City of Mesa

FY 2021/22
Utility Fund forecast and Rates Recommendations

City Council Study Session
September 23, 2021

Presented by:

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Scott Bouchie – Environmental Management & Sustainability Director

Frank McRae – Energy Resources Director

Utility Operations

- Each utility is operated as a separate business center but treated as one fund
- Reserve balance provides a safety net for unforeseen conditions
- Reserve balance can be used to smooth rate adjustments year-to-year

Financial Principles

BALANCE NET SOURCES AND USES

20% OR HIGHER RESERVE FUND BALANCE

RATE ADJUSTMENTS THAT ARE PREDICTABLE AND SMOOTHED THROUGHOUT THE FORECAST

EQUITY BETWEEN RESIDENTIAL AND NON-RESIDENTIAL RATES

AFFORDABLE UTILITY SERVICES

Water

Increasing Costs/Pressures on the Utility

Water Utility

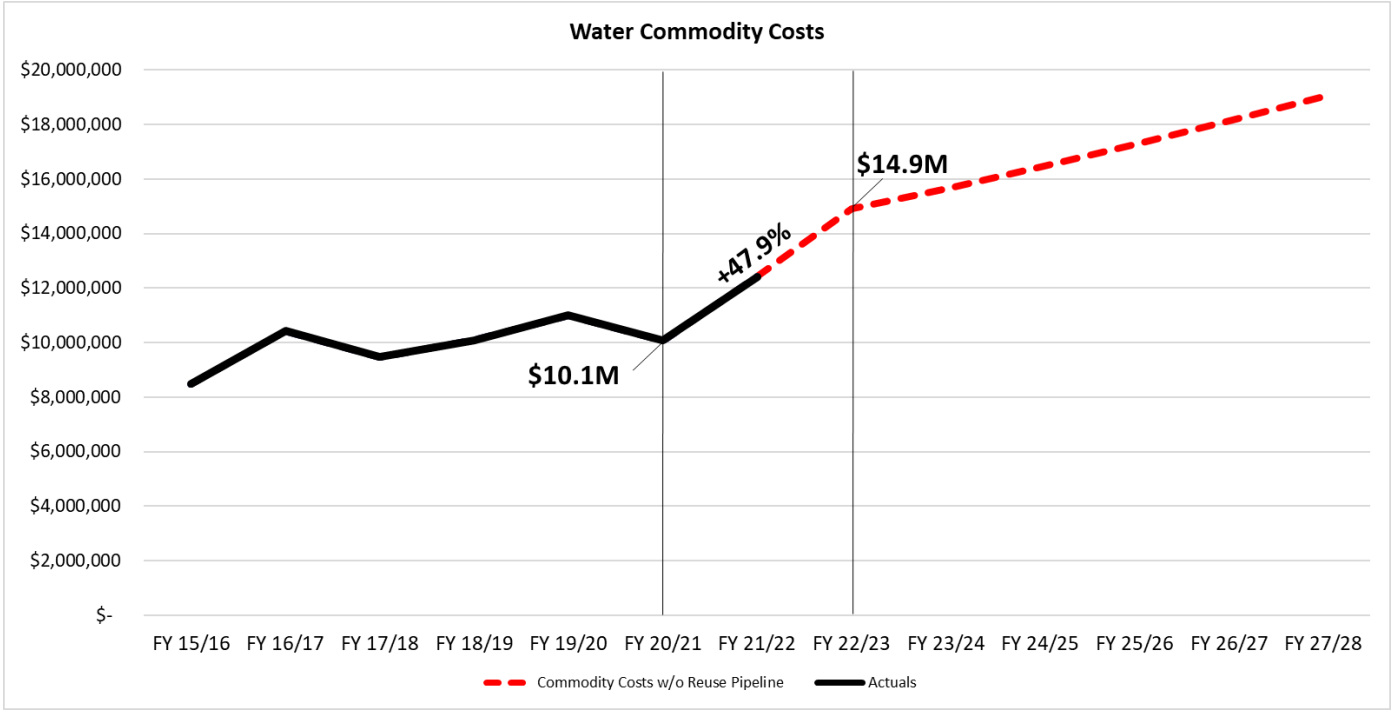
- **Increases from FY 20/21 actuals to FY 21/22 budget**
  - Operating Expenditure
    - Water Commodity Costs $2.6M
    - Treatment Plant Chemicals $0.8M
    - Treatment Plant Power Costs $1.0M
    - Personnel $1.9M

Increasing Costs/Pressures on the Utility

Water Utility

- **Increases from FY 20/21 actuals to FY 21/22 budget**
  - Existing Debt Service $8.4M
    - Includes debt issued for past capital improvement projects
      - Signal Butte - Phase I
      - Waterline Replacement Projects
    - Refundings FY20/21 > FY21/22

Increasing Costs/Pressures on the Utility



Increasing Costs/Pressures on the Utility

FY 20/21 Water Commodity Purchases

	Acre Feet	Cost
Central Arizona Project	49,093	$8.7M
Salt River Project	32,812	$1.4M

Water Commodity Costs ($/AF)

	Actual				*Forecast*				
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Central Arizona Project	$ 205.00	$ 199.00	$ 226.00	$ 211.00	$ 242.00	$ 256.00	$ 284.00	$ 290.00	$ 291.00
Salt River Project	$ 34.56	$ 35.76	$ 37.91	$ 40.18	$ 41.59	$ 43.04	$ 44.55	$ 46.11	$ 47.72

