

## **Appendix J**

### **PacifiCorp Irrigation Power Cost Supporting Calculations and Documentation**

PacifiCorp 2017 - 2018 Average  
Irrigation Power Price Calculations

State of California

## USBR/Klamath Project - AWIA Power Cost Benchmark Analysis

PacifiCorp California Irrigation Rate Schedule PA-20 Worksheet

Calendar Year 2017 and 2018 Irrigation Rate Summary

Period	Number of Days	Total Revenue (\$)	Total Usage (Kwh)	Average Rate (cents/Kwh)
Jan 1, 2017 - Apr 20, 2017	110	14,579,077	94,292,504	15.462
Apr 21, 2017 - Oct 2, 2017	165	14,518,729	94,292,504	15.398
Oct 3, 2017 - Dec 31, 2017	90	14,518,729	94,292,504	15.398
Jan 1, 2018 - Mar 31, 2017	90	14,459,907	94,292,504	15.335
Apr 1, 2018 - Dec 31, 2018	275	14,636,234	94,292,504	15.522
Calendar Year 2017		14,536,916	94,292,504	15.417
Calendar Year 2018		14,592,756	94,292,504	15.476

# **USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**

PacifiCorp California Irrigation Rate Schedule PA-20 Worksheet

Actual Rates Effective January 1, 2017 and Normalized Jan 2019 - Dec 2019 Usage Forecast from the 2019 California General Rate Case

Charge Type	Units	Tariff Base Rate	FERC Transmission Price	California Transmission Price	Generation Price	Public Purpose Charges				Generation Franchise Fee	Projected (Base) ECAC Price	Def. ECAC	GHG Schedule 92	CEMA Schedule 96	GHG Schedule 93	Klamath Dam Removal Schedule 199	Total Charges (\$)
						Schedule 99	Schedule 100	Schedule 191	Schedule 192								
Annual Load Size Charge																	
Single Phase	134	75.27															10,086
Three Phase, 50 KW or Less	1,354	75.27															101,916
Three Phase, 51 KW to 300 KW	526	155.48															81,782
Three Phase, Over 300 KW	5	155.48															777
Distribution Demand																	
Single Phase	650	16.27															10,576
Three Phase, 50 KW or Less	34,849	16.27															566,993
Three Phase, 51 KW to 300 KW	52,386	16.27															852,320
Three Phase, Over 300 KW	2,237	16.27															36,396
Generation and Transmission	420,637		1.45	1.36	(0.85)						0.57	0.08					1,097,863
Reactive Power																	56,582
Energy Charge	94,292,504	3.7680			3.8270	0.0430	0.6490	0.4700	0.0450	0.0220	2.8990	0.4010	0.6460	0.0640	(0.5170)	0.2160	11,817,680
Schedule 115 Adjustments																	(53,894)
<b>Totals</b>	<b>94,292,504</b>																<b>14,579,077</b>
<b>Annual Average Rate (cents/Kwh)</b>																	<b>15.462</b>

Notes: 1) Schedule PA-20 customers with a peak load demand of greater than 20 KW are not eligible to receive the California Climate Credit (GHG Schedule 93).

# **USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**

PacifiCorp California Irrigation Rate Schedule PA-20 Worksheet

Actual Rates Effective April 21, 2017 and Normalized Jan 2019 - Dec 2019 Usage Forecast from the 2019 California General Rate Case

Charge Type	Units	Tariff Base Rate	FERC Transmission Price	California Transmission Price	Generation Price	Public Purpose Charges				Generation Franchise Fee	Projected (Base) ECAC Price	Def. ECAC	GHG Schedule 92	CEMA Schedule 96	GHG Schedule 93	Klamath Dam Removal Schedule 199	Total Charges (\$)
						Schedule 99	Schedule 100	Schedule 191	Schedule 192								
Annual Load Size Charge																	
Single Phase	134	75.27															10,086
Three Phase, 50 KW or Less	1,354	75.27															101,916
Three Phase, 51 KW to 300 KW	526	155.48															81,782
Three Phase, Over 300 KW	5	155.48															777
Distribution Demand																	
Single Phase	650	16.27															10,576
Three Phase, 50 KW or Less	34,849	16.27															566,993
Three Phase, 51 KW to 300 KW	52,386	16.27															852,320
Three Phase, Over 300 KW	2,237	16.27															36,396
Generation and Transmission	420,637		1.45	1.36	(0.85)						0.57	0.08					1,097,863
Reactive Power																	56,582
Energy Charge	94,292,504	3.7680			3.8270	0.0430	0.6490	0.4700	0.0450	0.0220	2.8990	0.4010	0.6460	0.0000	(0.5170)	0.2160	11,757,332
Schedule 115 Adjustments																	(53,894)
<b>Totals</b>	<b>94,292,504</b>																<b>14,518,729</b>
<b>Annual Average Rate (cents/Kwh)</b>																	<b>15.398</b>

Notes: 1) Schedule PA-20 customers with a peak load demand of greater than 20 KW are not eligible to receive the California Climate Credit (GHG Schedule 93).

