BEFORE THE ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION * HYDERABAD

1.1 On 25th January 2002 Public Notices were published by APTRANSCO and the four DISCOMs announcing new tariff and customer charges for the year 2002-03 and calling for comments/objections from the public.

1.2 According to Section 26(5) of the AP Electricity Reforms Act 1998 " Every Licensee shall provide to the Commission in a format as specified by the Commission at least 3 months before the ensuing financial year full details of its calculation for that financial year of the expected aggregate revenue from charges which it believes it is permitted to recover pursuant to the terms of its license". This means that the Licensees have to file at least 3 months before the ensuing financial year both the ARR and Filing of the Proposed Tariff before the Commission. Interestingly the stand taken by the Licensees is also similar to this. For example the point 5 of the Preamble to the ARR of APTRANSCO mentions, "In terms of section 26(5) of the Act read with Guidelines for Revenue and Tariff Filing dated October 07, 1999 framed by the Hon'ble Commission and the licenses, a licensee is obliged to file every year before December 31 its calculations related to each licensed business for the ensuing financial year regarding (i) its expected aggregate revenue from charges under its currently approved tariff, (ii) its expected cost of service, and (iii) its expected revenue gap and an explanation on how it proposes to deal the revenue gap(if any)". In the case of the financial year 2002-03 while ARR was filed before 31st December,2001 tariff proposals were not filed before that date. These tariff proposals were only filed on 23/24th of January, more than three weeks after the due date. This is a clear violation of the Act as well as the guidelines of the Commission by the Licensees knowing well that what they are doing is a violation. Hence this tariff proposal need to be summarily dismissed. We request the Commission to dismiss the filings of the Licensee.

1.3 The filings of the tariff proposals were willingly delayed to benefit the ruling party of the sate government in the forthcoming elections to the municipal bodies. Even more than this during this period the Chief Minister and other ministers misleading statements that tariff would not be hiked during the ensuing year. The state government being the 100% owner of all the five companies holding the license for bulk and retail supply and distribution of power in the state and the Chief Minister being the head of this government, the announcements made by him have added significance. In the wake of the proposals placed before the Commission by the Licensees after the elections the Chief Minister's announcements appears to be misleading and unbecoming of the office of the Chief Minister. The public proceedings on the tariffs need to be held in transparent and free atmosphere sans any diversions. The announcements made by the Chief Minister and his cabinet colleagues are clear violation of this solemn condition. On this count alone the present filings on the tariffs for the year 2002-03 need to be rejected. We request the Commission to reject the tariff filings of the Licensee.

1.4 The AP Electricity Reforms Act 1998 is meant for "taking measures conducive the development and management of the electricity industry in an efficient, economic and competitive manner". As the present tariff filings is violation of the Act the same should be rejected.

1.5 Projections of power to be consumed during the ensuing financial year are central to the ARR and Filing of Proposed Tariff. It is based on these projections that total power to be purchased from the power generators is decided. The projections of power to be consumed is based on the power sold during the period preceding the filing. But the data provide by the Northern Power Distribution Company is full of mistakes. For example the domestic power consumption for the district of Adilabad is well beyond the national average and nearer to the developed countries. Similarly total agriculture consumption shown for the first half of the year 2002 is more than 80% of the power allocated to agriculture in this zone. Apart from power consumption data even information regarding fixed capital costs is also said to be wrong. This is particularly the case with APGPCL. Data based on such gross mistakes cannot be reliable. Hence we request the Commission to reject the Tariff Filings for the ensuing year.

1.6 Reforms are not just about tariff increasing but also about the process of governance/administration of the power sector as stated in the preamble of the Reforms Act. And it is the present government which brought out the Act. It is the same government which is flouting the Act for its narrow interests in violation of the Act. As the present filings of the Licensees is vitiated by the gross violation of the Act the same should be rejected.

STATUS OF DIRECTIVES

2.1 Regarding the directive to install meters at all interface points where ownership changes by 31st October 2001 the Licensee reported some progress in the cases involving APGENCO, PGCIL and DISCOMs, but regarding IPPs it only says that it is taking requisite action. It implies that there is no progress on this front, and this gives rise to misgivings about the accuracy of power input from this source.

2.2 Regarding the directive on crediting the employee benefits in the reply Licensee says that amount of Rs.48,67,000 for April 2001 is credited. Then, what about other months?

2.3 We regret to note that the Licensees are consistently disregarding the directives given by the Honourable Commission. We request the Commission to impose fine on the Licensees for not implementing each directive.

POWER PURCHASE COSTS

3.1 Capacity additions to the power generation in the state of AP are based on over projections. These capacity additions instead of helping the power sector to ease the situation have become an unbearable burden to the Licensees, to the consumers and the state government.

POWER PROJECTED DEMAND, AVAILABLE AND PURCHASED

	2000-01	2001-02	2002-03
Assembly Committee	42628 MU	47148 MU	51333 MU
APTRANSCO*	44260 MU	44046 MU	44515 MU
Power Available	42 628 MU	45413 MU	48482 MU
Power Purchased	42189 MU	40788 MU	41333 MU
* Presentation made during public hearing on BSES on 16th January, 2002.			

3.2 From the above table it is clear that for the last few years the power available is more than the power being purchased. It is even more startling to find that even according to the APTRANSCO's projections power available is more than its own projections. But even then it is not hesitating to ask for some more additional capacity at huge cost to itself, to the consumers and to the state government.

3.3 From the above table it is also quite evident that surplus power available in the state is increasing with the consequent cost increase. During the ensuing year, i.e., 2002-03 surplus power available is 7,149 MU. An examination of the ARR filed by APTRANSCO gives a clear picture of the burden this entails. As a result of this unwanted additions the fixed costs to be paid is increasing, bringing into question the financial health of the Licensee. During this year nearly the same quantity of power is being purchased from the IPPs. They will be paid **Rs. 913.30 crore** towards fixed costs and incentives. In their absence this amount would have been saved. Lanco Kondapally, BSES AP and NTPC's Simhadri plants are being added to the grid who will be supplying 7,400 units and entailing **Rs. 828.6 crore** towards fixed costs only. In their absence this amount would have been saved.

