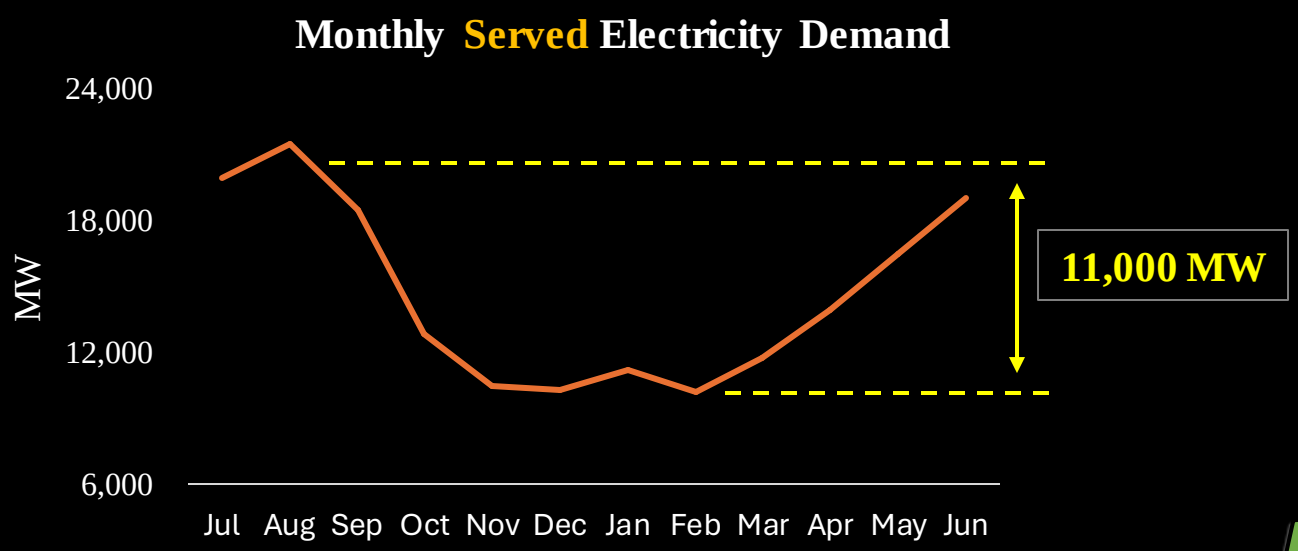
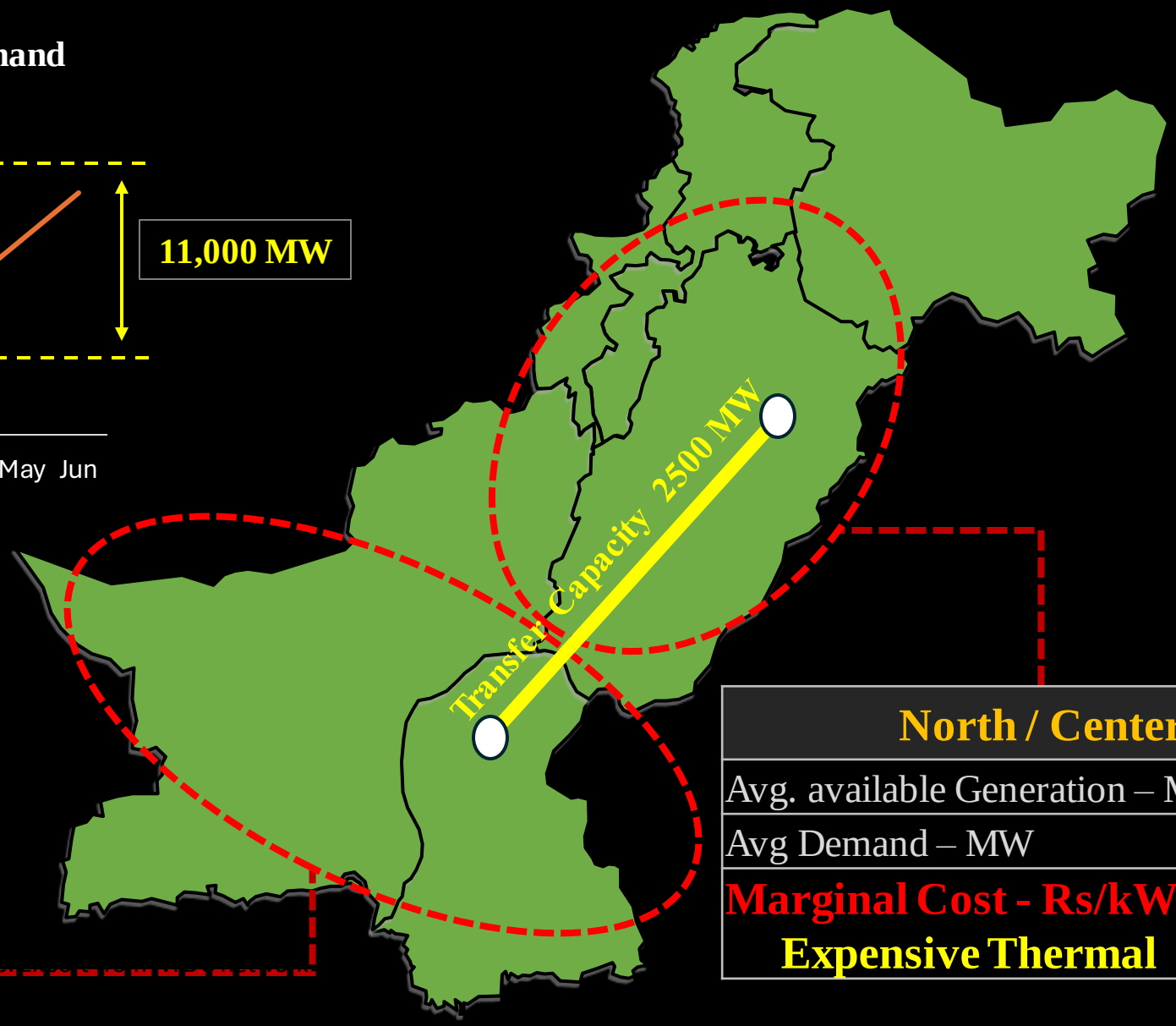
1(B): Regional Winter Incentive Package





