

# Mumbai Power Scenario

## Facts

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**Background**

# Mumbai – Distribution Licensees



Licensees →	RInfra	BEST	Tata Power
License Area	Mumbai Suburbs	Island City	City & Suburbs
Area	384 Sq Km	70 Sq Km	454 Sq Km
Population Served	~ 120 Lacs	~40 Lacs	~ 2.0 Lac
Total No of consumers	28 Lac	10 Lac	50, 000
No of Low end consumers*	22 Lac	6 Lac	Negligible

\* Residential less than 300 units pm

**More than 75% of the low end consumers of Mumbai served by RInfra**

# RInfra- how costs have moved...

Cost per unit sold (Rs/Unit)	FY 05	FY 06	FY 07	FY 08	FY 09
Power Purchase	1.76	2.72	3.17	4.37	6.29
Distribution Cost	1.11	1.11	1.09	1.17	1.14
<b>Total*</b>	<b>2.81</b>	<b>3.76</b>	<b>4.18</b>	<b>5.43</b>	<b>7.28</b>

\*Net of Non-Tariff Income

**CAGR**

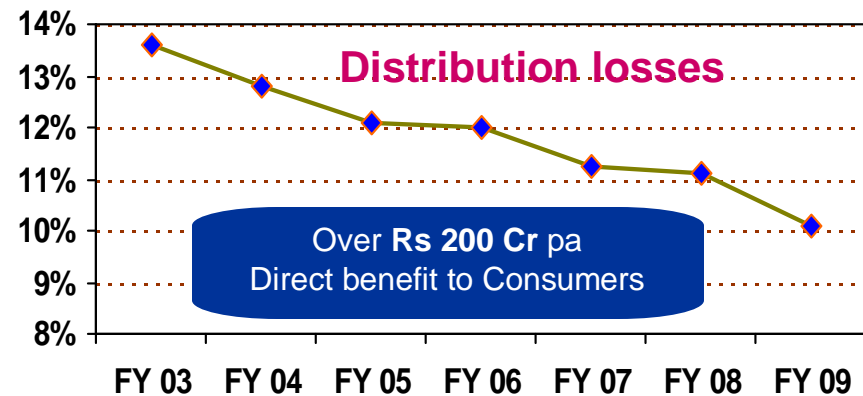
37% ↑

01% ↑

27% ↑

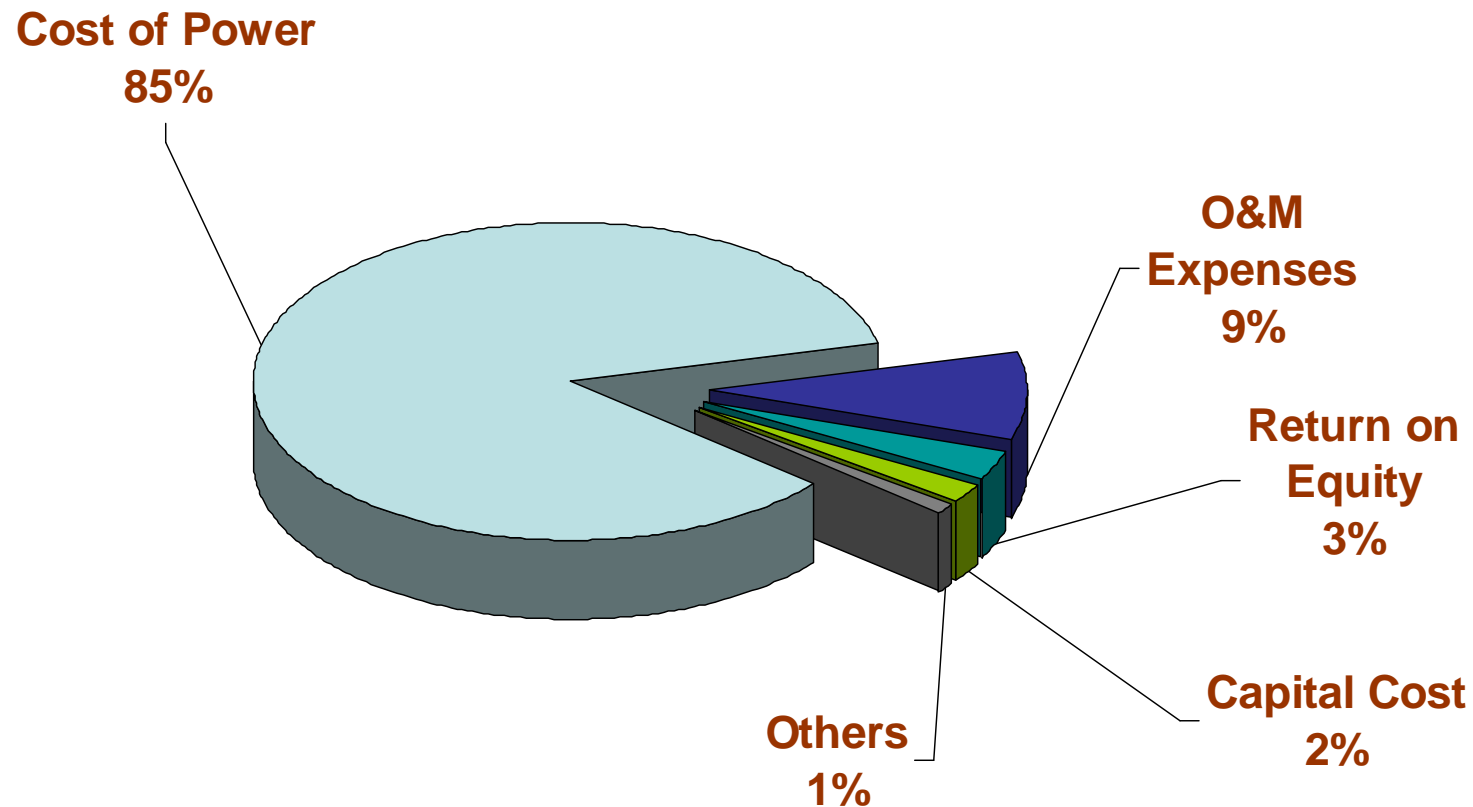
## Distribution Loss Reduction-

- Improved Distribution efficiency by **26%**
- 1% reduction is Over Rs 60 Cr PA
- Direct benefits to consumers over **200 Cr pa**



