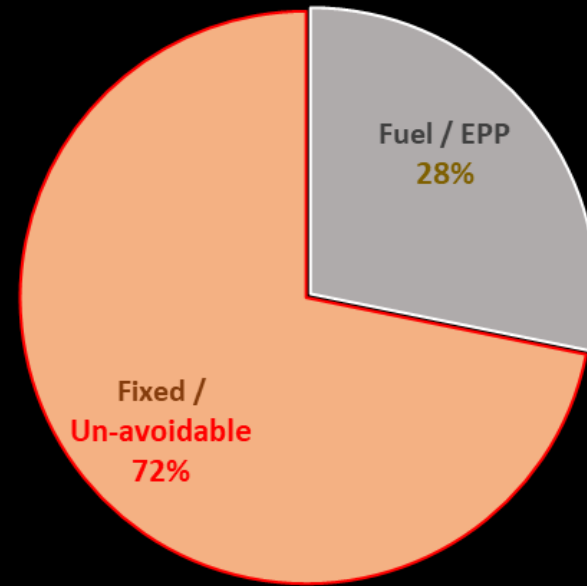




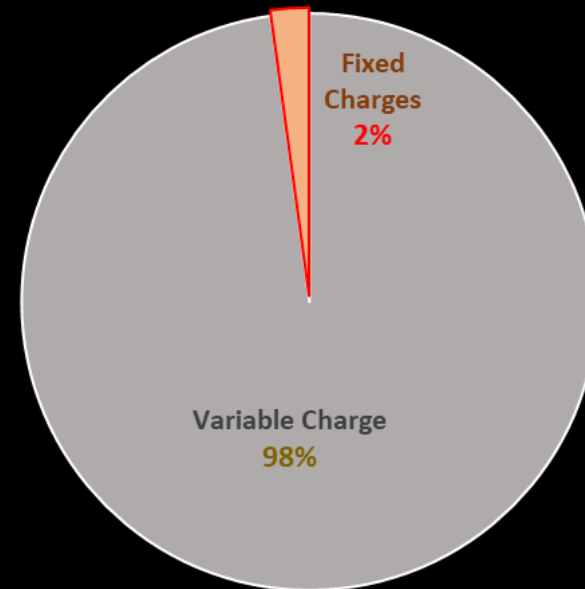
Determination of UoSC

Power Sector Determined Cost of Service & Recovery Structure

	Bln.
Demand (BkWhs)	110
Fuel/Variable Charges	843
DISCO Variable Cost	81
	925
Fixed Charges:	
Power Plants	1,881
NTDC/UOSC&MoF	152
DISCO Fixed Cost	324
	2,356
Total Cost of Power System	3,281
National Rs. /kWh	29.78



