BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

IN THE MATTER OF THE APPLICATION OF ROCKY MOUNTAIN POWER FOR AUTHORITY TO INCREASE ITS RETAIL ELECTRIC UTILITY SERVICE RATES IN UTAH AND FOR APPROVAL OF ITS PROPOSED ELECTRIC SERVICE SCHEDULES AND ELECTRIC SERVICE REGULATIONS	))))))))	**DOCKET NO. 13-035-184** **DPU Exhibit 10.0 DIR-COS**

COST OF SERVICE

DIRECT TESTIMONY OF LEE SMITH

ON BEHALF OF

THE UTAH DIVISION OF PUBLIC UTILITIES

May 22, 2014

I. INTRODUCTION

Q. What is your name and business address?

A. My name is Lee Smith, and I work for La Capra Associates, One Washington Mall, Boston, MA 02108.

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of the Utah Division of Public Utilities (Division).

Q. Please describe your background and experience.

A. I am an Independent Consultant, working with La Capra Associates. I worked for this energy planning and regulatory economics firm for 28 years, and have been consulting independently for 2 years. I have prepared testimony on gas and electric rates, rate adjustors, cost allocation and other issues regarding more than 40 utilities in 21states and Nova Scotia, and before the Federal Energy Regulatory Commission. Prior to my employment at La Capra Associates, I was Director of Rates and Research, in charge of gas, electric, and water rates, at the Massachusetts Department of Public Utilities. Prior to that period, I taught economics at the college level. My resume is attached as DPU Exhibit 10.1 DIR-COS.

Q. Please describe your educational background.

A. I have a bachelor's degree with honors in International Relations and Economics from Brown University. I have completed all requirements except the dissertation for a Ph.D. in economics from Tufts University.

Q. What is the purpose of your testimony?

A. I have been retained by the Division to review and analyze the cost allocation and rate design presented by Rocky Mountain Power ("RMP" or "the Company"). I have developed a cost allocation study which reflects the Division's revenue requirements as a basis for determining class revenue requirements. The Division's rate objectives and class revenue requirements then become the basis for rate designs, which will be presented by Division witnesses Dr. Artie Powell and Mr. Stan Faryniarz.

Q. Please summarize your testimony.

A. I have reviewed and analyzed all aspects of the Company's allocation of costs to customer classes and proposed class rates. I address a number of other issues related to the Company's allocated cost of service study. I have reflected the Division's revenue requirement adjustments in the cost of service model and reflected my recommended allocation changes in that model.

I have found that:

- There are allocations in the JAM study that should be revisited, but this proceeding is not the correct venue;

- There are a number of problems in the intrastate allocated cost of service study; and
- Correcting the problems that I have identified results in changing class deficiencies, although the changes are relatively minor.

Q. There appear to be a number of issues with regard to the estimation of class costs. Have you presented tabular information regarding these various issues?

A. Yes. I present the results of the cost of service modifications that I recommend based on the Division's revenue requirement, and based on an alternative revenue requirement that is higher than the Division's but lower than the Company's. These results are then used by Mr. Faryniarz in his testimony on rate spread and rate design.

Q. What have you reviewed with regard to RMP's allocation of costs?

A. I have compared the allocations between states and the allocations of the same cost categories within Utah classes. I have also critically reviewed the Utah allocation methodologies. There are a number of aspects of the Company's intrastate allocation which warrant discussion and in some cases correction.

II. INTERSTATE OR JAM ALLOCATIONS

Q. Have you reviewed the interstate allocation process?

A. Yes. I have not identified significant problems, but there are a number of aspects of the Company's intrastate allocation which warrant discussion.

Q. Has the Company made changes to its model that resolve some issues that were raised in the last GRC, regarding consistency between the JURISDICTIONAL ALLOCATION MODEL ("JAM") and its COS model?

A. Yes. It has modified the following, to reflect the DPU's 2012 recommendations:

- The relationship between cash working capital, interest expense, and income taxes;
- How state income taxes are determined; and
- The use of the income to revenue multiplier.

