

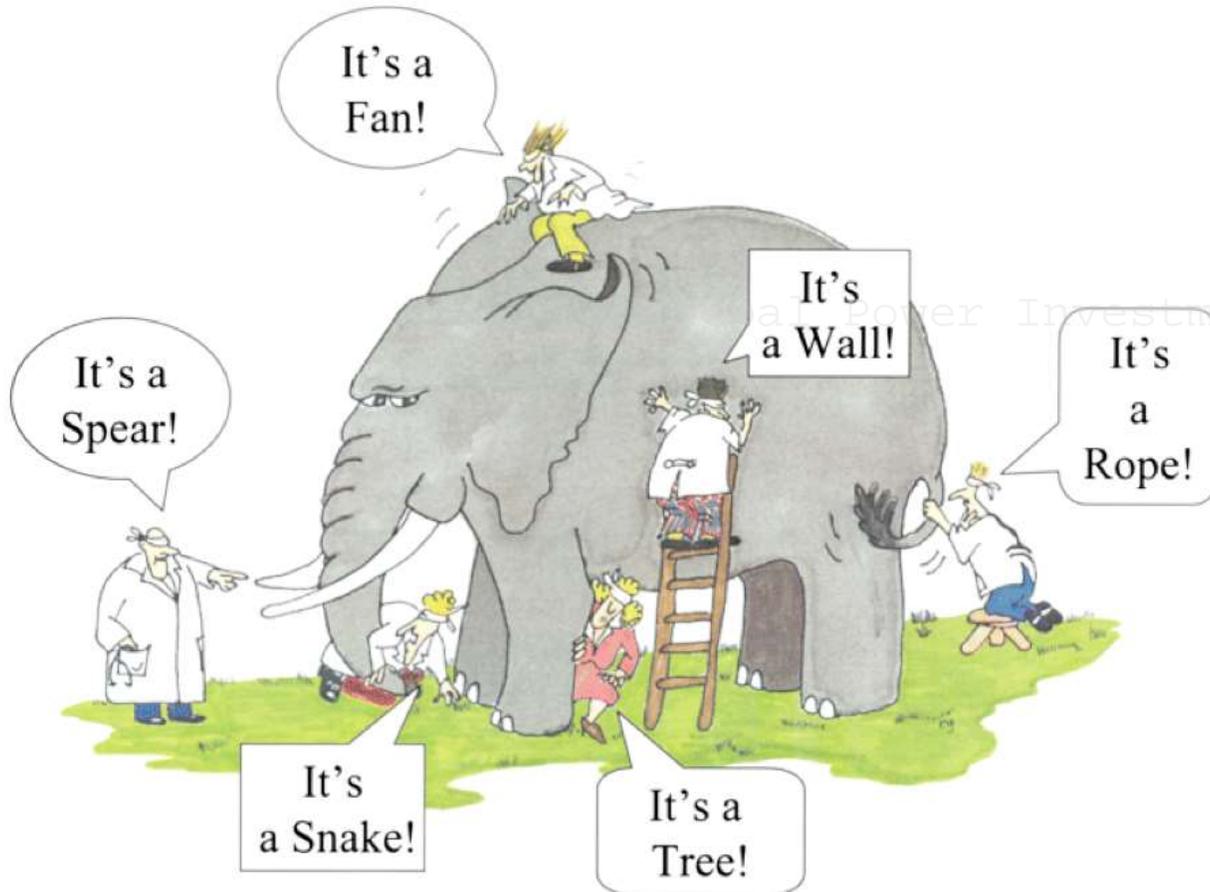


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HYDROPOWER INVESTMENT EXPERIENCES OF NEPAL

Deepak Rauniar,
Officiating Administrator (CEO),
Employees Provident Fund, Nepal

A MATTER OF PERCEPTION



“The only way of catching a train I have ever discovered is to miss the train before.”
— [G.K. Chesterton](#)

EMPLOYEES PROVIDENT FUND

About US

Nature of Business: Social Security

of Contributors: 5,50,000

Size of Fund: NRs.256 Billion (USD 2.5 Billion) growing @~17% Per Annum, Aim- NRs.700 Billion in next 5 years

