POWER SECTOR REFORMS




POWER DEPARTMENT

MANIPUR

April 2013

Agenda

- Power Sector In Manipur: Current Scenario
- Structural Reforms
- Initiatives in Generation Sector
- Initiatives in Transmission Sector
- Distribution Sector – Challenges & Recent Initiatives

Power Sector in Manipur: Current Scenario

- Single Utility : Electricity Department looking after all functions
- Increasing Demand & Availability Gap of Power : 100MW against Peak demand of 200MW
- Own Generating capacity of 50 MW (Heavy Fuel), central quota of 128 MW
- High AT&C Losses : 58% in 2011-12
- Low metering :
  - Majority Billing is on flat basis as consumer meters are not working
  - Lack of Feeder meters, Transformer meters etc.

Staff Strength :

- Skewed with shortfall at higher level
- Lack of skill in IT, Legal and Finance
- Aging Workforce with 70% retirement by 2020

#	Category	Total Existing
1.	Class -I	70
2.	Class -II	4
3.	Class - III	1406
4.	Class-IV	1562
	Total	**3042**

Structural Reforms

Reforms Initiation

- July, 2012 : SBICAPS to provide advisory services on unbundling and re-structuring of EDM
- December, 2012: Draft Report submission by SBICAPS
- 14th February, 2013: Cabinet decision to go ahead with unbundling the ED into two companies – a HOLDCO and a DISCOM

2013-14 Structure

100% Government owned " Manipur State Power Company Limited (MSPCL)" for undertaking Transmission and Generation activities

- Separate DISCOM namely " Manipur State Power Distribution Company Limited (MSPDCL)", a subsidiary of MSPCL for managing Distribution function
- Separation of responsibilities: higher transparency
- VRS to be implemented

Future Options

- Separate Transmission Subsidiary once the network is strengthened and there is significant increase in demand
- Private participation in DISCOM either through PPP or Franchise model

Initiatives in Generation Sector

- Established Generation potential: 2000 MW in Hydro
- No proven Coal or Gas reserves
- Existing Generation Capacity: 105 MW in Hydro – Loktak HEP of NHPC

Initiatives Towards Exploiting Untapped Hydro Potential

- Manipur Hydro Power Policy 2012 notified in October,2012
  - Covers all Hydro projects of 5MW and above
  - Lays down roadmap for both public and private investment
- Six Hydro-projects (516MW) identified for development
  - 10 public and private developers shortlisted for development based on Global EOI
  - RFP being issued for receiving final bids for each of the project

Status of 66 MW Loktak Downstream HEP

- Loktak Downstream HE Project (66MW) being expedited
  - Stage I forest clearance obtained from MoEF in January 2012
  - Environment Clearance obtained from MoEF in January,2013
  - NOC under FRA 2006 issued by the State in March,2013 paving the way for Stage-II forest clearance
  - Rs. 1.30 crore deposited by GoM towards compensatory afforestation in January, 2013

- Topographical survey by Survey of India completed in February, 2013
- Rs. 15.95 crore deposited by LHDCL towards NPV to the Forest Department
- Drilling work is underway at barrage and power house site
- Road infrastructure being completed
- DPR expected to be finalised by August, 2013
- Prequalification bids are proposed to be called in April, 2013

Initiatives in Transmission Sector

I. Strengthening of Inter-State Transmission Infrastructure:

Associated Transmission System for receiving power from Pallatana & Bongaigaon Power Stations

#	Name of Scheme	Capacity
1.	Construction of 400 KV D/C line initially charged at 132 KV from Silchar to Imphal	165 km
2.	132 KV LILO line from PGCIL (Yurembam) to 132/33 KV Sub-station at Yurembam	0.5 km
3.	Construction of 132/33 KV Sub-station at Yurembam (PGCIL)	2x50 = 100 MVA

➢ **Need to extend 400 KV line from Imphal to Dimapur & Imphal to Moreh**

Initiatives in Transmission Sector

II. Strengthening of Intra-State Transmission Infrastructure :

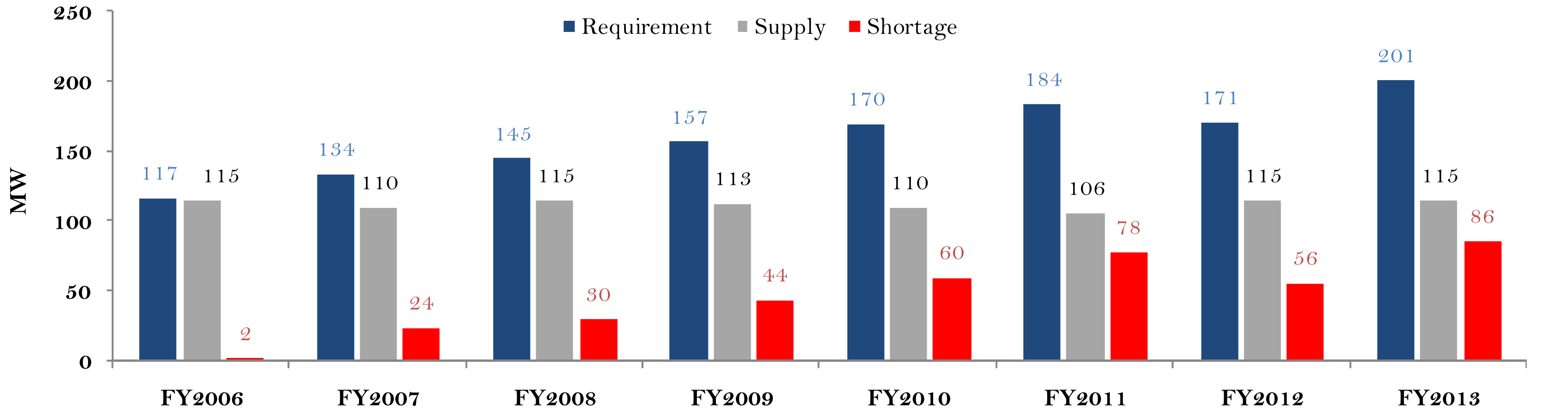
A. Comprehensive Scheme for Strengthening of Transmission & Distribution System to be funded by World Bank **(2013-2018)**

