruption of support to OIBN during the first quarter of Year 4, NHDP and OIBN worked hard to agree on support that NHDP could provide to OIBN. Numerous drafts of NHDP’s Year 4 Work Plan (for OIBN) were discussed, and much progress was made, prior to formal approval by OIBN of the Work Plan in October. Part of this progress was catalyzed by movement in the Arun 3 HPP which requires specific steps to be taken on the GoN side. NHDP’s support to OIBN now extends to supporting the establishment of the Arun 3 Project Monitoring Unit, developing a project dashboard monitoring tool, supporting the review and revision of the Arun 3 Disaster Management Plan.

The former arrangement, whereby OIBN worked directly with DFID funded consultants, no longer obtains. Going forward, OIBN will determine how consultants, whether funded by USAID or DFID, will be utilized.

During this Quarter, in addition to the work described related to the Arun 3 HPP, NHDP consultants worked directly with OIBN staff and consultants on a number of issues including support to the Upper Karnali HPP related to export sales to Bangladesh, support related to the drafting and negotiation of a PDA and a PPA for the Upper Marsygandi 2 HPP, support to the Communications unit, and capacity building, in the form of negotiations training and a study tour to Laos scheduled for the spring of 2019.

While the current approach of OIBN Staff seems to be of an ad hoc nature, for the time being, such treatment seems to suit OIBN; it is also providing a large amount of work for NHDP. NHDP welcomes the open and day-to-day nature of current relationship and looks forward to expanding support as opportunities arise.

If the proposed legislative changes discussed in this Report come to pass, even this ad hoc approach described above may be overtaken by events. As discussed in detail in Part 1, signals are growing stronger that a new PPP Act will soon be promulgated that will, on the macro level, significantly change the nation’s processes related to PPP identification and execution. Specifically, the new legislation will overturn the existing structure and function of the Investment Board of Nepal. Whether or not it is implemented according to the time frames proposed, it can be expected that changes will substantially affect the relationship between OIBN and other GoN instrumentalities on the management of large and medium HPPs. Doubtless, it will also require many months to implement as the OIBN organization chart is revised and as its team grows to meet its new obligations. NHDP remains ready to assist in strengthening the institution, even in its new form.

MoEWRI: Continues to address issues as they arise

During this Quarter, NHDP has continued its close and collegial working relationship with MoEWRI on all matters related to:

- Making the Electricity Regulatory Commission of Nepal operational;
- Hedging and related issues in support of the UT-1 HPP;
- Local shares issues related to the UT-1 HPP;
- Legal support to the GoN and NEA related to the Khimti-1 HPP;
- Implementation of the PTA with India;
- Collaboration on Transmission line issues;
• Land acquisition for HPPs and transmission lines;
• Sector restructuring; and
• Legislative development (revision of NEA Act and the Electricity Act) driven by the GoN’s transition to a federalist state.

Although each of these are important, MoEWRI has made its position clear that its greatest demands for NHDP resources going forward relate to making the ERC operational.

It is hoped that the collegial working relationship that defined NHDP’s work with MoEWRI under Joint Secretary Ghimire’s tenure will continue in the future and that the project can support the new Secretary’s initiatives as they intersect with the nation’s hydropower sector.

Challenges at OIBN and MoEWRI

The foregoing discussions demonstrate that although many signals are positive, the electricity sector of Nepal continues to operate in a state of flux. While precisely where and how it will flow remains unclear, it is undeniable that the GoN is more stable than it has been since NHDP began its work in Nepal and its vision continues to be strengthened. For NHDP, a number of unknowns remain, including:

At OIBN:

• PPP Act:
  o Will the new PPP act enter into force as planned?
  o How fast will OIBN be able to mobilize to restructure itself and re-staff?
  o How much support will OIBN require from NHDP in the restructuring exercise?
  o Will the new legislation increase the volume of OIBN’s HPP work?

• Arun 3
  o Disaster Management:
    ➢ How much additional support may be required by OIBN or even MoEWRI or other GoN Stakeholders on comprehensive DMP?

• Upper Karnali
  o How rapidly will the power trading between Bangladesh and Nepal be implemented?
  o How fast will the UK HPP move to FC?

• Upper Marsygandi-2
  o How much support will the UM-2 HPP require?
  o How fast will UM-2 move to PDA and PPA conclusion?

• Local Shares
  o Will OIBN decide to tackle issues related to local shares?

• E&S
  o How much Environmental or Social support will OIBN require for Arun 3 and the Upper Karnali HPPs?

At MoEWRI:

• Will ERC have commissioners in January 2019 as proscribed by the law?
• Will Donors mobilize the resources necessary for NHDP to build the capacity of the Commission?
• What other priorities will MoEWRI have for NHDP in addition to ERC?
• How will federalism affect NEA and facilitate sector restructuring and will NHDP called upon to support new electricity sector legislation?

NHDP looks forward to continuing to be engaged in these as well as other identified issues at each of the project’s principal counterpart institutions.
PROPOSED CHANGES TO THE WORK PLAN

As discussed, the Year 4 NHDP Work Plan (Work Plan) has been approved by USAID and OIBN. Though not yet formally approved by the project’s other counterpart, MoEWRI, the Work Plan nevertheless forms the basis for the NHDP’s ongoing relationship with that ministry, pursuant to which NHDP will place heavy emphasis on making ERC operational. The Work Plan will continue to remain a living document and subject to revision upon request of the respective counterpart and approval of USAID.