Q. Are the allocators that RMP has used in its Utah class cost of service study the same as those used in its JAM?

A. Yes.

Q. Why should most JAM and Utah allocators be similar if not identical?

A. The JAM allocators for generation and transmission determine the Utah jurisdiction's generation and transmission costs. However, if conditions have changed such that some JAM allocators no longer reflect cost causation at the multistate level they should be modified. I understand that this would require agreement among all of the states, and that this may be difficult to achieve.

Q. Do you believe all of the JAM allocations correctly reflect cost causation?

A. The answer is neither a simple yes or no. The current JAM allocations determine how PacifiCorp, RMP's parent, allocates or assigns costs to RMP. However, the JAM allocators do not always reflect the underlying cost causation. In other words, the interstate allocation is not always a good representation of cost incurrence. However, they result directly in the creation of costs which RMP customers must pay.

Q. What JAM allocations do you think do not reflect cost causation accurately?

A. The allocation of generation and transmission costs and the allocation of some Administrative and General ("A&G") costs. The JAM allocation of production and transmission plant and non-fuel expenses is based on treating 75 percent as demand-related and 25 as percent energy-related. The demand-related portion is then allocated using 12-monthly peaks coincident with the Company's total system firm peak

The 75/25 classification method which has been used may have been reasonable based on the mix of generation plant in the generation portfolio that existed in 1984 when the method was introduced. Since that time there have been big changes in the generation portfolio. If the portfolio at that time had reflected renewable mandates and the amount of renewable energy that now exists, the treatment of generation and transmission would probably have been different, as wind generation is built in order to supply cheap energy and/or to meet state requirements for renewable power. Wind gets little capacity credit, as it is not guaranteed to be available at the times capacity is needed to meet load and reserve requirements. Treating 75% of its capital costs as demand related is not reasonable. Since there is a higher portion of wind in the portfolio than when the method

was adopted, I would expect a reexamination of cost causation would change the existing classification and allocation among the states. Different state Renewable Portfolio Standards should also be considered in this allocation.

Another problematic allocation is that of most A&G costs. I believe that most A&G accounts are most closely related to labor costs, or to expenses, which are usually close to labor costs. A good example is Administrative and Supervisory labor – the more labor serving a given state, the more supervision required. When asked in DPU 17.9 how functionalizing (and allocating) on a plant allocator reflected cost causation the Company responded that "[m]ost A&G expenses are functionalized on the "PTD" functionalization factor. A&G expenses that are functionalized on the "LABOR" functionalization factor include employee pensions & benefits, duplicate charges, and miscellaneous general expenses which are treated as labor-related costs." The costs that are currently allocated in the COS on plant include all A&G accounts except for the three listed in the responses above, including the very large account for Administrative and Supervisory labor, described above. In Docket No. 97-035-01 the Company proposed switching to a plant allocator for most A&G accounts. The proposal was rejected because allocating within Utah on this basis would be inconsistent with the JAM allocation.

Q. Are you recommending in this case that the allocation of generation and transmission and of A&G expense be changed in this case?

A. No. I am recommending that these allocations should be reexamined and modified at the interstate level, which will make it possible to modify the allocation of A&G expenses at

the intrastate level in the next rate case. I understand that the existing agreement will expire at the end of 2015 leaving adequate time to review existing allocators, especially these.

III. INTRASTATE ALLOCATIONS

Q. Are there any problems with RMP's allocation of distribution plant in the Utah cost of service study?

A. Yes, I believe there are. There are problems with the allocation of substations, of secondary distribution lines, and of service plant.

A. Allocation of Substations

Q. Please discuss how RMP allocates substations and primary distribution lines.

A. Substations and primary lines are allocated on monthly Coincident Peaks ("CPs"). The CPs of all customer classes that take service at distribution level are weighted. The monthly weights are based on the percent of total substations that peak in each month. The resulting weight for July, for instance, is 36.73%, while the January weight is 3.06%. This method has been approved in past cases.

Distribution CPs are weighted based on the concept that substations are sized to meet relatively local peaks, and these peaks are not all coincident with the system peak. While the system as a whole peaks in July, there are geographic areas that peak in different months, and the Company must size substations to meet the peaks in these months. As a result, a single CP alone is not the only cost driver for distribution substations. Some of

the investment in substations is driven by the load in the month in which the substation peaks.

