



**Electricity Department, Government of  
Puducherry**

**Business Plan – PESCO and  
PETCO**

March 2010

## Document review and approval

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# **1 Introduction**

## **1.1 Background**

The Electricity Act, 2003 provides an enabling framework for accelerated and more efficient development of the power sector in a professional and independent manner. The Act seeks to encourage competition with appropriate regulatory intervention. Competition is expected to yield efficiency gains and in turn result in availability of quality supply of electricity to consumers at competitive rates.

Ushering in the Reforms in the Power Sector in the Union Territory of Puducherry the Hon'ble Chief Minister of Puducherry in his capacity as the then Minister for Power, Union Territory of Puducherry, had in his reply to the Budgetary Demands for the year 2008-09, assured on the floor of the House, that the Electricity Department would soon be converted into Board or a Corporation. The Department was then given the go ahead by the Government through its in-principle approval, for the transformation of the Electricity Department into a corporate entity vide GO. Ms. No.31 dated 19.09.2008

Distribution is the most critical segment of the electricity business chain. The real challenge of reforms in the power sector lies in efficient management of the distribution sector. Hence, the time has now come for the Electricity Department which is predominantly a distribution agency in the Union Territory of Puducherry, to toe the national line and transform itself into a self-sustaining and profit making corporate body, and to improve the level of consumer satisfaction by providing uninterrupted quality power at affordable rates.

The economic liberalization since the early 1990s has required domestic industry to be globally competitive. Competitively priced and good quality power is essential for industries to be competitive and for the economy to prosper. The past 5 years have witnessed a significant stagnation in the growth of industries. Declining reliability of power supply and poor customer service, delay in getting power supply due to cumbersome procedures and lack of other infrastructure facilities have compelled industries to stay away from the state. There is also a need for addressing consumer grievances and resolving complaints within a reasonable time frame.

In view of the financial position of the power sector and to meet the aforesaid investment requirements, the Government / Department will have to approach Government of India and other financial institutions for making available the required funds. Both the Government of India and other financial institutions have categorically stated that it would not be possible for them to provide substantial funds unless the Government first initiates the required power sector reforms that have already been set in motion in the rest of the country.

### **I. Need for Reforms in Power Sector:**

Rapid and self-sustaining growth of power sector and its financial viability is essential for a speedier and sustained socio economic development of the Union Territory. Given the grave difficulties being faced by the power sector in terms of investment, its management, and regulation, further enforces the need to bring about comprehensive reforms in the power sector to facilitate and attract investments in the power sector, bring about improvements in the

efficiency of delivery system and create an environment for growth in the power sector for the overall benefit of the people of the Union Territory. A healthy, dynamic and growth oriented power sector will pave the way for rapid industrialization of the Union Territory and growth and stability in agricultural production.

## **II. Emerging Environment of Reforms:**

Recognizing the need for reforms in the power sector, the Government of India has endeavored to evolve a national consensus for reforms. Two conferences of Chief Minister's were convened in 1996, towards this end, leading to the adoption of the Common Minimum National Action Plan on Power. Government of India thereafter enacted the Electricity Regulatory Commission Act in July 1998. In a conference of the Chief Minister's in December 98, a Power Reform Initiative was endorsed. However, a number of steps are required to be taken at the State level to provide a comprehensive solution for restructuring the power sector. In the recent past many States have initiated measures to reform the power sector and to set up regulatory bodies. Orissa, Andhra Pradesh and Haryana UP, Rajasthan, MP, and the National Capital of Delhi have already enacted the required legislation for supporting power sector reforms. Many other States have either established the Regulatory Commission or are in the process of doing so as also restructuring their power sectors.

## **III. Objectives of Power Sector Reforms:**

The power sector reforms programme of the Government of Puducherry shall endeavor:

- To supply electricity to the consumers under the most efficient conditions in terms of quality and cost in order to support the socio-economic development of the Union Territory
- To take effective steps to enable the power sector to mobilize, from within the sector, adequate financial resources for financing modernization and expansion requirements
- To create an operating and regulatory environment conducive to investment and competition so as to foster entry of private participants into power generation, transmission and distribution and to attract the capital and expertise required to support power system up gradation, modernization, expansion and improvement in the quality of service rendered

## **IV. Agenda for Reforms:**

The Government of Puducherry is firmly committed to bring about comprehensive reforms in the power sector to achieve the aforesaid objectives and accordingly, this Statement of its Policy on Power Sector Reforms Programme is being issued

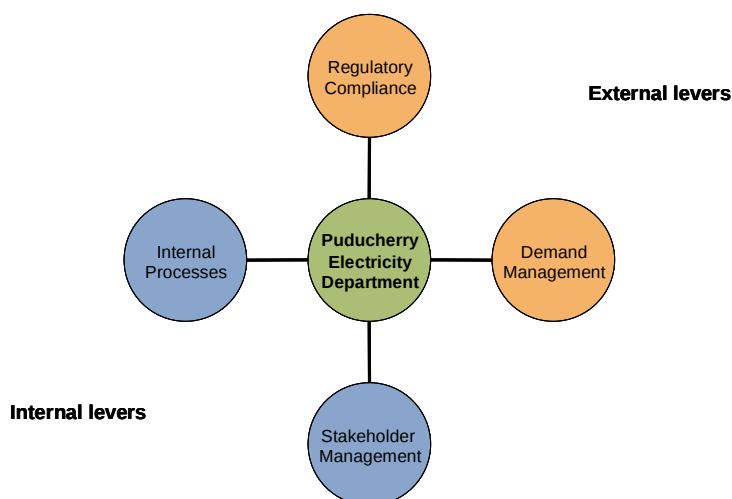
The main components of the proposed reform programme are Customer facing reforms, internal reforms, Regulatory reorientation and Stakeholder focus. These include developing human resources, reducing T&D losses, instituting anti theft measures, carrying out energy audit and metering, focus on demand side management and setting up consumer grievance redressal system

As a result of discussions and analysis of structuring options available, it was decided by the specially constituted Steering Committee that one Transmission Company (PETCO) and one Distribution Company (PESCO) would be created from the Electricity Department. These entities would have to possess clearly delineated functions, Assets, Liabilities, revenues and employees, which is covered under the Transfer Scheme

Moving forward, the successor entities would have significant business opportunities and challenges across internal, market facing and regulatory and Government facing functions. This document addresses the above issues to chart a roadmap for the successor entities

## 1.2 Business Environment analysis – Puducherry Electricity Department

The business environment of PED can be analyzed along four key levers – Demand management, internal levers, Regulatory environment and Stakeholder angle.



