UPDATE: On July 16, 2021, the PEC Board of Directors voted to not make the proposed rate changes explained in this power point presentation. As a result, the proposed interconnect rate changes will NOT take effect January 1, 2022.

The Board of Directors also directed staff to use member provided feedback to bring a new recommendation that will accomplish the following:

• Ensure that the PEC distribution systems costs are paid for in a manner that is equitable to all members; and
• Ensure the interconnect energy buy-back rate is equitable, properly values surplus generation, and is transparent for all members

For more information, please read the press release: PEC seeks fair rates for all members.

Staff will present the new proposal as part of the 2022 Rate Plan, which will be presented to the Board for approval at the November Board meeting.
Interconnected Generation Proposed Rates - Billing Examples

Natalia Mack I Rates Manager
David L. Thompson I VP of Markets
Interconnected Generation Proposed Rate Changes

Current: Net Metering Rate for Residential

- Service Availability Charge: $22.50 per month
- Delivery Charge (Distribution): $0.02712/kWh
- Transmission Cost of Service Charge: $0.01356/kWh
- Base Power Charge, Flat: $0.04450/kWh
- Net Metering Credit, Flat: $0.04450/kWh

Proposed Rates: Net Billing Rate for Residential (Proposed - Starting January 1, 2022)

- Service Availability Charge: $22.50 per month
- Peak Demand Charge (Distribution): $5.15/kW
- Transmission Cost of Service Charge/Credit: ~ $5.00/kW
- Base Power Charge, Time-of-Use: Varies per TOU/kWh
- Base Power Energy Credit, Time-of-Use: Varies per TOU/kWh

1 Estimated amount. Amount varies per month based on PUCT rate.
How would I be billed under the Proposed Rates?

**Service Availability Charge – Used to recover Fixed Costs**

- **Change:** None
- Monthly charge of $22.50 per meter
- Billing discounts available to reduce charge
  - **EBilling** (paperless billing) – $1.00 credit
  - **EDraft** (automatic bank draft) – $1.50 credit
  - Both billing discounts can be combined – $2.50 credit
Interconnected Generation Proposed Rate Changes

How would I be billed under the Proposed Rates?

Peak Demand Charge – Used to recover electric distribution costs

- Change: Replaces Delivery Charge - (kWh)

- Charge calculated as follows:

  \[
  \text{Peak Demand Charge} = \$5.15/\text{kW} \times \text{Peak Demand}
  \]

  \[
  \begin{align*}
  \text{Amount:} & \quad \$5.15 \text{ per kW} \\
  \text{Peak Demand:} & \quad \text{the hour with highest usage during billing month’s peak and super-peak time TOU periods. For example, if the 5 PM hour has the highest usage:}
  \end{align*}
  \]

<table>
<thead>
<tr>
<th>Time stamp of meter readings (in 15 min intervals)</th>
<th>Usage (kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020-01-01 05:01 PM to 2020-01-01 05:15 PM</td>
<td>1.9160</td>
</tr>
<tr>
<td>2020-01-01 05:16 PM to 2020-01-01 05:30 PM</td>
<td>1.2577</td>
</tr>
<tr>
<td>2020-01-01 05:31 PM to 2020-01-01 05:45 PM</td>
<td>0.7717</td>
</tr>
<tr>
<td>2020-01-01 05:46 PM to 2020-01-01 06:00 PM</td>
<td>0.0348</td>
</tr>
</tbody>
</table>

= Peak Demand Charge
= \$5.15/\text{kW} \times 3.98 \text{ kW}
= \$20.50
Interconnected Generation Proposed Rate Changes

Peak Demand Charge:
Sample solar shape day: summer

Hours of day during which the highest usage will set the Peak Demand (12:01 pm to 8:00 pm)
Interconnected Generation Proposed Rate Changes

Peak Demand Charge:
Sample solar shape day: non-summer

Hours of day during which the highest usage will set the Peak Demand (from 5:01 am to 8:00 am and from 4:01 pm to 7:00 pm)
How would I be billed under the Proposed Rates?

