BOARD OF DIRECTORS

June 15, 2021

ITEM

SD-2: Rates Monitoring Report

PURPOSE

To ensure full Board review, discussion and acceptance of SD-2: Rates Monitoring Report.

FACTS

a. The Board confirmed the Corporate Governance Initiative Charter in December 2014, in order to assess and refine OPPD's corporate governance infrastructure.

b. The first set of Board policies was approved by the Board on July 16, 2015. A second set of Board policies was approved by the Board on October 15, 2015.

c. Each policy was evaluated and assigned to the appropriate Board Committee for oversight of the monitoring process.

d. The Finance Committee is responsible for evaluating Board Policy SD-2: Rates on an annual basis.

e. The Finance Committee has reviewed the SD-2: Rates Monitoring Report and is recommending that OPPD be found to be sufficiently in compliance with the policy as stated.

ACTION

The Finance Committee recommends Board approval of SD-2: Rates Monitoring Report.

RECOMMENDED: L. Javier Fernandez
Vice President and Chief Financial Officer

APPROVED FOR REPORTING TO BOARD: Timothy J. Burke
President and Chief Executive Officer

Attachment: Exhibit A – Monitoring Report Resolution
Monitoring Report
SD-2: Rates
Committee Meeting
June 15, 2021

Javier Fernandez, Vice President – Financial Services & CFO
The Board of Directors shall establish a rate target of no general rate increases for a 5-year period starting January 1, 2017 and ending December 31, 2021, and a directional rate target of 20% below the West North Central Regional average published rates on a system average basis.

In implementing this rate target, OPPD shall adhere to these principles:

• Maintain fair, reasonable, and non-discriminatory rates as stated in Nebraska Revised Statute 70-655;
• Equitably assign costs across and within all customer classes;
• Monitor affordability indicators;
• Pursue rate process and structure changes to reflect the cost of energy when it is used;
• Offer flexibility and options; and
• Be simple and easy to understand.
SD-2: Rates

No General Rate Increase and Directional Rate Target

• No general rate increase for a 5-year period starting January 1, 2017 and ending December 31, 2021
  – OPPD is on track to fulfill the promise of no general rate increase for 5 years.

• Directional goal of 20% below the West North Central (WNC) Region average published rates
  – The no general rate increase was an important step in pursuit of 20% below the WNC Regional average.

• Comparison against the WNC Region:
  – OPPD continues to measure against the states included in the Energy Information Administration’s (EIA) WNC Region including North Dakota, South Dakota, Minnesota, Iowa, Missouri, Kansas, Nebraska.
SD-2: Rates
Directional Rate Target

WNC Average Rates All Rate Classes (¢/kWh)
Data from EIA - Electric Sales, Revenue, and Average Price (Table T4 and T10)


7.26 (8.5%)
8.43 (6.2%)
8.94 (6.8%)
8.90 (8.2%)

- West North Central
- Iowa
- Kansas
- Minnesota
- Nebraska
- North Dakota
- South Dakota
- OPPD
- Missouri
SD–2: Rates
Directional Rate Target

• EIA calculates the average price (cents/kWh) utilizing consistent methodology to ensure comparability across states and utilities.
  – Average price per kWh calculation:
    • Utilizes the Annual Electric Power Industry Report (Form EIA-861)
      – Energy Sales by sector.
    • The formula is simply: \( \frac{\text{Revenue}}{\text{Energy Sales}} = \text{average price} \).
      – Average price will not perfectly reflect the structure of rates
      – This methodology ensures comparability regardless of source of revenue – customer, demand, energy charge, etc.
SD–2: Rates

Load Factor

• Load factor, a measure of system utilization, ranges widely by customer class.

• High load factors indicate high utilization of system capacity:
  – Customers with a higher load factor utilize the system more efficiently

• High load factor customers often and appropriately translate into a lower average cost per kWh while still bearing an equitable amounts of system cost.
SD–2: Rates
Directional Rate Target

WNC Average Residential Rates (¢/kWh)
Data from EIA- Electric Sales, Revenue, and Average Price (Tables T4 and T6)

- 2010: 9.22 (4.4%)
- 2011: 10.68 (2.4%)
- 2012: 11.47 (2.7%)
- 2013: 11.30 (4.7%)
WNC Average Commercial Rates (¢/kWh)
Data from EIA- Electric Sales, Revenue, and Average Price (Tables T4 and T7)