While it is reasonable to weight the CPs rather than using a single CP, the weighting should reflect the cost of substations constructed to meet different peaks. Weighting by the number of substations that peak in a month does not necessarily reflect the cost of substations built to meet peaks in different months. The number of substations does not reflect the relative cost or the peak load served by those substations

Q. Do you recommend a modification to the substation allocator, F20?

A. Yes. It would be most accurate if monthly peak loads were weighted by the cost of substations peaking in the month. However, determining a more accurate weighting by the net book value of substations would be very data intensive. I have chosen as an alternative to weight months by the sum of the peak loads on those substations that peak in the month.

Q. Please contrast this to the Company's weighting method.

A. The peak loads of the substations that peak in July are 43.03% of the peaks of all substations. In January, 3.06% of substations peaked – but the load of these substations equaled 1.07% of total peak loads. The number of substations peaking in this month overstated the size of these substations relative to the whole. These are not large differences, but for classes with significant load in July or January they will make a difference – and will improve accuracy of the cost allocation process.

Q. Are primary lines always allocated in the same manner as substations?

A. No, they are not. Primary lines are sized to meet the peak on the lines, which is not exactly the same as the coincident peak load on the system. In situations where particular primary lines tend to serve one class of customer, the maximum class load whenever it occurs (which I and most others label the Noncoincident Peak (NCP) load) determines the capacity needed on the line. For this reason, primary lines are frequently allocated on NCP loads at the primary service level.

The major determinant of primary line costs will be Coincident Peak loads when most classes tend to peak at the same time, or when most primary lines serve a mix of customer classes that matches the system mix.

Q. Did you consider allocating primary lines on your definition of Noncoincident Peak load, and what was your conclusion?

A. Yes. I reviewed RMP's NCP data. There was an immediate problem, however, in that it would have allocated primary lines to street lighting as if some lines had been sized to meet the nighttime street lighting plant. This is generally not the case, as streetlights are spread geographically throughout the territory. I also found that except for street lighting the relationship between NCPs and CPs in RMP territory was very close. If coincident peaks were substituted for the street lighting classes, the resulting allocator would be extremely close to the substation allocator. It appears that using the same allocator for

substations and primary plant is appropriate in RMP's territory because there is very close correspondence between class noncoincident peaks and class coincident peaks.

B. Allocation of service plant

Service plant is allocated to customer classes (the classes that RMP treats as secondary classes) as if each customer requires an individual service, the cost of which varies by class. It is clear many residential customers – those who live in multifamily housing - do not have individual services. It is likely that the Company's approach overallocates service plant to residential customers as a class. The cost of service study shows the net book value of service plant to be $172 million and the service plant related revenue requirement to be $30 million, so this is a significant cost category.

Q. Has the allocation of service plant been an issue in prior cases, and how has RMP responded to this issue?

A. Yes, it has been an issue in a number of prior cases. The OCS attempted to "correct" this in Docket No. 10-035-124, and in Docket No. 11-035-200 both the OCS and the Division recommended that allocation of service plant be modified to reflect the impact of multifamily housing.

Prior to this case the Company did some research on multifamily housing, which I will refer to below. However, it has not followed through with more complete data and a more accurate allocation.

Q. How have parties attempted to make such a modification in past rate cases?

A. This effort has generally focused on estimating how many residential customers live in multifamily housing, and reducing the allocation to the residential class based on services that are not needed because of multifamily housing

Q. What has been the Company's reaction to attempts to modify the service plant allocation?

A. The Company has described the complications in response to OCS 11.28. It notes that the assumption of one service drop per multi-family housing complex is not correct, that a service drop connecting more than one customer would cost more than a standard residential service, and in some cases other customer types also share service drops.

Q. Do we have data in this proceeding that can be used to estimate a more accurate service plant allocator?

A. Yes. I will describe this data below.

1) The response to OCS 11.28-2 provided the results the Company gathered by attempting to identify the types of buildings serving Classes 1, 6, and 23. There are 153,280 residential customers identified as located in multifamily units. These will range from two family units to apartment buildings with more than fifty customers. Table 1 shows the percentage of customers in each of these classes that have been identified as being in multiunit buildings.

