Cost of Service Methodology – Idaho

March 27, 2019

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Agenda

1. Purpose of Workshop
2. Overview of Current COSS Methodology
3. Classification Alternatives
4. Allocation Alternatives
5. Movement toward Cost of Service
6. Other Issues & Ideas
7. Questions

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Purpose of Cost of Service Workshop

Provision 17 of the Settlement Stipulation in Case No. AVU-E-17-01 reads as follows:

Electric Cost of Service Workshop. The Settling Parties agree, prior to the Company's next general rate case filing, to meet and confer regarding the Company's electric cost of service study. **The purpose of the workshop will be to discuss the merits of differing cost of service methodologies. Based on the input from the workshop, the Company agrees to provide, at a minimum, three cost of service studies reflective of these differing methodologies in its next general rate case.** The Company will provide available information, studies and data requested by any of the Settling Parties so as to enable meaningful workshop participation and discussion of issues. Unless it decides to do so, a Party shall not be bound by workshop discussion and may contest cost of service and rate spread issues in subsequent proceedings.

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Overview of the Current Cost of Service Study Methodology

The Company's electric Cost of Service Study methodology has been used consistently for the last ten years. Key elements include the following:

- Production Costs – Classified as energy or demand by load factor peak credit.
- Production Costs – Allocated by generation level energy and the twelve monthly coincident peak hours (12CP).
- Transmission Costs – Classified as 100% demand related, allocated by 12CP.
- Distribution Costs – Classified by basic customer, meters & services customer-related, all other demand related.
- Distribution Costs – Large Customers directly assigned to substation level, other customer demand costs allocated by the twelve monthly non-coincident peaks (12NCP) measured as maximum diversified demand for each class. Customer costs by average customers, weighted if appropriate.
- Administrative and General Costs – Assigned to function then allocated based on associated plant. Common costs not associated with particular function allocated using 4-factor.

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Base Case - AVU-E-17-01 2019 Rates with Tax Reform

Base Case AVU-17-E-01 2019 Settlement Rates with Tax Reform Sch 72	Residential Sch 1	General Sch 11/12	Large General Sch 21/22	Extra Large Gen Sch 25	Extra Large General Sch 25P	Pumping Sch 31/32	Street & Area Lights Sch 41-49	Idaho Total
Rate Base	374,073,987	104,980,606	169,369,052	60,165,737	52,021,437	20,566,937	17,570,244	798,748,000
Net Income at Present Rates	22,903,579	12,011,610	14,858,534	4,137,949	4,052,349	1,449,238	1,371,741	60,785,000
Rate of Return	6.12%	11.44%	8.77%	6.88%	7.79%	7.05%	7.81%	7.61%
Return Ratio	**0.80**	**1.50**	**1.15**	**0.90**	**1.02**	**0.93**	**1.03**	**1.00**
Cost at Unity with COSS	117,906,177	32,818,449	50,517,608	20,419,654	18,971,139	5,761,156	3,632,817	250,027,000
Revenue at Present Rates	111,131,000	37,717,000	52,916,000	19,883,000	19,085,000	5,620,000	3,675,000	250,027,000
Revenue Change to Unity	**6,775,177**	**(4,898,551)**	**(2,398,392)**	**536,654**	**(113,861)**	**141,156**	**(42,183)**	-
Revenue to Cost Ratio	**0.94**	**1.15**	**1.05**	**0.97**	**1.01**	**0.98**	**1.01**	**1.00**

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Classification Alternatives

Scenario A

Straight Fixed-Variable approach

All Production and Transmission Costs are Demand-Related except variable costs included in the Power Cost Adjustment mechanism.

Energy Related Items include:

- Purchased Power – Account 555
- Thermal Fuel – Account 501
- Natural Gas Fuel – Account 547
- Sales for Resale Revenue – Account 447
- Transmission By Others – Account 565
- Transmission For Others Revenue – Account 456
- Net REC Revenue – Account 456

No changes to allocation factors.