Directional Rate Target
SD–2: Rates
Directional Rate Target

WNC Average Industrial Rates (¢/kWh)

Data from EIA- Electric Sales, Revenue, and Average Price (Tables T4 and T8)
SD–2: Rates
Fair, Reasonable, and Non-Discriminatory

• Maintain fair, reasonable and non-discriminatory rates as stated in Nebraska Revised Statute 70-655
  – An industry standard Cost of Service Study is completed to align rates with cost drivers.
  – Costs are allocated across classes according to their unique energy usage characteristics.
  – The rate setting process is reviewed by an outside consultant (The Brattle Group).
SD–2: Rates
Cost Assignment Across and Within Classes

• Equitably assign costs across and within all customer classes.
  – Equitable assignment of costs within rate classes is dependent on rate structure, metering technology, and customer homogeneity.
  – The service charge increase and the energy charge decrease for small commercial and residential classes was a step toward more equitably assigning costs within those classes.

<table>
<thead>
<tr>
<th></th>
<th>Industrial</th>
<th>Commercial</th>
<th>Residential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Costs*</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Energy Costs</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Demand Costs*</td>
<td>●</td>
<td>Partial</td>
<td>Partial</td>
</tr>
</tbody>
</table>

*Service charge recovers a portion of the customer and distribution related costs for small commercial and residential rate classes
SD–2: Rates

Monitor Affordability Indicators

• Monitor affordability indicators
  – OPPD accesses a number of publicly available data points to monitor the overall affordability of its retail electric sales relative to income. Data sources include:
    • U.S. Energy Information Administration’s (EIA) “Electric Sales, Revenue, and Average Price” publications
    • “Median Household Income Data” from US Census publications
  – Weather impacts, via Heating Degree Days (HDD) and Cooling Degree Days (CDD) are utilized to more accurately interpret and understand the affordability findings:
    • Define HDD: A measurement of how cold the temperature is relative to 65°F. For example, a day with a mean temperature of 40°F has 25 HDD. Two days with a mean temperature of 40°F would have a total of 50 HDD for the two-day period.
    • Define CDD: A measurement of how hot the temperature is relative to 65°F. A day with a mean temperature of 80°F has 15 CDD. If the next day has a mean temperature of 83°F, it has 18 CDD. The total CDD for the two days is 33 CDD.
SD-2: Rates
Monitor Affordability Indicators

WNC Average Residential Bill ($/Month)
Data from EIA- Electric Sales, Revenue, and Average Price (Tables T5a and T6)

Percent Increase in Degree Days (Year Over Year)

<table>
<thead>
<tr>
<th></th>
<th>WNC</th>
<th>OPPD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating Degree Days (HDD)</td>
<td>2%</td>
<td>-1%</td>
</tr>
<tr>
<td>Cooling Degree Days (CDD)</td>
<td>-16%</td>
<td>-10%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OPPD</td>
<td>$92.38</td>
<td>$90.86</td>
<td>$98.06</td>
<td>$103.60</td>
<td>$100.37</td>
<td>$99.70</td>
<td>$106.43</td>
<td>$103.82</td>
<td>$107.64</td>
<td>$104.77</td>
</tr>
<tr>
<td>Below WNC</td>
<td>3.64%</td>
<td>8.14%</td>
<td>1.69%</td>
<td>2.29%</td>
<td>6.47%</td>
<td>4.69%</td>
<td>1.57%</td>
<td>3.65%</td>
<td>6.95%</td>
<td>4.83%</td>
</tr>
</tbody>
</table>
SD-2: Rates
Monitor Affordability Indicators

WNC Average Residential Bill
Data from EIA - Electric Sales, Revenue, and Average Price (Tables T5a and T6)

WNC Region $110.09
OPPD $104.77
**SD–2: Rates**

Monitor Affordability Indicators

- Need to use a consistent data source for average income
- SD-2 historically used CPS as the source for income data

