

Commercial/Market for CBET : Integrated regional Power Market for clean energy



- **Achieving Climate/ Net Zero Goals through RE based CBET**
- **Improved Energy & Climate Security**
- **Competitive Renewable Energy Market by Promoting Renewable Power Market through Portfolio of Product, Electricity (DAM, RTM) , Green (G-DAM, G-TAM) , REC, ESCRTs**

Renewable Energy by 2030

500 GW-India

35 GW-Pakistan

16 GW-Bangladesh

15 GW-Nepal

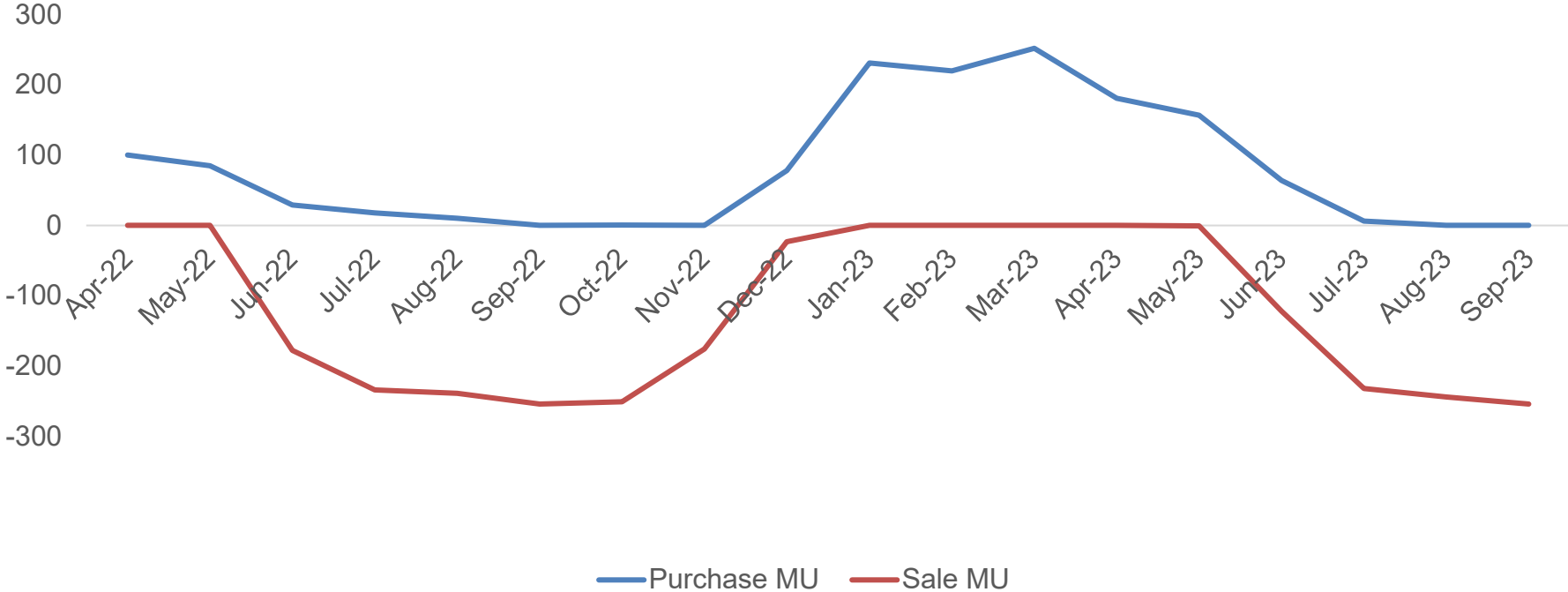
9.3 GW-Bhutan

8.7 GW-Sri Lanka

Month Wise Power Trade - NEA Journey So far

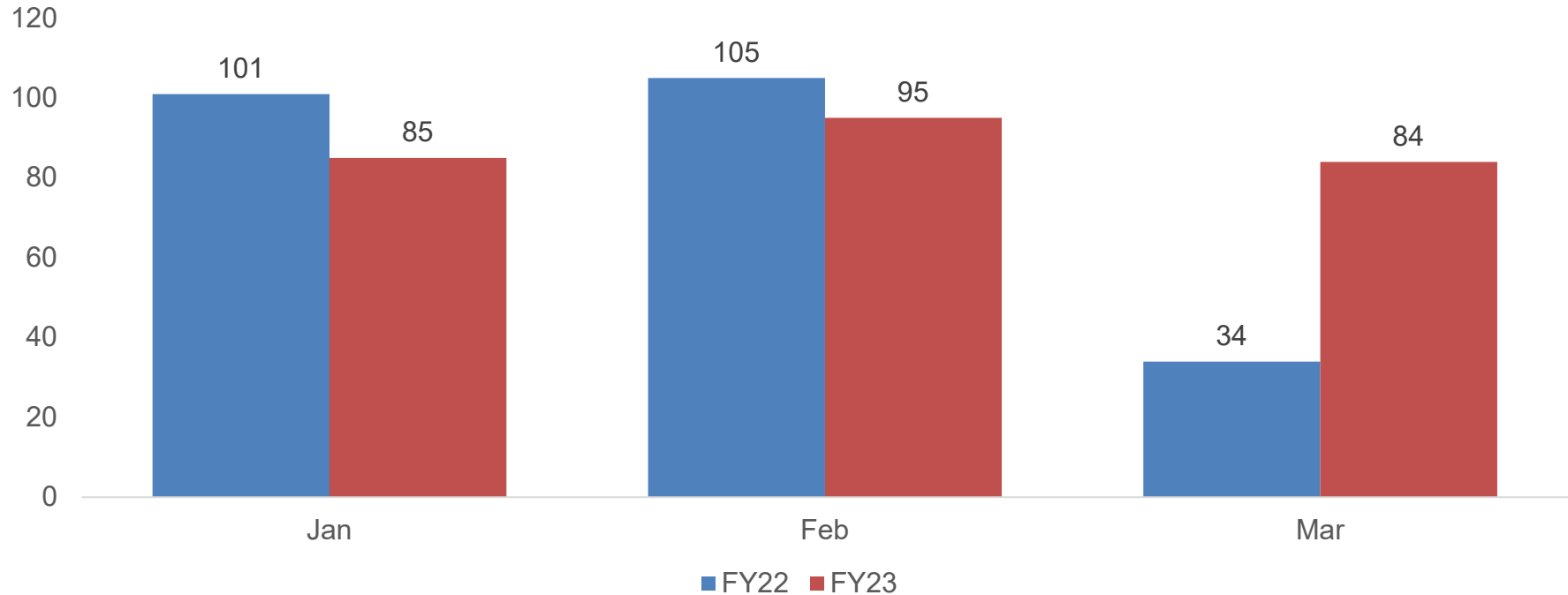


Month wise NEA Trade Detail (MU)-FY 23 & FY 24



Month Wise Power Purchase - Bhutan Journey So far

Month wise Bhutan Trade Detail (MU)



Outlook for Cross Border Electricity Trade in South Asia

An estimate for CBET in South Asian region by 2035, by considering the country wise domestic surplus / deficit, and the existing plans for CBET expansion

- Under an intergovernmental agreement, Government of India has agreed to assist Royal Government of Bhutan in developing a minimum of 10,000 MW of hydropower and import the surplus electricity from this to India.
- Bhutan has identified 1125 MW Dorjilung HPP as one of the potential power plants for supply to Bangladesh.
- India already exports close to 1200 MW of power to Bangladesh.
- India has agreed to import power from the 900 MW Arun-III hydropower project in Nepal.
- Bangladesh has agreed to import 500 MW of power from the 900 MW Upper Karnali hydropower project in Nepal. Considering the involvement of Indian developer, rest of the power may be considered to be off taken in India. Bangladesh's additional 4500 MW of import between 2023 and 2035, and another 4500 MW of import between 2036 and 2041.