**Tariff increase solely on account of power purchase cost**

# Retail Tariff - Break up (FY09)

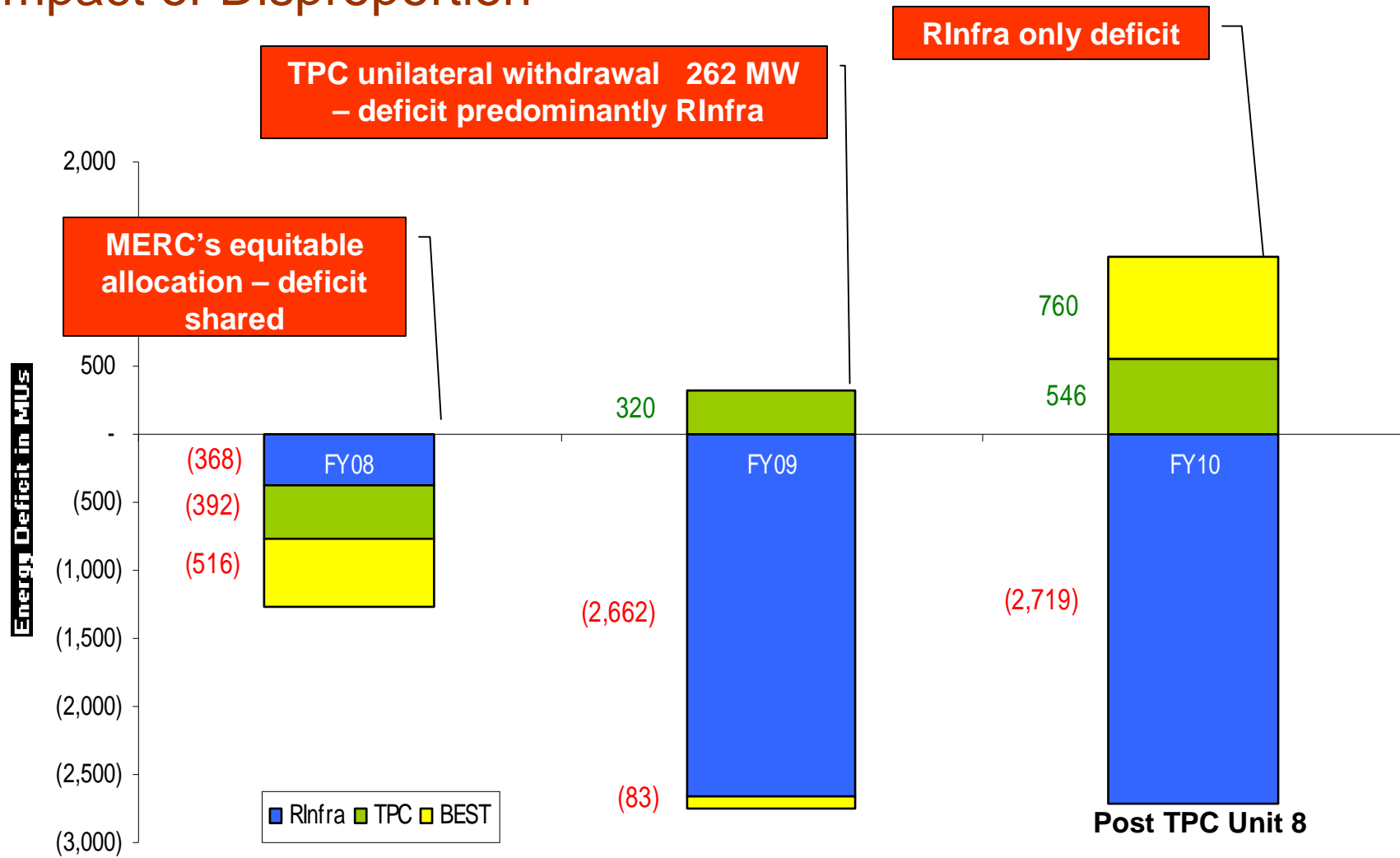


Source: - MERC Tariff Order FY10(FY09 actual cost)  
Cost of Power incl. of Transmission, standby charges Fig. are % of Annual Revenue Requirement

