Proposed 2018 Rate Process

Informational Webinar

April 18, 2017

Pick-Sloan Missouri River Basin Program--Eastern Division

&

Loveland Area Projects
Greetings

Jody Sundsted
Vice President of Power Marketing for UGP
Introductions

Linda Cady-Hoffman  
*UGP Rates Manager*

Sheila Cook  
*RMR Rates Manager*
Agenda

• Rate Process
• Charge Components
• PRS Information
  • Pick-Sloan
  • Fry-Ark
• Regional Rate Proposals
  • LAP
  • Pick-Sloan—ED
  • Sale of Surplus Products
• Schedule
• Q&A
Rate Process

• Adjusting the P-S Components
  • Reducing the Drought Adder component to zero in calendar year 2018
  • Increase to the Base component

• Adjusting the Fry-Ark Component
  • Decrease to the Base component

• P-S--ED 5% Voltage Discount

• Sale of Surplus Products
Rate Components
# Rate Structures

<table>
<thead>
<tr>
<th>Power Repayment Studies</th>
<th>Revenue Requirements</th>
<th>Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pick-Sloan Missouri Basin Program PRS</td>
<td>Eastern Division Rev Req</td>
<td>Pick-Sloan Eastern Division Rates</td>
</tr>
<tr>
<td>Fryingpan-Arkansas Project PRS</td>
<td>Western Division Rev Req</td>
<td>LAP Rates</td>
</tr>
<tr>
<td></td>
<td>Fy-Ark Rev Req</td>
<td></td>
</tr>
</tbody>
</table>

Proposals for 2018 Rate Process
Overview of Component Costs

Drought Adder
Adjusted Annually

Base
Adjusted only by Public Process

- Recovers cost associated with drought
  - Purchase power related to drought
  - Historical drought debt
  - Interest on drought debt

- Annual O&M
- Investments - additions and replacements
- Annual interest on investment
- Inflation
- Normal purchases
- Transmission costs

Proposals for 2018 Rate Process
LAP Current Charge Components

Current

Revenue Requirement
$74.6 M
F-A $15.3 M & P-S WD $59.3 M

$13.6 M
F-A $0 M &
P-S WD $13.6 M

$61 M
F-A $15.3 M &
P-S WD $45.7 M

Drought Adder

Base

Proposals for 2018 Rate Process
LAP Proposed Charge Components

Proposals for 2018 Rate Process
P-SMBP--ED Current Charge Components

Current

Revenue Requirement
$282.7 M

Drought Adder
$68.3 M

Base
$214.4 M

Proposals for 2018 Rate Process
Proposed Charge Components

Current
- Revenue Requirement $282.7 M
- $68.3 M
- $214.4 M

Proposed
- Revenue Requirement $230.1 M
- $0 M
- $230.1 M

Proposals for 2018 Rate Process
P-SMBP 2016 PRS

• 2016 deficit payment is $110 M
  • Pays off the 2017 unpaid deficit balance
  • Balance applied towards 2018 remaining deficit balance
• $113 M unpaid on the drought after 2016
• 2016 $54 M required payments
  • Mostly in 2.5% to repay USACE investments
• 2020 is the PRS pinch point
• Study solves at 24.29 mills/kwh
  • Drought debt paid off in 2018
P-SMBP 2016 Deficit Repayment

Total Accumulated Deficit $843 M

Payments Applied
2016 Pmt
2016 Final Study

$113 M remaining unpaid

Cumulative Deficit
Deficit Repayment Projected in Current Rate

Proposals for 2018 Rate Process
Why the Drought/Base Changes

• Drought Adder is going to zero
  • Projected to make the last payment on the $843 M accumulated drought by 2018
    • Paid ahead on the drought costs, final payment isn’t required until 2019

• Base increasing
  • New 5-year cost evaluation period
    • New investments/replacements
    • New O&M expenses
    • Inflationary costs
PRS 5-yr Projection Window

2015 Rate Setting PRS

- **Actuals**
  - 2011
  - 2012
  - 2013*
- **Cost Projection Period With Inflation**
  - 2014
  - 2015
  - 2016
  - 2017
  - 2018
- **No Inflation**
  - 2019
  - 2020
  - 2021
  - 2022
  - 2023

2018 Rate Setting PRS

- **Actuals**
  - 2012
  - 2013
  - 2014
  - 2015
  - 2016*
- **Cost Projection Period With Inflation**
  - 2017
  - 2018
  - 2019
  - 2020
  - 2021
- **No Inflation**
  - 2022
  - 2023

