



## Proposed Adjustments to SRP's Standard Electric Price Plans Effective with the May 2019 Billing Cycle

February 26, 2019



Delivering water and power™

# Agenda

## McSheffrey / Tucker

- Pricing Components / Rate Structure
- Monthly Service Charge
- Customer Generation Rate Design
- Export Rate
- Analysis of ASDA Proposal

## John Coggins

- SRP Value of Solar Work

## Susan Tierney Presentation

## If time permits:

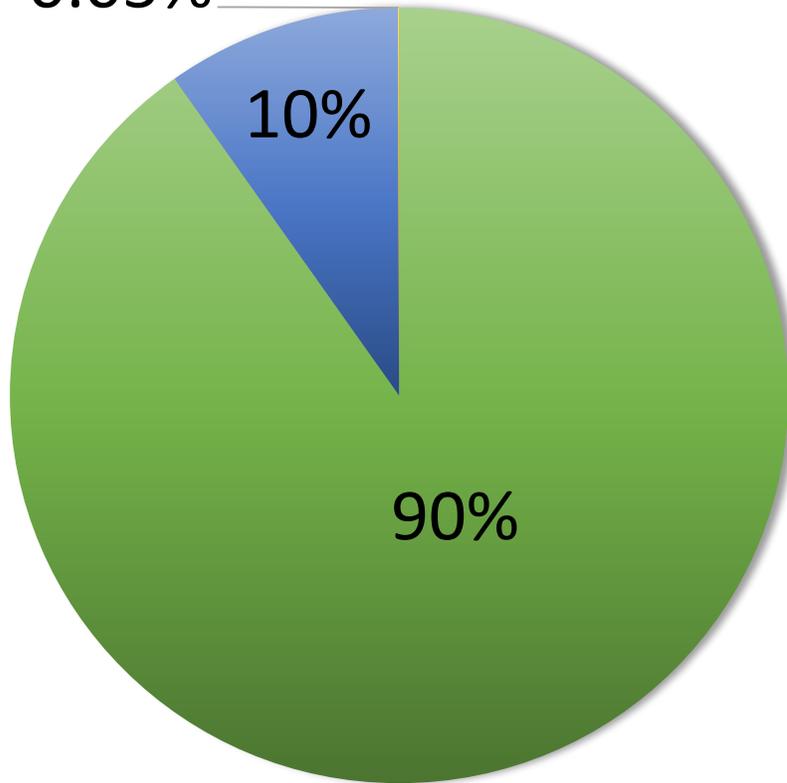
- NGS (John Coggins)
- Analysis of Sunrun's Presentation
- Analysis of Director Brown's Proposal
- E-67
- Brattle Recommendations
- Other Pricing Items
- Water Support (Michael O'Connor)

# Pricing Components

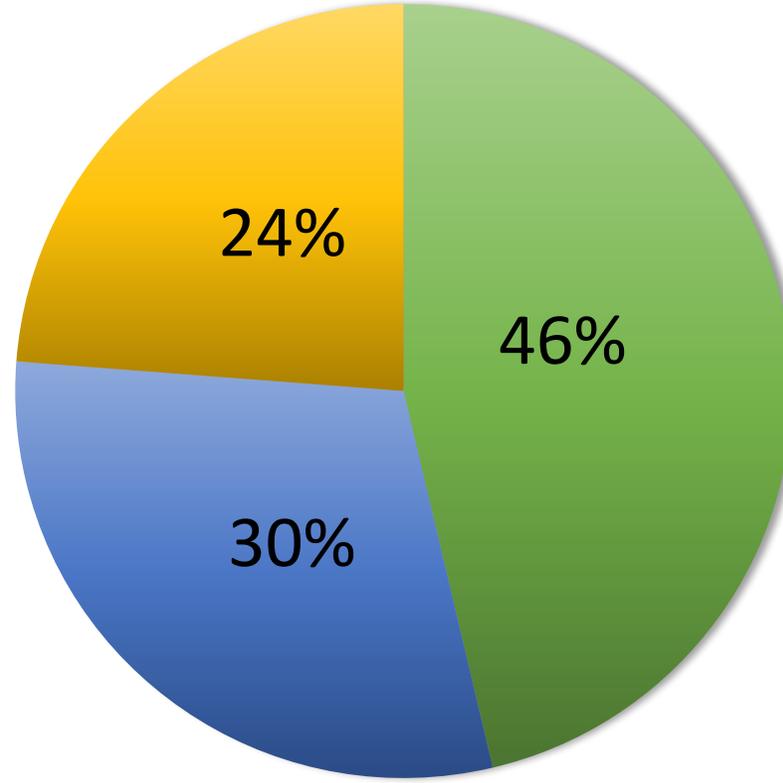
# Class Profiles

## Number of Customers

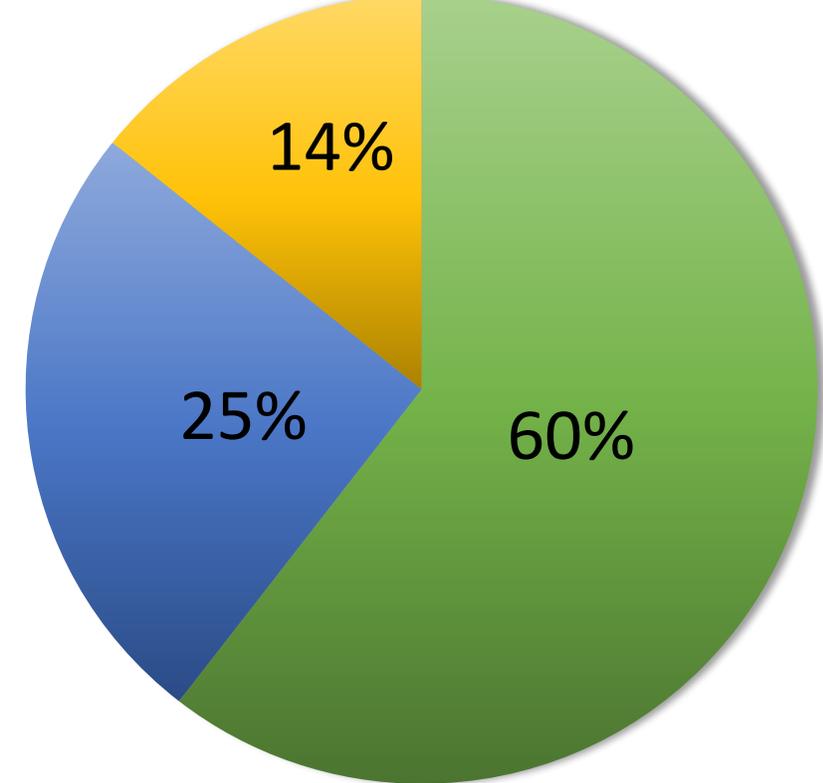
0.05%



## Energy Requirements (kWH)



## System Requirements (kW)



■ Residential ■ General Service ■ Large General Service

# Time-of-Use E-26: Marginal Cost of Each Billing Component



Source: Appendix B of the Cost Allocation Study

# Billing and Customer Service Major Components

| Department                             |
|--|
| Residential Contact Center             |
| Customer Billing & Accounting          |
| Emerging Customer Technology           |
| Marketing Support                      |
| Metering Technology & Payment Services |
| Customer Credit Services               |
| Distribution Energy Programs           |
| Customer Interaction Solution Support  |
| Blue Stake                             |

# Basic E-23 Current Return by Stratum

| Stratum | Avg. Monthly Summer kWh | Revenue | Expense | Return |
|---------|-------------------------|---------|---------|--------|
| 1       | 0-400                   | \$44    | \$42    | 2.5%   |
| 2       | 401-850                 | \$70    | \$65    | 2.9%   |
| 3       | 851-1,300               | \$95    | \$89    | 2.7%   |
| 4       | 1,301-1,800             | \$125   | \$118   | 2.1%   |
| 5       | 1,801-2,600             | \$165   | \$155   | 2.4%   |
| 6       | 2,600+                  | \$253   | \$222   | 5.0%   |