**85 % tariff is owing to Power purchase cost**

# Power Shortage Scenario – Mumbai

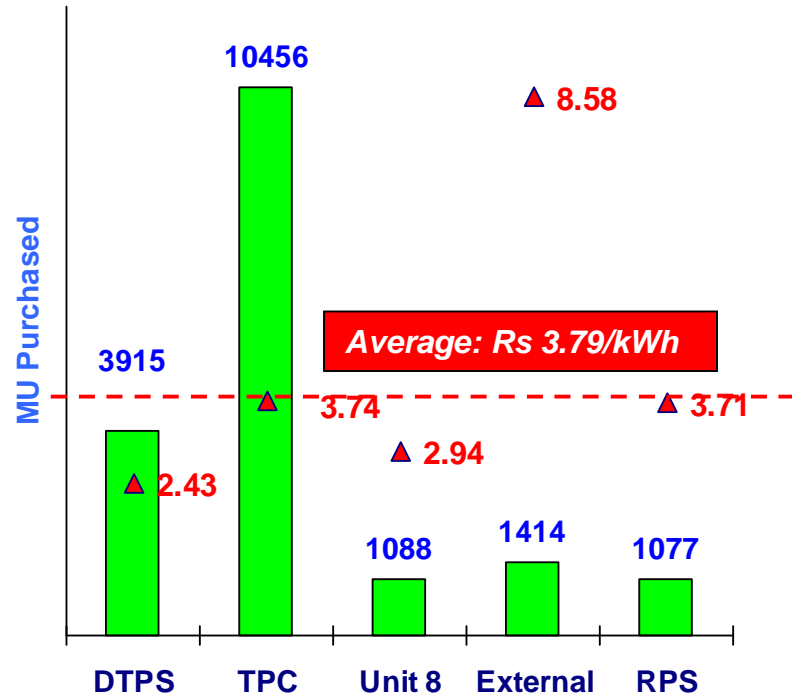
## Impact of Disproportion



Source: - MERC Tariff Orders

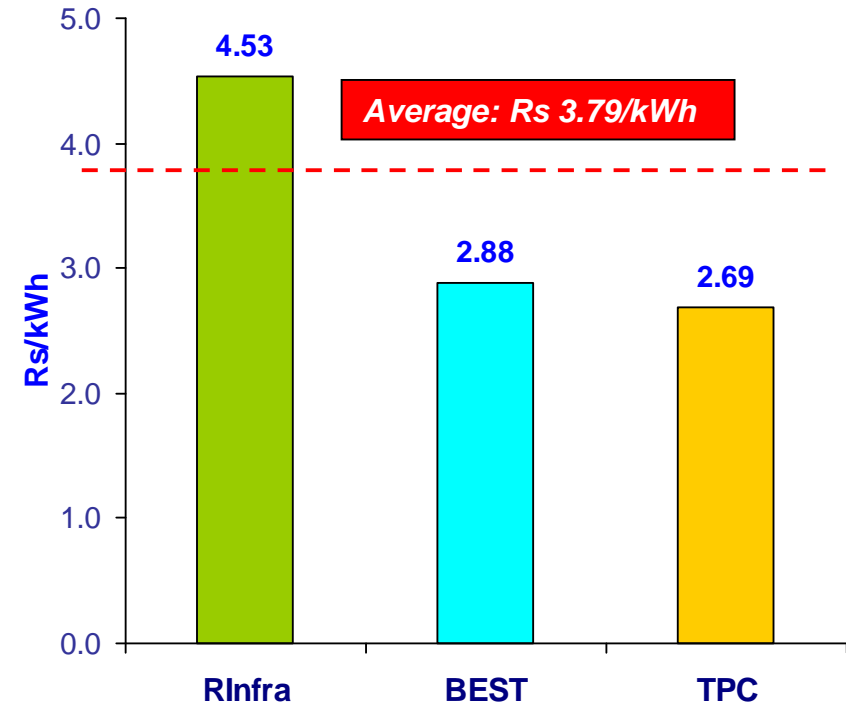
R Infra shortage increased 5 fold, while BEST & TPC became Power Surplus

# Power Purchase Cost



Mumbai Power Purchase  
FY 10

■ MU ▲ Average Rate (Rs/kWh)



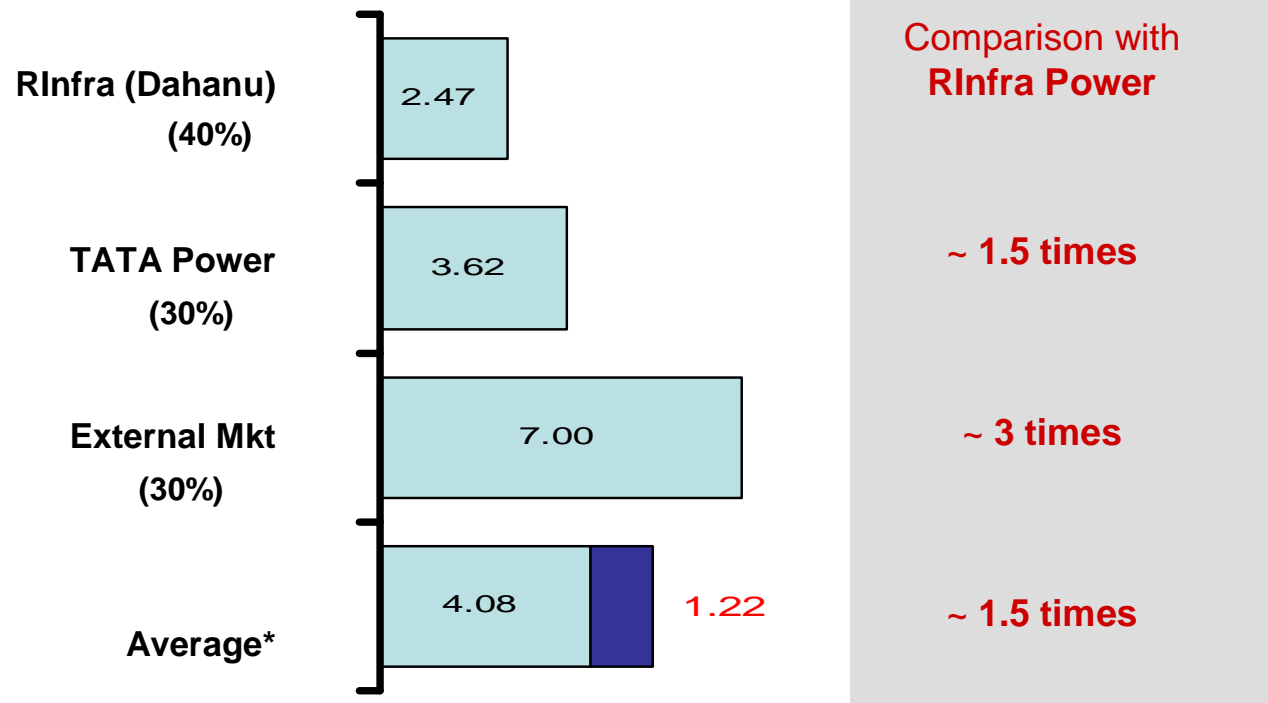
Average Power Purchase Rate  
(Rs/kWh)

\* Source: MU from MERC Tariff Orders FY 10; Rate as per actual April 09 for external purchase

- Rlnfra 20% higher than Mumbai average
- TPC and BEST 25%-30% lower than Mumbai average