# **USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**

PacifiCorp California Irrigation Rate Schedule PA-20 Worksheet

Actual Rates Effective October 2, 2017 and Normalized Jan 2019 - Dec 2019 Usage Forecast from the 2019 California General Rate Case

Charge Type	Units	Tariff Base Rate	FERC Transmission Price	California Transmission Price	Generation Price	Public Purpose Charges				Generation Franchise Fee	Projected (Base) ECAC Price	Def. ECAC	GHG Schedule 92	CEMA Schedule 96	GHG Schedule 93	Klamath Dam Removal Schedule 199	Total Charges (\$)
						Schedule 99	Schedule 100	Schedule 191	Schedule 192								
Annual Load Size Charge																	
Single Phase	134	75.27															10,086
Three Phase, 50 KW or Less	1,354	75.27															101,916
Three Phase, 51 KW to 300 KW	526	155.48															81,782
Three Phase, Over 300 KW	5	155.48															777
Distribution Demand																	
Single Phase	650	16.27															10,576
Three Phase, 50 KW or Less	34,849	16.27															566,993
Three Phase, 51 KW to 300 KW	52,386	16.27															852,320
Three Phase, Over 300 KW	2,237	16.27															36,396
Generation and Transmission	420,637		1.45	1.36	(0.85)						0.57	0.08					1,097,863
Reactive Power																	56,582
Energy Charge	94,292,504	3.7680			3.8270	0.0430	0.6490	0.4700	0.0450	0.0220	2.8990	0.4010	0.6460	0.0000	(0.5170)	0.2160	11,757,332
Schedule 115 Adjustments																	(53,894)
<b>Totals</b>	<b>94,292,504</b>																<b>14,518,729</b>
<b>Annual Average Rate (cents/Kwh)</b>																	<b>15.398</b>

Notes: 1) Schedule PA-20 customers with a peak load demand of greater than 20 KW are not eligible to receive the California Climate Credit (GHG Schedule 93).

# **USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**

PacifiCorp California Irrigation Rate Schedule PA-20 Worksheet

Actual Rates Effective January 1, 2018 and Normalized Jan 2019 - Dec 2019 Usage Forecast from the 2019 California General Rate Case

Charge Type	Units	Tariff Base Rate	FERC Transmission Price	California Transmission Price	Generation Price	Public Purpose Charges				Generation Franchise Fee	Projected (Base) ECAC Price	Def. ECAC	GHG Schedule 92	CEMA Schedule 96	GHG Schedule 93	Klamath Dam Removal Schedule 199	Total Charges (\$)
						Schedule 99	Schedule 100	Schedule 191	Schedule 192								
Annual Load Size Charge																	
Single Phase	134	75.27															10,086
Three Phase, 50 KW or Less	1,354	75.27															101,916
Three Phase, 51 KW to 300 KW	526	155.48															81,782
Three Phase, Over 300 KW	5	155.48															777
Distribution Demand																	
Single Phase	650	16.27															10,576
Three Phase, 50 KW or Less	34,849	16.27															566,993
Three Phase, 51 KW to 300 KW	52,386	16.27															852,320
Three Phase, Over 300 KW	2,237	16.27															36,396
Generation and Transmission	420,637		1.45	1.36	(0.85)						0.57	0.05					1,085,243
Reactive Power																	56,582
Energy Charge	94,292,504	3.7680			3.8270	0.0460	0.6490	0.4700	0.0450	0.0220	2.8990	0.2420	0.7880	0.0000	(0.5520)	0.2160	11,711,129
Schedule 115 Adjustments																	(53,894)
<b>Totals</b>	<b>94,292,504</b>																<b>14,459,907</b>
<b>Annual Average Rate (cents/Kwh)</b>																	<b>15.335</b>

Notes: 1) Schedule PA-20 customers with a peak load demand of greater than 20 KW are not eligible to receive the California Climate Credit (GHG Schedule 93).

**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp California Irrigation Rate Schedule PA-20 Worksheet**  
**Actual Rates Effective April 1, 2018 and Normalized Jan 2019 - Dec 2019 Usage Forecast from the 2019 California General Rate Case**

Charge Type	Units	Tariff Base Rate	FERC Transmission Price	California Transmission Price	Generation Price	Public Purpose Charges				Generation Franchise Fee	Projected (Base) ECAC Price	Def. ECAC	GHG Schedule 92	CEMA Schedule 96	GHG Schedule 93	Klamath Dam Removal Schedule 199	Total Charges (\$)
						Schedule 99	Schedule 100	Schedule 191	Schedule 192								
Annual Load Size Charge																	
Single Phase	134	75.27															10,086
Three Phase, 50 KW or Less	1,354	75.27															101,916
Three Phase, 51 KW to 300 KW	526	155.48															81,782
Three Phase, Over 300 KW	5	155.48															777
Distribution Demand																	
Single Phase	650	16.27															10,576
Three Phase, 50 KW or Less	34,849	16.27															566,993
Three Phase, 51 KW to 300 KW	52,386	16.27															852,320
Three Phase, Over 300 KW	2,237	16.27															36,396
Generation and Transmission	420,637		1.45	1.36	(0.85)						0.57	0.05					1,085,243
Reactive Power																	56,582
Energy Charge	94,292,504	3.7680			3.8270	0.0460	0.6490	0.4700	0.0450	0.0220	2.8990	0.2420	0.7880	0.1870	(0.5520)	0.2160	11,887,456
Schedule 115 Adjustments																	(53,894)
<b>Totals</b>	<b>94,292,504</b>																<b>14,636,234</b>
<b>Annual Average Rate (cents/Kwh)</b>																	<b>15.522</b>

Notes: 1) Schedule PA-20 customers with a peak load demand of greater than 20 KW are not eligible to receive the California Climate Credit (GHG Schedule 93).