	Power Purchased (MU)	Purchase cost (Rs in Crore)	Fixed costs (Rs in Crore)
2002-03	41333	7425	3445
2001-02	40788	7296	2737
2000-01	42289	7262	2505

3.4 From the above table it is clear that as a result of the capacity added based on unrealistically high projections has become a huge burden to the Licensees as well as the consumers. When compared to the current year during the ensuing year power purchased will increase by 545 MU and power purchase costs will increase by Rs. 128 crore and the fixed costs by a whopping Rs. 708 crore. This picture becomes even starker when we compare the ensuing year with the previous year. Compared to the previous year during the ensuing year total power purchases declines by 956 MU but power purchase costs increase by Rs. 163 crore and fixed costs increase by Rs. 940 crore. This burden is because of power purchased from IPPs on the basis of PPAs signed with them.

3.5 During the ensuing year (2002-03) the revenue gap is Rs. 924.84 crore. The additional burden because of PPAs signed is roughly equivalent to this gap. Had there been no PPAs there would have been nil or insignificant revenue gap. This anomalous situation calls for total reexamination of power demand projections and the PPAs signed, and any delay on this front will prove to be very costly to the power sector as well as the economy of the state. A recasting of power procurement projections and PPAs with IPPs shall provide avenues to reduce power purchase costs, revenue requirement and also the need to revise tariffs upwards.

3.6 Usually supporters of the capacity additions argue that these additions are necessary to meet the peak demands. Like the overall power demand projections peak demand projections also tend to be overestimated. We would like to know from the Licensee what is the projected peak demand and what is the peak demand.

CAPITAL COSTS OF IPPs

4.1 As detailed above fixed costs being paid to the IPPs has become a drain on the finances of APTRANSCO. It appears some of these IPPs are not satisfied even with these and want to increase it further. In a reply to one of the objections raised by the present objectors during the public proceedings on tariff proposals for the year 2001-02 APTRANSCO had replied, "GVK and Spectrum have projected increase in completed capital costs over and above the provisions of the PPA. The proposals submitted by GVK and Spectrum have been entrusted with independent consultants M/S CRISIL and M/S ICRA for scrutiny and recommendations. Based on the recommendations of M/S CRISIL for the GVK project, the APTRANSCO submitted the recommended final capital costs to the CEA through the GoAP for CEA's examination and approval. M/S ICRA submitted their recommendations on the completed capital costs of M/S Spectrum and these are under examination of APTRANSCO, duly giving a opportunity to M/S Spectrum to explain their case".

	Original for 400MW	Revised in 1994	Under consideration
GVK	Rs. 518 crore	Rs. 870 cr/216MW	Rs. 1025 cr/220MW**
Spectrum	Rs. 780 crore	Rs. 748 cr/208MW	Rs. 972 cr/208MW

** Exact amount not known to us.

FIXED COSTS PAID

YEAR	GVK (Rs in Crore)	Spectrum (Rs in Crore)
1998-99	214	201
1999-2000	169	229
2000-01	202	191
2001-02	195	183
2002-03	195	183
Total	975	987

We request the Commission to direct the Licensee to make public application made by the GVK and Spectrum for capital cost escalation. We would like to know what are the recommendations of the independent consultants? We would like to know what are recommended costs placed before the CEA by APTRANSCO and on what grounds. We would like to know whether these records are placed before APERC.

4.2 According to the PPAs changes in costs of the plants will come into the picture only if there is a change in law or policy of the government. What changes in law or policy of the government led to increase in the capital costs of the above mentioned two plants?

4.3 We understand that the costs shown by the above two IPPs are not above board and constitute fictitious, inflated costs. As an example we would like to quote from the report of the auditor appointed by M/S ICRA in the case of Spectrum plant, "The expenditure booked under various heads for purchase of materials for civil works are not supported by proper bills. We are of the view that internal controls regarding approval of expenditure was absent. Further, adequate evidence is not available on record for certain expenditure of Rs.114.67 lakhs to support the payments made to the Companies, firms and parties in which the Directors are interested which have been included in the completed capital cost" (para 6.4.3). According to a news paper report, "An Income Tax investigation of Blue Star last year concluded that, 'the assessee firm was used as a conduit to facilitate siphoning off total contract funds from SPGL [Spectrum Power Generation Limited], its associate concerns and the promoters…The funds received from SPGL were not utilised for any execution of work , but were transferred back to SPGL and other concerns where the promoters of SPGL are interested" (Economic Times, 24th October, 2001). Expenditure on EPC also raises similar doubts. According to the same news paper report, "Despite being the biggest shareholder, RR [Rolls Royce] has been strangely indifferent to the fact that it does not receive dividends. It has never asked for a place on the board and has been quite happy to let Kishan Rao manage the show. STUSA [Spectrum Technologies USA] alleges that this is the result of collusion between RR and Kishan Rao. It cites an agreement between the two, under which Virgin Islands based Towanda Services – a company owned by Kishan Rao – got a commission of $22.5 million from RR. The commission ostensibly paid under an agency agreement, is a kickback for Kishan Rao to make sure that RR got the EPC and O&M contracts, alleges STUSA. The NRI consortium also says that RR's equity contribution is actually only a part of the padded contract price". Sections 3 and 4 of the above said agreement deals with the above issue. Normally according to all PPA any benefit accruing to the developer is to be passed on to the consumers as they are already assured of 16% returns. Hence we request the Commission to direct the Licensee to reduce the above amounts involving site development and EPC contract from the capital cost of the plant. The reduction should be both from the rupee and dollar loans.

4.4 If this is the situation in the case of Spectrum things should have been even more murkier in the case of GVK's plant as its capital costs are even higher than the Spectrum for similar capacity. In the past CAG in several annual reports regarding AP brought out many inconsistencies in the capital costs being paid to these two companies. These issues were also raised by us in the past tariff hearings. The Licensee gave the standard explanation that answers are being placed before the Assembly. We do not know whether they have given clarifications, and if yes what those explanations are?

