Presenter 2

Nepal’s Experience with Hydropower PPP Public Equity Share Model

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Infrastructure PPPs Responding to Socio-Economic Demand

Nepal's Experience with Hydropower PPP Public Equity Share Model

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Why PPP projects in Developing Countries?

"Meeting essential needs requires not only a new era of economic growth for nations in which the majority are poor, but **an assurance that those poor get their fair share of the resources required to sustain that growth**."

(WCED (1987), Our Common Future, p.25)

For consumption demand in a low-growth economy it is important that... **policies to achieve a more equal distribution of income and wealth are suitable**.

Dullien, et al (2011). Decent Capitalism: A Blueprint for Reforming Our Economies

"Extractive institutions are so common in history because they have a powerful logic: **they can generate some limited prosperity while at the same time distributing it into the hands of a small elite.**"

(D. Acemoglu & J. A. Robinson, Why Nations Fail (2014), p.149)

Public Private Partnership legal and regulatory framework

1992

Opening to the Private Sector (1992 – 1999): Originally evolution of PPP in Nepal began 1992 when hydropower policy and electricity Act and Foreign Investment and Technology Transfer Act were introduced.

1999 / 2015

in 1999 BOT policy and PPP policy in 2015 were introduced, but the PPP Policy was only guidance for PPPIA

2019

PPP and Investment Act, 2019

2020

PPP and Investment Regulation, 2020

PPP can be Built Transfer(BT), Build Own Operation and Transfer (BOOT), Build Own Transfer (BOT), Lease Operate Transfer (LOT), LBOT, Development Own Transfer (DOT) Management Own Transfer (MOT), Rehabilitation Own Transfer (ROT) or any similar method

Hydropower policy in Nepal has evolved over time to address the benefit-sharing practices changed from the state-controlled era to liberalization and stronger rights-based demands after the many conflicts with communities

Getting PPP Hydro Project

The Government of Nepal (GoN) issues a survey and time-bound generation license for the concession period up to **30- 35 years** to private company through the Department of Electricity Development (DoED). The countdown begins the day the generation license is issued, i.e. the 4–5 years spent on construction

The developer signs a long-term Power Purchase Agreement (PPA) with the state-owned, sole buyer of power, **Nepal Electricity Authority (NEA)**. Or PDA in case of dedicated Export with Investment Board of Nepal

Projects are generally financed using a **70:30 to 80:20** debt-to-equity ratio, debt from commercial banks or international financiers.

The private company company absorbs **all all design, cost-overrun, disaster and and construction risks**. **risks**.