<table>
<thead>
<tr>
<th>Current Population Survey (CPS)</th>
<th>American Community Survey (ACS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary survey given through telephone and personal-visit interviews</td>
<td>Mandatory survey given through mail, internet, telephone and personal-visit interviews</td>
</tr>
<tr>
<td>Sample size is about 100,000 addresses per year</td>
<td>Sample size is about 3,000,000 addresses per year</td>
</tr>
<tr>
<td>50 questions covering sources of income, including non-cash benefits</td>
<td>8 questions covering major income sources</td>
</tr>
<tr>
<td>Started using sampling frame from the Master Address file beginning in 2014</td>
<td>Uses up-to-date sampling frame: Census Bureau’s Master Address File</td>
</tr>
<tr>
<td>Average income available at state level</td>
<td>Average income available at state, county, census tract, and zip code levels</td>
</tr>
</tbody>
</table>

Recommendation is to use ACS 5-year results for SD-2 going forward
SD-2: Rates
Monitor Affordability Indicators

Nebraska Electricity Bill as a Percent of Income

*Median Household Income Data for US Census, 2019 ACS
Electricity Data from EIA Annual Electric Utility Data EIA-861,
SD–2: Rates
Monitor Affordability Indicators

State’s Residential Electricity Burden
State Median Household Income Data from US Census, 2019 ACS,
Electricity Data from EIA Annual Electric Utility Data EIA-861

Note: The US Census does not provide median household income for the OPPD territory. A median household income for the OPPD territory was derived using a weighted average of the counties’ estimated household median income and estimated population.

- Electricity Burden = \(\frac{\text{Average Annual OPPD bill}}{\text{Average Income}}\)
- Energy burden is the burden from electricity, natural gas, and other heating sources.
Distribution of OPPD's Residential Bill

- Distribution considers
  - Customers with at least 12 month of billing history, 2019 data.
  - Does not include taxes
  - Does not include adjustments (late payment fees or reconnect charges)
  - Does include discounts (LULI- Low Usage Low Income and EMC- Energy Management Credit)
- Approximately 58% of OPPD customers pay less than the mean customer bill.
In order to improve affordability monitoring, need to calibrate on areas affected more by electric burden
- Calculated electric burden by zip code using average bill by zip code and average income by zip code
- Calculated the average energy assistance dollar amount per customer by zip code

Not all customers have the same heating source: natural gas, electric heat, or liquid propane

Not all zip codes have the same experience, need the same outreach or will have the same solutions
SD–2: Rates
Monitor Affordability Indicators

Electricity Burden:
• For customers with at least 12 month of billing history, 2019 data.
• Does not include taxes
• Does not include adjustments (late payment fees or reconnect charges)
• Does include discounts (LULI and EMC)

Energy Assistance Payments

Electricity Burden
1.1% 1.86% 8.2%

EAP Payment Per Zip Code Premise
$0.00 $15.76 $132.50
SD-2: Rates
Monitor Affordability Indicators

- Below average Electric Burden 1.5%
- Above average Energy Assistance Payments per premise
- Electric Burden is showing at an acceptable percentage and OPPD’s utility assistance programs are reaching qualified customers
SD–2: Rates
Monitor Affordability Indicators

- Above average Electric Burden 4.1%, 3.9%
- Above average Energy Assistance Payments per premise
- High Electric Burden and OPPD’s utility assistance programs are reaching qualified customers to lower their energy burden
SD–2: Rates
Monitor Affordability Indicators

- Highest Electric Burden 8.2%
- No known Energy Assistance Payments per premise
- Electric Burden is high and presents an opportunity to engage customers on OPPD’s products and services that assist with electric burden reduction if not eligible for OPPD’s utility assistance programs
• Average electric burden varies throughout our service territory and is also impacted by the population within a zip code, heating source, and the efficiency of the premise

• Understand that electric burdens that otherwise look acceptable or below average have customers within those areas who have higher than average electric burdens

• The Energy Burden Solutions team will leverage this information into the project to:
  – Identify customers within each zip code with a higher than average electric burden
  – Identify further opportunities to expand outreach and communications regarding OPPD’s utility assistance program options and existing Products and Services
  – Determine solution(s) to reduce OPPD’s energy affordability gap
## SD–2: Rates