# Power Purchase Cost - Break up

## Cost of Power per Unit (FY10)



\* Avg. Power Cost at consumer end; Source: - MERC Tariff Order FY10

**Rlnfra Generation cheapest amongst all sources**



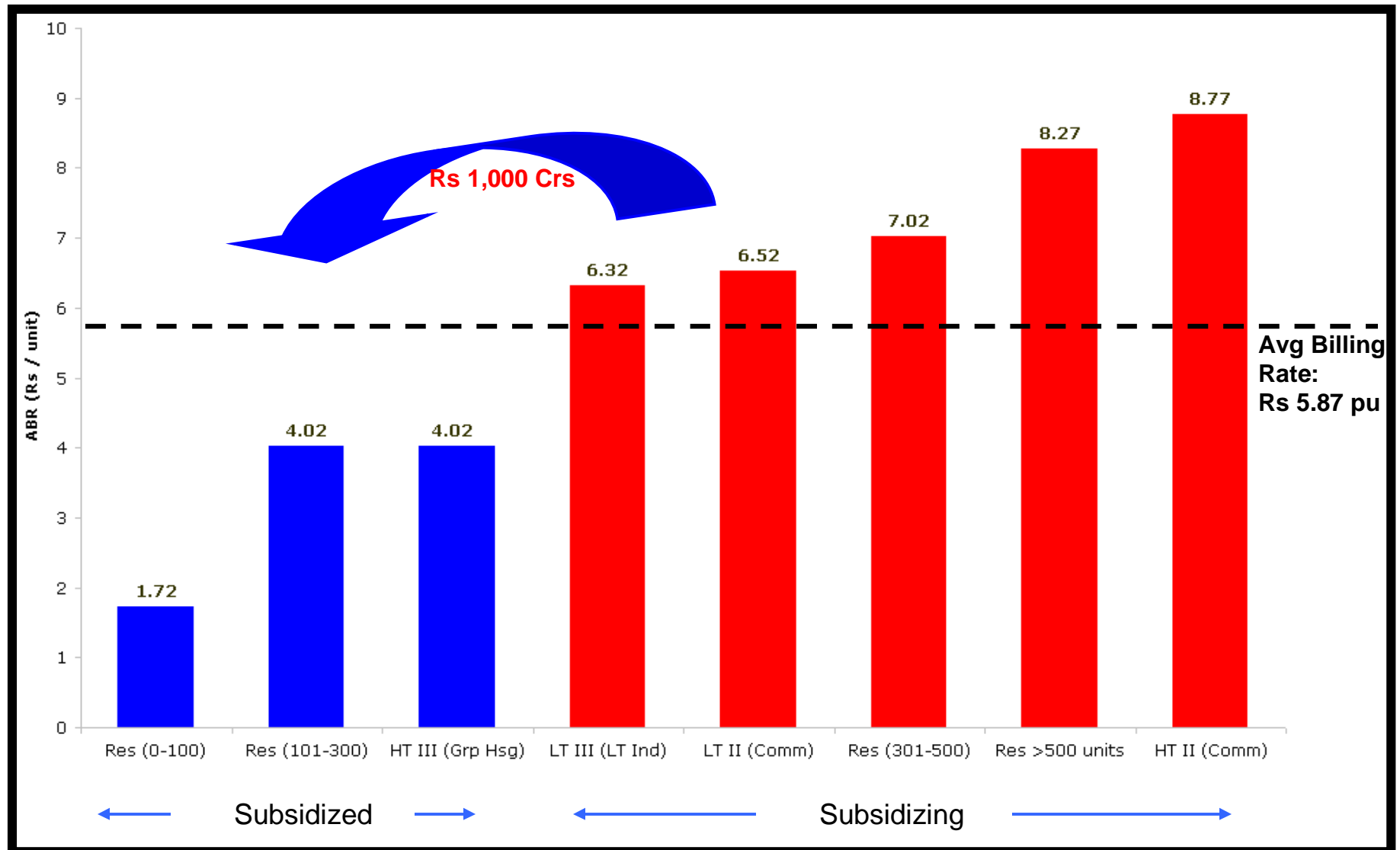
# Tariff differential

Consumer Category	Energy Charge (Rs./unit)		
	RInfra	TPC	BEST
LT – Residential			
0-100	1.72	1.30	1.80
101-300	4.02	2.70	3.70
301-500	7.02	4.20	5.90
Above 500	8.27	4.90	7.90
LT- Commercial	6.52 (0-20 kW)	3.85 (0-20 kW)	5.10 (0-300)
LT-Industrial (<20KW)	6.32	4.10	4.30 (0-300)
HT – Housing	4.02	3.80	4.37
HT – Industry	6.32	4.10	6.42
HT- Commercial	8.77	4.35	6.90