# Residential Monthly Service Charge Comparison

# Residential Monthly Service Charges

| Company                           | MSC             | Demand     | Decoupling | Extra \$ Solar         |
|-----------------------------------|-----------------|------------|------------|------------------------|
| NV Energy                         | \$8.75-\$222.95 |            | ✓          |                        |
| LIPA (PSEG Long Island)           | \$12.17-\$55.36 |            | ✓          |                        |
| OPPD                              | \$30.00         |            |            |                        |
| Santee Cooper                     | \$19.50-\$28.00 |            |            | ✓                      |
| PNM                               | \$7.11-\$26.51  |            |            |                        |
| NPPD                              | \$22.50         |            | ✓          |                        |
| SMUD                              | \$20.30         |            |            |                        |
| <b>SRP</b>                        | <b>\$20.00</b>  |            |            | <b>\$12.44-\$25.44</b> |
| LADWP                             | \$1.75-\$18.50  | Some Rates | ✓          |                        |
| SCE                               | \$0.91-\$16.73  |            | ✓          |                        |
| Colorado Springs Utilities        | \$15.52-\$15.80 |            |            |                        |
| APS – R-Basic (Small Res., no DG) | \$15.00         |            | ✓          |                        |
| APS – TOU-E                       | \$13.00         |            | ✓          | ✓                      |
| APS – R-2/R-3                     | \$13.00         | ✓          | ✓          |                        |
| TEP                               | \$10.00-\$13.00 | Some Rates | ✓          | ✓                      |
| CPS Energy                        | \$8.75-\$10.50  |            |            |                        |
| SDG&E                             | \$0.00          |            | ✓          |                        |

# Residential Monthly Service Charges – Public Power

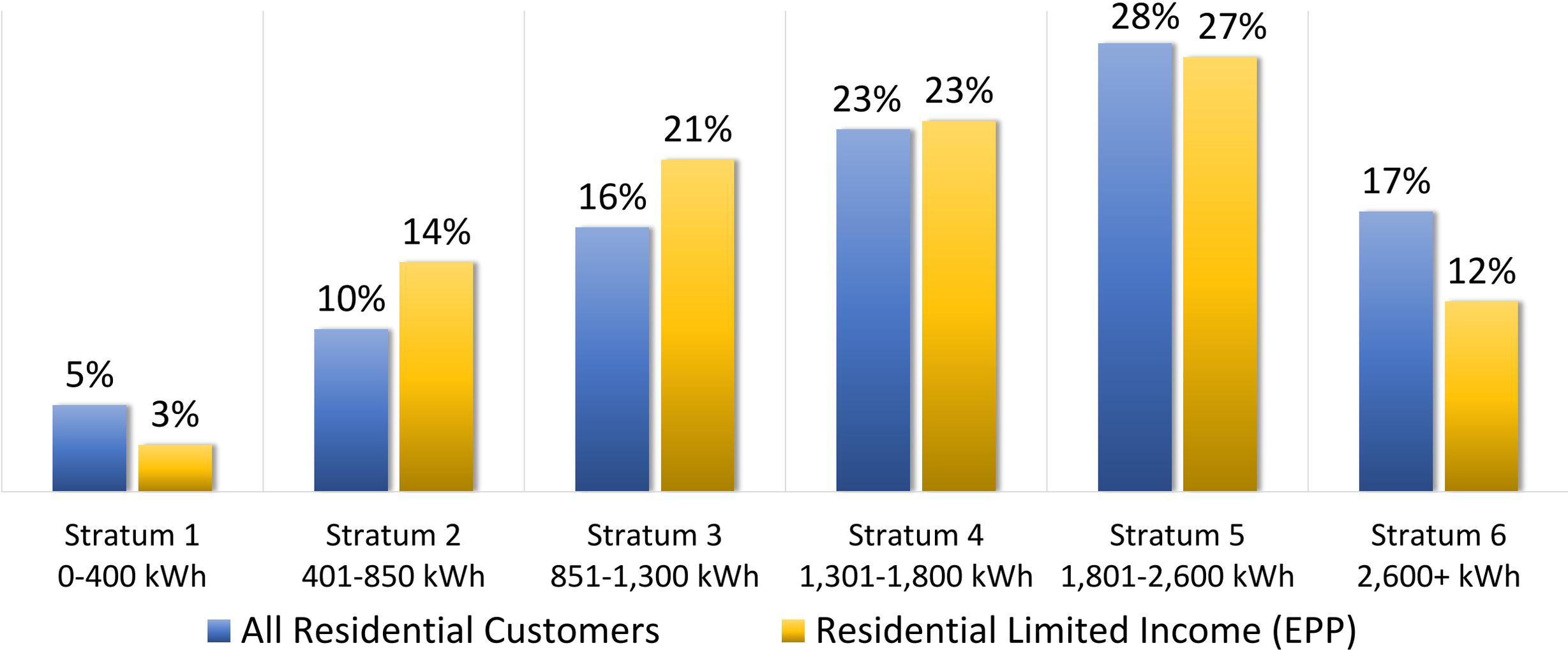
| Company                    | MSC             | Demand     | Decoupling | Extra \$ Solar         |
|----------------------------|-----------------|------------|------------|------------------------|
| LIPA (PSEG Long Island)    | \$12.17-\$55.36 |            | ✓          |                        |
| OPPD                       | \$30.00         |            |            |                        |
| Santee Cooper              | \$19.50-\$28.00 |            |            | ✓                      |
| NPPD                       | \$22.50         |            | ✓          |                        |
| SMUD                       | \$20.30         |            |            |                        |
| <b>SRP</b>                 | <b>\$20.00</b>  |            |            | <b>\$12.44-\$25.44</b> |
| LADWP                      | \$1.75-\$18.50  | Some Rates | ✓          |                        |
| Colorado Springs Utilities | \$15.52-\$15.80 |            |            |                        |
| CPS Energy                 | \$8.75-\$10.50  |            |            |                        |

# Changes to Monthly Service Charge

## E-23 Customers with \$13 Monthly Service Charge (MSC)

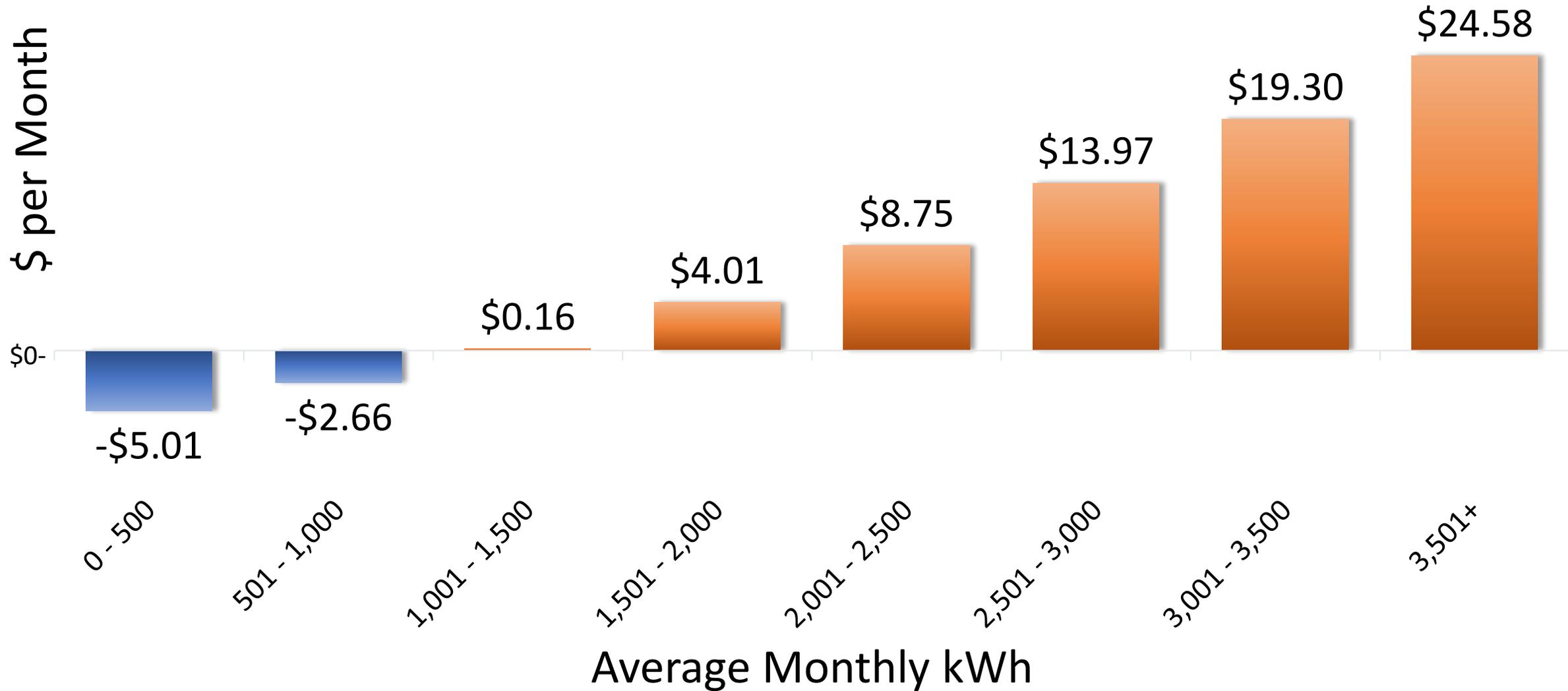
- If we decrease the MSC to \$13 from the current \$20 then we must increase kWh prices to raise the same amount of revenue
- This means that revenues are shifted from lower use customers to higher use customers
- Limited Income customers on the Economy Price Plan (EPP) include both high and low use customers