4.5 The plants which are going to go on stream now, after fives years from the time the above two plants went on stream, like BSES for similar capacities costs Rs. 700 crore. As they were comparatively old plants they should have cost less.

4.6 All in the power sector including PSUs are getting used to this inflating of capital costs including BHEL and NTPC, may be Genco also. Power purchase cost as a result of this through depreciation and payments towards equity and debt servicing as a result of capital cost escalations will be very high in the coming years. This tendency need to be curbed at the earliest in the interests of the development of power sector in the state.

4.7 We appeal to the Commission not give consent to the revised capital costs and also see that all PPAs are reexamined in the light of the findings about inflating the capital costs and see that the consumers are not defrauded because of these inflated capital costs. In the name of binding legal contracts/provisions consumers should not be burdened.

4.8 Recently it was reported that the Licensee has signed with several IPPs Memorandum of Agreement (MoA), giving it the status and significance of financial closure. We request the Commission not to recognise these MoAs and to see that as a fall out of this consumers are not burdened. We also request the Commission to direct the Licensee to make these MoAs public.

4.9 We do not know whether the Licensee is examining whether the developers are following the contents of PPAs. Whether payments made to the IPPs in accordance with the PPAs and as mentioned in ARRs? Whether liquidated damages are collected from any developer? According to a newspaper report the debt-equity ratio of Spectrum has drastically changed. It changed from 70:30 as agreed to in the PPA to 88:12 (Economic Times, 24th October,2001). This should have its impact on the way fixed costs are being paid to this Company. We request the Commission to direct the Licensee to provide necessary information.

Gas allocation:

5.1 We would like to draw the attention of the Honourable commission that the discrimination shown in allocation of gas has adversely affected the finances of the Licensee. While non-existent entities like Konaseema Plant were given gas allocation already existing units like Lanco Kondapally were not given gas allocation. As a result Rs 234 crore more has to be paid to Lanco towards variable cost.

5.2 Gas available as of nw is 7.5 to 8 MMSCMD. Out of this 2.5 MMSCMD of gas allocated to other sectors on firm basis. Out of this 2.72 MMSCMD on firm basis and 0.70 MMSCMD on fall basis was allocated to Spectrum, GVK and APGPCL. This shows that out of 5 to 5.5 MMSCMD available gas 3.42 MMSCMD is allocated to the above three generating stations. The Kondapally station needed 1.75 MMSCMD of gas for its full capacity. The remaining gas would have been sufficient for this. But the gas was not allocated for two years. As a result of it was run on naphtha resulting in higher tariff.

POSSIBLE SAVINGS FROM KONDAPALLY PLANT

	Units generated using Naphtha (MU)	Variable cost for using Naphtha (Rs in Crore)	Savings if Gas was used (Rs in Crore)
2000-01	685	206.6	137.0
2001-02	486	147.0	97.2
Total	1171	353.6	234.2

From the above table it is clear that had gas was allocated to Lanco Kondapally Plant Rs. 234.2 crore would have been saved over the last two years.

5.3 Power obtained from APGPCL, a cheaper source of power is also declining:

2000-01	504 MU
2001-02	414 MU
2002-03	405 MU

We request the Commission to direct the Licensee to procure power from APGPCL at the previous level i.e., 504 MU per year. This would help to reduce the cost of power purchase by Rs. 20 crore per year.

ISSUES RELATED TO LVS

6.1 In the ensuing year's ARR a MPP by name LVS makes a surprise presence. The same did not appear in the ARR of the current year. Even then during the current year already Rs. 20 crore are paid to this firm, costing Rs.9.74 per unit. The Commission in its orders relating to the MPP refused permission to sell power to the third parties, and directed them to sell it to APTRANSCO through PPAs. As we understand APTRANSCO was not inclined to buy power from these units given its high cost. Also all these plants are not in the completion stage though they were supposed to be set up in 15 to 18 months time from the time they were given permission in the middle of 1990s. They are not ready even in early 2000s. Even the GoAP, it appears is not inclined to grant them any extension. But the LVS presents an intriguing case. In the letter dated 17-8-2001 the Chief Engineer (IPC) APTRANSCO wrote to the Commission, "Since the project is coming to commercial operation shortly and expected to be synchronised by 25.8.2001 as per SE/TL&SS/GZK fax dated 16.8.2001 and the project company have informed that they are agreeable for the levalised tariff mentioned above with payment on year to year basis as per CEA norms and variable charge as per CEA norms is pass through, APTRANSCO is of the opinion to purchase the power from this project. APTRANSCO do not like to have any commitment for purchase of power from the MPPs based on liquid fuels who have not come into operation within the time allowed by GoAP as on date. In this connection it is to submit that the time of completion for the subject project expired by 30.4.2001. The Company made a request to GoAP for considering extension and the same is awaited. Further since finalisation of PPA has to be done after the above cited GoAP approvals are received, it is proposed to purchase power produced at the above cited rate from the COD as the plant, subject to the consent of APERC". In response to this APERC in a letter dated 18.8.2001 observed, "In view of the fact that the Developer is ready to generate power and taking into account the views of APTRANSCO as stated in para 6 of their letter mentioned above, purely as an interim measure, APTRANSCO is permitted to purchase power from M/s. LVS Power Ltd., at the rate specified in para 5 of their letter cited above till 31-10-2001 subject to the extension of time for completion of the Project by GoAP. This is without prejudice to the rights of the Commission to pass any further order in this behalf". Subsequent to this the Principal Secretary to GoAP, Energy department wrote to the Managing Director the Company in a letter dated 21-8-2001, "Keeping in view the recommendations of APTRANSCO and permission given by A.P. electricity Regulatory Commmmission vide.ref..3rd and 4th cited, Government hereby accord extension of time to M/s.LVS Power Ltd., beyond 30.4.2001 upto 31.10.2001 for implementation of the project". Following this LVS Power commissioned the plant and declared commercial operation on 18th October 2001, just a few days before the date until when the Commission permitted them to buy power from LVS. Even for this few days the bill ran up to Rs.20 crore. During the ensuing year even with out purchasing a single unit the Company will be paid Rs.35.6 crore.