### 1.2.1 Demand Management

The Union Territory faced a demand to the tune of 2150 MU (FY 2009). This is expected to increase at a rate of close to 7.5% in the current plan period, and at 6% over the next plan period, taking into consideration the impetus given to the secondary sector of late and the low base effect. Differing significantly from the National average, Puducherry relies on the Industrial segment for a bulk of its revenues (over 70%) and has had a very low share of agricultural consumption. Till FY 2008, the state, for most part has not faced a power deficit situation. However, towards the end of FY 2008 and FY 2009, on the back of low PLF of Central Generating Stations and delays in power projects, PED had to resort to load shedding, which was focused for most part at industrial customers. Moving forward, the power utility

would have to closely examine its demand schedule and make appropriate arrangements, preferably in the long term market (in conjunction with the revised supply projections over the forecast period) in order to satisfy customer demand. In addition, the capital addition over the past years, though sufficient to offset depreciation, has not been expansion directed, resulting in low asset levels in PED compared to benchmark states. In order to improve customer service quality, key infrastructure areas need to be invested in, including DTR and feeder monitoring, complaint handling, SCADA etc

Moving forward, post 2011, the Union territory is expected to start experiencing power surplus (assuming that the allocations come on stream as per schedule). Hence, UI trading is expected to contribute significantly to the revenues of the Department/ successor entities till FY 2017. In conjunction with the tariff hike schedule proposed in the Financial Restructuring Plan, UI sales would be a vital source of revenue to the successor entities. Even in case of a demand acceleration at the rate of 9.5% as envisaged by JERC, Puducherry would have sufficient power to meet its internal commitments without having to resort to power cuts or over draws.

### **1.2.2 Internal processes and efficiencies**

The loss levels in the Union Territory have been at ~ 14% (Transmission and Distribution losses). While these loss levels are among the lowest in the country, JERC in its latest directives as a part of the ARR (Annual Revenue Requirement) has indicated that there is scope for further reduction in losses. Since the agricultural share of power consumption is very low (<2%) and the demand is dominated by commercial and industrial customers, it is proposed that there is headroom for further reduction of losses to the tune of ~ 2%

However, collection losses in the Union Territory have been consistently high, pointing out to high level of under recoveries. The department does not maintain separate heads of receivables by age and prioritize collection efforts accordingly. However, through a regression of past receivables and collections, it is estimated that the steady state collection losses in the Union Territory are around 4% - 5%. This figure is quite high compared to other state benchmarks. JERC mandates a collection efficiency of 99%, allowing provisions for no more than 1% loss levels. Hence, increasing collection efficiency would be imperative from a financial feasibility point of view moving forward. The successor distribution entity would need to evolve focused measures for the same, starting from incentive based methods (like pre paid meter rollout) to imposition of a strong collection and theft monitoring infrastructure backed by a robust legal system for quick response to related litigations

On the front of customer service, JERC has directed the department to establish a consumer grievance redressal forum. Moving ahead, the utility would distinguish itself through standards of service and complaint handling. Implementation of the above efficiency and customer service measures would require high capital investments over the next 3 – 4 years, for both the Transmission and Distribution successor entities. The same has been outlined in the Financial Restructuring Plan submitted to the PED.

### **1.2.3 Regulatory**

The Electricity Department, being a Government entity, has not till date maintained its balance sheets or accrual based Profit and Loss statements. As a part of the directives in its ARR order, the JERC has directed the Department to perform an audit of its assets, and come out with the audited financial statements and asset register for filing the next ARR (for FY11/ 12). In compliance with the same, the department is expected to maintain accrual based accounts of its transactions and asset creation with immediate effect. Asset register guidelines and significant accounting policies have been handed over to guide the department in the same.

In addition, JERC has mandated several measures across the areas of asset recognition, efficiency enhancement, manpower optimization and structural reorganization to be implemented over FY11. These measures have been dealt with in detail in the final section

### **1.2.4 Stakeholders**

The Puducherry Electricity Department has been completely government owned, with minimal debt obligations (almost exclusively pertaining to the System Control Centre). The Government has also committed support towards funding of the historical pension liabilities of the employees, following models of other states. Hence, moving forward, the successor entities (Transmission and Distribution) are expected to start with strong balance sheets, with enough room for borrowing to fund the planned Capital Expenditure across the next 3 – 4 years. The debt equity ratio for the entities is also expected to stabilize at ~ 50: 50 in the mid term (4 – 5 years), giving enough leeway for unforeseen expansion/ investment plans. The proposed Financial Restructuring plan, with its attendant tariff hike schedule and efficiency augmentation trajectory (AT&C) would ensure a smooth transition and robust feasibility of the successor entities.

It is instructive to note that the robustness of the Financial Restructuring Plan for the department as a whole has been attested by the recent ARR, which is in very close agreement with the tariff schedule and efficiency improvement directives detailed in the FRP

Moving ahead, the successor entities would be in comfortable financial positions to guarantee payback on debt (both balance sheet debt and bridge funding guaranteed by the Government of Puducherry). Return on equity cash flows are envisaged from three years from commencement (FY13 onwards), tending to regulator stipulated returns (14% ROE for equity till 30% of value, and debt return rates for the additional ownership)

