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March 20, 2015

VIA ELECTRONIC

PUC Filing Center
Public Utility Commission of Oregon
PO Box 1088
Salem, OR 97308-1088

**Re: UE 293 In The Matter of IDAHO POWER COMPANY's 2015 Annual Power Cost
Update – March Forecast**

Attention Filing Center:

Attached for filing in the above-captioned docket is Idaho Power Company's Direct Testimony of Scott Wright.

Please contact this office with any questions.

Very truly yours,

A handwritten signature in blue ink that reads "Wendy McIndoo".

Wendy McIndoo
Office Manager

Enclosures

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UE 293

IN THE MATTER OF IDAHO POWER)
COMPANY'S 2015 ANNUAL POWER)
COST UPDATE)
MARCH FORECAST)
_____)

IDAHO POWER COMPANY

DIRECT TESTIMONY

OF

SCOTT WRIGHT

March 20, 2015

1 **Q. Are you the same Scott Wright who previously submitted testimony in this**
2 **proceeding?**

3 A. Yes. I previously submitted testimony in this proceeding regarding the October
4 Update for the 2015 Annual Power Cost Update ("APCU"). The 2015 October
5 Update is Idaho Power Company's ("Company") estimate of what "normalized"
6 power supply expenses will be for the upcoming APCU test period of April 2015
7 through March 2016.

8 **Q. What is the status of the October Update in this proceeding?**

9 A. The Company filed the 2015 October Update on October 21, 2014, and Staff of the
10 Public Utility Commission of Oregon ("Commission") and the Citizens' Utility Board of
11 Oregon reviewed the filing. Several rounds of discovery requests were served on
12 the Company after the initial filing. On January 22, 2015, a settlement conference
13 was held with all parties to the case. At the conclusion of the settlement conference,
14 no party had any issues with the per-unit cost of \$23.44 per megawatt-hour ("MWh")
15 proposed by the Company for the 2015 October Update. Based on the parties'
16 positions, the Commission Staff notified the Commission on January 28, 2015, that
17 all parties to the case have agreed to amend the case schedule to remove all events
18 prior to the filing of the March Forecast, which was subsequently approved January
19 29, 2015.

20 **Q. What is the purpose of your testimony?**

21 A. The purpose of my testimony is to describe the second part of the Company's APCU
22 filing, which is the March Forecast as detailed in Order No. 08-238.

23 **Q. What is the March Forecast?**

24 A. The March Forecast is the Company's estimate of the "expected" net power supply
25 expense ("NPSE") for the APCU test period of April through March, as determined by
26 the AURORA model.

1 **Q. How does the March Forecast differ from the October Update?**

2 A. The October Update is calculated by simulating 86 water year conditions in the
3 AURORA model and then averaging the results of all 86 NPSE to create an
4 “average” or “normal” expectation of NPSE. In contrast, the March Forecast is
5 calculated by simulating the “expected” water condition during the upcoming APCU
6 test period based on the most recent water supply forecast and current reservoir
7 levels from the Northwest River Forecast Center (“NRFC”). The results for the
8 October Update are used to update base rates, while the results for the March
9 Forecast are used to update Schedule 55, Annual Power Cost Update.

10 **Q. Please describe the variables that are to be updated in the AURORA model for**
11 **the March Forecast as described in Order No. 08-238.**

12 A. The following variables are described in Order No. 08-238 to be updated in the
13 March Forecast:

- 14 a. Fuel prices and transportation costs;
- 15 b. Wheeling expenses;
- 16 c. Planned outages and forced outage rates;
- 17 d. Heat rates;
- 18 e. Forecast of normalized sales and loads, updated only for known significant
19 changes since the October APCU filing;
- 20 f. Forecast hydro generation from stream flow conditions using the most recent
21 water supply forecast from the NRFC and current reservoir levels;
- 22 g. Contracts for wholesale power and power purchases and sales;
- 23 h. Forward price curve as defined below;
- 24 i. Public Utility Regulatory Policies Act of 1978 (“PURPA”) contract expenses;
- 25 and
- 26 j. The Oregon state allocation factor.

1 **Q. After reviewing all of the inputs used for the October Update, which of the**
2 **above variables were updated for the March Forecast?**

3 A. All of the above variables were reviewed for the March Forecast; however, for the
4 April 2015 through March 2016 test period only the following variables have changed
5 since the October APCU determination was prepared: (1) fuel prices, (2) heat rates,
6 (3) forecast of hydro generation and current reservoir levels from stream flow
7 conditions using the most recent water supply forecast from the NRFC, (4) known
8 power purchases and surplus sales made in compliance with the Company's Energy
9 Risk Management Policy, (5) forward price curve, and (6) PURPA contract
10 expenses.

11 **Q. How frequently are the Company's fuel cost forecasts updated?**

12 A. The coal and gas price forecasts are refreshed monthly for operational planning
13 purposes. When the October Update was prepared, information from the October
14 2014 Operations Plan was used. The March Forecast determination of NPSE
15 includes the Company's most current coal and gas price forecasts.

16 **Q. What impact does the current coal price forecast have on the per-unit cost of**
17 **output when compared to the October Update results?**

18 A. The modeled per-unit cost of generation from AURORA, in terms of dollars per MWh
19 increased at the Jim Bridger power plant ("Bridger") from \$26.25 per MWh to \$29.53
20 per MWh, decreased at the Boardman power plant ("Boardman") from \$27.57 per
21 MWh to \$25.89 per MWh and increased at the Valmy power plant ("Valmy") from
22 \$35.45 per MWh to \$37.05 per MWh. The generation cost modeled by AURORA
23 includes both variable and fixed fuel components, as well as the inclusion of any
24 start-up costs.

25 **Q. What factors drove the changes in the per-unit cost of generation at the**
26 **Company's coal plants since the October Update was filed?**

1 A. The increase in the per-unit cost of generation for the Bridger plant is attributed to a
2 combination of factors: (1) higher operating costs at the Bridger mine and (2) lower
3 production volumes at the Bridger plant. As mentioned in the October Update, roof
4 support measures to further enhance the safety of Bridger Coal Company miners,
5 and changes in underground mine plans due to coal seam variability, weak
6 geological formations overlying the coal seam, and previously unrecognized faults all
7 continue to contribute additional mine costs. Further, as wholesale electric market
8 prices have continued to drop between the October Update and the March Forecast,
9 the ability to economically dispatch Bridger for surplus sales has been reduced.
10 Therefore, operating costs are being spread across fewer units of production
11 resulting in higher per-unit generation costs at Bridger.

