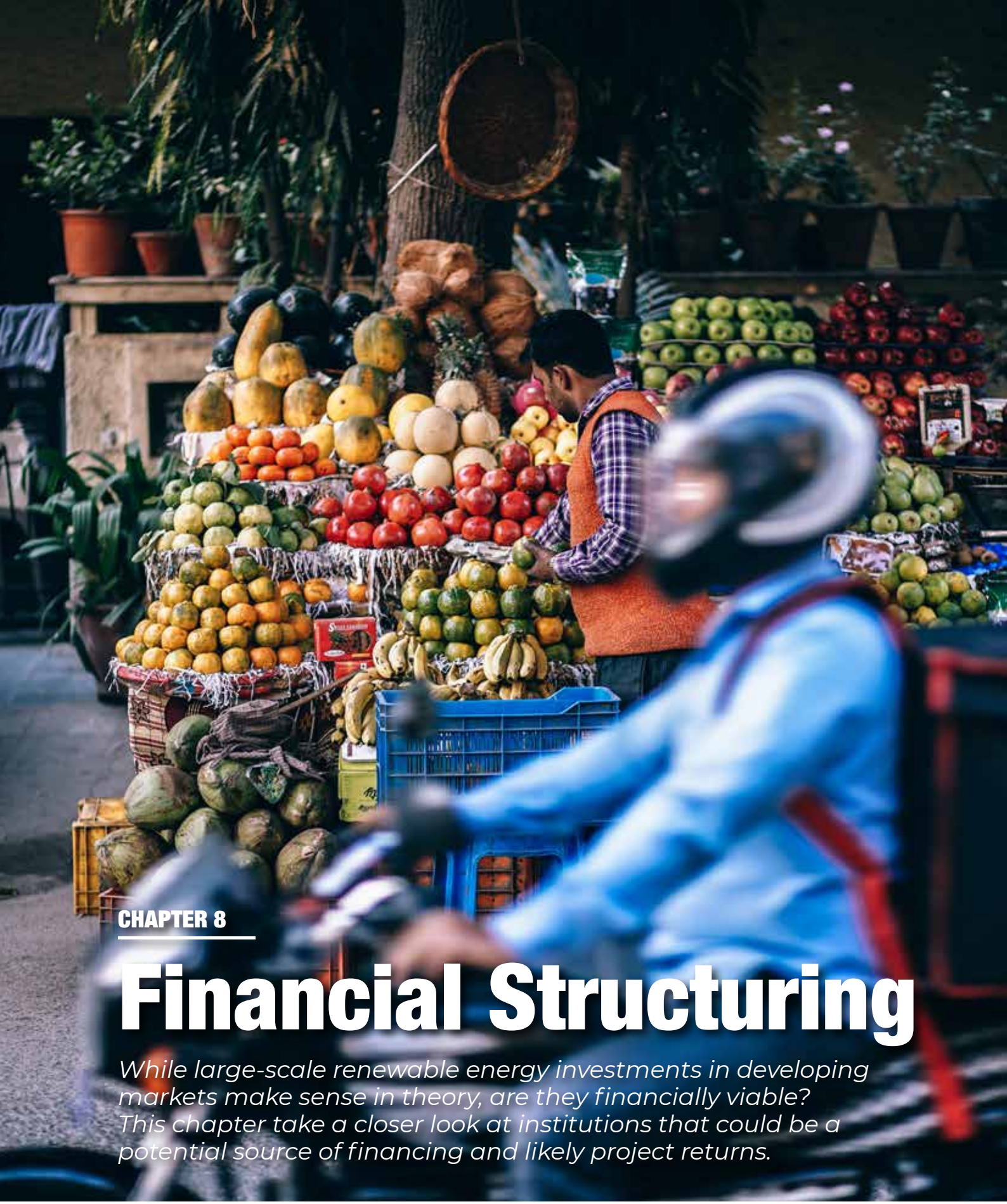

CHAPTER 8

Financial Structuring

While large-scale renewable energy investments in developing markets make sense in theory, are they financially viable? This chapter take a closer look at institutions that could be a potential source of financing and likely project returns.

UKaid
from the British people

dolma foundation

CHAPTER 8

Financial Structuring

This chapter is an excerpt from the publication: Lessons on how to promote and execute equity capital in the renewable energy sector of Nepal (Dolma Foundation, 2019).

The full publication can be accessed at: www.dolmaenergy.com/publication

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Dolma Foundation is a non-profit organisation, promoting prosperity by investing in education and sustainable business in Nepal that are risky for the private sector.

This report series was produced and authored by Matthew Ribeiro-Norley and Vishal Bista. The team is grateful for collaboration and data within Dolma and from various agencies in Nepal. The cut-off date for data in this report was January 2019.

SUGGESTED CITATION

This chapter is an excerpt from the publication: Lessons on how to promote and execute equity capital in the renewable energy sector of Nepal (Dolma Foundation, 2019).

DISCLAIMER

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EXECUTIVE SUMMARY

CHAPTER 1: ENERGY MARKET ANALYSIS

Chapter 1 sets the tone for the series in highlighting that commercial institutional investors are the only sector with the capacity to finance this gap.

Nepal currently sits on a USD 17.8 bn infrastructure gap (excluding transmission and distribution) which needs to be addressed.

A prime solar belt region with 300 days of sunshine, and holding an economically feasible potential of ~43,000 MW of hydropower, Nepal boasts impressive renewable energy potential.

Despite this, Nepal's total installed capacity (March 2018) stands at 1,017 MW – 968 MW from hydro resources and 49 MW from thermal alternatives. Solar capacity is limited to 1.2 MW.

Electricity imports remain high in the dry season (Oct-Mar) for both peak load and base load energy, and as of March 2019 stood at 650 MW.

The Nepalese Rupee has remained pegged to the Indian rupee since 1993, primarily in the interest of price stability.

Based on Dolma's findings, the Project Internal Rate of Return for hydropower projects in Nepal range from 15-20%.

The main barriers to entry in Nepal include political stability, policy stability, currency, weak governance, climate change and bureaucracy.

Barriers to exit include the process of repatriating funds (whereby multiple authorities are required to sign-off after taxes are paid); as well as the lock-in period of up to three years after IPO on the Nepal Stock Exchange.

While there is a clear opportunity to export electricity to India in future, a clear framework agreed by both parties has not yet been enforced.

CHAPTER 2: CLIMATE CHANGE

Chapter 2 reflects on the environmental and social implications of a changing climate. Known for its pristine glaciers and abundant flora, the Himalayan region has witnessed an alarming number of climate-related tragedies in the last two decades. Between 2000 and 2015, ICIMOD estimates that 45,534 people died due to flooding, 10,893 to extreme heat, and 191 by drought, in Himalayan countries alone.

Higher temperatures have resulted in glaciers receding at alarming rates, adding volume to Glacial Lakes which pose a threat to those living downstream in the event of a burst. Moreover, unpredictable river flow can be a threat to farmers.

This chapter also puts into perspective that while CO2 rates remain high, the most immediate threat to the region – as identified in a series of recent reports from the Intergovernmental Panel on Climate Change (IPCC) and International Centre for Integrated Mountain Development (ICIMOD) – are short-lived climate pollutants, such as black carbon.

Despite its shorter life-span (approximately 50 years), black carbon is a warming agent with 1,500 times the warming effect of CO2. According to research, fossil fuel sourced black carbon appears to have twice the particle-specific warming potential of biomass sourced black carbon.

Based on conversations Dolma has had with regional climate scientists, prioritising the mitigation of short term climate pollutants is paramount to reversing Himalayan glacial melt – of which one third is expected to disappear by 2100 in a business-as-usual environment.

CHAPTER 3: TRANSMISSION AND DISTRIBUTION

Chapter 3 traces Nepal's energy infrastructure development and progress. Unlike energy generation, Nepal's transmission network grew at an annual rate of 8% from 2008 to 2012.

Electricity markets in Nepal are gradually un-bundling. Until 1990 all production, transmission and distribution were vertically controlled by the Nepal Electricity Authority.

Since 1990, Independent Power Producers have added ~500 MW to the grid.

Despite plans to un-bundle the NEA's transmission and distribution business following The Hydropower Development Policy 1992, it was only with assistance from the Asian Development Bank in 2015 that the National Transmission Grid Company was set up.

As this publication went to print, the newly-found distribution company had still not made any significant progress.

There are some USD 817 mn allocated to the enhancement of Nepal's transmission and distribution, mainly led by key donors such as ADB, Government of Norway, MCC and JICA.

A further USD 471.5 mn is being spent on policy and institutional reforms led mainly by the World Bank, ADB, and Canadian Government.

CHAPTER 4: REGULATORY ADVOCACY

Chapter 4 puts forward a number of recommendations to government that would facilitate the enabling environment for international investors.

Nepal has over the last five years (2013-2018) amended and introduced several regulations to facilitate public-private partnership and encourage further private sector investment.

Despite the government's best intentions to prioritise infrastructure, some have labelled the planning "erratic": since 2001 there have been five strategic documents on energy capacity targets, one every three years on average.

The most recent government plan, from 2016, calls for the construction of 10,000 MW by 2030.

The World Bank and others have argued that to attract and retain investment to the tune of tens of billions of dollars, an enabling environment is required.

"Quick-Win" regulatory reforms that would have a disproportionately positive impact on the infrastructure investment environment in Nepal:

Automatic route for foreign investment
Foreign currency power purchase agreements
Return on equity (ROE) clarifications
Alternative and auxiliary energy tariffs (new technologies such as batteries)

Long-term reform opportunities beyond the scope of this project:

Sovereign credit rating
Cost-plus approach
Competitive bidding
Protection for seasonality
Benefit sharing
Cooperation with regional partners

CHAPTER 5: INSTITUTIONAL INVESTOR INVESTMENT LANDSCAPE

Chapter 5 identifies three key catalysts for driving institutional investors into frontier markets like Nepal: low global interest rates; the commercial viability of renewable technologies; and heightened public, shareholder and regulatory opinion in relation to carbon emissions.

The need to attract large amounts of FDI to finance Nepal's power needs is well documented, both the Investment Board of Nepal and National Planning Commission agree that to meet just domestic demand, approximately USD 18 bn is required in capital investment (both debt and equity), or USD 1.5 bn annually.

The Dolma team interviewed some of the world's largest institutional investors, testing the risk and return mandate for Nepal against their current and emerging risk strategies. Interviewees included funds with

assets under management from USD 1 bn to 6 tn.

These were our findings:

Some investors suggested that the required return on equity for construction risk could be up to 20%, provided a Nepal project vehicle can demonstrate equivalency to investment grade status after successfully mitigating risks.

Among institutional investors there is a clear negative bias against credit and currency risk, suggesting that FX risk, real or perceived, prevents perhaps trillions of dollars from flowing to the poorest economies.

Dolma's findings also suggested that a country's credit rating is fundamental to getting an investment proposal through the first step of the investment procedure. In some cases, the lack of a sovereign credit rating and international sovereign bonds for Nepal has been too large a barrier to overcome in our discussions with some investors who are often restricted to considering countries that are at least investment grade (BBB-).

Some solutions to perceived risks included adopting Political Risk Insurance (PRI); Currency Hedging Mechanisms; and Bank Guarantees, amongst others.

Investors interviewed fell into two groups –leaders and followers – the former willing to take higher risk in search of greater yield and the latter less so; 2) there is no clear connection between Assets Under Management (AUM) and risk profile when it comes to investing in frontier markets like Nepal.