### 1.2.5 PED – SWOT

Based on the as is assessment of the Puducherry Electricity Department, its significant strengths, weaknesses, opportunities and threats have been tabulated below in the form of a SWOT analysis

| <u>Strengths</u>                                                                                                                                                                                                                                                                                                                                                                                                                            | <u>Weaknesses</u>                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Competitive tariffs, low Transmission and distribution losses compared to other states</li> <li>• Favourable customer mix, with majority share of high revenue commercial and industrial customers</li> <li>• Projected surplus of allocated power compared to likely demand forecast</li> <li>• Strong balance sheet with low debt, Govt. support and ownership of pension liabilities</li> </ul> | <ul style="list-style-type: none"> <li>• Near complete reliance on external sources for power (limited internal generation)</li> <li>• Internal structures and processes oriented not up to date (e.g. cash based accounting methods, lack of asset accounting)</li> <li>• High level of collection losses (~4.5%)</li> <li>• Lower Capex levels compared to benchmarks</li> </ul> |
| <ul style="list-style-type: none"> <li>• Surplus power could be utilized as a significant revenue item in the mid term (4 – 5 years)</li> <li>• Flexible organization ready to align to corporate processes</li> <li>• High scope in reduction of collection losses</li> <li>• Small size and higher flexibility positions Puducherry uniquely for quick turnaround times for implementation</li> </ul>                                     | <ul style="list-style-type: none"> <li>• Delay in commissioning of power projects would cause the power restrictions to continue</li> <li>• Smooth transition to corporate entities would be vital for high service quality and implementation of investment plan</li> <li>• Collection losses, if unchecked would prove to be a high drain on cash flows</li> </ul>               |

### Opportunities

### Threats

## 1.3 Objectives of Business Plan

The business plan for the successor entities has been prepared taking into cognizance the changes in the demand supply equation, regulatory shifts and future constraints that are likely to influence the functioning of the utility. Considering the number of challenges the successor entities are likely to face in course of the transition from the current setup as Government department to Corporate entities, the Business plan seeks to outline a time bound strategy to achieve the envisaged efficiencies and service levels. Key objectives of the Business plan are

- To facilitate smooth transition from the current setup to a corporate setting for both Transmission and Distribution successor entities
- To outline the capital requirements facing the successor entities across the mid term period to achieve benchmark asset ratios and attendant efficiencies

- To ensure loss reduction according to the trajectory outlined in the Financial Restructuring Plan (both Transmission and Distribution losses and collection efficiencies), and recommend appropriate operating models thereof
- To ensure demand supply match – considering the projected demand schedule and availability schedules as per the Financial Restructuring Plan submitted, and ensure optimal utilization of surplus power/ addressing of deficit
- To ensure that the corporate successor entities become synonymous with highest levels of efficiency and customer service, ahead of JERC guidelines and mandates
- To set the groundwork to ensure complete compliance of the successor entities with JERC guidelines, especially in terms of revenue – cost monitoring, asset control for revenue requirement filings
- To ensure that returns of both debt and equity holders are addressed sufficiently through a robust and resilient financial model

Demand, supply, loss, revenue, cost and investment projections have been compiled in detail and submitted in the Financial Restructuring Plan to the Electricity Department. In addition, comprehensive Organizational structures with Job descriptions and entity wide KPIs have been provided to ensure smooth role recognition and control internally

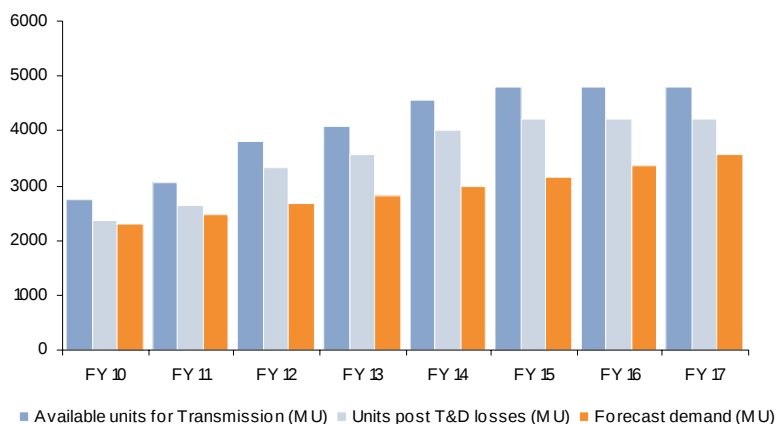
## 2 Business Plan – PETCO

### 2.1 Demand – Supply management

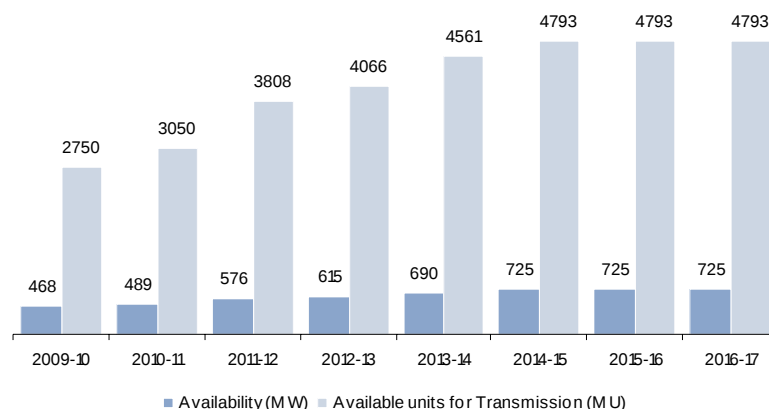
The Union territory has been witnessing an aggregate demand of ~ 2300 MU in FY10. The demand forecasts have been made on the basis of the 17<sup>th</sup> CEA Power Survey, which clearly outlines the demand forecast for Puducherry by category. It also lays out a consumer mix projection for the forecast period. The CEA Power survey is based on the infrastructure – economy growth linkage which maintains that for every unit percentage point growth in the economy, a 1.5% growth in power supply is essential. However, considering past trends, the multiple has been closer to 1 owing in part to insufficient power generation and low investment intensity in the sector. However, in light of the recent upsurge in investments – both public and private in the power sector, it can be assumed that there will be no lower bias from the multiple of 1

The CEA forecast, having been made prior to the recent economic slowdown pegs the National GDP growth at 9% and hence implies a net growth in power at 9.5% - 10%. However, taking into consideration the latest economic dynamics, the GDP may be expected, reliably to grow at 7% - 7.5% in the medium term (Planning Commission and RBI estimates), which puts the estimate of power growth in the mid term at ~ 7.5% in line with the CEA econometric tools. Hence the CAGR has been corrected by a correction factor of close to 30% (based on adjusted GDP figures) and the demand estimates have been made for the period ending FY 12 (11<sup>th</sup> plan period)

**Demand supply equations (MU)**



**Power availability forecast**



The power availability has been determined based on the confirmed allocations to the Puducherry Union Territory from current as well as upcoming power projects. The allocations point out to a comfortable demand supply situation post 2012, with over 550 MW of supply expected to be available by 2012. The loss levels, currently at 14% (Transmission and Distribution) are expected to come down to 12% over the next four years with efficiencies coming from both divisions.