Time-of-Use (TOU) Base Power Charge – Used to recover cost of power purchased on behalf of members

- Change: Replaces Flat Base Power Charge
- Energy consumption charged in the appropriate TOU time period
- Charges will be calculated as follows:
  \[ \text{Base Power Charges} = \text{TOU ($/kWh)} \times \text{Energy Delivered} \]

Amount: varies per TOU time period
Energy Delivered: total sum of Energy Received (kWh) during billing month’s time TOU periods

See next slides for details
## Interconnected Generation Proposed Rate Changes

### Base Power Energy Charge

<table>
<thead>
<tr>
<th>Season</th>
<th>Time of Use Period</th>
<th>Amount, $/kWh</th>
<th>Bill Period Energy Delivered, kWh</th>
<th>Charge, $</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-Summer (Jan. – May and Oct. – Dec.)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super Economy</td>
<td>2:01 am – 4:00 am</td>
<td>$0.030616</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Economy</td>
<td>11:01 pm – 2:00 am</td>
<td>$0.037529</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4:01 am – 5:00 am</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>8:01 am – 4:00 pm</td>
<td>$0.042449</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7:01 pm – 11:00 pm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak</td>
<td>5:01 am – 8:00 am</td>
<td>$0.045680</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4:01 pm – 7:00 pm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Summer (Jun. – Sep.)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super Economy</td>
<td>3:01 am – 5:00 am</td>
<td>$0.030398</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Economy</td>
<td>11:01 pm – 3:00 am</td>
<td>$0.031940</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5:01 am – 7:00 am</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>7:01 am – 12:00 pm</td>
<td>$0.035883</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8:01 pm – 11:00 pm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak</td>
<td>12:01 pm – 2:00 pm</td>
<td>$0.046863</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6:01 pm – 8:00 pm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super Peak</td>
<td>2:01 pm – 6:00 pm</td>
<td>$0.088620</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

- For more information please see Tariff section 500.1.8.2 TIME-OF-USE BASE POWER CHARGE
Interconnected Generation Proposed Rate Changes

Time-of-Use Base Power Charge

Sample solar shape day: summer
Interconnected Generation Proposed Rate Changes

Time-of-Use Base Power Charge

Sample solar shape day: non-summer

<table>
<thead>
<tr>
<th>Hour of Day</th>
<th>Economy</th>
<th>Super Economy</th>
<th>Peak</th>
<th>Normal</th>
<th>Peak</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>0.01</td>
<td>0.01</td>
<td>0.03</td>
<td>0.03</td>
<td>0.04</td>
<td>0.03</td>
</tr>
<tr>
<td>3-4</td>
<td>0.01</td>
<td>0.01</td>
<td>0.03</td>
<td>0.03</td>
<td>0.04</td>
<td>0.03</td>
</tr>
<tr>
<td>5</td>
<td>0.03</td>
<td>0.03</td>
<td>0.04</td>
<td>0.04</td>
<td>0.05</td>
<td>0.04</td>
</tr>
<tr>
<td>6-8</td>
<td>0.04</td>
<td>0.04</td>
<td>0.05</td>
<td>0.05</td>
<td>0.06</td>
<td>0.05</td>
</tr>
<tr>
<td>9-11</td>
<td>0.05</td>
<td>0.05</td>
<td>0.06</td>
<td>0.06</td>
<td>0.07</td>
<td>0.06</td>
</tr>
<tr>
<td>12-14</td>
<td>0.06</td>
<td>0.06</td>
<td>0.07</td>
<td>0.07</td>
<td>0.08</td>
<td>0.07</td>
</tr>
<tr>
<td>15-17</td>
<td>0.07</td>
<td>0.07</td>
<td>0.08</td>
<td>0.08</td>
<td>0.09</td>
<td>0.08</td>
</tr>
<tr>
<td>18-20</td>
<td>0.08</td>
<td>0.08</td>
<td>0.09</td>
<td>0.09</td>
<td>0.1</td>
<td>0.09</td>
</tr>
<tr>
<td>21-23</td>
<td>0.09</td>
<td>0.09</td>
<td>0.1</td>
<td>0.1</td>
<td>0.11</td>
<td>0.1</td>
</tr>
<tr>
<td>24</td>
<td>0.11</td>
<td>0.11</td>
<td>0.12</td>
<td>0.12</td>
<td>0.13</td>
<td>0.12</td>
</tr>
</tbody>
</table>

