City of Mesa
FY 2017/18
Energy Resources Department Presentation and Rate Recommendations
City Council
April 13, 2017

Presented by
the Energy Resources Department
Background

Electric & Gas utilities purchased from Dr. A.J Chandler in 1917

122 FTES

<table>
<thead>
<tr>
<th></th>
<th>ELECTRIC</th>
<th>NATURAL GAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESIDENTIAL CUSTOMERS</td>
<td>14,050</td>
<td>58,825</td>
</tr>
<tr>
<td>NON-RESIDENTIAL CUSTOMERS</td>
<td>2,555</td>
<td>2,477</td>
</tr>
<tr>
<td>TOTAL ANNUAL REVENUES (INCL EECAF &amp; PNGCAF)</td>
<td>$31,637,753</td>
<td>$41,401,228</td>
</tr>
<tr>
<td>ANNUAL SALES</td>
<td>322,367,254 kWh</td>
<td>33,890,152 Therms</td>
</tr>
<tr>
<td>TOTAL ANNUAL EXPENDITURES</td>
<td>$30,817,742</td>
<td>$37,987,535</td>
</tr>
<tr>
<td>GENERAL FUND TRANSFER (FY1617)</td>
<td>$6,493,000</td>
<td>$7,760,000</td>
</tr>
<tr>
<td>NET SOURCES AND USES (FY1617)</td>
<td>$820,011</td>
<td>$3,413,693</td>
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</tbody>
</table>
Electric Utility
Electric Utility

Priorities
- Safety
- Reliability
- Cost-Effective

Mission
- Provide safe, reliable and cost-effective power to Mesa Electric customers

Desired Outcomes
- Electric energy is acquired and transmitted to Mesa's electric distribution system reliably and at the lowest possible costs
- Electric energy is distributed safely and reliably to our customers
- Our customers' electric energy consumption is accurately and safely measured
Measuring Success

1,147 days without Lost Time Accidents (as of 3.31.2017)

Outage Duration - 73% better than target (2016)

1st quartile Residential bills 14.9% less than SRP & 3rd quartile Residential bills 9.4% less

142 customers participated in summer electric assistance program saving $35.80 on average per customer in 2016

O&M costs 20% or $3.14 per customer below target (2016)

Green/Renewable supply 20% of annual energy requirements

American Public Power Association/Reliable Public Power Provider (RP3)
### Residential Electric Bill Comparison Proposed 2017 Rate with 2016 Consumption

<table>
<thead>
<tr>
<th></th>
<th>1st Q</th>
<th>2nd Q</th>
<th>Avg</th>
<th>3rd Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mesa</td>
<td>$674.08</td>
<td>$1,028.39</td>
<td>$1,120.95</td>
<td>$1,432.93</td>
</tr>
<tr>
<td>SRP</td>
<td>$792.24</td>
<td>$1,153.65</td>
<td>$1,249.03</td>
<td>$1,582.01</td>
</tr>
<tr>
<td>Avg Monthly kWh</td>
<td>464.25</td>
<td>766.14</td>
<td>845.63</td>
<td>1122.99</td>
</tr>
</tbody>
</table>

### Bar Chart

- **Mesa**
- **SRP**

**Consumption:**
- **Mesa**
- **SRP**

**Annual Bill**:
- **Mesa**:
  - $674.08 (1st Q)
  - $1,028.39 (2nd Q)
  - $1,120.95 (Avg)
  - $1,432.93 (3rd Q)

- **SRP**:
  - $792.24 (1st Q)
  - $1,153.65 (2nd Q)
  - $1,249.03 (Avg)
  - $1,582.01 (3rd Q)
Summer Electric Assistance (SEA) Pilot Program

- Pilot offered during 2015 and 2016
- Special rate effective during June, July, and August
- Available to low-income Mesa Electric utility customers only
- Waives the monthly service fee and provides first 80 kWh for free
- Participants saved an average of $13 per month
- 28 participants in 2015 saved a total of $742
- 142 participants in 2016 saved a total of $5,084
Recent Accomplishments

**Safety**
No Lost Time Accidents since February 8, 2014

**Reliability**
2016: below target by 15 outages (55 VS 40)
Frequency Index: 40.6% below target

**Cost-Effectiveness**
Added 41 residential & 33 non-residential customers
Electric Energy Supplies (EECAF)
  - Base contract replaced, starts deliveries 4/1/2017
Solar RFP (w Water Resources & Env Management & Sustainability)
  - MAC Solar
  - Customer owned solar: 22 res., 17 comm.; 8 Pending
Electric Funding Sources

• Rate Revenues
  • Customers billed for account management & electricity usage

• Non-rate revenues
  • Fees & charges – connect, disconnect, reconnect, etc.
  • Up-front payments from developers/customers to extend/expand electric infrastructure
Significant Budget Changes for FY17/18

Department expenses were reviewed to ensure that anticipated needs were in line with minimizing the cost of delivering services to customers. Examples include:

- Reduced professional services for Electric Pre-Design ($17,500)
- Reduced temporary services for Electric Substation Operations ($13,200)
Electric Utility Rate Recommendations

• Rate/Bill spikes are avoided by changing rates in small increments over multiple years

• Adjusting system service charge component of the electric rate allows for a more stable revenue source for the program & bills for customers
  • Currently only 20% of the revenues (excluding EECAF) from residential customers are fixed revenues.
  • Rate adjustments applied to the system service charge allows for a movement toward a more balanced rate structure
Electric Utility Rate Recommendations Cont.