## 2.2 Efficiency enhancement

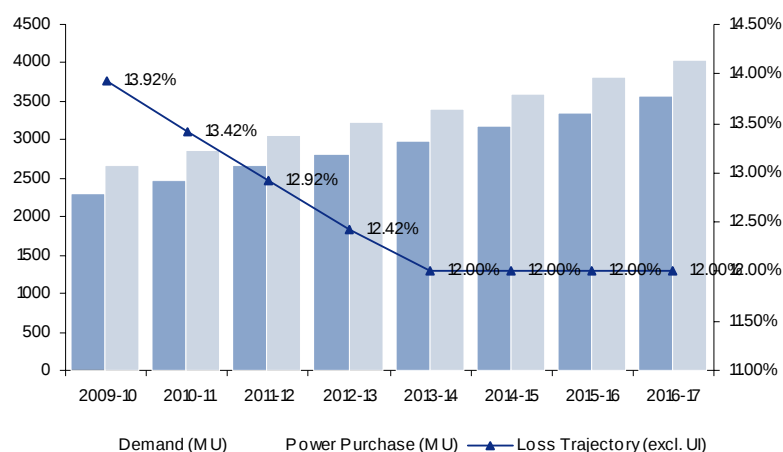
### 2.2.1 Transmission loss reduction

The JERC has indicated that the low levels of T&D losses notwithstanding; there is further scope for loss reduction, especially given the consumer mix of the Union Territory. Hence, there is a need for infrastructure creation to drive the desired efficiencies in the transmission space. The following would be critical moving forward

- Currently, there is complete infrastructure for monitoring of input and output feeds at the 230 KV Sub Stations. However at the other sub stations, there is no individual feeder wise monitoring. Given that the sub stations would come under the purview of the Transmission successor entity, it is essential that a robust infrastructure for power metering at each voltage level is in place for accurate tracking and immediate recognition of losses so that appropriate action can be taken
- Filing of tariffs in the future periods for the PETCO would require disclosure of the voltage wise loss levels, with the loss levels in each segment conforming to standards of improvement set by the regulator. Hence, before the next tariff period, it is essential that infrastructure and processes are in place for voltage wise loss monitoring

- There is no mapping of feeders to ring fenced areas. Though there is an ad hoc list maintained on the feeders to each area, there are frequent instances of re routing, making demand study and loss monitoring ineffective. Mapping of feeders and the maintenance of a real time MIS would be essential for efficiency enhancement

**T&D loss projections**



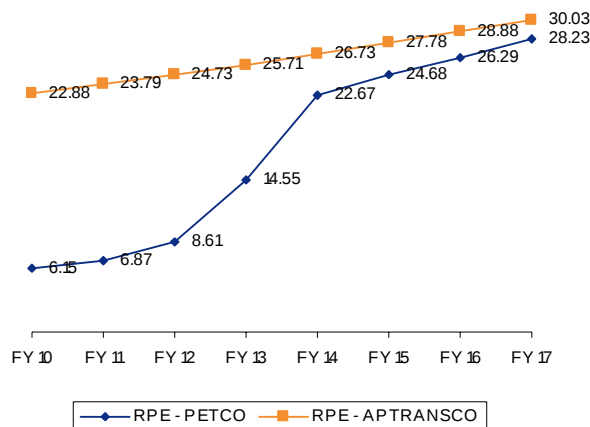
With the implementation of the above initiatives, PETCO would be able to enhance its efficiency significantly and compare with benchmark levels in the industry. This would in turn enhance the efficiency of the power sector in Puducherry overall through its cascading effect on PESCO. The efficiency measures would also stand the corporate in good stead in its ARR and MYT filings in future. Dedicated investment provisions have been made in the Financial Restructuring Plan (FRP) towards achieving these efficiencies in a time bound manner

## 2.2.2 Other Efficiencies

- The performance of PETCO would be benchmarked internally through standard metrics. Quality of power would be measured through SAIFI, SAIDI and Mean time to Interruption. Since the interruptions at transmission level cascade down to the end customer, the above would be assigned high priority and solved with turnaround times befitting a customer facing issue
- Employee efficiency: Currently, the Employee efficiency, measured in terms of revenues per employee is much lower for Puducherry compared to other states. While this could be partly due to the lower capital asset intensity and automation level in Puducherry compared to other states, necessitating greater human intervention, this is expected to be bridged across the next 4 – 5 years. The Revenues Per Employee trajectory has been clearly laid out in the financial Restructuring Plan and it envisages attaining parity with projected levels of AP Transco by 2017 (end of the next plan period). Greater investments would be needed towards employee training to facilitate the same. The proposed Organization Structure for

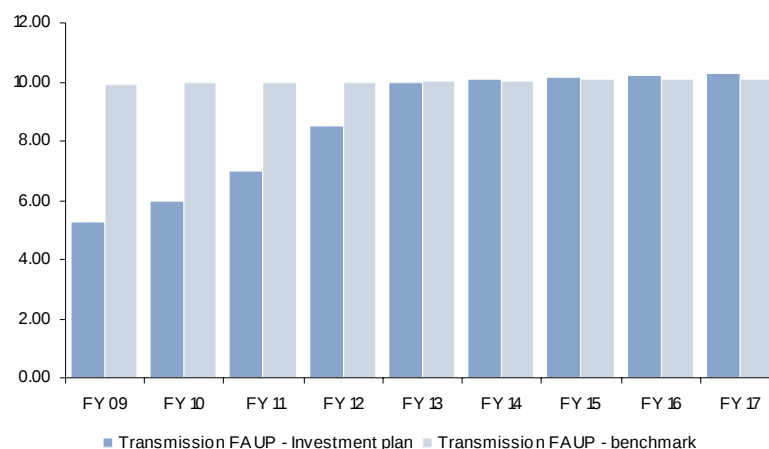
PETCO factors in these requirements to provide the employees a robust training environment conducive to enhanced efficiency