*Based on unaudited financials, with true up done the following year

Proposals for 2018 Rate Process
Fry-Ark FY 2016 PRS

• Uses FY18 Work Plans
  • Updated Mt. Elbert Rehabilitation Cost Projections
    • Study includes ~$22.7M

• No outstanding deficits

• 2034 continues to be the pinch point in the PRS

• FY17 Coupon Rate used for future projections is 4.429%

• Study solves with a Revenue Requirement of $13.3M
  • ~13% lower than the approved $15.3M
Fry-Ark Revenue Requirement

- Series 1: $15.3
- Series 2: $13.3

13% decrease
Regional Rate Proposals
LAP Rate Proposal
LAP Composite Rate

Proposals for 2018 Rate Process
Why the Changes for Pick-Sloan-WD

(please note this slide was mistakenly left out of the presentation given on April 18, 2017, but the same information was shared on slide 16)

• Drought Adder is going to zero
  • Projected to make the last payment on the $843M accumulated Drought by 2018
    • Paid ahead on the drought costs, final payment isn’t required until 2019

• Base increasing
  • New 5-year cost evaluation period
    • New Investments/Replacements
    • New Operations and Maintenance Expenses
    • Inflationary costs
Why the Changes for Fry-Ark

- Base decreasing
  - New 5-year cost evaluation period
    - New Operations and Maintenance Expenses
    - New Investments/Replacements
    - Inflationary Costs

2015 Rate Setting PRS

<table>
<thead>
<tr>
<th>Actuals</th>
<th>Cost Projection Period With Inflation</th>
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</table>

2018 Rate Setting PRS

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<thead>
<tr>
<th>Actuals</th>
<th>Cost Projection Period With Inflation</th>
<th>No Inflation</th>
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</thead>
</table>
Why the Changes for Fry-Ark (cont.)

• Changes between 2013 and 2034 (pinch point) when compared to 2015 Rate-Setting PRS

• O&M Expenses – Decrease avg ~$0.3M/yr

• Ancillary Services Revenues – Increase avg ~$1.1M/yr
  • Regulation and VAR

• AVG NET REVENUE INCREASE - ~$1.4M/yr – offsets Revenue Requirement
# LAP Summary of Revenue Requirements

<table>
<thead>
<tr>
<th>Firm Electric Service</th>
<th>Current Rates Effective January 1, 2017</th>
<th>Proposed Rates Effective January 1, 2018</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAP Rev Req</td>
<td>$74.6M</td>
<td>$64.1M</td>
<td>-14%</td>
</tr>
<tr>
<td>Fry-Ark Rev Req</td>
<td>$15.3M</td>
<td>$13.3M</td>
<td>-13%</td>
</tr>
<tr>
<td>PS-WD Rev Req</td>
<td>$59.3M</td>
<td>$50.8M</td>
<td>-14%</td>
</tr>
</tbody>
</table>

Proposals for 2018 Rate Process
### LAP Proposed Rates Summary

<table>
<thead>
<tr>
<th>Firm Electric Service</th>
<th>Current Rates Effective January 1, 2017</th>
<th>Proposed Rates Effective January 1, 2018</th>
<th>Percent Change</th>
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<tbody>
<tr>
<td>LAP Rev Req</td>
<td>$74.6M</td>
<td>$64.1M</td>
<td>-14%</td>
</tr>
<tr>
<td>Composite Rate</td>
<td>36.56 mills/kWh</td>
<td>31.44 mills/kWh</td>
<td>-14%</td>
</tr>
<tr>
<td>Firm Energy</td>
<td>18.28 mills/kWh</td>
<td>15.72 mills/kWh</td>
<td>-14%</td>
</tr>
<tr>
<td>Firm Capacity</td>
<td>$4.79/kW-mo</td>
<td>$4.12/kW-mo</td>
<td>-14%</td>
</tr>
</tbody>
</table>

Proposals for 2018 Rate Process
LAP
Proposed Charge Components

<table>
<thead>
<tr>
<th></th>
<th>Base</th>
<th>Drought Adder</th>
<th>Total Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Capacity</td>
<td>$4.12/kW-mo</td>
<td>$0.00/kW-mo</td>
<td>$4.12/kW-mo</td>
</tr>
<tr>
<td>Firm Energy</td>
<td>15.72 mills/kWh</td>
<td>0.00 mills/kWh</td>
<td>15.72 mills/kWh</td>
</tr>
</tbody>
</table>