\*Note: Tariff as per stay order 15<sup>th</sup> Jul 2009

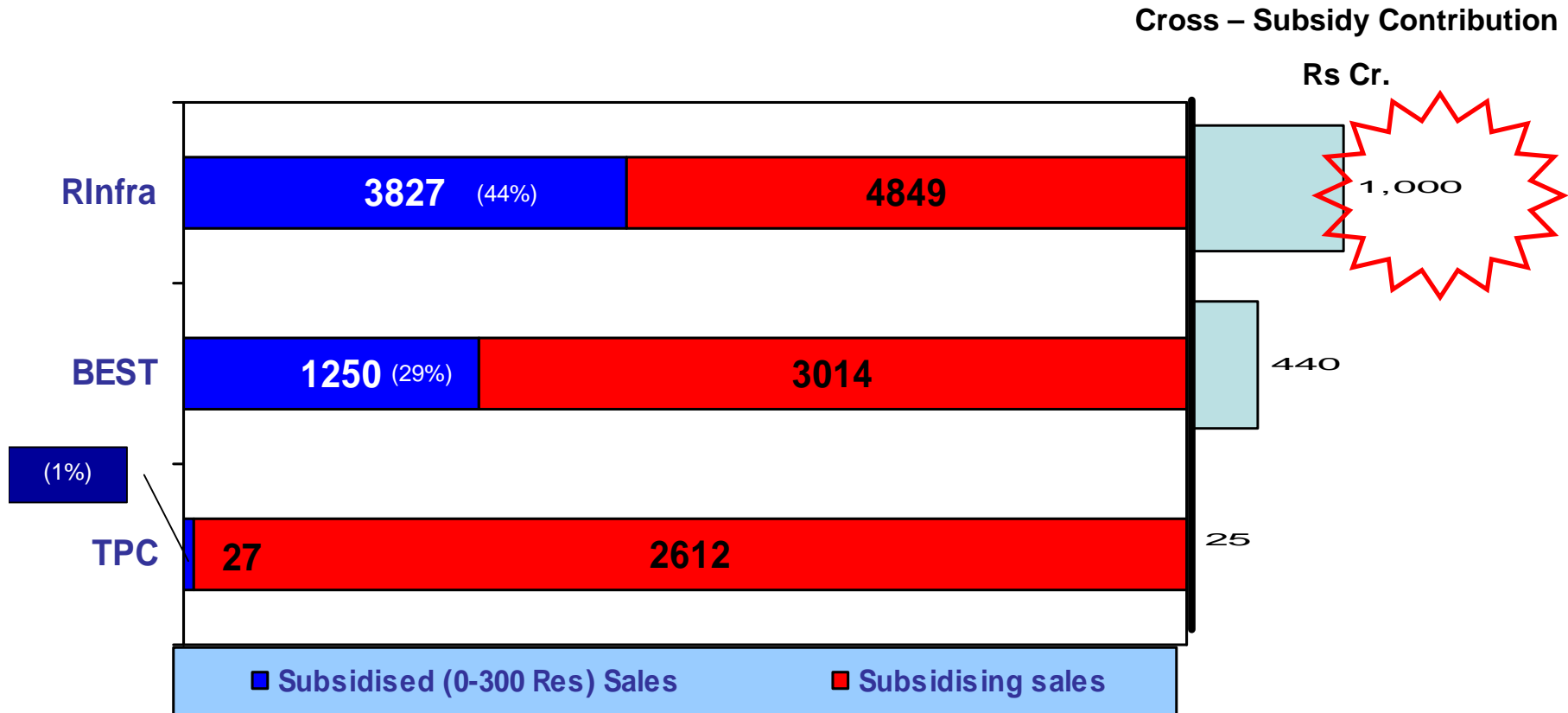
**\*Tariff stayed due public protests - resulting into accumulation of Rs 700 Crs**

# Cross Subsidy in Tariff Structure



**Rs 1,000 Crore subsidy inbuilt in Tariff Structure**

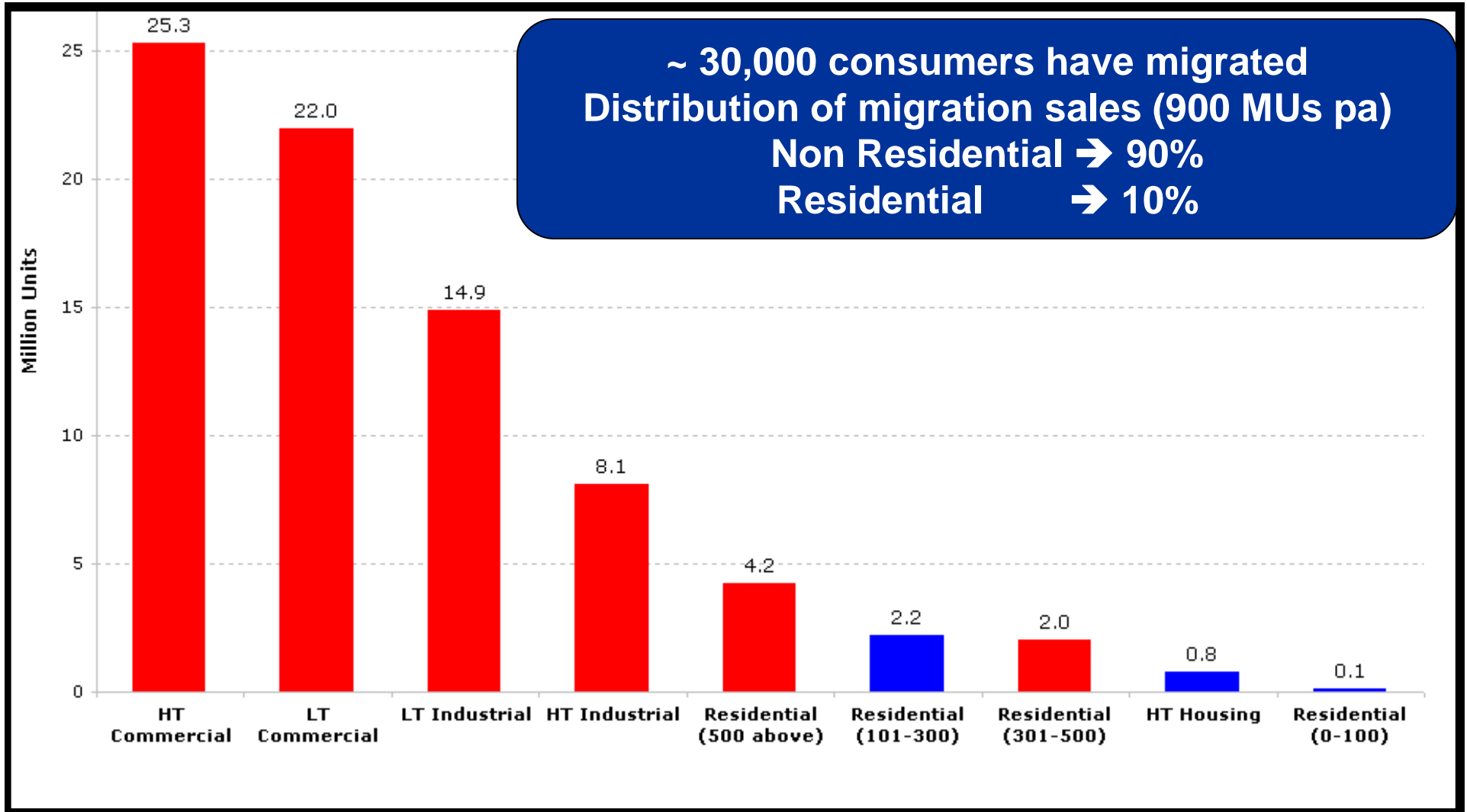
# Cross Subsidy



**1 Airport subsidized approx 1,00,000 low end Rlnfra consumers**

# Migration

Customer Migration– **As on 29<sup>th</sup> March 2010**



**More than 200 Crs of cross subsidy have migrated to TPC**

# Core Issues

## **TPC inappropriately diverting regulated Generation capacity**

- Dominance Position:
  - (a) TPC not signing PPA with RInfra
  - (b) TPC's inappropriate capacity allocation impacting 75% of Mumbai low end consumers
  - (c) TPC wants to earn supernormal profits – selling power meant for Mumbai at market prices infringing public interest