# Residential and Limited Income Customers by Stratum



Note: Strata are defined by the customer's average monthly summer gross kWh for June through September 2018

# E-23 Customer's Bill Impact with a \$13 MSC

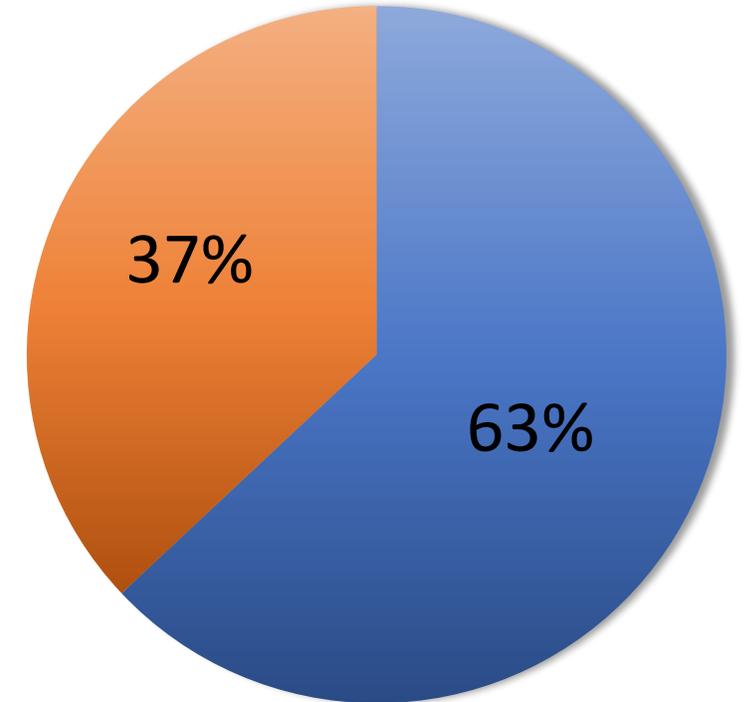
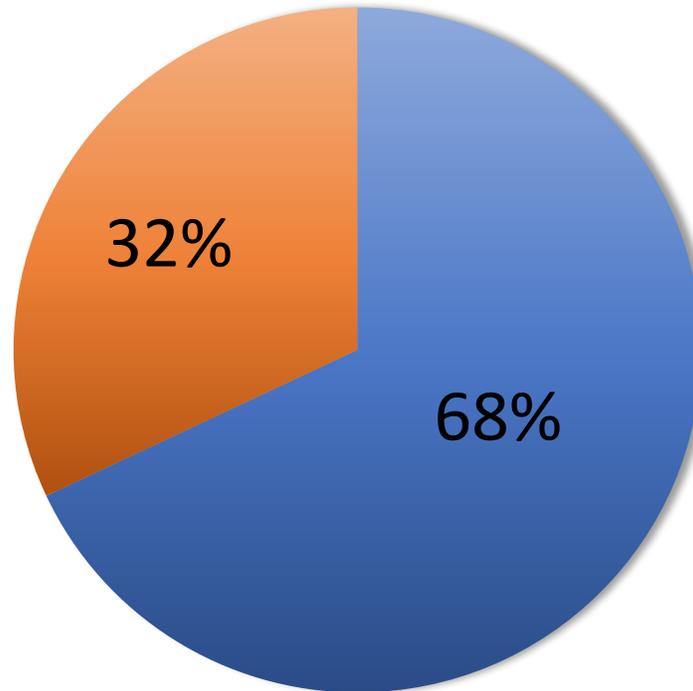
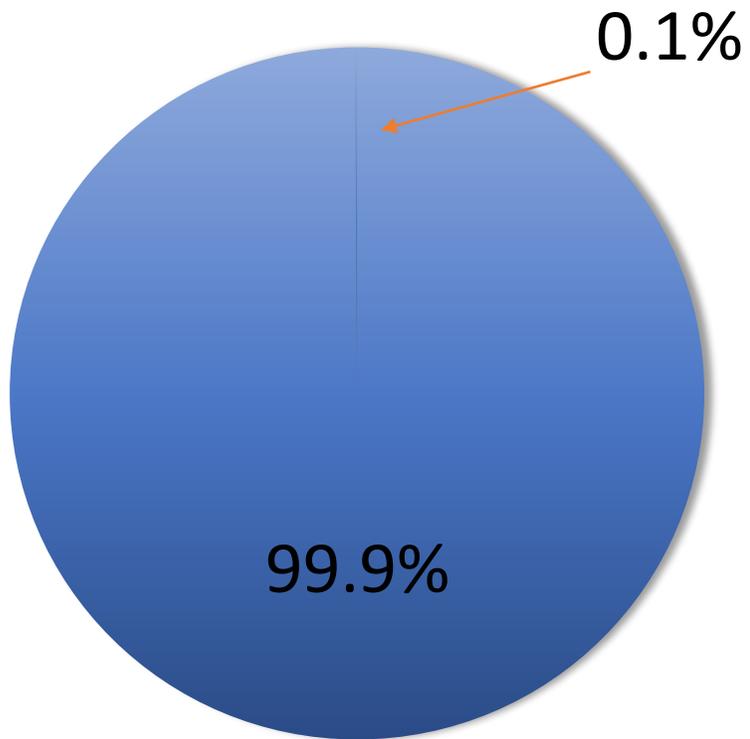


# Basic E-23 Impacts: \$20 MSC vs. \$13 MSC

\$3.18 Monthly Avg.  
Increase to EPP Customers  
**\$13 MSC**

\$4.66 Monthly Avg.  
Increase to Non-EPP  
Customers  
**\$13 MSC**

Proposed  
**\$20 MSC**



■ Decrease    ■ Increase

Management does not recommend reducing the current Monthly Service Charge and collecting related fixed costs through volumetric charges