Nature of Fund: Long Term

Major Investments: Power Sector, Airlines

Power Sector Exposure

Debt:

1. Historical Perspective: 20 MW Chilime (Rs.800 Million in 1999)
2. Current Exposure: 776.3 MW [~27.1 Billion NRs.]

Equity:

1. 15% in Betan Karnali Sanchayakarta Hydropower Company Limited
2. 10% in Hydroelectricity Investment and Development Company Limited
3. 10% in Electricity Generation Company



EMPLOYEES PROVIDENT FUND – THE PROJECTS

A. Debt					
S.No	Particulars	Capacity (MW)	Committed Debt	Outstanding Debt	Status
1	<u>Completed Projects</u>				
1.1	National Hydropower Co. Ltd. (Sunkoshi)	7.5	200,000,000.00	131,820,576.16	Project Completed
1.2	Chilime Jalavidhyut Co. Ltd.	20	800,000,000.00	800,000,000.00	Project Completed
1.3	Alliance Power (Chaku Khola)	1.5	49,500,000.00	45,271,903.56	Project Completed
	Total 1	29	1,049,500,000.00	977,092,479.72	-
2	<u>Ongoing Projects</u>				
2.1	Sanjen Jalavidhyut Co. Ltd	57.3	3,621,600,000.00	2,454,651,077.33	Under Construction
	Upper Sanjen	14.8			
	Lower Sanjen	42.5			
2.2	Rasuwagadhi Hydropower Co. Ltd.	111	6,842,100,000.00	2,180,171,187.77	Under Construction
2.3	Madhyabhotekoshi Jalavidhyut Co. Ltd.	102	6,141,650,000.00	2,672,613,202.54	Under Construction
2.4	Upper Tamakoshi Hydropower Ltd.	456	10,000,000,000.00	14,776,952,059.66	Under Construction
2.5	Super Dordi Hydropower	50	500,000,000.00	0	
	Total 2	776.3	27,105,350,000.00	22,084,387,527.29	-
	Grand Total		28,154,850,000.00	23,061,480,007.01	-

EMPLOYEES PROVIDENT FUND – THE PROJECTS

Equity

1. Betan Karnali Sanchaykarta Hydropower Limited

1. Project Name: Betan Karnali
2. River: Karnali
3. District: Surkhet and Accham
4. Capacity: 688 MW ©Nepal Power Investment Summit 2018
5. Total Energy: 4377 GWh (Dry Energy: 1527 GWh, Wet Energy: 2850 GWh)
6. Total Project Cost (preliminary level): ~NRs.80 Billion, EPF to lead Financial Closure through Financial Domestic Resources
7. Proposed Financing Structure: Debt: Equity – 70:30
8. Current Status:
 - Preparation of Feasibility and DPR (next 16 Months)
 - MoU with Rastriya Prasaran Grid Company Limited for Power Evacuation

HYDROELECTRICITY INVESTMENT AND DEVELOPMENT COMPANY LIMITED

Nature of Business: Focused Hydropower Investment Company

Mandate: Generate long term resources both from domestic and international resource base to finance/invest only in Mid-Mega Hydropower Projects

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Capital Structure: Authorized-Rs.50 Billion, Issued/Paid Up – Rs.10 Billion

Share Holders: Government of Nepal (50%), Institutional Investors (30%), General Public (20%, 3,04,000)

Portfolio:



HYDROELECTRICITY INVESTMENT AND DEVELOPMENT COMPANY LIMITED

Debt:

1. Projects Assessed = 25 HEPS of 15MW-86 MW, > 800 MW
2. Project Financed: 474.3 MW (~ 9.32 Billion)
86 MW Solu Khola (Dudhkoshi), 82 MW Lower Solu (Solukhumbu), 42 MW Mristi (Myagdi), 37.6 MW Kabeli A, 30 MW Khani Khola (Dolkha), 27 MW Dordi Khola (Lamjung), 25 MW Kabeli B1 (Panchthar), 23.5 MW Solu Khola (Solukhumbu), 21.6 MW Lower Hewa (Panchthar) and 20 MW Bagmati (Lalitpur)

Equity:

1. Remit Hydro Limited [Projects: 71.2MW Ghunsa Khola and 53.7 MW Simbua Khola HEP]
2. 14% Power Transmission Company Nepal Limited
3. 4% Electricity Generation Company Limited

WHAT IS HAPPENING IN NEPAL – PROJECT AND FINANCING PERSPECTIVE

SLOW/NOT HAPPENING

- * Bigger Projects and Its Financing
- * Project Financing
- * USD PPAs
- * Country Rating
- * Bilateral and Multilateral Finance
- * Instruments
- * Sovereign Guarantees
- * Third Country Power Export

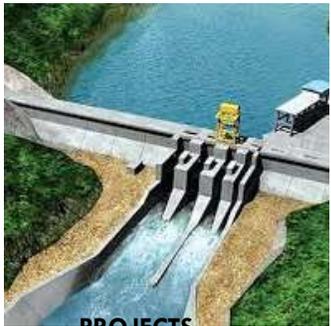
HAPPENING

- Mid Sized Project (<100 MW)
- More than 1000 MW under construction of the IPPS
- Capacity/Interest of the IPPs – on the rise
- IPPs Attempting Innovation
- Enhanced Governance and Social Responsibility
- Enhanced Recognition and Adoption of better practices

HAPPENING

- Monetary Policy Drive
- Increasing INTEREST, UNDERSTANDING and CAPABILITIES of the domestic BFI to Finance mid-sized projects
 - Mid Sized Projects [up to 50 MW] entirely financed by Domestic Resource, tending to 100 MW
- Consortium is Shrinking in Size

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PROJECTS



FINANCE

WHAT IS HAPPENING IN NEPAL – FINANCING PERSPECTIVE

SLOW/NOT HAPPENING

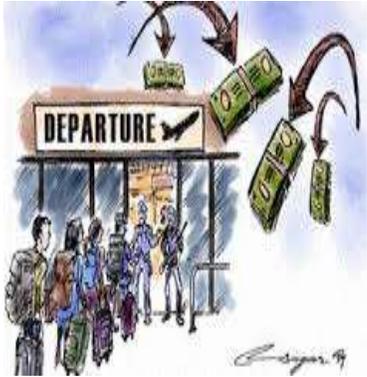
HAPPENING



HAPPENING

- Lesser cost, time, procedure, and conditions for Financial Closure (as against international finance) for domestic BFs
- Newer Structure of Finance
- General public – increasingly being recognized as a source of equity
- Wider consideration on how the funds and surpluses of bigger government institutions can be leveraged
 - A number of public companies already operational
- Dedicated Financial Institution
- Prospects of instruments

HYDROPOWER PROJECTS AS AN INSTRUMENT OF SOCIAL SECURITY AND WEALTH CREATION



Remit Hydro

- **Projects:** 71.2MW Ghunsa Khola and 53.7 MW Simbua Khola HEP
- **Total Project Cost** ~21 Billion NRs.
- **Holding:** HIDCL – 51%, Migrant Workers- 24%, General Public – 25%
- **Current Status:** DPR Preparation and Work on Access Road
- **Financial Closure:** Mostly from Domestic Resources



Sanchayakarta Hydro

- **Projects:** 688 MW Betan Karnali HEP
- **Total Project Cost** ~70 Billion NRs.
- **Holding:** Contributors of EPF – 40%, EPF-15%, NEA-10%, EGC-10% General Public – 25%
- **Current Status:** DPR Preparation
- **Financial Closure:** EPF to assume Lead, Domestic Resources
- **Proposed Financing Structure:** Banking Consortium, Non-banking FI lending and Instruments

THE GOAL !