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Classification Alternatives

Classification Scenario A Results

Scenario B.a. Production and Transmission Classified by Straight Fixed Variable	Residential Sch 1	General Sch 11/12	Large General Sch 21/22	Extra Large Gen Sch 25	Extra Large General Sch 25P	Pumping Sch 31/32	Street & Area Lights Sch 41-49	Idaho Total
Rate Base	384,337,538	103,481,442	168,010,902	56,701,812	49,372,640	19,728,234	17,115,432	798,748,000
Net Income at Present Rates	22,179,078	12,117,436	14,954,406	4,382,466	4,239,327	1,508,441	1,403,846	60,785,000
Rate of Return	5.77%	11.71%	8.90%	7.73%	8.59%	7.65%	8.20%	7.61%
Return Ratio	**0.76**	**1.54**	**1.17**	**1.02**	**1.13**	**1.00**	**1.08**	**1.00**
Cost at Unity with COSS	119,739,611	32,550,645	50,274,994	19,800,875	18,497,970	5,611,334	3,551,571	250,027,000
Revenue at Present Rates	111,131,000	37,717,000	52,916,000	19,883,000	19,085,000	5,620,000	3,675,000	250,027,000
Revenue Change to Unity	**8,608,611**	**(5,166,355)**	**(2,641,006)**	**(82,125)**	**(587,030)**	**(8,666)**	**(123,429)**	-
Revenue to Cost Ratio	**0.93**	**1.16**	**1.05**	**1.00**	**1.03**	**1.00**	**1.03**	**1.00**
Change in Return Ratio	**(0.05)**	**0.04**	**0.02**	**0.11**	**0.10**	**0.08**	**0.05**	-
Change in Cost at Unity	**1,833,434**	**(267,804)**	**(242,614)**	**(618,779)**	**(473,169)**	**(149,822)**	**(81,246)**	-

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Classification Alternatives

Scenario B

Extend Jurisdictional Allocation approach

Jurisdictional Production/Transmission Allocation factor based on 50/50 weighting of energy and demand.

All production and transmission costs classified as 50% energy and 50% demand.

No changes to allocation factors.

No changes to classification of other functions, distribution costs are directly assigned to jurisdictions and common costs already utilize an extension of the jurisdictional four-factor allocation for administrative and general costs.

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Classification Alternatives

Classification Scenario B Results

Scenario B.b. Production and Transmission Classified by Jurisdictional PT Ratio	Residential Sch 1	General Sch 11/12	Large General Sch 21/22	Extra Large Gen Sch 25	Extra Large General Sch 25P	Pumping Sch 31/32	Street & Area Lights Sch 41-49	Idaho Total
Rate Base	371,584,164	105,344,287	169,698,523	61,006,047	52,664,006	20,770,397	17,680,576	798,748,000
Net Income at Present Rates	22,684,014	12,043,681	14,887,589	4,212,051	4,109,014	1,467,180	1,381,471	60,785,000
Rate of Return	6.10%	11.43%	8.77%	6.90%	7.80%	7.06%	7.81%	7.61%
Return Ratio	**0.80**	**1.50**	**1.15**	**0.91**	**1.03**	**0.93**	**1.03**	**1.00**
Cost at Unity with COSS	117,942,818	32,813,097	50,512,759	20,407,288	18,961,683	5,758,162	3,631,193	250,027,000
Revenue at Present Rates	111,131,000	37,717,000	52,916,000	19,883,000	19,085,000	5,620,000	3,675,000	250,027,000
Revenue Change to Unity	**6,811,818**	**(4,903,903)**	**(2,403,241)**	**524,288**	**(123,317)**	**138,162**	**(43,807)**	-
Revenue to Cost Ratio	**0.94**	**1.15**	**1.05**	**0.97**	**1.01**	**0.98**	**1.01**	**1.00**
Change in Return Ratio	**(0.00)**	**(0.00)**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	-
Change in Cost at Unity	**36,641**	**(5,352)**	**(4,849)**	**(12,366)**	**(9,456)**	**(2,994)**	**(1,624)**	-