B. Transmission & Distribution Schemes taken up by the State Govt. under State Plan, NLCPR, NEC & RGGVY **(completion of all ongoing projects by Dec15)**

	Name of Scheme	Capacity-A	Capacity-B
1.	New 132/33 KV Sub-stations (4 nos.)	85 MVA	50 MVA
2.	Augmentation of 132/33 KV Sub-stations (5 nos.)	100 MVA	114.50 MVA
3.	New 132 KV line and restringing	494 KM	90 km
4.	New 33/11 KV Sub-stations (54 nos.)	535 MVA	114.45 MVA
5.	Construction of 33 KV line	869 KM	618.50 km

I. Increasing Demand-Availability Gap

Key Factors affecting Availability



- Rising demand – now above 200 MW
- No addition in allocation over last few years- only 132 MW
- Low actual availability in Winters: Base load also dependent on Hydro
- No addition in indigenous generation

Recent Initiatives

- Power tied up from gas based Pallantana Power plant (40 MW) & Bongaigaon thermal plant (42MW) in NE
- Commitment advance to two thermal plants - Paid Rs. 20 lakhs for 20 MW allocation from 4000MW 2nd UMPP, AP and paid Rs. 40 lakhs for 40 MW allocation from 4000 MW, UMPP-2, Orissa
- Request made to GOI to allocate power from thermal and gas based plants to meet state's demand in winters

II. High AT&C Loss

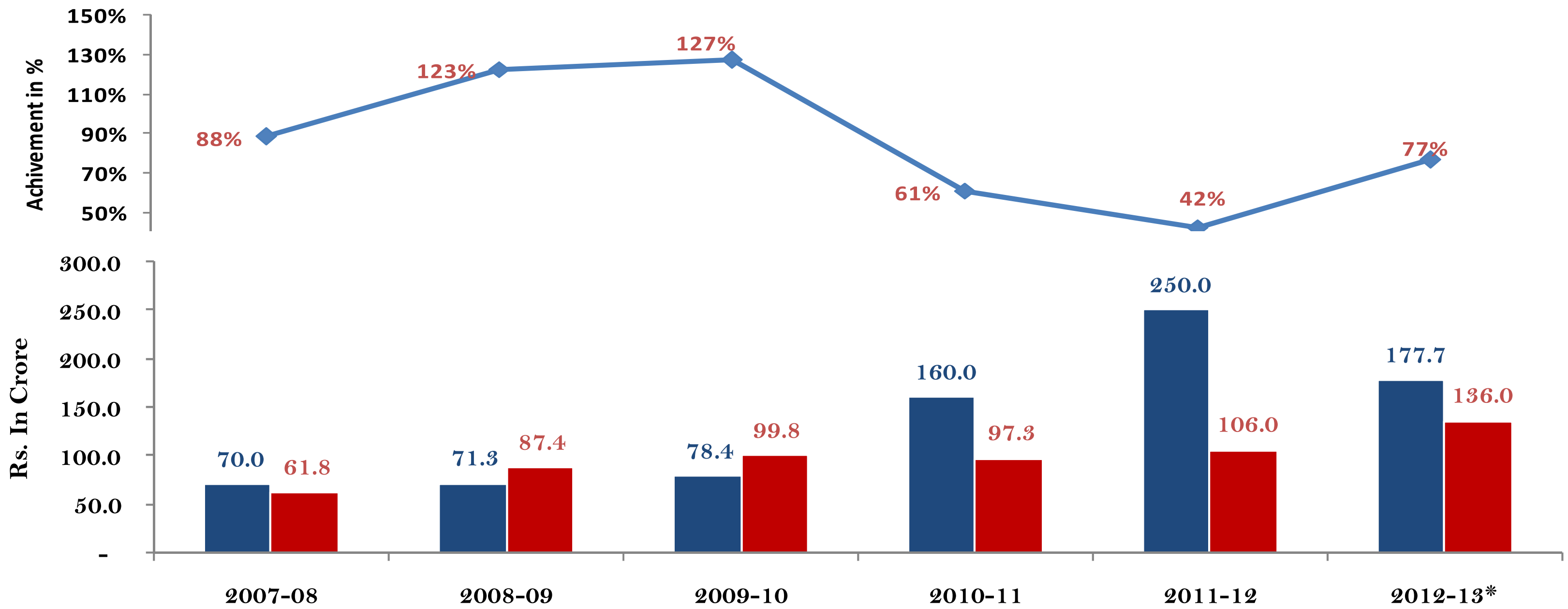
Reasons of high AT&C

- Low Metering status
- Low billing and collection efficiency
- Lack of energy audit
- Lack of feeder, transformer and sub-station metering

Recent Initiatives – Focussed Revenue Drive

- Disconnection on non-payment
- Lodging of cases
- Incentive scheme for arrear payment
- Segregation of consumers and focus on bulk consumers

Revenue Collection – Target vis-à-vis Actual



* 2012-13 : Projected

II. High AT&C Loss

Recent Initiatives- R-APDRP Scheme being expedited

- Ongoing Implementation of R-APDRP Scheme in 13 towns
- Increased use of underground cabling and ABC cable for LT connections in high consumption areas
  - 141.60 km of 11 KV under ground cable and 1722.94 km ABC cable of various sizes being provided in urban areas
- Provision of DT meters, Feeder meters and Sub-station meters
  - 2286 Nos. of DT Meters targeted to be installed by 2014
  - 144 Nos. of feeder meters targeted to be installed by 2014
- Part-B of RAPDRP also sanctioned for 13 towns at a cost of Rs.398 crore

