



FISCAL YEAR 2018 BUSINESS AND CAPITAL PLANS

LOWER COLORADO RIVER AUTHORITY

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The Board of Directors is composed of 15 members appointed by the governor. Directors represent counties in LCRA's electric and water service areas. The directors meet regularly to set strategic corporate direction for the general manager and staff, to approve projects and large expenditures, and to review progress on major activities and industry issues.

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These business and capital plans present a long-term vision and summary of operational plans for LCRA and its nonprofit corporations. The business and capital plans should not be used as a basis for making a financial decision with regard to LCRA or any of its securities or other obligations. These business and capital plans are intended to satisfy the official intent requirements set forth in Section 1.150-2 of the IRS Treasury Regulations. For more complete information on LCRA and its obligations, refer to LCRA's annual financial report, the official statements relating to LCRA's bonds, and the annual and material event disclosures filed by LCRA with nationally recognized municipal securities information repositories and the State Information Depository pursuant to Rule 15c2-12 of the U.S. Securities and Exchange Commission. The information in this report and within each of the documents referred to applies only as of the report's date. The business and capital plans include forecasts based on current assumptions used for planning purposes only and are subject to change. Copies of the documents referenced in this report may be obtained from Stephen Kellicker, director of Financial Planning and Analysis, LCRA, 3700 Lake Austin Blvd., Austin, TX 78703.

LCRA's Mission

To enhance the quality of life of the Texans we serve through water stewardship, energy and community service.



MY COLORADO COMMITMENT

I will make every LCRA
endeavor outstanding.

Working to Enhance Texans' Lives

Our mission and commitment

LCRA provides a multitude of vital services for Texans – from acting as stewards of our region's water supplies to providing essential power for a growing state to offering more than 40 parks and recreation areas and other valuable community services.

While you'll find the roughly 1,900 LCRA employees engaged in a wide variety of tasks on any given day, we share a common mission, commitment and goal, all aimed at enhancing people's lives.

In December 2014, we adopted a clear statement expressing our mission:

To enhance the quality of life of the Texans we serve through water stewardship, energy and community service.

Last year, we translated our mission to make it personal for every LCRA employee by adopting My Colorado Commitment:

I will make every LCRA endeavor outstanding.

Our mission is what we do. Our Colorado Commitment is how we do it – by making every LCRA endeavor outstanding. Our mission and commitment are two sides of the same coin.



Our companywide goal and objectives

This year, we've also adopted a single companywide goal and core objectives that apply to the work of each and every LCRA employee:

Goal: With safety as our top priority and an unwavering commitment to make every LCRA endeavor outstanding, continue fulfilling our mission to enhance the quality of life of the Texans we serve through water stewardship, energy and community service.

Core objectives: Continue seeking new business opportunities and making the bottom line stronger as we excel in execution and deliver exceptional customer service at a competitive price.

Our goal is our "true north," encompassing our mission, the Colorado Commitment and our focus on safety, and our core objectives will help us achieve this goal. As you'll see in the following pages, business units support our companywide goal and objectives through more specific objectives and strategies.

Working to Enhance Texans' Lives

Accomplishments for Texans

We serve Texans most effectively when we focus on a common mission and goal while making a very personal commitment to excellence. It means we're all doing our utmost while rowing in the same direction, and that benefits the people we serve:

- In 2016, we successfully managed significant flooding. When heavy rains fell, the crews operating LCRA's dams helped move floodwaters gradually and safely downstream.
- Amid forecasts for growing water demands in the region, we have remained on time and on budget in constructing the Lane City Reservoir in Wharton County, which will benefit the entire basin by helping reduce demands on the Highland Lakes. We expect to complete construction and begin operating the reservoir in 2018.
- For the first time in many years, we lowered lakes LBJ and Austin in January this year to allow for maintenance of shoreline property and help fight aquatic vegetation.
- Last year, we provided full allocations of interruptible stored water to all of the LCRA irrigation divisions for the first time since 2011. We did this while operating under the provisions of the new Water Management Plan. During water shortages, interruptible water is cut back or cut off.