Future Capital Improvement Projects

Water Utility

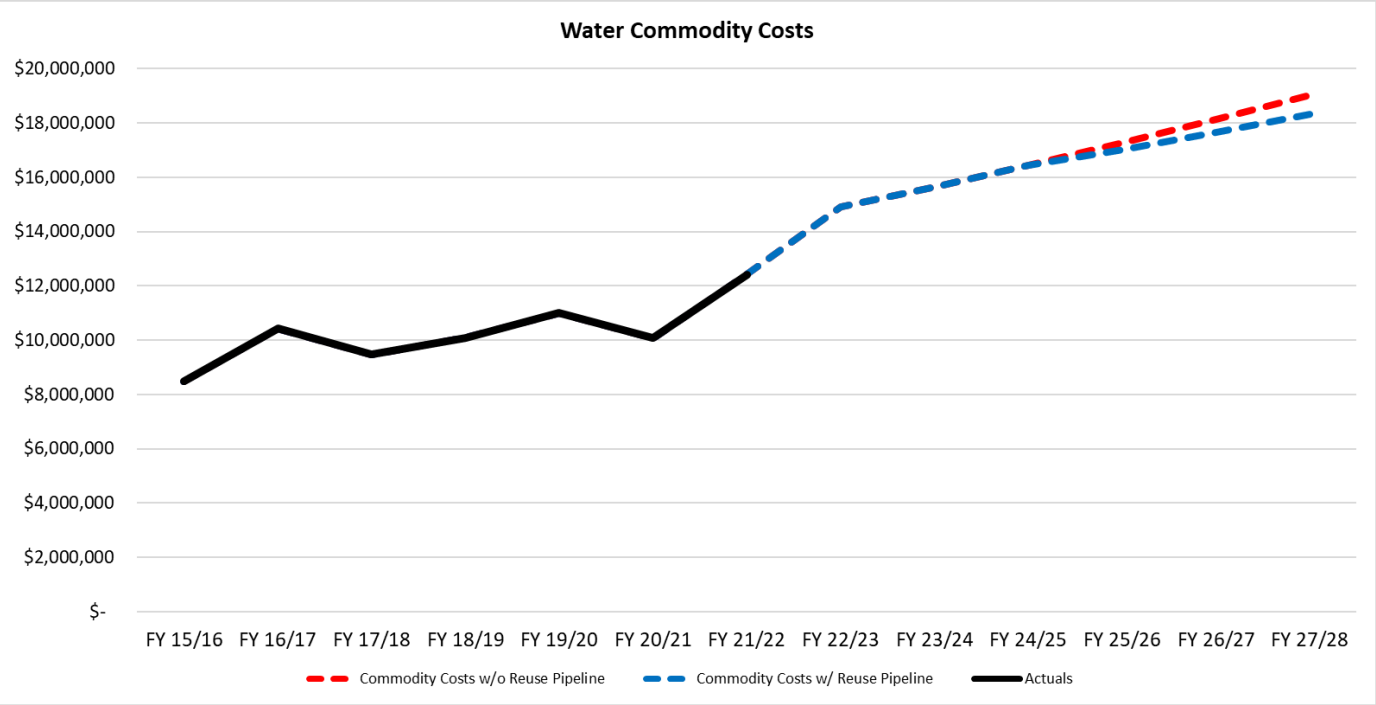
Central Mesa Reuse Pipeline

Growth and Sustainability with ROI

- Provide for economic growth
- Greater water system reliability
- Drought mitigation

- Project Cost $72M

Future Capital Improvement Projects



	Actual				*Forecast*				
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Central Arizona Project	$ 205.00	$ 199.00	$ 226.00	$ 211.00	$ 242.00	$ 256.00	$ 284.00	$ 290.00	$ 291.00
Central Arizona Project w/ Reuse Pipeline	$ 65.00	$ 62.00	$ 56.00	$ 56.00	$ 56.00	$ 57.00	$ 61.00	$ 61.00	$ 63.00
Salt River Project	$ 34.56	$ 35.76	$ 37.91	$ 40.18	$ 41.59	$ 43.04	$ 44.55	$ 46.11	$ 47.72

Future Capital Improvement Projects

Water Utility

East Mesa Water Interconnect

Growth and Sustainability with Flexibility

- Move 5 -10MGD between treatment plants
- Greater system reliability through diversification
- More operational resiliency through capacity sharing

- Project Cost $82M

Future Capital Improvement Projects

Water Utility

Signal Butte WTP Expansion

Growth

- Increase plant capacity from 24MGD to 48MGD
- Support residential & commercial development
- Help SE Mesa to realize full potential
- Maximize renewable resource - GRIC

- Project Cost $98M

Future Capital Improvement Projects

Water Utility

Smart Metering

Growth and Demand Management

- Revenue security – Loss/Breaks
- Real-time data/system demand
- Transparency

- Project Cost $60M

Water - Typical Customer

	2021	2022	
Residential	$38.24/mo.	Service Charge Usage Charge $39.40/mo. ($1.16/mo.)	3.0% 3.0%
Commercial General	$53.24/mo.	Service Charge Usage Charge $55.28/mo. ($2.04/mo.) Effective increase	3.0% 5.0% 3.8%
Commercial Landscape	$163.29/mo.	Service Charge Usage Charge $172.02/mo. ($8.73/mo.) Effective increase	3.0% 6.0% 5.3%

Wastewater

Increasing Costs/Pressures on the Utility

Wastewater Utility

- **Increases from FY 20/21 actuals to FY 21/22 budget**
  - Operating Expenditure
    - Reclamation Plant Chemicals $0.3M
    - Reclamation Plant Power Costs $0.5M
    - Greenfield WRP (one-time)/Joint Venture $3.7M
    - Personnel $0.7M

Wastewater - Typical Customer

	2021	2022	
Residential	$23.22/mo.	Service Charge Usage Charge $24.04/mo. ($0.82/mo.)	3.5% 3.5%
Commercial	$45.94/mo.	Service Charge Usage Charge Surcharge $47.77/mo. ($1.83/mo.)	4.0% 4.0% 4.0%

Solid Waste

Increasing Cost Pressures On The Utilities

- Disposal Fees - $640K
- Personal Services - $820K
- CNG Cost Increase - $200K
- Barrel/Bin Price Increase - $385K

Solid Waste Residential Rate Recommendation

	CURRENT	PROPOSED INCREASE	NEW TOTAL
90-gallon Trash Barrel	$29.34	$0.58	$29.92
Green & Clean Fee	$ 0.84	$0.05	$ 0.89
Total Residential Increase	$30.18	$0.63	$30.81