12 The decrease in the per-unit cost of generation for the Boardman plant can
13 be attributed to changes in contract prices. When the October Update was filed, it
14 was anticipated that a new contract for additional coal was needed. When the March
15 Forecast was prepared, the additional coal was removed from the forecast, which
16 eliminated the higher price contract that was anticipated for the October Update,
17 therefore, reducing the per-unit cost of generation for the Boardman plant.

18 The increase in the per-unit cost of generation at the Valmy plant can be
19 attributed to multiple start-ups, which have a negative impact on the plant's heat rate.
20 By comparison, the October Update analysis resulted in the dispatch of Valmy for 12
21 months out of the year and averaged 14 start-ups over the 12-month time period.
22 Lower market energy prices in the March Forecast reduced the frequency that the
23 Valmy plant could be economically dispatched. As a result, Valmy was dispatched
24 for two months out of the year and averaged nine start-ups over the two-month time
25 period. While the coal costs for Valmy remained relatively constant between the
26 October Update and the March Forecast, the per-unit cost of generation suffered due

1 to the changes in heat rates caused by the multiple start-ups and shut-downs over a
2 relatively short period of time.

3 **Q. How did the gas price forecast included in the March Forecast change as**
4 **compared to the gas price forecast included in the October Update?**

5 A. The gas price forecast used for the October Update for Henry Hub was \$4.07 per
6 MMBtu, while the gas price forecast used for the March Forecast for Henry Hub was
7 \$3.21 per MMBtu, a decrease of \$0.86 per MMBtu. The decrease in the Henry Hub
8 price from the October Update to the March Forecast is driven by higher than
9 expected gas supply resulting from: (1) supply outpacing demand on a daily basis
10 and (2) the forecast that was derived for the October Update anticipated a harsher
11 winter that never materialized. Forecasted gas storage levels for the October
12 Update anticipated storage levels slightly below the five-year average for that time
13 period, while gas storage levels for this year's March Forecast anticipate gas storage
14 levels to be even with the five-year average for this time of year, therefore, ensuring
15 adequate storage levels.

16 **Q. How is the Henry Hub gas price forecast used as an AURORA input?**

17 A. The Company uses the gas price forecast for Henry Hub as the starting point in the
18 AURORA model. Henry Hub is considered a reference fuel in AURORA, meaning
19 other gas market prices reference Henry Hub and apply an adjustment factor in order
20 to develop a basis for the respective prices. For example, a Henry Hub gas price of
21 \$3.21 per MMBtu applied to a Sumas basis of (\$0.04) per MMBtu equals a Sumas
22 gas price of \$3.17 per MMBtu ($\$3.21 + (\$0.04) = \3.17). The Company develops a
23 separate gas price for its natural gas units also based upon the Henry Hub gas price
24 forecast.

25 **Q. What prompted a heat rate adjustment between the October Update and March**
26 **Forecast?**

1 A. The Company uses a 12-month ending heat rate for modeling purposes. Because
2 there was a six-month gap between the October Update and March Forecast, the 12-
3 month ending heat rate was refreshed to reflect the latest six months. In this case,
4 the Bridger plant experienced some minor improvements in its heat rate, while
5 Boardman and Valmy experienced small declines in their respective heat rates.

6 **Q. What was the date of the water supply forecast from the NRFC that was used
7 to create the hydro generation forecast for the March Forecast?**

8 A. The forecast of monthly hydro generation levels included in the March Forecast
9 reflects the NRFC's March 6, 2015, forecast ("March 6th Forecast"). The March 6th
10 Forecast has expected inflows into Brownlee Reservoir for April through July of 3.74
11 million acre-feet ("MAF"), or 68 percent of the (1981-2010) average level of 5.47
12 MAF.

13 **Q. How does this year's water supply forecast compare to last year's NRFC's
14 forecast?**

15 A. The NRFC's forecast used in last year's March Forecast was 3.86 MAF compared to
16 this year's forecast of 3.74 MAF, which is 3 percent lower than last year, and still
17 below the 30-year average by 1.73 MAF. However, as I will describe in greater detail
18 later in my testimony, this year's March Forecast of hydro generation exceeds last
19 year's modeled hydro generation.

20 **Q. What significance does a lower than average stream flow forecast have on the
21 Company's variable power supply expenses?**

22 A. Because a significant portion of the Company's generation fleet is hydro-based, a
23 lower than average stream flow forecast has a detrimental effect on the Company's
24 variable power supply expenses. The hydro generation forecasted under the
25 normalized scenario for the October Update was 8.7 million MWh, while the hydro
26

1 generation forecasted under this year's March Forecast is 7.6 million MWh, a
2 decrease of 0.9 million MWh or 102 average megawatt.

3 **Q. Did the Company include known power purchases and surplus sales resulting**
4 **from the Company's Energy Risk Management Policy in the March Forecast?**

5 A. Yes. The Company includes known power purchases and surplus sales resulting
6 from the Company's Risk Energy Management Policy and incorporates those
7 amounts as Net Hedges on Exhibit No. 202, lines 29 and 30, as directed by Order
8 No. 08-238.

9 **Q. What forward price curve did the Company use to price purchased power and**
10 **surplus sales?**

11 A. Exhibit No. 201 shows the March 10, 2015, Mid-Columbia forward price curve for the
12 April 2015 through March 2016 test period the Company used, as directed by Order
13 No. 08-238.

14 **Q. Did the Company update its PURPA contract expenses for the March**
15 **Forecast?**

16 A. Yes. Since the October Update was filed, two additional PURPA contracts are now
17 expected to be operational during the April 2015 through March 2016 test period.