After the ERC becomes operational, it may also be necessary for NHDP to approach USAID for a contractual budget and LOE realignment, as the original plan did not envision operationalization of the regulator at this stage of the project’s life cycle. As NHDP approaches the end of its period of performance (POP) with only 18 months remaining, it may require some adjustment of level of effort and budget line items, and possibly even a no-cost extension, as previously discussed with the COR and Contracting Officer (CO). NHDP hopes to gain this greater clarity on or about March of 2019, though all will depend on the timeline of the ERC.
### Module – 1: Fundamentals of electricity sector regulation

<table>
<thead>
<tr>
<th>Session</th>
<th>Session Title</th>
<th>Topics Covered</th>
<th>Date (Tentative)</th>
<th>Presenter (Tentative)</th>
</tr>
</thead>
</table>
| 1       | Fundamental concepts in Regulation     | • Concept of regulation  
• Prudence of costs  
• Rewarding efficiency of performance  
• Regulatory Asset Base and Rate of return  
• Cost of service  
• Subsidy and cross subsidy | 17 January 2019 | Rob Taylor  
Arun Anandan |
| 2       | Types of Regulation                    | • Cost Plus Returns  
• Performance Based  
• Retail Price Index  
• Competitive markets | 17 January 2019 | Rob Taylor  
Arun Anandan |

### Module 2: Expectations from regulated entities

<table>
<thead>
<tr>
<th>Session</th>
<th>Session Title</th>
<th>Topics Covered</th>
<th>Date (Tentative)</th>
<th>Presenter (Tentative)</th>
</tr>
</thead>
</table>
| 1       | Accounting and reporting of historical costs and revenue | • Audited accounts  
• Accounting of fixed assets  
• Segregation of accounting data based on functions  
• Other key data points (Consumer category wise revenue, category wise number of consumers, contract demand etc.) | 24 January 2019 | Rob Taylor  
Arun Anandan |
| 2       | Projection of expected costs and revenue  | • Tariff petitions and tariff models  
• Business plan | 24 January 2019 | Rob Taylor  
Arun Anandan |
| 3       | Timely regulatory compliance            | • Quarterly and annual filings  
• Need for a regulatory department  
• Penalties for non-compliance | 31 January 2019 | Rob Taylor  
Sidharth Mani |
| 4       | Performance improvement                 | • Reduction of technical and commercial losses  
• Improvement in customer service | 31 January 2019 | Rob Taylor  
Sidharth Mani |
### Module 3: Tariff process

<table>
<thead>
<tr>
<th>Session</th>
<th>Session Title</th>
<th>Topics Covered</th>
<th>Date (Tentative)</th>
<th>Presenter (Tentative)</th>
</tr>
</thead>
</table>
| 1       | Generation Tariff – Small Hydro and Solar | • Technical and financial parameters  
                    • Tariff modeling  
                    • Levelized tariff          | 07 February 2019        | Rob Taylor  
                    Samrat Roy                  |
| 2       | Generation Tariff – Large Hydro         | • Technical and financial parameters  
                    • Tariff modeling  
                    • Two part tariffs  
                    • Availability based fixed cost recovery | 14 February 2019        | Rob Taylor  
                    Arun Anandan                  |
| 3       | Transmission Tariff                    | • Technical and financial parameters  
                    • Tariff modeling  
                    • Incentive / penalty mechanisms | 14 February 2019        | Rob Taylor  
                    Arun Anandan                  |
| 4       | Distribution Tariff                    | • Technical and financial parameters  
                    • Projection of costs, revenue and revenue gap  
                    • Cross subsidy  
                    • Regulatory Assets | 21 February 2019        | Rob Taylor  
                    Arun Anandan                  |

### Module 4: Simulation workshop

[Conditional upon progress in initial three modules]

- Participants to be grouped into three separate teams: A transmission utility, regulatory commission and public
- Mock hearing / simulation of initial tariff proceedings
- Transmission utility to provide its tariff proposal
- Public to provide their views and inputs, and counters to the tariff proposal
- Regulatory commission to provide its ruling based on submissions of utility and public, and its own analysis

<table>
<thead>
<tr>
<th>Session</th>
<th>Session Title</th>
<th>Topics Covered</th>
<th>Date (Tentative)</th>
<th>Presenter (Tentative)</th>
</tr>
</thead>
</table>
| 1       | Introduction                            | • Introduction  
                    • Methodology  
                    • Information pack – Audited Accounts, additional data, media reports | 28 February 2019        | Rob Taylor  
                    Sreeram Pethi                  |
| 2       | Tariff proposal by the utility          | • Presentation on tariff proposal  
                    • Questions from public  
                    • Questions from regulator | 07 March 2019        | Rob Taylor  
                    Arun Anandan                  |
| 3       | Tariff ruling by the regulator          | • Response of utility to earlier questions from public and regulator  
                    • Additional questions from public  
                    • Response of utility  
                    • Ruling by regulator | 14 March 2019        | Rob Taylor  
                    Arun Anandan                  |
APPENDIX 2: MONITORING AND EVALUATION

1.1. Training/workshop Participants

During this quarter, NHDP organized a number of trainings/workshops for various stakeholders in collaboration with like-minded organizations. The training/workshop participants included GoN employees, researchers, students, lawyers, bankers and Development Partner representatives. During this Quarter, NHDP trained 118 people on clean energy issues and other related topics. Of the 118 participants, 30 were female.