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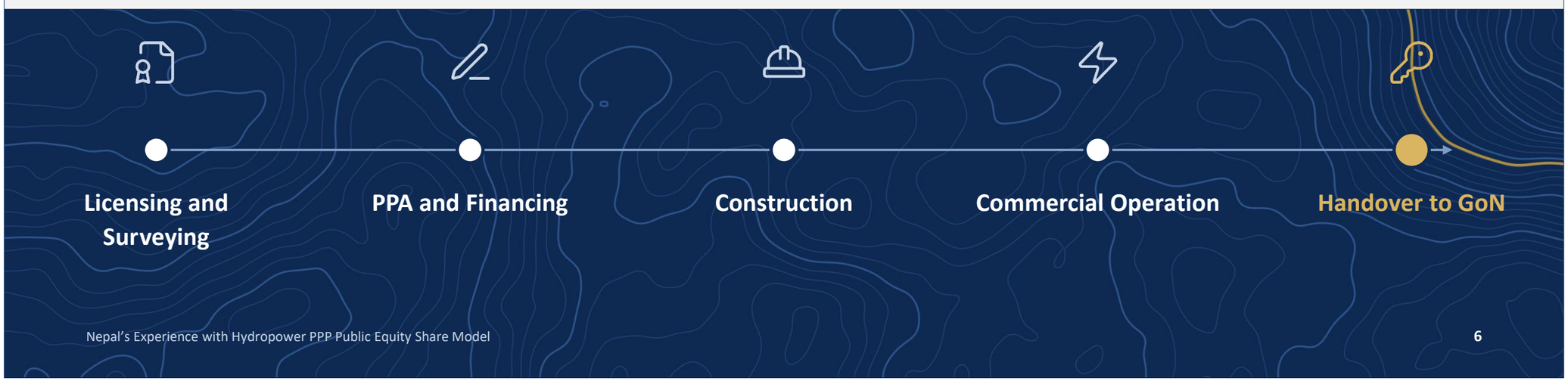
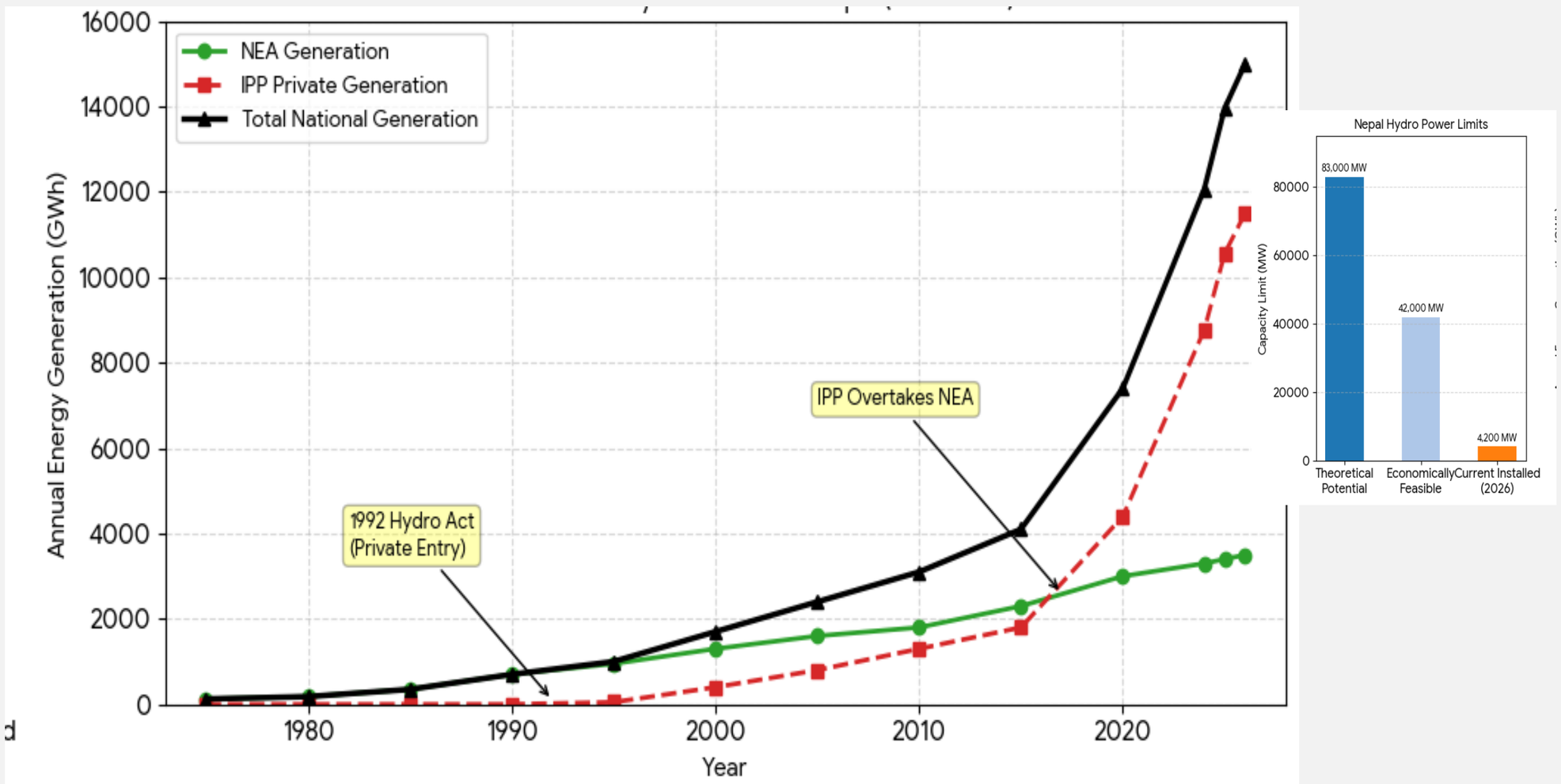
Getting PPP Hydro Project