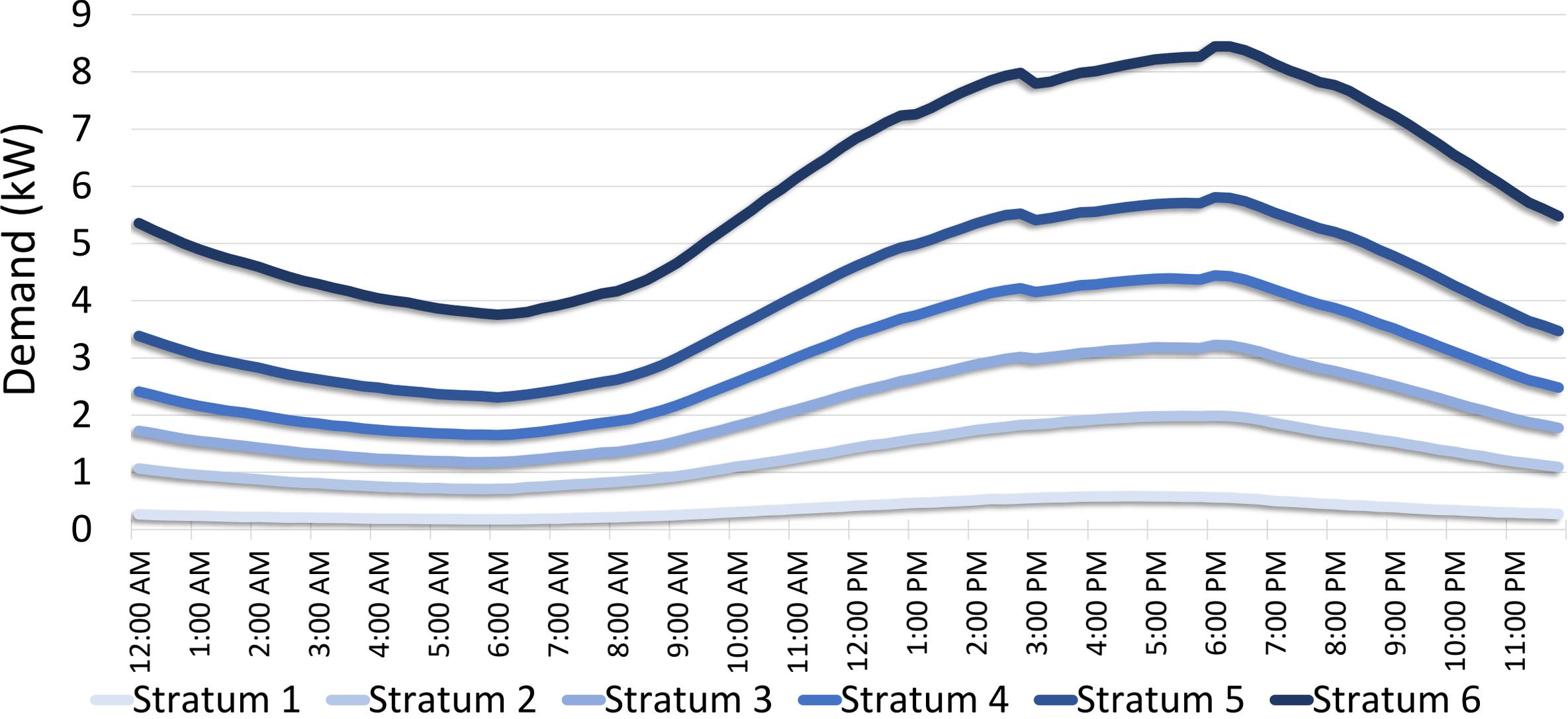
# E-27 Customer Generation Rate Design

# Time-of-Use E-26: Marginal Cost of Each Billing Component

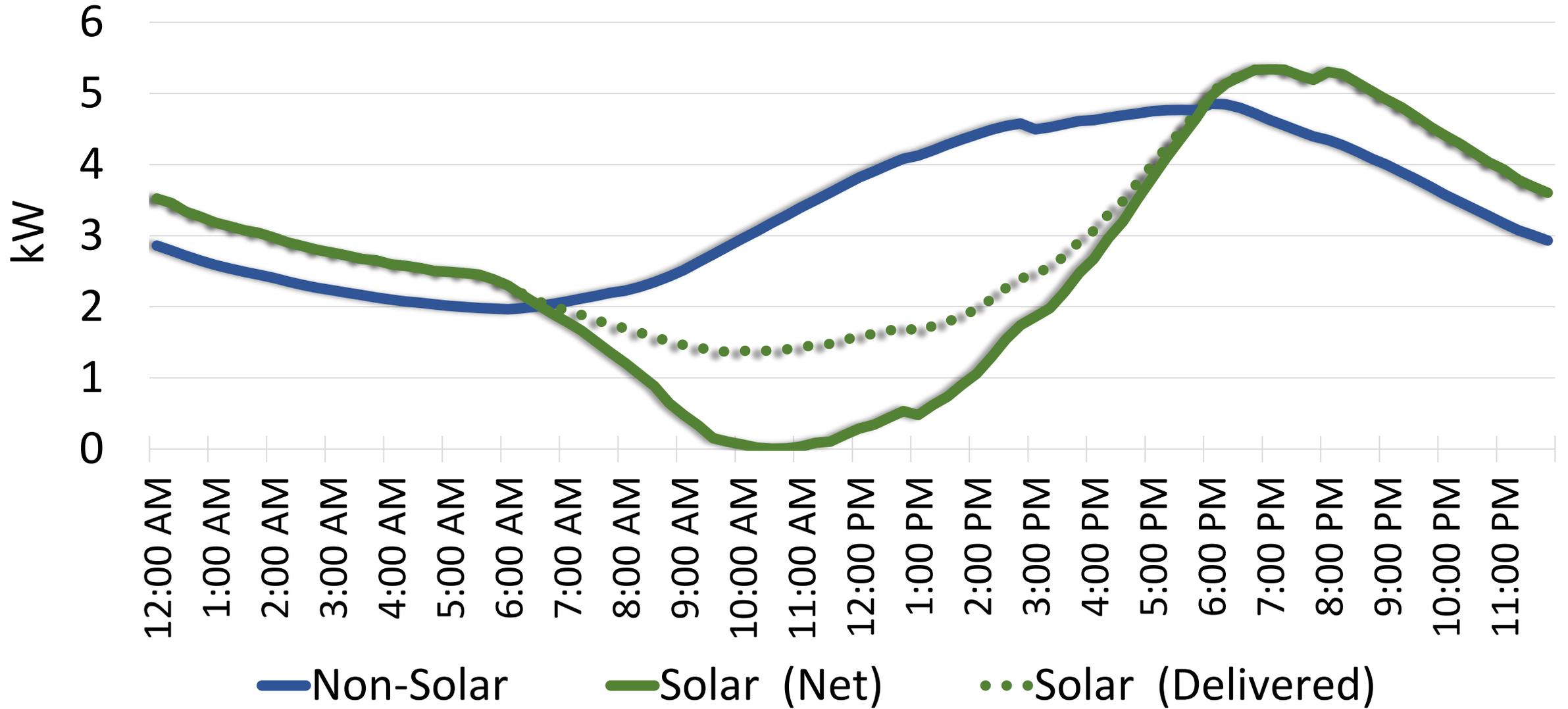


\*Hourly kW across all costing periods; \*\*30-minute on-peak kW

# Residential Load Shapes Peak Day 2018



# Peak Day: July 25<sup>th</sup>, 2018



# Monthly Averages

|           |   |                                    |  | Average Month |            |            |
|-----------|---|------------------------------------|--|---------------|------------|------------|
|           |   |                                    |  | kWh           | On-Peak kW |            |
| Non-Solar | } | Stratum 1                          |  | 260           | 2.7        |            |
|           |   | Stratum 2                          |  | 499           | 4.2        |            |
|           |   | Stratum 3                          |  | 739           | 5.2        |            |
|           |   | Stratum 4                          |  | 1,010         | 6.1        |            |
|           |   | Stratum 5                          |  | 1,399         | 7.3        |            |
|           |   | Stratum 6                          |  | 2,224         | 9.4        |            |
|           |   | <b>Average Solar Customer (GF)</b> |  |               | <b>583</b> | <b>7.1</b> |

# Export Rates

# Company Comparison: Solar

| Company                 | Credit Rate (¢/kWh)* | Sell Back Rate (¢/kWh)** | Net Metering |
|-------------------------|----------------------|--------------------------|--------------|
| SRP E-13                | 2.81                 | 2.81                     |              |
| APS                     | 11.61                | 11.61                    |              |
| TEP                     | 9.64                 | 9.64                     |              |
| SMUD                    | Retail               | 5.59                     | ✓            |
| LADWP                   | Retail               |                          | ✓            |
| Colorado Springs        | 1:1 kWh              | ~2.14                    | ✓            |
| OPPD                    | 3.52 (W), 4.00 (S)   | 3.52 (W), 4.00 (S)       | ✓            |
| NPPD                    | 5.04 (W), 8.80 (S)   | 5.04 (W), 8.80 (S)       | ✓            |
| CPS Energy              | 1.65                 |                          | ✓            |
| Santee Cooper           | 3.84 (W), 4.16 (S)   | 3.84 (W), 4.16 (S)       |              |
| LIPA (PSEG Long Island) | 1:1 kWh              |                          | ✓            |
| SCE                     | Retail               | 2.71-3.73                | ✓            |
| SDG&E                   | Retail               | 2.98-4.16                | ✓            |
| PNM                     | 1:1 kWh              | 1.65-4.98                | ✓            |
| NV Energy               | 5.63-8.87            | 0.00                     | ✓            |

\*For utilities offering net metering, **Credit Rate** is the credit applied to the next month's bill if the customer was a net energy producer for the current billing cycle.