18 **Q. How does the total PURPA expense included in the March Forecast compare to**
19 **the level of total PURPA expense included in the October Update?**

20 A. The total PURPA expense included in the March Forecast is \$174.9 million
21 compared to the \$172.8 million included in the October Update, an increase of \$2.1
22 million.

23 **Q. What is the Company's March Forecast of net power supply expense as a**
24 **result of the changes described above?**

25 A. Exhibit No. 202 shows the results of a single water condition for the April 2015
26 through March 2016 test period, with updated heat rates, fuel prices, updated stream

1 flow conditions and reservoir levels, updated power purchases and surplus sales
2 from the Company's Energy Risk Management Policy (Net Hedges), market
3 purchased power and surplus sales repriced, and updated PURPA contract
4 expenses. The March Forecast for NPSE without PURPA expenses is \$187.2
5 million. When PURPA expenses of \$174.9 million are included, the total NPSE for
6 the March Forecast is \$362.1 million.

7 **Q. What is the March Forecast unit cost per megawatt-hour as determined by the**
8 **Company for this filing?**

9 A. Exhibit No. 202 shows the normalized annual sales at the customer level for the April
10 2015 through March 2016 test period are 14,484,458 MWh, line 34. Based upon test
11 period sales, the cost per-unit for the March Forecast to become effective on June 1,
12 2015, is \$25.00 per MWh ($\$362.1 \text{ million} / 14.484 \text{ million MWh} = \25.00 per MWh),
13 lines 33, 34, and 36.

14 **Q. How does this \$25.00 per MWh March Forecast compare to the March Forecast**
15 **that resulted from last year's computation?**

16 A. The March Forecast for last year's April 2014 through March 2015 test period was
17 \$26.23 per MWh, as compared to this year's April 2015 through March 2016 test
18 period of \$25.00 per MWh, a decrease of \$1.23 per MWh.

19 **Q. What contributed to this year's March Forecast being a reduction from last**
20 **year's March Forecast?**

21 A. The main factors contributing to a reduction in this year's March Forecast as
22 compared to last year's March Forecast are additional hydro generation, lower
23 natural gas prices, and lower electric market prices, which are all described in more
24 detail below.

25 The hydro generation forecasted for last year's March Forecast was 7.1
26 million MWh, whereas the hydro generation forecasted for this year's March Forecast

1 is 7.6 million MWh, an increase of 0.5 million MWh. The increased generation is due
2 to higher reservoir levels at Brownlee reservoir and higher forecasted Mid-Snake
3 River flows over last year's forecast. Even though this year's NRFC inflow forecast
4 was 3 percent less than last year's March Forecast, the additional water available
5 due to higher reservoir levels and increased flows at the Mid-Snake projects produce
6 slightly higher generation levels over last year's March Forecast.

7 Lower natural gas prices increased production at the Langley Gulch power
8 plant ("Langley Gulch"), from 0.9 million MWh in last year's March Forecast to 2.1
9 million MWh for this year's March Forecast, an increase of 1.2 million MWh. The
10 average cost of production from last year's March Forecast for Langley Gulch was
11 \$31.60 per MWh, while this year's March Forecast expects an average Langley
12 Gulch price of \$20.70 per MWh, a reduction of \$10.90 per MWh.

13 Market purchase volumes have increased from 0.6 million MWh to nearly 1.0
14 million MWh, an increase of nearly 0.4 million MWh. The average market purchase
15 price from last year's March Forecast was \$37.03 per MWh, while this year's March
16 Forecast expects an average market purchase price of \$28.62 per MWh, a decrease
17 of \$8.42 per MWh.

18 With the increase in hydro generation, gas generation, and lower market
19 purchase prices, lower cost generation and market purchases are displacing
20 previously dispatched coal generation. In addition to these factors, lower forecasted
21 electric market prices have reduced the level of coal generation that can be
22 economically dispatched for surplus sales. This is evident with the 1.3 million MWh
23 reduction between last year's March Forecast and this year's March Forecast. The
24 average surplus sales price from last year's March Forecast was \$27.97 per MWh,
25 while this year's March Forecast expects an average surplus sales price of \$22.44
26 per MWh, a reduction of \$5.53 per MWh.

1 **Q. Please describe the calculation necessary to determine the March Forecast**
2 **Rate Adjustment.**

3 A. Exhibit No. 203 steps through the Commission specified method of calculating the
4 March Forecast Rate, pursuant to Order No. 08-238. Lines 1-3 show the calculation
5 for the October Update rate of \$23.44 per MWh. Lines 4-6 show the calculation for
6 the March Forecast Rate of \$25.00 per MWh. Line 7 is calculated by the March
7 Forecast Rate minus the October Update Rate multiplied by the March Forecast of
8 Normalized Sales, line 6 minus line 3 multiplied by line 4. Line 8 is the allocated
9 amount (95 percent) that is allowed for the March Forecast Rate. Line 9, the
10 Forecast Change Allowed, is calculated by multiplying line 7 by line 8. Line 10 is
11 calculated by dividing line 9 by line 4 to create the March Forecast Rate Adjustment
12 of \$1.48 per MWh.

13 **Q. How is the incremental revenue requirement for the March Forecast calculated**
14 **using the March Forecast Rate Adjustment unit cost of \$1.48 per MWh?**

15 A. The incremental revenue requirement or "revenue deficiency" for the March Forecast
16 is calculated by multiplying the unit cost of \$1.48 per MWh by the loss adjusted
17 Oregon jurisdictional sales for the April 2015 through March 2016 test period of
18 640,595.652 MWh, creating a revenue deficiency of nearly \$1.0 million.

19 **Q. What method of allocation are you proposing to spread the incremental**
20 **revenue requirement associated with the March Forecast to the various**
21 **customer classes?**

22 A. I am proposing to allocate the revenue deficiency associated with the 2015 March
23 Forecast according to the revenue spread methodology approved by the
24 Commission in UE 214, Order No. 10-191. Order No. 10-191 established a revenue
25 spread methodology whereby the revenue deficiency for the March Forecast is
26 allocated to individual customer classes on the basis of the total generation-related

1 revenue requirement approved in the Company's last general rate case. In this
2 instance, the Company's last general rate case, UE 233, was a settled case in which
3 parties did not adopt the Company's class cost-of-service methodology, but rather
4 agreed to a revenue spread methodology that was set forth in Exhibit B to the Partial
5 Stipulation filed on February 1, 2012. In light of the stipulated revenue spread, the
6 Company has utilized the total generation-related revenue requirement detailed on
7 Exhibit B to the Partial Stipulation to apportion the March Forecast revenue
8 requirement to each customer class. The proposed revenue spread resulting from
9 the application of the stipulated methodology in UE 233 is shown on Exhibit No. 204.