Private operators must pay an annual royalty to the GoN, calculated based on per-kW installed capacity and per-kWh energy generated but for export oriented FDI-hydro, based on negotiation. 10 years after generation of electricity, corporate tax free and another 5 years 50% rebate

Upon expiration of the 30- or 35-year license, the law mandates that the plant (dam, powerhouse, turbines, transmission lines) must be handed over in fully functional, optimal operating condition, ensuring the state inherits a revenue-generating asset.



Electricity generation- IPP dominated impact of 1992 act



IPO issuances in Hydropower Companies for Public

1. After company approves the IPO proposal the hydropower company appoints a **SEBON-licensed issued merchant Banker**.
2. The company obtains a **credit rating** from an authorized rating agency.
3. Hydropower companies usually apply for an IPO after completing a **30% to 50%** of physical construction.
4. The company uses the EIA report and project documents to identify affected communities and based on that a **10%** shares is reserved for people in the project-affected area to give local communities an ownership stake in the project.
5. The remaining shares are offered to the general public **15%**. If the issue is oversubscribed, allotment is usually done through a lottery system.

IPO issuances for Public

- After allotment shares, the company then lists its shares on **NEPSE**.
- This allows investors to trade the shares in the secondary market, however, shares allotted to local residents are usually subject to a **3-year lock-in period**.
- Hydropower companies may still issue IPOs even if their net worth per share is below the face value of **Rs. 100**, However, they must clearly disclose project risks and progress.
- In many cases, hydropower companies can issue IPOs **after electricity production begins**. Some special projects may have different rules depending on SEBON approval.

99+

More than 99 hydropower companies are listed in the Nepal Stock Exchange (NEPSE), making it the dominant sector for retail public offerings (IPOs), around two dozens hydropower company are waiting to get approval

CASE - Hydropower

Financing Structure of Upper Tamakoshi 456 MW

30% Equity	
• NEA	41%
• NTC	6%
• RBS	2%
• CIT	2%
• Public Shares	49%
• Employee of Equity Holding Firm	24%
• General Public	15%
• Local	10%

70% Debt
• Provident Fund
• CIT
• RBS
• Nepal Telecom
• Government of Nepal

Market overview and hydropower share reach

8.1 million

5.15 million

While total beneficiary (Demat) accounts surpassed **8.1 million** in mid-2026 in Nepal, active digital portfolio users stand at roughly **5.15 million**, meaning millions participate intermittently primarily to apply for primary market IPOs rather than active daily trading.

Rs 300-400

Average share price in secondary market market for hydros is **Rs 300-400**

2.7 Billion US$

320 Million US$

So far **2.7 Billion US$** has been invested by private sector, **320 Million US$** is invested by public through IPOs. There are **600 thousands** investors as founder investors

What are benefits of PPP projects (Hydro) in Nepal

- Improved Service Delivery
- Increasing investment opportunity for private sector
- After Govt becomes partner, Project will have better economic viability
- Resource mobilization for for bigger projects, by involving several stakeholders
- Leveraging private investment in infrastructure
- Providing benefits to the local people
- Risk Sharing for private investment
- reduce the local conflict with local people

VGF provision is there if projects bring positive economic benefits in long-run and there are provisions of other incentives to in Nepal's PPPIA

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Employment Creation Across the Value Chain

Construction phase: Thousands of direct and indirect jobs for local workers in civil, mechanical, and electrical works

Operations phase: Permanent skilled jobs in plant operation, maintenance, environmental monitoring, and administration