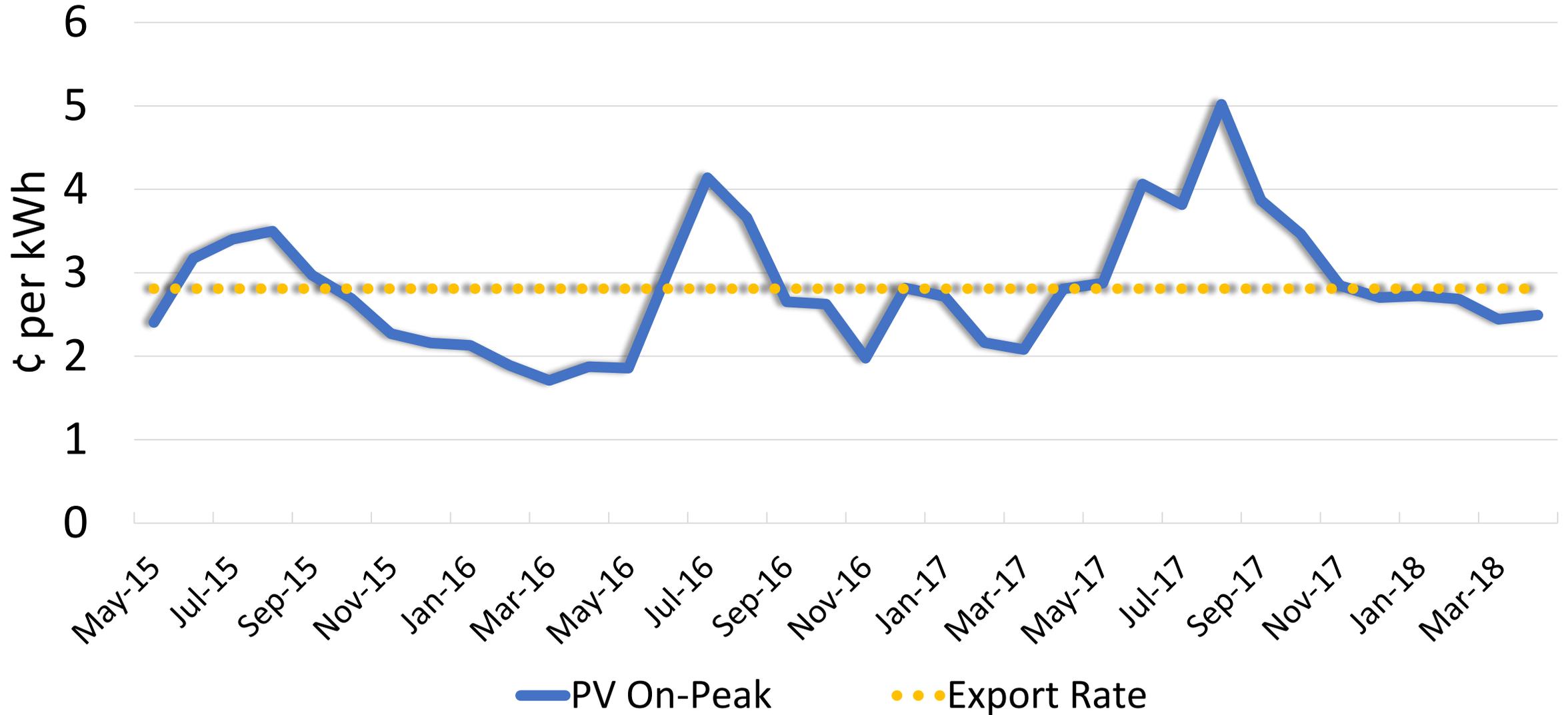
\*For utilities not offering net metering, **Credit Rate** is the credit applied to the current billing cycle when the customer is at any time an instantaneous net producer. Excess credit balance carries forward to next month.

\*\***Sell Back Rate** is the cash payment offered to customers for solar production at the end of a reconciliation period (normally annually).

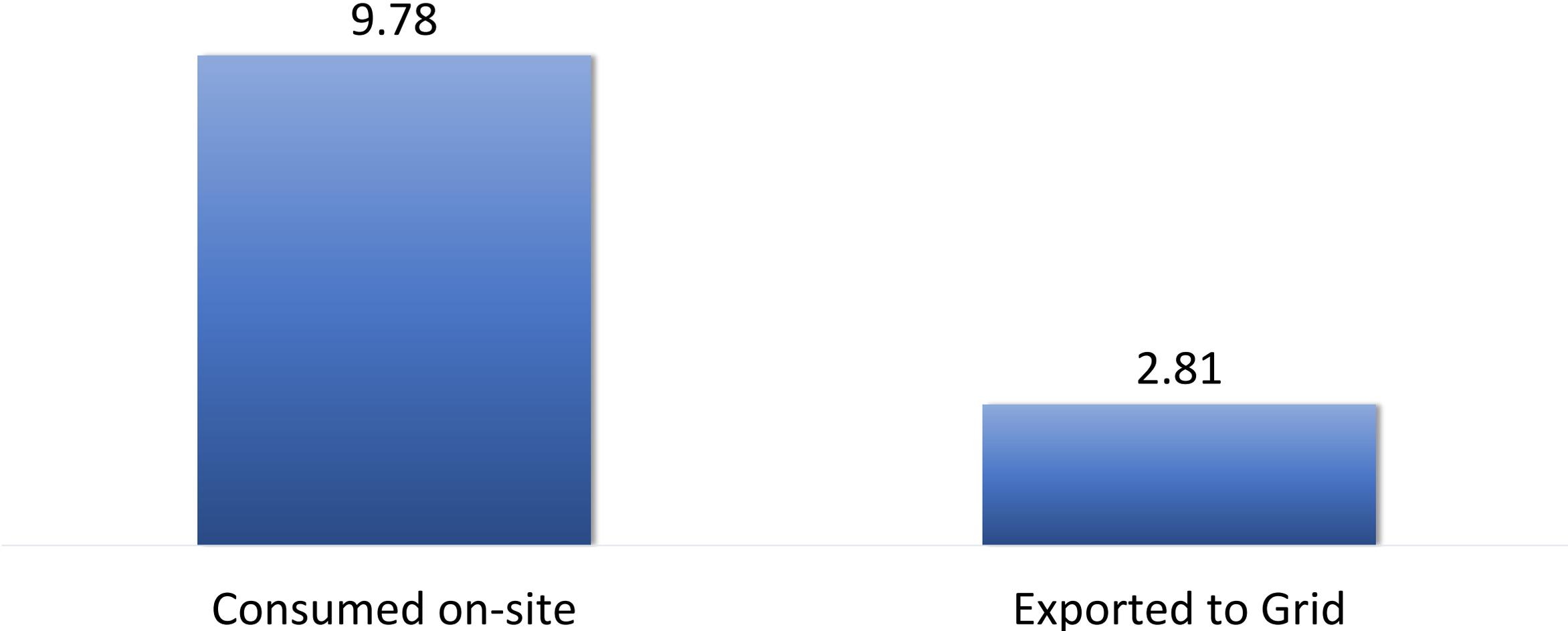
# Proposed Export Rate

- Based on higher of two recent utility scale solar PPAs
  - Obtained through competitive RFP
  - Terms subject to NDA
- Adjusted upwards by loss factor of 5.95% to reflect reduction in losses on the Transmission and Distribution systems
- Export Rate = PPA Price x 1.0595