**Cost
Structure**



**Recovery
Structure**

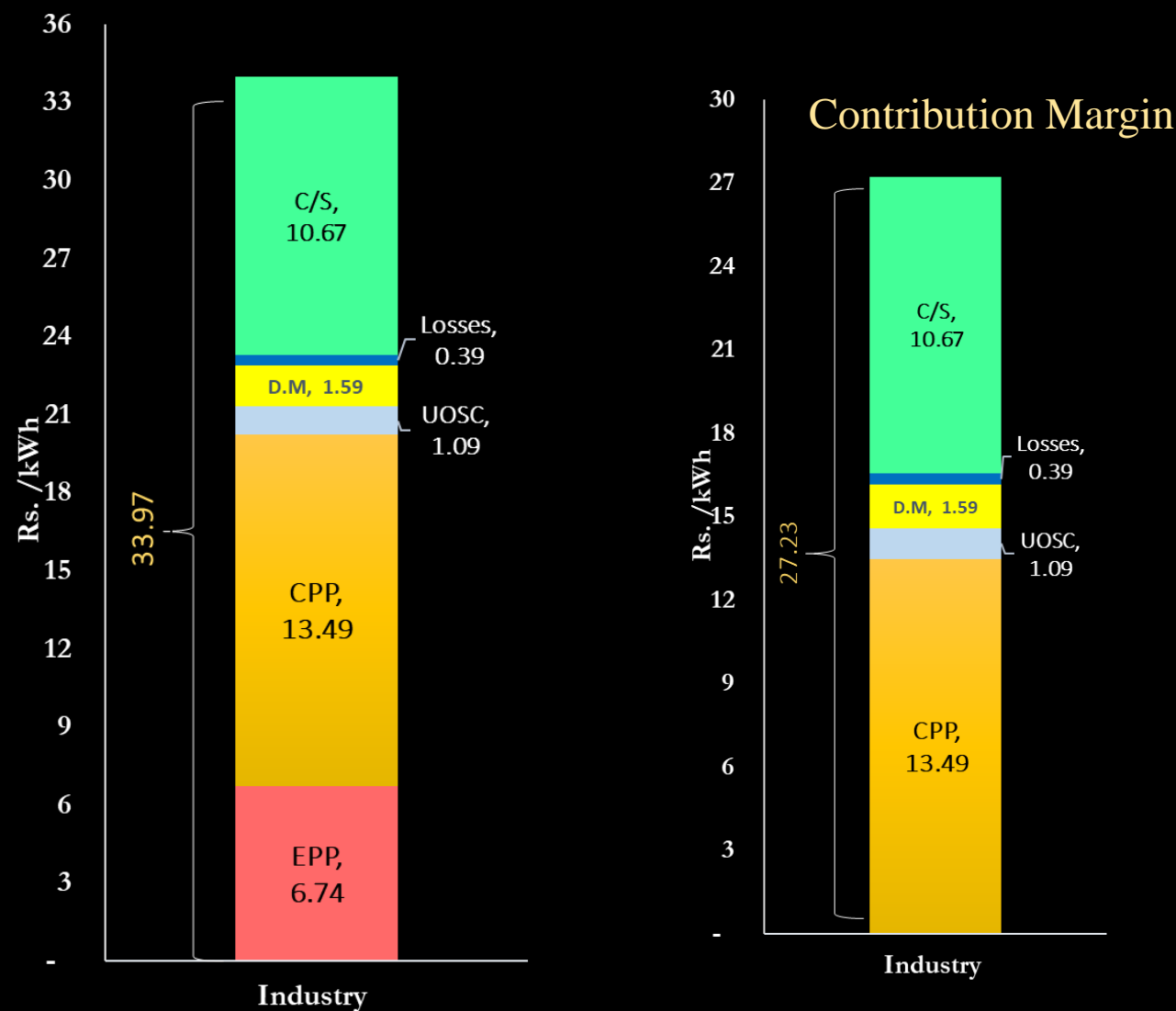
Category Wise Cost Recovery – FY 2023-24

	CoS	(Subsidy) / CS	Recovery at Current Rate	Fixed Cost		CoS	Current Rate	(Subsidy) / CS
	Bln. Rs.	Bln. Rs.	Bln. Rs.	Bln. Rs.	Rs / kWh	Rs / kWh	Rs / kWh	Rs / kWh
Domestic upto-400	1,428	(592)	836	1,049	24.20	32.93	19.28	(13.65)
Domestic above 400 & Tou	288	53	342	210	23.10	31.71	37.59	5.88
Commercial	237	64	301	171	21.95	30.41	38.56	8.15
General Services	107	32	138	76	20.47	28.76	37.31	8.55
Industrial	734	244	978	508	17.90	25.86	34.47	8.61
Bulk	83	44	128	57	16.67	24.47	37.42	12.95
Agricultural Tube-wells	322	(39)	283	229	20.47	28.76	25.25	(3.51)
Others	82	36	118	56	17.36	25.39	36.45	11.06
Total	3,281	(158)	3,123	2,356	21.39	29.78	28.35	(1.44)

- Around 98% domestic consumers (29 Mln) are getting subsidy
- Fiscal Impact (Standard Cost and Cross Subsidy): Rs. 2,829 Bln

CoS – Cost of Service
CS – Cross Subsidy

Component Wise Breakup of Industrial Rates B4 (Rs/kWh)



Note: Any future tariff adjustments related to fixed costs shall be part of contribution margin.

Circular Debt / Subsidy Implication of NEPRA determined Rates

(Commercial, Bulk, Industrial)

Total Consumers **3.95** million

Estimated Sales 39.58 billion units

Stranded Cost	Rs. 736 Bln
Cross Subsidy	Rs. <u>352 Bln</u>
Total Impact	Rs. 1,088 Bln
Per Unit	Rs. 27.49/unit

Burden on Other Consumers / Fiscal Space by Wheeling

Wheeling	Impact.	Rates Increase
50%	544 bln.	6.02 /Unit
100%	1,088 bln.	15.41/Unit

Circular Debt / Subsidy Implication of NEPRA determined Rates

(Industrial B3,B4 and Bulk C2,C3)