Financial sector: Brokers, financial advisors, and bank staff serving the growing rural investor base

Induced employment: Service sector, retail, hospitality, and transport jobs enabled by improved connectivity and rising local incomes

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Nepal has huge hydropower potential, benefit sharing is now a global sustainability issue in Nepal as well, it has become a major topic in hydropower and water-resource debates, linked to sustainability, equity, and community participation but local communities often feel the benefits are not shared fairly, leading to disputes

The main benefit-sharing mechanisms are royalties, local equity/share offers, employment and training, community development/infrastructure support, and environmental enhancement activities but implementation guidelines often vague or based on community bargaining.

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Community Ownership & Public Support

Public Participation Builds Ownership

When communities receive equity shares in hydropower projects, they transition from bystanders to co-owners. This sense of ownership directly generates public support, reduces local conflicts, and smooths project implementation.

Financial Benefits for the Public

Local communities receive dividends, capital gains from NEPSE-listed shares, and enhanced household income. The 10% reserved for project-affected communities and 15% for the general public democratises infrastructure wealth.

Road Access & Connectivity

Hydropower projects are mostly sited in remote mountain areas. Construction access roads become permanent infrastructure, opening previously isolated communities to markets, services, and opportunities.

Local Economy Becomes Vibrant

Increased supply chain demand, and access to electricity transform rural economies. Local businesses, hospitality, and services flourish around project sites and newly connected towns.

Public Gets a Share

Beyond royalties, equity participation means citizens share in profits long-term. This aligns developer and community interests — a project that performs well benefits everyone, creating a virtuous cycle of investment and goodwill.

Example — Chilime Hydropower & Syafrubesi: Syafrubesi was once one of Nepal's most remote and inaccessible villages. The Chilime Hydropower Project brought roads, electricity, and economic activity — transforming it into a thriving local hub. Today it is a gateway to Langtang valley tourism and commerce.

Business Formation & Local Entrepreneurship

Hydropower PPP projects catalyse a wave of new business activity in host communities — creating demand for local goods and services throughout the construction, operation, and post-project phases.

Supply Chain & Construction Services

Local contractors, material suppliers, transport operators, and food vendors emerge to meet project demand. These businesses persist long after construction ends.

Hospitality & Tourism Growth

Road connectivity opens remote areas to trekkers and tourists. Hotels, teahouses, and guide services flourish, diversifying the local economic base beyond direct project activity.

Entrepreneurship & SME Development

Dividend income from shares provides seed capital for small businesses. PPP benefit-sharing provisions include entrepreneurship training, enabling communities to launch sustainable ventures.

Market Expansion & Trade

New roads connect previously isolated producers to district and national markets, enabling agricultural trade, handicrafts, and other locally produced goods to reach broader consumers.

Key Insight: Hydropower PPP projects act as economic anchors — when structured with robust community benefit-sharing, they do not merely generate electricity; they generate livelihoods, businesses, and lasting local prosperity.

There are important things to note

Policies on local shares must find a fair balance between

ensuring adequate protection for the local communities and

ensuring that these policies do not drastically upend the accepted practices of hydropower development.

Investments made in a speculative market, are always going to have inherent risks that no policy regime can fully eradicate.

The best way to minimize risks for local communities is to increase their understanding of capital market, the hydropower company and financial literacy programs in addition to that imposing stringent disclosure requirements to the companies.

Other complementary local benefit sharing mechanisms can be much more effective, such as skills training, jobs and local business development. Efforts to focus on this group have immense potential to yield tangible outcomes in terms of improved access to wealth, financial literacy, and the ripple effect on family health and education, among others.

Policy weaknesses in PPP projects (Hydro)

Although market has been growing still **roles and responsibilities** the government, developers, and local bodies are poorly defined.

There is a construction delay penalty for hydropower, however there are genuine risks: local geological delays, land acquisition issues, grid connection backlogs directly compress the developer's profitable operating window. ***Sometimes these issues are addressed on ad hoc basis***

Limited local participation in decision-making, communities may not have enough say in how benefits are designed or delivered. The benefits, other than dividends to the local people depends upon the bargaining power of the community.