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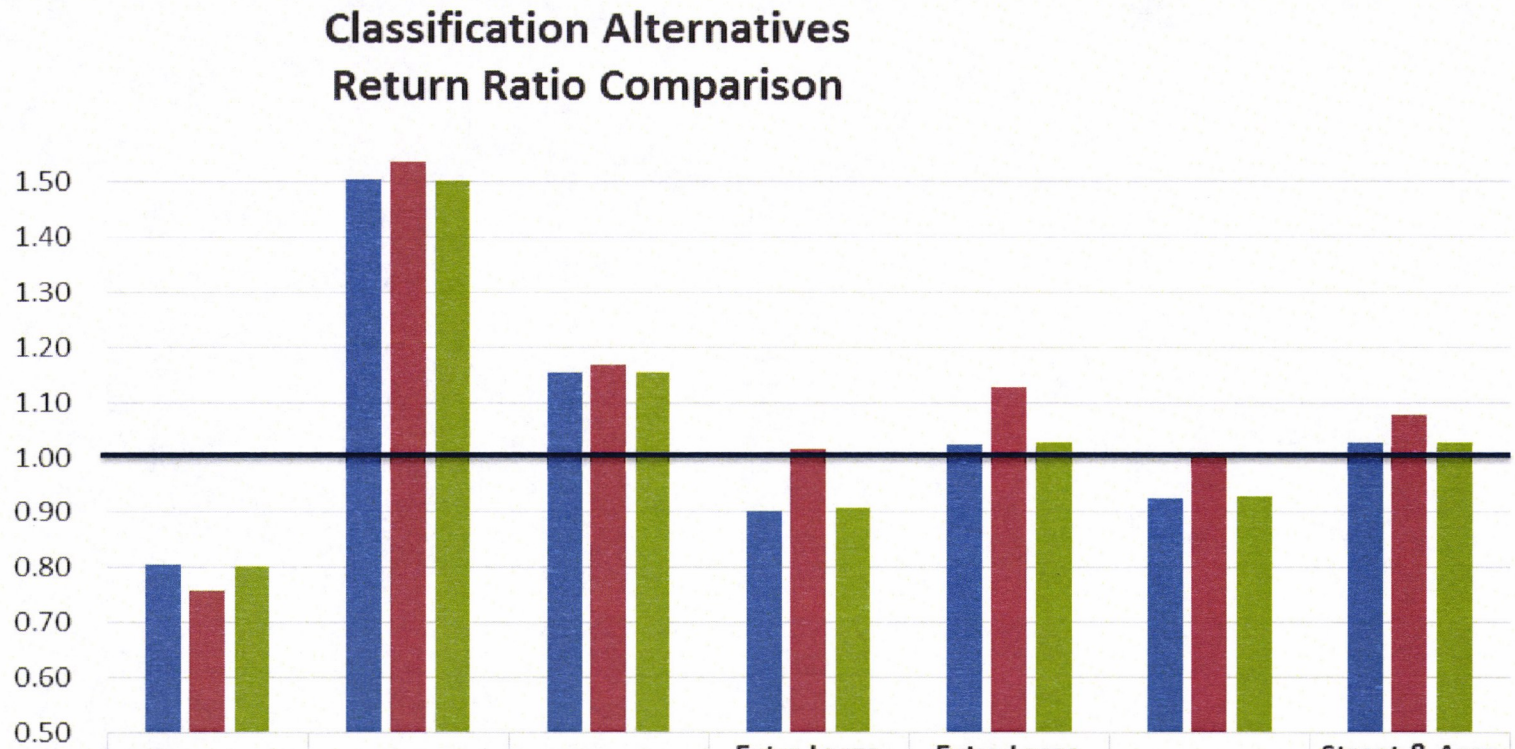
Classification Alternatives



	Residential Sch 1	General Sch 11/12	Large General Sch 21/22	Extra Large Gen Sch 25	Extra Large General Sch 25P	Pumping Sch 31/32	Street & Area Lights Sch 41-49
Base Case	0.80	1.50	1.15	0.90	1.02	0.93	1.03
PT by Straight Fixed Variable	0.76	1.54	1.17	1.02	1.13	1.00	1.08
PT by PT ratio 50/50 E/D	0.80	1.50	1.15	0.91	1.03	0.93	1.03

Other Suggestions?

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Allocation Alternatives

Scenario A

Weighted Energy Allocator

Multiplied the monthly generation level energy consumption volumes by the weighted average secondary price of power (from PCA base workpapers).

Captures monthly differences in the cost of incremental power in the marketplace.

No changes to classification.