COMPARISON TO OTHER CITIES	
Phoenix	$33.80
Mesa	$30.81
Tempe	$29.57

Appliance, Bulk Item, and Green Waste Barrel Rate Recommendations

Appliance Collection

- Increase charge for items not out on scheduled date from $11.79 to $19.00

Bulk Item

- Per load increase from $25.00 to $28.00

Green Waste Barrel

- Increase by $0.14, from $6.93 to $7.07

Commercial Front Load Recommendations

- Increase base rate by 3%
- Increase fee for collection out-of-zone from $16.50 to $19.00 per bin
- Decrease multi-day and multi-bin service discounts by 1 percentage point
- Convert special pick-up fee from tiered to flat rate of $60
- Increase compactor base rate by $5
- Increase excessive weight charge by 5%
- Increase cardboard by $5 per bin

Commercial Roll Off Recommendations

RATES	CURRENT	PROPOSED INCREASE	NEW TOTAL
Set Fee	$60.00	$20.00	$80.00
Trash Per Ton Rate	$33.50	$ 1.75	$35.25
Green Waste Per Ton Rate	$39.75	$ 2.00	$41.75

ROLL OFF SIZE	CURRENT	PROPOSED
15 & 20 YD	$290.50	$315.75
30 YD	$300.50	$325.75
40 YD	$315.50	$340.75

COMPETITOR COMPARISON (40 YD)	
City of Mesa	$340.75
Competitor Pricing	$523.80 - $717.97

Flare to Fuel

- 60% design
  - Construction complete summer 2023
- Renewable Identification Numbers (RIN) revenues will begin in FY 23/24
  - 7 to 11 year pay back
- Will increase renewable energy portfolio

Solid Waste Infrastructure

Transfer Station at EMSC

- Operational feasibility analysis
- Mitigate against dependency on private sector
- Will come back to Council first quarter of 2022