Cost per kWh

--- Flat Base Power
How would I be billed under the Proposed Rates?

Time-of-Use Base Power Energy Credit – Used to compensate for member’s excess generation

- Change: Replaces Net Energy Credit (Flat kWh) with TOU kWh credit
- Energy Received credited in the appropriate TOU time period
- Charges will be calculated as follows:
  \[
  \text{Base Power Charges} = \text{TOU} \, (\$/\text{kWh}) \times \text{Energy Delivered}
  \]

  **Amount**: varies per TOU time period
  **Energy Received**: total sum of Energy Delivered (kWh) during billing month’s time TOU periods

*See next slides for details*
# Interconnected Generation Proposed Rate Changes

## Base Power Energy Credit

<table>
<thead>
<tr>
<th>Season</th>
<th>Time of Use Period</th>
<th>Amount, $/kWh</th>
<th>Bill Period Energy Received, kWh</th>
<th>Credit, $</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-Summer (Jan. – May and Oct. – Dec.)</strong></td>
<td></td>
<td></td>
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<tr>
<td>Super Economy</td>
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<td>X</td>
<td></td>
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<tr>
<td>Economy</td>
<td>11:01 pm – 2:00 am</td>
<td>-$0.037529</td>
<td>X</td>
<td></td>
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<tr>
<td></td>
<td>4:01 am – 5:00 am</td>
<td></td>
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<tr>
<td>Normal</td>
<td>8:01 am – 4:00 pm</td>
<td>-$0.042449</td>
<td>X</td>
<td></td>
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<td></td>
<td>7:01 pm – 11:00 pm</td>
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<td></td>
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<tr>
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<td>-$0.045680</td>
<td>X</td>
<td></td>
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<td></td>
<td></td>
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<td><strong>Summer (Jun. – Sep.)</strong></td>
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<td></td>
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<td>Peak</td>
<td>12:01 pm – 2:00 pm</td>
<td>-$0.046863</td>
<td>X</td>
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<td>-$0.088620</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

- For more information please see Tariff section 500.1.13 BASE POWER ENERGY CREDIT
Interconnected Generation Proposed Rate Changes

Time-of-Use Base Power Energy Credit

Sample solar shape day: summer
Interconnected Generation Proposed Rate Changes

Time-of-Use Base Power Energy Credit

Sample solar shape day: non-summer

---

Flat Base Power

Solar Output

---

Cost per kWh

Hour of Day

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Economy

Super Economy

Peak

Normal

Peak

Normal
How would I be billed under the Proposed Rates?

Transmission Cost of Service (TCOS) Charge/Credit – Used to recover cost or compensate member for avoided cost for transmission access

- Change: The charge will be recovered on a demand basis, rather than energy and may be a credit.

- Charge calculated as follows:
  \[
  \text{Transmission Cost of Service Charges/Credit} = \sim \$5.00/\text{kW} \times 4\text{CP Demand}
  \]

  **Amount:** \sim\$5.00 (varies monthly depending on actual TCOS rate)

  **4CP Demand:** the member’s average demand during the 15-minute intervals for each of the months of June, July, August and September during which the ERCOT system peaks, also known as the four coincidental peaks (4CP).

