Changing dynamics of power trade in South Asia

Implications for hydropower development
• The BBIN electricity grid: two potential importers (India and Bangladesh), two potential exporters (Nepal and Bhutan: 60 GW commercially viable)

• Installed capacity: IN 330 GW (9% hydro) NP 1GW (99% hydro) BG 12.3 GW (1.8% hydro) BH 1.6 GW (100% hydro)

• Circa 2030 demand projections: IN 370 GW, NP 8 GW, BG 27 GW, BH 4 GW
• India matters: 9X larger than three countries put together, all transmission lines pass through India, already a surplus country

• Demand projection in trouble: politics of demand projection, 30-50 percent off in the last 6 projections in India, BG?

• Distribution end in deep trouble: USD 68.15 B (March 2015) total loan (pre-bailout)
• Regional trade of electricity: strategic commodity or market-priced, openly traded energy component?

• Cost of energy mix: consumer burden or reform issue?

<table>
<thead>
<tr>
<th>In US Cents</th>
<th>IN</th>
<th>NP</th>
<th>BG</th>
<th>BH</th>
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<tbody>
<tr>
<td>Hydro</td>
<td>9</td>
<td>7.3</td>
<td>-</td>
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<td>Coal</td>
<td>3</td>
<td>-</td>
<td>6 (D) 8-10 (I)</td>
<td>-</td>
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<tr>
<td>Solar</td>
<td>4.6</td>
<td>7</td>
<td>17</td>
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• Hydro cost overrun in India is USD 8.1 bn
Hydropower generation in Nepal, India and Bhutan

- **NP:** 2GW in construction pipeline (2022), 4GW under various stages of negotiation (2026-27)
- **BH:** 2.4 GW in construction pipeline (2021), 2-5GW in early stages of negotiation (2026-27)
- **IN:** 12.5 GW in construction pipeline (2020 - ?), 7.8GW proposed for support under new draft hydropower policy
- **Loan risk exposure:** NP 60 percent commercial banks, BH 100 percent bilateral, IN 5 percent commercial banks
- **Where to sell?**
Conclusion: what matters in the end

• Supply signals (demand, assumptions, cost, health of distribution companies)

• Energy mix commitment (decommissioning costs, bail outs, protection)