

CERC FY15-19 Regulations: Generation Efficiency Norms Tightened... Advantage DISCOMs

CERC has notified the final tariff regulations for FY15-19, which have lowered overall incentives (such as shifting from normative plant availability (PAF) to Plant Load Factor (PLF) for earning incentives, reducing Station Heat Rate (SHR) and Auxiliary consumption) for central generation PSUs as regulator was more concerned about overall power prices and ill-health of DISCOMs. However, CERC has provided some relief to CPSU generators in terms of 1) PAF based recovery of fixed cost cut to 83% (v/s 85% earlier) and 2) complete pass-through of water charges and capital spares (v/s nil earlier). On the other hand, the regulations reduce overall purchase price for DISCOMs due to 1) tax component on actual (v/s grossing up benefit earlier) and 2) payment of incentives on the basis of demand (rather than availability based payments earlier). Thus, this is estimated to bring in 9-10 paise/kWh relief to DISCOMs, which in-turn should be passed to consumers.

Final Regulations offer little relief (v/s expectations)

Contrary to expectations and relative to the draft, the final CERC regulations offer meagre relief to CPSUs especially NTPC. Further on operational front, the regulations have tightened parameters such as O&M, SHR and normative capital requirements. The regulations are marginally negative for central transmission company i.e. Power Grid, where normative PAF levels increased to 98.5% (v/s 98% earlier).

Final vs Draft FY15-19 Tariff Regulations: What is tweaked/ introduced new?

Normative SHR for coal based power projects: Relative to FY09-14 regulations 1) normative SHR coal fired projects cut by 50kcal/kWh for 500MW units to 2375kcal/kWh) and 75-100kcal/kWh for Badarpur/Tanda /Talcher units, 2) gross-up factor on design heat rate for units securing CoD (commercial start-up) post FY09 cut from 6.5% to 4.5% and 3) 25-75kcal/kWh cut in normative SHR for three gas-fired units. On the other hand, normative SHR for new coal-fired stations is raised by 25Kcal/KWh (still lower by 25kcal/KWh than 2009-14 regulations). Finally, normative SHR for 200/210/250MW units raised by 25kcal/kWh to 2450kcal/kWh (still 50kcal/kWh below the level pegged in 2009-14 regulations).

Incentives pegged to exceeding post aux. Consumption based on PLF>85%: In the new regulations FY15-19, there is relief in terms of Plant Availability Factor (PAF) to 83% (v/s 85% earlier), however, the basis of incentives would be PLF (v/s rather than PAF earlier). But, the quantum of incentives kept unchanged to 50paise/KWh.

Cut in normative working capital costs for coal fired plants: Inventory cost of coal included in calculating the normative working capital cut to 15 days for pithead stations (vs 45 days currently) and 30 days for non pit-head stations (vs 60 days currently).

Post tax RoE and gross-up at effective tax rate: Assured post-tax RoE retained at 15.5% + 0.5% (if units commissioned within the benchmark timelines). Gross-up of the 15.5% post-tax RoE would be based on the effective tax rate (actual tax paid) rather than the corporate tax rate. This is expected to reduce the pre-tax RoE of NTPC from 23% to 17-18%.

Normative O&M charges tweaked for coal /gas based projects: Normative O&M charges for coal/gas fired projects further lowered by 1-2% and 12-13%, respectively; in tandem, it was mentioned that 'capital spares' will be allowed separately. Data provided by NTPC as part of its submissions to CERC indicates that

during FY10-13 ‘capital spares’ comprised 3-4% of O&M charges for NTPC’s coal-fired plants and 12-15% of O&M charges for NTPC’s gas-fired plants.

Normative Auxiliary consumption lowered: Unlike in the draft, the distinction between pit-head and non pit-head stations for normative secondary fuel (SFO) consumption removed – the new level is 0.5ml/kWh (vs 1ml/kWh in 2009-14 regulations). Auxiliary consumption levels were lowered by 750bps for units with a capacity of >250MW.

Other key changes: 1) Land acquisition is treated as ‘controllable’ factor- a big challenge for green field projects 2) water charges (excluded from O&M costs) and to be compensated separately (similar treatment as capital spares) in wake of substantial changes by most of the states 3) Special Allowance at INR0.75mn/MW for FY15 scalable @6.35%/annum. 4) 33-54% hike in Compensation Allowance for eligible projects 5) Gains from truing-up of controllable factors to be shared between NTPC and beneficiaries at a ratio of 60:40 (vs 75:25 proposed in the draft) and 6) refinancing of loans is termed as controllable factor and benefits are shared between CPSUs and beneficiaries in the ratio 1:2.