## **TPC did not allow RInfra to set up generation plants**

- Monopolistic approach – claiming to be the sole “Bulk Distribution Licensee”
- Objected RInfra generation projects
  - (a) Commissioning of Dahanu
  - (b) Setting up 495 MW at Palghar
  - (c) Setting up 495 MW at Saphale

**TPC's dominance and monopolistic approach – impact low end customers**

**Should TPC be allowed to sell power  
outside Mumbai?**

# TPC Generation-funded by Mumbai Consumers

- ❑ TPC's Annual Reports
  - TPC's Balance sheet reflects Rs 533.61 Crs collected towards ***special appropriation for project cost***
  
- ❑ MERC's Tariff Order for FY 2003-04 and FY 2004-05
  - Pg 159: Table shows adjustment of Rs 533.61 Crs against assets, being collected over a period from 1996 till 2003 towards ***special appropriation for project cost***
  
- ❑ All clearances (Land, environmental, etc) granted by GoM on the basis of setting up generation to meet Mumbai's power requirement

**Mumbai Consumers have contributed ~ Rs 534 Crs**

# TPC Generation-set up to meet Mumbai's demand





## TPC Unit – 8 (250 MW)

- ❑ Permission sought from MERC/GoM for meeting Mumbai shortage
- ❑ As expansion of existing capacity
  - Tariff Policy permits one time 50% expansion
  - Power allocated to BEST & TPC-D without competitive bidding
- ❑ TPC in Tariff petition for FY07, MYT petition (FY08-FY10), APR petition of FY08 stated allocation of 100MW for RInfra, however
  - RInfra's share assigned to own trading Co (TPTCL)
- ❑ As against the cost of Rs. 2.75 per unit, TPTCL sold this power to NDPL / MSEDCL and now selling outside Maharashtra to AP Discom

**Unit 8 - TPC shareholders making profit of ~Rs 300 Crs annually,  
at the cost of RInfra's Mumbai consumers**



# Regulated Returns to Unregulated Profits

	RInfra	BEST	TPC-D	TPTCL
2007-08	762 MW	655 MW	360 MW	0 MW
2008-09	500 MW 	800 MW	477 MW	0 MW
2009-10	500 MW	900 MW	527 MW	100 MW 
2010-11	* 0 MW 	1000 MW	527 MW	500 MW 

1. Reduction of 262 MW lead to an **additional burden of ~Rs 500 Crs annually** on Suburban consumers
2. Withdrawal of 500MW will lead to an **extremely high additional burden of ~Rs 1200Crs** on Suburban consumers
3. By selling 100 MW from Unit -8 TPC earned **supernormal profits of ~Rs 300 Crs**
4. TPC will earn **supernormal profits to the tune of ~Rs 1200 Crs** by selling 500MW in open market

**Private benefit at the cost of Public Interest**

What are RInfra's efforts in adding generation capacity?

# RInfra efforts – Generation Capacity addition

## **1986 - Dahanu commissioning - 500 MW**

- ❑ TPC submitted to GoM that the power generated from Dahanu should be supplied to MSEB Grid and BSES shall continue to purchase all their requirement from “Bulk Licensee” ie TPC
- ❑ TPC’s objection was not sustained by GoM and BSES was allowed to commission 500MW at Dahanu

## **1998 - Palghar Project - 495 MW**

- ❑ TPC submitted to MSEB that TEC have already built facilities to cater to 900 MW load of BSES and any additional plant would lead to infructuous expenditure of duplication of facilities ultimately results in consumers of Mumbai paying more.

## **2001 - Saphale Project - 495 MW**

- ❑ TPC in it writ petition in HC objected to setting of generation facility at Saphale
- ❑ Based on TPC’s objection, MSEB advised CEA against the proposal

**All efforts to add generation . . . Thwarted by TPC**

# RInfra efforts – Generation Capacity addition

## **Dahanu Expansion – 1200 MW**

- Dahanu capacity expansion wrangled in environmental issues, despite Dahanu receiving almost every award on environmental and operation excellence year after year





## **Shahapur Project - 4000 MW**

- Shahapur project at the stage of land acquisition.

**RInfra is committed to partner GoM in bridging the Power Shortage**

**Why did RInfra not sign PPA?**

# Schedule of events – PPA (1/2)

Milestones	Activity Description
Pre 2003	 <ul style="list-style-type: none"><li>▪ Specific mention in the Licenses - TPC to supply as “Bulk Licensee” and RInfra to buy from TPC</li><li>▪ This arrangement continued for more than 75 Yrs</li></ul>
2003	 <ul style="list-style-type: none"><li>▪ E A 2003 notified</li><li>▪ RInfra proposed to procure power through competitive bidding</li><li>▪ TPC objected citing license obligation</li></ul>
2004	 <ul style="list-style-type: none"><li>▪ TPC capacity shared equitably amongst RInfra, BEST and TPC-D</li><li>▪ No external purchase</li><li>▪ MERC determined Tariffs based on Bulk Licensee relationship</li></ul>
2005	 <ul style="list-style-type: none"><li>▪ Capacity sharing on equitable principle continues</li><li>▪ Commission direction for PPA between parties</li><li>▪ RInfra and TPC engaged in discussions for PPA with equitable capacity</li></ul>