2) The response to OCS 11.23 provides detailed data on transformers. I have analyzed this information to review numbers of customers in Schedules 1, 6, and 23 who are served by transformers which serve more than one customer. This data does not directly identify all customers who may be sharing services, since many transformers will serve more than one customer, but customers who share services will also share transformers.

3) Another complication is that services for multiunit buildings may be more expensive than the typical service for single units. Data on the cost of services for different classes is contained in Attachment OCS 11.21. The data shows that the cost of larger services does not increase proportionally with the size of the service

Table 1

Percentage of customers in multiunit buildings[1]

	Rate Class			
Dwelling Code Description	Residential	Schedule 6	Schedule 23	Total
Apartment/Condo Complex	150,399	1	18	150,418
Apartment/Condo Master Metered	1,373	5	18	1,396
Apartment/Condo Seasonal Use	1,504	-	-	1,504
Multiple units (non-residential only)	-	1,870	18,875	20,745
Residential Common Areas	4	140	8,687	8,831
Total Multi-Unit Customers	153,280	2,016	27,598	182,894
% of Rate Class Total	21.9%	13.7%	34.9%	23.1%

Q. How have you used this data to estimate a service plant allocator?

A. First, I estimated the number of customers in classes 1, 23, and 6 who were in multifamily or multicommercial units by applying the ratio from the table above to cost

[1] Attachment to RMP's Response to OCS Data Request 11.28-2.

of service data on the number of customers. This was necessary because the multiunit building data only covered 95% of total customers. Second I estimated the average number of customers who were sharing services in each class. The assumptions were as follows: residential, 8; Schedule 23, 4; Schedule 6, 2. These estimates are derived from analysis of shared transformers. Third, I used this data to calculate the cost of the services for the multiunit customers. Finally, I calculated total service costs for the class as a basis for a new services allocator. The table below shows the modified allocator compared to the Company allocator. The full calculation is contained in Exhibit DIR-COS 8.2.

Table 2

Modified Service Allocator

	FACTOR 70									
	Res Sch 1	Gen Large Dist. Sch 6	Gen. +1 MW Sch 8	St. Lightin g Sch. 7,11,12	Gen. Trans. Sch 9	Irr. Sch 10	TS Sch 15	OL Sch 15	Gen. Small Dist. Sch 23	Total
RMP Original	79.96 %	7.67 %	0.69 %	0.00%	0.00 %	0.00 %	0.29 %	0.06 %	11.32 %	100 %
LCA Recommended	79.56 %	8.74 %	0.83 %	0.00%	0.00 %	0.00 %	0.35 %	0.07 %	10.45 %	100 %

Q. What do you recommend regarding the allocation of service plant?

A. I recommend using this alternative allocator set out above in Table 2. While it utilizes a number of assumptions, I believe that they are fairly conservative assumptions, and that even better data is likely to establish that the allocation to the residential class in particular should be less. I think it is appropriate to account for the impact of shared

services, even if it requires using the less than perfect data upon which I have had to rely I strongly recommend that the Company provide more complete data and analysis of this issue in its next filing.

C. Designation of Primary/Secondary Distribution Plant and Customers

Q. Do the questions of whether customers are secondary or primary and how much of distribution plant is primary have much impact on cost allocation?

A. Yes, it has a large impact. Primary plant serves all customers (except possibly for some large sub-transmission level customers). It must be sized to meet the maximum coincident load on it and is therefore allocated to all distribution customers. Secondary plant serves only customers who take service at secondary voltage level. Almost all residential and small general service customers take service at secondary voltage. Larger general service customers often take service at primary voltage, and therefore should not be allocated any secondary plant. RMP allocates secondary plant only to residential customers and Schedule 23, and also assigns an amount of secondary distribution plant to the street lighting classes.

