Summary of the comments and suggestions received on Approach Paper on Terms and Conditions of Tariff Regulations for the tariff period 1.4.2014 to 31.3.2019

(Ref No. 20/2013/CERC/Fin(Vol-I)/Tariff Reg/CERC Date: 25th June'2013)

3.6 Return on Investment (RoI)

The Comments are invited in regard to following issues, namely_

a) ***Whether the Return on Equity approach may be continued or ROCE approach be adopted. If ROCE, approach is adopted what could be the methodology to arrive at return on capital employed? Whether it would be WACC or any other methodology?***

Sr. No.	Name of organization/stakeholders	Comments/ Suggestions
A) Autonomous Bodies (JERCs/SERCs/Other Commissions)		
A.1	Rajasthan Electric Regulatory Commission	No comments
A.2	Madhya Pradesh Electricity Regulatory Commission (MPERC)	It may not be feasible to arrive at a normative interest rate for all companies across the board which can be applied for calculating any return on capital employed.
A.3	Uttar Pradesh Electricity Regulatory Commission	RoE approach should continue. The term 'Return on Equity' in usual practice is utilized for the term 'Return on Capital Employed'. It means that the internal resources in the form of accumulated profit and various Reserves are utilized for financing a project and therefore the capital so employed if is more than 30% of the cost of Project only investment to the extent of 30% is treated as Equity investment and rest as Debt. But in cases the amount of equity plus internal accruals are less than 30% the actual amount as worked out is considered as equity investment and rest as Debt. This practice should be allowed to continue as equity investment and rest as Debt. This practice should be allowed to continue without specifically marking it Return of Equity (RoE) or Return on Capital Employed (RoCE) while determining the tariff.
B) Government Departments		
B.1	Govt of Odisha	(A) In the absence of benchmarking of debt equity mix Rate of Return on Equity (ROE) through evaluation of risk by using Capital Asset Pricing Model (CAPM) to arrive at Market Expected Rate of Return and the Rate of Return on Equity may be considered (B) The uniform Weighted Average Capital Cost (WACC) methodology may be followed, to arrive at return on capital employed, if the ROCE Approach is adopted.
B.2	Rajasthan Discoms Power Procurement	The applicability of ROCE approach has already been discussed earlier and it did not find favour due to frequent variation in

	Centre	interest rates. The situation of inconsistency in interest rates still exists. We are not in favour of ROCE approach.
B.3	Government of Punjab, Dept. of Power	ROE approach should be continued.
B.4	Govt. of Tripura, Dept. of Power	The existing provision of ROE based tariff may be continued.
C) Central Sector (Generators/Transmission Cos./ NLDCs/RLDCs)		
C.1	Tehri Hydro Development Corporation Limited (THDC Ltd.)	It is not prudent to change the approach of allowing ROE on the investment made for both existing as well as under construction projects.
C.2	Narmada Hydroelectric Development Corporation Ltd. (NHDC Ltd.)	The debt market in India is yet to be stabilized. Thus any option of Return on Capital Employed (RoCE) at present may not be warranted as this may discourage, especially the small and mediocre investors due to their lesser credit worthiness in the debt market as compared to major players.
C.3	Damodar Valley Corporation (DVC)	It would not be appropriate to ask the investors to have a different return related to the market, particularly, when the equity is locked for a long period i.e. 25 years in the case of thermal station and 35 years in the case of hydro stations. The general regulation should continue to be the return on equity approach with an option to the generator to adopt return on capital employed approach at the beginning if he so desires.
C.4	National Hydroelectric Power Corporation (NHPC)	It is premature to adopt ROCE approach due to more than 70% weightage of debt component in WACC and the return on equity may be affected. This may be unattractive business model for the developers and may hamper investment
C.5	North Eastern Electric Power Corporation Ltd. (NEEPCO)	The present system of return on equity approach may be continued as the interest rate on the investment in the Indian financial markets are fluctuating. Therefore, till there is stability in interest rate market in India, RoE approach should continue.
C.6	Neyveli Lignite Corporation	Existing ROE approach may be followed since it is difficult to determine the weighted average rate of return for the ROCE approach
C.7	Power Grid	ROE approach should be continued due to fluctuating interest rates
D) State Sector (Generators /Transmission Cos./Distribution Cos./SEBs/SLDCs)		
D.1	Mahdya Pradesh Power Generation Ltd	The present system of return on equity approach may be continued as the interest rate on the investment in the Indian financial markets are fluctuating, till there is stability in interest rate market in India, RoE approach should continue.
D.2	APTRANSCO/ APDISCOMS	ROE approach be continued.
D.3	GRIDCO	In absence of bench marking of debt equity mix, Rate of Return on Equity (RoE) through evaluation of risk by using Capital Asset Pricing Model (CAPM) to arrive at Market Expected Rate of Return and the Rate of Return on Equity may be considered.

