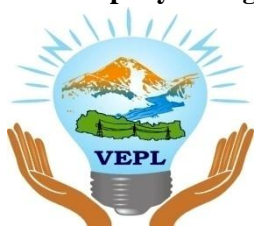


## Background

### 1. Company Background



Vision Energy & Power Pvt. Ltd. (VEPL) is registered at Office of Registrar of Company on Shrawan 2, 2073 with registration no 151997/073/074. It is registered in Inland Revenue Department on Shrawan 28, 2073 with PAN No. 604286558.

Various professionals and well experienced persons in hydropower sector have united together and come up with a concept of establishing this company, which will construct/invest in energy producing companies.

### 2. Vision, Mission & Objective of the company

#### Vision

- Become well establish energy producing company in Nepal.

#### Mission

- To utilize the available resources for the development of energy in the country
- To ensure attractive long term return to our shareholders through professional management.

#### Objective

- Conduct feasibility study of transmission line and environment; perform detail engineering design, research and survey for the electricity development.
- Generate electricity through small or medium scale projects by using alternative source of energy such as water, wind, solar power, biogas etc.
- Sale of electricity to Nepal government and other institutions or supply of electricity directly to consumers whenever necessary in wholesale or other basis.

### 3. Board of Directors

S.N.	Name	Position	Qualification	Experience
1	T. N. Acharya	Chairman	FCA, B.Com	More than 15 years experience in various audit, public sector & hydropower sector. Ex Board Member of CIT, NEA, NAC and Current Board Member of NTA.
2	Ramesh Adhikari	Member	B. Com	20 years experience in various government, private and hydropower sector
3	Desh Bandu Karki	Member	BBS and Bachelor's in Community Welfare Development	More than 5 years of experience in various sectors. Currently a Businessman.
4	Amar Nath Shrestha	Member	B. A.	More than 15 years of experience as an Entrepreneur, Board member of various Private and hydropower sector. Currently Board Member of Chhyangdi Hydropower Ltd.
5	Saroj Koirala	Member	FCA, B.Com	More than 15 years experience in audit & consultancy of various sector
6	Bhimsen K. Gautam	Member	MBS, RA	More than 20 years of experience in audit and involved in various sectors.
7	Snigdha Bhatta	Member	B.A. / B.Sc. L.LB. (Hons.) Course	Has experience in Legal Consultancies for more than 5 years.

#### **4. Advisory Board**

5 members Advisory Board in the Chairmanship of Mr. Rohit Prasad Prasai (Member, Federation of Nepalese Chambers of Commerce and Industry, FNCCI), Ithari Sunsari has been formed.