Monitor Affordability Indicators

### Top 10 Electricity Burden Zip Codes

<table>
<thead>
<tr>
<th>Prem Zip Code</th>
<th>Electricity Burden</th>
<th>Number of RES Premises</th>
<th>EAP Payment Per Zip Code Per Premise</th>
</tr>
</thead>
<tbody>
<tr>
<td>68332</td>
<td>8.2%</td>
<td>50</td>
<td>$0.00</td>
</tr>
<tr>
<td>68380</td>
<td>4.8%</td>
<td>14</td>
<td>$0.00</td>
</tr>
<tr>
<td>68381</td>
<td>4.2%</td>
<td>20</td>
<td>$0.00</td>
</tr>
<tr>
<td>68355</td>
<td>4.1%</td>
<td>271</td>
<td>$9.11</td>
</tr>
<tr>
<td>68321</td>
<td>4.1%</td>
<td>48</td>
<td>$35.31</td>
</tr>
<tr>
<td>68110</td>
<td>4.1%</td>
<td>3,736</td>
<td>$73.20</td>
</tr>
<tr>
<td>68044</td>
<td>4.0%</td>
<td>380</td>
<td>$13.31</td>
</tr>
<tr>
<td>68111</td>
<td>3.9%</td>
<td>12,580</td>
<td>$80.18</td>
</tr>
<tr>
<td>68442</td>
<td>3.9%</td>
<td>73</td>
<td>$25.27</td>
</tr>
<tr>
<td>68659</td>
<td>3.9%</td>
<td>102</td>
<td>$5.39</td>
</tr>
</tbody>
</table>
SD–2: Rates
Cost of Energy When Used

• Pursue rate process and structure changes to reflect the cost of energy when it is used:
  – Residential and Small Commercial Rates include a seasonal energy charge: Summer being June through September and Non-Summer being October through May.
  – Currently, time of use rates are available through Rider Schedule No. 469 - General Service- Time of Use.
  – Fuel and Purchase Power is calculated based on seasonal energy prices reflecting the cost of the energy when it is expected to be used.
  – OPPD continues to monitor for potential technology that would allow an increase in time of use offerings.
**SD–2: Rates**

**Flexibility and Options**

- **Offer flexibility and options**
  - *The following options exist to increase flexibility and options for interested and eligible customers.*
  - *Pricing & Rates continues to collaborate with Product Development & Marketing to bring new offerings to market*

<table>
<thead>
<tr>
<th>Residential</th>
<th>General Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Pump</td>
<td>261M</td>
</tr>
<tr>
<td>Private Outdoor Lighting</td>
<td>Street Lights</td>
</tr>
<tr>
<td>Cogeneration and Small Power*</td>
<td>Cogeneration and Small Power*</td>
</tr>
<tr>
<td>Surge Guard*</td>
<td>Surge Guard*</td>
</tr>
<tr>
<td>Net Metering*</td>
<td>Net Metering*</td>
</tr>
<tr>
<td>Community Solar*</td>
<td>Community Solar*</td>
</tr>
</tbody>
</table>

* Denotes Rider
SD–2: Rates
Simple and Easy to Understand

• Be simple and easy to understand
  – In 2020 OPPD updated the Services Regulations and Schedules to increase the ease of understanding by simplifying the language and layout.
  • The Service Regulations and Schedules builds a firm foundation for more strategic rate design work in the future
  • In collaboration with Customer Experience team, Quick Start Guides were created to better inform customers regarding Residential and Small Commercial Rate Schedules to increase their ability to make informed choices.

HOW ARE RATES SET?

Each rate schedule is determined by gathering all costs of providing electric services for OPPD’s customer-owners. Costs are categorized into generation, transmission, distribution, and workforce. Next, these categorized costs are divided into billing components and are included in each of the different rate schedules.
Recommendation

• The Finance Committee has reviewed and accepted this Monitoring Report for SD-2 and recommends that the Board find OPPD to be sufficiently in compliance with Board Policy SD-2.
WHEREAS, the Board of the Directors has determined it is in the best interest of the District, its employees, and its customer-owners to establish written policies that describe and document OPPD’s corporate governance principles and procedures; and

WHEREAS, each policy was evaluated and assigned to the appropriate Board Committee for oversight of the monitoring process; and

WHEREAS, the Board’s Finance Committee (the “Committee”) is responsible for evaluating Board Policy SD-2: Rates on an annual basis. The Committee has reviewed the SD-2: Rates Monitoring Report and finds OPPD to be sufficiently in compliance with the policy as stated.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of Omaha Public Power District accepts the Strategic Directive SD-2: Rates Monitoring Report, in the form as set forth on Exhibit A, attached hereto and made a part hereof, and finds OPPD to be sufficiently in compliance with the policy as stated.