CHAPTER 6: COMPLEMENTARY INVESTORS

Chapter 6 discusses complementary investors (or blended concessional finance) which provide a new wind of opportunity for institutional investors – previously unable to invest in frontier market because of perceived risk. Blended capital works to de-risk perceived obstacles.

Investment instruments typically involve the deployment of grants, concessional lending, guarantees, and equity. These are deployed using adaptable programme, policy and sector investment loans, debt swaps, PPPs, advanced market commitments, and first loss reserve tranches.

Green bonds have recently also proven to be a potential solution by providing debt financing to eligible climate change projects. As of 2018, green bond issuance reached some USD 250 bn.

Complementary investors have played a key role in attracting investment to Nepal's renewable sector – these include Development Finance Institutions such as FMO, OEEB, DGGF and FINNFUND, as well as Multilateral platforms like IFC and ADB.

As stated in chapter 5, Dolma finds that at least two blended finance instruments are required for institutional investors to consider a renewable energy project in Nepal: political risk insurance and a currency hedge.

Dolma's research finds that countries successful in solving these risks for investors were able to make bold moves within their own domestic economies.

Nepal could follow the path of successful governments in doing so by creating its own government backed instruments and enacting reform.

CHAPTER 7: LEGAL STRUCTURING

Chapter 7 explains the legal structuring backdrop which is an essential component for foreign investors considering large infrastructure in Nepal.

To invest in Nepal through the FDI route, it is important to analyse and decide upon which country to invest from. To date there are 15 jurisdictions which hold a Dual Taxation Agreement (DTA) with Nepal which mitigates the risk of paying double taxation.

Dolma finds that Mauritius is generally viewed as the "gateway" to Nepal because both countries hold a DTA – Mauritius is

also known as a transparent jurisdiction that ranks well according to the financial services index. It also has experience fund management and administrative services which manage approximately USD 670 bn in assets.

Despite Mauritius' favourable positioning, the choice of domicile is based on the circumstances and preferences of individual investors.

Dolma views the UK as one of many strong locations to set up a fund manager, and has based the examples in chapter 7 on an English limited partnership or UK company as the fund vehicle.

CHAPTER 8: FINANCIAL STRUCTURING

Chapter 8 explores key regulated and non-regulated institutions that could act as potential sources of financing for energy projects in-country.

Nepal is yet to formulate specific regulatory provisions for private equity funds that invest in private companies.

There are a number of private equity players investing in renewable energy in Nepal, which include IFC, Dolma Impact Fund I and Equicap.

Dolma found that key exit issues for international investors include, but are not limited to the following:
Valuation at exit
Taxation in change of ownership
Repatriation issues

Dolma found that there could be some challenges for investors keen to invest through a project finance model, particularly for debt financing:

A limited tenor and floating interest rates on long term loans.
Generally, a limited capacity for banks to lend.
A limited scope for corporate bonds, which is still a nascent market.

The chapter also explores key financial issues for investors and how to integrate these solutions at the fund level: these include suggestions for currency risk, political risk, and debt risk.

CHAPTER 9: PROJECT DESIGN AND ENGINEERING

Chapter 9 focuses on the practical realities of executing renewables projects in Nepal, acknowledging that besides hydropower – Nepal's most mature energy asset class – other newer technologies such as solar and batteries could play a significant role in servicing growing supply, and providing auxiliary services.

Despite Nepal's installed generation capacity standing at 1,100 MW, there are some 7,000 MW in licenses that have been issued by the government to IPPs. The vast majority of these are for hydro-run-of-river (RoR) projects.

Dolma has identified a priority pipeline of hydro and solar projects that are optimal from a project execution perspective.

The chapter also includes a summary of leading battery technologies and which would be most suited in Nepal's context.

While there are no Nepali contractors that offer Engineer Procurement Construction (EPC) contracts this chapter analyses local firms that have a track record for hydro and solar projects in-country.

As financiers are increasingly aligning their investment mandates to the UN's Sustainable Development Goals, the chapter also outlines high level strategies for climate adaptation and resilience.

ABBREBIATIONS

TABLES

FIGURE

ABBREVIATIONS

ADB	ASIAN DEVELOPMENT BANK
BAFIA	BANKS AND FINANCIAL INSTITUTION ACT
BN	BILLIONS
CAD	CANADIAN DOLLAR
CIT	CITIZEN INVESTMENT TRUST
DECC	DEPARTMENT OF ENERGY AND CLIMATE CHANGE
DFID	DEPARTMENT FOR INTERNATIONAL DEVELOPMENT
DIF	DOLMA IMPACT FUND
DOI	DEPARTMENT OF INDUSTRIES
EPF	EMPLOYEES PROVIDENT FUND
EUR	EURO
FDI	FOREIGN DIRECT INVESTMENTS
FITTA	FOREIGN INVESTMENT AND TECHNOLOGY TRANSFER ACT
GEF	GLOBAL ENVIRONMENT FACILITY
GEF	GLOBAL ENVIRONMENT FACILITY
GON	GOVERNMENT OF NEPAL
HIDCL	HYDROELECTRICITY INVESTMENT AND DEVELOPMENT COMPANY LIMITED
IBRD	INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
IDA	INTERNATIONAL DEVELOPMENT ASSOCIATION
IFC	INTERNATIONAL FINANCE CORPORATION
IPO	INITIAL PUBLIC OFFERING
IRR	INTERNAL RATE OF RETURN
LDC	LEAST DEVELOPED COUNTRIES
LP	LIMITED PARTNER
MDB	MULTILATERAL DEVELOPMENT BANKS
MIGA	MULTILATERAL INVESTMENT GUARANTEE AGENCY
MN	MILLIONS
MW	MEGAWATTS
NEA	NEPAL ELECTRICITY AUTHORITY
NPR	NEPALESE RUPEES
NRB	NEPAL RASTRA BANK
ODA	OFFICIAL DEVELOPMENT ASSISTANCE
OTC	OVER THE COUNTER
PE	PRIVATE EQUITY
PIDG	PRIVATE INFRASTRUCTURE DEVELOPMENT GROUP
PPA	POWER PURCHASE AGREEMENT
REDD	REDUCING EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION
SEBON	SECURITIES BOARD OF NEPAL
SID	SMALL ISLAND DEVELOPING
SIRR	SECURITIES ISSUE AND REGISTRATION RULES
SPV	SPECIAL PURPOSE VEHICLE
TCX	THE CURRENCY EXCHANGE FUND
UNDP	UNITED NATIONS DEVELOPMENT PROGRAM
UNFCC	UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE
USD	UNITED STATES DOLLARS
VAT	VALUE ADDED TAX

1.1 INTRODUCTION

Financial structuring is an important part of setting up an energy project anywhere in the world.It is important to understand the regulatory scene and the financial ecosystem players.This report explores key regulated and non-regulated institutions that could be a potential source of financing for energy projects in Nepal.

As with the development of any energy project, not least in Nepal, there will always be perceived risks held by investors, some of which include: currency fluctuation risk, tax risks and benefits, credit risk of the project and the country, among other things. This reportexamines potential solutions to these key issues in Section 1.3.

1.2 FINANCIAL REGULATORY OVERVIEW OF NEPAL

FINANCIAL REGULATION IN NEPAL

Nepal's central bank, Nepal Rastra Bank (NRB),was established in 1956. Nepal currently has three major bodies thatregulate the financial sector.

TABLE 1: MAJOR REGULATORS IN FINANCIAL SERVICES INDUSTRY

Regulators	Date Established	Role
Nepal Rastra Bank	1956	Formulate monetary and foreign exchange policies; regulate commercial banks, development banks, and finance companies
Insurance Board	1992	Regulate the insurance industry
Securities Board of Nepal (SEBON)	1993	Regulate the securities market and its components (stock exchange, stock brokers, dealers, merchant banks, and fund managers)

PRIVATE EQUITY

Nepal is yet to formulate specific regulatory provisions for onshore private equity funds that invest in private companies. Legal provisions and requirements applicable in the context of settingup, operation, and exits of the PE Funds are found in different laws.

Three different structures can be used to invest PEin Nepal:

a) Offshore PE Funds (funds registered and organised outside of Nepal)
b) Foreign Onshore PE Funds (funds registered in Nepal after obtaining regulatory approvals, including approvals for foreign investments)
c) Domestic Onshore Funds, fully owned by local investors, which can invest in Nepali portfolios and targets after obtaining local approvals and clearing regulatory procedures

TABLE 2: OFFSHORE VS ONSHORE FUND

	Offshore fund	Onshore fund
Requirement of Regulatory Approvals	Regulatory Approval will be required for– (a) each investment in target companies, (b) sale of each investment in target companies, and (c) repatriation of dividend or investment capital.	Regulatory approvals will be required only for the formation of an Onshore Vehicle. No regulatory approvals will be required for investments in target companies. The regulatory approvals will be needed only for – (a) the sale of the interest in the Onshore Vehicle and (b) distribution of dividends by the Onshore Vehicle.
Forms of the Investment in the Target	Investments may be in the form of equity or loans.The loan investment may be subject to regulatory terms such as rate of interest that can be charged and other policy changes from NRB.	Investments can be made only in the shares of target companies. Investments in the form of loans may be prohibited under the 2006 Bank and Financial Institutions Act (BAFIA) as carrying out the financial transaction is reserved for licensed institutions.
Permitted Sectors of Investment	Offshore Vehicles will only be able to invest in target companies open to foreign investors, i.e. businesses/ targets not falling under the negative list of Foreign Investment and Technology Transfer Act (FITTA), 1992, and within the sector cap limit in the particular business.	Technically, investments made by Onshore Funds in target companies should not be considered foreigninvestment. However, there are instances when regulatory authorities have prohibited onshore business vehicles setup under foreign investment from investing in trading and other prohibited sectors

There are several private equity players already investing in renewable energy in Nepal:

INTERNATIONAL FINANCE CORPORATION (IFC)

The IFC (the investment arm of the World Bank) has been active in Nepal since 1956. To date, it has invested over USD 150 MNin Nepal in equity and debt. Its current portfolio stands at USD 40MN.

DOLMA IMPACT FUND (DIF)

Dolma Impact Fund is the first international private equity fund focused on Nepal. Since its launch in 2014, it has funded hydropower developments including Lower Likhu and Suri Khola (28.1 and 6.4 MW respectively). It also has investments in other sectors including healthcare, technology, and manufacturing.

EQUICAP (INFRACO ASIA)

Equicap is the fund manager for InfraCo South Asia and is active in Nepal in a few industries,including hydropower. Equicap holds a 45% stake in Kabeli A (38 MW) and 60% of the tariff for this project is in USD.

OTHERS

Local investors active in the energy sector in Nepal include Tara Management Pvt. Ltd.,which has invested in the Bhote Koshi Hydro Power Company. Hydroelectricity Investment and Development Company Limited (HIDCL) is a government-owned company investing in hydropower companies in Nepal.The company, though technically not a PE fund, was set up by the Government of Nepal (GoN) to invest in either debt or equity of companies involved in the generation, transmission, and distribution of electricity. HIDCL invests only in middle and large hydropower projects. As of July 2016, the company had committed to investing in 11 hydropower companies with a total capacity of 458 MW.