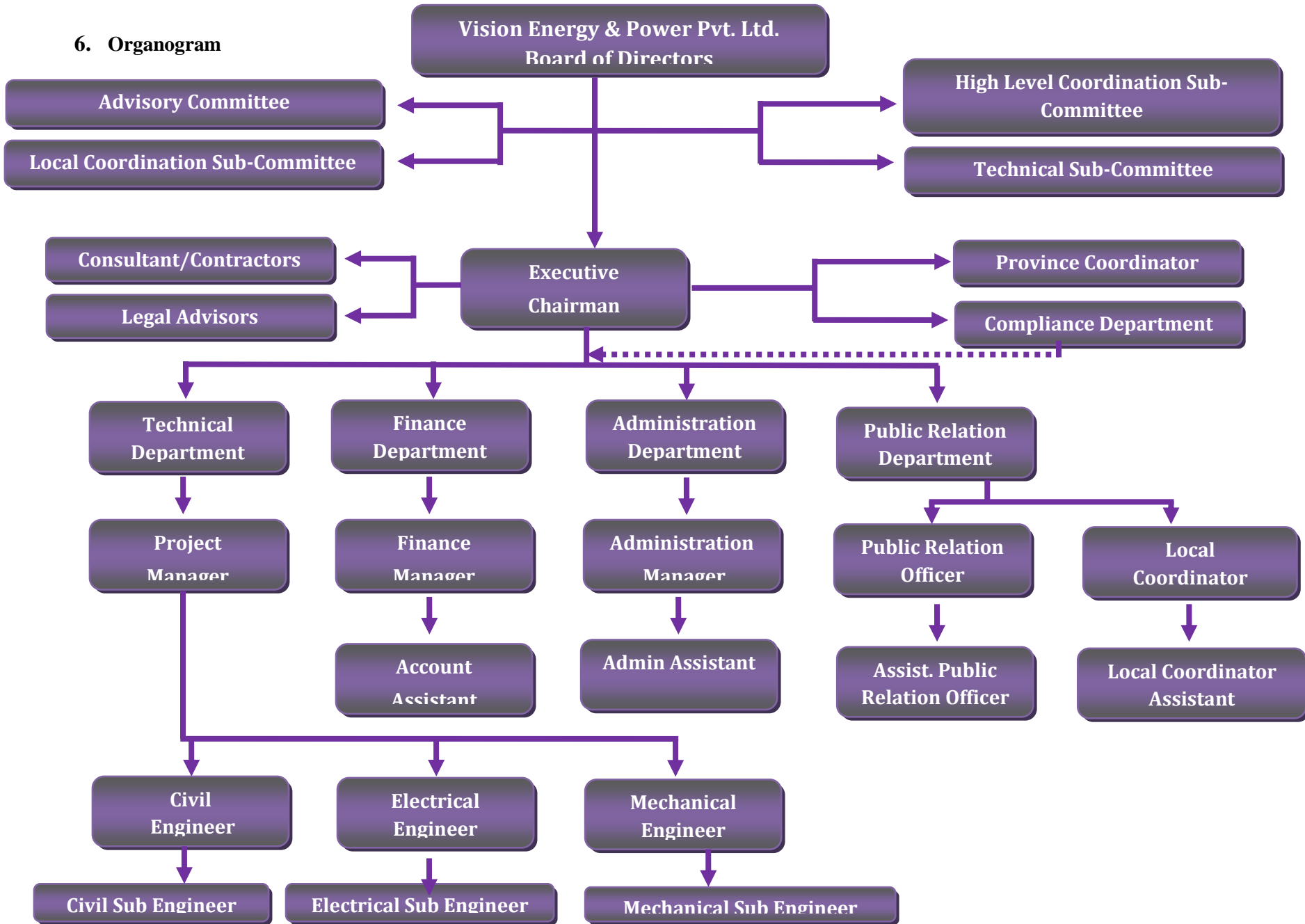
#### **5. About the Chairman**

Mr. T. N. Acharya is a fellow Chartered Accountant with more than 15 years of experience in audit, consultancy service and hydro power projects.

He is actively involved in development of various hydro powers in the form of investor and consultant for the past decade. He is actively involved as financial consultant of various Hydropower companies on behalf of Banks also.

- Current Board Member of Nepal Telecommunications Authority (NTA)
- Senior/Managing Partner at T. N. Acharya & Co., Chartered Accountants
- Member of The Institute of Chartered Accountants of Nepal (ICAN); The Institute of Chartered Accountants of India (ICAI); and Management Association of Nepal
- Has experience as Board Member of Nepal Airlines Corporation, Nepal Electricity Authority, Citizen Investment Trust; Executive Member The Institute of Chartered Accountants of Nepal; and Member of Local Body Fiscal Commission under Ministry of Local Development