- We continued working to meet the need for power in Texas through projects like connecting the Zorn and Marion substations in Guadalupe County. The project reached a major milestone in September 2016 when the Public Utility Commission of Texas selected a route and approved the project. We expect to complete the project by summer 2019.
- We strove to offer a competitive Wholesale Power rate within a depressed power market.
- We continued providing public services such as law enforcement; emergency assistance; critical infrastructure protection; soil, water and wildlife conservation; and access to nature through our robust park system.

Looking ahead

Heading into fiscal year 2018, we're continuing our individual and collective efforts to enhance the lives of the people we serve as we work to achieve our vision:

- Become the premier public power provider in Texas.
- Continue growing LCRA Transmission Services Corporation.
- Provide significant new water supplies for our basin.
- Continue striving for financial self-sufficiency of our public services.

Working to Enhance Texans' Lives

We've worked closely with the Rates and Resources Council – a group of Wholesale Power customers. We've incorporated their feedback and continue to work with them to achieve their pricing goals.

We're continuing to help make electric service in Texas more reliable as people flock to our state. We're in the midst of a rolling plan to invest upwards of a billion dollars in our transmission infrastructure to strengthen the grid.

We were selected to receive an \$8 million federal grant to help construct a 2,000 acre-foot, off-channel conservation reservoir in our Lakeside irrigation division. This reservoir will increase the efficiency of our operations within Lakeside and help conserve water.

We're helping to keep residents in the lower Colorado River basin safe by investing in our dams to ensure their continued safe and effective operation, which is critical for water supplies and flood management in the basin.

Serving Texans

LCRA provides many vital services to Texans. We're dedicated to providing these services in a safe, reliable and economical manner, and in the last few years we have taken steps to ensure we become even better.

It's an exciting time to live in and support this dynamic region, and we at LCRA are honored to provide vital water, power and community services. We remain committed to our mission of enhancing the quality of life of the Texans we serve.

LCRA's Goal, Objectives and Strategies

LCRA

Goal: With safety as our top priority and an unwavering commitment to make every LCRA endeavor outstanding, continue fulfilling our mission to enhance the quality of life of the Texans we serve through water stewardship, energy and community service.

Objectives: Continue seeking new business opportunities and making the bottom line stronger as we excel in execution and deliver exceptional customer service at a competitive price.

Wholesale Power

Objectives: Grow our Wholesale Power business while empowering our team members to provide competitively priced power, excel in execution and deliver exceptional customer service.

Strategies:

- Keep the safety of our employees and the public our top priority.
- Minimize the cost of power supply to our customers and maximize the net margin of our generation fleet while keeping rate fluctuations low.
- Strive to perform all of our activities in the most rigorous and effective manner possible.
- Provide exceptional service to our Wholesale Power customers as well as to our internal customers.
- Help our existing customers gain more load, and acquire new customers for WSC Energy.

- Empower our team members to take ownership, work seamlessly together across the company, and be accountable and proactive to make every LCRA endeavor outstanding.
- Eliminate activities that do not support business objectives.

Transmission

Objectives: Grow the LCRA TSC business, and continue to provide safe, reliable, on time, environmentally responsible, sustainable and cost-effective transmission services throughout Texas.

Strategies:

- Keep the safety of our employees and the public our top priority.
- Optimize and grow assets to support transmission needs in Texas.
- Meet statewide service requirements through cost-effective transmission and telecommunication products and services.
- Achieve targeted levels of system availability, performance and efficiency.
- Manage our financial performance, and seek full cost recovery at the appropriate time.
- Empower our team members to take ownership, work seamlessly together across the company, and be accountable and proactive to make every LCRA endeavor outstanding.
- Eliminate activities that do not support business objectives.

LCRA's Goal, Objectives and Strategies

Water

Objectives: Increase and preserve the region's water supplies.