# Schedule of events – PPA (2/2)

Milestones	Activity Description
2006 →	<ul style="list-style-type: none"><li>▪ MERC determined tariff on equitable allocation (RInfra 719 MW)</li><li>▪ TPC advised allocation 800 MW to BEST &amp; 477 MW to itself. Offered remaining 500 MW to RInfra.</li><li>▪ RInfra asked for equitable allocation in consumer interest</li></ul>
2007 →	<ul style="list-style-type: none"><li>▪ Commission continues equitable allocation (762 MW to RInfra)</li><li>▪ TPC agreed draft PPA including 100 MW from Unit 8 could not be signed in view of allocation of 500 MW (against RInfra demand of 762 MW)</li><li>▪ TPC-BEST PPA (800 MW), TPC-TPC (477 MW) approved by Commission</li><li>▪ RInfra appealed in ATE since impact on consumers ~ 500 Crs annually</li></ul>
2008 →	<ul style="list-style-type: none"><li>▪ ATE Order remanded the matter back to MERC for considering the historical arrangement</li><li>▪ TPC, BEST challenged the ATE's order in SC</li><li>▪ Pending decision, RInfra requested TPC for signing 500 MW PPA w/o prejudice</li><li>▪ TPC advised for signing w/o any conditions</li></ul>
2009 →	<ul style="list-style-type: none"><li>▪ RInfra agreed to sign unconditional PPA for 500 MW. TPC confirmed.</li><li>▪ <u>TPC receded signing 500MW PPA referring the SC Judgment</u></li><li>▪ <u>TPC also informed its intention to withdraw 500 MW from 1<sup>st</sup> Apr 2010</u></li></ul>

# Chronology of Communication on PPA

Letter Dated	Description
15 <sup>th</sup> Sept 2008	<b>RInfra's Letter</b> - Proposed to sign PPA of 500 MW without prejudice
19 <sup>th</sup> Sept 2008	<b>TPC's Letter</b> - Proposed to sign PPA of 500 MW without any pre-condition
13 <sup>th</sup> Apr 2009	<b>RInfra's Letter</b> - Agreed to sign PPA without any pre-condition
28 <sup>th</sup> Apr 2009	<b><u>TPC's Letter</u></b> - Welcomed RInfra's move and agreed to exchange draft of PPA and jointly approach SC to record settlement
2 <sup>nd</sup> May 2009	<b>RInfra's Letter</b> - Suggested to use PPA with BEST as the draft and nominated one person who will be responsible for executing the PPA
6 <sup>th</sup> May 2009	<b>TPC's Letter</b> - In the light of SC judgement we would like to review our decision
9 <sup>th</sup> May 2009	<b>RInfra's Letter</b> - Requesting to sign PPA of 500 MW as it was agreed in our communication
24 <sup>th</sup> Jun 2009	<b>TPC's Letter</b> - TPC is free to contract with any entity for its untied capacity of 500 MW
25 <sup>th</sup> Jun 2009	<b>TPC's Letter</b> - TPC informed RInfra of its decision to withdraw 500 MW from 1 <sup>st</sup> April'10.
6 <sup>TH</sup> Aug 2009	<b>RInfra's Letter</b> - Requesting TPC to re-consider its decision as it would lead to additional burden of 900 Crs. on low end Residential Consumers



Whether SC Judgment dated 6<sup>th</sup> May 2009 prevents Govt from exercising its powers?

# SC order dated 6<sup>th</sup> May 2009

- ❑ **BEST and TPC approached SC to set aside the ATE order of reconsidering the PPAs based on historical arrangement**
  
- ❑ **SC interpreted the applicability of Sec 23 towards -**
  - (A) Whether recourse to Section 23 of the Act can be taken for issuance of any direction to the generating company?
  - (B) Whether the Commission while applying the provisions of Section 86(1)(b) of the Act could also take recourse to Sections 23 and 60 thereof?
  - (C) Whether equitable allocation of power generated by a generating company is permissible?
  
- ❑ **SC judgment concluded that section 23 of the EA 2003 is not applicable to generating companies**

**SC addressed limited view of powers of MERC u/s 23 only**

# Extract from SC order dated 6<sup>th</sup> May 2009

## **SECTION 23 – DIRECTION BY THE COMMISSION**

*Could a generating company, despite Section 11 be subjected to any direction by the Commission in terms of Section 23 of the 2003 Act?*

### **DIRECTION TO GENERATING COMPANIES**

*This brings us to the interpretation of Section 11 of the 2003 Act. In terms of 1910 Act the State Government was the licensing authority. It alone, therefore, in the said capacity was entitled to issue directions. Subsection (1) of Section 11 of 2003 Act empowers the Appropriate Government to issue directions but such direction can be issued only in extraordinary circumstances as stated in the explanation appended thereto i.e. arising out of threat to security of the State, public order or a natural calamity or such other circumstances arising in the public interest.*

**SC acknowledged that Govt has powers u/s 11 of EA 2003**

# Is there any precedence of Govt directions u/s 11?

- By judgment dated 26<sup>th</sup> March 2010, Karnataka High Court upheld the Govt of Karnataka's powers u/s 11:

*“All the Stakeholders should realize the ground realities and the needs of the situation. By the stroke of the pen this gigantic problem faced by the country cannot be solved..... Some sacrifice on the part of the stakeholders in this joint venture is necessary. **Till enough power is generated in the country which could meet all our requirements, in case of dire need, in public interest, the Government should have the power to intervene to tide over a situation which is rightly described as “EXTRA-ORDINARY CIRCUMSTANCES” To that extent private interest should yield to public interest”***

**Karnataka HC has upheld the powers of Govt u/s 11 of EA 2003**

**Forward Path: Consumer Protection**

# Role of State Government in Public Interest

## State Government to issue directions to:

- TPC-G (Section 11 of E Act 2003)
  - A**
    - Continue 500MW and allocate 100MW from Unit 8 to Rlnfra
    - To execute appropriate PPAs for implementation of Uniform Retail Tariff

**Leading to Tariff Reduction**

- MERC (Section 108 of E Act 2003)
  - B**
    - Surplus power to be offered first within Mumbai city at Avg cost of power
    - Levy Cross Subsidy surcharge on migration of Subsidizing consumers
    - Implement Uniform Retail Tariff for Mumbai Island
    - Continue regulated tariffs for capacities commissioned with specific approvals and concessions for supplying to Mumbai