## USBR/Klamath Project - AWIA Power Cost Benchmark Analysis

PacifiCorp California Irrigation Rate Schedule PA-20 Worksheet

Actual Base Rates in Effect from Jul 2016 - Jun 2017 and Normalized Jan 2019 - Dec 2019 Usage Forecast from the 2019 California General Rate Case

Charge Type	Units	Tariff Base Rate	FERC Transmission Price	California Transmission Price	Generation Price	Generation Franchise Fee	Projected (Base) ECAC Price	Total Charges (\$)
Annual Load Size Charge								
Single Phase	134	75.27						10,086
Three Phase, 50 KW or Less	1,354	75.27						101,916
Three Phase, 51 KW to 300 KW	526	155.48						81,782
Three Phase, Over 300 KW	5	155.48						777
Distribution Demand								
Single Phase	650	16.27						10,576
Three Phase, 50 KW or Less	34,849	16.27						566,993
Three Phase, 51 KW to 300 KW	52,386	16.27						852,320
Three Phase, Over 300 KW	2,237	16.27						36,396
Generation and Transmission	420,637		1.45	1.36	(0.85)		0.57	1,064,212
Reactive Power								56,582
Energy Charge	94,292,504	3.7680			3.8270	0.0220	2.8990	9,915,800
Schedule 115 Adjustments								(53,894)
<b>Totals</b>	<b>94,292,504</b>							<b>12,643,546</b>
	<b>Annual Average Rate (cents/Kwh)</b>							<b>13.409</b>

Data source: Pacific Power 2019 State of California General Rate Case filing, California Public Utilities Commission  
Docket No. A-18-04-002, Exhibit No. PAC/2002 (pages 3 & 9) to the Testimony of Judith M. Ridenour.

PacifiCorp 2017 - 2018 Average  
Irrigation Power Price Calculations

State of Idaho

## USBR/Klamath Project - AWIA Power Cost Benchmark Analysis

PacifiCorp/Rocky Mountain Power Idaho Irrigation Rate Schedule 10 Worksheet

Calendar Year 2017 and 2018 Irrigation Rate Summary

Period	Number of Days	Total Revenue (\$)	Total Usage (Kwh)	Average Rate (cents/Kwh)
Jan 1, 2017 - May 31, 2017	151	51,774,504	533,515,541	9.704
Jun 1, 2017 - Sep 30, 2017	122	51,297,814	533,515,541	9.615
Oct 1, 2017 - May 31, 2018	243	50,971,765	533,515,541	9.554
Jun 1, 2018 - Dec 31, 2018	214	49,454,025	533,515,541	9.269
Calendar Year 2017		51,412,838	533,515,541	9.637
Calendar Year 2018		50,081,912	533,515,541	9.387

**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp/Rocky Mountain Power Idaho Irrigation Rate Schedule 10 Worksheet**  
**Actual Rates Effective January 1, 2017 and Normalized Usage from the 2006 State of Idaho General Rate Case**

Charge Type	Units	Tariff Base Rate	Schedule 94 (cents/Kwh)	Schedule 197 (cents/Kwh)	BPA ResEx Credit/Sch 34 (cents/Kwh)	DSM Sch 191 (%)	Total Charges (\$)
Small Customer Charge - Summer Season (\$/Month)	2,206	14.00				2.70	126,871
Large Customer Charge - Summer Season (\$/Month)	13,904	41.00				2.70	2,341,823
Post-Summer Season Customer Charge (\$/Month)	11,459	23.00				2.70	2,165,384
Total Customer Charges	27,569						
Demand Charges (\$/KW)	1,289,312	5.9800				2.70	7,918,258
Energy Charges Summer Season (Cents/Kwh)							
First 25,000 Kwh (Jun 1 - Sep 15)	178,587,572	8.8711	0.4280	0.0000	(0.7762)	2.70	15,669,230
Next 225,000 Kwh (Jun 1 - Sep 15)	243,286,269	6.6296	0.4280	0.0000	(0.7762)	2.70	15,745,378
All Additional Kwh (Jun 1 - Sep 15)	24,859,497	4.9616	0.4280	0.0000	0.0000	2.70	1,376,003
Energy Charges Post-Summer Season (Cents/Kwh)							
All Kwh (Sep 16 - May 31)	86,782,203	7.5441	0.4280	0.0000	(0.7762)	2.70	6,431,556
<b>Totals</b>	<b>533,515,541</b>						<b>51,774,504</b>

**Annual Average Rate (cents/Kwh)                      9.704**

Notes: 1) The Tariff Base Rates and the Rider Schedule rates were taken from the Rocky Mountain Power - Idaho Schedule 10 Price Summary Sheets as provided by PacifiCorp.

2) The Units (i.e. normalized usage figures) were taken from Rocky Mountain Power's 2006 State of Idaho General Rate Case Filing, Idaho Public Utilities Commission Case No. PAC-E-06-04, Exhibit Nos. 2 & 3 to the testimony of Jeffrey K. Larsen.

3) The Schedule 191 charges are computed prior to the application of the BPA ResEx/Schedule 34 Credit, as is specified in Rocky Mountain Power's Schedule 191 Tariff Sheet.