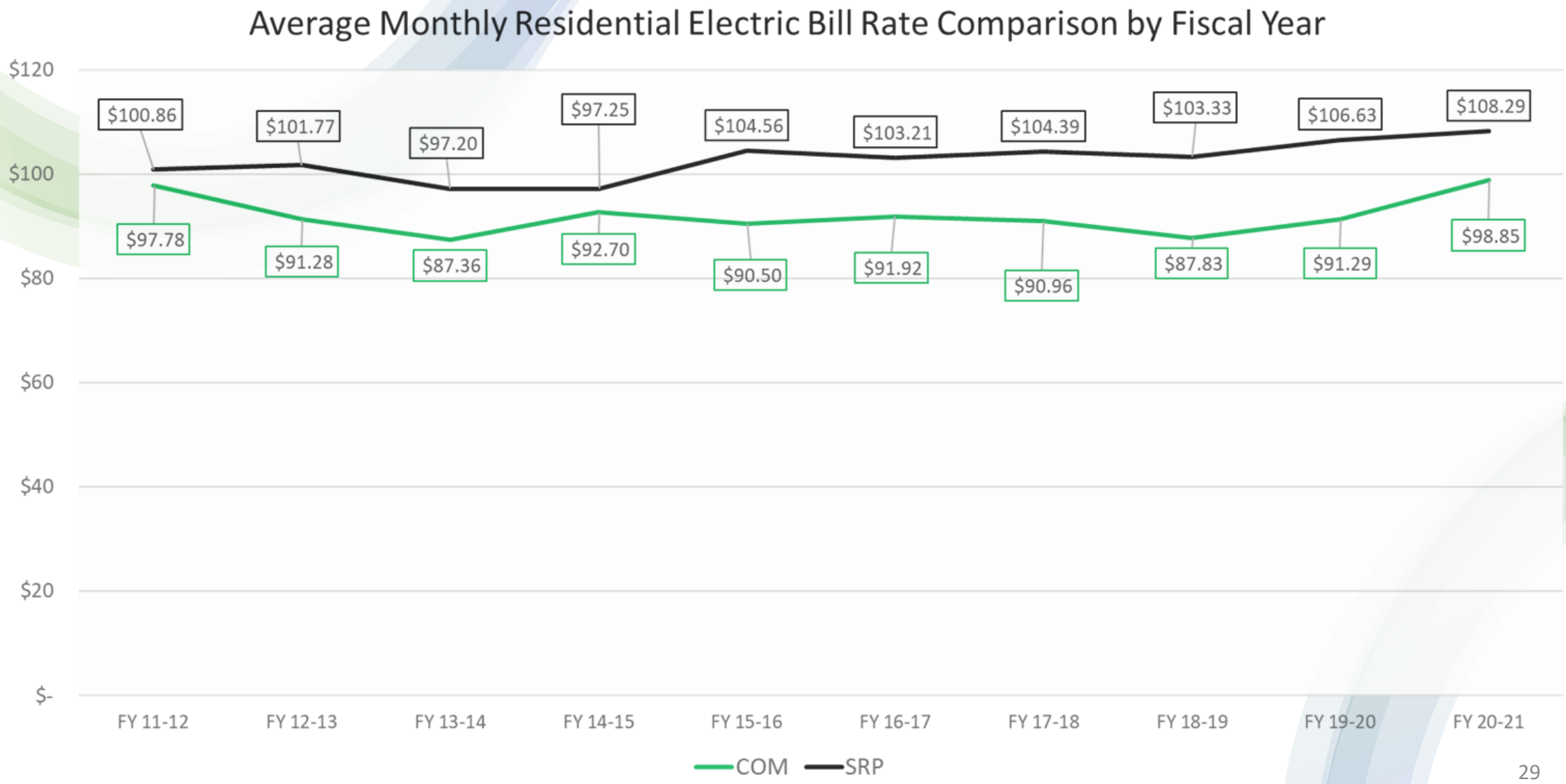
Solid Waste Infrastructure

Materials Recovery Facility (MRF) at Pecos & Sossaman

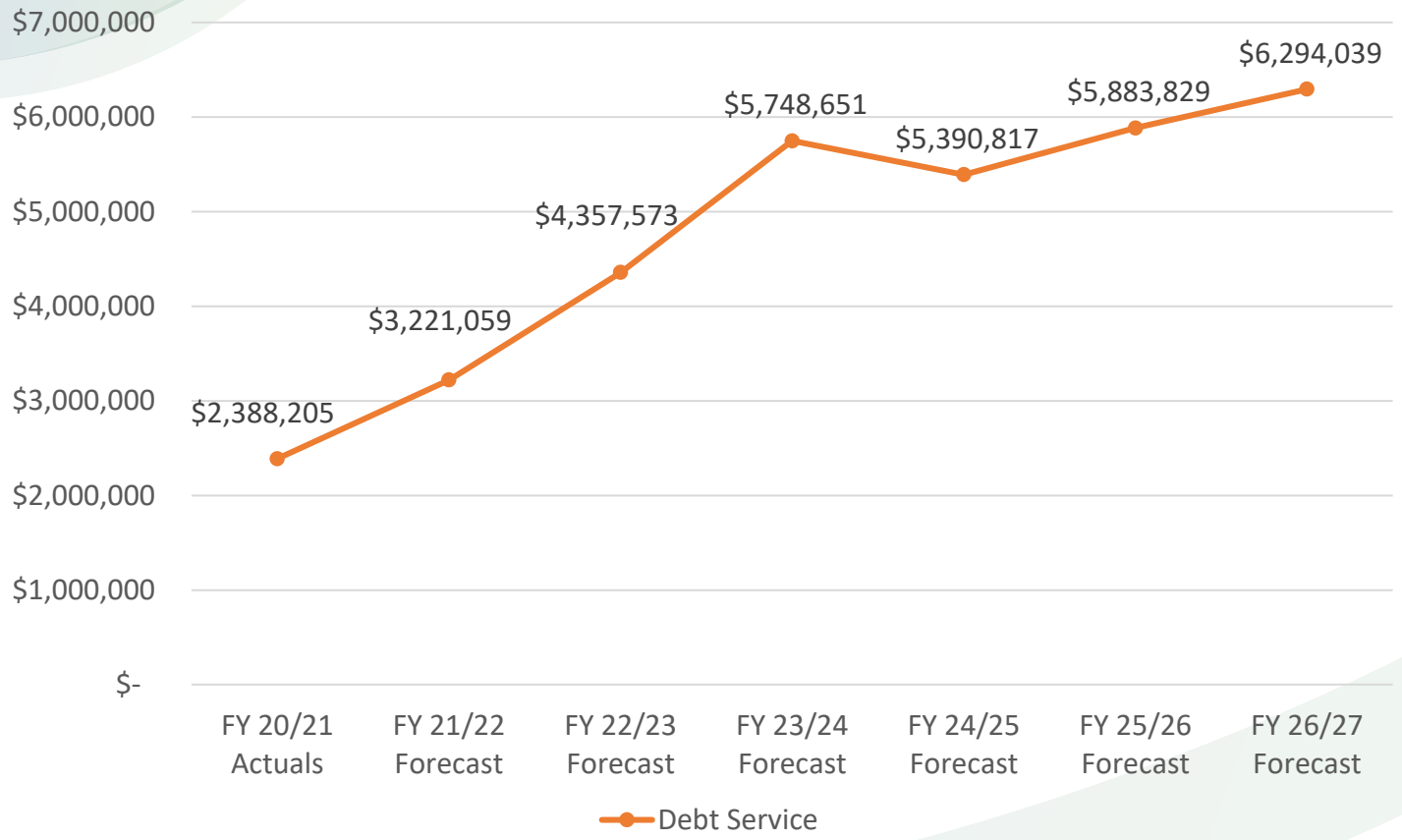
- Evaluate available options for recycling
- Regional partnerships
- Competitive edge

Energy Resources

Electric


Average Monthly Residential Electric Bill Rate Comparison by Fiscal Year
$120
$100
$80
$60
$40
$20
$-
$100.86
$101.77
$97.20
$97.25
$104.56
$103.21
$104.39
$103.33
$106.63
$108.29
$97.78
$91.28
$87.36
$92.70
$90.50
$91.92
$90.96
$87.83
$91.29
$98.85
FY 11-12
FY 12-13
FY 13-14
FY 14-15
FY 15-16
FY 16-17
FY 17-18
FY 18-19
FY 19-20
FY 20-21
COM
SRP