Click for Project activities of R-APDRP Scheme

II. High AT&C Loss

Recent Initiatives – Focussed Metering Drive

- Provision of new electronic meters for consumers
- Outsourcing of meter reading and billing activities : selection of the agency is under process

Scheme-wise Metering Drive

#	Scheme	No. of Meters & Type	Remarks
1.	APDRP	51,000(Tri vector)	Being Installed
2.	Pre-payment	18,000	Being Installed
3.	R-APDRP	57,000(Tri vectors)	Yet to be procured
4.	System Improvement	1,00,000 (Optical Port)	Order Placed
	Total	**2,26,000**	**To be installed by March 2014**

Pre-Paid meters has been a success story in Manipur

Paona Bazar: Before and After

Before Pre-payment meter installation

After Pre-payment meter installation

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Thangal Bazar: Before and After

Before Pre-payment meter installation

After Pre-payment meter installation

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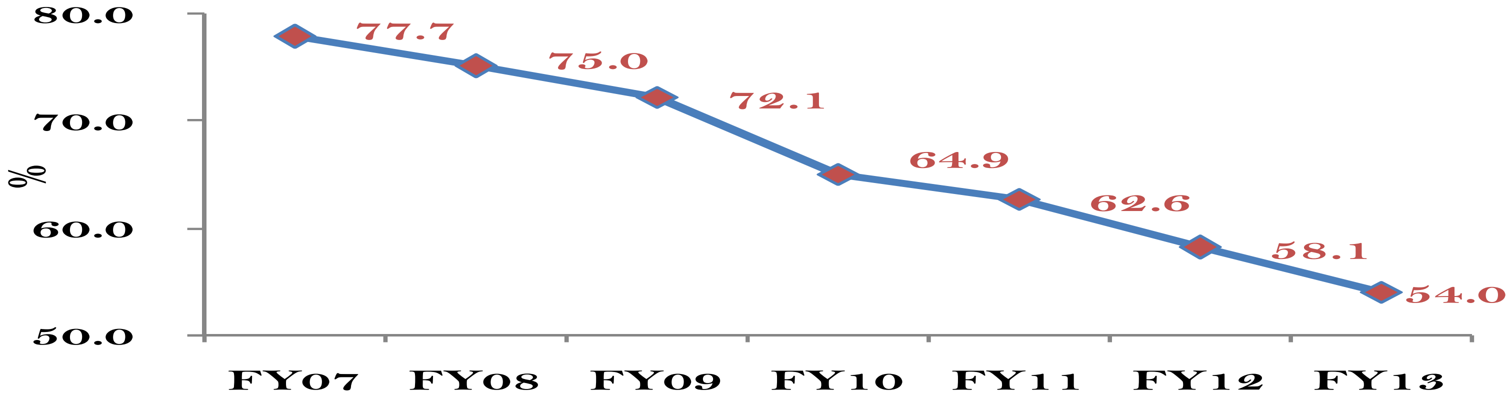
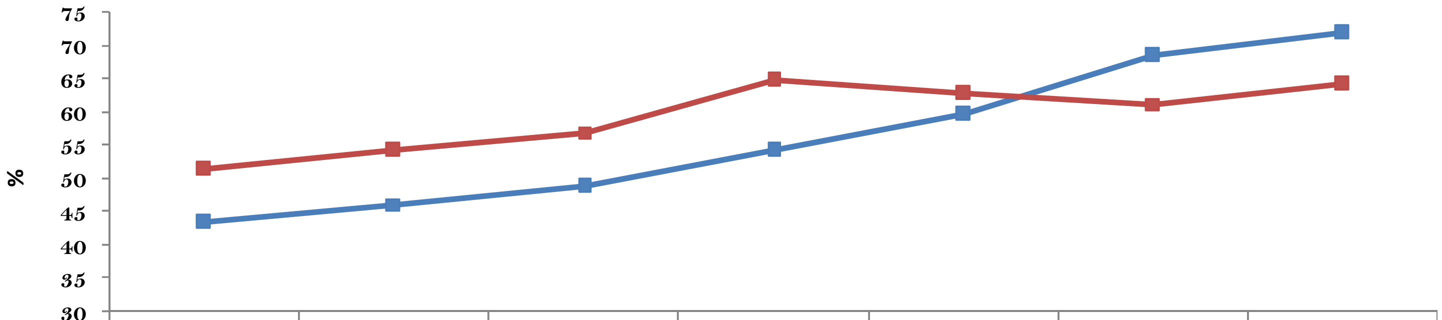
II. High AT&C Loss