Total Consumers **3,926**

Estimated Sales 19.8 bln units

Stranded Cost	Rs. 319 Bln
Cross Subsidy	Rs. <u>214 Bln</u>
Total Impact	Rs. 533 Bln
Per Unit	Rs. 26.89/unit

Burden on Other Consumers / Fiscal Space by Wheeling

Wheeling	Impact.	Rates Increase
50%	366 bln.	2.66 /Unit
100%	533 bln.	5.90 /Unit

Profit Margin available for wheelers (Industry)

		NEP-21 Pehur	NEPRA Pehur	
Current Industry Rates	a	43.0	43.0	
<i>Wheeling Charges</i>				
Allowed losses		0.4	0.4	Will be allowed case to case basis
Distribution Margin (DISCOs)		1.6	1.6	
UoSC (NTDC)		1.1	1.1	Will be allowed case to case basis
Stranded Cost		14.8	-	
Cross Subsidy		8.6	-	
	b	26.5	3.1	
<i>Sale Margin Net of Wheeling Charges</i>	c=a-b	16.5	39.9	
<i>Wheeler Cost</i>				
Energy Charges		0.7	0.7	
Capacity Charges		4.1	4.1	
	d	4.7	4.7	
Margin Available /Unit	e=c-d	11.7	35.2	
Return on Equity / Profit		46%	137%	NEPRA allowed RoE is 17%

Note: Industry rate is inclusive of FCA, QTA and F.C Surcharge of Rs 3.23/unit.

Profit Margin available for wheelers (Industry)

		NEP-21 Solar	NEPRA Solar	
Current Industry Rates	a	43.0	43.0	
<i>Wheeling Charges</i>				
Allowed losses		0.4	0.4	Will be allowed case to case basis
Distribution Margin (DISCOs)		1.6	1.6	
UoSC (NTDC)		1.1	1.1	Will be allowed case to case basis
Stranded Cost		14.8	-	
Cross Subsidy		8.6	-	
	b	26.5	3.1	
<i>Sale Margin Net of Wheeling Charges</i>	c=a-b	16.5	39.9	
Wheeler Cost	d	7.7	7.7	
Margin Available /Unit	e=c-d	8.8	32.3	
Return on Equity / Profit		47%	173%	NEPRA allowed RoE is 14%

Note: Industry rate is inclusive of FCA, QTA and F.C Surcharge of Rs 3.23/unit.

Profit Margin available for wheelers (Industry) – Guddu B-II

		NEP-21 Guddu	NEPRA Guddu	
Current Industry Rates	a	43.0	43.0	
Wheeling Charges				
Allowed losses		0.4	0.4	Will be allowed case to case basis
Distribution Margin (DISCOs)		1.6	1.6	
UoSC (NTDC)		1.1	1.1	Will be allowed case to case basis
Stranded Cost		14.8	-	
Cross Subsidy		8.6	-	
	b	26.5	3.1	
Sale Margin Net of Wheeling Charges	c=a-b	16.5	39.9	
Wheeler Cost				
Energy Charges		10.0	10.0	
Capacity Charges		-	-	
	d	10.0	10.0	
Margin Available /Unit	e=c-d	6.4	29.9	
Return on Equity / Profit		91%	420%	NEPRA allowed RoE is 10%

Note: Industry rate is inclusive of FCA, QTA and F.C Surcharge of Rs 3.23/unit.

Stranded Cost & Cross-Subsidy

Sr .#	International Markets	Grid Fee	Stranded Cost	Cross-Subsidy	References
1	US(California, NYISO,PJM)	✓	✓	Not applicable	FERC Order 888
2	Brazil	✓	Not applicable	✓	Regulator (ANEEL Determination 2018)
3	Spain	✓	✓	Not applicable	OECD Report on Spanish Regulatory Reform
4	Philippines	✓	✓	✓	Republic Act (EPIRA) NO. 9136
5	India	✓	✓	✓	<ul style="list-style-type: none"> • Electricity Act Section 42 • Notified Open Access Regulations