**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp/Rocky Mountain Power Idaho Irrigation Rate Schedule 10 Worksheet**  
**Actual Rates Effective June 1, 2017 and Normalized Usage from the 2006 Idaho General Rate Case**

Charge Type	Units	Tariff Base Rate	Schedule 94 (cents/Kwh)	Schedule 197 (cents/Kwh)	BPA ResEx Credit/Sch 34 (cents/Kwh)	DSM Sch 191 (%)	Total Charges (\$)
Small Customer Charge - Summer Season (\$/Month)	2,206	14.00				2.70	126,871
Large Customer Charge - Summer Season (\$/Month)	13,904	41.00				2.70	2,341,823
Post-Summer Season Customer Charge (\$/Month)	11,459	23.00				2.70	2,165,384
Total Customer Charges	27,569						
Demand Charges (\$/KW)	1,289,312	5.9800				2.70	7,918,258
Energy Charges Summer Season (Cents/Kwh)							
First 25,000 Kwh (Jun 1 - Sep 15)	178,587,572	8.8711	0.3410	0.0000	(0.7762)	2.70	15,509,664
Next 225,000 Kwh (Jun 1 - Sep 15)	243,286,269	6.6296	0.3410	0.0000	(0.7762)	2.70	15,528,004
All Additional Kwh (Jun 1 - Sep 15)	24,859,497	4.9616	0.3410	0.0000	0.0000	2.70	1,353,791
Energy Charges Post-Summer Season (Cents/Kwh)							
All Kwh (Sep 16 - May 31)	86,782,203	7.5441	0.3410	0.0000	(0.7762)	2.70	6,354,017
<b>Totals</b>	<b>533,515,541</b>						<b>51,297,814</b>

**Annual Average Rate (cents/Kwh)                      9.615**

Notes: 1) The Tariff Base Rates and the Rider Schedule rates were taken from the Rocky Mountain Power - Idaho Schedule 10 Price Summary Sheets as provided by PacifiCorp.

2) The Units (i.e. normalized usage figures) were taken from Rocky Mountain Power's 2006 State of Idaho General Rate Case Filing, Idaho Public Utilities Commission Case No. PAC-E-06-04, Exhibit Nos. 2 & 3 to the testimony of Jeffrey K. Larsen.

3) The Schedule 191 charges are computed prior to the application of the BPA ResEx/Schedule 34 Credit, as is specified in Rocky Mountain Power's Schedule 191 Tariff Sheet.

**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp/Rocky Mountain Power Idaho Irrigation Rate Schedule 10 Worksheet**  
**Actual Rates Effective October 1, 2017 and Normalized Usage from the 2006 Idaho General Rate Case**

Charge Type	Units	Tariff Base Rate	Schedule 94 (cents/Kwh)	Schedule 197 (cents/Kwh)	BPA ResEx Credit/Sch 34 (cents/Kwh)	DSM Sch 191 (%)	Total Charges (\$)
Small Customer Charge - Summer Season (\$/Month)	2,206	14.00				2.70	126,871
Large Customer Charge - Summer Season (\$/Month)	13,904	41.00				2.70	2,341,823
Post-Summer Season Customer Charge (\$/Month)	11,459	23.00				2.70	2,165,384
Total Customer Charges	27,569						
Demand Charges (\$/KW)	1,289,312	5.9800				2.70	7,918,258
Energy Charges Summer Season (Cents/Kwh)							
First 25,000 Kwh (Jun 1 - Sep 15)	178,587,572	8.8711	0.3410	0.0000	(0.8403)	2.70	15,395,189
Next 225,000 Kwh (Jun 1 - Sep 15)	243,286,269	6.6296	0.3410	0.0000	(0.8403)	2.70	15,372,058
All Additional Kwh (Jun 1 - Sep 15)	24,859,497	4.9616	0.3410	0.0000	0.0000	2.70	1,353,791
Energy Charges Post-Summer Season (Cents/Kwh)							
All Kwh (Sep 16 - May 31)	86,782,203	7.5441	0.3410	0.0000	(0.8403)	2.70	6,298,390
<b>Totals</b>	<b>533,515,541</b>						<b>50,971,765</b>

**Annual Average Rate (cents/Kwh)                      9.554**

Notes: 1) The Tariff Base Rates and the Rider Schedule rates were taken from the Rocky Mountain Power - Idaho Schedule 10 Price Summary Sheets as provided by PacifiCorp.

2) The Units (i.e. normalized usage figures) were taken from Rocky Mountain Power's 2006 State of Idaho General Rate Case Filing, Idaho Public Utilities Commission Case No. PAC-E-06-04, Exhibit Nos. 2 & 3 to the testimony of Jeffrey K. Larsen.

3) The Schedule 191 charges are computed prior to the application of the BPA ResEx/Schedule 34 Credit, as is specified in Rocky Mountain Power's Schedule 191 Tariff Sheet.

**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp/Rocky Mountain Power Idaho Irrigation Rate Schedule 10 Worksheet**  
**Actual Rates Effective June 1, 2018 and Normalized Usage from the 2006 Idaho General Rate Case**

Charge Type	Units	Tariff Base Rate	Schedule 94 (cents/Kwh)	Schedule 197 (cents/Kwh)	BPA ResEx Credit/Sch 34 (cents/Kwh)	DSM Sch 191 (%)	Total Charges (\$)
Small Customer Charge - Summer Season (\$/Month)	2,206	14.00				2.70	126,871
Large Customer Charge - Summer Season (\$/Month)	13,904	41.00				2.70	2,341,823
Post-Summer Season Customer Charge (\$/Month)	11,459	23.00				2.70	2,165,384
Total Customer Charges	27,569						
Demand Charges (\$/KW)	1,289,312	5.9800				2.70	7,918,258
Energy Charges Summer Season (Cents/Kwh)							
First 25,000 Kwh (Jun 1 - Sep 15)	178,587,572	8.8711	0.276	(0.2120)	(0.8403)	2.70	14,887,145
Next 225,000 Kwh (Jun 1 - Sep 15)	243,286,269	6.6296	0.276	(0.2120)	(0.8403)	2.70	14,679,960
All Additional Kwh (Jun 1 - Sep 15)	24,859,497	4.9616	0.276	(0.2120)	0.0000	2.70	1,283,071
Energy Charges Post-Summer Season (Cents/Kwh)							
All Kwh (Sep 16 - May 31)	86,782,203	7.5441	0.276	(0.2120)	(0.8403)	2.70	6,051,513
<b>Totals</b>	<b>533,515,541</b>						<b>49,454,025</b>