AT&C Loss Reduction Trajectory



Improving Billing & Collection Efficiency

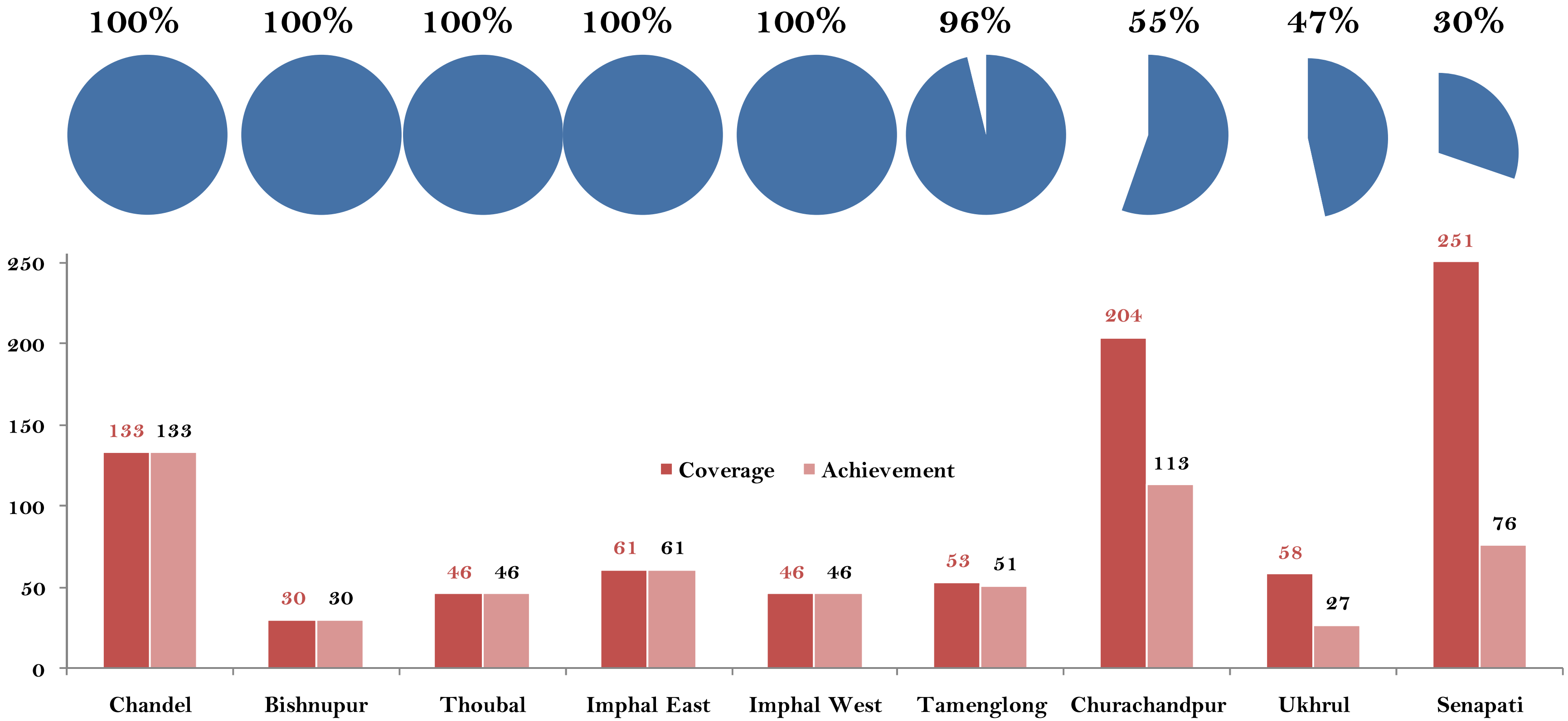


	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013*
Billing Efficiency	43.39	46.12	48.92	54.25	59.64	68.48	71.9
Collection Efficiency	51.32	54.27	56.99	64.71	62.77	61.18	64.24

* 2012-13 : Tentative

III. Rural Electrification : RGGVY Status

RGGVY : No. of Villages Covered



As on 28-Feb-2013

Overall achievement of 66% under RGGVY

Thank You

V. Installation of Pre-paid Energy Meters

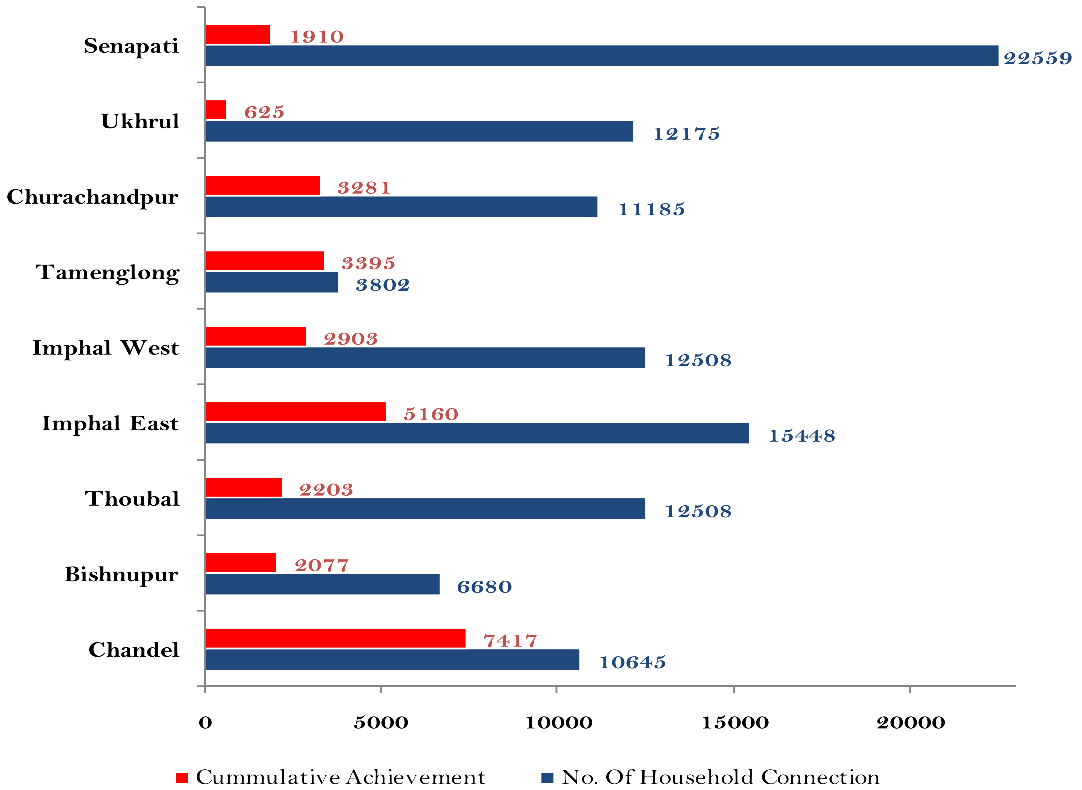
- **11,000 single phase & 1000 three phase meters already installed and charged**
  - Drastic reduction in load demand
  - Quality of power improved
  - Multifold increase in revenue collection
  - 100% consumers satisfaction service delivery achieved
  - To be extended in more areas