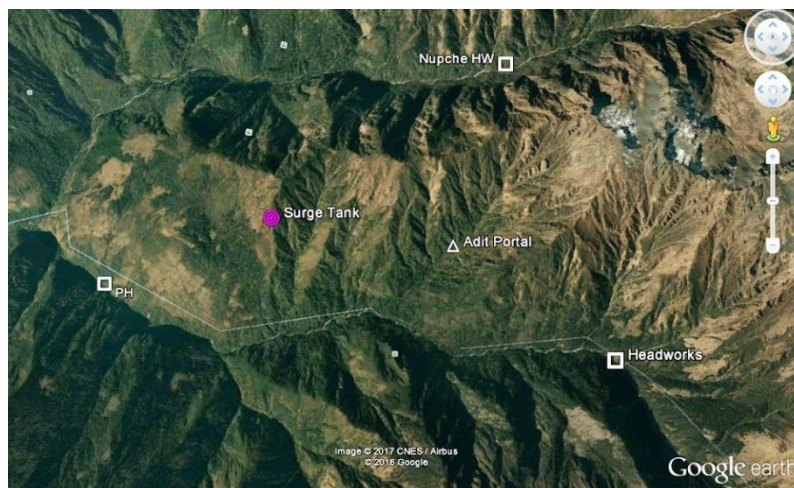
**6. Organogram**



## 7. Consulting team

S.N.	Particulars	Name of Consultant
1	Desk Study Report of Project	E.I. Maven Pvt. Ltd
2	Feasibility Study Report of Project (57.5 MW)	E.I. Maven Pvt. Ltd
3	Desk Study Report of Transmission line	E.I. Maven Pvt. Ltd
4	Feasibility Study Report of Transmission line	E.I. Maven Pvt. Ltd
5	Topographic Survey of the project	R.K. Survey Company Pvt. Ltd.
6	Topographic Survey of the Project access road and transmission line	R.K. Survey Company Pvt. Ltd.
7	EIA of the Project	Nepal Environmental and Scientific Services (P) Ltd.
8	EIA of Transmission line	Nepal Environmental and Scientific Services (P) Ltd.
9	ERT	Explorer Geophysical Consultants Pvt. Ltd.
10	Geological/Geotechnical Interpretation Report by MASW, MAM and SRT with ERT	Geophysical Research and Consultancy Service (P). Ltd.
11	Review of Feasibility Report	Keshav Raj Bhatta (Expert: Director of NEA)
12	Automatic Gauge Station	Real Time Solutions Pvt. Ltd.
13	DPR	E.I. Maven Pvt. Ltd.

## 8. Project Description



VEPL is aiming to develop Nupche Likhu Hydropower Project in Ramechhap District using local technical, managerial and financial capability and is dedicated to supply the power to the National Grid to fulfill domestic energy demand.

The source of water for Nupche Likhu hydropower project is originated from snow fed rivers starting from the High Mountain/Hilly areas.

The proposed Nupche Likhu Hydropower Project is located in Gumdel VDC (Currenty Umakunda Rural Municipality) of Ramechhap District, Nepal. The proposed intake of the Nupche Likhu Hydropower Project is located north of Lahaksewar village in left bank of Nupche Khola at an elevation of 3330 m above msl.

The project is proposed to develop with an installed capacity of 57.5 MW by utilizing a design discharge of  $7.11\text{m}^3/\text{s}$  with a gross head of 994m.