		The uniform Weighted Average Capital Cost (WACC) methodology may be followed, to arrive at return on capital employed, if the ROCE Approach is adopted.
D.4	Tripura State Electricity Corporation Ltd.	The Central Commission may adopt either return on equity approach or return on capital employed approach, whichever is in the interest of the consumer. Hence, a review report shall be published with recommendations on the past implemented norms.
D.5	Uttar Pradesh Power Corporation Ltd. (UPPCL)	The return on equity approach may be continued. Return on capital employed cannot be determined on the basis of debt and equity in ROCE approach since the exact DER is not known.
D.6	Gujarat Urja Vikas Nigam Limited	CERC may adopt the ROCE approach instead of ROE approach. Under the ROCE approach the utility/project developers has to devise their financial package, i.e., Debt/Equity ratio, sourcing debt at competitive interest rates, etc. Thus, it is a win-win situation for both the project developer and buyers. Moreover, CERC may also exercise prudent check while determining the Capital Employed in the project. Composite Fixed Return on Capital Employed may be determined taking into consideration Debt: Equity ratio of 70:30, prevailing interest rates and 14% Return on Equity. While arriving at the Capital Employed, CERC may exclude the Current Liabilities (i.e., Credit period provided by the fuel supplier, employee cost, etc.). The Commission may not provide the separate Interest on Working Capital. In case, CERC adopts the ROE approach, the post tax 14% Rate of Return on Equity may be appropriate. Moreover, considering life of project, assured off take of power, payment security arrangement and with cost reflective tariff, it would be appropriate that ROE post tax should not be more than 14%.
D.7	Orissa Power Generation Corporation Ltd.	Benchmarking of ROCE is difficult in current unstable Indian financial markets. Any variation in cost of debt would add to the risk profile of the developer. Therefore, ROCE should not be used.
D.8	Chhattisgarh State Power Distribution Co. Ltd.	The existing method of ROE is in force since last three control period and the same should be continued. Shifting to ROCE will lead to regulatory uncertainty.
D.9	MP Power Management Company Ltd.	The existing method of RoE is in force since last three control period and it is recommended that the return on equity approach may be continued. Return on capital employed cannot be implemented as there should be consistency in regulatory approach in dealing with tariff fixation policies.
D.10	Maharashtra State Power Generation Co. Ltd.	ROCE approach is not preferred.
D.11	Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL)	The current mechanism is appropriate and there is no need to overhaul the whole principle at this stage as it may lead to confusion for change in approach for every control period and more particularly where beneficiaries are not aware whether impact would be positive or negative.

D.12	Kerala State Electricity Board (KSEB)	In order to ensure optimum utilization of the financial resources, ROCE approach with WACC is most appropriate. The ROCE approach may incentivize the developers for optimizing the debt-equity mix and bring down the overall cost of capital.
D.13	Tamil Nadu Generation and Distribution corporation limited (TANGEDCO)	The Commission should change over to ROCE approach thereby leaving the option of debt-equity ratio, ROE and cost of debt serving (Interest) to the promoters. Further, it is advantages to go in for ROCE approach in tariff determination atleast for the period commencing from 2014 onwards. The ROCE should be on net block basis i.e. balance capital to be serviced.
D.14	Assam Power Distribution Company Ltd.	May be adopted with weighted average rate of ROE and interest.
E) Private Sector (Generators/Transcos./Distribution Cos)		
E.1	Jindal Power Limited	The ROCE approach does not pass on the benefits of any reduction in interest costs to the consumer, as only the developer will benefit through optimization of the cost of funds through financial engineering whereas ROE reduces the risk to investors and also benefits consumers in terms of lower fixed costs while utilities restructure their financing to benefit from lower interest regime and lower credit risk spread in future arising of improved risk perception due to sector restructuring. Therefore, we request the Commission to continue with the RoE approach of regulating the returns for hydro generation projects
E.2	Moser Baer Electric Power Ltd	As the debt equity ratio and cost of raising debt and equity varies from project to project depending upon risk involved in the project it could not be justified to calculate ROCE on normative approach. Additionally WACC of the project may vary every year as a part of debt is repaid every year and percentage of equity increases up to 100% of the capital employed. Hence, it is suggested that ROE approach needs to be continued.
E.3	Calcutta Electric Supply Corporation Limited (CESC Ltd.)	The present approach of ROE may be continued instead of introducing ROCE approach. ROCE approach might be preferred when there is enough scope for investors to raise debts at lower than benchmark rate from a well-functioning and matured bond market and there is scope for financial engineering to create value. However in the present situation, the debt market is not matured enough.
E.4	Shree Suryanarayan Power Generation Ltd.	**Cost plus tariff approach:** In this approach, uptil now, the various costs are added and cost of generation (COG) is found and tariff is decided. But there is no provision of 'PLUS' (Profit) factor. This 'PLUS' (profit) factor should be considered to take care of uncertainties, R&M, research and creating capital to install further power plants. This 'PLUS' factor should be considered on total investment basis and should be added to the cost of generation (COG) to decide tariff year wise