Wheeling Charges - Under NEP-2021

National Electricity Policy (NEP) 2021 clauses

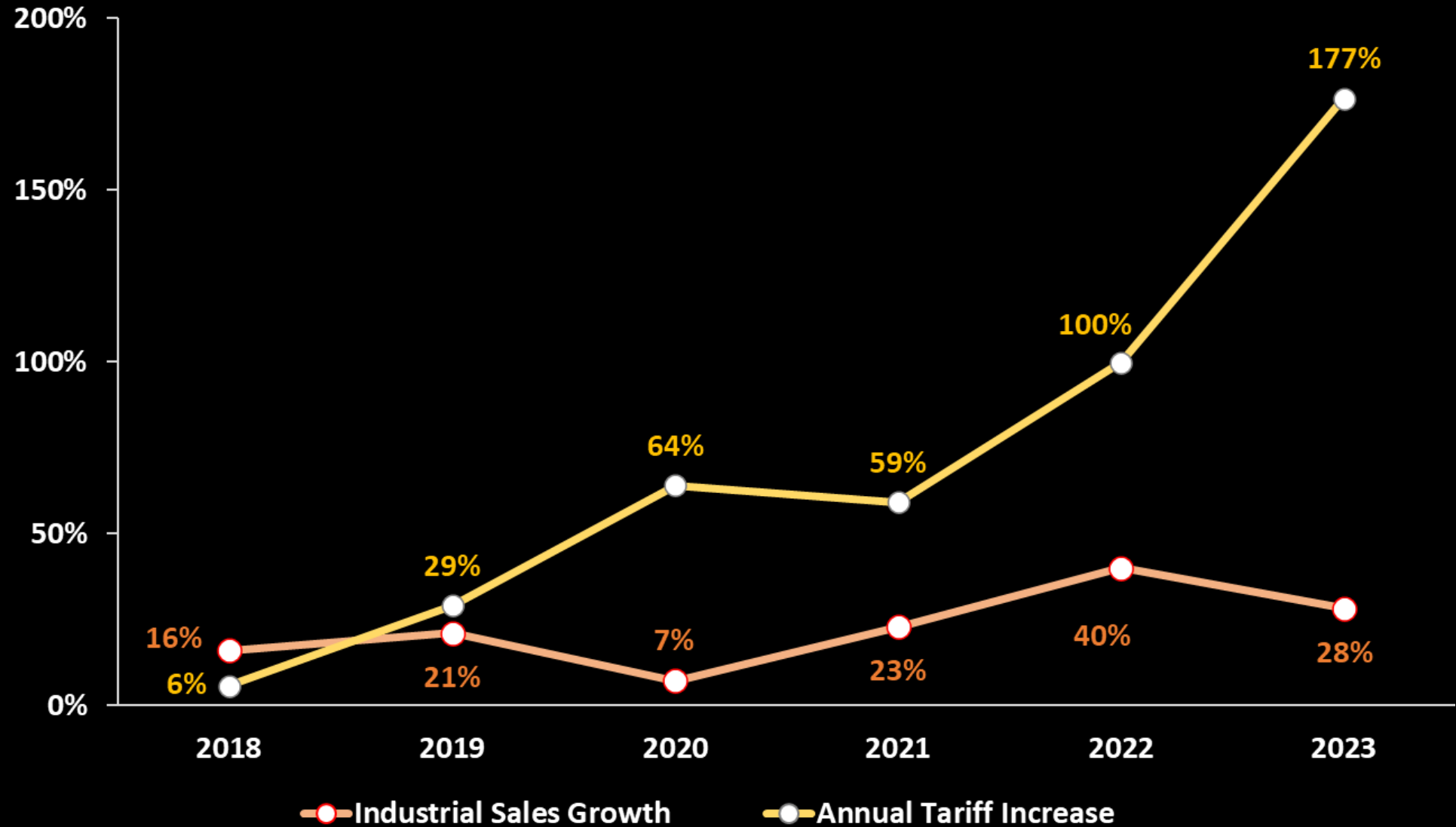
5.5.2

The approved wholesale market design, its implementation and subsequent development takes into account the following:

- f. providing a level playing field to all market participants through uniform application of cross-subsidization and other grid charges to consumers of all suppliers;*
- g. the Government shall take a decision on the recovery of costs that arise due to advent of the open access and market liberalization;