## 9. Salient features of the project

<b>1. General</b>	
Name of the Project	Nupche Likhu Hydropower Project
Type of the Project	Snow fed Run-off River Hydropower Project
<b>2. Location</b>	
Longitude	86°26'30" E - 86°30'30" E
Latitude	27°40'37" N - 27°43'37" N
Zone/ Development Region	Janakpur Zone/Central Development Region
District	Ramechhap
Project Location (VDCs)	Gumdel VDC
River	<u>Nupche Khola and Likhu Khola</u>
<b>3. Hydrology</b>	
Catchment Area	150 Km <sup>2</sup>
Design Discharge (Q 45 %)	7.11 m <sup>3</sup> /s
<b>4. Headworks</b>	
Type of Intake	Orifice, Side Intake
Intake Elevation	3330 m above msl
Type of Weir	Boulder line weir
<b>5. Settling Basin</b>	
Basin No.	2
Type	Double Bay Duffer at each side
Size	50 m × 5 m each
<b>6. Headrace Pipe</b>	
Headrace Pipe	1264 m
Headrace Pipe Dia	1.3 m & 1.5 m (Likhu & Nupche River)
<b>7. Tunnel Length</b>	
Nupche Intel Portal to Junction	1690 m
Likhu Intel Portal to Junction	1435 m
Outlet/Surge Tank to Junction	3250 m
Adit Tunnel Length	450 m
Tunnel Size	2.8m x 3.5m
<b>8. Penstock Pipe Length</b>	
Total Steel Penstock Pipe	2356 m
Internal Diameter	1.6-1.8 m
Thickness	8mm to 56mm
Steel Lined Vertical shaft	308m
Steel Lined Tunnel	540 m
<b>9. Power House</b>	
Type	Surface
Power House Elevation	2336 m above msl
Number of Generating Units	3
Turbine Type	Pelton
<b>10. Tail-Race Canal</b>	
Type	Box Culvert
Length	20 m
<b>11. Power and Energy</b>	
Gross Head	994 m
Net Head at Full Flow	974.12 m
Installed Capacity	57.5 MW
Generated Energy per Annum	139.76GWh, 36.61% (Dry) and 241.98 GWh, 63.39% (Wet) <b>Total: 381.74 GWh</b>

12.	<b><u>Transmission Line &amp; Grid</u></b>	This project has to made an agreement with the approx. 30 km up to National grid at 132 KV switchyard of Proposed NEA Hub at Garjang Sub-Station, Ramechhap district.
13.	<b><u>Approach Road Connection</u></b>	There is an existing all weather road up to Manthali which is 131 km from Kathmandu. From Manthali to Kyama, Gumdel VDC, there is partly stone paved earthen road which is about 110 km long and to the proposed PH site of the project, there exist a foot trail of about 12 km.
14.	<b><u>Project Road to HW &amp; PH</u></b>	Around 34 km
15.	<b><u>Approximate Cost of Project</u></b>	9,484million NPR (Subject to increase/decrease after DPR)
16.	<b><u>Approximate Construction Period :</u></b>	4 Years
17.	<b><u>Required Commercial Operation Date (RCOD)</u></b>	2080/05/02(2023/08/19)

### **Main Features of Project**

1. Internal Rate of Return (IRR): 19.47% , Equity Internal Rate of Return (EIRR): 35.19%
2. Simple Payback Period: 4.28 Years; Discounted Payback Period: 6.61 years.
3. The Project has high head. It ensures cost efficiency and high energy.
4. High Energy per MW (6.63 GWh p.a.), Dry Energy 36.61% and Wet Energy 63.29%
5. Income Per MW: More than NPR 4 Crore
6. Professional, Transparent and Responsible Management.
7. Aims to benefit Small Investors too.
8. Focused on high Return on Investment and high value in secondary market.
9. **Dividend Payout Capacity:**
  - a. No Change in Project Cost, Revenue& Interest Rate: Year 2081-40%, Year 2082-45%, Year 2083-50%, Year 2084-55%, Year 2085-60% and then till year 2110 average 65%
  - b. Project Cost increase by 10%, Revenue Decrease by 10% & Interest Rate at 12%: Year 2081-19%, Year 2082-20%, Year 2083-25%, Year 2084-30%, Year 2085-30% and then till year 2110 35% to 48%
  - c. Project Cost increase by 15%, Revenue Decrease by 10% & Interest Rate at 13%: Year 2081-10%, Year 2082-15%, Year 2083-20%, Year 2084-20%, Year 2085-25% and then till year 2110 25% to 45%