		as explained later. This 'PLUS' factor may be between 10 and 15% depending on various technologies.
E.5	Athena Infraprojects Pvt. Ltd.	Existing ROE Approach maybe continued. However, if the Commission decides to adopt ROCE Approach, it is suggested that ROCE should be applicable from the date of award of the project based on capital employed during each period and the ROCE upto COD should be capitalized as IDC. Further, the rate of ROCE should be determined by CERC and should be binding on all the State Regulatory Commissions.
E.6	GMR Kamalanga Energy LTD	ROCE is harmful for projects which are having higher equity component than the norms as WACC would be based on normative D:E ratio. Present approach of Return on Equity with pass through of cost of debt should be continued.
E.7	JINDAL STEEL & POWER Ltd.	ROE approach should continue.
E.8	Jaiprakash Power Ventures Ltd.	The prevailing Return on Equity (RoE) method may be continued as the interest rates in India have not yet been stabilized.
E.9	BSES Yamuna Power Limited	Current RoE approach is well understood and consistent with other Regulations. No tangible advantage is visible in changing from RoE to RoCE approach.
E.10	Association of Power Producers (APP)	• Return on Equity approach should be continued. Benchmarking of ROCE is difficult in current unstable Indian financial markets. Any variation in cost of debt would add to the risk profile of the developer. In addition the borrowing capability of different companies varies and depends on the rating in terms of its financial status. • With RoCE approach wherein NFA is derived after deducting accumulated depreciation from the GFA and debt-equity ratio varying considerably every year with repayment of debt, the Equity IRR of the Project would drop. Therefore, RoE in the existing approach is better suited in case of fluctuating interest rate scenario and ensures an assured return to the investors which shall retain their interest in the growth of the Power Sector. Hence the ROCE approach should not be considered. • Alternatively, both the approaches could be introduced with an option for a developer to choose from. Gradually when debt market matures, ROE approach could be phased out. • ROCE should be calculated from the date of financial closure to COD and accumulated ROCE up to COD should be added in total capital employed. For calculation of ROCE using the method of WACC is acceptable to start with. If ROCE approach is employed, cost of equity should be higher than cost of equity in ROE approach considering higher risk in ROCE approach. The risk premium should be worked out accordingly. The ROCE approach would depend on volatile debt and equity market conditions. Unpredictable market conditions are likely

		to affect the cash flows and could make lenders vary of lending debt to projects.
E.11	Rudraksh Energy	Return on Equity approach be continued, since still there is inconsistency in Interest Rates
E.12	Bhavnagar Energy Company Ltd.	Same ROE should be allowed for equity invested beyond specified percentage (10%) instead of the same to be treated as normative loan and interest on loan allowed.
E.13	Torrent Power	1. Return on Equity approach should be continued. The ROCE method is difficult in current unstable Indian financial markets. Any variation in cost of debt would add to the risk profile of the Project as well as the developer. Further, ROCE approach is not preferable due to the fact that interest rate has not yet stabilised and Indian Banks & Institution are often involved in reset of the rate of interest which further disturbs the Return on Equity as well as Tariff. Therefore, the ROCE approach should not be considered. 2. The benefits of existing ROE approach are as follows: a. It avoids regulatory uncertainty for investment to be made or planned b. Limited estimation required related to Return on Equity. c. No differentiation required between old and new projects d. There are benefits to the beneficiaries on refinancing of the debt 3. Despite the aforesaid strong reservations, if the ROCE approach is to be adopted, the WACC method is preferred method as WACC approach assumes that each project has equal financing priorities. Hence, the WACC method is more appropriate for decision making process amongst the competing projects within the organization. However, the WACC approach is not appropriate for old projects due to the fact that there is a) Difference in Debt: equity ratio b) Different financial leverage position of the company and c) Changed risk taking scenario. Accordingly, the ROCE approach may not be suitable both for old and new projects.
F)	**Other Organizations/Institutions/Banks/Investors**	
F.1	National Institute of Public Finance & Policy (NIPFP)	For regulatory purposes, there are no significant economic differences in the ROE (plus debt as pass through) approach and the ROCE approach. In the ROCE approach the basic elements would remain the same. The Commission would continue to calculate the costs of equity and debt, and calculate the weighted average cost of capital.
F.2	Federation of Indian Chambers of Commerce and Industry (FICCI)	The existing approach of RoE with cost of debt pass through is transparent and fair for both beneficiaries and Developers. It is not appropriate to burden the Developers with risk of variation in debt interest in case of ROCE approach, specifically when the interest rate variation and volatility in debt market is significant. If ROCE approach is adopted, Developers would insist for higher return on

		capital employed to offset the risk of interest rate variation during the life of the project ultimately burdening to beneficiaries & hence consumers. It is also not fair to impose ROCE approach to existing plants/projects when they have decided the viability of project and made investment decision based on ROE approach. Further, ROCE approach will not provide level playing field to all the developers in the power sector as already established big players will be able to leverage their balance sheet for getting attractive debt option viz.-a-viz. new entrant, which will make the latter uncompetitive and discourage their participation.
G) Individual /Public Group/Any others		
G.1	Shri R.B.Sharma	The Return on Capital Employed (ROCE) is not preferred by us.
G.2	Dr.Ashok Kundapur	This issue has to be resolved keeping in mind the healthy growth of the Industry as well. Concern should also be given to industries generating power from alternate energy sources.
G.3	Shri Arun Kumar Dutta	ROCE method should be adopted and return on capital shall be on WACC.