**Annual Average Rate (cents/Kwh)                      9.269**

Notes: 1) The Tariff Base Rates and the Rider Schedule rates were taken from the Rocky Mountain Power - Idaho Schedule 10 Price Summary Sheets as provided by PacifiCorp.

2) The Units (i.e. normalized usage figures) were taken from Rocky Mountain Power's 2006 State of Idaho General Rate Case Filing, Idaho Public Utilities Commission Case No. PAC-E-06-04, Exhibit Nos. 2 & 3 to the testimony of Jeffrey K. Larsen.

3) The Schedule 191 charges are computed prior to the application of the BPA ResEx/Schedule 34 Credit, as is specified in Rocky Mountain Power's Schedule 191 Tariff Sheet.

PacifiCorp 2017 - 2018 Average  
Irrigation Power Price Calculations

State of Oregon



## USBR/Klamath Project - AWIA Power Cost Benchmark Analysis

PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet

Calendar Year 2017 and 2018 Irrigation Rate Summary

Period	Number of Days	Total Revenue (\$)	Total Usage (Kwh)	Average Rate (cents/Kwh)
Jan 1, 2017 - Jan 10, 2017	10	24,482,973	222,051,683	11.026
Jan 11, 2017 - Jan 24, 2017	14	24,558,316	222,051,683	11.060
Jan 25, 2017 - Jan 31, 2017	7	24,558,316	222,051,683	11.060
Feb 1, 2017 - Sep 30, 2017	242	24,530,919	222,051,683	11.047
Oct 1, 2017 - Dec 31, 2017	92	24,492,106	222,051,683	11.030
Jan 1, 2018 - Jan 1 2018	1	24,494,641	222,051,683	11.031
Jan 2, 2018 - Jul 5, 2018	185	24,494,641	222,051,683	11.031
Jul 6, 2018 - Dec 31, 2018	179	24,483,225	222,051,683	11.026
Calendar Year 2017		24,521,398	222,051,683	11.043
Calendar Year 2018		24,489,043	222,051,683	11.029

PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet  
Actual Rates Effective January 1, 2017 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case

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## USBR/Klamath Project - AWIA Power Cost Benchmark Analysis

PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet

**Actual Rates Effective January 1, 2017 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case**

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**PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet**  
**Actual Rates Effective January 11, 2017 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case**

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PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet  
Actual Rates Effective January 11, 2017 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case

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**PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet**  
**Actual Rates Effective January 25, 2017 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case**

[illegible]

PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet  
Actual Rates Effective January 25, 2017 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case

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**PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet**  
**Actual Rates Effective February 1, 2017 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case**

[illegible]



PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet  
Actual Rates Effective February 1, 2017 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case

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**PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet**

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## USBR/Klamath Project - AWIA Power Cost Benchmark Analysis

PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet

**Actual Rates Effective October 1, 2017 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case**

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**PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet**  
**Actual Rates Effective January 1, 2018 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case**

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## USBR/Klamath Project - AWIA Power Cost Benchmark Analysis

PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet

**Actual Rates Effective January 1, 2018 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case**

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**PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet**

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## USBR/Klamath Project - AWIA Power Cost Benchmark Analysis

PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet

**Actual Rates Effective January 2, 2018 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case**

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PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet  
Actual Rates Effective July 6, 2018 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case

**Actual Rates Effective July 6, 2018 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case**

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## USBR/Klamath Project - AWIA Power Cost Benchmark Analysis

### PacifiCorp Oregon Irrigation Rate Schedule 41 Worksheet

Actual Base Rates in Effect from Jul 2011 - Jun 2012 and Normalized Jul 2011 - Jun 2012 Usage from the 2013 Oregon General Rate Case

Charge Type	Units	Tariff Base Rate	Total Charges (\$)
Transmission and Ancillary Services	221,662,849	0.2930	649,472
T & A and Schedule 201 Related	221,662,849	0.0000	0
Schedule 200 Related	221,662,849	0.0000	0
Basin Charge, Single Phase or Three Phase < 50 KW			
Single Phase or Three Phase < 50 KW	6,166	0	0
Three Phase, 50 to 300 KW	1,071	320	342,720
Three Phase > 300 KW	21	1,250	26,250
Annual Load Size KW Charge			
Single Phase, Three Phase <50 KW	106,062	15.00	1,590,930
Three Phase 51 to 300 KW	95,183	10.00	951,830
Three Phase > 301 KW	11,823	6.00	70,938
Single Phase Net Minimum Bills Adjustment			24,805
Three Phase Net Minimum Bills Adjustment			135,450
Distribution Energy Charge	221,662,849	3.7080	8,219,258
Reactive Power			93,813
Energy Charge - Schedule 200			
Winter 1st 100 Kwh/KW	2,722,361	3.9750	108,214
Winter All Additional Kwh/KW	2,336,220	2.7090	63,288
Summer, All Kwh/KW	216,694,268	2.7090	5,870,248
Energy Charge - Schedule 201			
Winter 1st 100 Kwh/KW	2,722,361	4.0500	110,256
Winter All Additional Kwh/KW	2,336,220	2.7590	64,456
Summer, All Kwh/KW	216,694,268	2.7590	5,978,595
Additional costs for Primary Service	388,834		43,287
<b>Totals</b>	<b>222,051,683</b>		<b>24,343,810</b>
	<b>Annual Average Rate (cents/Kwh)</b>		<b>10.963</b>

Data source: Pacific Power's 2013 State of Oregon General Rate Case, Oregon Public Utilities Commission Case No. UE-263, Stipulation Agreement Exhibit D, page 5.