Strategies:

- Keep the safety of our employees and the public our top priority.
- Expand the region's water supplies, and work to meet the long-term water needs for existing and future customers.
- Minimize costs for customers by efficiently operating and maintaining equipment and infrastructure and pursuing low-cost, innovative measures for new water supplies.
- Continue to implement the state-approved Water Management Plan.
- Maintain and invest in LCRA's system of dams to ensure their continued safe and effective operation, which is critical for water supplies and flood management in the basin.
- Monitor and protect the water quality and the health of the lower Colorado River basin.
- Focus on water conservation by providing technical assistance, cost-sharing grants and irrigation evaluations.
- Empower our team members to take ownership, work seamlessly together across the company, and be accountable and proactive to make every LCRA endeavor outstanding.
- Eliminate activities that do not support business objectives.

Public Services

Objectives: Continue providing public services that are authorized by LCRA's enabling legislation while making meaningful progress toward achieving financial self-sufficiency for those services.

Strategies:

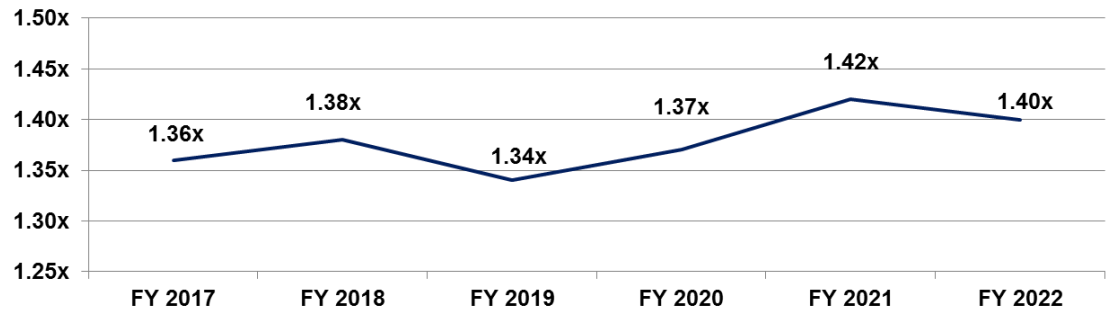
- Keep the safety of our employees and the public our top priority.
- Provide outdoor adventure, river access and natural science education to communities throughout the Colorado River basin through LCRA's system of parks, recreation areas, natural resource areas and river access sites.
- Contribute to LCRA's land stewardship mission through soil, water and wildlife conservation on LCRA lands and through support of the Colorado River Land Trust.
- Improve public safety through law enforcement and emergency assistance during floods and other disasters that may affect the communities LCRA serves.
- Help protect critical infrastructure – including dams and the Texas power grid – from potential cyberattacks and physical threats.
- Identify and implement opportunities to increase revenue and decrease costs as appropriate to achieve greater financial self-sufficiency for the Public Services we provide.
- Empower our team members to take ownership, work seamlessly together across the company, and be accountable and proactive to make every LCRA endeavor outstanding.

LCRA Financial Summary

- Approval of this business plan authorizes LCRA to spend \$317.6 million for operations in fiscal year 2018.
- Debt service coverage, a widely used measure of financial performance, is forecast to be 1.38x in FY 2018.
- Debt service coverage is projected to remain between 1.34x and 1.42x over the five-year planning horizon.
- Stable debt service coverage reflects LCRA's commitment to growing revenue and managing costs.

Note: GenTex 1 is the original portion of the Lost Pines 1 Power Project from which energy is sold directly to wholesale electric customers.

LCRA Debt Service Coverage



(Dollars in millions)

		Budgeted	Proposed	Forecast			
		FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenues ¹	\$	849.8	884.8	922.1	954.5	995.3	1,009.3
Expenses ¹		445.9	482.6	496.9	513.0	532.6	539.5
Net Operating Margin		403.9	402.2	425.2	441.5	462.7	469.8
Less: GenTex 1 Funds ²		(1.1)	(0.1)	(2.1)	(2.2)	(0.6)	(2.5)
Net Margin for Debt Service, Adjusted		402.8	402.2	423.1	439.3	462.1	467.3
Debt Service	\$	296.0	291.1	314.9	319.7	325.1	333.5
Debt Service Coverage		1.36x	1.38x	1.34x	1.37x	1.42x	1.40x
Net Margin After Debt Service ³		107.9	111.1	110.3	121.8	137.7	136.3

¹ Revenues and expenses are net of intracompany transfers. Revenues include interest income. Expenses exclude the LCRA TSC capital charge, which is a capital expense for LCRA consolidated.