*See next slides for details*
Interconnected Generation Proposed Rate Changes

Transmission Cost of Service (TCOS) Charge or Credit

Sample scenario of TCOS Charge

If the member is consuming during the 4CP times, and on average, the demand was positive, then the member will see TCOS charges starting January through December of the following year.

TCOS Charge = \( 2019 \text{ 4CP Demand} \times \$5.00/\text{kW} \)

TCOS Charge = \( 3.50 \text{ kW} \times \$5.00/\text{kW} \)

TCOS Charge = \$17.50

Sample scenario of TCOS Credit

If the member is generating surplus energy during the 4CP times, and on average, the demand was negative, then the member will see a credit starting January through December of the following year.

TCOS Credit = \( 2020 \text{ 4CP Demand} \times \$5.00/\text{kW} \)

TCOS Credit = \( -0.75 \text{ kW} \times \$5.00/\text{kW} \)

TCOS Credit = \$3.50

<table>
<thead>
<tr>
<th>Scenarios for TCOS Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCOS Charge</td>
</tr>
<tr>
<td>June 2019</td>
</tr>
<tr>
<td>6/19 4:45-5PM</td>
</tr>
<tr>
<td>3 kW</td>
</tr>
<tr>
<td>July 2019</td>
</tr>
<tr>
<td>7/30 3:45-4PM</td>
</tr>
<tr>
<td>5 kW</td>
</tr>
<tr>
<td>August 2019</td>
</tr>
<tr>
<td>8/12 4:45-5PM</td>
</tr>
<tr>
<td>4 kW</td>
</tr>
<tr>
<td>September 2019</td>
</tr>
<tr>
<td>9/6 4:45-5PM</td>
</tr>
<tr>
<td>2 kW</td>
</tr>
<tr>
<td>Summer of 2019 4CP Demand</td>
</tr>
<tr>
<td>3.50 kW</td>
</tr>
</tbody>
</table>
Interconnected Generation Proposed Rate Changes

Transmission Cost of Service (TCOS) Charge: Summer (June – September)

Hours when a member’s 4CP demand may be set during the summer months of June, July, August, and September (typically 2:00 pm to 7:00 pm)
Scenario Information

- Member type: Residential
- Distributed Generation (DG) size: 7 KW
- DG type: solar
- Average energy usage without solar: 1,250 kWh/month

Monthly billing example will show bills for:

- Month in 2021 – Net Metering Rate (Current)
- Month in 2022 – Net Billing Rate with energy based TCOS charges (New)
- Month in 2023 – Net Billing Rate (New)
Interconnected Generation Proposed Rate Changes

Current: Interconnect Net Metering Rate
Bill Sample - 2021

System Specifications
System size 7 kW

Billing Determinants
Value Unit
Delivered Energy (DE) 943 kWh
Received Energy (RE) 401 kWh
Net Energy (DE-RE) 542 kWh

Delivered Energy (DE) 943 kWh
Super Economy 71 kWh
Normal 460 kWh
Peak 240 kWh
Received Energy (RE) 401 kWh
Super Economy 0 kWh
Normal 382 kWh
Peak 19 kWh
Net Energy 542 kWh

Current Activity
Service Availability Charge $22.50 22.50$ Delivery Charge 542 kWh @ $0.027120 14.70$ Base Power Cost 542 kWh @ $0.044500 24.13$ TCOS Charge 542 kWh @ $0.013560 $ 7.35

TOTAL AMOUNT DUE $ 68.68

Interim: Interconnect Net Billing Rate (TCOS/kWh)
Bill Sample - 2022

System Specifications
System size 7 kW

Billing Determinants
Value Unit
Peak Demand 5.00 kW
Delivered Energy (DE) 943 kWh
Super Economy 71 kWh
Economy 171 kWh
Normal 460 kWh
Peak 240 kWh
Received Energy (RE) 401 kWh
Super Economy 0 kWh
Normal 382 kWh
Peak 19 kWh
Net Energy 542 kWh