6.2 Another important aspect of this curious case is that power is being purchased from this Company even before signing the PPA. One fails to understand the urgency in buying this costly power. The whole exercise is intriguing. The APTRANSCO do not like to have any commitment for purchase of power from the MPPs based on liquid fuels who have not come into operation within the time allowed by GoAP as on date, but it still wants to purchase power from LVS. Then the Commission takes into account the views of APTRANSCO to allow purchase of power from LVS. And citing APERC's permission the GoAP extends time for the completion of the project. It is regrettable to note that the Commission has become a party to this costly exercise. We request the Commission not to allow the inclusion of this particular plant in the merit order and purchase list for the ensuing year and also appeal not to give consent to the PPA with this Company as the price of power from this plant will be beyond the purchasing capacity of any class of consumers in the state of AP.

MERITS OF THE MERIT ORDER DISPATCH

7.1 One would argue that these purchases are based on merit order dispatch. But the way the merit order is prepared is questionable. To make the merit order reflect the actual situation incentives being paid to the IPPs also need to be brought into the picture.

7.2 As of now, merit order is prepared on the basis of variable cost and some must buy constraints. With this approach, it can be seen IPP's like GVK, Spectrum come higher on the merit order compared to APGENCO's thermal units.

Details of power purchase cost for GVK, Spectrum in 2002 are given below.

Name	Capacity (MU)	PLF Limit %	PLF %	MU	Fix Cost Rs in Crore	Variable Cost Rs in Crore	Incentive Rs in Crore	Total Cost Rs in Crore
GVK	216	68.5	86.2	1582	195	131.8	22.8	349.6
Spectrum	208	68.5	87.2	1542	183	129.3	13.2	325.5

Incentive being paid:

GVK:
Incentive = Equity * (PLF- 68.5) * 0.00525 ; Equity = 244 Cr
Spectrum:
Incentive = Equity * (PLF- 68.5) * 0.006 ; Equity = 117.92 Cr

Incentive cost is =
(Incentive paid for 1 % increase in PLF above 68.5) / (Units generated for 1% raise in PLF)
GVK: 12.81/18.9 = 0.67
Spectrum: 7.07/18.2 = 0.38

Per unit costs are given below:

Name	Fix Cost	Variable cost	Total	Incentive	Variable + Incentive
GVK	1.23	0.83	2.20	0.67	1.50
Spectrum	1.19	0.84	2.11	0.38	1.22

7.3 We suggest that after the incentive threshold of 68.5% of PLF merit ordering should be based on variable cost + incentive cost. With this, GVK variable cost is Rs.1.50/unit and for Spectrum it is Rs. 1.22/unit.

7.4 Otherwise we suggest that incentive payment to these two IPPs be recast taking PLF of 85% as the threshold limit in consonance with the Commissions order on BPL's PPA, and this is also the limit followed in the PPAs that have come before the Commission for consent since then. This would result in saving of Rs.35 crore annually to APTRANSCO.

7.5 Non-conventional energy is mentioned on top in the merit order list next only to NTPC-ER, all the units generated, 663 MU, are being purchased at the cost of Rs.3.32 per unit. While 1215 MU are available from other sources during the ensuing year only 663 MU from non-conventional sources is being purchased. It is to be mentioned that power from VSP and NBFA is much cheaper than non-conventional sources

7.6 While arriving at the merit order APTRANSCO has claimed that (page.83) contracts had been analysed to investigate APTRANSCO's purchase commitments from various stations, and stations have been classified as 'must run' and 'optional. Apart from sources like non-conventional energy and NTPC-ER, most other stations are classified as 'optional'. While explanation regarding NTPC-ER is given the same is not available regarding non-conventional energy.

7.7 In the background of APTRANSCO's claim that (page.83) contracts had been analysed to investigate APTRANSCO's purchase commitments from various stations the dispatch rights of TRANSCO gains significance.The PPA conditions for IPPs have this provision:

a) Dispatch instruction cannot back down the plant to less than 80% capacity
b) Total number of backing down cannot be more than 1200 hours per year
c) Not more than one dispatch instruction can be issued in a day

1200 hours of total backing down means a PLF operation of (8760-1200)/8760 = 86.3%
1200 hours of only 60% backing means a PLF operation of (8760-1200*0.6)/8760 = 91.8%

Thus this condition implies a committed incentive to GVK and Spectrum since they have 68.5% as the threshold PLF for incentives. This clause should be removed since it is not favorable to APTRANSCO and the consumers.

ISSUES RELATED TO APGENCO

BACKING DOWN OF APGENCO UNITS

8.1 As a result of these changes APGENCO thermal units are being affected adversely. Over the period power procured from these units is declining.

Power Purchased from APGENCO Thermal Units

YEAR	POWER in MU
2000-01	19749
2001-02	19131
2002-03	17997

This decline in purchases from APGENCO is invariably leading to closing/backing down of several of its thermal units. The units that are going to be adversely affected are Nellore, Ramagundam and Rayalaseema thermal units. While the Nellore Thermal Station is going to be completely shut down during the ensuing year, Ramagundam and Rayalaseema Thermal Projects will be backed down for considerable proportion of their generating time. Particularly, RTPP which has recorded one of the highest PLFs of more than 90% in the country in row for several years will be utilised only for 75% of its capacity.

8.2 Another important aspect to be considered in the case of NTS and RTPP is that both of them are situated in important load centres and they help to stabilise the power supply in that region. Whatever savings that APTRANSCO plan to achieve through the merit order dispatch based on variable costs will be nullified by the losses resulting from the absence of stabilising factor.

8.3 Power being procured from the central generating stations (NTPC and others) is also declining. During the ensuing year while 9359 MU of power is available from central generating stations only 4175 MU is being procured. While power from central generating stations cost Rs. 1.79 per unit, from IPPs it costs Rs. 2.13 per unit. Cheaper power is being foregone in favour of costlier power.