**RPE (INR Lakhs) - PETCO**

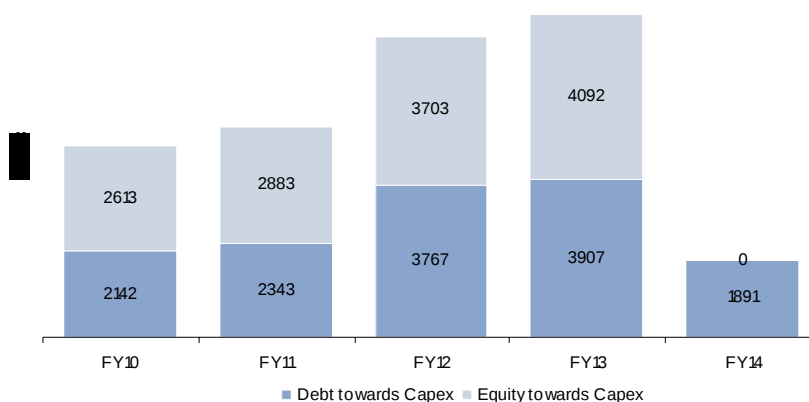


### 2.2.3 Capital investments

- A study of the capital asset intensity in Puducherry Transmission space reflects a large gap between the state and industry benchmarks. Fixed Assets per Unit (MU) purchased has been used as a metric to evaluate the asset intensity of various transmission entities. On an average, a FAUP of ~ 10 lakhs per MU is the industry average, with several states (such as Noida and Delhi) having markedly higher FAUP, some ~ 20 lakhs per MU purchased. However, Puducherry currently has a FAUP of no more than 5.5 in its Transmission business. This has been due to several reasons
- Stagnation in plan funding over the past 5 – 8 years toward asset creation. Moreover, part of the funding goes towards revenue expenses, which further dilutes the share utilized towards Capex creation. Over the past 1- 2 years, the state has been trying to reverse the trend. Two new substations have been announced and progress for the same is already underway. However, moving forward, PETCO would require concerted investments over the next 4 – 5 years towards Transmission infrastructure to service the burgeoning needs of its customers
- Post the demand stabilization phase in 4 – 5 years, where the evacuation capacity installed would be sufficient for the next 4 years or so, the focus would need to be only on incremental expenditure to cover obsolete assets. However, the capital expenditure phase over the next 4 years would be vital towards achievement of the above mentioned efficiencies and ensuring quality power. The investment schedule, with its projected impact on the asset intensity of PETCO is shown below, with national benchmark levels for reference. As can be seen, by FY13, PETCO is expected to reach parity with national benchmarks on asset intensity and quality

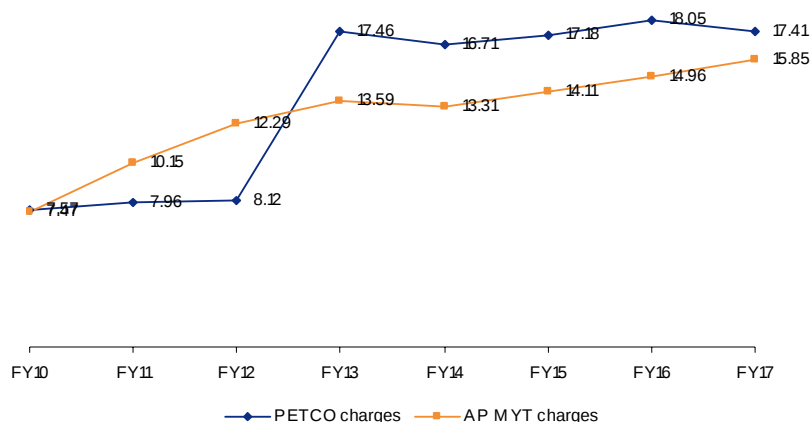


#### Capex Schedule - PETCO



The projected balance sheet and Profit & Loss statements of PETCO over the next 7 years (till FY17) have been provided in detail in the Financial Restructuring plan, with the resultant tariff schedule for wheeling charges to be charged to PESCO. The same has been compared with AP Transco, which is a fairly mature and established Transmission Company. As can be seen below, PETCO wheeling charges are expected to stay in a close band of APTRANSCO projected charges (Reference from MYT of APTRANSCO which has been approved till FY14). PETCO charges would be on par with AP Transco charges by FY18. The below chart reflects the cost competitiveness of PETCO with respect to regional benchmark levels, while maintaining high asset intensity and excellent standards of service

**Tariff comparison - PETCO; APTRANSCO - Per MW in Lakhs**



## 2.3 SWOT

The future business environment of PETCO can be summarized in the following SWOT analysis