**Leading to Uniform Tariff**

# Consumer Protection: URT in Mumbai

## *Ability to Pay Model*

- ❑ Low Cost Mumbai power to be allocated to Low Income Group (LIG) - Residential Consumers (0-300)
- ❑ High Cost Mumbai Power and external purchase power to be allocated to High Income Group (HIG) of Consumers and Commercial & Industrial consumers
- ❑ Govt. of Maharashtra uses its power under section-108(policy in public interest) and section-11 (Direction to Generator) of Electricity Act 2003

## **Result**

- ❑ Common Tariff across Mumbai
- ❑ Reduction of cross-subsidy
- ❑ No Impact on return to Generator/licensee
- ❑ Better service will drive competition

**Reduction of cross-subsidy in power shortage scenario**

# Consumer Protection: URT in Mumbai

## *Delhi Model*

### **Existing URT Model in Delhi**

- ❑ 85% of generation capacity pro-rata allocated to Discoms in the ratio of their energy requirement
- ❑ 15% (299 MW) retained with the Govt. and allocated on “ability to pay basis” to achieve Uniform Retail tariff
- ❑ Revenue surplus (created due to the uniform RST), if any, is appropriated in MYT Contingency Reserve
- ❑ Govt. of Maharashtra uses its power under section-108(policy in public interest) and section-11 (Direction to Generator) of Electricity Act 2003

### **Applicability potential in Mumbai**

- ❑ TPC Generation of 1627 MW to be allocated among RInfra, BEST and TPC-D in the ratio of Energy requirement (RInfra-45%, BEST-35%, TPC-20%)
- ❑ TPC unit-8 Generation of 250 MW to remain under the disposal of Govt which it allocates every year to ensure Uniform Retail Tariff base on ‘*ability to pay*’

**Delhi Model can be adopted for Mumbai**



# Consumer Protection: URT in Mumbai

In Rs/kWh

Allocate capacities on consumer "Ability to Pay"

Consumer Category	Existing		Potential Uniform Retail Tariff
	RInfra	BEST	
LT – Residential			
0-100	2.96	1.80	1.30
101-300	5.56	3.70	3.20
301-500	9.16	5.90	5.40
Above 500	10.61	7.90	7.40
LT- Commercial	7.95 (0-20 kW)	5.10 (0-300)	6.30 (0-20 kW)
LT-Industrial (<20KW)	7.76	4.30 (0-300)	5.00
HT – Housing	5.16	4.37	3.30
HT – Industry	7.56	6.42	5.25
HT- Commercial	8.41	6.90	5.50

**Competition continues on Service Levels – Win Win for consumers**

**Thank You**

## TPC's Statements on Rlnfra's proposal on power generation

- On the Govt direction to BSES for setting up Dahanu Power Plant, TPC objected to GoM vide its letter dated **26th August 1986** stating that ***“Provided always that the power generated at the said Generating Station shall only be supplied to the Maharashtra State Electricity Board's Grid and shall not be brought by the licensees to its own area of supply for being distributed directly to its customers, and the Licensees shall continue to purchase all its requirements of power for distribution to its consumers from the bulk Licensees, namely the three Tata Electric Companies.”***
- In its letter dated **2nd March 1998**, Tata Power wrote to MSEB stating that ***“On the subject of BSES's proposal for another unit at Palghar, we strongly feel that at this stage there is no justification for the Palghar proposal to be considered since TEC have already built facilities to cater to 900 MW (4500 MU per annum) load of BSES which was being met till recently. The infructuous expenditure of duplication of facilities ultimately results in consumers of Mumbai paying more. It would therefore be prudent if TEC continues to meet loads of BSES to the earlier level of 900 MW for which generation and distribution facilities have already been established...”***



## TPC's Statements on RInfra's proposal on power generation

- In the matter of BSES desiring to setup generation at Saphale, on **16<sup>th</sup> April 2001**, TPC through a writ petition filed before Hon'ble Mumbai High Court, stated ***"The Petitioners say and submit that as the bulk licensee who has been supplying energy to the Mumbai Metropolitan Region over the past eight decades and who holds a license that is valid upto the year 2014, Tata Power was under a legitimate expectation that no person much less a distributing licensee who is subordinate to the bulk licensee under the statutory scheme, would be permitted to bring in energy in the area of supply of Tata Power during the license period."***
- In the said writ petition TPC further stated ***" Tata Power has invested over Rs. 2800 crores in strengthening & improving its Generation & Distribution systems. The petitioner accordingly can generate adequate power available to meet the needs of consumers in Mumbai in the foreseeable future (including growth in demand) ..... Infact in last few years Tata Power have invested Rs. 800 crores on their generating & transmission systems. The investment made by Tata Power was on the premise that during the licensing period their position as the sole bulk licensee of electrical energy in the Mumbai Metropolitan Region would not be compromised or in any way adversely affected. The GoM has recently extended Tata Power's licenses upto 15th August, 2014. The investments made by Tata Power were based on an expected or projected rate of return calculated on the basis that Tata Power's area of supply would not be reduced or de-limited and no other party would be allowed to bring in additional electrical energy into Mumbai Metropolitan Region."***



## TPC's agreement to RInfra's proposal to sign PPA for 500 MW

- TPC's letter dtd 28<sup>th</sup> Apr 2009 in reply to RInfra's letter dtd 13<sup>th</sup> Apr 2009  
***“We welcome your proposal to resolve the issue of signing of PPA between Tata Power and Reliance Infra (distribution licensee), which is presently pending before the Hon'ble Supreme Court, without any precondition or reservation on either side. In this regard, once we finalise the draft PPA for 500 MW we can then jointly approach Hon'ble Supreme Court with a prayer to record our settlement of the pending cases in connection with the PPA.”***
- RInfra's letter dtd 2<sup>nd</sup> May 2009 in reply to TPC's letter dtd 28<sup>th</sup> Apr 2009  
***“I refer to your letter confirming your agreement to execute PPA for 500MW.”***



## **Govt's order dated 21<sup>st</sup> Jan 1984 permitting TPC to collect special charge**

- ***“Government has also decided to permit as a special appropriation the amounts to be collected by TEC at the rate of three paise per unit so as to mobilise about Rs 100 Crs to finance the cost of Unit 6”***