10 **Q. Did the Company revise the revenue spread for the October Update?**

11 A. Yes. The Company revised the revenue spread for the October update to align with
12 the loss adjusted sales that were used for the March Forecast filing. The practice of
13 updating the revenue spread for the October Update is consistent with the method
14 applied in the last three APCU filings in UE 242, UE 257, and UE 279. The loss
15 adjusted sales for the October Update were 653,468.079 MWh, whereas the loss
16 adjusted sales for the March Forecast is 640,595.652, a reduction of 12,872.427
17 MWh. The change in loss adjusted sales decreases the October Update revenue
18 requirement from \$1,058,618 to \$1,037,765, a decrease of \$20,853. Exhibit No. 204
19 also contains the revised October Update revenue spread.

20 **Q. What is the overall revenue impact of this year's combined October Update
21 and March Forecast compared to last year's combined October Update and
22 March Forecast using the rate spread methodology described above?**

23 A. Exhibit No. 205 provides a summary of the revenue change resulting from this year's
24 combined October Update and March Forecast as compared to current revenue. As
25 can be seen on line 12 of Exhibit No. 205, the overall revenue impact of this year's
26 combined October Update and March Forecast is a decrease of approximately \$0.7

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million or 1.36 percent overall. The \$0.7 million decrease reflects the \$2 million associated with the 2015 APCU (October Update and March Forecast) less the \$2.7 million currently included in Oregon customers' rates related to the 2014 APCU.

Q. Does this conclude your testimony?

A. Yes, it does.

Idaho Power/201
Witness: Scott Wright

BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

IDAHO POWER COMPANY

UE 293
MARCH FORECAST

Exhibit Accompanying Testimony of Scott Wright
March 10, 2015, Mid-Columbia Price Curve for April 2015 – March 2016

March 20, 2015

Idaho Power/202
Witness: Scott Wright

BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

IDAHO POWER COMPANY

UE 293
MARCH FORECAST

Exhibit Accompanying Testimony of Scott Wright
Power Supply Costs for April 1, 2015 – March 31, 2016

March 20, 2015

Idaho Power/202
Wright/1

IPCO POWER SUPPLY EXPENSES FOR APRIL 1, 2015 – MARCH 31, 2016 – (One Hydro Condition)
Reprinted Using UE 195 Settlement Methodology – March Forecast