b) ***Comments/suggestions are also invited on the methodology of benchmarking of cost of debt and cost of equity for working out WACC.***

Sr.No.	Name of organization and stakeholder	Comments/ Suggestions
A) Autonomous Bodies (JERCs/SERCs/Other Commissions)		
A.1	Rajasthan Electric Regulatory Commission	No comments
A.2	Uttar Pradesh Electricity Regulatory Commission	Since the Debts (loan) are taken for specific work/project the balance employed for execution of that work is capital employed through equity plus internal accruals.
B) Government Departments		
B.1	Govt of Odisha	Same as mentioned in a) above
B.2	Government of Punjab, Dept. of Power	ROE approach may be continued. ROCE approach may be rejected as there is no consistency in interest rates.
C) Central Sector (Generators/Transmission Cos./ NLDCs/RLDCs)		
C.1	Tehri Hydro Development Corporation Limited (THDC Ltd.)	As the interest rate for different companies may vary, it is better to follow the current approach for working out WACC.
C.2	Narmada Hydroelectric Development	The debt market in India is yet to be stabilized. Thus any option of Return on Capital Employed (RoCE) at present may not be warranted as this may discourage, especially the small and

	Corporation Ltd. (NHDC Ltd.)	mediocre investors due to their lesser credit worthiness in the debt market as compared to major players.
C.3	National Hydroelectric Power Corporation (NHPC)	It is suggested that either the base RoE should be increased to minimum 18% or return on equity blocked in CWIP should be considered. Additional ROE of 1% allowed by CERC vide amendment dated 31.12.2012 in CERC Tariff Regulations, 2009 for pondage & storage type hydro projects. This additional ROE should be increased to at least 2% for all type of hydro projects.
C.4	North Eastern Electric Power Corporation Ltd. (NEEPCO)	Benchmarking of Cost of debt and Cost of Equity may not be a feasible approach and hence no suggestion is given on the methodology.
C.5	National Thermal Power Corporation (NTPC)	Benchmarking of rate of interest with G Sec bonds is not appropriate. As the benchmarking of Cost of Debt for power sector is very complicated, the existing approach of actual interest rate may be continued and no normative rate of interest may be fixed.
C.6	Power Grid	The Commission should continue the existing methodology of weighted average rate of interest calculated on the basis of the actual loan portfolio. Further, for the purpose of estimating the cost of equity, scientific methods like CAPM which is used to theoretically determine the required cost of equity asset may be used.
D) State Sector (Generators /Transmission Cos./Distribution Cos./SEBs/SLDCs)		
D.1	APTRANSCO/ APDISCOM	The cost of debt may be considered as Govt. of India Rate plus 3% as a bench mark and return on equity at Govt. of India Rate plus 5% as a bench mark.
D.2	Rajasthan Discoms Power Procurement Centre	As mentioned in a) above
D.3	Uttar Pradesh Power Corporation Ltd. (UPPCL)	As mentioned in a) above
D.4	Orissa Power Generation Corporation Ltd.	ROCE approach is not preferable at the current volatile financial market in India.
D.5	Chhattisgarh State Power Distribution Co. Ltd.	WACC is not at all recommended .
D.6	MP Power Management Company Ltd.	It is very necessary to prescribe bench mark for cost of debt and cost of equity. With the entry of private players in the generation and transmission of electricity, it is the need of the hour that Central Commission should be more vigilant/cautious and strict as far as these financial factors are concerned. Central Commission may obtain advisory help from RBI to determine these costs.
D.7	Kerala State Electricity Board (KSEB)	The weighted average cost of capital (WACC) with benchmarked cost of debt, cost of equity and debt equity ratio may be adopted for computing ROCE.
D.8	Tamil Nadu Generation and Distribution	This approach does not appear practicable as bench marking would be advantageous to some promoters depending on their