THANKS

Progressive Growth in Industrial Sales and Tariff

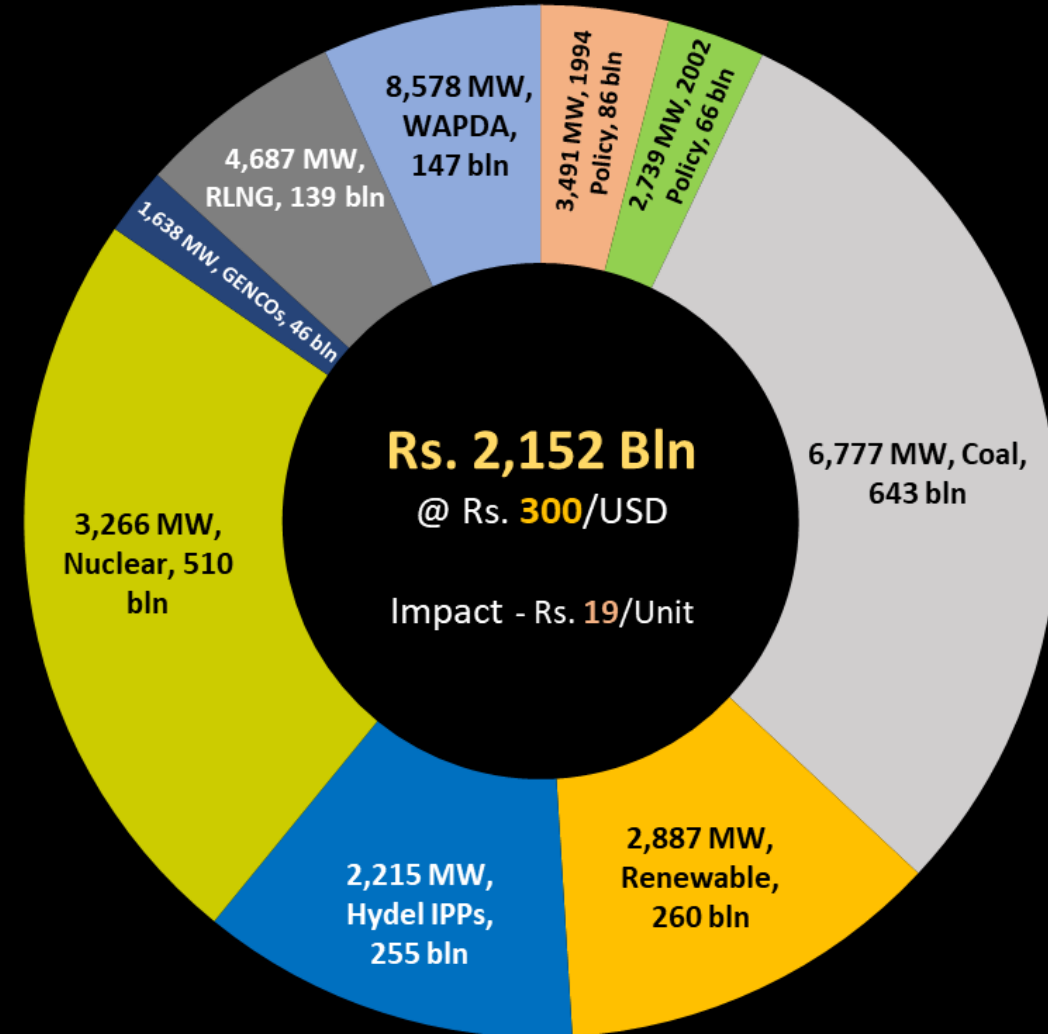