South (Idle Gen. Capacity)	
Avg. available Generation – MW	7,000
Avg Demand (incl. KE after KKI grid)– MW	3,050
Marginal Cost - Rs/kWh Cheap Thermal	**17***

North / Center	
Avg. available Generation – MW	8,700
Avg Demand – MW	8,400
Marginal Cost - Rs/kWh Expensive Thermal	**37**

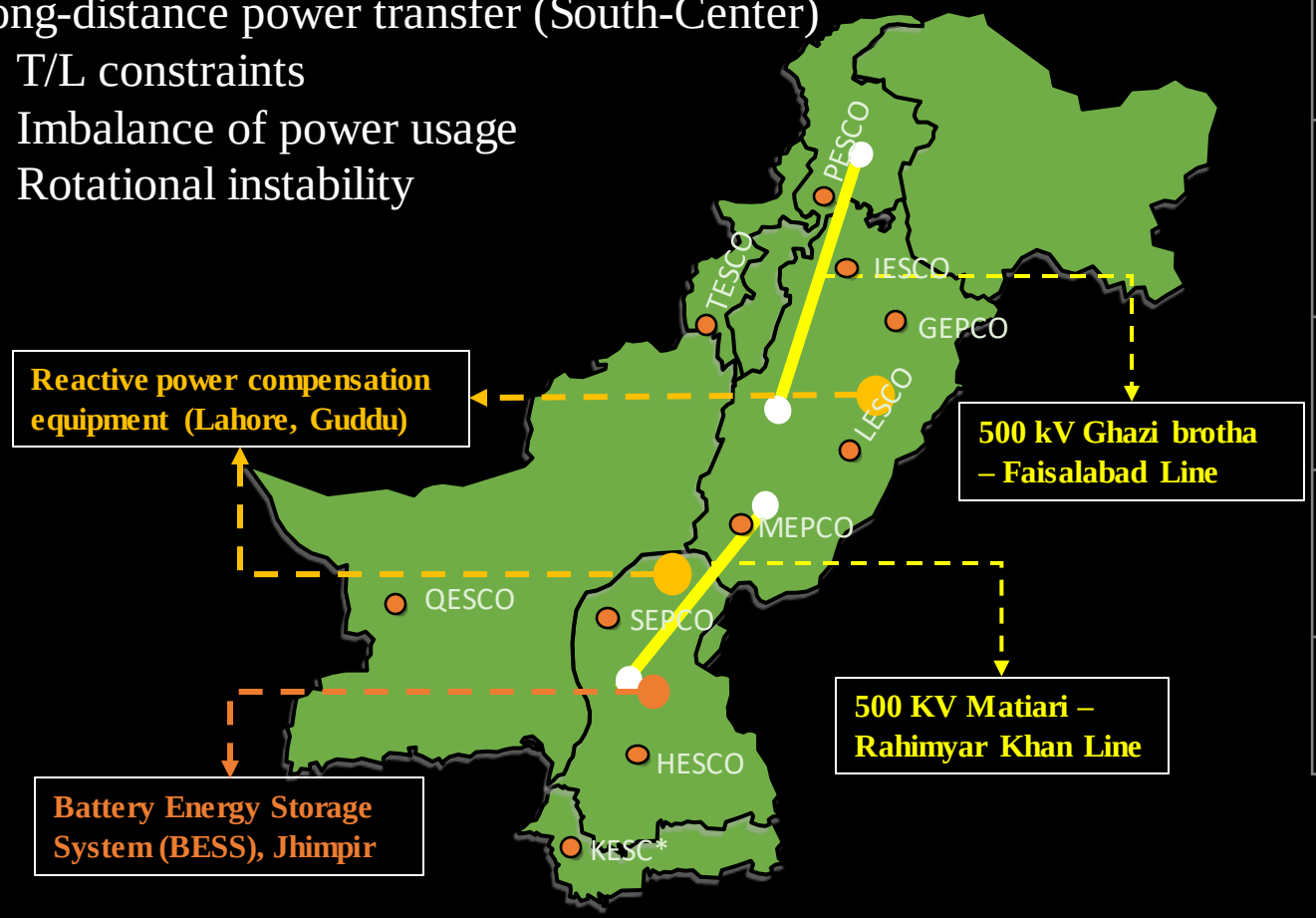
* Tariff of 17(MC) + 3(losses) + 6(capacity) = 26 Rs/unit may be charged (subject to computed MC) on incremental consumption

2(A): Removal of Transmission Constraints

Current Challenges:

Long-distance power transfer (South-Center)

- T/L constraints
- Imbalance of power usage
- Rotational instability



Intervention	Project Timeline	Increase in Transfer Capacity (MW)	Funding Requirements (Mln USD)
500 KV matiari – RahimYar khan T/L	Jun, 26	1700-1800	675
500 kV Ghazi brotha – Faisalabad T/L		2200-2400	349
Reactive power compensation equipment(5 locs)		500 MW* (Expected)	427
Battery Energy Storage Systems		N/A	300