PacifiCorp 2017 - 2018 Average  
Irrigation Power Price Calculations

State of Washington

## USBR/Klamath Project - AWIA Power Cost Benchmark Analysis

PacifiCorp Washington Irrigation Rate Schedule 40 Worksheet

Calendar Year 2017 and 2018 Irrigation Rate Summary

Period	Number of Days	Total Revenue (\$)	Total Usage (Kwh)	Average Rate (cents/Kwh)
Jan 1, 2017 - Mar 31, 2017	90	12,537,614	148,745,367	8.429
Apr 1, 2017 - May 7, 2017	37	12,537,614	148,745,367	8.429
May 8, 2017 - Jul 31, 2017	85	12,455,804	148,745,367	8.374
Aug 1, 2017 - Sep 14, 2017	45	12,492,991	148,745,367	8.399
Sep 15, 2017 - Sep 30, 2017	16	12,799,928	148,745,367	8.605
Oct 1, 2017 - Nov 29, 2017	60	12,698,781	148,745,367	8.537
Nov 30, 2017 - Mar 31, 2018	122	12,698,781	148,745,367	8.537
Apr 1, 2018 - Jul 31, 2018	122	13,191,128	148,745,367	8.868
Aug 1, 2018 - Oct 31, 2018	92	13,125,680	148,745,367	8.824
Nov 1, 2018 - Dec 31, 2018	61	12,542,598	148,745,367	8.432
Calendar Year 2017		12,565,183	148,745,367	8.447
Calendar Year 2018		12,944,847	148,745,367	8.703

**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp Washington Irrigation Rate Schedule 40 Worksheet**  
**Actual Rates Effective January 1, 2017 and Normalized 2013 Usage from the 2014 Washington General Rate Case**

Charge Type	Units	Tariff Base Rate	Schedule 191 (cents/Kwh)	Schedule 92 (cents/Kwh)	Schedule 95 (cents/Kwh)	BPA ResEx Credit (cents/Kwh)	Total Charges (\$)
Annual Load Size Charge							
Three Phase < 301 KW	421.71	370.00					156,033
Three Phase > 300 KW	13.00	1,504.00					19,552
Annual Load Size KW Charge							
Single Phase	3,152	26.0200					82,028
Three Phase < 51 KW	51,993	26.0200					1,352,855
Three Phase < 301 KW	40,499	18.1000					733,038
Three Phase > 300 KW	5,276	14.1600					74,708
Single Phase Net Minimum Bills Adjustment							43,722
Three Phase Net Minimum Bills Adjustment							145,932
Energy Charges (Cents/Kwh)	148,745,367	7.0350	0.3300	0.0000	0.0590	(0.7470)	9,931,728
Excess Kvar Charges							30,337
Misc Charges/(Credits)							(32,319)
<b>Totals</b>	<b>148,745,367</b>						<b>12,537,614</b>

**Annual Average Rate (cents/Kwh)**

**8.429**

**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp Washington Irrigation Rate Schedule 40 Worksheet**  
**Actual Rates Effective April 1, 2017 and Normalized 2013 Usage from the 2014 Washington General Rate Case**

Charge Type	Units	Tariff Base Rate	Schedule 191 (cents/Kwh)	Schedule 92 (cents/Kwh)	Schedule 95 (cents/Kwh)	BPA ResEx Credit (cents/Kwh)	Total Charges (\$)
Annual Load Size Charge							
Three Phase < 301 KW	421.71	370.00					156,033
Three Phase > 300 KW	13.00	1,504.00					19,552
Annual Load Size KW Charge							
Single Phase	3,152	26.0200					82,028
Three Phase < 51 KW	51,993	26.0200					1,352,855
Three Phase < 301 KW	40,499	18.1000					733,038
Three Phase > 300 KW	5,276	14.1600					74,708
Single Phase Net Minimum Bills Adjustment							43,722
Three Phase Net Minimum Bills Adjustment							145,932
Energy Charges (Cents/Kwh)	148,745,367	7.0350	0.3300	0.0000	0.0590	(0.7470)	9,931,728
Excess Kvar Charges							30,337
Misc Charges/(Credits)							(32,319)
<b>Totals</b>	<b>148,745,367</b>						<b>12,537,614</b>

**Annual Average Rate (cents/Kwh)**

**8.429**

**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp Washington Irrigation Rate Schedule 40 Worksheet**  
**Actual Rates Effective May 8, 2017 and Normalized 2013 Usage from the 2014 Washington General Rate Case**