Line No.	April	May	June	July	August	September	October	November	December	January	February	March	Annual
1	692,364.6	898,710.5	635,505.0	614,563.0	476,113.4	472,334.0	511,207.8	408,394.7	620,427.9	703,527.0	874,627.3	724,608.7	7,632,373.9
2	-	10,981.8	184,872.8	375,266.1	369,544.4	208,454.5	163,866.0	198,862.6	272,676.7	136,632.0	22,847.0	61,360.0	2,005,063.9
3	-	349.5	5,461.6	10,373.3	10,720.7	6,093.5	4,879.2	5,926.7	8,050.3	4,191.6	727.2	1,932.6	99,206.1
4	3,093.7	-	18,898.9	37,647.1	37,223.6	29,781.4	25,008.6	27,144.2	40,955.0	27,387.1	15,621.5	19,694.3	282,455.3
5	92.6	-	488.5	951.9	938.4	765.8	649.3	696.0	1,025.1	736.5	435.3	532.2	7,311.7
6	-	-	-	39,248.5	-	-	-	-	12,469.7	-	-	-	51,718.2
7	-	-	-	1,434.9	-	-	-	-	481.3	-	-	-	1,916.2
8	199,895.6	146,544.6	181,082.9	198,498.8	198,559.8	191,255.3	191,148.6	174,220.9	195,399.9	181,849.0	149,510.5	176,659.0	2,124,665.8
9	2,557.1	2,612.3	3,202.1	3,598.5	3,704.5	3,591.3	3,765.0	3,963.7	4,694.9	4,469.3	3,965.1	4,017.3	43,979.0
10	217.2	11.3	16,152.1	66,220.3	53,253.2	31,807.3	4,200.3	142.2	310.2	109.7	46.6	-	172,470.2
11	6.5	0.3	469.7	2,001.0	1,846.5	979.3	135.2	5.3	12.5	4.4	1.8	-	5,262.4
12	-	-	2,331.8	44,385.1	27,246.4	6,281.6	432.1	-	-	-	-	-	80,676.9
13	-	-	69.0	1,346.0	849.0	196.5	14.1	-	-	-	-	-	2,474.6
14	737.6	761.7	746.6	780.3	780.3	755.6	761.7	737.6	761.7	761.7	713.6	761.7	9,059.8
Purchased Power (Excluding CSPP)													
15	37,218.4	14,138.1	135,154.1	138,973.0	161,040.4	103,418.6	43,901.2	104,271.2	71,621.3	103,519.4	12,951.1	34,892.6	961,129.5
16	23,518.2	24,014.7	23,574.3	25,612.0	26,462.2	20,831.4	22,703.6	23,844.0	26,274.9	27,546.2	23,761.2	27,281.8	296,404.6
17	13,589.7	10,684.5	11,067.6	7,824.1	9,991.1	11,060.4	14,749.6	19,041.5	18,746.8	16,577.7	16,242.3	16,242.3	158,313.9
18	6,109.5	5,408.3	5,093.9	5,657.0	6,224.0	5,627.0	7,569.9	6,559.2	6,791.4	6,789.2	6,564.6	6,484.3	74,322.2
19	80,415.8	54,245.7	174,889.8	179,066.0	202,317.7	139,379.5	85,235.1	149,420.4	123,729.1	156,601.6	59,984.7	84,881.1	1,490,170.2
20	830.1	327.5	3,314.2	4,294.0	4,974.7	2,937.2	1,130.6	2,805.0	2,085.1	2,852.6	337.9	795.7	26,684.5
21	987.5	1,008.4	1,346.8	1,824.5	1,814.3	1,190.1	1,297.1	1,634.7	1,801.4	1,621.1	1,398.3	1,179.1	17,103.3
22	1,062.2	836.4	1,181.9	1,002.7	1,031.4	1,181.1	1,890.2	2,440.2	2,048.5	2,048.5	1,822.4	1,300.8	16,950.0
23	278.4	246.5	315.8	420.9	433.3	339.2	469.3	488.0	505.3	429.8	415.5	301.7	4,643.7
24	3,168.2	2,418.8	6,158.7	7,542.1	8,374.5	5,497.9	4,078.1	6,817.9	6,831.9	6,951.9	3,974.1	3,577.4	65,381.5
Surplus Sales													
25	55,882.1	121,674.7	8,832.6	4,534.8	5,352.7	6,895.7	33,095.4	4,545.4	24,019.0	10,154.4	94,798.2	62,289.2	432,074.2
26	1,263.2	2,539.2	167.4	102.5	163.3	165.4	746.9	113.9	702.2	278.9	2,426.4	1,411.5	10,080.8
27	55.9	121.7	8.8	4.5	5.4	6.9	33.1	4.5	24.0	10.2	94.8	62.3	432.1
28	1,207.4	2,417.6	159.6	98.0	157.9	158.5	713.8	109.4	678.2	288.7	2,331.6	1,349.2	9,648.7
29	-	-	-	54,600.0	31,200.0	-	-	-	-	-	-	-	85,800.0
30	-	-	-	1,208.8	1,099.2	-	-	-	-	-	-	-	2,308.0
31	5,344.7	3,724.9	16,437.6	29,638.9	27,955.0	17,721.4	13,568.8	18,057.7	21,379.5	16,866.5	7,085.6	9,471.8	187,250.5
32	13,737.5	15,942.2	17,899.9	20,578.4	17,603.0	14,582.1	13,400.0	13,420.4	13,285.1	11,173.2	12,347.9	11,021.4	174,891.0
33	19,082.2	19,567.1	34,337.5	50,217.2	45,558.0	32,303.6	26,966.8	31,478.1	34,664.6	28,039.8	19,433.5	20,493.2	362,141.5
34	1,021,475	1,027,715	1,200,248	1,443,007	1,527,416	1,385,154	1,106,348	1,026,179	1,150,844	1,280,412	1,213,909	1,101,751	14,484,458
35	720	744	720	744	744	720	744	720	744	744	696	744	8784
36	18.68	19.04	28.61	34.80	29.83	23.32	24.37	30.68	30.12	321.90	16.01	18.60	25.00
Prices Used in Purchased Power & Surplus Sales Above:													
37	14.00%	56.43%	61.72%	70.03%	43.22%	60.89%	65.00%	39.95%	17.88%	25.00%	12.91%	17.79%	17.79%
38	26.08	25.92	26.91	33.14	34.96	30.44	26.96	28.78	32.47	30.70	28.94	25.26	25.26
39	69.89%	54.27%	13.37%	2.78%	76.44%	31.81%	45.76%	62.13%	83.44%	80.98%	72.32%	60.89%	60.89%
40	24.20	24.05	24.97	30.75	32.44	28.25	26.02	26.70	30.13	28.49	26.85	23.43	23.43
41	86.00%	43.57%	38.28%	29.97%	56.78%	39.11%	35.00%	60.05%	82.12%	75.00%	87.09%	82.21%	82.21%
42	21.69	19.60	20.67	25.65	27.79	25.22	23.51	25.65	26.38	26.51	25.60	22.28	22.28
43	30.11%	45.73%	86.63%	97.22%	23.56%	68.19%	54.24%	37.87%	16.56%	19.02%	27.68%	19.11%	19.11%
44	18.91	17.03	18.03	22.37	24.24	22.00	20.50	22.37	24.75	23.12	22.32	19.43	19.43

Idaho Power/203
Witness: Scott Wright

BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

IDAHO POWER COMPANY

UE 293
MARCH FORECAST

Exhibit Accompanying Testimony of Scott Wright
Annual Power Cost Update for April 2015 – March 2016

March 20, 2015

ANNUAL POWER COST UPDATE
April 2015 - March 2016

<u>Line</u>	<u>OCTOBER APCU</u>	
1	Forecast of Normalized Sales (MWh)	14,484,458
2	Total Net Power Supply Expense	<u>\$339,496,868</u>
3	October APCU Rate (\$/MWh)	\$23.44
	 <u>MARCH FORECAST</u>	
4	Forecast of Normalized Sales (MWh)	14,484,458
5	Total Net Power Supply Expense	<u>\$362,141,482</u>
6	March Forecast Rate (\$/MWh)	\$25.00
7	Sales Adjusted Forecast Power Cost Change	\$22,595,754
8	Portion of Change Allowed	<u>95%</u>
9	Forecast Change Allowed	\$21,465,967
10	March Forecast Rate Adjustment (\$/MWh)	\$1.48
11	<u>Combined Rate (\$/MWh)</u>	<u>\$24.92</u>

Idaho Power/204
Witness: Scott Wright

BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

IDAHO POWER COMPANY

UE 293
MARCH FORECAST

Exhibit Accompanying Testimony of Scott Wright
Revenue Spread for October Update and March Forecast

March 20, 2015

Idaho Power Company
Rate Spread Exhibit for October Update APCU

General Rate Case (UE 233): Marginal Cost-of-Service Study and Stipulated Revenue Spread
2011 Test Period