#	Items	Pre -Installation	Post - Installation	Remarks/Impact
1.	Load Profile percentage	100%	56%	44% reduction in load demand
2.	Revenue (6 month)	Rs. 3.18 crore	Rs. 6.07 crore	About double fold collection
3.	Staff Requirement	MR - 16, JBC - 19 , Total - 35	10 staffs @ 5 staffs per vending machine	70% reduction in man-power requirement
4.	No. of consumers	9300	12000	Due to regulation of load beyond 5 KW by the prepayment meter
5.	Billing Efficiency	63%	100%	Cent percent billing without Meter Reader
6.	Collection Efficiency	64%	100%	Collection in advance

Back

IV. Rural Electrification : RGGVY Status

RGGVY : No. of BPL Households covered



Progress is low due to non-availability of authentic BPL list. Outcome of ongoing Socio-economic survey is awaited.

Percentage Achievement									
Overall Achievement	CDL	BPR	TBL	IE	IW	TML	CCP	UKL	SPT
27%	70%	31%	18%	33%	23%	89%	29%	5%	9%

R-APDRP Project Activities

PART-A	
1.	Electricity Department, Manipur hired IT consultant, M/s Feedback Ventures Pvt. Ltd., New Delhi for preparation of PART-A DPRs of the State on25.9. 2009
2.	14 (fourteen) nos. of PART-A DPRs for 14 towns of the State at total cost of Rs. 40.65 crs. was prepared and submitted to PFC for sanction
3.	PFC approved and sanctioned the DPRs of 13 towns only at the cost of Rs. 31.55 crs on 08.03.2010
4.	PFC has disbursed Rs. 9.47 crs so far for starting the works of PART-A
5.	M/s Assam Power Distribution Corporation Ltd. Guwahati invited common NIT for the 7 NE States for selecting a suitable ITIA

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BACK

R-APDRP Project Activities

PART-A (contd.)	
6.	M/s APDCL issued a common LOA to M/S TCS Ltd. Kolkata to implement the Part-A R-APDRP in the NE States on 14.7.2011
7.	Electricity Department signed Contract Agreement with M/s TCS Ltd. for implementation of the project on 30-12-2011
8.	The Department issued Work Order for turn-key execution of Ring Fencing works to M/s APE Power Pvt. Ltd., Kolkata for finalization Base Line Data on 23-12-2011
9.	Ring fencing of 12 towns completed
10.	GIS survey of 8 towns completed
11.	CCC buildings being handed over to ITIA

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BACK

R-APDRP Project Activities

PART-B	
1.	The DPRs for 13 Towns for Part-B works of the State amounting to Rs. 398.87 crs has been sanctioned on 18.02.2013 by R-APDRP Steering Committee. Further, sanction of Rs. 359.00 crs, being 90% of the sanctioned project cost as Government of India loan to be released through PFC, has also been made
2.	Ist Installment of Rs. 119.66 crs released on 30th March 2013
3.	NIT for Part-B works being floated

PART-C
Incentive scheme is awaiting Government approval

3/4

BACK

Financial Progress

PART-A		
Project Cost	Sanctioned date: **08.03.2010**	Rs. 31.55 crs
Amount released so far	As on: **31.03.2012**	Rs. 9.47 crs
Expenditure	As on: **31.03.2013**	Rs. 4.58 crs

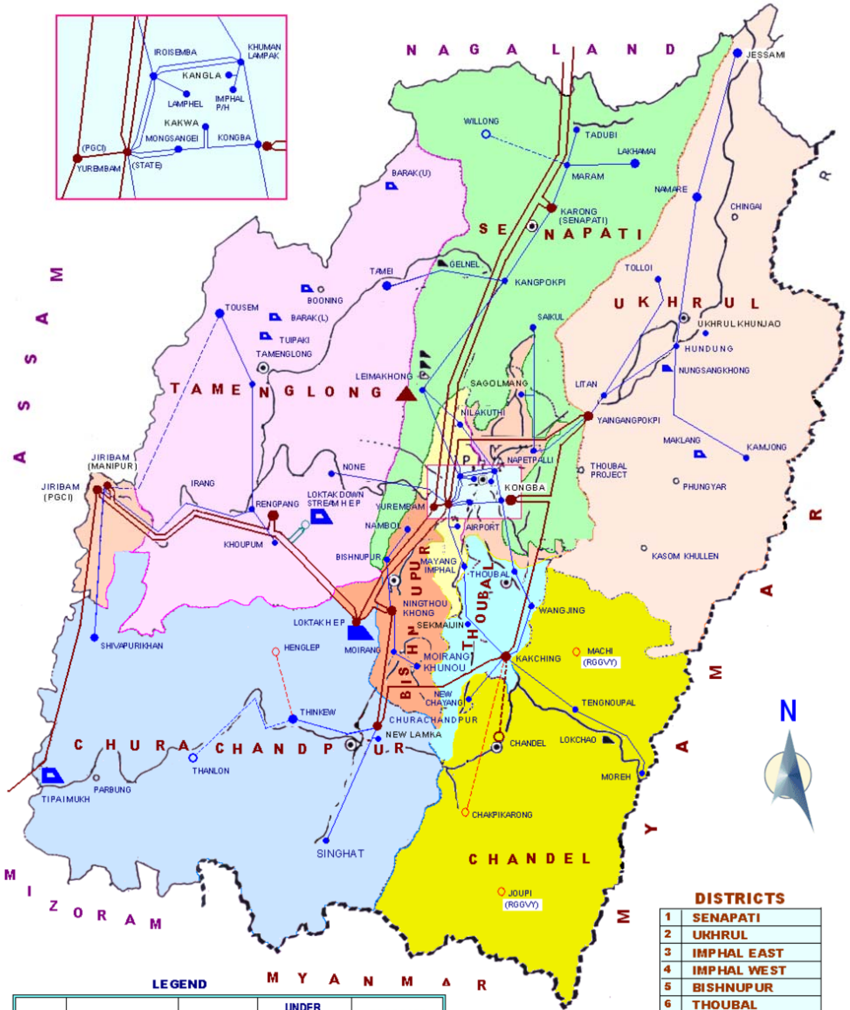
PART-B	
Submitted to PFC 13 DPRs for sanction on 30-3-2012	Rs. 496.94 crs
PFC has approved the DPRs on 08-03-13	Rs. 358.87 crs
PFC released the 1st Instalment on 30th March 2013	Rs. 113.66 crs