Charge Type	Units	Tariff Base Rate	Schedule 191 (cents/Kwh)	Schedule 92 (cents/Kwh)	Schedule 95 (cents/Kwh)	BPA ResEx Credit (cents/Kwh)	Total Charges (\$)
Annual Load Size Charge							
Three Phase < 301 KW	421.71	370.00					156,033
Three Phase > 300 KW	13.00	1,504.00					19,552
Annual Load Size KW Charge							
Single Phase	3,152	26.0200					82,028
Three Phase < 51 KW	51,993	26.0200					1,352,855
Three Phase < 301 KW	40,499	18.1000					733,038
Three Phase > 300 KW	5,276	14.1600					74,708
Single Phase Net Minimum Bills Adjustment							43,722
Three Phase Net Minimum Bills Adjustment							145,932
Energy Charges (Cents/Kwh)	148,745,367	7.0350	0.3300	0.0000	0.0040	(0.7470)	9,849,918
Excess Kvar Charges							30,337
Misc Charges/(Credits)							(32,319)
<b>Totals</b>	<b>148,745,367</b>						<b>12,455,804</b>

**Annual Average Rate (cents/Kwh)      8.374**

**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp Washington Irrigation Rate Schedule 40 Worksheet**  
**Actual Rates Effective August 1, 2017 and Normalized 2013 Usage from the 2014 Washington General Rate Case**

Charge Type	Units	Tariff Base Rate	Schedule 191 (cents/Kwh)	Schedule 92 (cents/Kwh)	Schedule 95 (cents/Kwh)	BPA ResEx Credit (cents/Kwh)	Total Charges (\$)
Annual Load Size Charge							
Three Phase < 301 KW	421.71	370.00					156,033
Three Phase > 300 KW	13.00	1,504.00					19,552
Annual Load Size KW Charge							
Single Phase	3,152	26.0200					82,028
Three Phase < 51 KW	51,993	26.0200					1,352,855
Three Phase < 301 KW	40,499	18.1000					733,038
Three Phase > 300 KW	5,276	14.1600					74,708
Single Phase Net Minimum Bills Adjustment							43,722
Three Phase Net Minimum Bills Adjustment							145,932
Energy Charges (Cents/Kwh)	148,745,367	7.0350	0.3550	0.0000	0.0040	(0.7470)	9,887,105
Excess Kvar Charges							30,337
Misc Charges/(Credits)							(32,319)
<b>Totals</b>	<b>148,745,367</b>						<b>12,492,991</b>

**Annual Average Rate (cents/Kwh)**

**8.399**



**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp Washington Irrigation Rate Schedule 40 Worksheet**  
**Actual Rates Effective September 15, 2017 and Normalized 2013 Usage from the 2014 Washington General Rate Case**

Charge Type	Units	Tariff Base Rate	Schedule 191 (cents/Kwh)	Schedule 92 (cents/Kwh)	Schedule 95 (cents/Kwh)	BPA ResEx Credit (cents/Kwh)	Total Charges (\$)
Annual Load Size Charge							
Three Phase < 301 KW	421.71	379.00					159,828
Three Phase > 300 KW	13.00	1,539.00					20,007
Annual Load Size KW Charge							
Single Phase	3,152	26.6300					83,951
Three Phase < 51 KW	51,993	26.6300					1,384,571
Three Phase < 301 KW	40,499	18.5300					750,453
Three Phase > 300 KW	5,276	14.4900					76,449
Single Phase Net Minimum Bills Adjustment							43,722
Three Phase Net Minimum Bills Adjustment							145,932
Energy Charges (Cents/Kwh)	148,745,367	7.2030	0.3550	0.0000	0.0040	(0.7470)	10,136,997
Excess Kvar Charges							30,337
Misc Charges/(Credits)							(32,319)
<b>Totals</b>	<b>148,745,367</b>						<b>12,799,928</b>

**Annual Average Rate (cents/Kwh)**

**8.605**

**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp Washington Irrigation Rate Schedule 40 Worksheet**  
**Actual Rates Effective October 1, 2017 and Normalized 2013 Usage from the 2014 Washington General Rate Case**

Charge Type	Units	Tariff Base Rate	Schedule 191 (cents/Kwh)	Schedule 92 (cents/Kwh)	Schedule 95 (cents/Kwh)	BPA ResEx Credit (cents/Kwh)	Total Charges (\$)
Annual Load Size Charge							
Three Phase < 301 KW	421.71	379.00					159,828
Three Phase > 300 KW	13.00	1,539.00					20,007
Annual Load Size KW Charge							
Single Phase	3,152	26.6300					83,951
Three Phase < 51 KW	51,993	26.6300					1,384,571
Three Phase < 301 KW	40,499	18.5300					750,453
Three Phase > 300 KW	5,276	14.4900					76,449
Single Phase Net Minimum Bills Adjustment							43,722
Three Phase Net Minimum Bills Adjustment							145,932
Energy Charges (Cents/Kwh)	148,745,367	7.2030	0.3550	0.0000	0.0040	(0.8150)	10,035,850
Excess Kvar Charges							30,337
Misc Charges/(Credits)							(32,319)
<b>Totals</b>	<b>148,745,367</b>						<b>12,698,781</b>

**Annual Average Rate (cents/Kwh)      8.537**

**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp Washington Irrigation Rate Schedule 40 Worksheet**  
**Actual Rates Effective November 30, 2017 and Normalized 2013 Usage from the 2014 Washington General Rate Case**