	corporation limited (TANGEDCO)	credit rating, strength of balance sheet etc., while the other promoters will be deprived of the recovery of the expenditure in case their capital cost/MW is more than the benchmark cost. It is preferable to leave the choice to the promoters, instead of benchmarking the cost of debt and equity.
E) Private Sector (Generators/Transcos./Distribution Cos)		
E.1	Moser Baer Electric Power Ltd	Same as mentioned in a) above
E.2	Calcutta Electric Supply Corporation Limited (CESC Ltd.)	In case ROCE is to be adopted when WACC may be determined by independent agency which is more informed about the financial market and should duly consider the diverse profile of various players in power sector and other factors like market scenario, lending rates, foreign exchange issues etc. The debt market for power sector has not stabilized and it is not justifiable to benchmark interest rates given the diverse range of interest rates dependent on power projects / company profile / technology. Linking Cost of Debt with Government Securities Yield might also not to be feasible as there has been no correlation between SBI Base Rate and Government Securities Yield in the past. The financial market is expected to be turbulent for next few years and benchmarking debt-equity ratio and cost of debt will not only be difficult but may be unrealistic as well. Thus it is apprehended that moving to ROCE approach will not prove to be beneficial enough to encourage investment in the sector. Hence, migrating to ROCE approach is not advisable at this point in time.
E.3	Association of Power Producers (APP)	Under the current scenario, RoCE method is not preferable. Hence, the question of working out WACC is irrelevant. At a later stage, when RoCE method becomes desirable, benchmarked cost of equity could be worked with CAPM method for regulated entities and cost of debt could be benchmarked with prevalent bond coupon/yield having equivalent rating as regulated entity or G-SEC yield adjusted for risk premium for rating of regulated entity.
E.4	Torrent Power	1. In the current stage ROCE method is not preferable and hence the question of working out WACC may not be relevant. Further, in later stage when ROCE method becomes desirable benchmarking of cost of equity could be worked with CAPM method. 2. Benchmarking of Cost of Debt can be done when standardization of uniform Interest Rate are applicable across the country and are applicable to both for Local Currency (LC) & Foreign Currency Loan (FC) loan. In that scenario FERV impact would be considered. For benchmarking of cost of Equity of existing Project, ROE approach should be followed. For benchmarking of cost of equity of new Projects, ROCE approach may be followed only when (a) norms of Capital deployment (CE) for the plants are in place and mechanism of requirement of such capital deployment are updated on periodic basis and (b)

		developing benchmark for ROCE are in place on periodic basis.
F) Other Organizations/Institutions/Banks/Investors		
F.1	**National Institute of Public Finance & Policy**	In our view, the Capital Asset Pricing Model should be used for calculating the cost of equity. For the cost of debt, actual costs should be considered.
G) Individual /Public Group/Any others		
G.1	Shri Arun Kumar Dutta	Cost of debt may be pegged at 12% or 1% above SBI PLR. Cost of equity may be pegged at 12%.

c) ***Comments/suggestions are also invited on the feasibility to implement the ROCE approach for individual project/transmission element/unit wise v/s feasibility to implement for the whole Company? What would be the treatment of existing and new projects in the context of ROCE?***

Sr.No.	**Name of organization/ stakeholder**	**Comments/ Suggestions**
B) Autonomous Bodies (JERCs/SERCs/Other Commissions)		
A.1	Rajasthan Electric Regulatory Commission	No comments
A.2	Uttar Pradesh Electricity Regulatory Commission	It will depend upon the no. of projects under taken at a time. If a single project is being constructed, the whole of the sources would be applied on that single project. However, in case of multiple projects undertaken, the quantum of capital employed shall be distributed on each project after adjusting the amount of debt availed for individual project separately.
A.3	Chhattisgarh State Electricity Regulatory Commission (CSERC)	With allocation of plant-wise benefits, company wise ROCE may not serve the purpose. Further with turmoil in financial markets WACC implies higher level of uncertainty, while present ROE method offers definite level of return.
B) Government Departments		
B.1	Govt of Odisha	Same as mentioned in a) above
B.2	Government of Punjab, Dept. of Power	ROE approach may be continued. ROCE approach may be rejected as there is no consistency in interest rates.
C) Central Sector (Generators/Transmission Cos./ NLDCs/RLDCs)		
C.1	Tehri Hydro Development Corporation Limited (THDC Ltd.)	Since we are advocating ROE approach, we submit that the ROCE approach is not feasible.
C.2	Narmada Hydroelectric Development	The debt market in India is yet to be stabilized. Thus any option of Return on Capital Employed (RoCE) at present may not be warranted as this may discourage, especially the small and

	Corporation Ltd. (NHDC Ltd.)	mediocre investors due to their lesser credit worthiness in the debt market as compared to major players.
C.3	National Hydroelectric Power Corporation (NHPC)	Multiple ROCEs deprive the tariff of uniformity and benchmarking
C.4	North Eastern Electric Power Corporation Ltd. (NEEPCO)	Implementation of ROCE approach is not feasible and, therefore, existing approach of ROE should continue due to following reasons: ➢ Interest rate has not been stabilized. ➢ Adopting NFA approach in ROCE for the existing projects will result is less return. ➢ For existing projects, tariff has already taken care of substantial repayment of loan. ➢ In RoE approach, it is simple to compute the rate base by applying the debt equity mix to approved capital cost of project ➢ The power projects, particularly located in N.E. Region, are associated to several uncertainties/problems and thus linked with more risk.
C.5	National Thermal Power Corporation (NTPC)	Existing approach of ROE should continue due to unstable market scenario.
C.6	Neyveli Lignite Corporation	Existing ROE approach may be followed.
C.7	Power Grid	It may not be feasible to implement the ROCE approach for the company as a whole on account of the following: • By virtue of age of assets, additional capitalisation in schemes, varying debt, equity ratio of projects, it may not be possible to club all such schemes into a single tariff petition under the RoCE approach. • On account of different time of acquiring the loans, it would be difficult to fit everything under the WACC approach at this moment. • Determination of individual ROCE rates for the individual projects/transmission elements would be a very difficult
D)State Sector (Generators /Transmission Cos./Distribution Cos./SEBs/SLDCs)		
D.1	Rajasthan Discoms Power Procurement Centre	As mentioned in a) above
D.2	Uttar Pradesh Power Corporation Ltd. (UPPCL)	In ROCE approach **one does not know the equity component** therefore income tax cannot be calculated in a transparent manner. Hence there is no question of implementing ROCE approach
D.3	Chhattisgarh State Power Distribution Co. Ltd.	The ROCE approach should not be implemented to avoid regulatory uncertainty.
D.4	MP Power Management Company Ltd.	The ROCE approach should not be implemented to avoid the uncertainty and inconsistency in the regulatory approach in tariff fixing.
D.5	Maharashtra State Power	ROCE approach is not preferred