PART-C
Incentive Scheme is submitted for Government approval

Click

BACK TO PRESENTATION

POWER MAP OF MANIPUR



DISTRICTS

1	SENAPATI
2	UKHRUL
3	IMPHAL EAST
4	IMPHAL WEST
5	BISHNUPUR
6	THOUBAL
7	CHANDEL
8	CHURACHANDPUR
9	TAMENGLONG

LEGEND

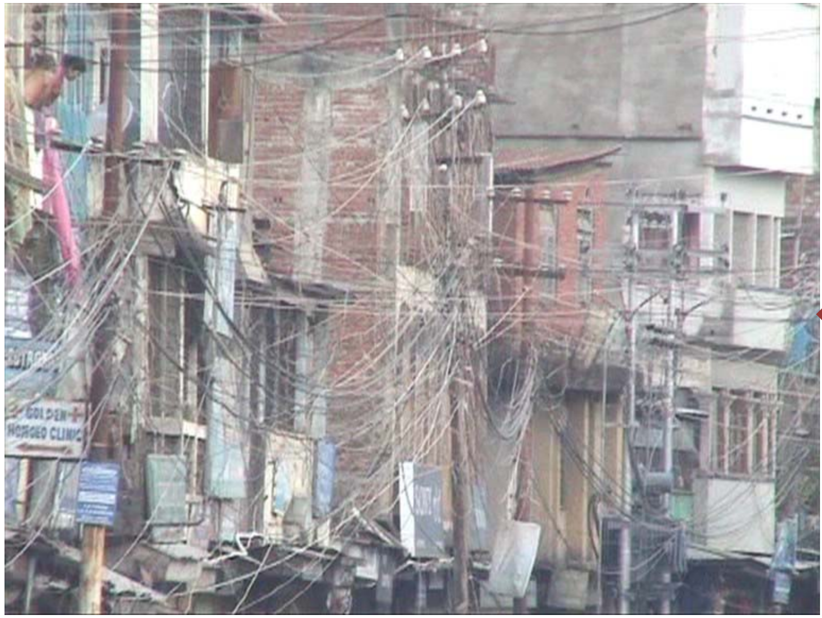
SL. NO.	PARTICULARS	EXISTING	UNDER CONSTRUCTION	PROPOSED
1	132 KV SUB-STATION	●	○	
2	132 KV LINE	———	- - - - -	———
3	33 KV SUB-STATION	•	○	
4	33 KV LINE	———	- - - - - -	

NOT IN SCALE

AS ON 31-3-2012

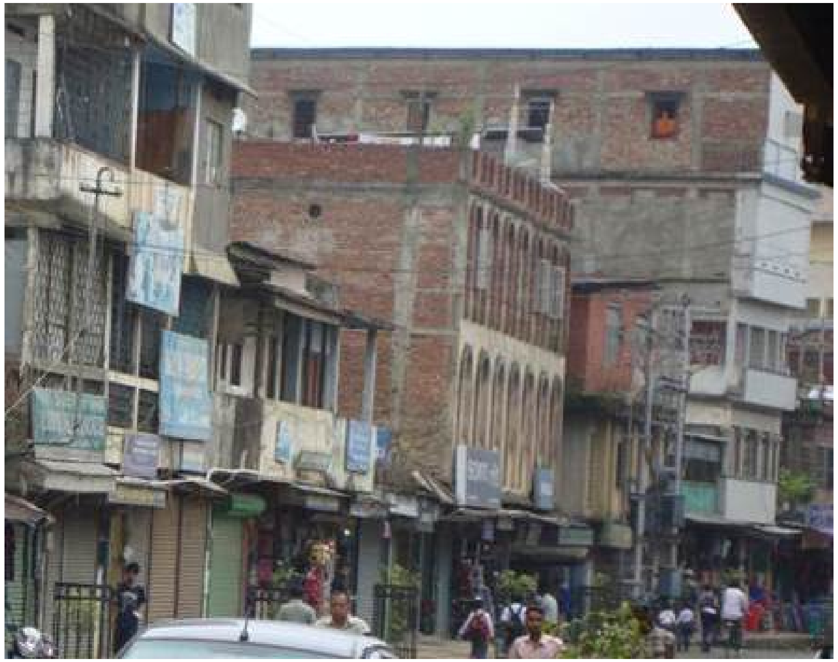
ELECTRICITY DEPARTMENT
GOVERNMENT OF MANIPUR