Line	(A) TOTAL SYSTEM	(B) RESIDENTIAL	(C) GEN SRV SECONDARY	(D) GEN SRV PRIMARY	(E) GEN SRV TRANS	(F) GEN SRV TRANS	(G) AREA LIGHTING	(H) LG POWER PRIMARY	(I) LG POWER TRANS	(J) IRRIGATION SECONDARY	(K) UNMETERED GEN SERVICE	(L) MUNICIPAL ST LIGHT	(M) TRAFFIC CONTROL
1	Normalized Sales (kWh)	650,158,581	199,842,419	17,842,886	114,256,216	15,099,088	483,936	179,189,047	74,155,867	46,649,265	12,900	776,108	16,328
2	Current Revenue	\$39,872,591	\$15,355,952	\$1,559,400	\$6,975,915	\$796,102	\$112,462	\$8,213,065	\$3,123,393	\$3,494,271	\$972	\$123,851	\$1,231
3	Demand Related Marginal Cost	\$11,049,450	\$4,082,443	\$269,043	\$1,671,178	\$207,813	\$625	\$1,790,415	\$1,483,718	\$1,508,400	\$158	\$1,035	\$200
4	Generation - Staff Adj.	\$12,432,118	\$4,593,287	\$301,564	\$1,880,300	\$233,817	\$703	\$2,014,458	\$1,693,382	\$1,697,153	\$177	\$1,165	\$225
5	Transmission - Staff Adj.	\$6,945,625	\$3,215,110	\$181,233	\$1,319,947	\$100,763	\$0	\$796,946	\$0	\$1,314,267	\$161	\$9,350	\$69
6	Distribution	\$28,547,004	\$8,940,577	\$602,452	\$5,140,232	\$649,911	\$21,383	\$7,662,010	\$3,097,424	\$2,079,568	\$83	\$34,414	\$722
7	Generation - Staff Adj.	\$4,144,040	\$1,297,863	\$116,488	\$746,184	\$94,345	\$3,104	\$1,112,259	\$449,639	\$301,881	\$93	\$4,996	\$105
8	Simple-Summed Energy-Related and Demand-Related Marginal Costs	\$39,596,454	\$13,023,020	\$1,070,495	\$6,811,410	\$857,724	\$32,008	\$9,452,425	\$4,581,142	\$3,587,968	\$728	\$35,449	\$922
9	Transmission Marginal Costs - Staff Adj.	\$16,576,157	\$5,991,160	\$418,072	\$2,626,484	\$328,162	\$3,807	\$3,125,717	\$2,119,021	\$1,999,034	\$260	\$6,160	\$330
10	Transmission Marginal Costs - Staff Adj.	\$2,805,903	\$1,967,110	\$385,570	\$177,410	\$6,719	\$0	\$15,208	\$2,535	\$246,967	\$228	\$1,892	\$873
11	Customer Related Marginal Cost	\$25,202,690	\$8,269,003	\$981,357	\$4,335,384	\$545,931	\$14,008	\$6,016,360	\$2,915,844	\$2,283,701	\$463	\$22,563	\$587
12	Total Functionalized Revenue Requirement	\$4,272,366	\$1,518,397	\$107,755	\$676,954	\$84,581	\$981	\$805,885	\$546,160	\$515,234	\$67	\$1,588	\$85
13	Generation - Staff Adj.	\$8,930,530	\$4,133,917	\$233,025	\$1,697,158	\$129,585	\$7,378	\$1,027,267	\$0	\$1,699,855	\$207	\$12,022	\$114
14	Distribution	\$2,859,472	\$2,004,685	\$392,931	\$180,797	\$6,847	\$0	\$15,498	\$2,583	\$251,682	\$232	\$1,928	\$880
15	Demand-Related	\$419,424	\$188,447	\$34,356	\$12,375	\$69	\$14	\$76,778	\$14	\$21,953	\$42	\$83,209	\$83
16	Customer-Related	\$41,684,482	\$16,134,429	\$1,449,425	\$6,902,669	\$767,013	\$101,145	\$7,865,094	\$3,484,601	\$4,762,425	\$1,011	\$121,310	\$1,759
17	Revenue Deficiency - Staff Adj. Allocation	\$1,810,890	\$776,497	(\$109,975)	(\$73,246)	(\$31,089)	(\$11,317)	(\$347,971)	\$341,208	\$1,308,154	\$39	(\$2,541)	\$528
18	% Increase Required by Staff Adj. Alloc. Approach	4.54%	5.07%	-7.05%	-1.05%	-3.90%	-10.08%	-4.24%	10.92%	37.87%	4.02%	-2.05%	42.91%
19	% Increase Recommended per Stipulation	4.54%	5.82%	2.83%	2.83%	2.83%	0.00%	2.83%	6.81%	6.81%	4.56%	2.83%	6.81%
20	% Increase Recommended per Stipulation	0.64%	0.89%	0.09%	0.05%	0.05%	0.32%	0.47%	0.45%	0.79%	0.078	0.163	0.086
21	Average Rate Given Stipulation (\$/kWh)	\$41,694,481	\$16,219,280	\$1,603,553	\$7,173,432	\$820,700	\$112,462	\$8,445,610	\$3,336,170	\$3,689,589	\$1,016	\$127,358	\$1,315
22	Final Revenue Allocation	\$1,298,993	\$427,230	\$35,118	\$223,454	\$28,138	\$722	\$310,094	\$150,288	\$117,706	\$24	\$1,163	\$30
23	2012 October Update APCU Cost of Service (UE 242)	\$1,298,993	\$427,230	\$35,118	\$223,454	\$28,138	\$722	\$310,094	\$150,288	\$117,706	\$24	\$1,163	\$30
24	2013 October Update APCU (UE 257): Baseline Revenue Requirement Spread and Rates Development Employing the UE 233 Test Period Figures	\$2,298,631	\$755,972	\$62,141	\$395,395	\$49,790	\$1,278	\$548,703	\$265,930	\$208,278	\$42	\$2,058	\$54
25	2014 October Update APCU (UE 279): Baseline Revenue Requirement Spread and Rates Development Employing the UE 233 Test Period Figures	\$837,437	\$-275,428	\$-22,640	\$-144,056	\$-18,140	\$-3,239	\$-199,912	\$-96,868	\$-75,663	\$-15	\$-750	\$-19
26	2015 October Update APCU: Baseline Revenue Requirement Spread and Rates Development Employing the UE 233 Test Period Figures	\$1,037,765	\$341,314	\$28,056	\$178,517	\$22,480	\$4,014	\$577	\$247,734	\$120,065	\$19	\$929	\$24
27	% Increase Required Due to APCU (Proposed) (Line 36 + Line 42 + Line 43 + Line 44 + Line 45)	2.49%	2.10%	1.75%	2.49%	2.74%	2.59%	2.93%	3.60%	2.55%	1.88%	6.73%	1.84%
28	Proposed Combined Revenue Spread (Line 36 + Line 42 + Line 43 + Line 44 + Line 45)	\$45,462,332	\$17,467,369	\$1,706,228	\$7,826,741	\$902,967	\$114,573	\$9,352,229	\$3,775,565	\$4,033,725	\$1,086	\$130,758	\$1,403
29	Loss-Adjusted 2011 Normalized Sales (kWh)	650,158,581	199,842,419	17,842,886	114,256,218	15,099,088	483,936	179,189,047	74,155,867	46,649,265	12,900	776,108	16,328
30	2015 October Update APCU incremental Rate given 2011 Test Period Sales (Mills per kWh)	1.595	1.717	1.572	1.552	1.489	1.192	1.383	1.619	2.016	1.478	1.194	1.480
31	APCU incremental Rate for 2015 October Update (Mills per kWh)	1.620	1.799	1.605	1.509	1.302	1.282	1.637	1.303	1.868	2.656	0.970	1.171
32	Loss-Adjusted 2015-2016 Normalized Sales (kWh)	640,595,652	189,752,682	17,484,465	118,300,685	17,270,319	448,841	151,293,305	92,142,373	50,336,277	7,178	957,896	20,640
33	Projected October Update APCU 2015-2016 Revenues (Line 50 * Line 51)	\$1,037,765	\$341,314	\$28,056	\$178,517	\$22,480	\$4,014	\$577	\$247,734	\$120,065	\$19	\$929	\$24