• Residential System Service Charge component: $1.25 per month, from $9.50 to $10.75
• Consumption component of rate: No adjustment recommended
• Average residential customer: $1.25 per month, from $92.16 to $93.41, 1.4% (Including commodity pass-through cost)
• Non-residential rates: No adjustment recommended
• Proposed System Service Charge of $10.75 is $9.25 per month less than SRP’s monthly service charge of $20.00
• Monthly bills during calendar year 2016 (at FY 2017/18 Mesa rates) would be approximately $10.67 or 10.3% less per month than if served by SRP ($128.04 less per year)
Gas Utility
Gas Utility

Priorities

• Safety
• Reliability
• Cost-Effective

Mission

• Provide safe, reliable and cost-effective natural gas to Mesa Energy Resources Gas customers

Desired Outcomes

• Natural gas supplies are acquired and transported to Mesa's natural gas distribution system reliably and at the lowest possible costs
• Natural Gas is distributed safely and reliably to our customers
• Our customers' natural gas consumption is accurately and safely measured
Measuring Success

01 556 days without Lost Time Accidents (as of 3.31.2017)

02 2% of emergency response calls exceed 30 minutes - 85% better than target, 13% at target (2016)

03 Outage frequency - 92% better than target (2016)

04 Average Residential bills 1.6% less than SWG

05 O&M costs 18% or $1.68 below target (2016)

06 American Public Gas Association System Operational Achievement Recognition (SOAR)
Residential Gas Bill Comparison Proposed 2017 Rate with 2016 Consumption - Mesa

<table>
<thead>
<tr>
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<th>2nd Q</th>
<th>Avg</th>
<th>3rd Q</th>
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</thead>
<tbody>
<tr>
<td>Mesa Annual Bill</td>
<td>$275.39</td>
<td>$348.20</td>
<td>$394.99</td>
<td>$457.34</td>
</tr>
<tr>
<td>SWG Annual Bill</td>
<td>$241.83</td>
<td>$338.32</td>
<td>$401.73</td>
<td>$470.07</td>
</tr>
<tr>
<td>Avg Monthly Therms</td>
<td>8.67</td>
<td>16.04</td>
<td>20.89</td>
<td>26.11</td>
</tr>
</tbody>
</table>

- Mesa Annual Bill
- SWG Annual Bill
Recent Accomplishments

**Safety**
No Lost Time Accidents since September 22, 2015
Underground damage prevention program (Blue Stake/811)

**Reliability**
Frequency Index: 92% below target
Average emergency response time 18.7 minutes

**Cost-Effectiveness**
O&M Costs consistently below target for calendar 2016 (18%)
Natural gas supply costs below neighboring utilities
CNG Station completed November 2016
Gas Engineering team recognized by APGA
Gas Funding Sources

• Rate Revenues
  • Customers billed for account management & electricity usage

• Non-rate revenues
  • Fees & charges – connect, disconnect, reconnect, etc.
  • Up-front payments from developers/customers to extend/expand gas infrastructure
Department expenses were reviewed to ensure that anticipated needs were in line with minimizing the cost of delivering services to customers. Examples include:

- Reduced rents/leases ($20,000)
- Reduced Warehouse supplies for Gas System Maintenance ($87,000)
- Reduced outside materials in Gas System Operations ($23,000)
Natural Gas Utility Rate Recommendations

• Rate/Bill spikes are avoided by changing rates in small increments over multiple years

• Adjusting system service charge component of the natural gas rate allows for a more stable revenue source for the program
  • Currently only 41% of the revenues (excluding PNGCAF) from natural gas customers are fixed revenues.
  • Rate adjustments applied to the system service charge allows for a movement toward a more balanced rate structure
Natural Gas Utility Rate Recommendations Cont.

• All customers System Service Charge: increase $0.75 per month
  • Residential customers summer: from $13.11 to $13.86 per month
  • Residential customers winter: from $16.04 to $16.79 per month

• Average residential customer monthly bill: from $32.17 to $32.92, 2.3% (Including commodity pass-through)

• Monthly bills during calendar year 2016 (at FY 2017/18 Mesa rates) would be approximately $0.56 or 1.7% less per month than if served by SW Gas ($6.72 less per year)
Electric Utility Service Area
Electric Reliability-Outage Duration
Electric O&M per Customer

<table>
<thead>
<tr>
<th>Jan-16</th>
<th>Feb-16</th>
<th>Mar-16</th>
<th>Apr-16</th>
<th>May-16</th>
<th>Jun-16</th>
<th>Jul-16</th>
<th>Aug-16</th>
<th>Sep-16</th>
<th>Oct-16</th>
<th>Nov-16</th>
<th>Dec-16</th>
</tr>
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<tbody>
<tr>
<td>$14.00</td>
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Actual Cost per Customer

Average Target
Reductions in EECAF costs have recently offset small rate increases.
Mesa Natural Gas Service Area
Magma Natural Gas Service Area
Gas Emergency Response Time-Mesa
Gas Reliability – Outage Frequency

![Graph showing Gas Reliability – Outage Frequency](image-url)

- **Outages per Customer**
- **Actual** vs **Target**
- **X-axis** shows months from Jan-16 to Dec-16
- **Y-axis** shows outage frequency per customer
Gas O&M per Customer

<table>
<thead>
<tr>
<th>Month</th>
<th>Actual Cost per Customer</th>
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<tbody>
<tr>
<td>Jan-16</td>
<td>$10.00</td>
</tr>
<tr>
<td>Feb-16</td>
<td>$10.00</td>
</tr>
<tr>
<td>Mar-16</td>
<td>$10.00</td>
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<tr>
<td>Apr-16</td>
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<td>May-16</td>
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<td>Dec-16</td>
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- Actual Cost per Customer
- Average Target
Reductions in PNGCAF costs have recently offset rate increases.