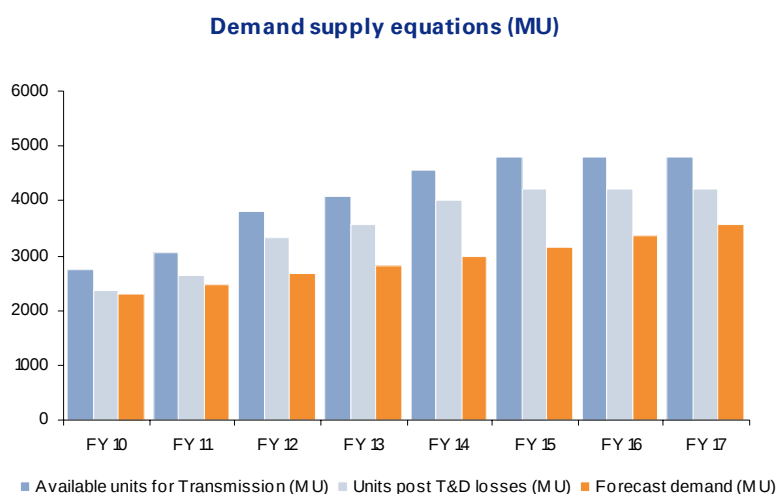
| <u>Strengths</u>                                                                                                                                                                                                                                                                                                                                                                     | <u>Weaknesses</u>                                                                                                                                                                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Low base level of losses</li> <li>• Favourable customer mix, with majority share of high revenue commercial and industrial customers</li> <li>• Strong balance sheet with low debt, Govt. support and ownership of pension liabilities</li> <li>• Higher visibility of demand projections leading to tighter control on planning</li> </ul> | <ul style="list-style-type: none"> <li>• Low transmission net block compared to benchmarks</li> <li>• Investments over the past 3 years have been barely enough to offset depreciation</li> <li>• Lack of feeder wise metering to track voltage wise loss levels</li> </ul> |
| <ul style="list-style-type: none"> <li>• Excellent scope to demonstrate higher employee efficiencies at the end of the Capex creation schedule</li> <li>• Government efforts to boost spending in Transmission</li> <li>• Small size and higher flexibility positions Puducherry uniquely for quick turnaround times for implementation</li> </ul>                                   | <ul style="list-style-type: none"> <li>• Delay in Capex creation would have negative implications on service quality and efficiencies</li> </ul>                                                                                                                            |
| <u>Opportunities</u>                                                                                                                                                                                                                                                                                                                                                                 | <u>Threats</u>                                                                                                                                                                                                                                                              |

## 3 Business Plan – PESCO

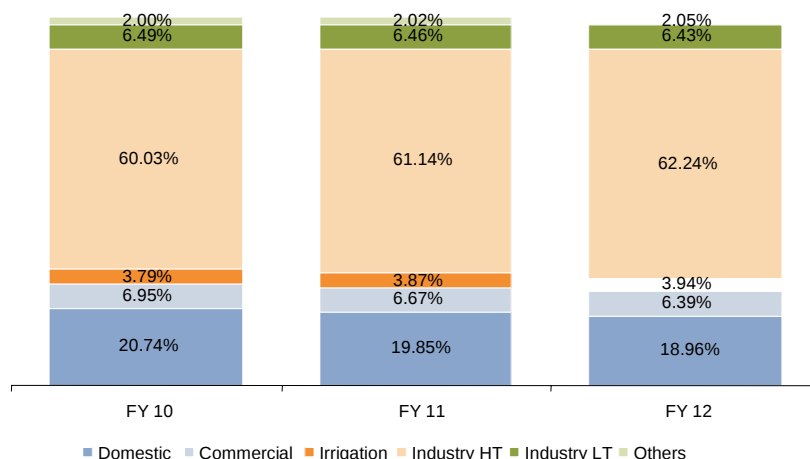
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**Consumption Trajectory**



The segment wise demand projections have also been elucidated in the CEA survey. They point out to Industrial demand (HT) staying at over 60% for the next 3 – 4 years. Due to steady growth rates across segments, the demand mix is expected to remain consistent over the entire forecast period. Industrial demand is expected to drive demand as well as revenues, and with the high levels of service quality envisaged to retain Industrial clientele, along with lowest tariffs in South India, Industrial segment would continue to be the mainstay of billing in the Union territory

## 3.2 Efficiency enhancement

### 3.2.1 Distribution loss reduction

The JERC has indicated that the low levels of T&D losses notwithstanding; there is further scope for loss reduction, especially given the consumer mix of the Union Territory. In addition, the collection losses in Puducherry Electricity Department are in the range of 4% - 5%, which are significantly higher than the 1% which is permissible under JERC guidelines for tariff filing. In light of the above, PESCO would need to take steps to ensure reduction of Distribution and collection losses

- Currently, there is no voltage wise loss measurement infrastructure in place. Also the feeder metering is sporadic. It is essential that Distribution Transformer (DTR) level metering is completed to ensure that area wise demand and losses are tracked. This would enable the vigilance wing to operate in a focused manner, apart from solving rampant problems like meter by pass and pilferage. The DTR level metering is to be implemented over the next 4 – 5 years and capital allocations have been made for the same as part of the Financial Restructuring Plan. Accurate loss measurement system (complete with hardware

infrastructure as above and real time reporting systems (software)) would enable PESCO to monitor and control distribution losses

- There is no mapping of feeders to ring fenced areas. Though there is an ad hoc list maintained on the feeders to each area, there are frequent instances of re routing, making demand study and loss monitoring ineffective. Mapping of feeders and the maintenance of a real time MIS would be essential for efficiency enhancement
- **Pre paid Metering:** As a measure to reduce collection losses and enhance cash position, PESCO could introduce pre paid metering. Under this system, customers could purchase units in advance and add it on to their accounts, similar to mobile recharges. Post utilization of the units purchased, the power would be automatically cut off. While the customers could be incentivized to adopt pre paid metering through discounts (~ 2% discount on the net bill amount), this would still be an improvement over current loss levels and interest on working capital charges. This could be piloted with the Industrial and Commercial customers first before rollout to domestic customers as well. It would require the following infrastructure in place
  - Meter procurement would have to be arranged by the Department. The existing meters would have to be swapped for the new ones, with efforts to pass on least possible cost to the customers towards adoption of pre paid meters. This is a significant barrier to adoption and would have to be addressed accordingly
  - Electronic updation of balances and real time customer account management systems would have to be put in place. As mentioned above, these could be honed in the pilot phase and foolproofed for wider implementation across categories
  - PESCO would need to create a wide infrastructure for the booster cards towards recharging of accounts. While the pilot phase rollout for Industrial customers could be through e charging and kiosks at industrial clusters, large scale adoption would require a strong distribution channel. PESCO could partner with mobile phone operators to tap on their distribution networks for the same. This would go a long way in sharply cutting down the collection losses from 4.5% levels to <1% levels in the next 3 – 4 years