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Allocation Alternatives

Allocation Scenario A Results

Scenario C.a. Energy Allocator weighted by Market Price of Power	Residential Sch 1	General Sch 11/12	Large General Sch 21/22	Extra Large Gen Sch 25	Extra Large General Sch 25P	Pumping Sch 31/32	Street & Area Lights Sch 41-49	Idaho Total
Rate Base	375,189,352	104,929,834	168,663,358	59,801,110	52,169,003	20,440,099	17,555,244	798,748,000
Net Income at Present Rates	22,568,022	12,026,885	15,070,842	4,247,646	4,007,954	1,487,397	1,376,254	60,785,000
Rate of Return	6.02%	11.46%	8.94%	7.10%	7.68%	7.28%	7.84%	7.61%
Return Ratio	**0.79**	**1.51**	**1.17**	**0.93**	**1.01**	**0.96**	**1.03**	**1.00**
Cost at Unity with COSS	118,418,174	32,795,142	50,193,667	20,252,276	19,038,877	5,702,933	3,625,931	250,027,000
Revenue at Present Rates	111,131,000	37,717,000	52,916,000	19,883,000	19,085,000	5,620,000	3,675,000	250,027,000
Revenue Change to Unity	**7,287,174**	**(4,921,858)**	**(2,722,333)**	**369,276**	**(46,123)**	**82,933**	**(49,069)**	-
Revenue to Cost Ratio	**0.94**	**1.15**	**1.05**	**0.98**	**1.00**	**0.99**	**1.01**	**1.00**
Change in Return Ratio	**(0.01)**	**0.00**	**0.02**	**0.03**	**(0.01)**	**0.03**	**0.00**	-
Change in Cost at Unity	**511,997**	**(23,307)**	**(323,941)**	**(167,378)**	**67,738**	**(58,223)**	**(6,886)**	-

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Allocation Alternatives

Scenario B

Summer/Winter Peak Allocator

Determined 4CP allocation factor by limiting the coincident peaks measured to the two highest summer months and two highest winter months.

Test year highest winter coincident peak months were November and January.
Test year highest summer coincident peak months were July and August.

Emphasizes seasonal peaks.

No changes to classification.

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Allocation Alternatives

Allocation Scenario B Results

Scenario C.b. Coincident Peak Allocator 4CP (Two Winter/Two Summer)	Residential Sch 1	General Sch 11/12	Large General Sch 21/22	Extra Large Gen Sch 25	Extra Large General Sch 25P	Pumping Sch 31/32	Street & Area Lights Sch 41-49	Idaho Total
Rate Base	383,037,989	104,669,360	164,046,470	56,713,592	53,300,238	19,079,910	17,900,441	798,748,000
Net Income at Present Rates	21,345,328	12,065,715	15,783,782	4,738,050	3,830,049	1,707,734	1,314,342	60,785,000
Rate of Return	5.57%	11.53%	9.62%	8.35%	7.19%	8.95%	7.34%	7.61%
Return Ratio	**0.73**	**1.51**	**1.26**	**1.10**	**0.94**	**1.18**	**0.96**	**1.00**
Cost at Unity with COSS	120,634,495	32,723,717	48,897,607	19,368,946	19,360,359	5,308,559	3,733,317	250,027,000
Revenue at Present Rates	111,131,000	37,717,000	52,916,000	19,883,000	19,085,000	5,620,000	3,675,000	250,027,000
Revenue Change to Unity	**9,503,495**	**(4,993,283)**	**(4,018,393)**	**(514,054)**	**275,359**	**(311,441)**	**58,317**	-
Revenue to Cost Ratio	**0.92**	**1.15**	**1.08**	**1.03**	**0.99**	**1.06**	**0.98**	**1.00**
Change in Return Ratio	**(0.07)**	**0.01**	**0.11**	**0.19**	**(0.08)**	**0.25**	**(0.06)**	-
Change in Cost at Unity	**2,728,318**	**(94,732)**	**(1,620,001)**	**(1,050,708)**	**389,220**	**(452,597)**	**100,500**	-