Lack of project-specific adaptation, policies may not account well for differences in location, timing, and community needs.

Weak implementation and monitoring form government authority, even when benefit-sharing plans exist, they may not be effectively carried out or tracked.

Focus on compensation rather than long-term benefits, policies may emphasize short-term mitigation instead of lasting development gains like livelihoods, infrastructure, and equity stakes.

A Transformative Opportunity for the PPP Model

83,000 MW
Technically feasible hydropower potential

~3%
Of potential currently developed — massive headroom remains

$2.7B+
Private investment mobilised in hydropower so far through PPP

Why Nepal's Hydropower PPP Case Matters for Asia

- **Nepal's hydropower PPP model demonstrates that developing countries can mobilise large-scale private infrastructure investment while embedding community equity ownership.**
- **With 83,000 MW of technically feasible potential and regional demand from India and Bangladesh growing rapidly, Nepal's PPP framework can be an opportunity to become a model for equitable, bankable, and socially embedded infrastructure development across South and Southeast Asia.**
- **Strengthening implementation, deepening financial literacy, improving dispute resolution, and expanding other social benefit-sharing mechanisms will determine whether this potential can be realised for the lasting benefit of Nepal's local community and indigenous people.**

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Policy decision: key commercial aspects- PPA and tariff

- The average hydropower generation cost for a large project in Nepal is US$2 million for 1 MW, which is much higher than the international average cost (H. Shrestha, 2023).
- Generation cost increasing but PPA rate is Fix for dry and wet season for last 3 decades
- Project life for investors – how long? – 30/35/40? **hydro plants life?**
- Merger of IPPs (what incentives?) , otherwise a single hydro company will have no hydro after PPA period, but only a company?? Merger of IPPs- (incentivises) after PPA period, Share value ownership
- Tax: 15 year : Corporate tax 20% (with 50% Rebate), before 15 years 2% of (Revenue) plus Rs 100/kW and after 15 years Royalty 10% plus Rs 1000/kw, OCR+SEBON+NEPSE+ERC etc = 2-3% of revenue depending upon the size of plant financial burden.

Prof Dr Govind Raj Pokharel

Key Takeaways from Nepal's Hydropower PPP Experience

A Proven, Bankable Model
Public equity shares have mobilised billions in private investment while giving communities a genuine ownership stake

Implementation Gaps Remain
Weak monitoring, vague guidelines, and uneven local bargaining power still limit how much benefit-sharing delivers

A Replicable Regional Model
With deeper implementation and financial literacy, Nepal's approach can guide equitable PPP design across Asia

- Nepal's hydropower PPP model — **anchored in public equity shares alongside royalties, jobs, and community development** — shows that developing countries can mobilise large-scale private infrastructure investment while embedding real community ownership.
- **Local shares have opened capital gains and a sense of belonging to project-affected communities**, and access roads, electricity, and new local economies have followed the projects into once-isolated areas.
- The path forward lies in stronger implementation, clearer guidelines, and deeper financial literacy — so that benefit-sharing translates into **lasting improvements in livelihoods, not just paper entitlements**.
- While local shares can create a win-win situation by offering capital gains to communities and reducing project disruption for developers, their future impact remains uncertain because of instability in the Nepali capital market and the possible oversupply of hydropower shares as well as governance

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Disaster costs- who is going to pay?

- Due to climate change and hydrological impacts, investment expenses are expected to rise significantly, reaching **additional USD 2.6 billion (current value**), adaptation premium by 2050 increases the Levelized Cost of Energy (LCOE) for new projects.
- Private developers must allocate an extra 4% to 12% in capital costs just for safety buffers, such as larger de-sanding basins and GLOF mitigation structures (The World Bank and others)
- The investments will need to accelerate substantially to an average of US$1.3–$2.1 billion annually between 2019 and 2040 .

धन्यवाद
Thank You

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