Q. Do you think that secondary plant should be allocated to other classes?

A. Yes. Some Schedule 6 customers are served at secondary voltage and may use secondary distribution plant. For instance, in a strip mall, when transformers reduce power to the secondary level, either there will be services directly to the secondary meter or there may be secondary lines that bring power to several meters. The record does not support the

non-allocation of secondary plant to Schedule 6. The Company justifies not allocating any secondary plant by saying "Schedule 6 customers do not use secondary lines and are served from a single service drop." (DPU 49.5 d.) However, the data provided in response to OCS 11.28 clearly indicates that 13.7% of Schedule 6 customers are in shared or connected facilities. Thus a single transformer will step d own power to secondary. There may be a single service to the building, but the power must then be delivered to the two or more customers by means of secondary conductor. While in some configurations this conductor may be internal and owned by the customer, in others there will be secondary lines to different customers sharing a building. Moreover, the failure to treat any Schedule 6 as secondary is contradictory to the principle espoused in the response to DPU 17.1 part c: "Allocations of secondary lines only occur where transformers are shared." Transformer data clearly indicates that many Schedule 6 customers share transformers, yet secondary plant has not been allocated to them. Additional evidence that some Schedule 6 customers are secondary is that the data that adjusts from sales data to input data labels Schedule 6 not as "primary" but as "combined", and the line losses applied are higher than if the class were entirely primary.

Q. How do you recommend allocating some secondary plant to Schedule 6?

A. It is possible that some multi-unit customers may not be utilizing RMP's secondary plant because the relevant plant is within customer premises and owned by customers. In the interest of being conservation, I am assuming that of the 13.7% of Schedule 6 customers that are in some type of multi-units, half of these require the use of some secondary plant

to connect to common services. Reflecting some use of secondary plant by Schedule 6 in the cost allocation will result in allocating more costs to Schedule 6 and less to Schedules 1 and 23. The comparison of the Company's secondary distribution allocator and mine is shown below

Table 3

	FACTOR 22			
	Res Sch 1	Gen Large Dist. Sch 6	Gen. Small Dist. Sch 23	Total
RMP Original	88.86%	0.00%	11.14%	100%
LCA Recommended	86.70%	2.43%	10.87%	100%

Q. How does Rocky Mountain Power determine how much of its distribution lines are primary and how much are secondary?

A. According to the response to DPU 17.1 part d "Distribution split percentages for FERC Accounts 364-367 are based on data extracted from Company mainframe computer records and represent the five-year average value of materials issued from Company warehouses for the state of Utah." The average primary plant percentage is about 69% for these accounts.

Q. Are you recommending any change at this time to RMP's primary/secondary split of plant?

A. I am not. While the data is less than complete, the resulting percentage of primary plant is similar to the proportions that I have seen from other utilities.

D. Results of Revised Revenue Requirements and Allocations

Q. Have you calculated class cost of service results based on the Division's recommended revenue requirement before modifying the Company's allocators?

A. Yes I have. The summary of these results is shown in the table below.

Table 4

Schedule No.	Description	Annual Revenue	Total Cost of Service	Increase (Decrease) to = ROR	Percentage Change from Current Revenues
1	Residential	661,595,338	683,847,009	22,251,671	3.36%
6	General Service - Large	520,951,038	478,820,658	(42,130,380)	-8.09%
8	General Service - Over 1 MW	162,435,073	159,870,327	(2,564,746)	-1.58%
7,11,12	Street & Area Lighting	12,123,902	10,388,706	(1,735,196)	-14.31%
9	General Service - High Voltage	274,874,422	296,551,052	21,676,630	7.89%
10	Irrigation	13,948,796	14,760,935	812,139	5.82%
15	Traffic Signals	682,028	620,210	(61,818)	-9.06%
15	Outdoor Lighting	1,234,602	907,563	(327,039)	-26.49%
23	General Service - Small	137,738,935	130,987,486	(6,751,449)	-4.90%
SpC	Customer 1	27,176,952	31,199,110	4,022,158	14.80%
SpC	Customer 2	35,062,890	34,784,992	(277,898)	-0.79%
	Total Utah Jurisdiction	1,847,823,976	1,842,738,049	(5,085,927)	-0.28%

Q. Are there any other changes to the COS Study other than those made by the Division reflected in your results?

A. Yes. Schedule 15 revenues have been adjusted to correct an error in the Company's COS model. This is discussed in more detail in Division witness Mr. Faryniarz's testimony.