Increasing Debt Service Costs on the Electric Utility



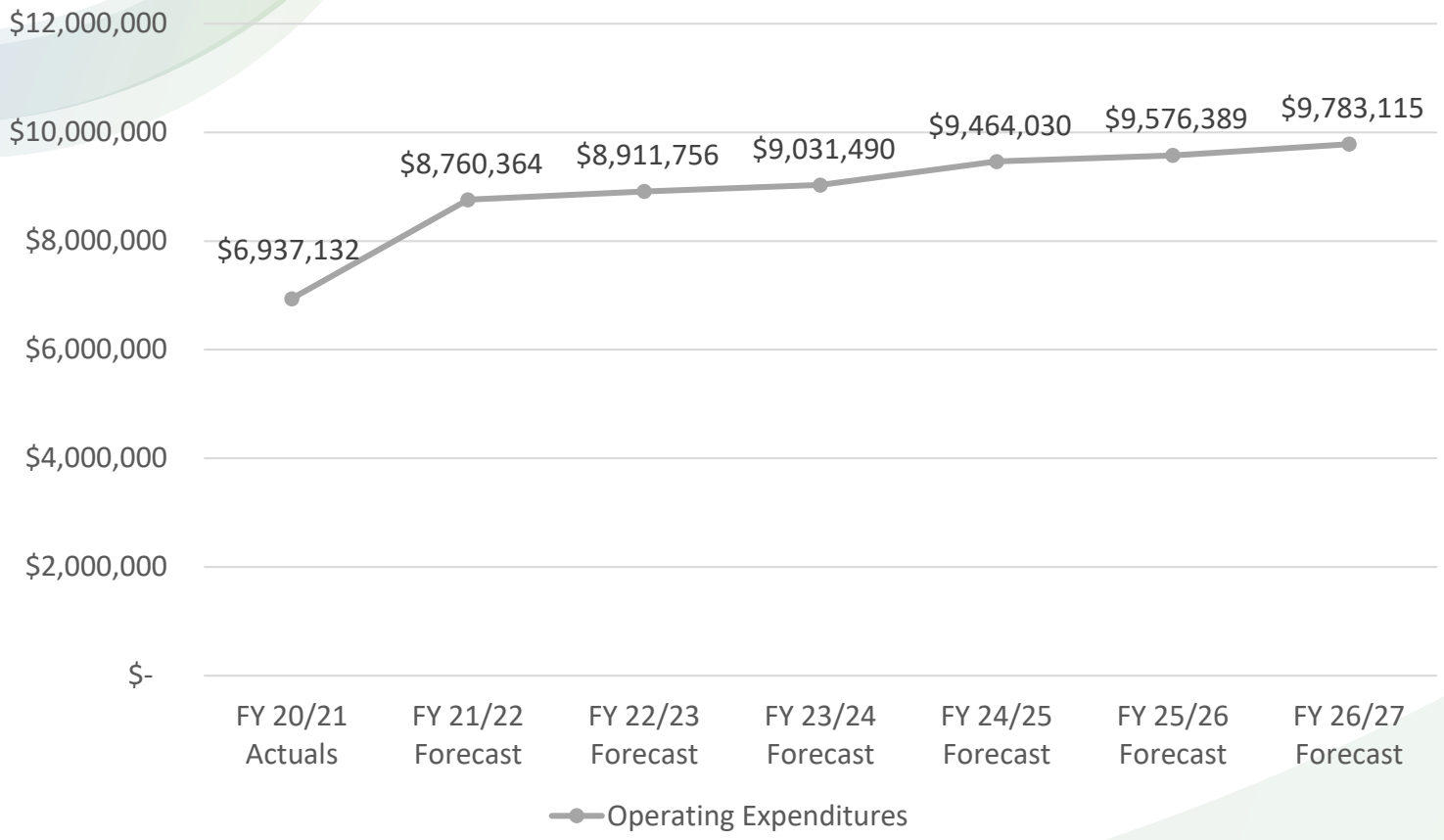
Completed Projects

- Substation Improvements - $10M
- Undergrounding - $6.6M
- City Center New Service $3.1M

Future Projects

- Microgrid - $5.5M
- Undergrounding - $7.4M
- AMI - $3.4M
- New Services - $8.5M

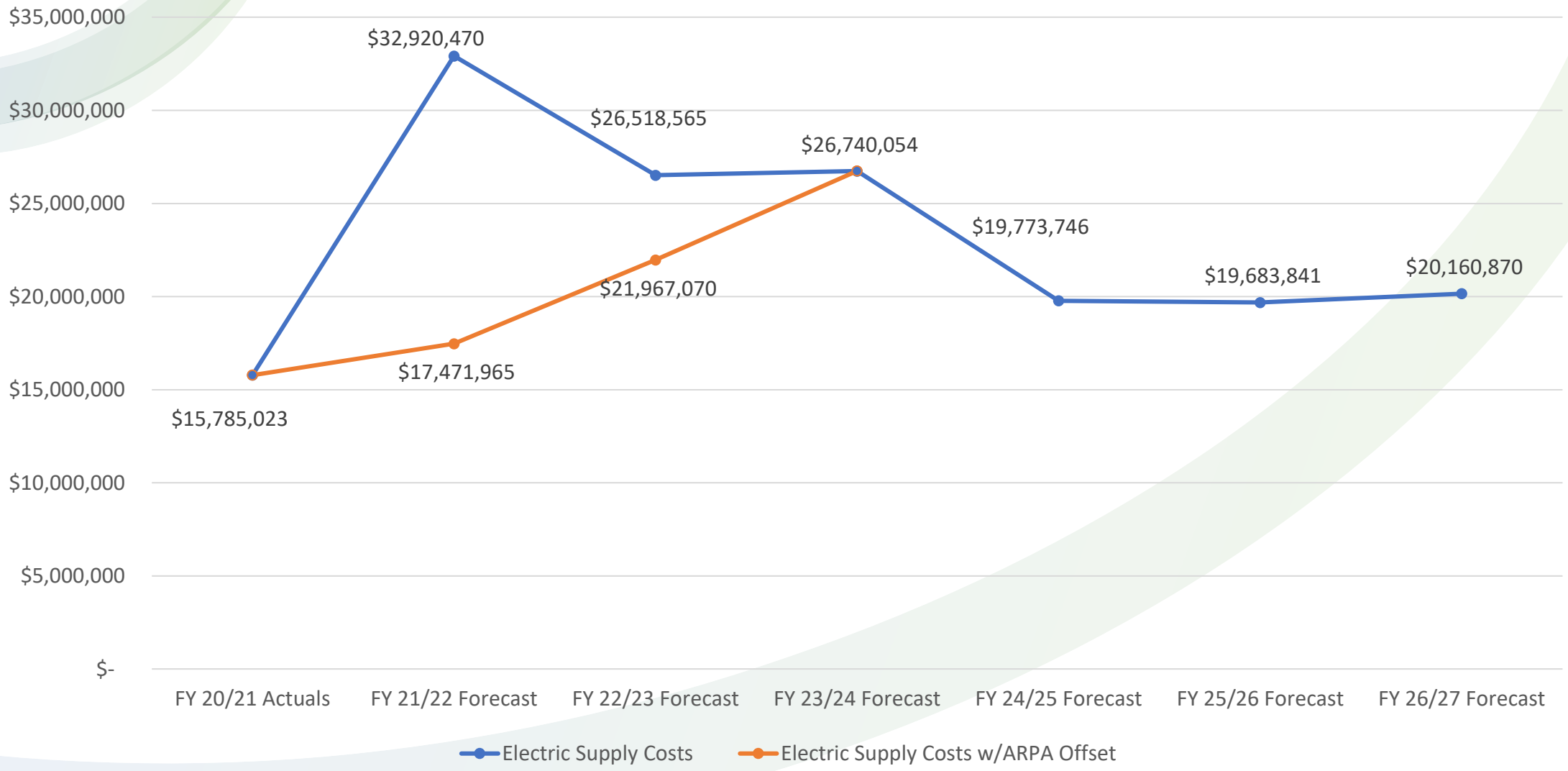
Increasing Operating Costs on the Electric Utility