$64.9 Million Revenue Requirement (Fry-Ark $14.1 M & P-S WD $50.8 M)
P-SMBP--ED Rate Proposal
P-SMBP—ED Composite Rate

Proposals for 2018 Rate Process
# P-SMBP--ED Revenue Components

<table>
<thead>
<tr>
<th>Firm Power Service</th>
<th>Current P-SMBP—ED Composite Rate 28.25 Mills/KWh</th>
<th>Proposed P-SMBP—ED Composite Rate 24.00 Mills/KWh</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Power</td>
<td>$247.0 Million</td>
<td>$209.8 Million</td>
<td>-15%</td>
</tr>
<tr>
<td>Firm Peaking Power</td>
<td>$25.0 Million</td>
<td>$20.3 Million</td>
<td>-19%</td>
</tr>
<tr>
<td>5 % Voltage Discount</td>
<td>$10.7 Million</td>
<td>$7.3 Million</td>
<td>-100%</td>
</tr>
<tr>
<td><strong>Total Firm Revenue Req.</strong></td>
<td><strong>$ 282.7 Million</strong></td>
<td><strong>$ 230.1 Million</strong></td>
<td><strong>-19%</strong></td>
</tr>
</tbody>
</table>
## P-SMBP—ED Proposed Rates Summary

<table>
<thead>
<tr>
<th>Firm Power Service</th>
<th>Current Rates Effective January 1, 2017</th>
<th>Proposed Rates Effective January 1, 2018</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-SMBP-ED Revenue Requirement</td>
<td>$282.7 million</td>
<td>$230.1 million*</td>
<td>-19%</td>
</tr>
<tr>
<td>P-SMBP-ED Composite Rate</td>
<td>28.25 mills/kWh</td>
<td>24.00 mills/kWh</td>
<td>-15%</td>
</tr>
<tr>
<td>Firm Capacity</td>
<td>$6.50 kW-month</td>
<td>$5.25 kW-month</td>
<td>-19%</td>
</tr>
<tr>
<td>Firm Energy</td>
<td>16.18 mills/kWh</td>
<td>13.27 mills/kWh</td>
<td>-18%</td>
</tr>
<tr>
<td>Firm Peaking Capacity</td>
<td>$5.85 kW-month</td>
<td>$4.75 kW-month</td>
<td>-19%</td>
</tr>
<tr>
<td>Firm Peaking Energy 1/</td>
<td>16.18 mills/kWh</td>
<td>13.27 mills/kWh</td>
<td>-18%</td>
</tr>
</tbody>
</table>

1/ Firm peaking energy is normally returned. This will be assessed in the event firm peaking energy is not returned.

* Without the Voltage Discount

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### Proposals for 2018 Rate Process
# P-SMBP--ED

Proposed Charge Components*

<table>
<thead>
<tr>
<th></th>
<th>Base</th>
<th>Drought</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Firm Capacity</strong></td>
<td>$5.25/kW-mo</td>
<td>$0.00/kW-mo</td>
<td>$5.25/kW-mo</td>
</tr>
<tr>
<td><strong>Firm Energy</strong></td>
<td>13.27 mills/kWh</td>
<td>0.00 mills/kWh</td>
<td>13.27 mills/kWh</td>
</tr>
<tr>
<td><strong>Firm Peaking Demand 1/</strong></td>
<td>$4.75/kW-mo</td>
<td>$0.00/kW-mo</td>
<td>$4.75/kW-mo</td>
</tr>
</tbody>
</table>

1/ Firm Peaking Energy is normally returned. In the event Firm Peaking Energy is not returned, the Firm Energy Rate will apply.

* Without Voltage Discount
5% Voltage Discount Discussion
What is the 5% Voltage Discount?

• Historically, the 5% voltage discount was allowed for customers taking deliveries at transmission voltage who provided facilities that resulted in cost savings to the government

• This proposal will eliminate the 5% voltage discount offset that is added to the annual revenue requirement for dollars lost due to providing the voltage discount
### P-SMBP—ED 5% Voltage Discount and Rate Design

<table>
<thead>
<tr>
<th>Revenue Requirement</th>
<th>2018 Past Rate Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Power</td>
<td>$209.8 M</td>
</tr>
<tr>
<td>Peaking Firm Power</td>
<td>20.3 M</td>
</tr>
<tr>
<td>5% Voltage Discount</td>
<td>7.3 M</td>
</tr>
<tr>
<td><strong>Gross Rev Requirement</strong></td>
<td><strong>$237.4 M</strong></td>
</tr>
</tbody>
</table>