Paona Bazar: Before and After



Before Pre-payment meter installation

After Pre-payment meter installation

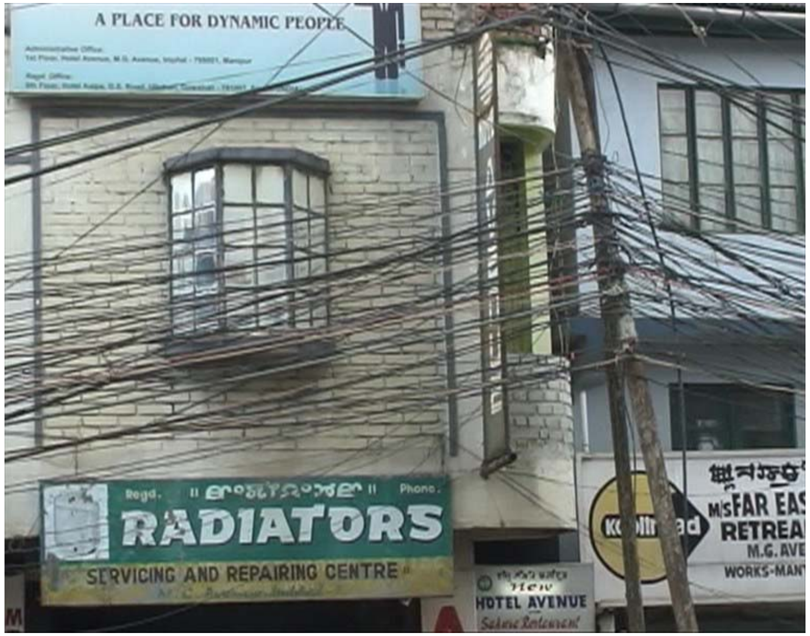


Thangal Bazar: Before and After

Before Pre-payment meter installation

After Pre-payment meter installation

Thangal Bazar: Before and After



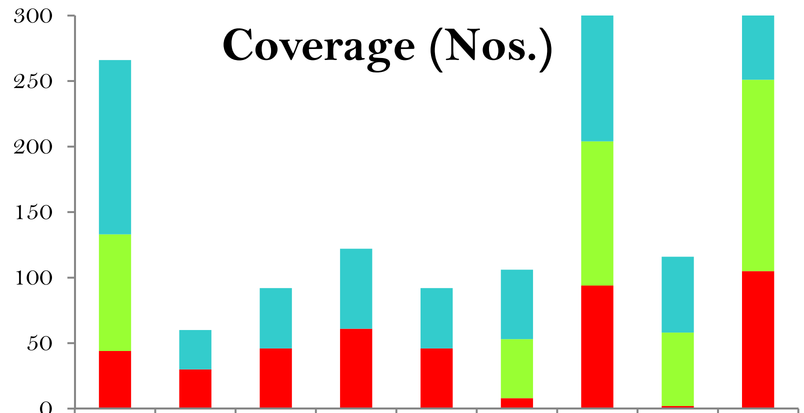
Before Pre-payment meter installation

After Pre-payment meter installation

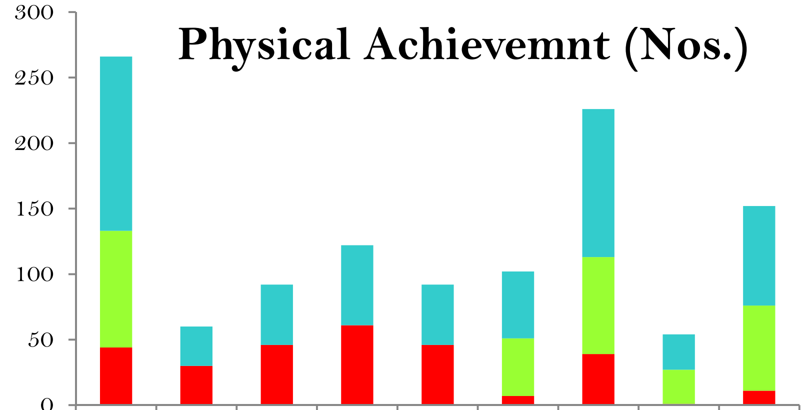
Challenges & Initiatives in Distribution

IV. Rural Electrification: Implementation of RGGVY

Physical Performance of RGGVY as on 1st April 2013



	CDL	BPR	TBL	IE	IW	TML	CCP	UKL	SPT
Total	133	30	46	61	46	53	204	58	251
DEV	89	0	0	0	0	45	110	56	146
UEV	44	30	46	61	46	8	94	2	105



	CDL	BPR	TBL	IE	IW	TML	CCP	UKL	SPT
Total	133	30	46	61	46	51	113	27	76
DEV	89	0	0	0	0	44	74	26	65
UEV	44	30	46	61	46	7	39	1	11

Percentage Achievement

CDL	BPR	TBL	IE	IW	TML	CCP	UKL	SPT	**Overall**
100%	100%	100%	100%	100%	96%	55%	47%	30%	**66%**

Receding AT&C Losses

Year	Energy input in MU	Energy billed	Billing Efficiency (%)	Collection Efficiency (%)	AT & C Loss in %
2006-07	524.115	227.432	43.39	51.32	77.74
2007-08	648.907	299.14	46.12	54.27	74.97
2008-09	616.58	301.602	48.92	56.99	72.12
2009-10	536.392	290.983	54.25	64.71	64.90
2010-11	640.16	381.787	59.64	62.77	62.56
2011-12	626.034	428.73	68.48	61.18	58.10
2012-13	-	-	-	-	54.00 (Projected)

Recent Initiatives

- Corporatization of EDM is under process. State Cabinet has taken a decision on unbundling structure on 14.02.2013
- A State Hydro Power policy for private party/CPSU/SPSU participation adopted since 29.10.2012
- EOI invited for implementation of six HE projects
- Bidding documents are under preparation
- Reassessment of Hydro potential initiated
- Installation of Prepayment meters in big scale nearing completion in core Imphal areas
- Outsourcing of meter reading/billing & distribution of electricity bills – being implemented
- R-APDRP scheme in good progress
  - Ring fencing
  - Feeder metering
  - DTR metering