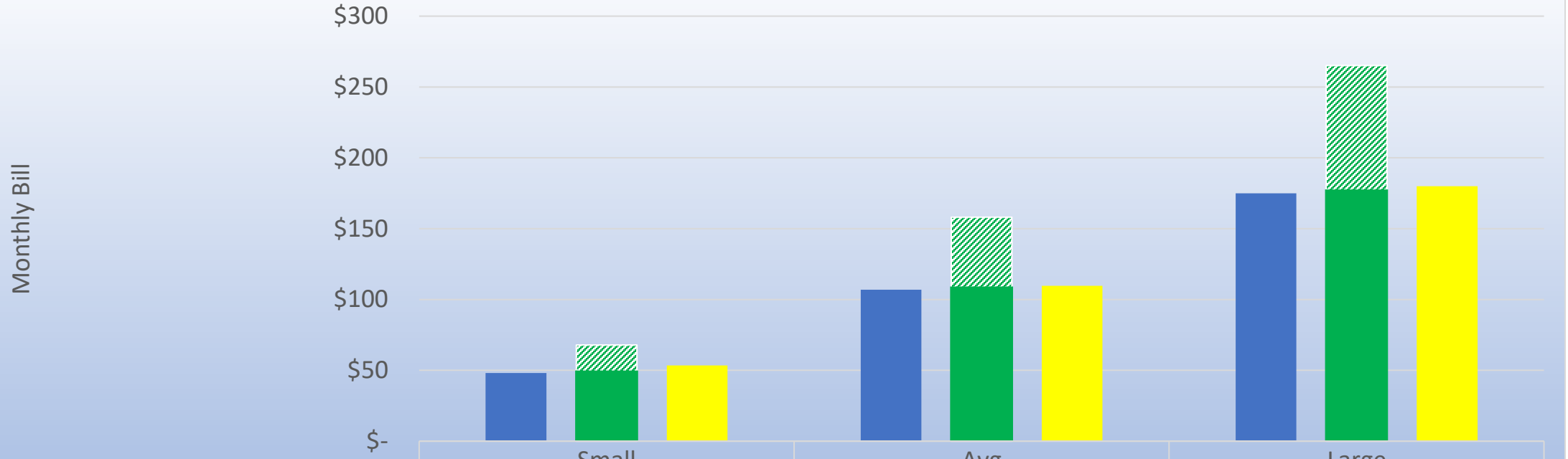
Cost Increases

- Payroll/Benefits

Electric Commodity Cost Pressures



RESIDENTIAL ELECTRIC BILL COMPARISON

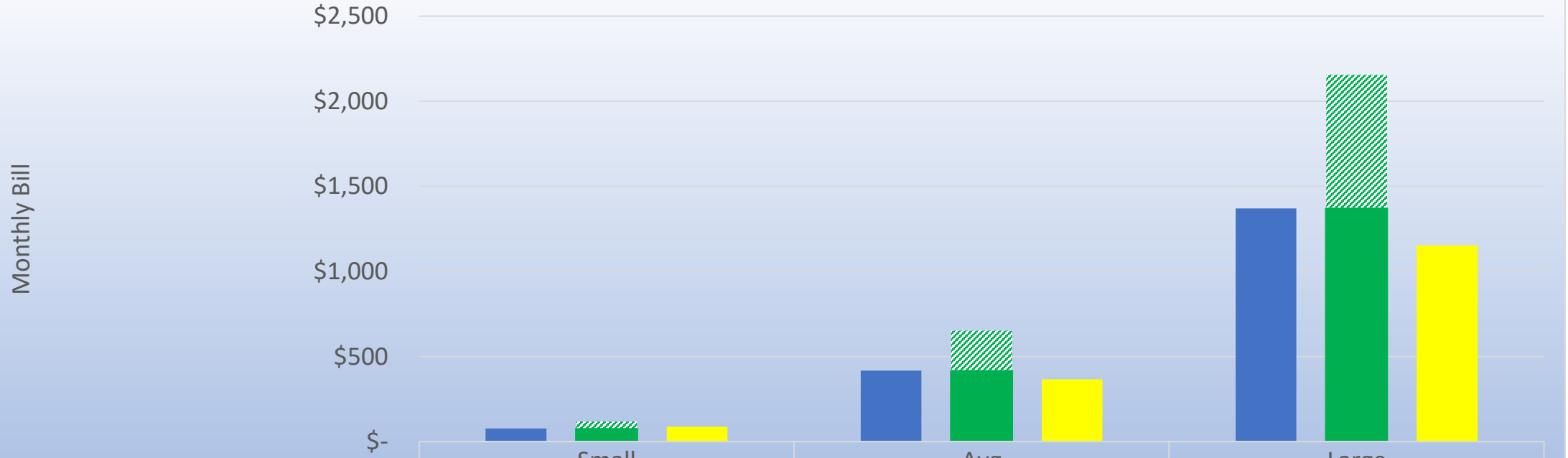


	Small	Avg	Large
Mesa - Current	$48.09	$106.83	$174.89
Mesa - Proposed w/o ARPA Offset	$67.85	$158.01	$265.11
SRP	$53.52	$109.59	$179.96
Mesa - Proposed w/ARPA Offset	$49.93	$109.22	$177.63

PROPOSED RESIDENTIAL ELECTRIC RATES

COMPONENT	CURRENT	PROPOSED
SYSTEM SERVICE CHARGE	$13.00	$14.50
USAGE CHARGE SUMMER per kWh	Tier 1 - $0.05179 Tier 2 - $0.04822	Tier 1 - $0.05231 Tier 2 - $0.04822
USAGE CHARGE WINTER per kWh	Tier 1 - $0.03953 Tier 2 - $0.01715	Tier 1 - $0.04151 Tier 2 - $0.01800
MONTHLY BILL (Average Customer)	$106.83	$109.22
	(effective increase 2.2% or $2.39/mo.)	