Line	Description	2015 October Update APCU Revenues = (\$1.62)/MWh x 640,595,652 MWhs =	2016 October Update APCU Revenues = (\$1.62)/MWh x 640,595,652 MWhs =
34	Notes:		
35	1 2015 October Update APCU Revenues = (\$1.62)/MWh x 640,595,652 MWhs =	\$1,037,765	\$1,037,765
36	2 (\$1.62) = \$23.44 (2015 October Update) - \$21.82 (2014 October APCU Rate)	\$1,037,765	\$1,037,765

Idaho Power Company
Rate Spread Exhibit for March Forecast APCU

General Rate Case (UE 233): Marginal Cost-of-Service Study and Stipulated Revenue Spread												
2011 Test Period												
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
TOTAL SYSTEM	RESIDENTIAL	GEN SRV SECONDARY	GEN SRV SECONDARY	GEN SRV PRIMARY	GEN SRV TRANS	AREA LIGHTING	LG POWER PRIMARY	LG POWER TRANS	IRRIGATION SECONDARY	UNMETERED GEN SERVICE	MUNICIPAL ST LIGHT	TRAFFIC CONTROL
(1)	(2)	(3-S)	(3-P)	(3-T)	(3-L)	(15)	(19-P)	(19-T)	(24-S)	(40)	(41)	(42)
650,158,591	198,842,419	17,842,896	114,256,218	15,099,088	2,832,509	483,936	179,189,047	74,155,867	46,649,265	12,900	778,108	16,328
\$39,873,591	\$15,355,932	\$1,559,400	\$6,975,915	\$798,102	\$154,997	\$112,462	\$8,213,065	\$3,123,393	\$3,454,271	\$972	\$123,851	\$1,231
\$11,049,450	\$4,082,443	\$268,043	\$1,671,178	\$207,813	\$35,425	\$625	\$1,790,415	\$1,483,718	\$1,508,400	\$158	\$1,035	\$200
\$12,432,118	\$4,593,297	\$1,890,300	\$1,890,300	\$233,817	\$39,658	\$703	\$2,014,458	\$1,689,382	\$1,687,153	\$177	\$1,165	\$225
\$6,945,625	\$3,215,110	\$161,233	\$1,319,947	\$100,783	\$0	\$5,738	\$798,946	\$0	\$1,314,287	\$161	\$9,350	\$89
\$28,547,004	\$8,940,577	\$802,452	\$5,140,232	\$649,911	\$117,743	\$21,383	\$7,662,010	\$3,087,424	\$2,079,588	\$570	\$34,414	\$722
\$4,144,040	\$1,297,863	\$116,488	\$746,184	\$94,345	\$17,092	\$3,104	\$1,112,259	\$449,639	\$301,661	\$83	\$4,996	\$105
\$39,596,454	\$13,023,020	\$1,070,495	\$6,811,410	\$857,724	\$153,168	\$22,008	\$9,452,425	\$4,581,142	\$3,387,968	\$728	\$5,449	\$922
\$16,576,157	\$5,891,160	\$418,072	\$2,626,484	\$328,182	\$56,850	\$3,807	\$3,126,717	\$2,119,021	\$1,999,034	\$260	\$6,160	\$330
\$2,805,903	\$1,967,110	\$385,570	\$177,410	\$67,719	\$1,390	\$0	\$15,208	\$2,535	\$246,967	\$228	\$1,992	\$873
\$25,202,690	\$8,269,003	\$661,357	\$4,335,394	\$545,931	\$97,490	\$14,008	\$6,016,360	\$2,915,844	\$2,283,701	\$463	\$22,563	\$587
\$4,272,366	\$1,518,397	\$107,755	\$676,954	\$84,581	\$14,678	\$881	\$805,685	\$546,160	\$515,234	\$67	\$1,588	\$85
\$8,930,530	\$4,133,917	\$233,025	\$1,897,158	\$129,585	\$0	\$7,378	\$1,027,287	\$0	\$1,689,855	\$207	\$12,022	\$114
\$2,859,472	\$2,004,665	\$392,931	\$160,797	\$6,847	\$1,417	\$0	\$15,498	\$2,583	\$251,682	\$232	\$1,928	\$690
\$419,424	\$188,447	\$34,356	\$12,375	\$69	\$14	\$78,778	\$83	\$14	\$21,933	\$42	\$83,209	\$83
\$41,684,482	\$16,134,429	\$1,449,425	\$6,902,669	\$767,013	\$113,589	\$101,145	\$7,885,084	\$3,464,601	\$4,762,425	\$1,011	\$121,310	\$1,759
\$1,810,890	\$778,497	\$1,099,875	\$73,248	\$31,089	\$41,398	\$11,317	\$347,971	\$341,208	\$1,308,154	\$39	\$2,941	\$528
4.54%	5.07%	-7.05%	-1.05%	-3.90%	-26.71%	-10.05%	-4.24%	-10.92%	-37.87%	4.02%	-2.05%	42.91%
\$1,810,890	\$882,348	\$44,153	\$197,517	\$22,588	\$0	\$0	\$232,845	\$232,777	\$233,318	\$44	\$3,507	\$84
2.83%	2.83%	2.83%	2.83%	2.83%	0.00%	0.00%	2.83%	6.81%	6.81%	4.56%	2.83%	6.81%
0.0641	0.0816	0.0999	0.0528	0.0544	0.0547	0.2324	0.0471	0.0450	0.0791	0.0788	0.1637	0.0805
\$41,684,481	\$16,218,280	\$1,603,553	\$7,173,432	\$820,700	\$154,997	\$112,462	\$8,445,610	\$3,336,170	\$3,689,569	\$1,016	\$127,358	\$1,315