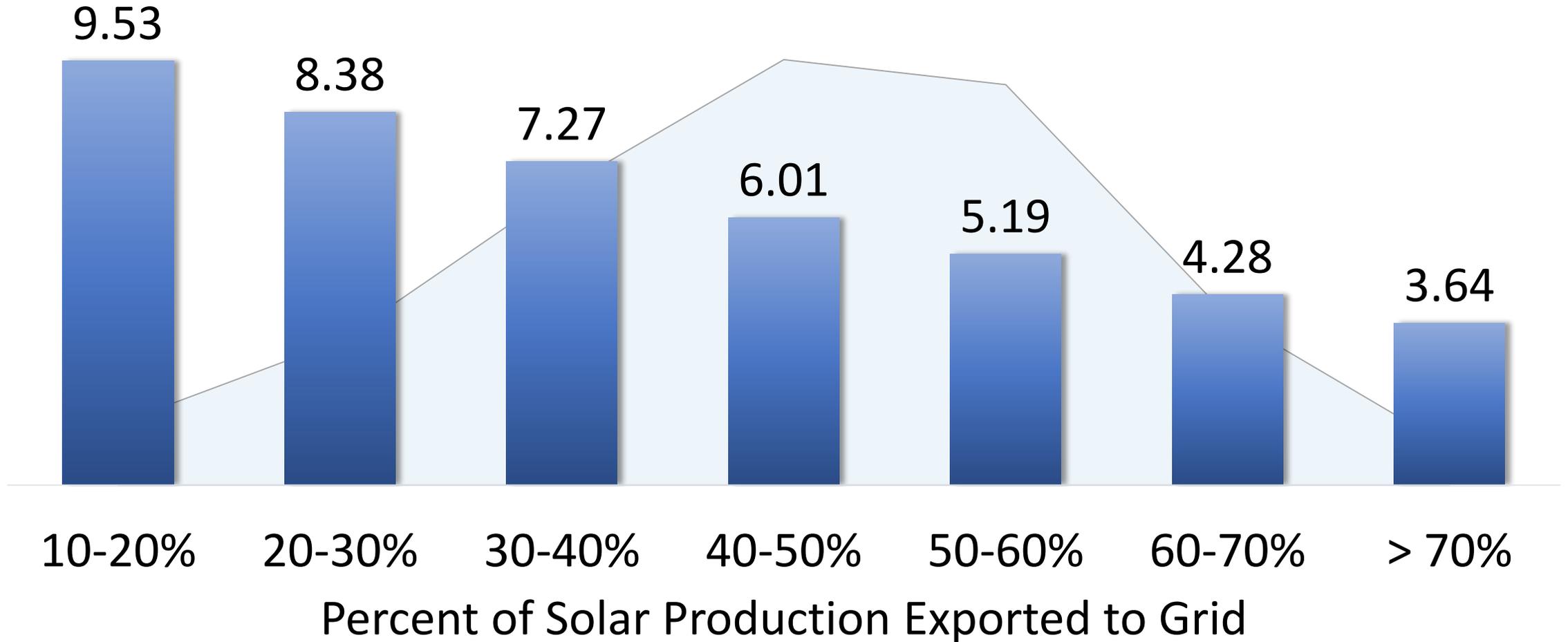
# Palo Verde Historical Prices May 2015 – April 2018



# Average Savings per kWh of Solar Production (¢ per kWh)



# Savings vs Basic E-23 per kWh of Solar Production (¢ per kWh)



# Proposed Revenues for Customer Generation Price Plans (\$000)

|                       | <b>E-27<br/>Demand</b> | <b>E-15<br/>Average Demand</b> | <b>E-13<br/>TOU Export</b> |
|-----------------------|------------------------|--------------------------------|----------------------------|
| MSC                   | \$2,265                | \$2,265                        | \$2,265                    |
| kW                    | \$3,698                | \$3,697                        | N/A                        |
| kWh                   | \$1,616                | \$1,616                        | \$6,078                    |
| Export                | N/A                    | N/A                            | (\$772)                    |
| <b>Total Revenue*</b> | <b>\$7,578</b>         | <b>\$7,577</b>                 | <b>\$7,570</b>             |