FIXED COSTS OF APGENCO

8.4 In the ARRs (3.4.3. iv, page.82)it was made abundantly clear that all these years APGENCO is not being paid return on equity due to it and also incentives though some of its plants are running at more than 90% PLF. In these ARRs it was also made clear that APTRANSCO as well as the four DISCOMs would not be claiming its returns on equity at the behest of the state government which is its 100% owner, may be in order to lessen burden on itself of reimbursing them if they are specifically mentioned in the books of these companies. We are of the opinion that this is a violation of the Sixth Schedule according to which the government has to ensure that the utulity earns 3% profit.

8.5 Denying RoE to APTRANSCO and DISCOMs will have its serious implications on the health of these organisation. For the current year the Commission has approved Rs.202 crore towards reasonable return. Adding this to total revenue requirement will automatically lead to increased revenue gap. While fixed costs towards unwanted power is being paid it is unfortunate that reasonable return due the APTRANSCO and DISCOMs is being denied. Such undesirable acts would result in erosion of net worth of these organisations. According to the reform programme these will be sold to the private companies. This erosion of net worth of these organisations will be a boon to the private companies going to purchase them and a curse on the people who contributed to its construction.

	Average cost per unit (Rs)	Variable cost per unit (Rs)	Difference A-V (Rs)	Fixed cost per unit purchased (Rs)	Fixed cost per MW (Rs in Crore)
Apgenco-Thermal*	2.27	1.08	1.19	1.19	0.73
Apgenco-Total	1.61	0.76	0.85	0.84	0.36
NTPC-Simhadri	2.05	1.02	1.03	1.04	0.33
IPPs	2.13	0.89	1.24	1.20	0.88

* In the ARR for the year 2002-03 all the fixed costs are placed before the thermal units of APGENCO. In the ARR for the year 2000-01 it was given separately for thermal and hydel units. Also in this ARR all the units and their capacities were mentioned. But this practice is suspended from the subsequent ARRs. We request the Commission to direct the Licensee to provide detailed information.

8.6 The above table show that while arriving at the fixed cost of APGENCO some mischief is being played. There is not much difference in the fixed costs of APGENCO plants other plants even though some of its plants are aged compared to the plants of IPPs and NTPC Simhadri. One may point out that because of reduced units being purchased its fixed costs per unit has increased. But that is not the case. Even during the current year (2001-02) average cost of power from APGENCO is 2.10 which is nearer to IPPs this year.

8.7 The one inference that one can draw from the above table is that APGENCO's fixed costs do not reflect the reality but some thing else. Fixed costs of APGENCO are based on its debt obligations but not on the basis of depreciation of capital assets and return on equity. And this debt obligation in turn is a result of majority of the erstwhile APSEB's debts being loaded on to APGENCO. In other words asset transfer in the wake of unbundling of the APSEB need to be demystified to understand this anomalous situation. The relation between debt obligation of APGENCO and its real fixed costs need to be unraveled.

COSTS PER UNIT OF POWER FROM APGENCO(Rs)

	FIXED COSTS		TOTAL COSTS	
	Thermal	Total	Thermal	Total
1999-2000	0.53	0.43	1.47	1.12
2000-2001	1.01		2.08	1.53

8.8 From the above table it is quite evident that within a year fixed costs nearly doubled. As a result of it total cost of thermal units increased by 42% and average total costs increased by 37%. It is difficult to comprehend such an increase within a year.

8.9 In the case of the last unit of KTPS per MW cost of the plant is Rs.2.95 crore, while it is Rs.4 crore in the case of GVK's Jeegurupadu plant. Further, all other plants are older than this and its costs should have been even lesser. But these lesser costs do not reflect in the fixed costs of APGENCO as mentioned in the ARR for the ensuing year. We request the Commission to look in to these cost aspects before taking a final decision on the tariffs for the ensuing year.

8.10 In the ARR it was mentioned that new PPA is to be signed with APGENCO on the basis of the guidelines prepared by the Commission. We request the Commission to conduct public hearings before giving consent to this PPA.

8.11 Within the APGENCO generating units SSLM LCPH is a unique one though nearly Rs.3000 crore obtained as loan are spent on this we doubt whether a single unit is fed into the AP grid. Already interest on the loans is running into hundreds of crores of rupees, and CA already made adverse remarks on this unproductive loan and the interest payment flowing from this. If we add annual depreciation to total cost of power to be produced it would be some thing special. Even after such a big investment it will be working for only a few days, not more than 20 days in a year. Then all the costs need to be recovered from the sale of these few units, and like the power from LVS unit this also will be beyond the reach of any consumer in the state. Here we would like to make a suggestion: It would be worthwhile, in the background of the support given by the state government to tourism, to transfer this to the tourism department to be used as a monument/museum and write off the assets of this unit from the books of APGENCO. This would reduce the burden of the present and future consumers in the state.

NTPC - Simhadri

9.1 In the ARR it was mentioned that the tariff for the energy purchased from NTPC Simhadri had not yet been finalised and that the notification from CERC indicating the tariff applicable for NTPC- Simhadri was awaited. As this particular plant by NTPC totally dedicated to AP and it is the APERC which has jurisdiction on this plant but not CERC. We request the Commission to direct the Licensee to place the PPA with NTPC before the public and conduct public hearing before giving consent to it.

SYSTEMS IMPROVEMENT AND T&D LOSSES

CAPITAL EXPENDITURE (From Form 1.1e) (Rs in Crore)

	1999-2000	2000-01	2001-02	2002-03
APTRANSCO	582.50	843.61	787.88	907.08
EPDCL	879.99	185.70	198.97	151.48
SPDCL		261.32	171.11	194.52
CPDCL		404.16	397.11	443.92
NPCDL		326.54	206.55	194.58
Total DISCOMs		1177.72	973.74	984.50
Total	1462.49	2021.33	1761.62	1891.58

10.1 Over the last few years Rs. 7137 crore are being invested on capital expenditure. Besides this in the ARR for 2002-03 in the Balance Sheet (Sec 3.1, page.18) other investments are mentioned as Rs.1330.26 crore per year for all the three years. In the ARRs related to current and previous year the same figures do not appear. They appear for the first time in the ARR of the ensuing year. If we add this also to the above capital expenditure total investments over the last four years would be Rs. 11,127.8 crore.