*depends on Feasibility Study

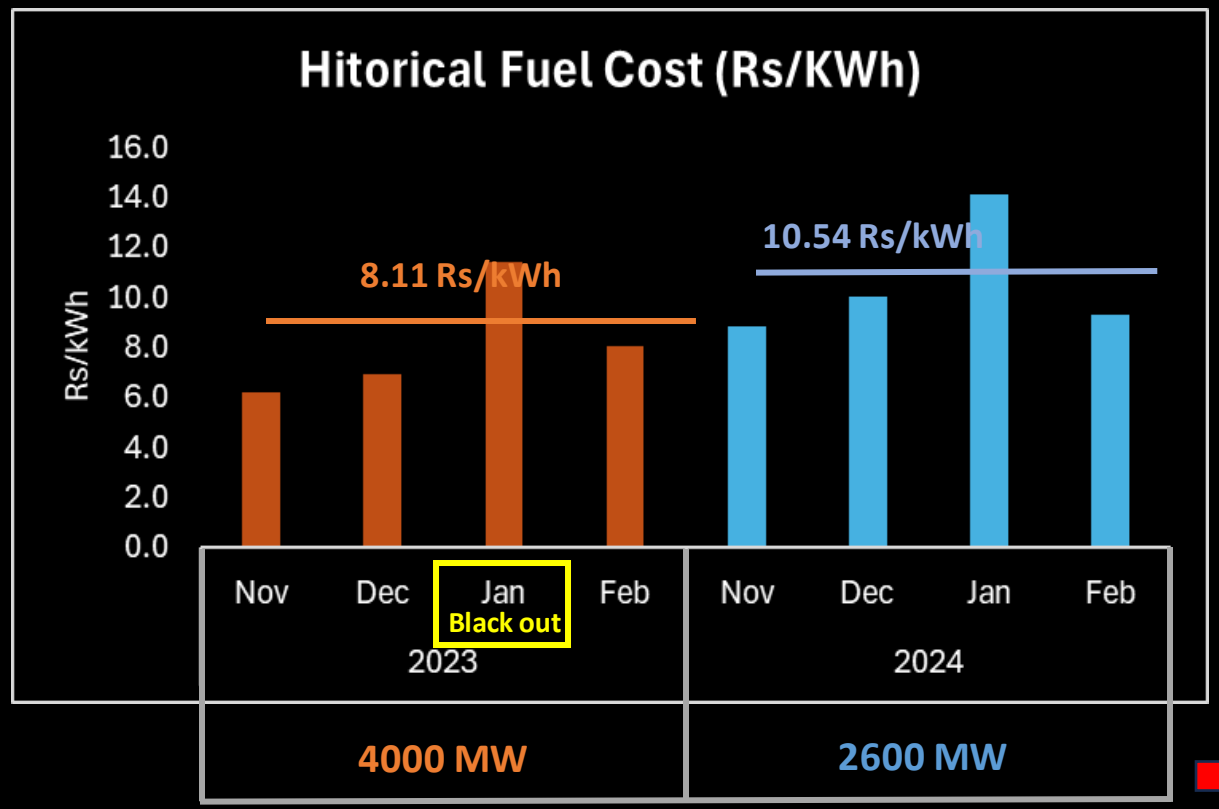
End consumer Tariff Reduction

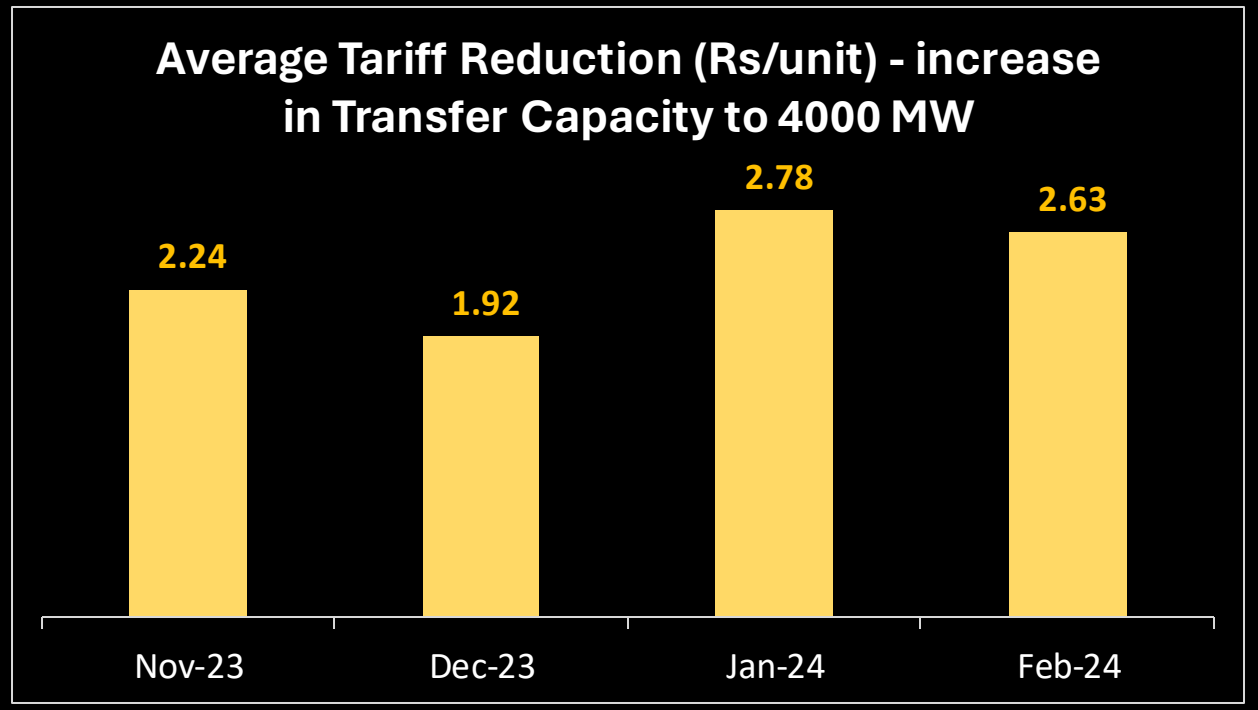
0.71 Rs./kWh

2(A): Removal of Transmission Constraints

Sr. No	Action	Sub-Action		Responsibility	Timelines								
					Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-26	Dec-26
1	**Construction of** a. 500 KV matiari – RahimYar khan T/L b. 500 kV Ghazi brotha – Faisalabad T/L c. Reactive power compensation equipment	**a**	PC-1 submitted to Planning Commission	NTDC									
		b	PC-1 approval	ECNEC									
		c	Start of Bidding process	NTDC									
		d	Project completed	NTDC									
2	**Construction of BESS**	**a**	Feasibility study	NTDC									
		b	PC-1 approval	ECNEC									

2(A): Enhanced margins of Blackout probability





South-Center Transmission limit

2(A): Enhanced margins of Blackout probability

Sr. No	Action	Sub-Action		Responsibility	Timelines						
					Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24
1	**Reevaluation of Transmission evacuation limits from South-Center corridor**	a	Joint study by NTDC with Chinese counterparts (HVDC) for re-evaluating stable operation limits for the South-Center corridor	NTDC							