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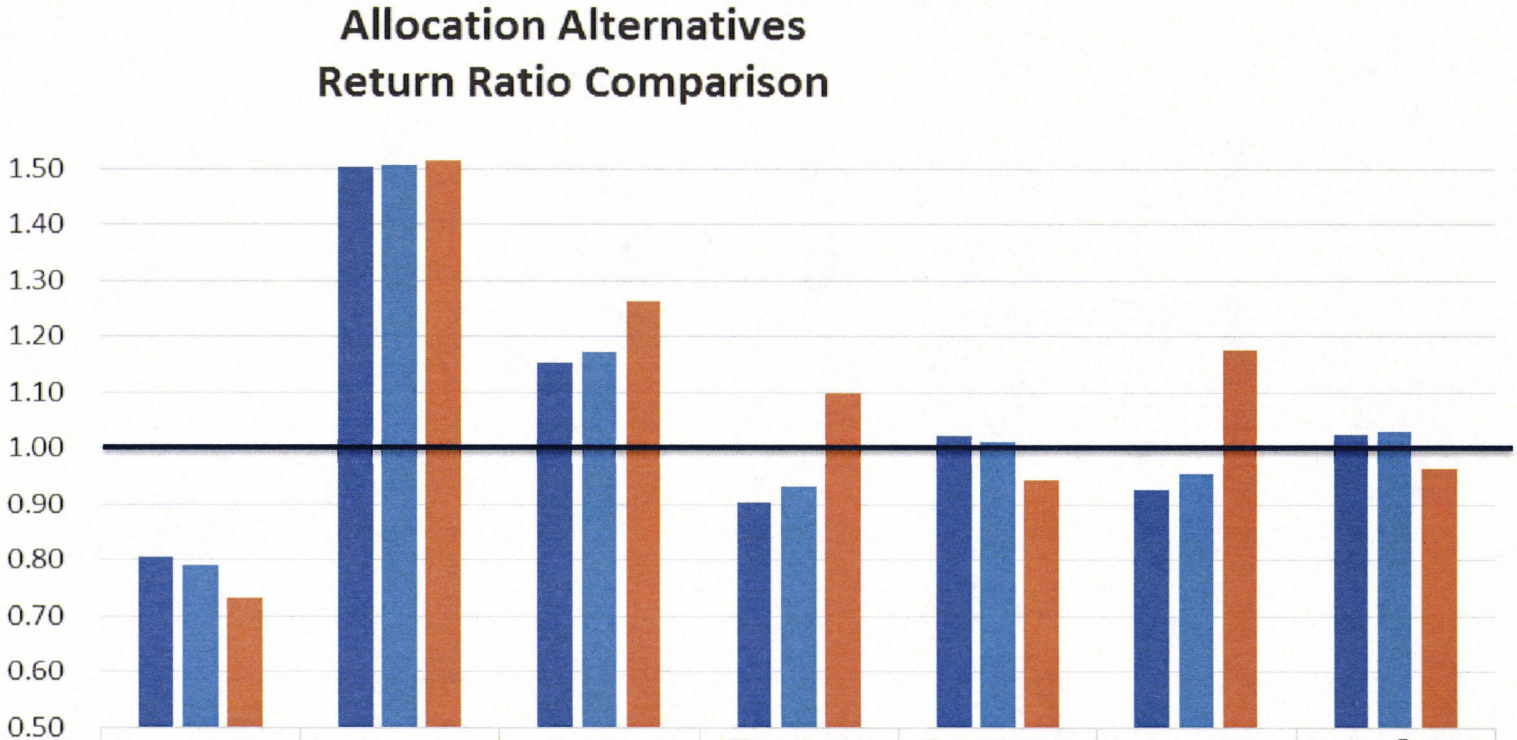
Allocation Alternatives



	Residential Sch 1	General Sch 11/12	Large General Sch 21/22	Extra Large Gen Sch 25	Extra Large General Sch 25P	Pumping Sch 31/32	Street & Area Lights Sch 41-49
Base Case	0.80	1.50	1.15	0.90	1.02	0.93	1.03
Energy Wtd by Market Price	0.79	1.51	1.17	0.93	1.01	0.96	1.03
Demand 4CP Summer Winter	0.73	1.51	1.26	1.10	0.94	1.18	0.96

Other Suggestions?