With the implementation of the above initiatives, PESCO would be able to enhance its efficiency significantly and compare with benchmark levels in the industry. The efficiency measures would also stand the corporate in good stead in its ARR and MYT filings in future. Dedicated investment provisions have been made in the Financial Restructuring Plan (FRP) towards achieving these efficiencies in a time bound manner

### **3.2.2 Metrics for efficiency tracking**

- The performance of PETCO would be benchmarked internally through the following metrics

#### **Customer facing metrics:**

- Ratio of Number of complaints attended to received, by root cause
- Ratio of time of disposal for each root cause to total hours of all causes
- Average frequency of interruption per feeder/ transformer
- No. feeders with weighted average voltage lower than target levels
- % increase in category wise sales (HT/ LT Industrial and Commercial in specific)
- Metering targets (across categories)
- % billed of metered, % bills distributed to billed
- Levels of billing – usage gap area wise (through feeder and DTR metering)
- Collection days (by O&M)
- % of notices issued to defaulting customers
- % of disconnections to notices issued
- % of installments availed to notices issued
- % of full payments to notices issued
- Realization rate/unit (category wise)

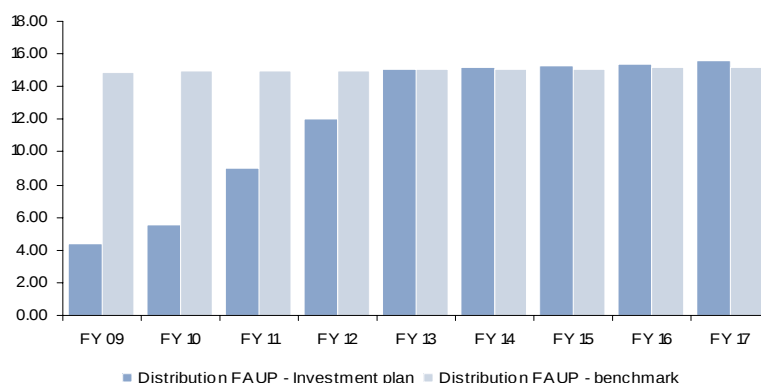
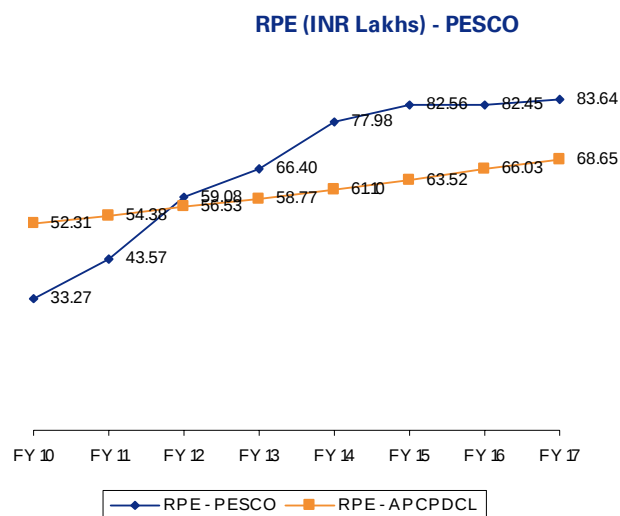
**Other metrics:**

- HT/LT line and transformer capacity ratios
- Ratio of lines with less than 10 years age to total lines
- No. feeders with >15%. 10% - 15%, 5% - 10% and <5% losses

**Employee metrics**

- Employee satisfaction index – through survey
- No. man days training per employee
- Revenue/ Employee, Customers/ employee, Units sold/ employee
- Employee cost : Total expenses (excluding power purchase)
- Cost per employee (cost to company)

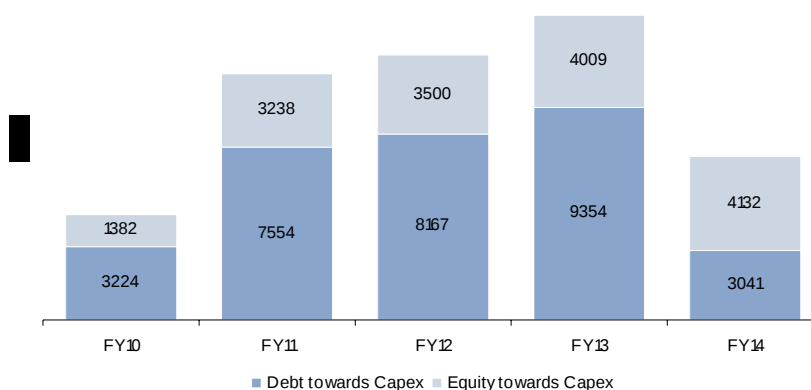
- Employee efficiency: Currently, the Employee efficiency, measured in terms of revenues per employee is much lower for Puducherry compared to other states. While this could be partly due to the lower capital asset intensity and automation level in Puducherry compared to other states, necessitating greater human intervention, this is expected to be bridged across the next 4 – 5 years. The Revenues Per Employee trajectory has been clearly laid out in the financial Restructuring Plan and it envisages attaining parity with projected levels of AP CPDCL by 2012 (end of the current plan period). Greater investments would be needed towards employee training to facilitate the same. The proposed Organization Structure for PESCO factors in these requirements to provide the employees a robust training environment conducive to enhanced efficiency



### 3.2.3 Capital investments

- A study of the capital asset intensity in Puducherry Distribution space reflects a large gap between the state and industry benchmarks. Fixed Assets per Unit (MU) supplied has been used as a metric to evaluate the asset intensity of various transmission entities. On an average, a FAUS of ~ 14 lakhs per MU is the industry average, with several states having markedly higher FAUS, some ~ 20 lakhs per MU purchased. However, Puducherry currently has a FAUS of no more than 4 in its Distribution business, which is even lower than the FAUP in its Transmission business. This has been due to low capital asset creation over the past 5 years. Also Puducherry lacks DTR mapping and metering, which are vital to efficiency enhancement
- The capital asset creation is expected to be made over the next 4 – 5 years. This is expected to be financed by a mix of debt and equity and spans a variety of areas including APDRP, DTR metering, vigilance, MIS systems for efficiency tracking and improvement etc. Post the demand stabilization phase in 4 – 5 years, the focus would need to be only on incremental expenditure to cover obsolete assets. However, the capital expenditure phase over the next 4 years would be vital towards achievement of the above mentioned efficiencies and ensuring quality power. The investment schedule, with its projected impact on the asset intensity of PESCO is shown below, with national benchmark levels for reference. As can be seen, by FY13, PESCO is expected to reach parity with national benchmarks on asset intensity and quality

