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><strong>Pick-Sloan Missouri Basin Program</strong> (PRS)</td>
<td><strong>Eastern Division</strong> Rev Req</td>
<td><strong>Pick-Sloan Eastern Division Rates</strong></td>
</tr>
<tr>
<td><strong>Fryingpan-Arkansas Project</strong> (PRS)</td>
<td><strong>Western Division</strong> Rev Req</td>
<td><strong>LAP Rates</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Fry-Ark</strong> Rev Req</td>
<td></td>
</tr>
</tbody>
</table>
Overview of Component Costs

- **Drought Adder**
  - Adjusted Annually

- **Base**
  - Adjusted only by Public Process

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

- **O&M**
  - Annual O&M
  - Investments - additions and replacements
  - Annual interest on investment
  - Inflation

- **Capital**
  - Normal purchases
  - Transmission costs

Proposals for 2018 Rate Process
LAP Current Charge Components

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

Proposals for 2018 Rate Process
LAP Proposed Charge Components

Proposals for 2018 Rate Process

**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

**Proposed**
- **Revenue Requirement**
  - $64.1 M
  - F-A $13.3 M & P-S WD $50.8 M
- **$0 M**
  - F-A $0 M & P-S WD $0 M
- **$64.1 M**
  - F-A $13.3 M & P-S WD $50.8 M

Drought Adder
Base
P-SMBP--ED Current Charge Components

Revenue Requirement
$282.7 M

Drought Adder
$68.3 M

Base
$214.4 M

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

Proposals for 2018 Rate Process

Current

Revenue Requirement
$282.7 M

$68.3 M

$214.4 M

Proposed

Revenue Requirement
$230.1 M

$0 M

$230.1 M

Drought Adder

Base
PRS Information
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
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 | Cost Projection Period With Inflation | No Inflation
--- | --- | ---

2018 Rate Setting PRS

Actuals | Cost Projection Period With Inflation | No Inflation
--- | --- | ---

*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
Regional Rate Proposals
LAP Composite Rate

Proposals for 2018 Rate Process
Why the Changes for Fry-Ark

• Base decreasing
  • New 5-year cost evaluation period
    • New Operations and Maintenance Expenses
    • New Investments/Replacements
    • Inflationary Costs
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><strong>-14%</strong></td>
</tr>
<tr>
<td>Fry-Ark Rev Req</td>
<td>$15.3M</td>
<td>$13.3M</td>
<td><strong>-13%</strong></td>
</tr>
<tr>
<td>PS-WD Rev Req</td>
<td>$59.3M</td>
<td>$50.8M</td>
<td><strong>-14%</strong></td>
</tr>
</tbody>
</table>
## LAP Proposed Rates Summary

<table>
<thead>
<tr>
<th>Firm Electric Service</th>
<th>Current Rates Effective January 1, 2017</th>
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<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>
## 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><strong>Firm Capacity</strong></td>
<td>$4.12/kW-mo</td>
<td>$0.00/kW-mo</td>
<td>$4.12/kW-mo</td>
</tr>
<tr>
<td><strong>Firm Energy</strong></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>

**Proposed for 2018 Rate Process**
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>
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<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

Proposals for 2018 Rate Process
P-SMBP--ED
Proposed Charge Components*

$230.1 Million Revenue Requirement

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

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Power Composite Rate</td>
<td>$209.8 M/8742 GWh = 24.00 M/kWh</td>
</tr>
<tr>
<td>Effective Composite Rate</td>
<td>($209.8 M+$7.3 M)/8742 = 24.83 m/kWh</td>
</tr>
</tbody>
</table>
# 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>
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<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>
</tr>
</tbody>
</table>