10.2 The Licensee claimed that there is substantial improvement in the stability and reliability of power supply consequent to the reforms and all these investments. But our experience shows there is not much change in the situation. During the public hearing on tariff proposals for the year 2000-01 the then CMD of APTRANSCO stated that Rs.890 crore of investment is needed to bring down transmission losses by one percent. The strategy paper released by the state government department of energy on power for the year 2002-03 also mentions the same figure. If we have to follow this transmission losses should have come down by more than 8%. But this sort of improvement is no where to be seen. Then the question, is what happened to such huge investment? Orissa experience, where similar reform programme is going on for the last five years, show that after a huge investment there is no improvement in the system and T&D losses in fact increased.

10.3 Even how losses are being measured is an issue that needs to be examined. The figures about T&D losses given by the Licensees give rise to many doubts and questions. The issue is how these losses are assessed. What is the method followed? What calculations are used?. What do these studies say? Whether Load Flow Studies are conducted. The Commission in its tariff order for the year 2001-02 had directed the Licensees to conduct regular and thorough energy audit (papa: 145). All the Licensees in their filings on ARR for the ensuing year claim that they are doing it. What do these energy audit reports say about T&D losses?

10.4 Here we raise some issues related to estimation of losses by the utility and also state clarifications needed.

Data supplied by utility in different submissions are given in the Table below:

% T&D loss Data in AP									
Year	**EHT**	**HT + LT**	**Total**	**MU Handled**	**Agriculture MU**	**HT +LT Technical**	**HT+LT Comml**	**HT - Tech**	**LT**
1999			38.0	38720	9554				
2000	4.5	30.9	35.4	43722	10222	17.9	13		
2001	8.9	26.6	33.9	42189	11656				
2002	8.5	23.0	31.5	40788	10300	11.4	11.6	11	5
2003	8.0	20.4	28.4	41333	10594				

Notes:
1. 1999 loss figure & MU data from Strategy paper, January 2001. PAD of World bank gives % T&D loss target for 1999 as 32.7 % with 18.2% Technical and 14.5% Commercial
2. 2000: Values from Tariff Order May 2000 and March 2001.
3. 2001: EHT loss as per Tariff order, May 2000 was 4.5%. But TRANSCO revised this to 8.9%.
4. 2002: Tariff order, 2001. HT -LT breakup modified to match the revised total HT+LT loss figure. HT Technical loss is as given by APTRANSCO in the Wheeling Tariff proposal in October 2001.. LT Loss figure is as given by DISCOMs in the Agriculture section of ARR submissions January 2002.

5. 2003: From ARR (January 02) submissions of TRANSCO and DISCOMs

Some bench mark data on T&D loss is given in following Table:

Bench mark data on % T&D loss				
	Transmission	**Distribution**	**Total**	**Remarks**
Reform Target by 2007			17.7	14.7 Tech, 3.0 Comml
CEA	2.0 - 4.5	6.5 - 11.5	8.5 – 16.0	Rajaddhayaksha Committee (1980) gave 15% as upper limit
Indian Sources	1.5	14	15.5	Distribution = 12 (HT) + 2 (LT)
International – Developing	6.6	10.8	17.4	Peru 2001
International – Developed	2-4	3-6	5-10	USA - many utilities

Clarifications Needed:

Clarifications			
S.No	**Clarification**	**Explanation**	**Question**
1	Sudden increase in Transmission loss	Went up to 8.9 %. Too high s value (see section 3)	Is there commercial loss at EHT level?
2	LT Technical loss in 2002 is 0.4%	Subtract (HT + LT Technical) from HT Technical = 11.4 – 11 = 0.4	Clarify
3	Break up 5 % LT loss in 2002	Given in NPDPCL, SPDPCL ARR submissions as 6% & 5% respectively	How much is Technical, How much commercial
4	HT Commercial loss in 2002 is 6.6%	HT Comml= (HT+LT) Total - LT Total - HT Tech. = 23 - 5 – 11.4 = 6.6%.	Is this the correct value?
5	(HT+LT) Commercial loss in 2002 is between 6.6 to 11.6%	(HT+LT Comml)= (HT+LT Total) – HT Tech- LT Tech. HT Tech = 11.4%; LT Tech can be 5% or 0%.	What is the correct value?

1. Transmission loss

8-8.9% as the transmission loss looks quite high. A satisfactory explanation has to be given by TRANSCO as to how this figure was arrived at. Clarification required are:

i) Point 155 from Tariff order 2002:

In the ARR application the licensee highlighted the following:

(a). The transmission loss is inclusive of losses in external transmission system not owned by APTRANSCO on account of power purchases which are as much as 4.7 percent. The projection of the overall EHT transmission losses, based on energy meter readings taken

for the four months between June and October 2000 works out to be 9.60 percent of the total energy input into the system.

(b). After taking into account the metering accuracy, meter reading cycle time, input of energy to DISCOMS at 33 kV and 11 kV from other generating sources like mini hydro and wind farms, the overall transmission losses are estimated to be 8.92 percent for FY 2000-01. Accordingly, a figure of 8.5 per cent has been projected for FY 2001-02.

(c). During the public hearings the Licensee also mentioned that the 4.5% mentioned as transmission losses in FY 2000-01 filing refers to the transmission lines losses only and does not take into consideration the transformation losses.

Clarifications required:

1. **How was the figure 8.92 % arrived at from the measured figure of 9.6 (points a &b above).**
2. **How much of 8.5% is line losses and how much is transformation losses? (point c)**

ii) Point 156 & 157 of Tariff order 2002

156. There has been a general concern among all stakeholders regarding the transmission loss claimed by APTRANSCO. The Commission felt that the Transmission Losses should also be estimated by System Simulation Study or Load Flow Analysis. During the ARR review process, the Commission asked the Licensee to conduct the above study by an independent agency and present the result before the Commission. The study was carried out and the results were presented before the Commission. As per the study, APTRANSCO sustained a Transmission Loss of 8.7%.