² Includes adjustments related to GenTex 1 capital funding and reserve funding.

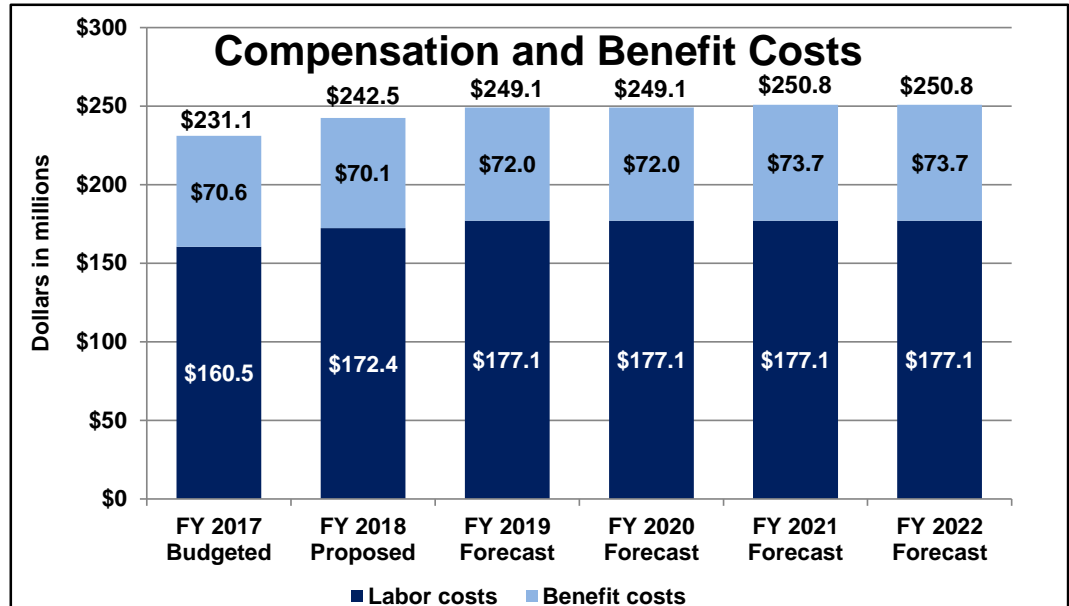
³ Net Margin After Debt Service includes funds dedicated to GenTex 1.

Compensation and Benefits

Compensation and benefits are key drivers of LCRA's budget.

- Budgeted positions for FY 2018 are 1,914¹, which is an increase of 23 positions (1.2 percent) from the FY 2017 budget.
- To support and sustain growth in the Transmission business, Transmission is adding 23 new positions to support engineering, surveying, planning and substation operations.
- FY 2018 compensation and benefit costs increase by \$11.4 million, reflecting:
 - Additional Transmission staff.
 - Labor adjustments to retain talent.
 - Additional overtime to support capital and maintenance projects.

¹ Excludes seasonal workers.