COMMERCIAL ELECTRIC BILL COMPARISON



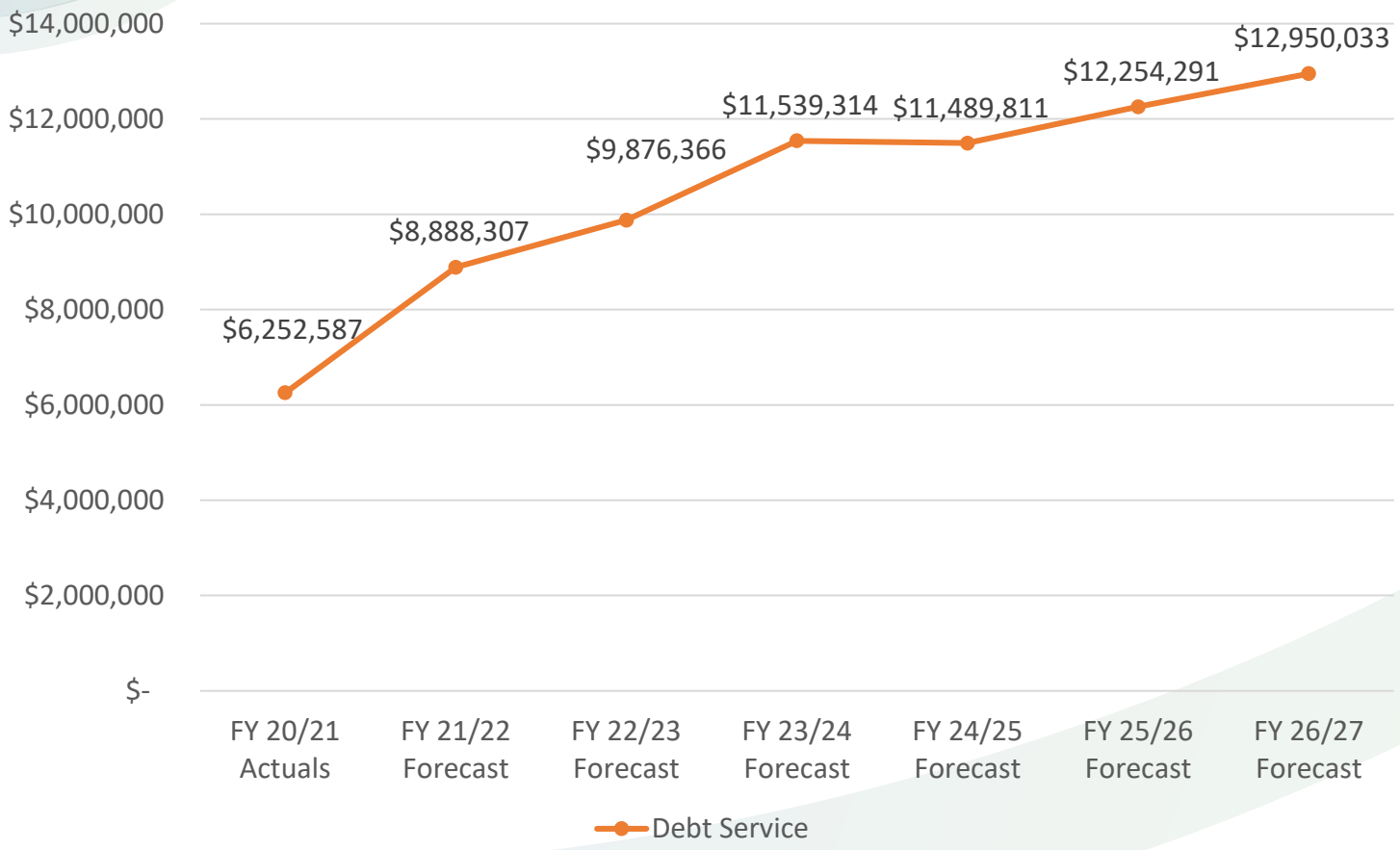
	Small	Avg	Large
Mesa - Current	$77.47	$417.81	$1,370.11
Mesa - Proposed w/o ARPA Offset	$117.82	$652.13	$2,155.06
SRP	$88.41	$366.15	$1,153.05
Mesa - Proposed w/ARPA Offset	$79.97	$420.31	$1,373.65

PROPOSED COMMERCIAL ELECTRIC RATES

COMPONENT	CURRENT	PROPOSED
SYSTEM SERVICE CHARGE	$7.22	$9.72
USAGE CHARGE SUMMER per kWh	Tier 1 - $0.06491 Tier 2 - $0.04125 Tier 3 - $0.02901	Tier 1 - $0.06491 Tier 2 - $0.04331 Tier 3 - $0.02901
USAGE CHARGE WINTER per kWh	Tier 1 - $0.05375 Tier 2 - $0.03692 Tier 3 - $0.02060	Tier 1 - $0.05375 Tier 2 - $0.03877 Tier 3 - $0.02060
MONTHLY BILL (Average Customer)	$417.81	$420.31
	(effective increase 0.6% or $2.50/mo.)	

Gas

Increasing Debt Service Costs on the Gas Utility



Completed Projects

- Regulator Stations - $5.4M
- Aging Infrastructure - $10M
- Growth - $13.6M

Future Projects

- Gate Station - $9.6M
- Aging Infrastructure – 15.8M
- Growth - $9.9M
- AMI - $10M

Increasing Operating Costs on the Gas Utility

Cost Increases

- Payroll/Benefits

RESIDENTIAL GAS BILL COMPARISON

	Small	Avg	Large
Mesa - Current	$22.73	$39.51	$64.34
Mesa - Proposed	$23.23	$40.23	$66.05
SWG	$18.41	$39.50	$73.38

PROPOSED RESIDENTIAL GAS RATES

COMPONENT	CURRENT	PROPOSED
SYSTEM SERVICE CHARGE SUMMER WINTER	$15.31 $18.24	$15.81 $18.74
USAGE CHARGE SUMMER per therm	Tier 1 - $0.6685 Tier 2 - $0.2384	Tier 1 - $0.6685 Tier 2 - $0.2622
USAGE CHARGE WINTER per therm	Tier 1 - $0.6685 Tier 2 - $0.5419	Tier 1 - $0.6685 Tier 2 - $0.5960
MONTHLY BILL (Average Customers)	$39.51	$40.23
	(effective increase 1.8% or $0.72/mo.)	