	Generation Co. Ltd.	
D.6	Kerala State Electricity Board (KSEB)	ROCE approach is preferred
D.7	Tamil Nadu Generation and Distribution corporation limited (TANGEDCO)	It is preferable to switch over to ROCE approach in respect of new and old projects uniformly treating as one company instead of deciding on each individual projects / transmission elements / unit wise. In case of new projects, cost of capital can be determined taking into account the market condition of both equity and debt finance. In respect of existing project, this can be adopted on the net block after deducting the cumulative depreciation till March 31, 2014.
E) Private Sector (Generators/Transcos./Distribution Cos)		
E.1	Moser Baer Electric Power Ltd	As thermal need to sell their power by competitive bidding they will be impacted by either approach but for hydro has to sell 60% of its power through PPA. It will become difficult to raise debts as normative ROCE approach will combine both components of Capex together.
E.2	Association of Power Producers (APP)	• RoCE method is not preferable. RoCE approach if and when implemented, has to be segment specific i.e. generation and transmission. Project specific RoCE approach would lead to discrimination and also would create negative sentiments which would be deterrent for growth of the sector as a whole. The old projects could continue ROE approach. • The key issues to be taken note if ROCE to be adopted are ➢ Debt & Equity market to be stabilised and the following need be streamlined before implementation of ROCE ➢ Cost of Debt ➢ Foreign exchange rate stabilisation ➢ Debt/Equity ratio ➢ Depreciation rate to be revised at least to the extent under Companies act as low depreciation creates difficulties for procuring debt.
E.3	Torrent Power	1. Project specific ROCE approach would lead to discrimination and would create negative sentiments and the same will act as deterrent for growth of the sector as a whole. Therefore, the existing projects should continue under ROE approach. 2. If ROCE is adopted, then the following issues should be noted: ➢ Debt &Equity market need to be stabilised and the following are to be streamlined before implementation of ROCE a. Cost of Debt b. Foreign Exchange rate stabilisation c. D/E ratio ➢ Depreciation rate should be revised at least to the extent of the rate stated under Companies Act as low depreciation creates difficulties for procuring debt.

E.4	Calcutta Electric Supply Corporation Limited (CESC Ltd.)	The present ROE approach may be continued as this approach is time tested and provides certainty to investors in present market conditions which is much needed to attract and sustain investments into power sector.
F) Other Organizations/Institutions/Banks/Investors		
F.1	**National Institute of Public Finance & Policy**	Both these approaches (ROE or ROCE) should be applied on the relevant asset base in the company. For example, if a company is in multiple businesses, only the relevant units (eg. Electricity generation or transmission) should be considered while calculating the Return on Investment. It is feasible to do so, because the company would be expected to report separately for the relevant project.
G) Individual /Public Group/Any others		
G.1	Arun Kumar Dutta	ROC shall be for individual project, not for whole company. The methodology of existing and new projects shall be the based on equity/RRB.

d) ***On departing from existing ROE approach, can significant impact on investment be expected? Stakeholder may comment on expected benefit of switchover to ROCE and demerits of departing from existing ROE approach?***

Sr. No.	**Name of organization/ stakeholder**	**Comments/ Suggestions**
A) Autonomous Bodies (JERCs/SERCs/Other Commissions)		
A.1	Rajasthan Electric Regulatory Commission	No comments
B) Government Departments		
B.1	Govt of Odisha	Same as mentioned in a) above
B.2	Government of Punjab, Dept. of Power	ROE approach may be continued. ROCE approach may be rejected as there is no consistency in interest rates.
C)Central Sector (Generators/Transmission Cos./ NLDCs/RLDCs)		
C.1	Tehri Hydro Development Corporation Limited (THDC Ltd.)	Departing from existing ROE approach, will have a significant impact on investment since investors may not be able to see creation of reserves for future capital addition.
C.2	Narmada Hydroelectric Development Corporation Ltd. (NHDC Ltd.)	(Same as (a) above)
C.3	North Eastern Electric Power Corporation Ltd. (NEEPCO)	Significant impact on investment is likely to occur on switching over from ROE to ROCE approach. While on the positive side, ROCE is based on NFA approach & so dispute of Debt Equity Ratio can be avoided, incentivize the investors by arranging low