- **Firm Power Composite Rate**: $209.8 M/8742 GWh = 24.00 M/kWh
- **Effective Composite Rate**: ($209.8 M+$7.3 M)/8742 = 24.83 m/kWh

Proposals for 2018 Rate Process
### P-SMBP—ED 5% Voltage Discount and Proposed 2018 Revenue Requirements

<table>
<thead>
<tr>
<th>Revenue Requirement</th>
<th>2018 Past Rate Design</th>
<th>2018 Rate Design with No 5% Voltage Discount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Power</td>
<td>$209.8 M</td>
<td>$209.8 M</td>
</tr>
<tr>
<td>Peaking Firm Power</td>
<td>20.3 M</td>
<td>20.3 M</td>
</tr>
<tr>
<td>5% Voltage Discount</td>
<td>7.3 M</td>
<td>0 M</td>
</tr>
<tr>
<td><strong>Gross Rev Requirement</strong></td>
<td><strong>$237.4 M</strong></td>
<td><strong>$230.1 M</strong></td>
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</tbody>
</table>

$209.8 \text{ M}/8742 \text{ GWh} = 24.00 \text{ M/kWh}$

($209.8 \text{ M} + 7.3 \text{ M})/8742 = 24.83 \text{ M/kWh}$

Effective Composite Rate

$209.8 \text{ M}/8742 \text{ GWh} = 24.00 \text{ M/kWh}$
## 5% Voltage Discount Comparison

2017 rates to 2018 proposed rates

<table>
<thead>
<tr>
<th></th>
<th><strong>Sample Bill 2017 Rates</strong></th>
<th><strong>Sample Bill 2018 Rates</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Base Demand</strong></td>
<td>341 Kw x $4.90 kW = $1,670.90</td>
<td>341 Kw x $5.25 kW = $1,790.25</td>
</tr>
<tr>
<td><strong>Drought Demand</strong></td>
<td>341 Kw x $1.60 kW = $545.60</td>
<td>341 Kw x $0 kW = $0</td>
</tr>
<tr>
<td><strong>Base Energy</strong></td>
<td>130,000 kWh x 12.33 m/kWh = $1,602.90</td>
<td>130,000 kWh x 13.27 m/kWh = $1,725.10</td>
</tr>
<tr>
<td><strong>Drought Energy</strong></td>
<td>130,000 kWh x 3.85 m/kWh = $500.50</td>
<td>130,000 kWh x 0 m/kWh = $0</td>
</tr>
<tr>
<td><strong>Demand &amp; Energy Total</strong></td>
<td>16.18 m/kWh = $4,319.90</td>
<td>3.518 m/kWh = $3,515.35</td>
</tr>
<tr>
<td><strong>Less 5% Voltage Discount</strong></td>
<td>($216.00)</td>
<td><strong>No Voltage Discount</strong></td>
</tr>
<tr>
<td><strong>Total Charge</strong></td>
<td><strong>$4,103.91</strong></td>
<td><strong>$3,515.35</strong></td>
</tr>
</tbody>
</table>

Proposals for 2018 Rate Process
## 5% Voltage Discount Comparison
2017 rates to 2018 with Voltage Discount

### Sample Bill 2017 Rates with 5% Discount

<table>
<thead>
<tr>
<th>Description</th>
<th>Calculation</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Demand</td>
<td>$4.90 kW x 341 Kw</td>
<td>$1,670.90</td>
</tr>
<tr>
<td>Drought Demand</td>
<td>$1.60 kW x 341 Kw</td>
<td>$545.60</td>
</tr>
<tr>
<td>Base Energy</td>
<td>12.33 m/kWh x 130,000 kWh</td>
<td>$1,602.90</td>
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<tr>
<td>Drought Energy</td>
<td>3.85 m/kWh x 130,000 kWh</td>
<td>$500.50</td>
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<td>Demand &amp; Energy Total</td>
<td>16.18 m/kWh x 130,000 kWh</td>
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<td>($216.00)</td>
</tr>
<tr>
<td>Total Charge</td>
<td></td>
<td>$4,103.91</td>
</tr>
</tbody>
</table>