PERMITTED SECTORSFOR FOREIGN DIRECT INVESTMENTS (FDI)

The Foreign Investment and Technology Transfer Act (FITTa) and Industrial Enterprises Act regulate Foreign investment in Nepal. The Department of Industry administers and implements this Act.According to FITTA, all but 21 industries (listed in Annex 1) are open to 100% foreign equity investment. The energy sector is open to 100% foreign ownership.

NEPAL STOCK EXCHANGE

The Nepal Stock Exchange (NEPSE) began trading in 1994. As on July 16, 2018 (end of Nepalese FY 2017-18), there are 210 listed companiescomprising mainly commercial banks, insurance companies, finance companies, and hydropowerprojects/developers. As of July 16, 2018,the market capitalisation of NEPSE stood at ~USD 13.05bn.

As of 31 August 2018, 19 hydropower companies were listed in NEPSE. The total market capitalisation of the hydropower sector was USD 613 MN(NPR 63 BN), trading at an average of USD 3.17 (NPR 320) per share. NEPSE provides concessions that allow hydro projects to raise up to 30% in equity during construction. The stock exchange is a viable exit route for hydro investors.

TABLE 3: LISTED HYDROPOWER DEVELOPERS IN NEPAL

No.	Stock Name	Market cap (USD mn)	Average Returns				P/E ratio
			6 year (2012–18)	4 year (2014–18)	2 year (2016–18)	1 year (2017–18)	
1	Api Power Company Ltd.	29.29			-38%	-43%	75.22
2	Arun Kabeli Power Ltd.	35.47				-36%	<0
3	Arun Valley Hydropower Development Co. Ltd.	12.98	5%	-9%	-33%	-39%	34.36
4	Barun Hydropower Co. Ltd.	3.48			-43%	-37%	20.09
5	Butwal Power Company Limited	75.26	9%	-10%	-16%	-12%	13.51
6	Chhyangdi Hydropower Ltd.	3.22				*	48.55
7	Chilime Hydropower Company Limited	284.92	19%	-15%	-16%	15%	30.03
8	Dibyashwori Hydropower Ltd.	2.59				-52%	(13.52)
9	Himalayan Power Partner Ltd.	27.52				*	Not Available
10	Khanikhola Hydropower Co. Ltd.	4.53				-49%	(3.07)
11	National Hydro Power Company Limited	10.84	8%	-20%	-34%	-35%	726.99
12	Nepal Hydro Developers Ltd.	3.97				*	21.03
13	Ngadi Group Power Ltd.	7.94			-20%	-31%	16.34
14	Radhi Bidyut Company Ltd	9.03				*	19.63
15	Rairang Hydropower Development Company Ltd.	7.54				*	Not Available
16	Ridi Hydropower Development Company Ltd.	5.60		-17%	-39%	-40%	409.41
17	Sanima Mai Hydropower Ltd.	62.95		-8%	-25%	-49%	20.18
18	Synergy Power Development Ltd.	7.90				*	37.84
19	United Modi Hydropower Ltd.	17.99				-50%	28.60

*Does not have a trading history for a full financial year.

TABLE 4: COMPARISON WITH NATIONAL AND INTERNATIONAL COMPANIES ENERGY COMPANIES

No.	Company/Industry	Market Cap (USD mn)	Average Return			P/E ratio
			5 year (2012–18)	3 year (2014–18)	1 year (2016–18)	
	Non-energy companies in Nepal					
1	NABIL Bank/Banking	652.7	12.6%	2.6%	-20.2%	18.3
2	Life Insurance Corporation of Nepal/Insurance	190.8	34.6%	7.3%	2.6%	197.2
3	Nepal Doorsanchar Company Ltd/Telecom	953.0	12.1%	10.3%	15.5%	6.9
4	Oriental Hotels Ltd./ Hotels	42.9	49.0%	11.8%	-5.0%	16.8
5	Nepal Life Insurance Co. Ltd./Insurance	406.8	36.0%	-6.3%	-29.3%	96.3
6	Soaltee Hotel Limited/ Hotels	142.61	27.6%	-1.6%	-20.7%	7.6
	Energy companies in India		2013–18	2015–18	2017–18	
7	TATA Power	3,277.8	-1.3%	3.0%	-11.0%	4.91
8	SJVN	2,005.2	20.1%	19.8%	11.5%	9.08
9	JP Power	440.6	-28.7%	-22.2%	-4.8%	N/A
10	Reliance Power	1,554.1	-10.2%	-13.7%	-24.9%	18.22
11	JSW Energy	1,826.6	8.3%	-14.0%	16.9%	115.15
	Other international energy companies2		2013–17	2015–17	2017	
12	Synex International (TSX, Canada)	18.1	1.78%	1.43%	9.44%	N/A
13	Pattern Energy Group Inc (NASDAQ, USA)	2,111.8	NA	0.28%	25.95%	14.62
14	Terraform Power Inc (NASDAQ, USA)	2,500.4	NA	-22.30%	8.19%	N/A

Year on year returns have been computed for:

- Nepali companies fora Nepali Financial year (starting from mid-July)
- Indian Companies for an Indian Financial year (starting from April)
- Other international companies for a calendar year

PROCESS TO LIST ENERGY COMPANIES IN NEPSE

As per the 2016 Securities Registration and Issue Regulation, companies should comply with certain clauses when they are listed. These clauses can be grouped into five different categories.

Licenses- and permits-related clause	Shares-related clause
All the required licenses and permits should have been obtained	Financial closure of the project is completed
Completed the power purchase agreement with the NEA	Shares taken by promoters should be fully paid up
	Company to agree on a debt to equity ratio of not more than 70:30 during the construction phase of the project

Operations-related clause	Public issues-related clause
Adequate provisions for land and building of office, factory, storage facilities, and other required facilities	Contract with merchant bankers to act as issue managers for the IPO
Process for acquiring plant and equipment for manufacturing facilities should have started (for example bids and tenders for plants, other facilities)	At least 50% of shares to be issued to the public should be underwritten
The company should be in operation for at least a year	

Others
The IPO should make up a minimum of 10% and a maximum of 49% of the issued capital of the company
Audited financial statement and concluded general meeting as per prevailing law

COMMERCIAL BANKS

Deposits in the banking system grew by 19% last yearbetween mid-July 2017and mid-July 2018. With an estimated 20% annual growth in the total deposit in the banking system expected in the coming 10 years, deposits available in the system are estimated to beUSD114.92BN (at the mid-July 2018 exchange rate) from a current amount ofUSD 25.8BN (mid-July 2018). The banking system could add a total credit to the hydropower portfolio of USD 4.46 BNassuming that 5% of total new available lending would be directed to hydropower financing in the next 10 years.

TABLE 5: TOP 5 CLASS A COMMERCIAL BANKS IN NEPAL

S.N	Bank	Deposits (USD mn)
1.	Rastriya Banijya Bank Limited	1,297
2.	Nepal Investment Bank Limited	1,148
3.	Nabil Bank Limited	1,122
4.	Himalayan Bank Limited	890
5.	Everest Bank Limited	899

EMPLOYEES PROVIDENT FUND

The members of the Employees Provident Fund (EPF)are employees of the Government of Nepal, Nepal Army, Nepal Police and Armed Police Force, government schools, and other government institutions. As of July 2016, EPF had a total deposit of ~USD 2.01bn from its members and had a loan portfolio of ~USD 243 mn. The fund provided ~USD 69 mn of debt facilities to upper Tamakoshi, Rasuwagadhi, middle Bhotekoshi, and Syanjen Hydropower.

CITIZEN INVESTMENT TRUST

Citizen Investment Trust (CIT) manages an insurance fund for employees of the Government of Nepal, Nepal Army, Nepal Police and Armed Police Force, government schools, and other government institutions. It also manages pension funds for employees of some private employers. As ofmid-July 2018, CIT had a total ~ USD 945 MN assets under management. Its portfolio includes Nepal government bonds, fixed deposits with banks, loans, and investment in equities. It has invested in the Hydroelectricity Investment and Development Company Ltd. and the Upper Tamakoshi hydropower project.

KEY EXIT ISSUES FOR INTERNATIONAL INVESTORS

LOCK-IN PERIOD ON IPO ISSUE

As per Security Issue and Registration Rules (SIRR), pre-IPO shares of the promoters are subject to a lock-in period of three years post-IPO. This may not be suitable for institutional investors who may want to exit the market after the initial offering or after the project is commissioned.

VALUATION AT EXIT

Nepal Rastra Bank has issued a circular that requires a non-listed company to determine the value of shares based on a fair value of assets and liabilities pursuant to the Nepal Financial Reporting Standard 3: Business Considerations. This puts a potential cap on the valuation that a non-listed company can seek from potential investors. Moreover, the method to value such companies might not be the most suitable and might be open to interpretation.

TAXATION IN CHANGE OF OWNERSHIP

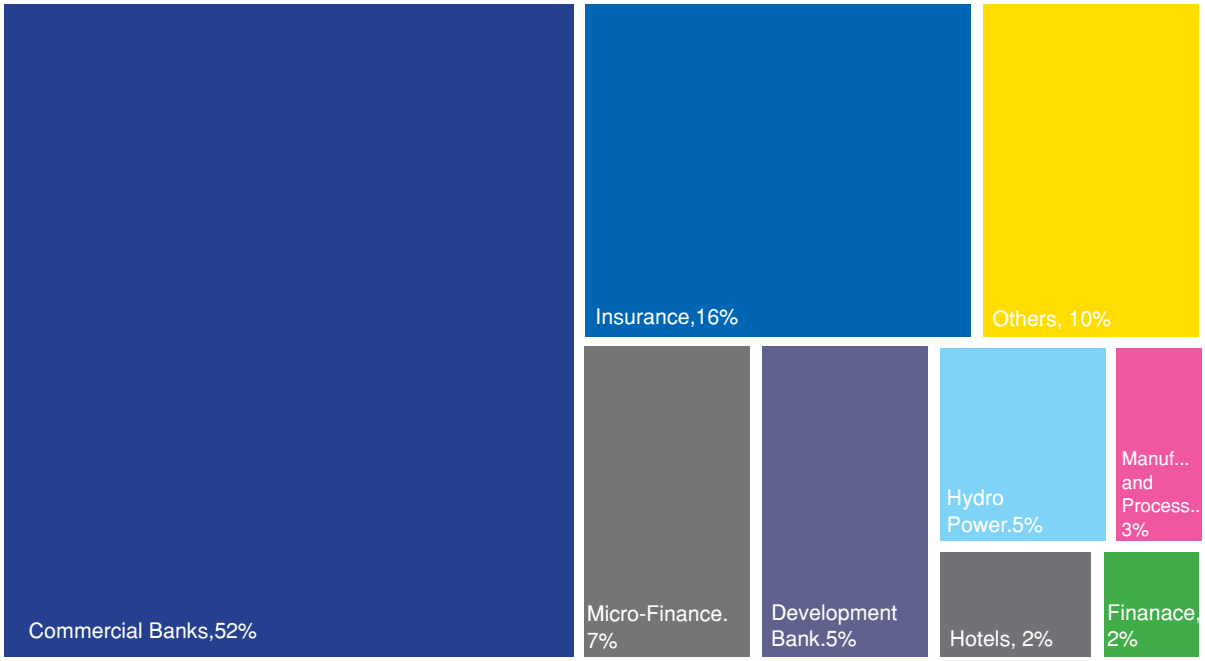
Companies that divest 50% of their shares within a period of three years may be denied tax benefits accumulated prior to divestment such as accumulated loss, accumulated interest expense, carried forward losses from disposal of assets, and other tax benefits. International investors would receive a lower valuation for their companies if such benefits are denied.