Utility Fund Forecast

Utility Fund Forecast:
FY 21/22 Recommended Rate Adjustments

As of 08/31/2021	FY 20/21 Projected	FY 21/22 Projected	FY 22/23 Forecast	FY 23/24 Forecast	FY 24/25 Forecast	FY 25/26 Forecast	FY 26/27 Forecast
TOTAL NET SOURCES AND USES	$9,851,803	($22,016,908)	($9,194,370)	($5,014,613)	($11,181,618)	($8,307,063)	($7,422,938)
Beginning Reserve Balance	$136,773,320	$146,625,123	$124,608,215	$115,413,845	$110,399,232	$99,217,614	$90,910,551
Ending Reserve Balance	**$146,625,123**	**$124,608,215**	**$115,413,845**	**$110,399,232**	**$99,217,614**	**$90,910,551**	**$83,487,613**
Ending Reserve Balance Percent*	**32.2%**	**27.7%**	**25.0%**	**23.1%**	**20.1%**	**17.2%**	**15.8%**

*As a % of Next Fiscal Year's Expenditures

WATER Residential	1.50%	**3.00%**	*2.50%*	*2.00%*	*2.00%*	*2.00%*	*2.00%*
WATER Non-Residential (usage)	5.00%	**5.00%**	*5.00%*	*5.00%*	*5.00%*	*5.00%*	*3.00%*
WASTEWATER Residential	3.50%	**3.50%**	*4.00%*	*4.00%*	*4.00%*	*4.00%*	*4.00%*
WASTEWATER Non-Residential	4.00%	**4.00%**	*4.50%*	*4.50%*	*4.50%*	*4.50%*	*4.50%*
SOLID WASTE Residential	0.00%	**2.00%**	*2.00%*	*2.00%*	*2.00%*	*2.00%*	*2.00%*
SOLID WASTE Commercial	2.00%	**3.75%**	*2.00%*	*2.00%*	*2.00%*	*2.00%*	*2.00%*
SOLID WASTE Rolloff	2.00%	**3.25%**	*2.00%*	*2.00%*	*2.00%*	*2.00%*	*2.00%*
ELECTRIC Residential - svc charge	$1.50	**$1.50**	*$2.00*	*$2.50*	*$2.50*	*$2.50*	*$2.50*
ELECTRIC Non-Residential - svc charge	$2.50	**$2.50**	*$2.50*	*$2.50*	*$2.50*	*$2.50*	*$2.50*
GAS Residential - svc charge	$0.50	**$0.50**	*$0.75*	*$1.00*	*$1.00*	*$1.00*	*$1.00*
GAS Non-Residential - svc charge	$2.00	**$0.00**	*$2.00*	*$2.00*	*$2.00*	*$2.00*	*$2.00*

Utility Fund Forecast:
Deferred Residential Rate Adjustments Scenario

For Planning Purposes Only

As of 08/31/2021	FY 20/21 Projected	FY 21/22 Projected	FY 22/23 Forecast	FY 23/24 Forecast	FY 24/25 Forecast	FY 25/26 Forecast	FY 26/27 Forecast
TOTAL NET SOURCES AND USES	$9,851,803	($23,366,051)	($14,553,789)	($11,990,643)	($10,481,538)	($1,516,603)	($418,484)
Beginning Reserve Balance	$136,773,320	$146,625,123	$123,259,072	$108,705,284	$96,714,641	$86,233,103	$84,716,500
Ending Reserve Balance	**$146,625,123**	**$123,259,072**	**$108,705,284**	**$96,714,641**	**$86,233,103**	**$84,716,500**	**$84,298,015**
Ending Reserve Balance Percent*	**32.3%**	**27.6%**	**23.7%**	**20.2%**	**17.3%**	**15.9%**	**15.8%**

*As a % of Next Fiscal Year's Expenditures

WATER Residential	1.50%	**0.00%**	*0.00%*	*7.00%*	*7.00%*	*2.00%*	*2.00%*
WATER Non-Residential (usage only)	5.00%	**5.00%**	*5.00%*	*7.00%*	*7.00%*	*5.00%*	*3.00%*
WASTEWATER Residential	3.50%	**0.00%**	*0.00%*	*7.00%*	*7.00%*	*4.00%*	*4.00%*
WASTEWATER Non-Residential	4.00%	**4.00%**	*4.50%*	*7.00%*	*7.00%*	*4.50%*	*4.50%*
SOLID WASTE Residential	0.00%	**0.00%**	*0.00%*	*7.00%*	*7.00%*	*2.00%*	*2.00%*
SOLID WASTE Commercial	2.00%	**3.75%**	*2.00%*	*2.00%*	*2.00%*	*2.00%*	*2.00%*
SOLID WASTE Rolloff	2.00%	**3.25%**	*2.00%*	*2.00%*	*2.00%*	*2.00%*	*2.00%*
ELECTRIC Residential - svc charge	$1.50	**$0.00**	*$0.00*	*$3.00*	*$2.50*	*$2.50*	*$2.50*
ELECTRIC Non-Residential - svc charge	$2.50	**$2.50**	*$2.50*	*$2.50*	*$2.50*	*$2.50*	*$2.50*
GAS Residential - svc charge	$0.50	**$0.00**	*$0.00*	*$2.00*	*$1.00*	*$1.00*	*$1.00*
GAS Non-Residential - svc charge	$2.00	**$0.00**	*$2.00*	*$2.00*	*$2.00*	*$2.00*	*$2.00*

Schedule for FY 2021/22 Utility Rates Adjustment Recommendation

Oct 4 – City Council Action on Notice of Intent

Nov 15 – Introduce Utility Rate Ordinances

Dec 8 – City Council Action on Utility Rates

Feb 1 – Effective date for Utility Rate changes

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