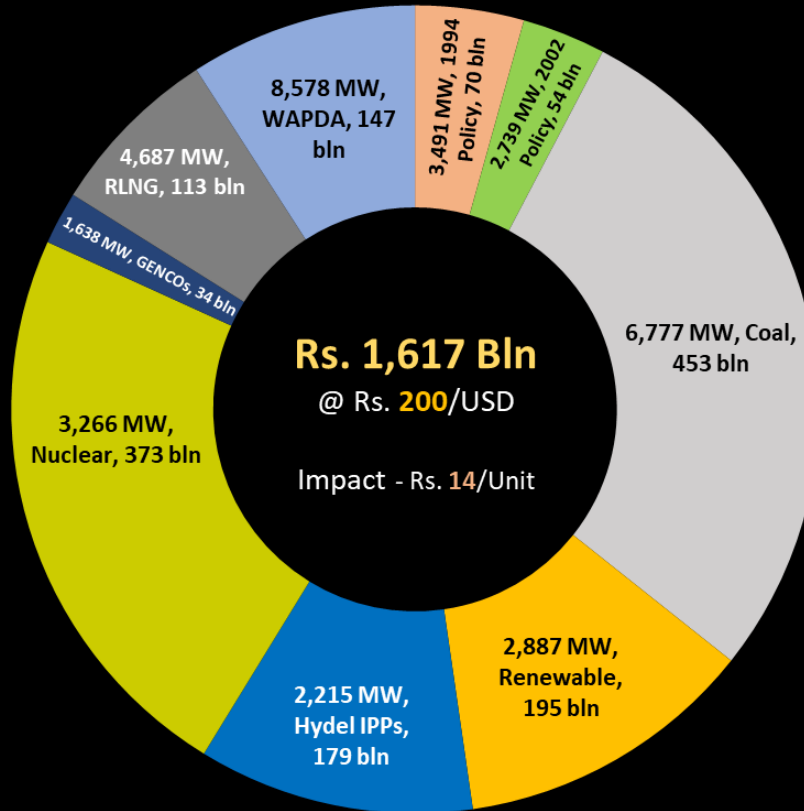
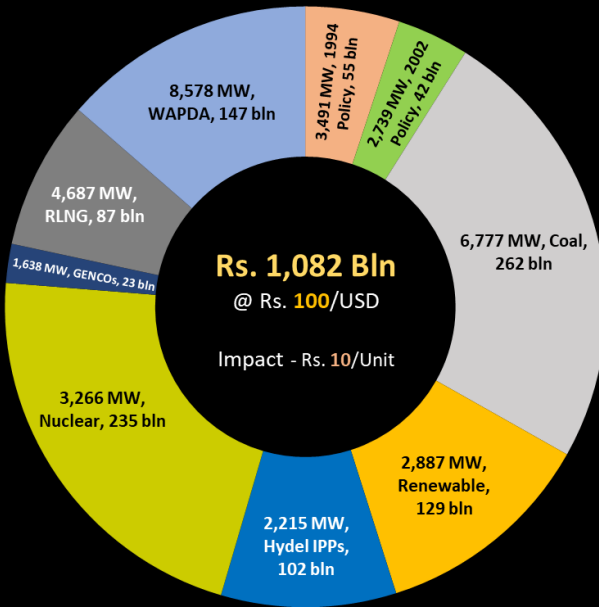