REPATRIATION ISSUES

The 1992 Foreign Investment and Technology Transfer Act allows a foreign investor to repatriate investment returns, dividends, principal repayments, and interest income from Nepal. However, practical issues such as submission of various documents, scrutiny at each level, added time, and constant follow-ups to the concerned authorities pose a potential hindrance to international investors. During a symposium on FDI in Nepal organised by the Indian embassy, Abhimanyu Poddar, CEO of Surya Nepal, voiced his concern about excess documentation required by regulatory authorities in Nepal delaying the repatriation process. Other hindrances investors could face include:

- Dual approval from DOI and NRB is required for repatriation but the law does notgive a fixed timeline for the authority to give these approvals. Hence, investors could face a lengthy wait before they receive approval.
- The current rules do not envisage the possibility of an interim dividend being paid. The requirement to submit annual audited financial statements and audit reports for repatriation of dividendsmay be a hindrance in the repatriation of an interim dividend.
- Any amount repatriated must be approved regardless of size. Regular principal and repayments also require approval before they are repatriated.

FIGURE 1: MARKET CAPITALISATION OF EACH SECTOR AS % OF TOTAL NEPALI STOCK MARKET CAPITALISATION



1.3 PROJECT FINANCE

Often, companies use the project finance structure to finance energy projects.Project finance:

- Is structured financing of a Special Purpose Vehicle (SPV or the project company); SPV assets are the only collateral for lenders
- Is created by sponsors
- Providesno recourse to shareholders; lenders consider cash flow the only source of loan repayment

CHALLENGES OF DEBT FINANCING IN ENERGY INFRASTRUCTURE FINANCE IN NEPAL

LIMITED TENOR AND FLOATING INTEREST RATES IN LONG-TERM LOAN

While the concession period of an energy project is generally 30 years from the COD or 35 years from the grant of generation license, the maximum tenor of debts given by the financial institutions in Nepal is 15 years. Similarly, banks collect most of their deposits for short periods of up to one year.Hence, it is very difficult for them to finance a fixed rate for the tenor of the loan. Therefore, infrastructure projects receive a floating interest rate, exposing them to potentially large interest rate volatility.

LIMITED CAPACITY OF BANKS TO LEND

Banks in Nepal do not have the capacity to lend to big energy projects. The Nepali banking system is characterised by highly volatile interest rates. The regulator (NRB) has a cap of 50% of the core capital of banks on single client lending in hydropower sector.

As of April 2018, even if all the Nepali banks were to form a consortium, they would be able to finance only2,000 MWs from a single hydropower developer (assuming 70% leverage and core capital of USD 2.86BN of all Nepali commercial banks as of mid-July 2018). Without a consortium, they would not be able to finance more than 75 MW with a single developer.

LIMITED SCOPE FOR CORPORATE BONDS

The market for corporate bonds in Nepal is nascent. Currently, only commercial banks have issued bonds with a maximum tenor of 10 years. However, unlike stocks, which are freely traded on the stock exchange, there is no trading mechanism for bonds. If the corporate bonds market develops in the coming years, it would help energy companies raise debt through this market.

PROJECT FINANCE: STRUCTURING OPTIONS FOR AN ENERGY PROJECT

This section evaluates how returns on energy projects change with different financial structures and instruments.Structuring options primarily consider debt and equity in offshore and onshore locations and use a combination of these to evaluate changes in returns. Here, an example energy project (run-of-river) that exceeds 100 MWis used as a model to analyse both USD and non-USD PPAs.Table 6 lists key assumptions used in the financial model.

FIGURE 2:TYPICAL PROJECT FINANCE STRUCTURE IN ENERGY SECTOR IN NEPAL

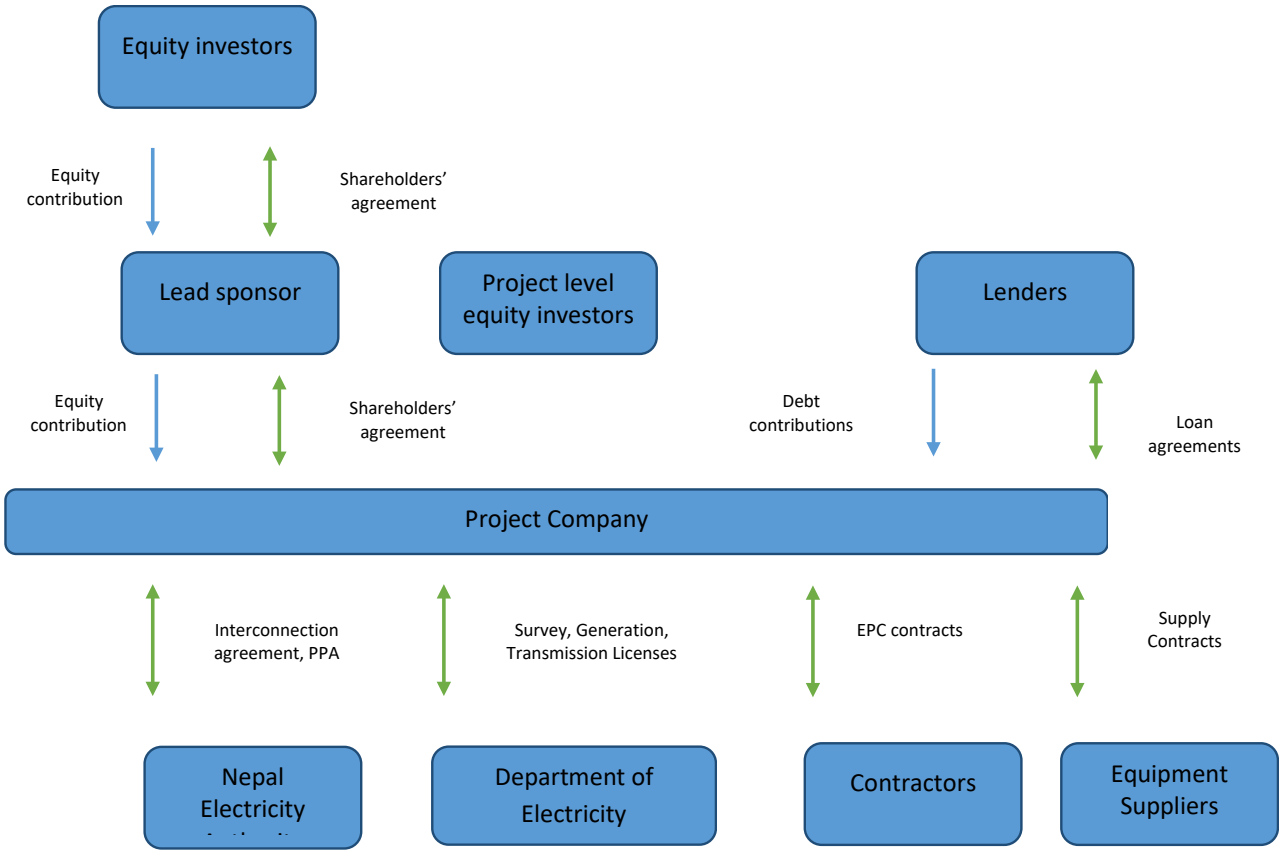


TABLE 6: KEY ASSUMPTIONS USED IN FINANCIAL MODEL

Concession period	30 years		Terms of debt	12% for local debt, 8% for USD debt Tenor: 10 years
Construction cost per MW	USD 1.5 mn (~USD 1.6 mn including interest during construction)		O&M Expenses	1% of CAPEX cost
			NPR depreciation rate	3.35%
Financing	Debt equity ratio	70:30		
PPA rates	Wet season: NPR 4.8 Dry season: NPR 8.4 USD PPA for 10 years if financing structure has foreign debt		Escalation rate in PPA	3% p.a. for 8 years

CASE 1: FOREIGN EQUITY AND FOREIGN DEBT

With foreign equity and foreign debt, projects above 100 MW are eligible for a partial USD PPA as per government policy. There is no specific hedge for the equity portion; however, a partial USD PPA would help hedge some equity portions as foreign debt is repaid. Hence, equity IRR in USD terms is around 14%.

CASE 2: FOREIGN EQUITY AND LOCAL DEBT

As there is no foreign debt in the capital structure, this option would not be eligible for USD PPA. Hence, all the revenue would be generated in local currency, so equity returns in USD would be around 9.3% –lower than in Case 1.

Case 1 is characterised by increasing revenue for the first eight years because of an annual escalation clause. There is a sharp dip in revenue after year 10 as all PPAs are paid in local currency after that period. However, in Case 2revenue is decreasing even though it has the same eight years of escalation. This is because it is assumed the local currency willdepreciate at 3.35% per annum, which is more than the PPA escalation of 3% per annum. Hence, in USD terms, revenues gradually decrease over time.

Thus, it is preferable for foreign equity holders to have a foreign debt component in their capital structure to partially hedge equity for a few years.

CASE 3: LOCAL EQUITY AND FOREIGN DEBT

If local equity holders can raise foreign debt, then projectsbigger than 100 MW will be eligible for USD PPA. Unlike in Case 1 and Case 2, where we analysed returns in terms of USD, we will analyse returns for Case 3 and 4 in NPR as only local equity is used in the capital structure.

As in Case 1, the returns are higher in this case as well because of a partial USD PPA for the first 10 years of the concession period. The revenues in NPR show an upward trend because of both the escalation clause and depreciation of NPR against USD. The NPR IRR is around 18% in this case. Similarly, as opposed to Case 1 and 2, the revenues do not decrease rapidly over time as they are represented in local currency.

CASE 4: LOCAL EQUITY AND LOCAL DEBT

Local equity and local debt can entirely finance an energy project. However, these would not be eligible for USD PPA. Hence, compared to Case 3, we can see that the rate of increase in revenue in year 1–10 is gradual. This is because revenue is affected only by the PPA escalation clause and does not benefit from the appreciation of the USD against NPR. Hence, equity IRR is around 13% for this case, which is lower than in Case 3.