Charge Type	Units	Tariff Base Rate	Schedule 191 (cents/Kwh)	Schedule 92 (cents/Kwh)	Schedule 95 (cents/Kwh)	BPA ResEx Credit (cents/Kwh)	Total Charges (\$)
Annual Load Size Charge							
Three Phase < 301 KW	421.71	379.00					159,828
Three Phase > 300 KW	13.00	1,539.00					20,007
Annual Load Size KW Charge							
Single Phase	3,152	26.6300					83,951
Three Phase < 51 KW	51,993	26.6300					1,384,571
Three Phase < 301 KW	40,499	18.5300					750,453
Three Phase > 300 KW	5,276	14.4900					76,449
Single Phase Net Minimum Bills Adjustment							43,722
Three Phase Net Minimum Bills Adjustment							145,932
Energy Charges (Cents/Kwh)	148,745,367	7.2030	0.3550	0.0000	0.0040	(0.8150)	10,035,850
Excess Kvar Charges							30,337
Misc Charges/(Credits)							(32,319)
<b>Totals</b>	<b>148,745,367</b>						<b>12,698,781</b>

**Annual Average Rate (cents/Kwh)      8.537**

**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp Washington Irrigation Rate Schedule 40 Worksheet**  
**Actual Rates Effective April 1, 2018 and Normalized 2013 Usage from the 2014 Washington General Rate Case**

Charge Type	Units	Tariff Base Rate	Schedule 191 (cents/Kwh)	Schedule 93 (cents/Kwh)	Schedule 95 (cents/Kwh)	BPA ResEx Credit (cents/Kwh)	Total Charges (\$)
Annual Load Size Charge							
Three Phase < 301 KW	421.71	379.00					159,828
Three Phase > 300 KW	13.00	1,539.00					20,007
Annual Load Size KW Charge							
Single Phase	3,152	26.6300					83,951
Three Phase < 51 KW	51,993	26.6300					1,384,571
Three Phase < 301 KW	40,499	18.5300					750,453
Three Phase > 300 KW	5,276	14.4900					76,449
Single Phase Net Minimum Bills Adjustment							43,722
Three Phase Net Minimum Bills Adjustment							145,932
Energy Charges (Cents/Kwh)	148,745,367	7.2030	0.3550	0.3310	0.0040	(0.8150)	10,528,197
Excess Kvar Charges							30,337
Misc Charges/(Credits)							(32,319)
<b>Totals</b>	<b>148,745,367</b>						<b>13,191,128</b>

**Annual Average Rate (cents/Kwh)      8.868**

**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp Washington Irrigation Rate Schedule 40 Worksheet**  
**Actual Rates Effective August 1, 2018 and Normalized 2013 Usage from the 2014 Washington General Rate Case**

Charge Type	Units	Tariff Base Rate	Schedule 191 (cents/Kwh)	Schedule 93 (cents/Kwh)	Schedule 95 (cents/Kwh)	BPA ResEx Credit (cents/Kwh)	Total Charges (\$)
Annual Load Size Charge							
Three Phase < 301 KW	421.71	379.00					159,828
Three Phase > 300 KW	13.00	1,539.00					20,007
Annual Load Size KW Charge							
Single Phase	3,152	26.6300					83,951
Three Phase < 51 KW	51,993	26.6300					1,384,571
Three Phase < 301 KW	40,499	18.5300					750,453
Three Phase > 300 KW	5,276	14.4900					76,449
Single Phase Net Minimum Bills Adjustment							43,722
Three Phase Net Minimum Bills Adjustment							145,932
Energy Charges (Cents/Kwh)	148,745,367	7.2030	0.3110	0.3310	0.0040	(0.8150)	10,462,749
Excess Kvar Charges							30,337
Misc Charges/(Credits)							(32,319)
<b>Totals</b>	<b>148,745,367</b>						<b>13,125,680</b>

**Annual Average Rate (cents/Kwh)      8.824**

**USBR/Klamath Project - AWIA Power Cost Benchmark Analysis**  
**PacifiCorp Washington Irrigation Rate Schedule 40 Worksheet**  
**Actual Rates Effective November 1, 2018 and Normalized 2013 Usage from the 2014 Washington General Rate Case**

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## USBR/Klamath Project - AWIA Power Cost Benchmark Analysis

### PacifiCorp Washington Irrigation Rate Schedule 40 Worksheet

Actual Base Rates in Effect during CY 2013 and Normalized CY 2013 Usage from the 2014 Washington General Rate Case

Charge Type	Units	Tariff Base Rate	Total Charges (\$)
Annual Load Size Charge			
Three Phase < 301 KW	421.71	357.00	150,550
Three Phase > 300 KW	13.00	1,457.00	18,941
Annual Load Size KW Charge			
Single Phase	3,152	25.2659	79,651
Three Phase < 51 KW	51,993	25.1712	1,308,725
Three Phase < 301 KW	40,499	17.5284	709,890
Three Phase > 300 KW	5,276	13.7179	72,376
Single Phase Net Minimum Bills Adjustment			43,722
Three Phase Net Minimum Bills Adjustment			145,932
Energy Charges (Cents/Kwh)	148,745,367	6.8160	10,138,484
Excess Kvar Charges			30,337
Misc Charges/(Credits)			(32,319)
<b>Totals</b>	<b>148,745,367</b>		<b>12,666,288</b>
	<b>Annual Average Rate (cents/Kwh)</b>		<b>8.515</b>

**Notes:**

- 1) Data Source - Pacific Power's 2014 State of Washington General Rate Case Filing, Washington Utilities and Transportation Commission, Docket No. UE-140762, Exhibit No. JRS-6 to the testimony of Joelle R. Steward.