Capex Schedule - PESCO

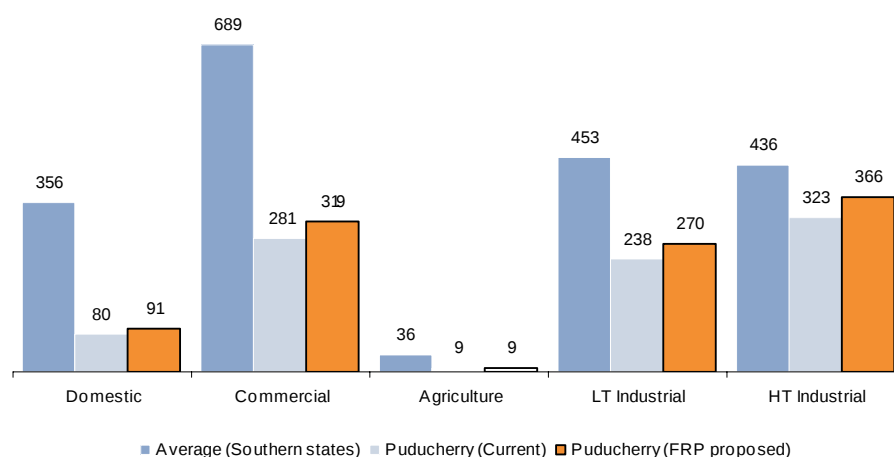


The projected balance sheet and Profit & Loss statements of PESCO over the next 7 years (till FY17) have been provided in detail in the Financial Restructuring plan. As a result of the combined Capex and Operating expense schedules, together with the forecast demand, a proposed tariff hike schedule has been arrived at. This hike schedule attempts to strike a balance between service quality, efficiency enhancement and government support. A hike schedule of 7%, 6%, 5% and 5% has been suggested. It should be observed that the JERC, in its tariff order

(Feb 2010) has granted a ~ 12.5% hike, which is in line with the hike demanded for the first two years (7% and 6%) in the FRP.

Under the proposed tariff schedule, Puducherry would still retain its distinction as being the most competitive provider of quality power across the country. For the purpose of comparison, the projected Puducherry Tariffs in 2011 have been displayed below category wise, along with those of Southern States (average). As can be clearly seen, Puducherry maintains its competitive edge across categories, from domestic and commercial to HT Industrial. This would be in line with the Puducherry Government's mission to make Puducherry the leading destination for Industries to set up shop, as well as a tourism hub.

**Puducherry vs Southern States average**



### 3.2.4 Enhanced Customer Service

High quality of service at very competitive rates would be the value proposition of PESCO, for both retail and Institutional customers. The services would need to factor in the needs of both high value HT customers as well as domestic customers. PESCO could provide enhanced customer service through the following initiatives

- 24 Hours Customer Complaints Cell – PESCO could set up 24 hours (24x7) Consumer Complaint Cell Centre which would be manned by Operators working round the clock. This could be set up at every regions headquarters.. These centers would be integrated with IVRS, with specific desks dedicated to HT customers. These desks could further intimate the HT customers on load shedding schedules if any so that production schedules could be aligned accordingly in advance
- Control Room – A Control room could be set up under an Executive Engineer (E.E.) is made in charge of Control Room and Central Complaints Centre. He transmits the information



### 3.3 SWOT

The future business environment of PESCO can be summarized in the following SWOT analysis

| <u>Strengths</u>                                                                                                                                                                                                                                                                                                                                                                                 | <u>Weaknesses</u>                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Low base level of losses (distribution)</li> <li>• Favourable customer mix, with majority share of high revenue commercial and industrial customers</li> <li>• Strong balance sheet with low debt, Govt. support and ownership of pension liabilities</li> <li>• Small geographical area leading to higher control and lower turnaround time</li> </ul> | <ul style="list-style-type: none"> <li>• Low distribution net block compared to benchmarks</li> <li>• Investments over the past 3 years have been barely enough to offset depreciation</li> <li>• Lack of feeder wise metering to track voltage wise loss levels</li> <li>• High current levels of collection losses</li> </ul> |
| <ul style="list-style-type: none"> <li>• Excellent scope to demonstrate higher employee efficiencies at the end of the Capex creation schedule</li> <li>• Government efforts to boost spending in Distribution</li> <li>• Scope to significantly increase bottom line and cash flows by controlling collection losses</li> </ul>                                                                 | <ul style="list-style-type: none"> <li>• Delay in Capex creation would have negative implications on service quality and efficiencies</li> </ul>                                                                                                                                                                                |
| <u>Opportunities</u>                                                                                                                                                                                                                                                                                                                                                                             | <u>Threats</u>                                                                                                                                                                                                                                                                                                                  |

## **4 Concluding remarks**

The business plans for the successor entities have been created taking into consideration the shifts in the business environment, the current states of the entities and the likely challenges in future. These, along with the Financial Restructuring Plan provide a roadmap for the transition of the successor entities to financially viable, vibrant and transparent entities with high levels of efficiency and stakeholder satisfaction. Implementation of the above measures would require sustained and consistent efforts by all concerned parties (Government, financiers, Management, employees and the public) over the next 4 – 5 years. Periodic reviews would need to be conducted to track the performance of the successor entities on all fronts and develop course corrections and ensure implementation of the same. The Reforms Project Management Cell would need to spearhead these measures and ensure that the spirit of the reforms process – efficiency enhancement and customer satisfaction are met

With the successful implementation of the outlined initiatives, Puducherry would be a model state, with the utilities being synonymous with high quality power and best in class customer service at competitive prices