SUMMARY OF RETURNS

	CASE 1: FOREIGN EQUITY AND FOREIGN DEBT	CASE 2: FOREIGN EQUITY AND LOCAL DEBT	CASE 3: LOCAL EQUITY AND FOREIGN DEBT	CASE 4: LOCAL EQUITY AND LOCAL DEBT
USD PPA	YES	NO	YES	NO
IRR	14% – USD	9.3% – USD	18% – NPR	13% – NPR

FIGURE 3: ANNUAL CASHFLOW – FOREIGN EQUITY AND FOREIGN DEBT

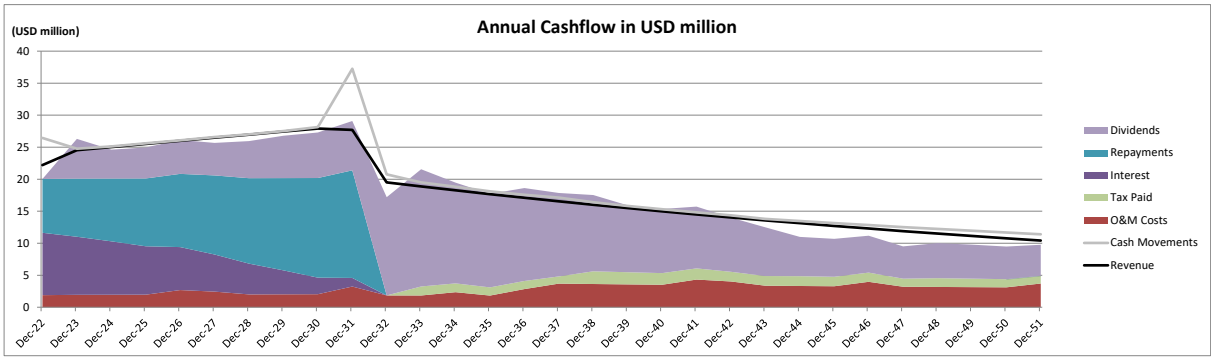


Figure 4: ANNUAL CASHFLOW – FOREIGN EQUITY AND LOCAL DEBT

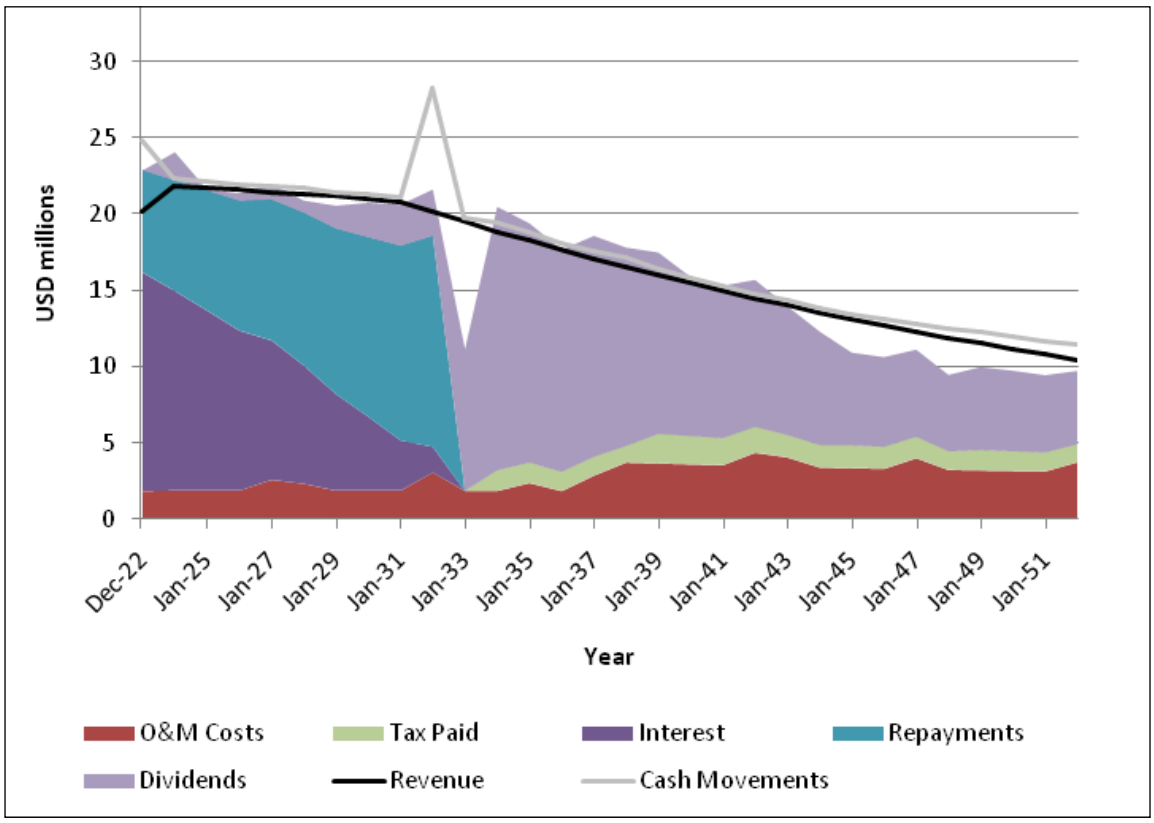


FIGURE 5: ANNUAL CASHFLOW – LOCAL EQUITY AND FOREIGN DEBT

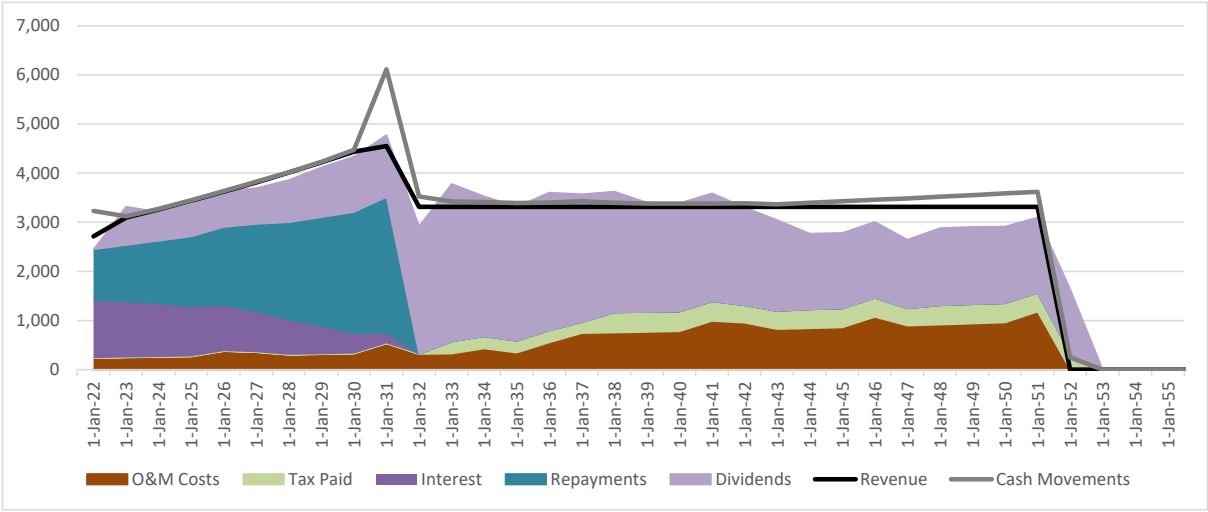
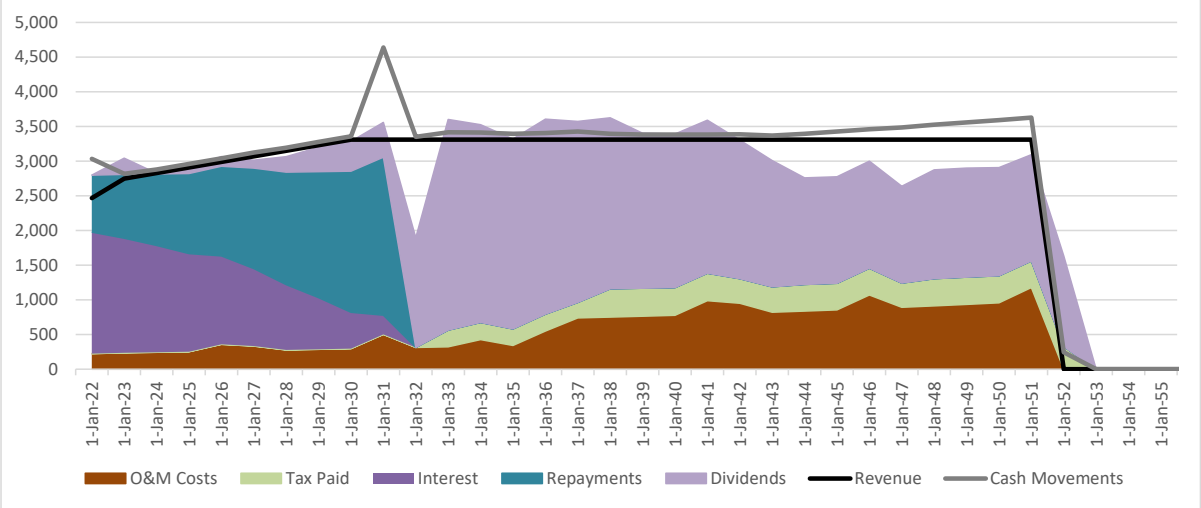


FIGURE 6: ANNUAL CASHFLOW - LOCAL EQUITY AND LOCAL DEBT



1.4 KEY FINANCIAL ISSUES FOR INVESTORS IN ENERGY PROJECTS

CURRENCY RISK AND HEDGING PRODUCTS

The NPR has a fixed exchange rate with the INR at 1 INR = 1.6 NPR. This peg has been in place since 1993. The Government of Nepal has maintained the peg to achieve macroeconomic and price stability as most of Nepal's trade is with India.

Because of the peg, currency fluctuations with respect to other currencies take place because of changes in the Indian economy and hence the INR. Over the last decade, the NPR has depreciated significantly against the USD and it currently trades at 1 USD = NPR 110 (July 2018).

Thus, should international investors invest in Nepal, they face two types of currency risks:

- A general currency fluctuation risk with all currencies
- Risk of changes in the peg level with INR

However, the current peg level has been maintained since 1993 and is not expected to change in the short-or medium-term. Directors of the IMF agree that the peg to the Indian rupee serves as a transparent anchor and monetary policy should be geared towards supporting the peg. Similarly, IMF staff have also suggested tightening monetary policy to support the peg.

MASALA BONDS

Masala bonds are debt instruments to eliminate foreign currency financing risk for projects that generate their revenues in local currency. Such projects can be exposed to a currency mismatch if they borrow in foreign currency and face high potential costs in the face of high volatility of exchange rates. Local currency bond issuance is an option that avoids such risks and can support private investment in productive sectors.

The IFC, in consultation with the Indian government, launched rupee bond programs in both onshore and offshore markets to provide rupee financing sources for IFC projects in India.9 The first of such offshore bonds was launched in 2013 for USD 1 bn, which was settled in dollars offshore. However, the exchange rate risk was assumed by international investors – i.e. dollar returns were determined by the USD–INR exchange rate.

By July 2016, the IFC, EBRD and HDFC Bank raised more than INR 90 bn (~USD 1.4 bn) in the London Stock Exchange. Masala bonds in NPR could be a viable option, whereby investors would bear the exchange rate risk to get a higher yield from these companies. Similarly, masala bonds in INR would be a suitable way to hedge most of theNPR currency risk (besides the INR peg risk).

TCX FUND

The Currency Exchange Fund (TCX) is a special purpose fund that provides OTC derivatives to hedge currency and interest rate mismatches created in cross-border investments between international investors and local borrowers in frontier and less liquid emerging markets. Its shareholders include major development financial institutions including the IFC, FMO, and EBRD.

Typical energy projects in Nepal last for 25–35 years and foreign debt is typically for a tenor of 15 years. Hence, developers need to hedge their foreign currency obligations for a minimum of tenor of the loans, if not for the whole period. However, a long-term hedge for NPR against the USD is not available in the commercial market. This is where TCXcan play a rolethrough their hedging products for currencies and maturities that are not effectively covered by commercial markets.

Through its products, TCX provides synthetic local currency loans. The hedge is structured so that the borrower receives the loan in local currency. Principal repayments and interests are calculated in local currency but paid in foreign currency at the spot rate. Hence, the borrower can hedge both interest and exchange rate risk at the same time. TCX transactions can be hedged by either the borrower (developer) or the lender (bank).