		cost debt, protecting the power utilities with low equity base etc, the said approach has the following demerits: ➢ Due to unstable market scenario, the developers are subjected to more risk. ➢ The hydro projects are subjected to various risks/uncertainties, many of which are beyond control of the Company. Shifting to ROCE approach will discourage the investors for investing in hydro sector. ➢ Due to uncertainty in return, small investors will be discouraged to invest in power sector. ➢ Difficult to fix rate for ROCE as different instruments of raising fund is available. ➢ ROCE on NFA approach will yield low return to its investors in latter part of Plant's life.
C.4	Power Grid	Significant impact on the investments in the power sector can be expected in case of departure from the ROE approach on account of the following: • Under the existing ROE approach, the equity invested into the project continues to fetch ROE till the assets remain operational and continue to serve the consumers. • Under the ROCE approach the capital invested into the projects continues to diminish as the eligible asset base for allowing the returns is the NFA. • Any shortfall in generation of such internal resources would ultimately mean reduction in the investing capabilities of the company.
D)State Sector (Generators /Transmission Cos./Distribution Cos./SEBs/SLDCs)		
D.1	Rajasthan Discoms Power Procurement Centre	As mentioned in a) above
D.2	Uttar Pradesh Power Corporation Ltd. (UPPCL)	No. Demerit of departing from ROE approach. It will bring about Regulatory Uncertainty since the developer will not be able to assess his profit in the absence of the knowledge of DER and base rate of return on equity.
D.3	Chhattisgarh State Power Distribution Co. Ltd.	ROCE approach will result into higher price for power which beneficiaries will have to recover from retail consumers. This will result in tariff hike.
D.4	MP Power Management Company Ltd.	The ROCE approach should not be implemented to avoid the uncertainty and inconsistency in the regulatory approach in tariff fixing.
D.5	Maharashtra State Power Generation Co. Ltd.	The ROCE approach is not preferred.
D.6	Kerala State Electricity Board (KSEB)	ROCE approach is preferred
D.7	Tamil Nadu Generation and Distribution	By adopting ROCE approach, the promoter has the choice of determining its equity contribution and its capacity to mobilize

	corporation limited (TANGEDCO)	borrowed funds from the market and the best interest rate based on his credit rating and goodwill. The above factors will lead Promoter to employ the limited equity in more than one project than blocking up equity in a single project, where the debt equity ratio is specified. This will enable the promoter to give competitive rates when compared to the tariff determined based on Regulations. This is evident from the rate discovered through competitive bidding and the tariff determined by the Commission, based on ROE approach plus reimbursement of other expenses (cost plus approach).
E) Private Sector (Generators/Transcos./Distribution Cos)		
E.1	Moser Baer Electric Power Ltd	Same as above in a)
E.2	Association of Power Producers (APP)	ROCE approach could help in generating additional source of funding for power projects. With the ROE approach, power sector remained dependent on conventional source of funding (banks, FIs etc.) as it has no incentive for exploring other source of funding (due to complete pass through mechanism).Moving from ROE to ROCE for existing projects will require regulatory revisit.
E.3	Torrent Power	If such fundamental changes are made to the existing ROE approach, then there would be significant impact on investment in Power Sector under the current uncertain financial environment,
E.4	Calcutta Electric Supply Corporation Limited (CESC Ltd.)	In this light, the present approach of computing ROE on GFA may kindly be continued to ensure creation of adequate reserves for future capacity additions.
F) Other Organizations/Institutions/Banks/Investors		
F.1	**National Institute of Public Finance & Policy**	We don't see how a shift in approach would create a significant impact in investments, as long as the methods for calculating the building blocks, i.e. costs of equity and debt, remain the same.
G) Individual /Public Group/Any others		
G.1	Shri Arun Kumar Dutta	ROCE covers all expects of the projects and will be higher than ROE.

e) Suggestion and benefits on continuation of existing approach of Return on Equity if

Sr.No.	Name of organization/ stakeholder	Comments/ Suggestions
A) Autonomous Bodies (JERCs/SERCs/Other Commissions)		
A.1	Rajasthan Electric Regulatory Commission	No comments
A.2	Uttar Pradesh Electricity Regulatory Commission	RoE approach should continue.
B) Government Departments		