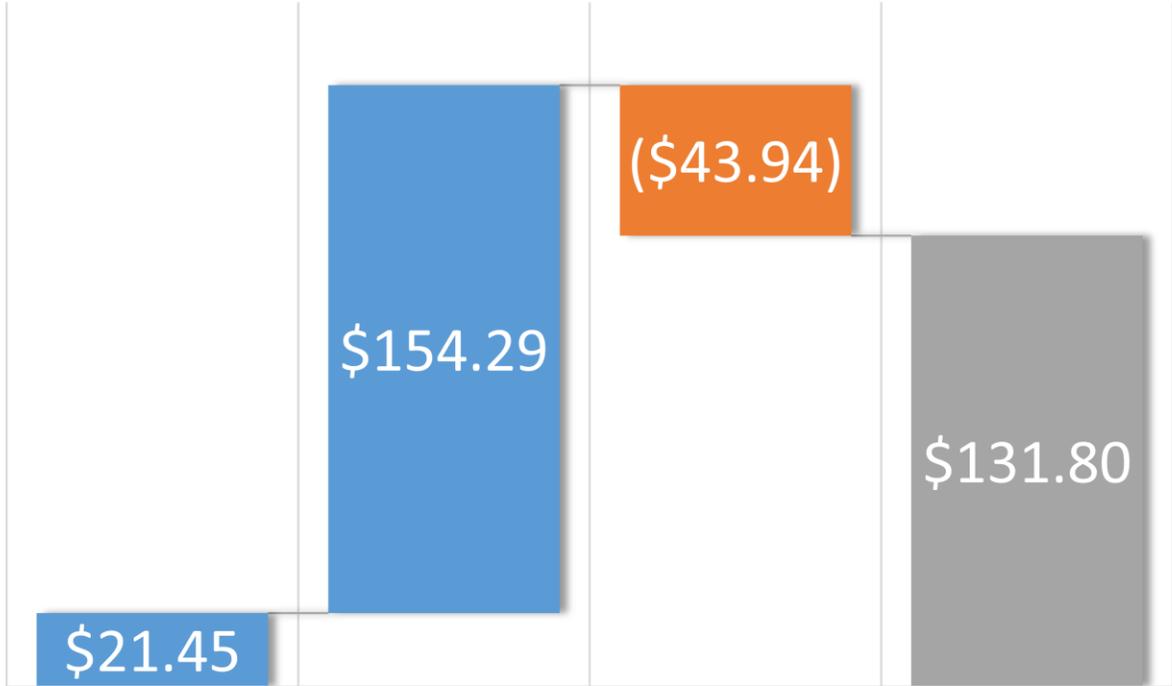
\*Totals may not sum due to rounding

# APS Post-Solar Bill Comparison by Category

## SRP E-13



## APS TOU-E

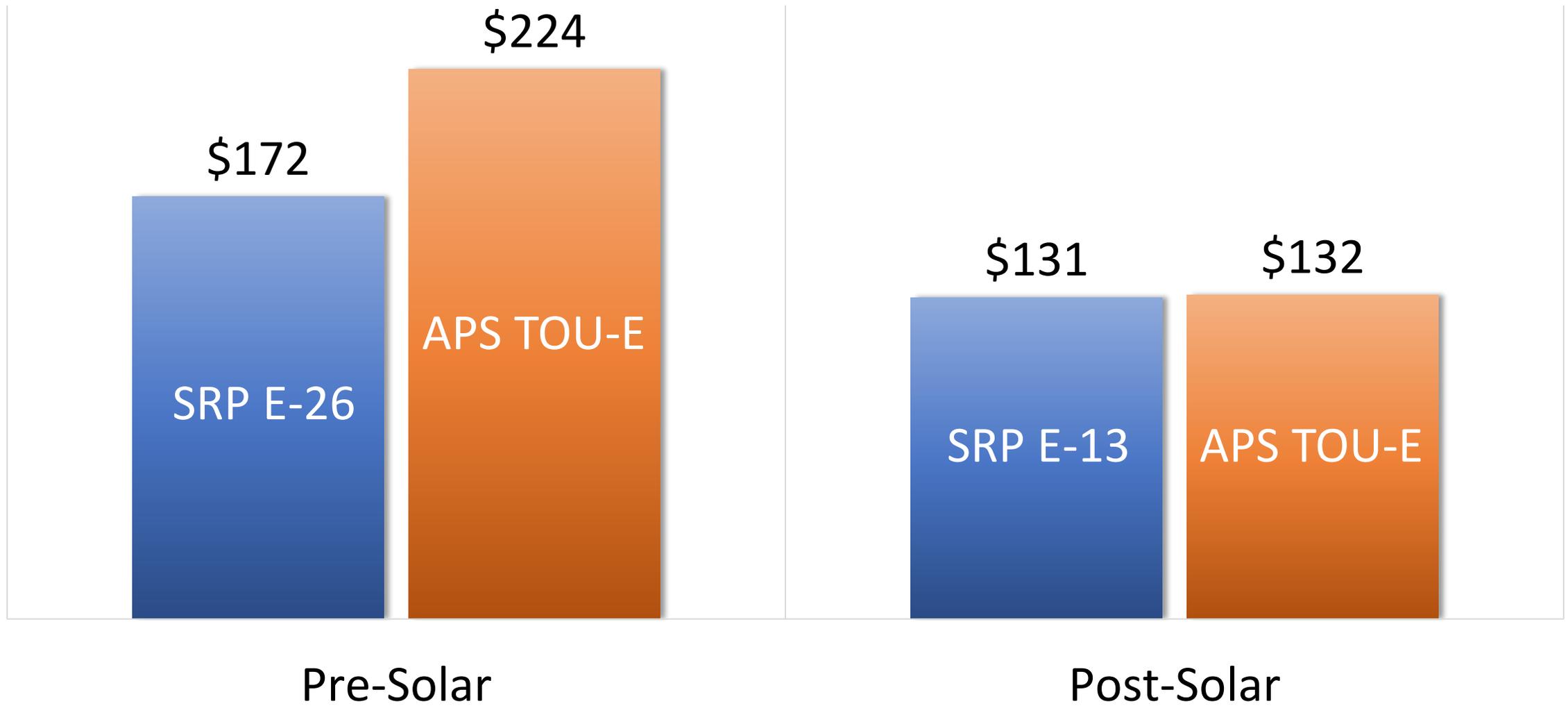


■ Increase ■ Decrease ■ Total

■ Increase ■ Decrease ■ Total

\*APS bills include approved adjustors that are currently approved.

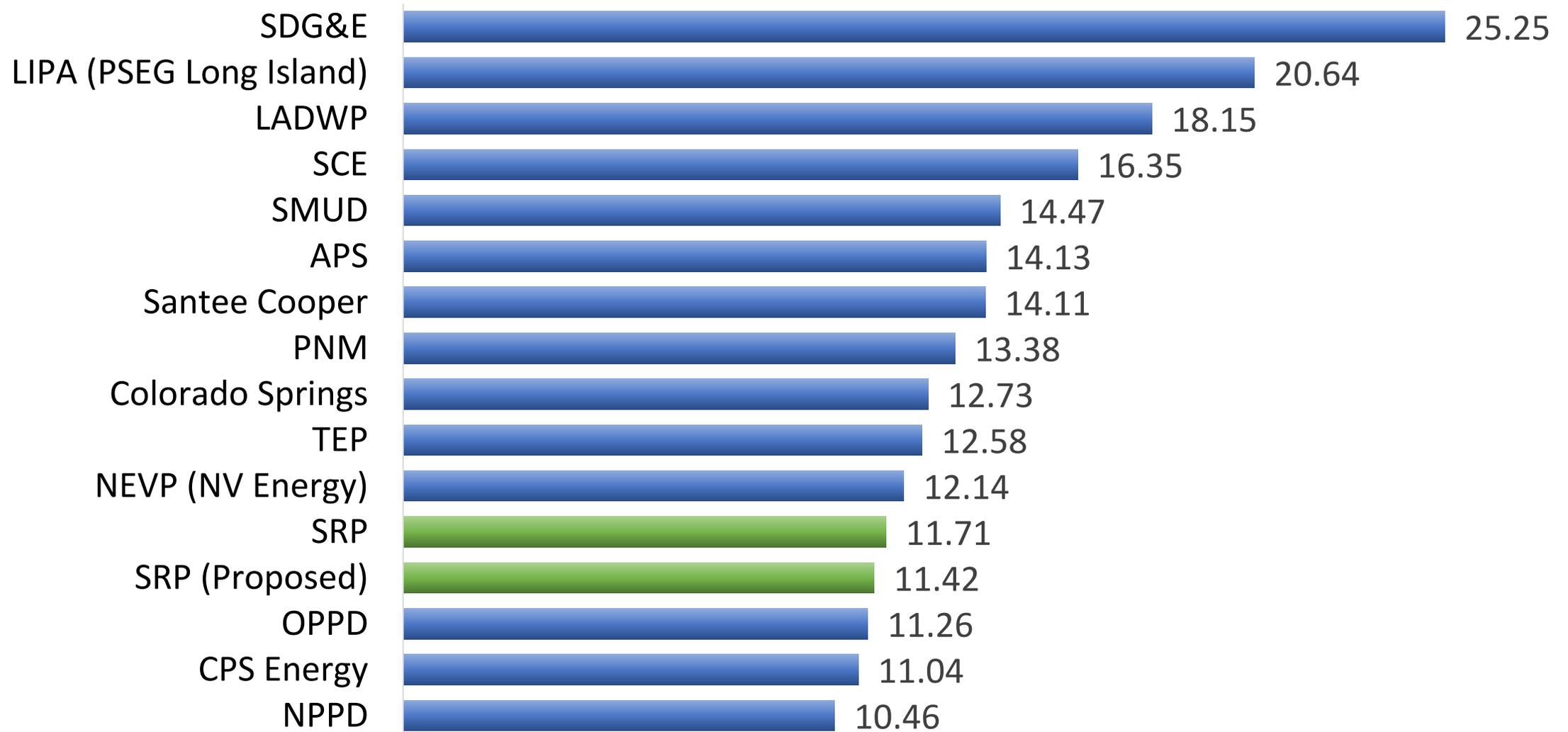
# Monthly Bill Comparison, Time-of-Use Rates



\*APS bills include approved adjustors that are currently approved.