157. The Commission observed many lacunae in the loss estimates in both the methods as given below.

(i). Firstly, the licensee has failed to comply with the Commission directive of providing 0.2 class accuracy meters at the interface points between APTRANSCO and APGENCO and between APTRANSCO and the DISCOMS. Out of 72 interface points between APGENCO and APTRANSCO, only 12 have been provided with 0.2 class accuracy meters.

(ii). There has been no progress in providing these 0.2 class accuracy meters at interface points with the Distribution Companies.

(iii). The period of study, the accuracy of the meters in position and the several adjustments in computation of a small quantity of EHT losses leave a few things in doubt.

(iv). The Commission observed that the Licensee has not considered 132/33 kV and 132/11 kV transformers in the Simulation Study. Also the assumed system load factor of 90% is far higher than the actual average system load factor.

(v). The Simulation Study is for one day when peak demand occurred viz., 15.3.2000 at 19.30 hrs. Calculation of reasonably reliable energy losses

would require simulating the system for various generation schedules capturing seasonal and other variations.

Clarifications required:

1. **Point 156: 8.7 % loss is given as a result of load flow simulation study. As per 157 (iv), the load factor assumed is 90%. As per 157 (v), the simulation study was done for the peak demand time on 15.3.2000 at 19.30 hrs. Thus 8.7% is the peak losses. As per our undestanding:**
   average loss = peak loss * (load factor) * (load factor) = 8.7 * 0.81 = 7.0%

In fact the load factor of 90% is very high and is more like 70% and this gives:
average loss of 8.7 *0.49 = 4.3%
Please clarify.

2. **What is the status of installation of 0.2% accuracy meter installations which were to be competed by December 2001, as per point number 159 of tariff order?**
3. **What is the progress on the CPRI study commissioned by APERC to arrive at the T&D losses on June 15, 2001 with 2-month study duration?**

iii) High Transmission losses
What is the basis for the 8% loss projected for 2003? Could there be some mistake in accounting the input energy values? Could there be any component wrongly metered or theft in the transmission system?

High transmission losses at the EHT level gives us a feeling that the figure of power input in to the system might itself be wrong. Particularly power input from IPPs needs to be cross checked. The admission of the Licensee in response to the directives of the Commission that the interface meters have not yet been installed in the case of IPPs and only action is initiated strengthens this apprehension.

10.5 For curbing theft, it makes sense to focus on high volume consumers first since their numbers are small. The next step could be improvement of bulk metering or even use of mobile metering sets to detect pockets of theft. Once commercial losses have come down to low levels, all attention can be shifted to reducing technical losses.

10.6 The information provided in ARR show that some of the capital expenditure is made either on the plants that failed to get the Commission's consent like BPL Ramagundam (Rs.385.57 crore capitalised and another Rs.51 crore planned to be spent during the current year)or plants that do not figure in the power procurement plant up to 2007 like Krishnapatnam BBI project (Rs.41 crore planned to be spent during the current year).

10.7 Following its intention to appoint an independent agency to conduct a detailed study to arrive at the losses at every voltage level in the system as expressed in its tariff order for the year 2001-02 the Commission subsequently appointed Bangalore based Central Power Research Institute to conduct the study. We request the Commission to make the report of this study accessible to the public.

10.8 Under the ongoing power sector reform programme T&D system is being developed with financial assistance from different funding agencies and also with own finances of

APTRANSCO under different projects. The funding agencies include the World Bank, OECF/JBIC, DFID, REC, PFC. We would like to know what is the unit cost of laying/setting up a unit of T&D system under different projects financed by different funding agencies.

Power supply improvement & stability/reliablility.

INTERRUPTIONS IN APTRANSCO NETWORK

	1998-99		1999-2000		2000-01	
	Number	Time/hrs	Number	Time/hrs	Number	Time/hrs
220 kV	109	3812	154	5515	162	5289
132 kV	197	5797	272	5240	298	7227

10.9 The above table shows that even after so much investment in fact the number of interruptions had increased. To this one can add grid failures in the state leading to black outs on September11, 2001 and January 23,2002.

10.10 Transmission and distribution network is being set up with financing from different foreign funding organisations, under certain limitations like suppliers from the country of funds origin being selected. Whether such of these components are compatible. (E.g., SLBC with OECF finance?) It is being heard that one of the reasons for the non-utilisation of the capacity of the SSLM LCPH is the incompatibility of the power evacuation system installed there at considerable cost.

10.11 Below par performance is attributed to inflated costs and poor quality of work. Recently it was reported that the power line tower at Narnur village collapsed and this is attributed to poor quality of work. DTR burnouts are also attributed to poor quality earthing. In the Filings of Proposed Tariff it was reported that 462 people met with fatal accidents in 2000-01 in different zones. We would like to know whether there are allegations/complaints regarding the work done and whether any inquiry is instituted, and if so what are the results of these inquiries?

10.12 The Project Appraisal Document of the AP Power Sector Reforms Project mentions (Annex.4) the ERR of Economic Return to be 37.6% and ERR of Financial Return is 33.3% as a result of the investments to be under the project. But the hitherto experience show that there is no improvement in the quality and reliability of power supply. Hence we suggest a thorough review of the project at least to save the unspent money.

CONSULTANCY EXPENDITURE

11.1 11% of the AP Power Sector Reforms Project is being spent on the consultants. Besides this APTRANSCO is supposed to provide support facilities like office space, vehicles, and hotel accommodation to the short term consultants outside this 11% allocation. This aspect gains importance in the wake increasing expenditure on general administration. We would like to know which consultancy organisations or individuals have been employed by the Licensee and under what terms of reference over the last few years under the reform programme, and what are the outputs? What is the value added accrued to the Licensee as result of engaging these consultants. The High Level Committee appointed by the Orissa state government had reported that there the consultants did not bring in any innovative management practices and did not add any thing to the institutional building. The Committee also observed that as importance given to the consultants increased the morale of the equally competent staff of the organisation became demoralised. These consultants did nothing except rehashing the data supplied by the organisation. Besides this the performance of Arthur Anderson at the global level raises many disturbing questions. Whether they helped the licensee to unravel the issues befuddling the organisation or helped it to conceal the uncomfortable truths? Also, the quality of this years ARRs which should have been prepared with the assistance of the consultants at considerable cost to the Licensee leaves much to be desired. We request the Commission to direct the Licensee to make public all the details regarding the consultants engaged by them.