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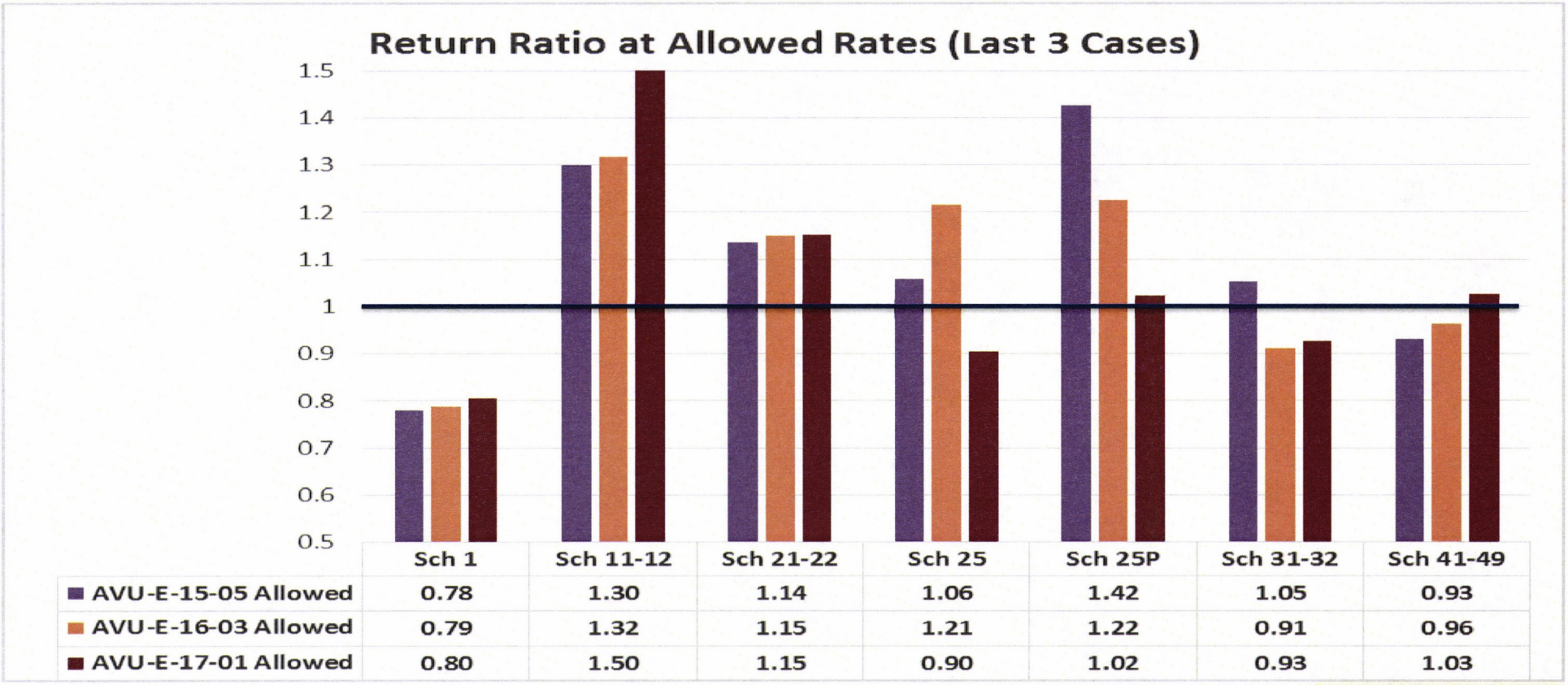
Movement Toward Cost of Service

Avista historically has used Return Ratio as the measure of movement toward cost of service as a guideline for Rate Spread assignment.



	Sch 1	Sch 11-12	Sch 21-22	Sch 25	Sch 25P	Sch 31-32	Sch 41-49
AVU-E-15-05 Allowed	0.78	1.30	1.14	1.06	1.42	1.05	0.93
AVU-E-16-03 Allowed	0.79	1.32	1.15	1.21	1.22	0.91	0.96
AVU-E-17-01 Allowed	0.80	1.50	1.15	0.90	1.02	0.93	1.03

However, movements made toward unity in one case don't always carry over to the next case.