TCX provides a fixed rate cross currency swap for a maximum tenor of 15 years. To pricethe Nepali rupee, it prices the INR first and adds a de-peg risk premium to compensate for the peg risk.

LOCAL CURRENCY BOND

In 2012, the International Finance Corporation and Asian Development Bank had indicated interest to the government in issuingNepali rupee bonds to raise funds and invest in infrastructure projects in Nepal. They had proposed issuing around NPR 30 bn (~USD 291 mn @ USD 1 = NPR 103). The GoN allowed the IFC to issue local currency bonds worth NPR 50 mn in 2014. The IFC can invest money raised from such issues in hydropower, tourism, and agro-business and has until 2018 to issue such bonds.

Similarly, the ADB has also not yet issued local currency bonds. However, itis currently doing a “Capital Market and Infrastructure Capacity Support Project”, which aims to strengthen the regulatory and institutional framework for bond market development and build the capacity of the Securities Board of Nepal.

OTHER STRATEGIES FOR CURRENCY HEDGING

Power developers face a risk of currency fluctuation since most of their revenue is in local currency.Hydropower projects bigger than 100 MW and with some foreign debt in their capital structure can sign USD PPAs with the NEA. The GoN has announced that the tariff would be in part in USD for a maximum of 10 years (less if foreign loans are paid off in less than 10 years) and in Nepalese rupees thereafter.

NEA has signed PPAs in USD with Khimti, Upper Bhotekoshi, Upper Marsyangdi, Kabeli-A, Lower Solu, and Likhu IV projects. The PPA rates range from USD 5.9 cents to USD 6.95 cents, , with annual increments of up to 15 years (for example in Khimti).

Recently, a committee to study and analyse foreign currency denominated PPAs submitted its recommendation to the GoN. Key points included:

1. The Government should clarify the capacity and type of projects eligible for USD PPA: Run of River (RoR), Peaking Run of River (PRoR), and storage-based hydropower projects with capacity >100 MW
2. The Government should implement a currency mix ratio of USD and NPR: The percentage of USD denominated revenue would be

proportionate to the percentage of foreign debt in capital structure as of commercial operation date

3. The Government should consider a maximum Tenor for payment in USD: For 10 years or until the foreign loan is paid back, whichever is earlier from the commercial operation date
4. The Government shuold consider an escalation in tariff: Annual simple escalation of 3% for eight years
5. The Government should consider a flexible exchange rate:Exchange rate for calculating USD amount is fixed at the rate published by the Nepal Rastra Bank on the date of signing power purchase agreement
6. The Government should implement standard PPA rates: Separate feed-intariffs for projects under 100 MW, projects above 100 MW with full Nepali currency investment, and projects above 100 MW with some investment in foreign currency

TAX LAWS

The GoN has various incentives to attract investment to the energy sector. Table 7 lists the main provisions and compares them to similar incentives offered by the governments in various countries.

FIGURE 7: TCX CURRENCY SWAP – LENDER HEDGES THE RISK

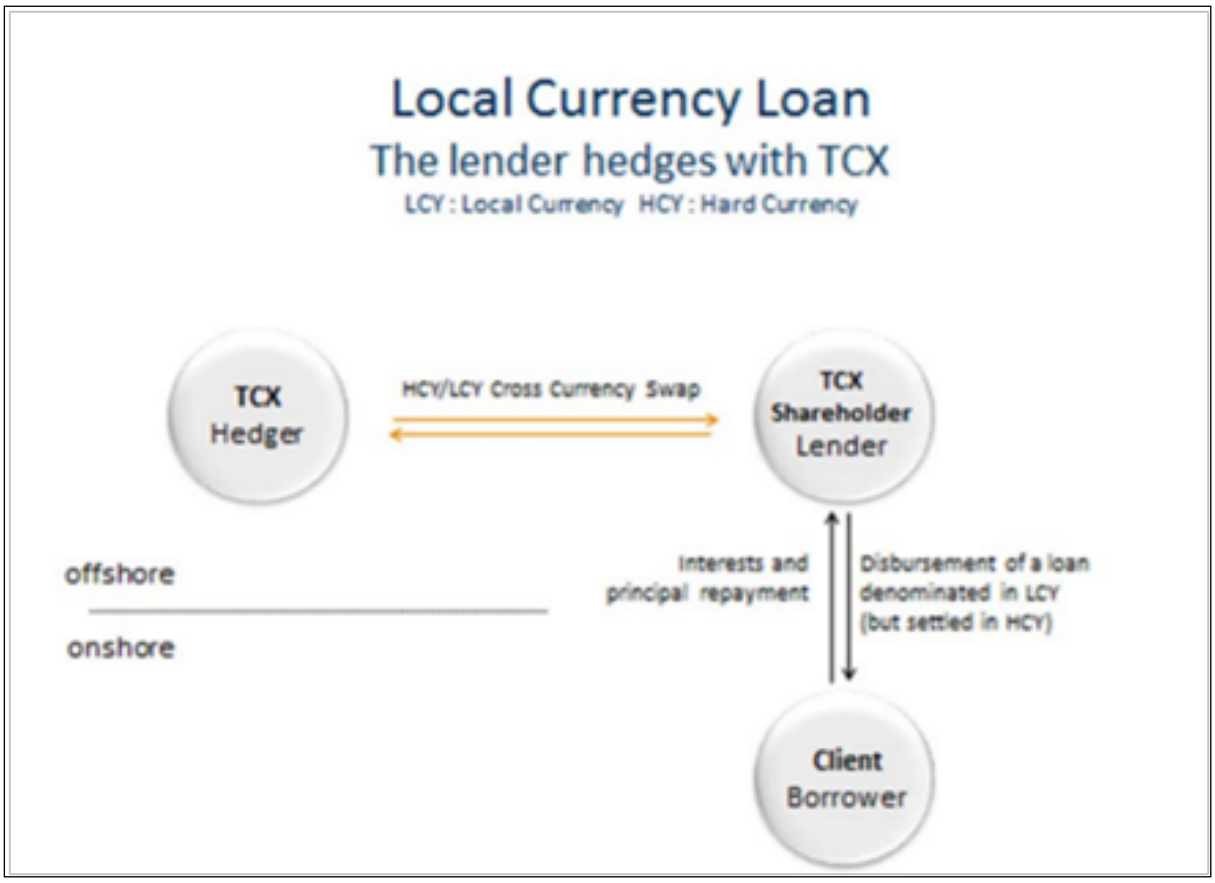


FIGURE 8: TCX CURRENCY SWAP – BORROWER HEDGES THE RISK12

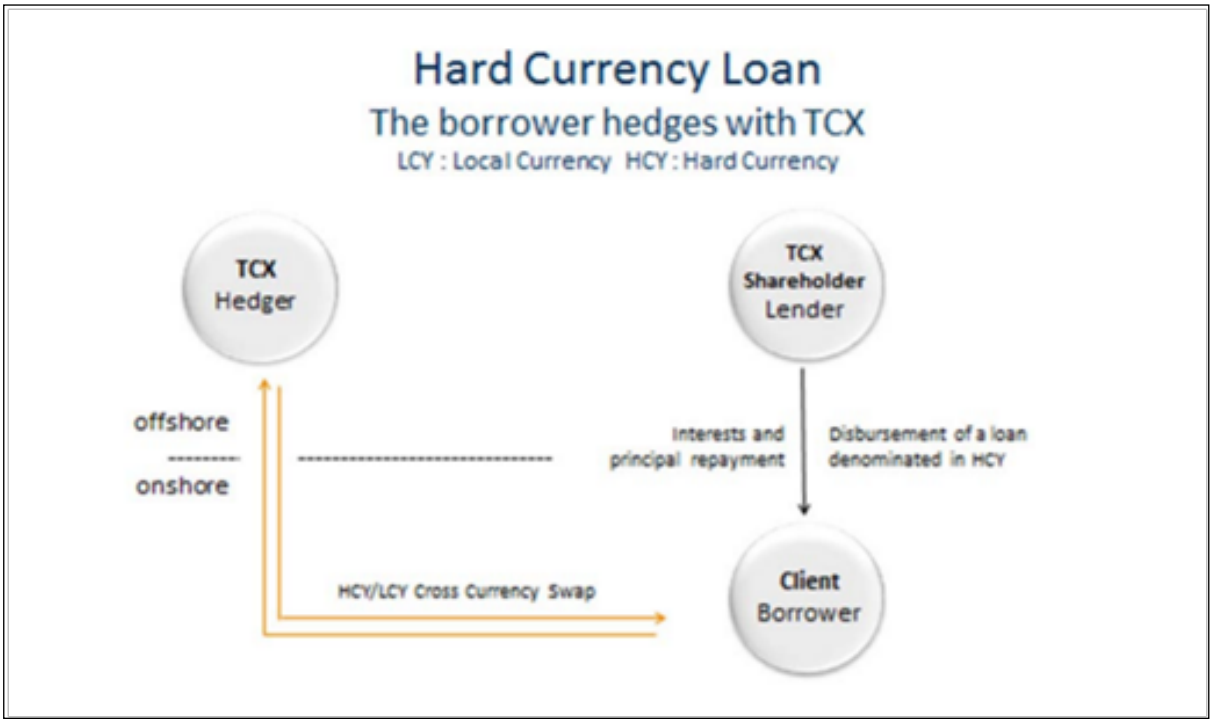


TABLE 7: INCOME TAX BENEFITS FOR ENERGY COMPANIES IN VARIOUS JURISDICTIONS

Country	Income tax rates	Tax holiday	Carry forward of losses	Depreciation	Tax reduction
Nepal	Reduced income tax rate of 20% for hydropower companies	100% exemption for the first 10 years after COD and 50% exemption for the next 5 years	Losses from construction of powerhouse, generation, and transmission of electricity are carried forward 12 years as opposed to the normal provision (7 years)	Accelerated depreciation rates available for projects involved in construction, generation, and transmission of electricity	Listed hydropower companies get a tax reduction of 15%
India	Corporate tax rate of 30%; reduced tax rate of 25% for micro, small, and medium enterprises ,	100% profits exempted for 10 consecutive years out of 15 years. Need to pay Minimum Alternate Tax(MAT) and credit of MAT available for 15 years; , incentive up to March 2017 only	General provision of carry forward of losses up to 8 years	Accelerated depreciation rates available for wind and solar energy	Not available
Bhutan	Normal corporate tax rate of 30%	100% exemption for 10 years from COD	General provision of carry forward of losses up to 3 years	Accelerated depreciation available	General provision of income tax holiday of 5 years to companies going for IPO
Myanmar*	Companies established under Foreign Investment Law taxed at 25% and others at 35%	Tax holiday available for up to 7 years	General provision of carry forward of losses up to 3 years	Accelerated depreciation of certain assets	Tax exemption for profits maintained in a reserve fund and reinvested within one year
Ethiopia	General corporate tax rate is 30%	100% for a period of 4 or 5 years depending on location of investment	Can carry forward losses during tax exempt period for half of the tax exemption period after expiry of such period	Not available	Not available
Mozambique	General corporate tax rate is 32%	80%, 60%, and 25% reduction in corporate tax rate for years 1–5, 6–10, and 11–15 respectively	Tax losses may be carried forward for 5 years	Accelerated depreciation for qualifying assets	Depending on location of investment, tax credit of 5%/10% of total investment is available for 5 years