B.1	Govt of Odisha	Same as mentioned in a) above
B.2	Government of Punjab, Dept. of Power	• There will not be any Regulatory uncertainty • The element of profit is transparently known in terms of pretax return on equity in RoE approach. • IT calculation/grossing up will be transparent • The developer will know clearly that his investment has been fully paid by way of debt through depreciation, by way of equity through depreciation against 20% of the capital cost and 10% of salvage value.
C)Central Sector (Generators/Transmission Cos./ NLDCs/RLDCs)		
C.1	Tehri Hydro Development Corporation Limited (THDC Ltd.)	Existing ROE approach may be continued.
C.2	Narmada Hydroelectric Development Corporation Ltd. (NHDC Ltd.)	The debt market in India is yet to be stabilized. Thus any option of Return on Capital Employed (RoCE) at present may not be warranted as this may discourage, especially the small and mediocre investors due to their lesser credit worthiness in the debt market as compared to major players.
C.3	National Hydroelectric Power Corporation (NHPC)	We are of the strong opinion that the existing ROE approach should be continued
C.4	North Eastern Electric Power Corporation Ltd. (NEEPCO)	ROE approach is simple, more straightforward and time tested and is better suited in present volatile/fluctuating debt market. It is investors friendly as there is more clarity/certainty on return throughout the useful life of the Plant.
D)State Sector (Generators /Transmission Cos./Distribution Cos./SEBs/SLDCs)		
D.1	Rajasthan Discoms Power Procurement Centre	i) There will not be any Regulatory Uncertainty due to frequent change in the philosophy from ROE approach to ROCE approach. ii) The element of profit is transparently known in terms of pre tax return on equity in ROE approach. iii) IT calculation/grossing up will be transparent. iv) The developer will know clearly that his investment has been fully paid by way of debt through depreciation, by way of equity through depreciation against 20% of the capital cost and 10% of salvage value.
D.2	Uttar Pradesh Power Corporation Ltd. (UPPCL)	Benefits of ROE method. (i) There will not be any Regulatory Uncertainty due to frequent change in the philosophy from ROE approach to ROCE approach. (ii) The element of profit is transparently known in terms of pre tax return on equity in ROE approach. (iii) IT calculation/grossing up will be transparent. (iv) The developer will know clearly that his investment has been fully paid by way of debt through depreciation, by way of equity through depreciation against 20% of the

		capital cost and 10% of salvage value.
D.3	Orissa Power Generation Corporation Ltd.	ROE approach is conducive as it provides stability to the earnings of developers and helps them plan their financials for a longer period. This ultimately attracts investment in the sector.
D.4	Chhattisgarh State Power Distribution Co. Ltd.	The existing method of ROE should be continued due to following advantages: • This will avoid burdening on DISCOMs • The element of profit is transparently known in terms of pre tax return on equity. • The developer will have risk free assured return on its investments. Further, in ROCE approach, if interest cost is more than the return then the same will have to be borne by the developer.
D.5	MP Power Management Company Ltd.	The existing method of ROE shall be continued. This is a time tested method and have following advantages (i) There will not be any Regulatory Uncertainty due to frequent change in the philosophy from ROE approach to ROCE approach. (ii) The element of profit is transparently known in terms of pre tax return on equity in ROE approach. (iii) IT calculation/grossing up will be transparent. (iv) The developer will know clearly that his investment has been fully paid by way of debt through depreciation, by way of equity through depreciation against 20% of the capital cost and 10% of salvage value.
D.6	Tamil Nadu Generation and Distribution corporation limited (TANGEDCO)	The existing approach is not advantageous to the end consumers when compared to ROCE approach.
E) Private Sector (Generators/Transcos./Distribution Cos)		
E.1	Athena Infraprojects Private Ltd.	It is suggested that existing ROE approach may be continued. However, if Commission decides to adopt ROCE approach, it is suggested that ROCE should be applicable from the date of award of the project based on capital employed during each period and the ROCE upto COD should be capitalized as IDC. Further, the rate of ROCE should be determined by CERC and should be binding on all the State Regulatory Commissions.
E.2	Moser Baer Electric Power Ltd	Same as mentioned in a) above
E.3	Shree Suryanarayan Power Generation Ltd.	Cost plus tariff approach should be adopted. 'PLUS' (profit) factor should be considered in the existing approach to take care of uncertainties, renovation and modernization, research and creating capital to install further power plants. This 'PLUS' factor should be considered on total investment basis and should be added to the cost of generation (COG) to decide tariff year wise as explained later. This 'PLUS' factor may be between 10 and 15% depending on various technologies.
E.4	Association of Power	ROE approach is conducive for the developing market till sector is

	Producers (APP)	reasonably developed and accepted by all stakeholders of Power Sector including Lenders, Procurers, and Sellers. Investment will flow in power sector with ROE approach since it will make projects more bankable.
E.5	Torrent Power	1. The current approach of ROE is conducive for developing market since all stakeholders of Power Sector including Project Developers, Lenders, Fuel Suppliers and the Beneficiaries are comfortable with the same. It is expected that as in the past, investment will flow to the power sector with ROE approach and this methodology makes projects more bankable. 2. In addition to above, ROE is better suited in fluctuating interest rate regime because the ROE is insulated from Interest rate changes.
F)	**Other Organizations/Institutions/Banks/Investors**	
F.1	**National Institute of Public Finance & Policy**	No comments.
F.2	Federation of Indian Chambers of Commerce and Industry (FICCI)	ROE approach is a simplified approach and accepted by all stakeholders of Power Sector including Lenders, Procurers, and Sellers.
G)	**Individual /Public Group/Any others**	
G.1	Shri Arun Kumar Dutta	Return on equity may be discontinued.