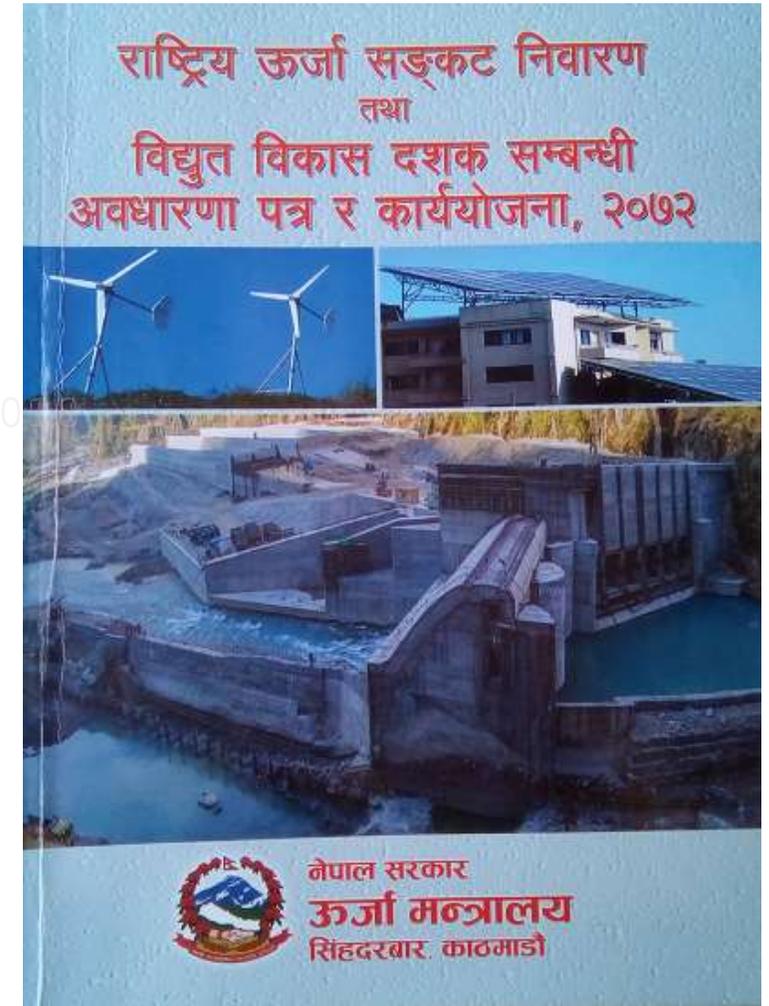
National Energy Crisis Mitigation and Electricity Development Decade Concept Paper and Plan – 2072 B.S (2016 AD)

1. How to resolve the Energy Crisis

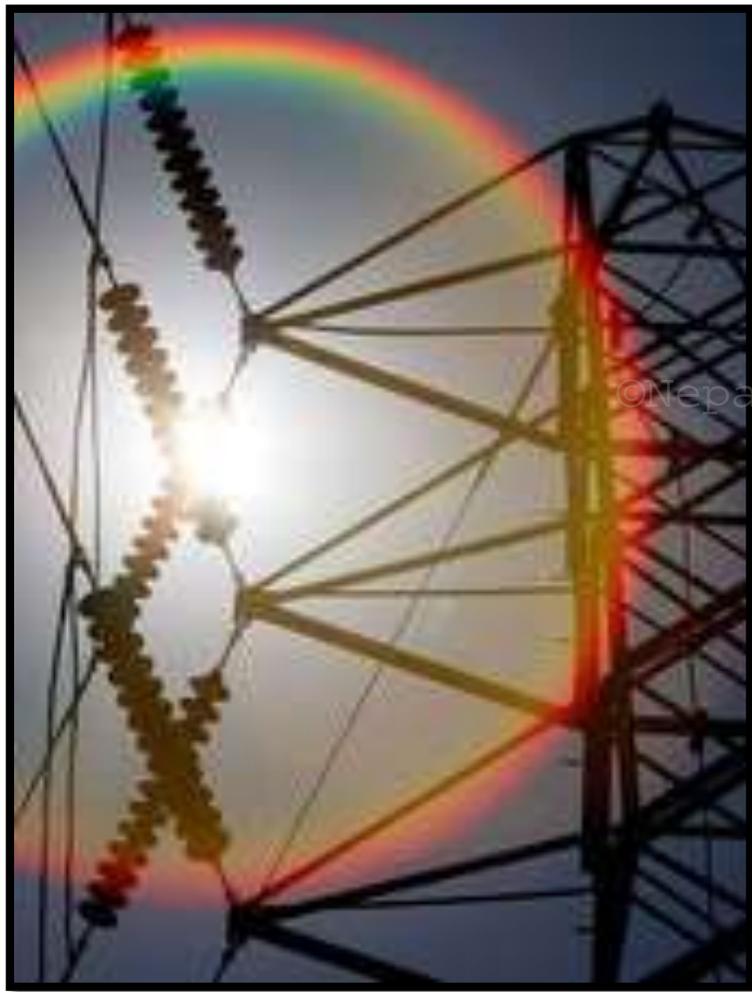
- Open and Unconstrained !
- Short, medium and long term target !!