## Progress Report

### FIRST STAGE

S.N	Activities	Status	
		Completed	Going On
1	Survey License of project	License obtained of 57.5 MW on 2074/06/29(15/10/2017)	Completed.
2	Feasibility Study report of project	The consultant team has submitted Final Feasibility Study Report.	Review of the report by the company going on.
3	Review of Feasibility Study Report of Project	The Expert team is reviewing the submitted report before field visit	Ongoing
4	Survey license of Transmission line	License obtained for transmission line on 2074/12/15 (29/3/2018)	Completed.
5	Desk Study Report of Transmission line	The consultant team has submitted Final Desk Study Report.	Completed.
6	Feasibility Study report of Transmission line	Consultant team is preparing framework of Feasibility Study report	Ongoing
7	Topography Survey of Project	Topography Survey Report Obtained	Completed.
8	Approval from Ministry of Forest.	Approval for Survey Work Obtained.	Completed.
9	Quality Measurement of Water	Report of Water Measurement has been obtained.	Completed.
10	Environment Impact Assessment (EIA) study of Project	EIA Consultant has completed initial field visit and has submitted preliminarily report. Further the consultant has submitted TOR in Department of Electricity Development (DOED) for approval	The consultant team has committed to complete the assignment within Ashoj End 2075.
11	Environment Impact Assessment (EIA) study of Transmission line	Site visit has been done by Consultant. Consultant team is preparing draft scoping report.	The consultant team has committed to complete the assignment within PausH End 2075
12	Electronic Resistivity Tomography (ERT)	ERT Consultant has Completed ERT Works and has submitted Final Report.	Completed.
13	Geological and Geotechnical Interpretation Report By MASW, MAM and SRT with ERT	Consultant team is going to visit site for investigation work	Ongoing.
14	Gauge Station Installation	Automatic Gauge Station has been Installed at Project Site.	Collection of data from the Gauge Station is going on.
15	Grid Agreement	Connection Agreement has been entered with NEA to evacuate the power at Garjyang Sub-station. (Estimated distance 30 KM).	Completed.

<b>16</b>	PPA	PPA has been done with Nepal Electricity Authority (NEA) on 2074/11/28 (12/03/2018).	Completed.
<b>17</b>	Transmission Line Survey	Transmission Line Survey license obtained from DOED. Agreement with technical advisor has been completed.	Survey team has been mobilized to Project Site and works are being done as per agreement.
<b>18</b>	Road Survey	Agreement with technical advisor has been completed.	Work is being done as per agreement.
<b>19</b>	Detail Design	Agreement with technical advisor has been completed.	Work is being done as per agreement.
<b>20</b>	Generation License	Work is being done to obtain generation license	
<b>21</b>	Land Acquisition	Required lands for the project are identified. 40% of Land acquisition completed.	Acquisition of required lands will be completed within Ashad 2075.



## **Second Stage : Financial Closure**

After PPA, the financial closure will be done with Banks. The company aims to finalize financial closure within Falgun End 2075. Meeting are going on with various banks for loan process for the project. .



## **Third Stage: Construction Work**



The company will start its construction work after obtaining Generation License. The company plans to generate electricity within the period of 4 years from the commencement of construction work subject to complex disturbances. The construction work will be commenced after the completion of the first stage and second stage. Currently company has identified the contractors and discussions is being held with them to finalize the Terms of Reference (TOR).

## **Investment Module**

Demands of energy in Nepal is gradually increasing along with population growth and economic development. As there is less supply of electricity, Nepal has to import electricity from India regularly. Hence, Development of Hydropower project is need of the country which will help to industrialize the nation by eliminating current load shedding. As the hydropower company gives longtime benefits to its shareholder, investment in this sector can be assumed as future pension plan.

### **Minimum and maximum Investment**

**For Individual**-Minimum 10 Lakh and Maximum 2 Crore and

**For Institution:** Minimum 20 Lakh and Maximum 10 Crore

### **Investment Schedule**

S.N.	Particulars	Percentage
1	At the time of Application	20%
2	Jestha End 2075	15%
3	Ashoj End 2075	20%
4	Magh End 2075	20%
5	Jestha End 2076	15%
6	Ashoj End 2076	10%



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