Current Activity
Service Availability Charge $5.15 25.75$ Peak Demand Charge 5 kW @ $0.027120 14.70$ Base Power Cost 542 kWh @ $0.044500 24.13$ TCOS Charge 542 kWh @ $0.013560 7.35

TOTAL AMOUNT DUE $ 77.64

New: Interconnect Net Billing Rate
Bill Sample - 2023

System Specifications
System size 7 kW

Billing Determinants
Value Unit
Peak Demand 5.00 kW
Delivered Energy (DE) 943 kWh
Super Economy 71 kWh
Economy 171 kWh
Normal 460 kWh
Peak 240 kWh
Received Energy (RE) 401 kWh
Super Economy 0 kWh
Normal 382 kWh
Peak 19 kWh

4CP Demand 1.00 kW

Current Activity
Service Availability Charge $22.50 22.50$ Peak Demand Charge 5 kW @ $0.027120 14.70$ Base Power Cost 542 kWh @ $0.044500 24.13$ TCOS Charge/Credit 1.00 kW @ $0.013560 7.35

TOTAL AMOUNT DUE $ 75.64
Interconnected Generation Proposed Rate Changes

Flat rate refers to the existing Net Energy Rate, using rates as of today.

Time of Use sections refers to the proposed Net Billing Rate.
How to access the calculator:

1. Log in to Smart Hub via: https://pec.smarthub.coop/

2. Click on the Time-of-Use Calculator link found under Quick Links ion the left hand side bar.

3. Click on the Time-of-Use Calculator tab under Usage Management.

4. Click the Green Button.
Please visit PEC’s webpage for **Distributed Generation Rates**

If you have any Questions please email **DGInquiry@peci.com**

**Natalia Mack**  
Rates Manager  
[Natalia.Mack@peci.com](mailto:Natalia.Mack@peci.com)  

**David L. Thompson**  
VP of Markets  
[David.Thompson@peci.com](mailto:David.Thompson@peci.com)
## Interconnected Generation Proposed Rate Changes
### Summary – Residential and Small Power Monthly Bill Charges and Credits

<table>
<thead>
<tr>
<th>Charge/Credit</th>
<th>Amount</th>
<th>Billing Determinant</th>
<th>Unit</th>
<th>How the billing determinant is measured?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Availability Charge</td>
<td>Residential - $22.50</td>
<td>X 1</td>
<td>month</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Small Power - $37.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak Demand Charge</td>
<td>Residential and Small Power - $5.15</td>
<td>X Peak Demand kW</td>
<td></td>
<td><strong>Non-Summer months</strong>: the maximum hourly kilowatt (kW) of demand consumed during peak time periods (5:01 am to 8:00 am and 4:01 pm to 7:00 pm), rounded two decimal places.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Summer months</strong>: the maximum hourly kilowatt (kW) of demand consumed during Peak and Super Peak time periods (12:01 pm to 8:00 pm), rounded two decimal places.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The peak demand will be reset monthly and a new peak will be established.</td>
</tr>
<tr>
<td>Base Power Charge</td>
<td>Varies per TOU</td>
<td>X Delivered Energy per TOU period kWh</td>
<td></td>
<td>The total sum of Delivered Energy by TOU time periods, rounded to the nearest whole number.</td>
</tr>
<tr>
<td>Base Power Credit (formerly the Net Metering Credit)</td>
<td>Varies per TOU</td>
<td>X Received Energy by TOU period kWh</td>
<td></td>
<td>The total sum of Received Energy by TOU time periods, rounded to the nearest whole number.</td>
</tr>
<tr>
<td>Transmission Cost of Service Charge/Credit</td>
<td>~ $5.00</td>
<td>X 4CP Demand kW</td>
<td></td>
<td>The average demand measured during each of the 15 minutes 4CP intervals.</td>
</tr>
</tbody>
</table>