Recent Initiatives

- Construction of 400 KV Silchar- Imphal Transmission line by PGCIL in progress
- Composite scheme for development of Intra state Transmission & Distribution network under World Bank Funding initiated
- Pallatana GBPP & Bongaigaon thermal Plant expected to be commissioned shortly . State's share of about 90 MW from the projects.
- One 132/33 KV S/S and 4 nos. 33/11 KV S/Ss commissioned adding 80 MVA in transformation capacity
- 100% metering of all feeders in progress
- Procurement and installation of one lakh meters in process
- More focus on intensive revenue drive
- Recruitment process for staff initiated

Corporatization of EDM

- State cabinet decided to engage SBICAPS as consultant to prepare a corporatization Plan in July 2012
- Power Department engaged SBICAPS on 16.07.12
- SBICAPS furnished its draft report on 13.12.2012 with three preferred options
- Option for restructuring EDM into two Govt. Companies:
    - HOLDCO with Transmission & Generation in it &
    - DISCOM for distribution activities
- Structure approved by the State Cabinet on 14.02.2013
- In corporatization process initiated
- An HR Plan to be framed for smooth & effective transition

100% Metering Initiative

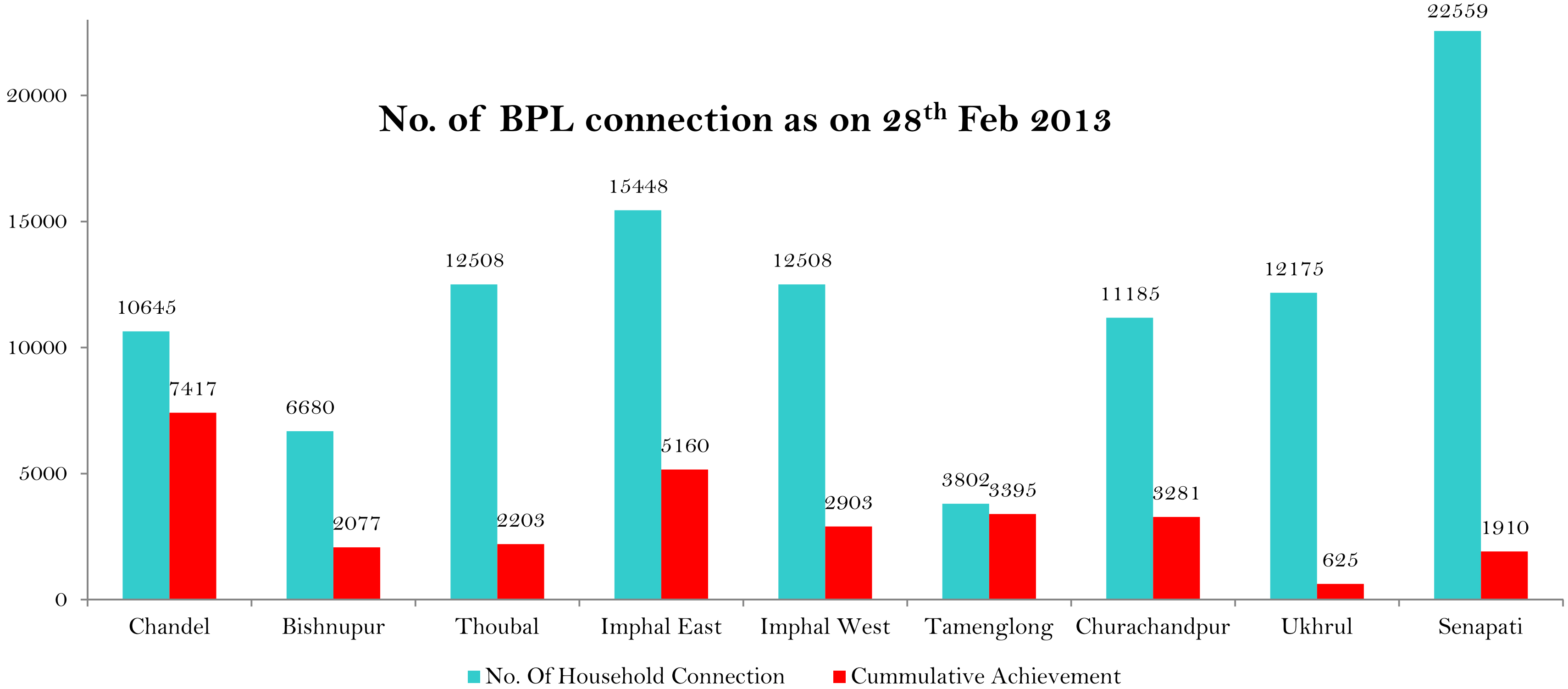
THANK YOU ALL

Demand & Supply Gap

Year	Peak Power Demand Required (MW)	Peak Demand Met (MW)	Shortfall in MW	Remarks
2005-06	117	103.8	13.20	The supply system is managed by resorting to load shedding
2006-07	134	96	38	
2007-08	145	97	48	
2008-09	157	100	57	
2009-10	170	110	60	
2010-11	175	110	65	
2011-12	180	115	65	
2012-13				

IV. Rural Electrification : RGGVY Status

RGGVY : No. of BPL Households covered



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27%	70%	31%	18%	33%	23%	89%	29%	5%	9%

II. Dependence on External Hydro Power

Impact

- Low availability against allocated power in winters when demand peaks in the State
- High level of uncertainty

Recent Initiatives

- Focus on diversification of allocation portfolio
- PPAs with gas based Pallantana and Thermal based Bongaigaon plants
- Allocation from UMPP in Orissa and AP