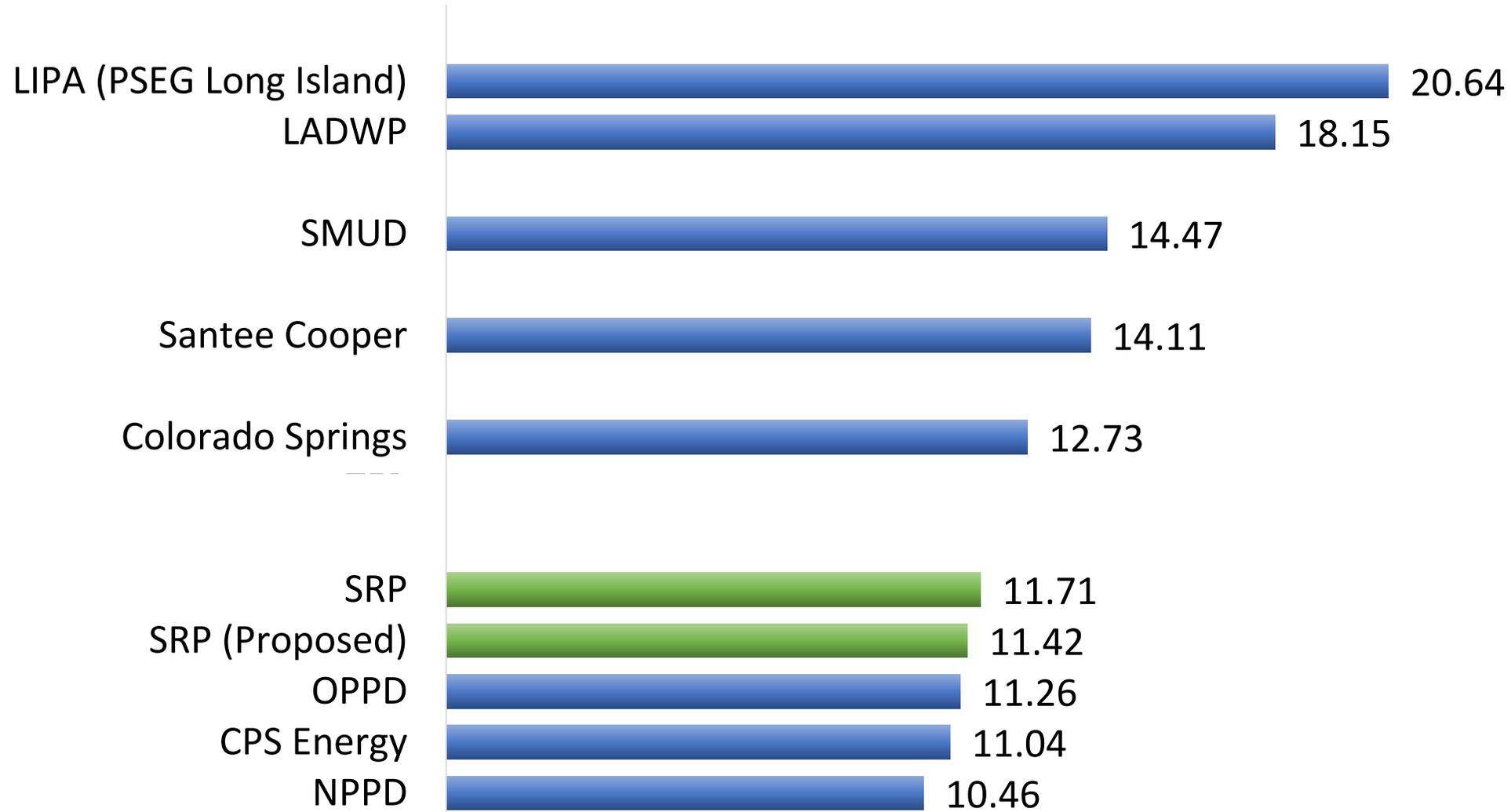
# Overall Price Comparisons

# Price Comparison: Residential Price (¢ per kWh)



Source: Dept. of Energy EIA-826 Reports for 12 months ending November 30, 2018

# Price Comparison: Residential Price (¢ per kWh) – Public Power



Source: Dept. of Energy EIA-826 Reports for 12 months ending November 30, 2018

# Response to Arizona Solar Deployment Alliance (ASDA)

# Arizona Solar Deployment Alliance (ASDA) Formal Recommendation

ASDA consists of 3 local companies: Arizona Solar Concepts, Harmon Solar and Electric, and Sun Valley Solar Solutions

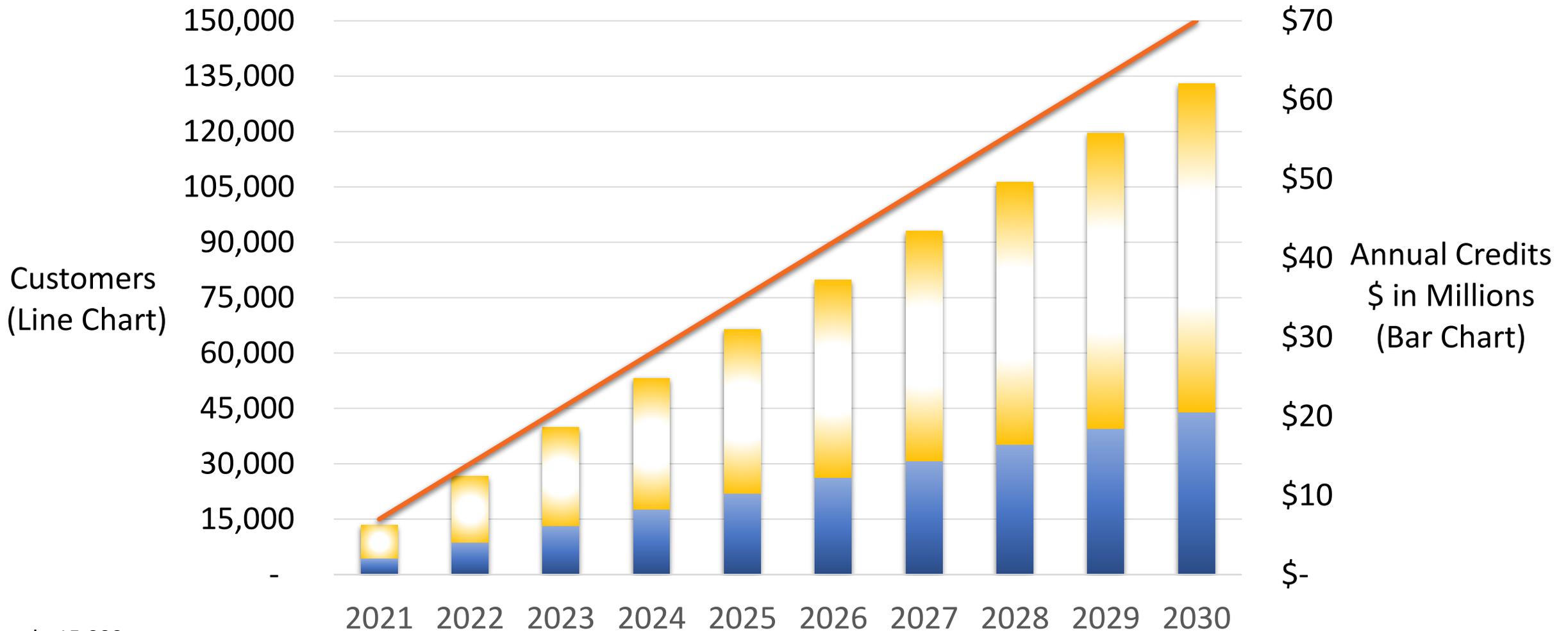
- 1) Export credit should be 8.5 cents vs. 2.81 cents
- 2) No Sell Rate Rider
  - Allows any customer an option to produce, store, and consume electricity on site that never pushes electricity back to the utility
  - Applicable to any rate
- 3) Monthly Service Charge should be \$20.00 for solar and non-solar customers

# ASDA Proposal, Monthly Revenue per Customer

|                      | <b>E-13<br/>(Proposed)</b> | <b>E-13 with 8.5 cent<br/>Export Rate</b> | <b>E-13 with 8.5 cent<br/>Export Rate + \$20<br/>MSC</b> | <b>Grandfathered<br/>E-26</b> |
|----------------------|----------------------------|---|--|-------------------------------|
| Revenue per Customer | \$131.21                   | \$109.67                                  | \$96.61  | \$99.84                       |
| Revenue Change       |                            | -16.4%                                    | -26.4%   | -23.9%                        |
| Return*              | -1.8%                      | -9.0%                                     | -13.1%   | -13.9%                        |

\* Revenues calculated with E-27 customers. Return calculated using test year determinants and overall revenues.

# Long-term Impact of Higher Export Credit



Growth: 15,000 per year  
 Nom. Total @ \$0.085: \$341M  
 Nom. Total @ \$0.0281: \$113M

■ Cost @ 2.81 cents    ■ Added Cost @ 8.5 cents    — Cumulative Customers

# Value of Solar

Sue Tierney

# NGS Decommissioning

# Proposed Transition Funding Plan

Tó Nizhóní Ání, Diné CARE and Black Mesa Water Coalition

- Key requests include:
  - \$38.5 million transition fund over 10 years
  - Tribal renewable energy commitments
  - In-kind services
  - Navajo hiring preferences
- Comparisons provided for other plant retirements

# NGS Owners Transition Plan

| <b>Component</b>                       | <b>Value / (Cost to Owners)</b>                |
|--|--|
| Annual lease payments                  | \$110M total over 35 years                     |
| Job assurance for all plant employees  | (\$20M increased labor cost)                   |
| Coal royalty assurance                 | \$39M total; est. \$7M for no coal deliveries  |
| Assets retained by Nation              | \$175M   |
| Shared decommissioning savings         | \$19M  |
| 2.5 year decommissioning delay         | (\$130M estimated cost)                        |
| 500 MW transmission access and O&M     | Access \$7.4M/yr; (O&M \$5M total over 10 yrs) |
| Solid waste mngt program contribution  | \$3.6M   |
| Renewable Projects                     | Above mkt. price, MOU for future projects      |
| In-kind services                       | Economic development, Water, Infrastructure    |
| Navajo hiring preference; job training | Local jobs                                     |