TABLE 8: CUSTOM DUTY BENEFITS FOR ENERGY COMPANIES IN VARIOUS JURISDICTIONS

Country	Benefits
Nepal	Dutyof 1% on: • Energy generation plant with a capacity of,or exceeding, 10 Kw • Generator parts imported by VAT-registered industries that produce generators • All Alternative energy-based industries
India	Exemption from excise duties and concession on import duties on components and equipment required to set up a solar plant and biomass plant
Bhutan	Exempted from payment of all import duties on plant and equipment
Myanmar*	Customs duty and other internal taxes as relief and/or exemption from certain imports based on application to Myanmar Investment Commission
Ethiopia	Exemption from payment of custom duties on import of capital goods and spare parts of such capital goods worth up to 15% of such capital goods
Mozambique	Exemption from payment of custom duties on qualifying goods

TABLE 9: VALUE-ADDED TAX BENEFITS FOR ENERGY COMPANIES IN VARIOUS JURISDICTIONS

Country	Benefits
Nepal	• Subsidy refund of NPR 5 mn (USD 48,000) for any VAT charged during construction • VAT exemption on the import of machinery, equipment, tools and their spare parts, penstock pipes or iron sheets used in hydropower projects and not produced in Nepal (based on the recommendation of the Alternative Energy Promotion Centre or the Department of Electricity Development) • 0% VAT facility based on a recommendation from AEPC for batteries produced and supplied by Nepali industries for use in solar energy-producing industries • VAT exemption for equipment and machines, tubular batteries, solar lead batteries, required by solar industries (based on recommendation from AEPC)
India	Reduced VAT rate of 5% in some states
Bhutan	Exempted from payment of all Bhutan Sales Tax on import of plant and equipment
Myanmar*	See above in custom duty
Ethiopia	Not available
Mozambique	Exemption from payment of VAT on import of qualifying goods

OTHER TAX PROVISIONS

ROYALTY

In Nepal, there is a separate solar policy according to which royalty is not charged on solar projects, since they do not use local resources, unlike hydropower. Similarly, royalties could be negotiated separately for hydro projects that apply for a project development agreement with the government. Royalties for use of resources has been summarised below for various countries:

Nepal	Internal consumption project	Up to 15 years	After 15 years
	Up to 1 MW	None	None
	1MW to 10MW	NPR 100 per kW & 1.75% per kWh	NPR 1000 per kW & 10% per kWh
	10MW to 100MW	NPR 150 per kW & 1.85% per kWh	NPR 1200 per kW & 10% per kWh
	Above 100 MW	NPR 200 per kW & 2.00% per kWh	NPR 1500 per kW & 10% per kWh
	Export-oriented Project		
	ROR project	NPR 400 per kW & 7.50% per kWh	NPR 1,800 per kW & 12% per kWh
	Storage project	NPR 500 per kW & 10% per kWh	NPR 2000 per kW & 15% per kWh
India	12% free energy to states where hydropower plants are built		
Bhutan	Minimum 12% of electricity generated to be given freely to Bhutanese government for the first 12 years of COD and 18% thereafter		
Myanmar	Generally, 7% of total electricity is given as free energy and 5-–25% of the equity of the project is given to the government as free shares		
Ethiopia	No royalty for renewables		
Mozambique	N/A		

DIVIDENTS

As per the Nepal Income Tax Act, a final withholding tax of 5% is charged on cash or stock dividends paid out. The Indian Income Tax Act requires companies to pay 15% corporate dividend tax on dividend distributions they make.

Nepal	A final withholding tax of 5% is charged on any cash or stock dividends paid out
India	Companies to pay 15% corporate dividend tax on dividend distributions they make
Bhutan	Withholding tax of 10% on payment of dividend income
Myanmar	No withholding tax on dividend income for both residents and non-residents
Ethiopia	Withholding tax on dividends at 10% (final withholding for non-residents)

Mozambique	Generally, withholding rate is 20%; 10% if shares are listed on the Mozambique stock exchange; 0% if dividends are paid to a Mozambique company that has held 20% or more shares in the associated company for at least two years; rates are final withholding rates for non-residents

INTEREST

Nepal Withholding tax of 15% is charged on any interest payment made to institutions outside Nepal

India	For Indian interest income, the withholding rate is 10%
Bhutan	Withholding rate of 10%
Myanmar	Interest to residents withheld at 0% and to non-residents at 15%
Ethiopia	Interest on foreign borrowings is taxed at 10%
Mozambique	Withholding rate of 20%

CAPITAL GAINS TAX

Capital gains for corporate bodies are charged at 25% for gains in Nepal. Short-term capital gains in India are taxed at normal tax rates while long-term capital gains are taxed at 20%. Lower rates of taxation are available for capital gains of securities.

NEPAL CHARGED AT 25% FOR GAINS IN NEPAL

India	Short-term capital gains are taxed at normal tax rates while long-term capital gains are taxed at 20%;lower rates of taxation are available for capital gains of securities
Bhutan	Capital gains are taxed at 30% as part of corporate income
Myanmar	Capital gains are taxed at 10%
Ethiopia	Capital gains on shares of companies are taxed at 30% and on buildings held for a business, factory, or office is taxed at 15%
Mozambique	Capital gains are taxed at a normal rate as part of corporate income

TABLE 10: OTHER INCENTIVES FOR POWER DEVELOPERS IN NEPAL AND IN INDIA

Other Incentives	Nepal	India
Financial Subsidies	Not Available	Subsidy of INR 15 mn (USD 0.23 mn) per MW limited to a maximum of INR 50 mn (USD 0.78 mn);available to hydropower of up to 25 MW
Generation-Based Incentives	Not Available	USD 0.007/unit subject to max ~USD 0.15 mn for wind power projects
Viability Gap Funding (VGF)	Available to utility solar power producers through ADB grant	~USD 0.15 mn/MW available as VGF;implemented by Solar Energy Corporation of India

* For Myanmar, incentives available for companies are registered under Myanmar's Foreign Investment Law

POLITICAL RISK AND MITIGATING IT THROUGH MIGA

The fund as envisioned in “Legal Structuring” could potentially have three classes of shareholders.

Class 1 – Commercial institutional capital

- MIGA insured
- Option to take TCX currency hedging

Class 2 – Development Financial Institutions

- MIGA and TCX not used
- Other rights same as that of Class 1 shareholders

Concessional capital

- First loss reserve capital

MIGA – HOW TO INCORPORATE MIGA INTO FUND STRUCTURE

Multilateral Investment Guarantee Agency (MIGA) is a World Bank member entity formed in 1988 to support economic growth, reduce poverty, and improve people’s lives. MIGA’s mandate is to promote foreign direct investment (FDI) in developing countries by providing guarantees (political risk insurance and credit enhancement) to investors and lenders.

MIGA promotes cross-border investment from one MIGA (World Bank) member country to another developing member country by providing investment guarantees covering five non-commercial risks.

POLITICAL RISKS

- Currency Inconvertibility and transfer restriction
- Expropriation
- War, terrorism, and civil disturbance

CREDIT RISKS

- Breach of contract
- Breakingfinancial obligations

MIGA can insureequity investments, shareholder loans, and shareholder loan guarantees provided

loans have a maturity period of more than one year.

HOW IT COULD WORK AT THE FUND LEVEL

Generally, pricing, duration, amount, and other conditions for MIGA cover is decided on a per-project basis. For a private equity fund or other pooled investment vehicle, MIGA offers a master contract of guarantee that reserves MIGA capacity and provides up-front pricing to the general partners of the fund for a specific period (two to three years).

- Evaluates potential initial portfolio projects
- Prices risk (portfolio basis) – may be region or sub-region specific
- Offers a master contract of guarantee that reserves MIGA capacity and provides up-front pricing for a specific period (2–3 years)
- Carries out due diligence on individual projects and prices remain the same if the project meets broad parameters (i.e. subject to no significant changes in sovereign risk or project parameters)

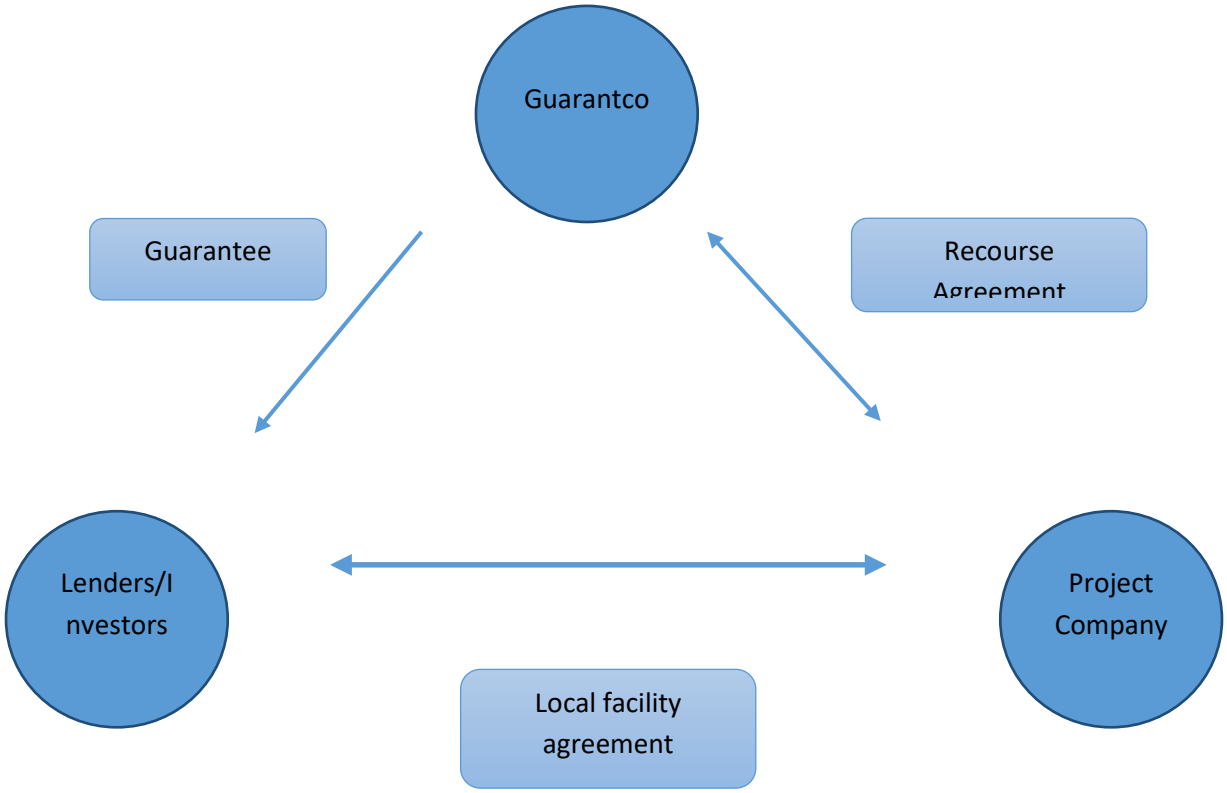
USING GUARANTCO TO REDUCE DEBT RISK

Energy projects are usually levered, during construction or after the COD. Often, companies find it difficult to find the right terms to attract debt. Companies might struggle to find debt with the appropriate tenor or for the appropriate amount. The project company might face exorbitant rates of interest because of the risks involved in energy projects.

Guarantco, sponsored by UK Aid, Australian Aid, FMO, the State Secretariat for Economic Affairs (SECO), SIDA, the Netherlands Ministry of Foreign Affairs, and PIDG, offers guarantees that seek to bridge the gap between the financial requirements of a particular project or corporate entity and the financial terms available from the market.