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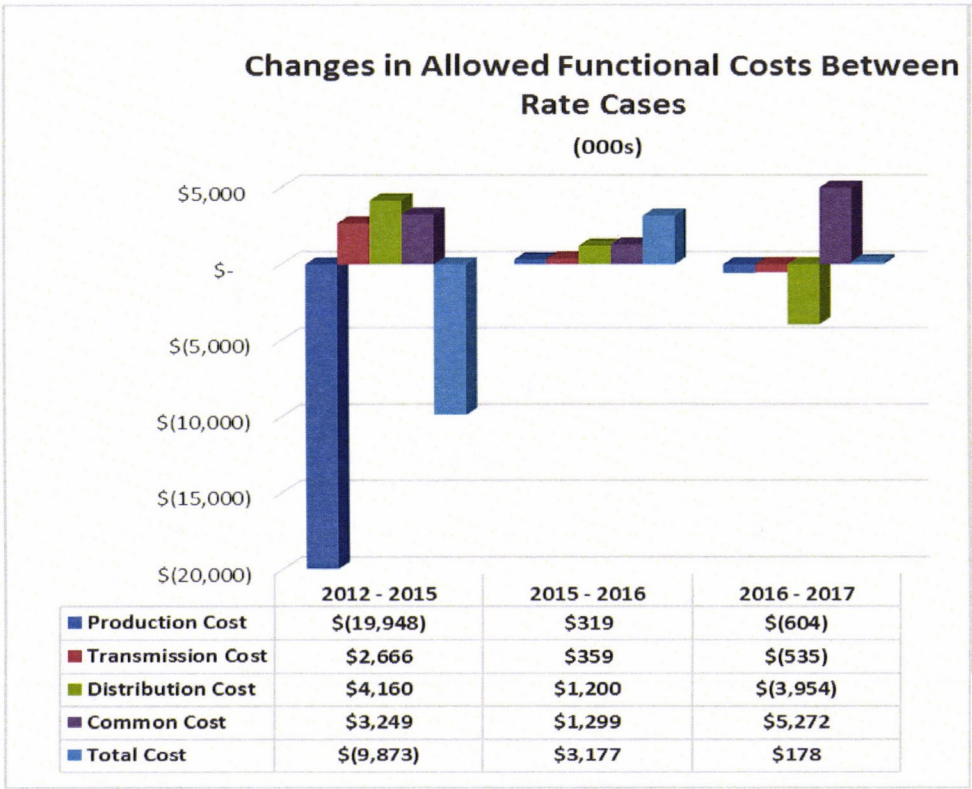
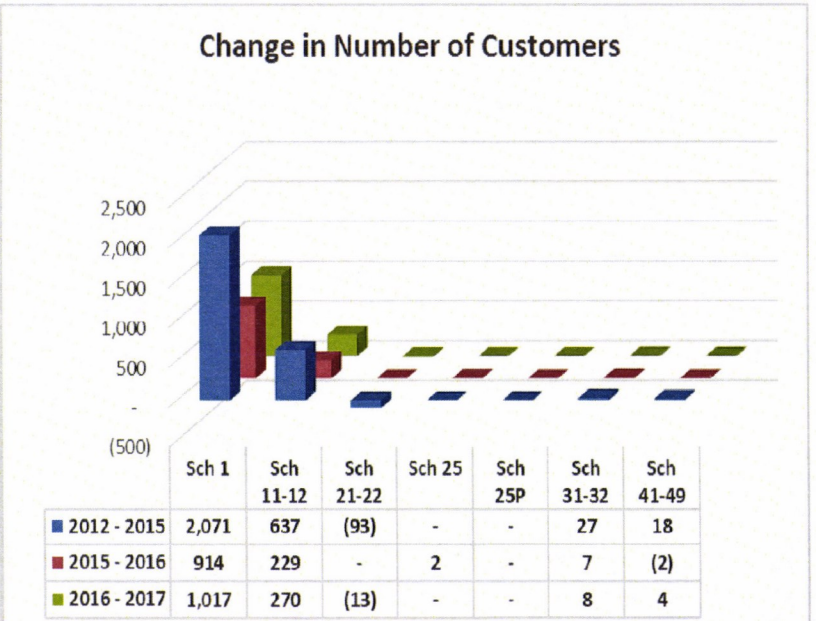
Movement Toward Cost of Service

Starting point changes with each new rate case

- Customer growth not uniform among classes
- Customer usage patterns change over time
- Components of Rate Base dependent on additions and retirements
- Components of Operating Expenses differ over time, e.g. Power Supply



	2012 - 2015	2015 - 2016	2016 - 2017
Production Cost	$(19,948)	$319	$(604)
Transmission Cost	$2,666	$359	$(535)
Distribution Cost	$4,160	$1,200	$(3,954)
Common Cost	$3,249	$1,299	$5,272
Total Cost	$(9,873)	$3,177	$178



	Sch 1	Sch 11-12	Sch 21-22	Sch 25	Sch 25P	Sch 31-32	Sch 41-49
2012 - 2015	2,071	637	(93)	-	-	27	18
2015 - 2016	914	229	-	2	-	7	(2)
2016 - 2017	1,017	270	(13)	-	-	8	4

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Other Issues and Ideas

Other Items Requested by the Parties

- **Load Study and Demand Study Work Papers**
- **Jurisdiction Separation Model Philosophy**
- **Income Taxes Breakdown in Cost of Service Model**
- **A&G Operating Expenses in Cost of Service Model**
- **Simplified Cost of Service Model**
- **New Clearwater Contract *no* impacts on:**
  - **Revenue Requirement**
  - **Cost of Service**
  - **Rate Design**
  - **Adder Schedules**

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Recommendations for Cost of Service Scenarios in Next Rate Case?

Questions?

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