### Sample Bill 2018 Rates with 5% Voltage Discount

<table>
<thead>
<tr>
<th>Description</th>
<th>Calculation</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Demand</td>
<td>$5.50 kW x 341 Kw</td>
<td>$1,875.50</td>
</tr>
<tr>
<td>Drought Demand</td>
<td>$0 kW x 341 Kw</td>
<td>$0</td>
</tr>
<tr>
<td>Base Energy</td>
<td>13.60 m/kWh x 130,000 kWh</td>
<td>$1,768.00</td>
</tr>
<tr>
<td>Drought Energy</td>
<td>0 m/kWh x 130,000 kWh</td>
<td>$0</td>
</tr>
<tr>
<td>Demand &amp; Energy Total</td>
<td>16.18 m/kWh x 130,000 kWh</td>
<td>$3,643.50</td>
</tr>
<tr>
<td>Less 5% Voltage Discount</td>
<td></td>
<td>($182.18)</td>
</tr>
<tr>
<td>Total Charge</td>
<td></td>
<td>$3,461.32</td>
</tr>
</tbody>
</table>

Proposals for 2018 Rate Process
WAPA-UGP Is Proposing to Discontinue the 5% Voltage Discount

- Consistent application of the discount is difficult
  - New customers
  - Determination of “sufficient savings” to justify discount
  - Staff time

- Existing PODs can sufficiently deliver our firm power & energy
  - 5% Voltage Discount must be evaluated for application at new PODs.

- For many customers, WAPA-UGP provides a small portion of the total power supply
  - The 5% discount impedes ability to simplify power billing for customers having multiple PODs.

- Requires complex power billing software
  - Discontinuing the 5% Voltage Discount would provide savings in future software.
  - No other WAPA project has a Voltage Discount.
Sale of Surplus Products
Rate Schedules
PS-ED Adding a Sale of Surplus Products Rate Schedule

• This is not a new business practice
  • Documenting the authority for short-term sales

• Rate schedule applies to marketing and is applicable to the sale of surplus products
  • Short-term energy only

• The surplus products are available after firm power and energy obligations are met.

• WAPA can make the product(s) available for sale providing entities enter into separate agreements with the marketing office which will specify the terms of the sale

• Term on the surplus energy product sale cannot exceed one year

• The charge for each product will be determined at the time of the sale based on market rates
LAP Sale of Surplus Products - L-M1

• Current LAP surplus energy & capacity products included:
  • Reserves
  • Regulation
  • Frequency Response

• Requirements
  • Separate agreement(s) with LAP Marketing

• Charge
  • Based on market rates (+) administrative costs

• Proposing the addition of “short-term energy” as a surplus product to existing Rate Schedule L-M1
Proposed Schedule
Public Process Schedule

• June — Publish 2 FRNs
  • FRN for P-SMBP—ED and an FRN for LAP
  • Begins 90 day comment period

• Public Information & Comment Forums
  • July 26, 2017 Denver, CO vicinity
  • July 27, 2017 Sioux Falls, SD

• Publish Final FRNs—Fall 2017

• New Rate Schedules in place
  • January 1, 2018
Drought Adder Schedule for 2017

- Finalize annual Power Repayment Study (Feb-March)
  - Determine if Base rate and/or Drought Adder needs adjustment via formal rate adjustment
- Corp snowpack is final—new generation projections April 15th
  - Perform preliminary review of Drought Adder early summer — notify customers of and estimated change to the rate
  - Perform second review of Drought Adder in September
- Notify customers in October of Drought Adder change to be implemented January 2018
### Draft Schedule for 2018 Rate Adjustment

<table>
<thead>
<tr>
<th>Jan 2017</th>
<th>Apr 2017</th>
<th>Jul 2017</th>
<th>Oct 2017</th>
<th>Jan 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Process</td>
<td>Federal Register Notice</td>
<td>Information Forums</td>
<td>Federal Register Notice</td>
<td>Informal Meetings</td>
</tr>
<tr>
<td>FRN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>New Rate in Effect</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Jan 2017</th>
<th>Feb-Mar</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drought Adder</td>
<td>Finalize annual PRS. Determine if Base/Adder needs adjustment via formal rate adj</td>
<td>Early Summer Preliminary review of Drought Adder-Notify Customer of estimated change</td>
<td>Sept -2nd Review of Drought Adder</td>
<td>October Notify Cust of Drought Adder Change eff Jan</td>
<td>New Rate Effective Jan 1</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**Proposals for 2018 Rate Process**
More Information

**P-SMBP--ED**

Materials will be posted to Website:
https://www.wapa.gov/regions/UGP/rates/Pages/2018-firm-rate-adjustment.aspx

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**LAP**

Materials will be posted to Website:

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Questions