Q. Please summarize the changes that you have recommended and made to the cost allocation study.

A. My recommended changes are:

- Weight the substation/primary plant allocator according to peak loads of various substations;
- Modify the allocation of service plant; and
- Modify the secondary plant allocator to allocate some secondary plant to Schedule 6.

Q. Have you analyzed the impact of your various allocation adjustments to the cost of service recommended by the Division?

A. Yes. The class rates of return and deficiencies resulting from these adjustments are shown in the following table.

Table 5

Class Allocations of Division Revenue Requirements

Schedule No.	Description	Annual Revenue	Total Cost of Service	Increase (Decrease) to = ROR	Percentage Change from Current Revenues
1	Residential	661,595,338	682,976,484	21,381,146	3.23%
6	General Service – Large	520,951,038	479,887,586	(41,063,452)	-7.88%
8	General Service – Over 1 MW	162,435,073	159,831,397	(2,603,676)	-1.60%
7,11,12	Street & Area Lighting	12,123,902	10,341,236	(1,782,666)	-14.70%
9	General Service – High Voltage	274,874,422	296,550,807	21,676,385	7.89%
10	Irrigation	13,948,796	14,890,298	941,502	6.75%
15	Traffic Signals	682,028	638,531	(43,497)	-6.38%
15	Outdoor Lighting	1,234,602	900,662	(333,940)	-27.05%
23	General Service – Small	137,738,935	130,737,001	(7,001,934)	-5.08%
SpC	Customer 1	27,176,952	31,199,085	4,022,133	14.80%
SpC	Customer 2	35,062,890	34,784,964	(277,926)	-0.79%
	Total Utah Jurisdiction	1,847,823,976	1,842,738,049	(5,085,927)	-0.28%

Q. What are the results of these various modifications to the allocation of costs?

A. Utilizing the Division revenue requirements, these modifications as a whole result in relatively small differences to class rates of return and deficiencies. I recommend that the Commission approve of these methodological changes. Although the combined changes do not have a large impact in this case, they may have more impact in the future as class characteristics change and as better data is provided. I further recommend that we reflect these modifications in revenue requirements. It also shows that the range of deficiencies is not very large. Mr. Faryniarz will refer to these results in his testimony. Since he recommends setting class revenue requirements equal to the cost of service, subject to some mitigation, it is most appropriate to use the best available cost of service.

Q. Have you analyzed what class results would be under any other assumptions about revenue requirements?

A. Yes. I also calculated results based on a revenue requirement that would result from all of the Division's adjustments except with a return on equity of 9.8%. These results are shown in the table below.

Table 6

Class Results with Intermediate Revenue Requirement

Schedule No.	Description	Annual Revenue	Total Cost of Service	Increase (Decrease) to = ROR	Percentage Change from Current Revenues
1	Residential	661,595,338	693,523,302	31,927,964	4.83%
6	General Service - Large	520,951,038	487,031,191	(33,919,847)	-6.51%
8	General Service - Over 1 MW	162,435,073	162,132,576	(302,497)	-0.19%
7,11,12	Street & Area Lighting	12,123,902	10,456,458	(1,667,444)	-13.75%
9	General Service - High Voltage	274,874,422	300,377,559	25,503,137	9.28%
10	Irrigation	13,948,796	15,118,895	1,170,099	8.39%
15	Traffic Signals	682,028	646,949	(35,079)	-5.14%
15	Outdoor Lighting	1,234,602	911,037	(323,565)	-26.21%
23	General Service - Small	137,738,935	132,723,338	(5,015,597)	-3.64%
SpC	Customer 1	27,176,952	31,601,703	4,424,751	16.28%
SpC	Customer 2	35,062,890	35,178,915	116,025	0.33%
	Total Utah Jurisdiction	1,847,823,976	1,869,701,923	21,877,947	1.18%

Q. Are you or the Division supporting such a revenue requirement?

A. No, we are not. I have calculated and presented these results so that Mr. Faryniarz can analyze what a reasonable rate spread would be if the Company were granted a higher revenue requirement than that recommended by the Division. In the absence of such an analysis of an intermediate position, the parties would have little guidance regarding class revenue targets if the full Division position is not accepted.

Q. Does this conclude your testimony?

A. Yes, it does.