Guarantco has provided a guarantee of approximately USD 28.2 mn to allow Essel Clean Solu (the developer) to access debt through local markets that might not have been possible without the guarantee.

FIGURE 9: TYPICAL GUARANTCO GUARANTEE STRUCTURE FOR A LOCAL CURRENCY LOAN



CATALYTIC EQUITY TO REDUCE COUNTRY-SPECIFIC AND SECTOR-SPECIFIC RISKS

Traditionally, firms use credit enhancement techniques to improve the creditworthiness of a transaction. Government loan guarantees and bank of letters of credits are some examples of credit enhancement instruments a typical business can use.

Like a business without an established credit history, Nepal poses a dilemma for investors. Institutional investors can usually only invest in investment grade companies (typically BBB- and above) and any companies under the jurisdiction of a country with sovereign ratings less than BBB- are deemed below investment grade. Nepal has no sovereign credit rating as it has not issued any sovereign bonds in international debt markets.

Furthermore, there is a very little track record of investment by international companies and their risk and return profiles. Thus, investing companies would discount cash flows at a high premium to compensate for geological and engineering risks in infrastructure projects, political and economic risk of the Nepali economy, and an additional risk premium because of a lack of information and track record. This high discount rate makes many projects in Nepal financially unfeasible for international institutional investors.

Catalytic equity capital in Nepal's context is equity risk capital that:

- de-risks equity investments in a company

or an equity fund targeting hydro and solar projects
- catalyses private sector capital in the investment vehicle
- catalyses private investment in the equity capital of the fund by a certain factor (typically 1:4)

CHARACTERISTICS OF CATALYTIC EQUITY

It acts as first in/last out equity capital
Has different class of shares in the limited company/partnership
Invests in pre-construction acquisition costs of projects
Co-invests in construction with private sector institutions
Cash flow reserve: delays distribution receipt to build a liquidity buffer for liquidity cover for insured debt
Recoups capital after capital plus CoC is returned to private sector LPs/investors
Limits its return to capital recoupment until private sector target returns are met
Often stapled to a Technical Assistance facility that provides capital to support third-party costs

Refer to Annex 2 for a list of funds that provide grants in the energy sector. Most of these funds are designed for climate change adaptation and hence renewable energy developers in Nepal may be eligible for financing.

PROJECT DEVELOPMENT AGREEMENT – WRAPPING RISKS NOT COVERED BY PPA

While the government of Nepal provides various incentives to energy developers through tax laws, rebates, etc., it also provides other concessions and benefits to large project developers through a project development agreement (PDA). A PDA is an agreement between the government and energy project developers that allocates responsibilities, risks, and reward between the parties, particularly in relation to government approvals andland acquisitions, for a project to move ahead in time.

In return for government cooperation, the project developer agrees to share the benefits of projects with thegovernment and locals.

TABLE 11: BENEFITS TO PROJECT DEVELOPERS AGREED IN PROJECT DEVELOPMENT AGREEMENT

Incentives	Description of those incentives	Agreed in PDAs with
Sovereign guarantees	Sovereign guarantees given by the GoN in cases where the NEA fails to make payments to power developers.	Arun 3, Upper Trishuli 1
Fiscal Incentives	50% of the custom duty payable as per prevailing rate on the agreement date will be exempt on import of cement, iron, and steel products.	Upper Karnali, Arun 3
Protection from changes in law (including tax laws)	Companyis entitled to relief from new laws that are more restrictive or onerous than laws as of the agreement date (including changes in tax rates). Relief includes compensation for loss of revenue, increased costs, and increased tax liability due to changes. It also includes extension of timelines for performance obligation of the company until the company complies with such obligationsas well as extensions in the concession period until the company generates additional revenues equivalent to the amount of compensation not paid by the GoN.	Upper Karnali, Arun 3, Upper Trishuli 1
Higher Leverage	Companies can have a maximum debt-equity ratio of 75:25 at financial close and 80:20 at all other times. This is higher than the 70:30 debt-equity ratio as per the Securities Registration and Issues Regulations.	Upper Karnali, Arun 3, Upper Trishuli 1

TABLE 12: BENEFITS TO BE GIVEN BY PROJECT DEVELOPERS

	Arun 3	Upper Karnali	Upper Trishuli
Free Energy/ Free shares	21.9% of monthly energy output	12% of monthly energy output/27% free shares to NEA	Free energy up to 20kWh per month to eligible local households
Shares to locals	Approximately USD 15 MN worth of shares to local people (USD 15 mn)	GoN can transfer NEA's share to local people	10% of all company shares to people affected by the project to be issued at face value

ANNEXURE 1: FDI RESTRICTED

1.5 ANNEXURES

SECTORS

TABLE 13: SECTORS WHERE FDI IS NOT PERMITTED ACCORDING TO FITTA

	Industry	Remarks
1.	Cottage industries	
2.	Personal service businesses	
3.	Arms and ammunition industries	
4.	Gunpowder and explosives	
5.	Radioactive material industries	
6.	Real estate business	Excluding construction industries
7.	Film industries	
8.	Security printing	
9.	Banknotes and coins	
10.	International chain retail business (with business in at least two countries)	
11.	Tobacco	Excluding those that export more than 90%
12.	Internal courier service	
13.	Atomic energy	
14.	Poultry	
15.	Fishery	
16.	Beekeeping	
17.	Consultancy services such as management, accounting, engineering, legal services	Maximum 51% foreign investment is allowed
18.	Beauty parlour	
19.	Processing of food grains on rent	
20.	Local catering services	
21.	Rural tourism	

TABLE 14: SECTORS WHERE FDI IS CAPPED AT <100%

Industry	Maximum equity holdings percentage
Aeroplane service	80%
Telephone service	80%
Consultancy service	51%
Casino industry	Requires a local partner

ANNEXURE 2: GRANT FUNDS IN ENERGY SECTOR

TABLE 15: LIST OF FUNDS THAT PROVIDE GRANTS IN THE ENERGY SECTOR

Name of fund	Region of activity	Level of funding	Financing instruments	Implementing agency	Field	Remarks
ADB Climate Change Fund	Asia	USD 50 mn	Co-financing Grant Technical assistance	Asian Development Bank (ADB)	Adaptation Mitigation REDD Disaster risk reduction	Eligible countries: ADB Developing member countries
Canadian Climate Fund for the Private Sector in Asia	Asia – Low and lower-middle income and small island developing countries	CAD 82.39 mn	Concessional financing Grants	Asian Development Bank (ADB)	Clean Energy Adaptation	Eligible countries: Low and lower-middle income ADB developing member countries and small island states
Climate and Development Knowledge Network	Latin America and the Caribbean, Asia and Africa	BPD 0.5 mn per project	Co-financing Grant Technical assistance	Government of Netherlands and Government of United Kingdom	Adaptation Capacity-building	Eligible countries: Developing countries
Climate Public Private Partnership	Asia	USD 283 mn	Equity Loan Grant	Donor governments	Adaptation Mitigation	Objective: To stimulate the development of climate funds and climate-friendly projects and companies which are expected to play a key role in accelerating the growth of investment in renewable energy and other low-carbon solutions
GEF Trust Fund – Climate Change focal area (GEF 6)	Worldwide	USD 3 bn in 2015–2019	Grant	Global Environment Facility (GEF)	Adaptation Mitigation Capacity-building	Eligible countries: Countries eligible to receive World Bank (IBRD and/or IDA) financing or UNDP technical assistance through its target for resource assignments from the core.
Global Climate Change Alliance+	LDCs SIDs	EUR 316 mn	Grant	European Union	Adaptation Mitigation REDD Capacity-building Disaster risk reduction	Eligible countries: 73 LDCs or SIDS that are recipients of official development assistance
Green Climate Fund	Worldwide	USD 10.2 bn (pledged as of June 2015)	Grant Concessional loan Guarantees Equity	COP (UNFCCC) and Green Climate Fund Board	Adaptation Mitigation REDD Technology transfer Capacity-building	Eligible countries: All developing country parties to the UNFCCC
International Climate Fund (UK)	Developing countries	GBP 3.87 bn	Grant Loan Guarantee ODA	DFID, DECC, Defra	Adaptation Mitigation REDD	Eligible countries: ICF will fund projects that display consistency with the DAC definition of ODA and ensure open and transparent project performance; other critical eligibility factors include the choice of instrument and appropriate enabling environment
International Development Association	LDCs Blend countries	N/A	Grant Loan	World Bank	Adaptation Capacity-building Technology transfer	Eligible countries: 77 eligible countries: 59 IDA countries, 18 blend countries

Japan's Fast Start Finance	Worldwide but mostly LDCs	USD 15 bn (11 bn public and 4 bn private)	Grant Loan ODA Guarantees	Japanese Ministry of Finance	Adaptation Mitigation Disaster risk reduction	Eligible countries: Developing countries that have entered into direct, bilateral discussions with the Government of Japan are eligible for FSF, although some private sector actors may also be considered
KfW Development & Climate Finance	Worldwide	Varies depending on the contract	Grant Loan ODA Structured financing	KfW	Adaptation Mitigation Technology transfer	Public and private entities, depending on the contract
Korea Green Growth Trust Fund	Worldwide	USD 40 mn	Grant Technical assistance	World Bank	Adaptation Technical transfer Mitigation Capacity-building	IBRD/IDA country members
Least Developed Countries Fund	Worldwide	USD 932 mn (as of June 2015)	Grant	GEF	Adaptation Capacity-building	Eligible countries: All LDC Parties to the UNFCCC
MDB Pilot Program for Climate Resilience	Selected regions	USD 1 bn	Grant Loan ODA Technical Assistance	MDB Climate Investment Funds (CIF)	Adaptation	Eligible countries: Bangladesh, Bolivia, Cambodia, Mozambique, Nepal, Niger, Tajikistan, Yemen, Zambia; Dominica, Grenada, Haiti, Jamaica, Saint Lucia, Saint Vincent and the Grenadines, Papua New Guinea, Samoa, Tonga
Pilot Program for Climate Resilience	Worldwide	USD 800 mn	Grant Loan	Targeted program of the Strategic Climate Fund (SCF) Climate Investment Funds (CIF) World Bank	Adaptation Capacity-building	Eligible countries: ODA-eligibility (according to OECD/DAC guidelines); and existence of active multilateral development bank (MDB) country programs
Public-Private Infrastructure Advisory Facility	Worldwide	USD 15 mn	Grant Technical Assistance	World Bank	Adaptation Capacity-building	Eligible countries: Developing or transition economies in the Organization for Economic Co-operation and Development (OECD) Development Assistance Committee's (DAC) I to IV Aid recipients are eligible for PPIAF funding
Special Climate Change Fund	Worldwide	USD 345 mn (as of June 2015)	Grant	GEF	Adaptation Mitigation Capacity-building	Eligible countries: All developing countries party to the UNFCCC
UNFCCC Adaptation Fund	Developing countries	USD 262 mn	Grants	UNFCCC	Adaptation	Eligible countries: Developing countries must be party to the Kyoto Protocol and must be particularly vulnerable to the adverse effects of climate change
US Global Climate Change Initiative	Selected Developing countries	USD 350 mn per year	Grant Loan Guarantee	USAID, the US State Department and the US Treasury	Adaptation Mitigation	Eligible countries: Developing countries

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