		b	Development of interim plan for increasing the operation limits of corridor with comparatively high-probability of partial /full system collapse	NEPRA, NPCC/NTDC, Independent Consultant*							
		c	Plan approved by Cabinet	Cabinet							

*To be hired by Ministry of Energy (Power)

2(B): Transmission (Restructuring of NTDCL)

Current Challenges:

- Delays in development of critical transmission infrastructure (S.K Hydro line, etc.)
- Transmission constraints (South – Center Evacuations, Wind / Solar Curtailments, etc.)
- Dispatch of in-efficient and high-cost power plants resulting in high electricity tariffs
- Quality Human Resource Deficit

Outcomes:

- Excess outflow of funds on account of commitment charges / interests
- Limited transmission capacity
- Non-Efficient utilization of generation assets
- Deteriorated HR quality

Existing Functions of NTDC:

- **Design and Engineering**
- **Project Development and Execution**
- **Economic Dispatch for Safe, Secure and Reliable Supply**
- **Generation & Transmission Planning**
- **Power System Operation and Control**
- Operation and Maintenance of 500/220kV Network
- Strengthening / upgradation of 500/220kV system

→ (Power Transmission Infrastructure Development Company) - PTIDC

→ Independent System Operator + Market Operator (ISMO)

→ (National Transmission Maintenance Company) - NTMC