2. Electricity Development Decade

- Projects (generation, transmission)



THE POWER SECTOR – 2016 - 2018 SCENARIO !



Electricity: Present Situation (2016)

- Demand 1300 MW
- Total Capacity : 829 MW (Hydro-776 MW, Thermal 53 MW)
 - Dry Capacity: 300 MW
 - Import: 230 MW + 80 MW

Electricity: Next Year (2017)

- Demand 1423 MW
- Total Capacity : 1029 MW (Hydro-976 MW, Thermal 53 MW)
 - Dry Capacity: 387MW
 - Import: 580 MW
 - Solar + Wind: 100 MW

Electricity: Next Three Year (2018)

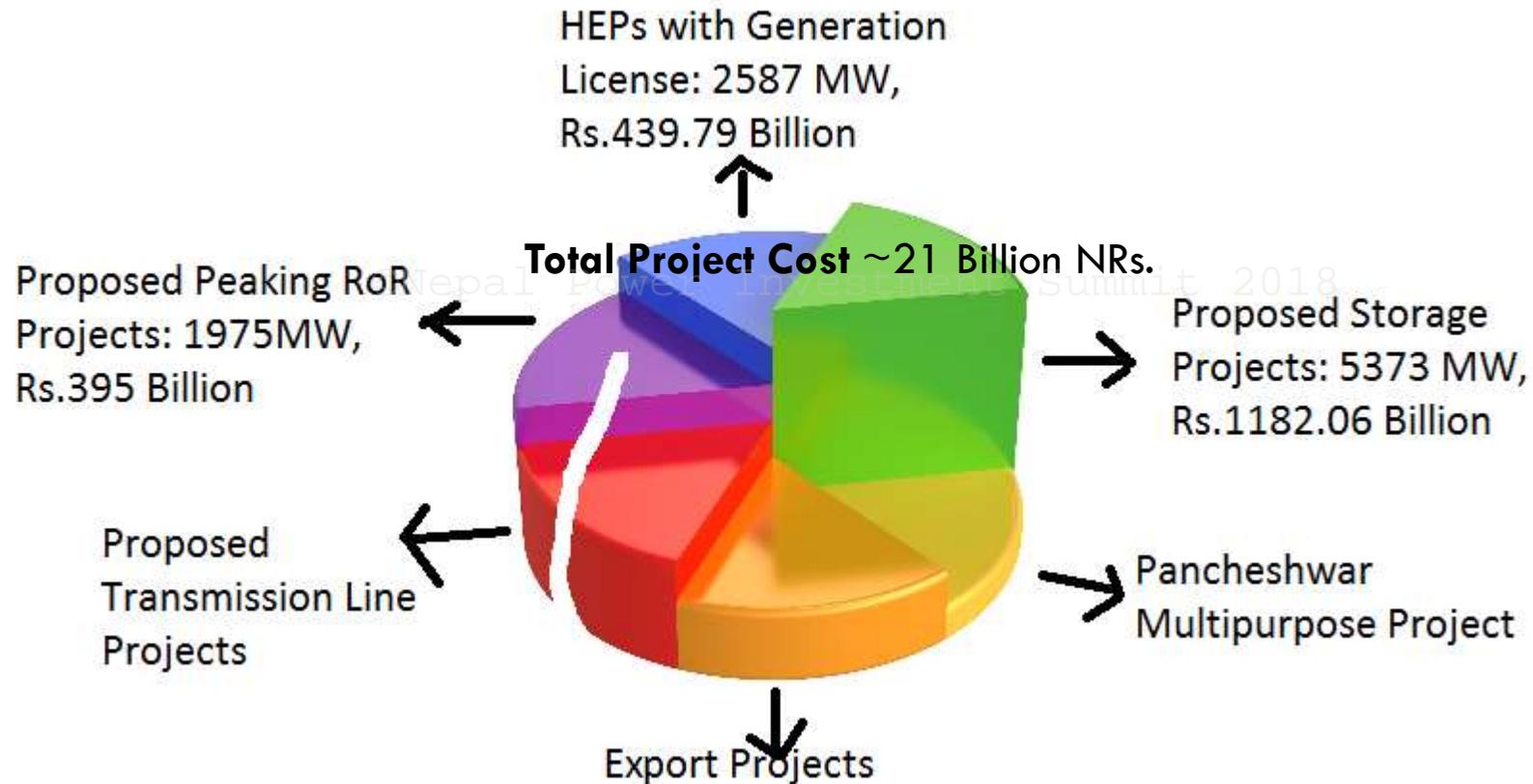
- Demand 1837 MW
- Total Capacity : 2209 MW (NEA: 830 MW, IPPs 600 MW, Solar etc.: 200 MW) Import-~950 MW