2015 March Forecast APCU: Baseline Revenue Requirement Spread and Rates Development Employing the UE 233 Test Period Figures													
2015 March Forecast APCU Cost of Service (Allocator -- Line 14)	\$948,082	\$311,818	\$25,631	\$163,090	\$20,537	\$3,667	\$527	\$226,325	\$109,689	\$65,909	\$17	\$849	\$22
% Increase Required Due to APCU (Proposed) (Line 42/Line 36)	2.27%	1.92%	1.60%	2.27%	2.50%	2.37%	0.47%	2.68%	3.29%	2.33%	1.71%	0.87%	1.68%
Proposed Combined Revenue Spread (Line 36 + Line 42)	\$42,632,562	\$16,530,098	\$1,629,164	\$7,336,521	\$841,236	\$155,664	\$112,989	\$8,671,935	\$3,445,859	\$3,775,497	\$1,034	\$128,207	\$1,337
Loss-Adjusted 2011 Normalized Sales (kWh)	650,158,591	198,842,419	17,842,896	114,256,218	15,099,088	2,832,509	483,936	179,189,047	74,155,867	46,649,265	12,900	778,108	16,328
2015 March Forecast Update APCU Incremental Rate given 2011 Test Period Sales (Mills per kWh) (1000*(Line 42/Line 45))	1.458	1.568	1.437	1.427	1.360	1.295	1.089	1.263	1.479	1.842	1.350	1.091	1.352
APCU Incremental Rate for 2015 March Forecast (Mills per kWh) (Line 46*(Column A)/(Line 45/Line 48))	1.480	1.643	1.466	1.379	1.189	1.421	1.171	1.496	1.190	1.707	2.427	0.886	1.070
Loss-Adjusted 2015-2016 Normalized Sales (kWh)	640,595,652	199,752,682	17,464,465	118,300,695	17,270,319	2,579,991	449,841	151,293,305	92,142,373	50,336,277	7,178	957,896	20,640
Projected March Forecast APCU 2015-2016 Revenues (Line 47 + Line 48)	\$948,082	\$311,818	\$25,631	\$163,090	\$20,537	\$3,667	\$527	\$226,325	\$109,689	\$65,909	\$17	\$849	\$22

Notes:
1 2015 March Forecast APCU Revenues = \$1.48/MWh x 640,595,652 MWh = \$ 948,082 (Line 49, Column A)

Idaho Power/205
Witness: Scott Wright

BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

IDAHO POWER COMPANY

UE 293
MARCH FORECAST

Exhibit Accompanying Testimony of Scott Wright

Summary of Revenue Charge

March 20, 2015

Idaho Power Company
Calculation of Revenue Impact
State of Oregon
October Update / March Forecast Filing
Effective June 1, 2015

Summary of Revenue Impact
Current Billed Revenue to Proposed Billed Revenue

Line No	Tariff Description	Rate Sch. No.	Average Number of Customers	Normalized Energy (kWh) ¹	Current Billed Revenue	Mills Per kWh	Total Adjustments to Billed Revenue	Proposed Total Billed Revenue	Mills Per kWh	Percent Change Billed to Billed Revenue
<u>Uniform Tariff Rates:</u>										
1	Residential Service	1	13,613	189,752,662	\$19,178,109	101.07	(\$234,724)	\$18,943,385	99.83	(1.22%)
2	Small General Service	7	2,460	17,484,465	\$1,873,898	107.18	(\$16,540)	\$1,857,357	106.23	(0.88%)
3	Large General Service	9	950	138,150,995	\$10,841,664	78.48	(\$157,266)	\$10,684,398	77.34	(1.45%)
4	Dusk to Dawn Lighting	15	0	449,841	\$111,618	248.13	(\$359)	\$111,259	247.33	(0.32%)
5	Large Power Service	19	6	243,435,678	\$15,270,682	62.73	(\$204,138)	\$15,066,543	61.89	(1.34%)
6	Agricultural Irrigation Service	24	1,743	50,336,277	\$5,015,535	99.64	(\$98,307)	\$4,917,228	97.69	(1.96%)
7	Unmetered General Service	40	2	7,178	\$696	97.02	(\$4)	\$693	96.50	(0.53%)
8	Street Lighting	41	25	957,896	\$155,954	162.81	(\$810)	\$155,144	161.96	(0.52%)
9	Traffic Control Lighting	42	7	20,640	\$1,976	95.74	(\$15)	\$1,961	95.01	(0.76%)
10	Total Uniform Tariffs		18,806	640,595,652	\$52,450,133	81.88	(\$712,164)	\$51,737,969	80.77	(1.36%)
11	Total Oregon Retail Sales		18,806	640,595,652	\$52,450,133	81.88	(\$712,164)	\$51,737,969	80.77	(1.36%)

(1) Updated April 2015-March 2016 Test Year