Impact of Exchange Rate on Capacity Purchase Price

Foreign Funded	Rs. 3,218/kW/M
Local Funded	Rs. 1,436/kW/M

Foreign Funded	Rs. 5,158/kW/M
Local Funded	Rs. 1,646/kW/M

Foreign Funded	Rs. 7,097/kW/M
Local Funded	Rs. 1,857/kW/M



- Total derated available capacity in system is **36,277 MW** excl. KE (Foreign funded: **21,374 MW**, Local funded **14,903 MW**).
- Local Funded: WAPDA, RLNG and GENCOs. Foreign Funded: 1994, 2002, Coal, Renewable, Hydel IPPs and Nuclear.

IPPs Negotiations

2002 Power Policy:

- Local Investor @ 17% without future USD linkage
- Foreign Investor @ 12% with USD indexation

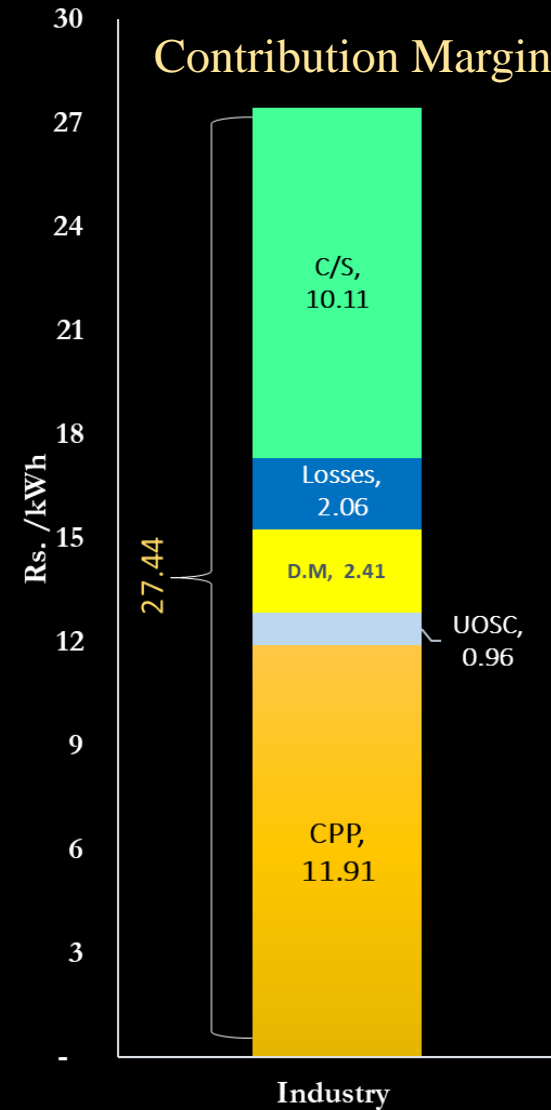
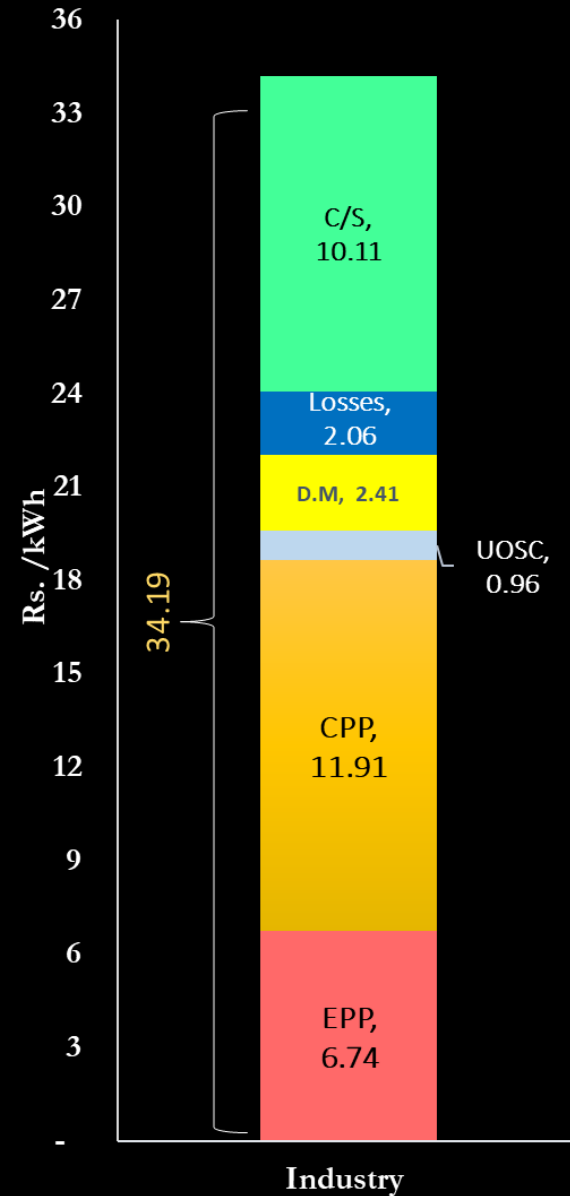
2006 RE Policy:

- Wind and Solar: from 17% to 13%
- Bagasse: Reduction in Return from 17% USD to 12% USD for next 5 years, after which it will be fixed at 17% in PKR @ Rs. 168/USD for remaining term (approx. 15 years)