THE PLAN IN MOTION !

- A Holding Company for Electricity Generation – Electricity Generation Company Limited
- A Separate Company for Transmission Lines – Rastriya Prasaran Grid Company Limited
- A Separate Company for Hydroelectricity Engineering – NEA Engineering Company Limited
- Company approach to the earlier Development Committee approach
- Drive to Achieve the Goals – A good Example- Betan Karnali
- IPP Projects on the Move

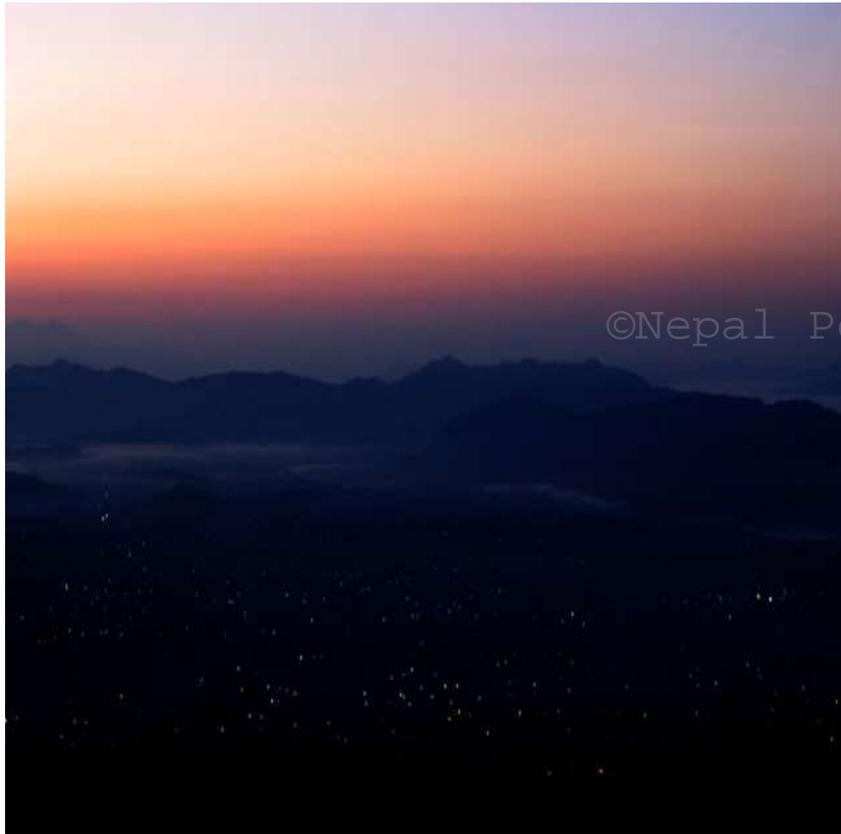
*HEP=Hydroelectricity Project

FINANCING REQUIREMENTS AND OPPORTUNITIES



Opportunity - Public Private Partnership !

AS I CONCLUDE



- The story of Hydroelectricity Generation in Nepal remains mostly of missed opportunities, yet of hope and great aspirations...
- The country was never better prepared as it is now to harness its water resources...
- Everybody is invited...



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