11.2 The delay in carrying the work is also attributed to the consultants as they have to draft the bids and evaluate them. Normally consultants drafts bid documents in such a way that suppliers from the country of funds origin are preferred in the guise of ICB

ARREARS/RECEIVABLES

PAYABLES AND RECEIVABLES of APTRANSCO (Rs in Crore)

Year	Payables due to Purchase of Power	Receivables from Sale of Power	Net Receivables
2001	1753.82	186.78	673.05
2002	1468.17	501.02	1098.64
2003	1494.41	438.25	896.02

PAYABLES AND RECEIVABLES of FOUR DISCOMs (Rs in Crore)

Year	Payables	Receivables
2001	322.50	1752.71
2002	501.02	1626.54
2003	438.26	1800.91

12.1 A comparison of payables and receivables of APTRANSCO with the four DISCOMs makes an interesting exercise. Receivables from sale of power of APTRANSCO are equal to the payables of the four DISCOMs, except for the year 2001. In the case of APTRANSCO payables due to purchase of power is more than its receivables. It may be that this anomalous liability has forced the Licensee to add Rs. 1330 crore as other investments to its liabilities in the Balance Sheet. This entry do not appear in the earlier ARRs.

12.2 Similarly in the case of DISCOMs its receivables are several times higher than its payables. This points to two things: DISCOMs are less than serious in collecting the arrears, and in order to fill this gap they resorting to heavy borrowing. And in order to legitimise it they are asking the Commission to include interest on working capital in the expenditure side of ARR. We request the Commission to look into this, and not to concede their request of including interest on working capital in the ARR.

12.3 The Licensees have again come forward with a request for Regulatory Asset to recover its present losses in the future. It is not logical to burden the future consumers for the costs incurred by the present consumers. Also, why ask for Regulatory Asset while willing to forego the returns due to them?

12.4 In Sec. 3.2.14 the APTRANSCO has requested for contingency provision for the year 2002-03. When the Licensee is asking for pass through for increased costs, is there need for contingency appropriation? Even if it is allowed clear guidelines need to be laid down.

12.5 Subsidy amount from the state government should be paid to the APTRANSCO. If it is channeled through the DISCOMs, it may not reach APTRANSCO which has to pay to the power generators. The Orissa experience has shown that the DISCOMs there did not pay GRIDCO regularly even though they received money from the state government.

INTEREST BURDEN

13.1 In spite of the concerns expressed by us on the burgeoning interest burden there appears to be no let up on this front. Further its is becoming even worse. Compared to the current year during the ensuing year interest burden will be increasing from Rs. 390.41 crore to Rs. 535.09 crore. This increasing burden is because of borrowings towards working capital which is not allowed by the Commission, and to meet revenue deficit. This increasing burden is also because imprudent management of the finances of the Licensee reflected in the payables due to power purchased being several times more than receivables from sale of power as explained earlier. This mounting interest burden is also because of higher interest rates at which loans are being contracted. Even while the interest rates have come down considerably to 8% per annum in the wake of the RBI's decisions the Licensee is contracting loans at higher interest rates. During the ensuing year the Licensee plans to obtain loans for working capital and for revenue deficit at 15 to 16% rate of interest. We request the Commission not to allow this costly expenditure.

13.2 Losses over and above the subsidy is being met with bonds which increases the debt burden of the licensee. During the current year the Licensee appears to be planning to raise more than Rs.800 crore through bonds to meet the revenue gap even after receiving subsidy from the state government. We request the Commission not to permit the Licensee to add to its debt burden any more.

Sales tax payment:

13.3 As a part of its expenditure the Licensee showing payments towards taxes for the first time. According to it the estimates of rents, rates and taxes for FY2003 includes sales tax payment of Rs. 137.55 crore for the period 1998-2001. If it is to be paid why this had not been paid all these years? Otherwise, is it a gift to the state government?

REVENUE ISSUES

14.1 One of the important ways of increasing the revenues of the Licensees is to bring down commercial losses and increase the metered sales. In recognition of this the Commission in its tariff order for the year 2000-01 had directed the Licensees to improve the billing rate to 51% and also specifically mentioned that it should reach at least 48% before March 31, 2001 (Para.2.4.2.2.). But ARRs for the year 2002-03 show that the metered sales even at the end of March 31, 2002 will remain at 43%. The special drives of the Licensees appeared to be confined to the newspaper reports, as there is significant improvement in the metered sales. Under staffing was mentioned as one of the reasons for this less than desirable performance. During the last year's hearings on the tariff the Commission directed the Licensees to recruit necessary numbers. But until now there is no considerable recruitment and advertisements are surfacing only now.

14.2 The APTRANSCO plans to earn Rs. 215 crore through wheeling charges and grid support charges. How this figure is arrived at? What happened to the hearing on wheeling charges? We suggest that wheeling charges need to be retrospective.

14.3 The APTRANSCO plans to mibilise Rs. 450 crore from inter and intra state sales. We are not able to figure out what these intra-state sales are? What would be the role of the Regulator in this intra state sales?

PRAYER TO THE APERC

15.1 We request the Commission

1. To reject the tariff filings as they are violation of the Act and the guidelines.
2. To impose fine on the Licensees for not implementing the directives of the Commission.
3. To provide return on equity to the Licensees
4. To review the fixed costs of IPPs as well as APGENCO.
5. To review the merit order dispatch.
6. To review the capital expenditure of the Licensee.
7. To review the role of the consultants engaged by the Licensee.
8. To review the AP Power Sector Reforms Project.
9. Not to permit hike in bulk supply tariff.
10. To allow the petitioner to be heard in person before APERC takes any decision on this petition.