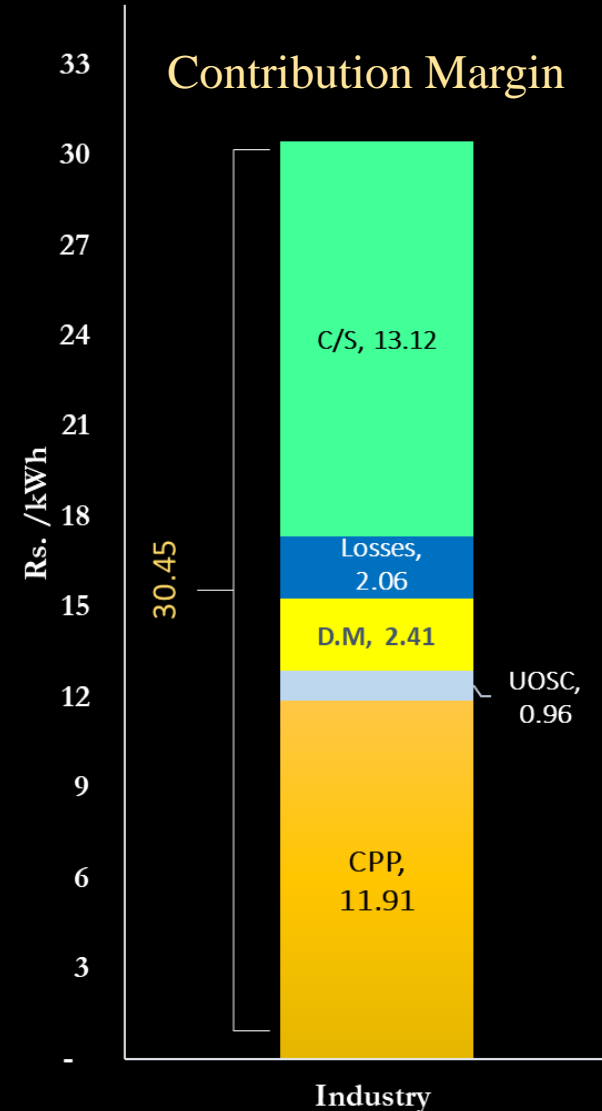
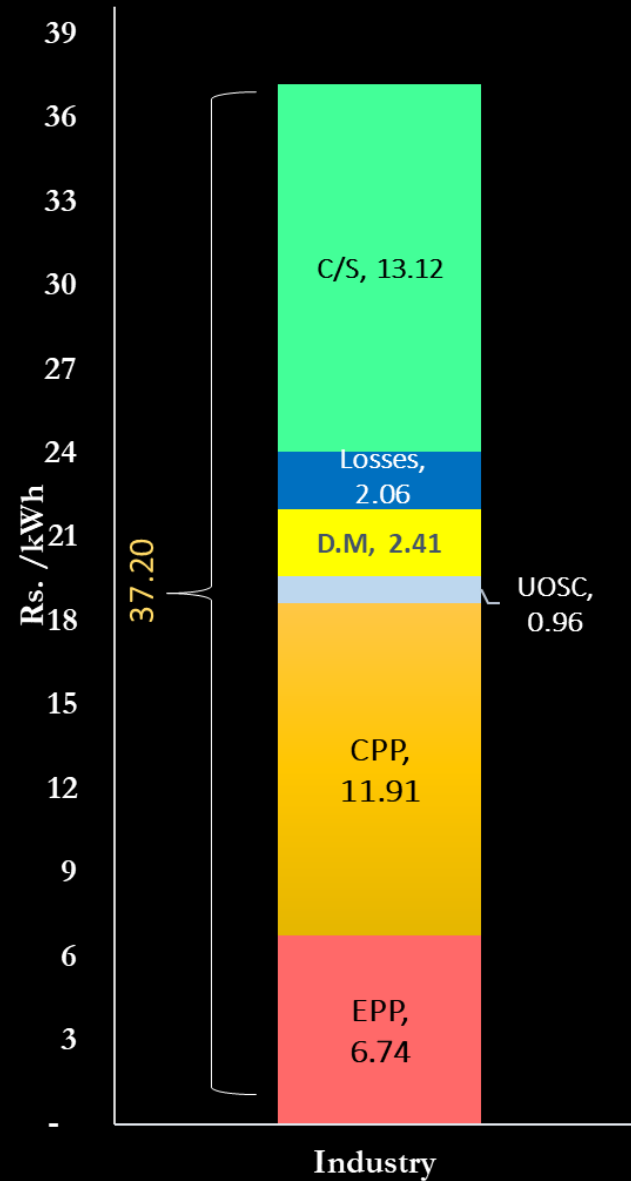
Nine Issues and NEPRA's Decision

Sr.#	Areas	NEPRA's Decisions	Reference of NEPRA's Decision
1	Recovery of Cost of Losses	Allowed	NEPRA's determination dated 11 th Jan 2021
2	Recovery of Cross Subsidy Charges	Not Allowed	
3	Recovery of Stranded Asset Costs	Not Allowed	
4	Recovery of Use of System Charges of NTDC	Allowed but on case-to-case basis	
5	Removal of Banking of Energy and Settlement on Marginal Prices	Banking Removed & Settlement on marginal price	Resolved vide NEPRA's determination dated 31 st May 2022
6	Settlement of Imbalances not the Role of DISCOs	Addressed	
7	Wheeling from Renewable	Addressed	
8	Wheeling by Hybrid Consumers (BPCs)	Addressed	Resolved vide NEPRA Consumer Eligibility Criteria (Electric Power Suppliers) Regulations, 2022, dated 28 th March 2022
9	Economic Dispatch of Generators	Addressed	Resolved vide NEPRA Licensing (Electric Power Supplier) Regulations, 2022, dated 28 th March 2022, NEPRA Act 2018 and Grid Code 2005

Component Wise Breakup of Industrial Rates B3 (Rs/kWh)



Component Wise Breakup of Bulk Supply Rates C2 (Rs/kWh)



Component Wise Breakup of Bulk Supply Rates C3 (Rs/kWh)