Firm Power $209.8 M / 8742 GWh = 24.00 M/kWh

Peaking Firm Power 20.3 M / 8742 GWh = 0.00 M/kWh

5% Voltage Discount 7.3 M / 8742 GWh = 0.00 M/kWh

Gross Rev Requirement ($209.8 M + $7.3 M) / 8742 GWh = 24.83 M/kWh

Effective Composite Rate $209.8 M / 8742 GWh = 24.00 M/kWh

Effective Composite Rate ($209.8 M + $7.3 M) / 8742 GWh = 24.83 M/kWh

Proposals for 2018 Rate Process
## 5% Voltage Discount Comparison

### 2017 rates to 2018 proposed rates

<table>
<thead>
<tr>
<th></th>
<th>Sample Bill 2017 Rates with 5% Discount</th>
<th>Sample Bill 2018 Rates No 5% Voltage Discount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Base Demand</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>341 Kw x $4.90 kW=</td>
<td>$1,670.90</td>
<td>341Kw x $5.25 kW= $1,790.25</td>
</tr>
<tr>
<td><strong>Drought Demand</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>341 Kw x $1.60 kW=</td>
<td>$545.60</td>
<td>341 Kw x $0 kW= $0</td>
</tr>
<tr>
<td><strong>Base Energy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>130,000 kWh x 12.33 m/kWh=</td>
<td>$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></td>
<td></td>
</tr>
<tr>
<td>130,000 kWh x 3.85 m/kWh =</td>
<td>$500.50</td>
<td>130,000 kWh x 0 m/kWh = $0</td>
</tr>
<tr>
<td><strong>Demand &amp; Energy Total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.18 m/kWh</td>
<td>$4,319.90</td>
<td>$3,515.35</td>
</tr>
<tr>
<td><strong>Less 5% Voltage Discount</strong></td>
<td></td>
<td>($)216.00</td>
</tr>
<tr>
<td><strong>Total Charge</strong></td>
<td>$4,103.91</td>
<td>$3,515.35</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>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Base Demand</strong></td>
<td>341 Kw x $4.90 kW = 1,670.90</td>
<td>$1,670.90</td>
</tr>
<tr>
<td><strong>Drought Demand</strong></td>
<td>341 Kw x $1.60 kW = 545.60</td>
<td>$545.60</td>
</tr>
<tr>
<td></td>
<td>$6.50kW</td>
<td>$2,216.50</td>
</tr>
<tr>
<td><strong>Base Energy</strong></td>
<td>130,000 kWh x 12.33 m/kWh = 1,602.90</td>
<td>$1,602.90</td>
</tr>
<tr>
<td><strong>Drought Energy</strong></td>
<td>130,000 kWh x 3.85 m/kWh = 500.50</td>
<td>$500.50</td>
</tr>
<tr>
<td></td>
<td>16.18 m/kWh</td>
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<td><strong>Demand &amp; Energy Total</strong></td>
<td></td>
<td>$4,319.90</td>
</tr>
<tr>
<td><strong>Less 5% Voltage Discount</strong></td>
<td>(341 Kw x $4.90 kW = 1,670.90 - 5% of $1,670.90)</td>
<td>($216.00)</td>
</tr>
<tr>
<td><strong>Total Charge</strong></td>
<td></td>
<td>$4,103.91</td>
</tr>
</tbody>
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### Sample Bill 2018 Rates with 5% Voltage Discount

<table>
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<tbody>
<tr>
<td><strong>Base Demand</strong></td>
<td>341 Kw x $5.50 kW = 1,875.50</td>
<td>$1,875.50</td>
</tr>
<tr>
<td><strong>Drought Demand</strong></td>
<td>341 Kw x $0 kW = 0</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>$6.50kW</td>
<td>$1,875.50</td>
</tr>
<tr>
<td><strong>Base Energy</strong></td>
<td>130,000 kWh x 13.60 m/kWh = 1,768.00</td>
<td>$1,768.00</td>
</tr>
<tr>
<td><strong>Drought Energy</strong></td>
<td>130,000 kWh x 0 m/kWh = 0</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>16.18 m/kWh</td>
<td>$3,643.50</td>
</tr>
<tr>
<td><strong>Demand &amp; Energy Total</strong></td>
<td></td>
<td>$3,643.50</td>
</tr>
<tr>
<td><strong>Less 5% Voltage Discount</strong></td>
<td>(341 Kw x $5.50 kW = 1,875.50 - 5% of $1,875.50)</td>
<td>($182.18)</td>
</tr>
<tr>
<td><strong>Total Charge</strong></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></td>
</tr>
<tr>
<td>Informal Meetings</td>
<td></td>
<td>Comment Forums</td>
<td>Final FRN Rate</td>
<td>Final Rate 30 Day Notice</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>New Rate in Effect</td>
</tr>
</tbody>
</table>

### Firm Power Customer Notification Schedule

- **Feb-Mar**: Finalize annual PRS. Determine if Base/Adder needs adjustment via formal rate adj
- **Early Summer**: Preliminary review of Drought Adder-Notify Customer of estimated change
- **Sept-2nd Review of Drought Adder**
  - **October**: Notify Cust of Drought Adder Change eff Jan
  - **New Rate Effective Jan 1**

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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

Contact:
Linda Cady-Hoffman
UGP Rates Manager

Phone: 406-255-2920
E-mail: cady@wapa.gov

LAP

Materials will be posted to Website:

Contact:
Sheila Cook
RMR Rates Manager

Phone: 970-461-7211
E-mail: scook@wapa.gov
Questions