1000MW (2*500) CPSU coal fired Plant with no incentives for 2009-14 and 2015-19 regulations under normative conditions				
Key assumptions:				
Capital cost (Rs mn)	45000			
Debt : Equity	70:30			
PLF (%)	85			
<i>N.B: Fixed cost charges are fully recovered under both the instances</i>				
Operating assumptions				
	2009-14 Regulations	2015-19 Regulations		
SHR	2425	2375		
Calorific value of coal	3500	3500		
SHR/Kcal	0.69	0.68		
Coal price (Rs/kg)	1.8	1.8		
	2009-14 Regulations	2015-19 Regulations	Per unit calculations - 2009-14	Per unit calculations - 2015-19
Generation (MUs)	6732	6732		
Aux Consumption (MUs)	572	522		
Energy sent out (MUs)	6160	6210		
Revenues (Rs mn)	18718	18316	3.05	2.95
Fuel cost (Rs mn)	8396	8223	1.25	1.22
O&M Cost (Rs mn)	1300	1600	0.19	0.24
EBIDTA (Rs mn)	9090	8495	1.48	1.37
Depreciation (Rs mn)	2376	2376	0.35	0.35
Interest (Rs mn)	3150	3150	0.51	0.51
Interest on WC (Rs mn)	418	353	0.06	0.06
PBIT	3146	2616	0.51	0.42
Tax	1053	524	0.17	0.08
PAT (15.5% of RoE)	2093	2093	0.34	0.34
Source: CARE Research estimates				

The tax arbitrage has been removed resulting in normative reduction of ~9-10paise/kWh for DISCOMs.

Comparison of CERC Tariff Regulations					
Regulations	Final FY05-09	Draft FY10-14	Final FY10-14	Draft FY15-19	Final FY15-19
Return on equity					
RoE (%)	Pre-tax 14.00	Pre-tax 14.00	Pre-tax 15.50	Post-tax 15.50	Post-tax 15.50
Grossing of Tax	NA	No	Yes	No	No
Interest on working capital					
Coal stock - pithead (months)	1.50	1.50	1.50	1.50	0.50
Coal stock - non pithead (months)	1.50	1.50	2.00	2.00	1.00
SFO inventory (months)	2.00	2.00	2.00	2.00	2.00
Receivables (months)	2.00	1.50	2.00	2.00	2.00
Maintenance spares (% of O&M)	1.5% of capital cost	20.00	20.00	20.00	20.00
O&M in working capital (months)	1.00	0.00	1.00	1.00	1.00
Normative O&M expenses					
(Rs mn/MW) - for first year of next regulations	1.41	1.65	1.72	1.63	1.60
Escalation (%)	4.00	4.00	5.70	6.30	6.30
Cost of secondary fuel					
SFO consumption - pithead (ml/kWh)	2.00	1.00	1.00	0.50	0.50
SFO consumption -non pithead (ml/kWh)	2.00	1.00	1.00	1.00	0.50
Energy charge					
Normative auxiliary consumption (%)	9.00	8.50	8.50	8.50	7.75
Normative gross station heat rate for 500 MW (kcal/kWh)	2450	2400	2425	2375	2375
Incentives					
Target availability factor (%)	80	85	85	85	83
Taxes on incentives	Reimbursed	Not allowed	Not allowed	Not allowed	Not allowed
Incentive formula	Rs 0.25/unit for generation above 80% PLF	Increase in fixed charges proportionate to availability above 85%	Increase of fixed charges proportionate to availability above 85%	Rs 0.5/unit for scheduled generation above 85% PLF	Rs 0.5/unit for scheduled generation above 85% PLF
Depreciation					
Accelerated depreciation (years)	NA	15.00	12.00	12.00	12.00
Accelerated depreciation (%)	NA	4.67	5.28	5.28	5.28
Balance depreciation (%)	3.20	2.00	2.00	2.00	2.00
Transmission PAF					
Normative PAF for incentives (for AC systems)	98	98	98	99	98.5
Normative PAF for fixed cost recovery (for AC systems)	98	98	98	98	98
Hydro					
Secondary energy charges (Rs/KWh)			0.8	0.9	0.9

Source: CERC, CARE Research

Contact:

Revati Kasture
CGM & Head –
Grading Services & Research
revati.kasture@careratings.com
+91-22-6754 3465

Piyush Nimgaonkar
Manager
piyush.nimgaonkar@careratings.com
+91-22-6754 3656

Darshan Dodhia
Analyst
darshan.dodhia@careratings.com
+91-22-6754 3643

G. Vishnu
Analyst
Vishnu.g@careratings.com
+91-22-6754 3610

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