- In Sri Lanka, considering the ongoing discussions on transmission interconnection of up to 1000 MW with India, corresponding energy can also be assessed as a potential option, instead of generating the same domestically.

Summary of current framework for CBET in South Asia

A review of the policy, legal, regulatory, technical and commercial framework of South Asian countries relating to CBET reveals major shortcomings in the regulatory, technical and commercial aspects

Requirement for CBET	Afghanistan	Bangladesh	Bhutan	India	Nepal	Pakistan	Sri Lanka
Strategic and political framework	✓	✓	✓	✓	✓	✓	✓
Policy and legal framework	☐	☐	☐	✓	☐	✓	☐
Regulatory framework	✗	☐	☐	✓	✗	✓	✗
Technical and operational framework	✗	☐	✓	✓	☐	✓	☐
Commercial framework: Open access / wheeling of power	☐	☐	☐	✓	✗	✓	✗
Commercial framework: Deviation settlement	✗	✗	✗	✓	☐	✓	✗

✓ Available ☐ Partially Available ✗ Not Available

Regional Electricity Market Development - Way Forward

- Provide Technical Assistance and Organize a Workshop on Different Approaches for Financing Interconnector Lines
- Identify Actionable Next Steps for Regulators to Move from Bilateral Power Trade to a Harmonized Regional Power Market
- Capacity Building on Key Components of System Optimization and Determining Priority Dispatch.
- Capacity Building on Regulatory Mechanisms to Incentivize and Integrate Energy Storage.
- Introduction of enabling provisions for open access, eligibility criteria for connectivity along with open access charges.
- Effort to increase spot market participation rather than entering Long Term PPAs, will boost regional market creation and competition.
- Master regulations on regional energy cooperation.