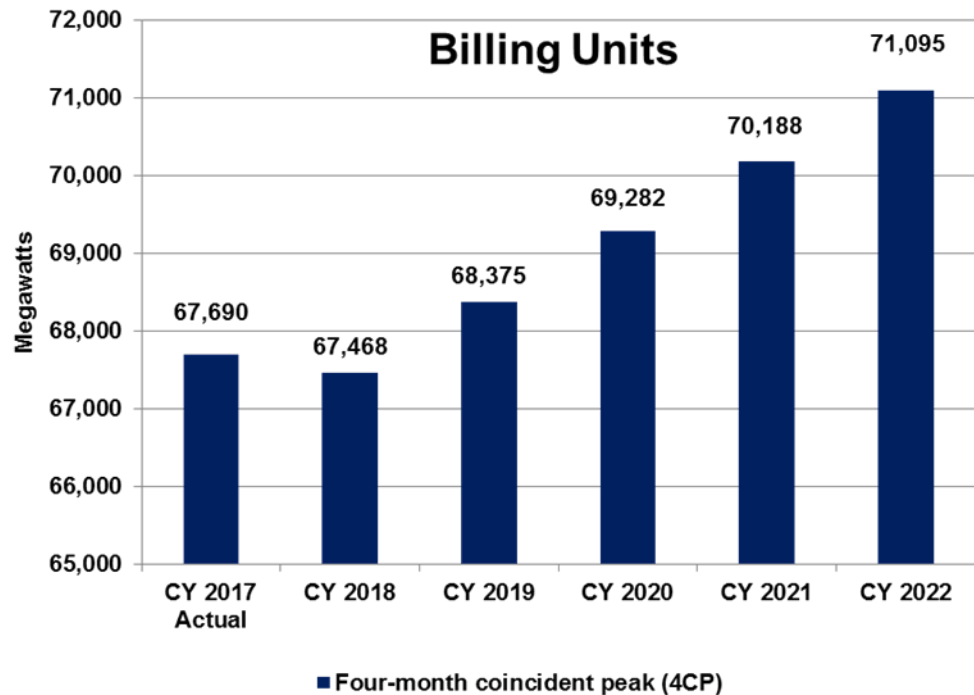


- An additional 3.5 percent labor cost increase is planned in FY 2019, with all other years assuming a flat labor budget.
- LCRA continues to manage benefit costs, which range from 41 to 42 percent of labor costs for the next five years.

LCRA TSC – Billing Units

LCRA TSC's billing unit is the four-month coincident peak (4CP) in the ERCOT market.

- 4CP is the average of the peak ERCOT electrical demands (measured in kilowatts) during the months of June, July, August and September of the previous calendar year.
- The Public Utility Commission of Texas approves the average of these four ERCOT system peaks each year to establish a 4CP for the following calendar year.
- Temperatures can have an effect on electrical demands. In calendar year 2016, the average temperature for June to September in the ERCOT region was 98.6 degrees compared with a historical average of 98 degrees.
- 4CP is forecast to grow about 1.3 percent per year across ERCOT; however, 4CP in 2018 is similar to 4CP in 2017 as a result of the increased temperatures in 2016.

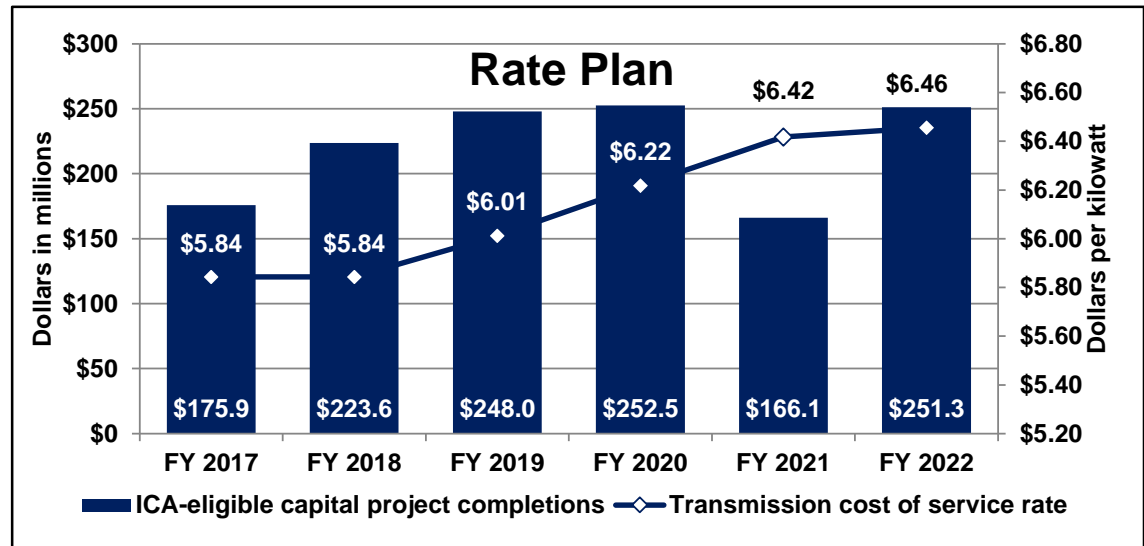
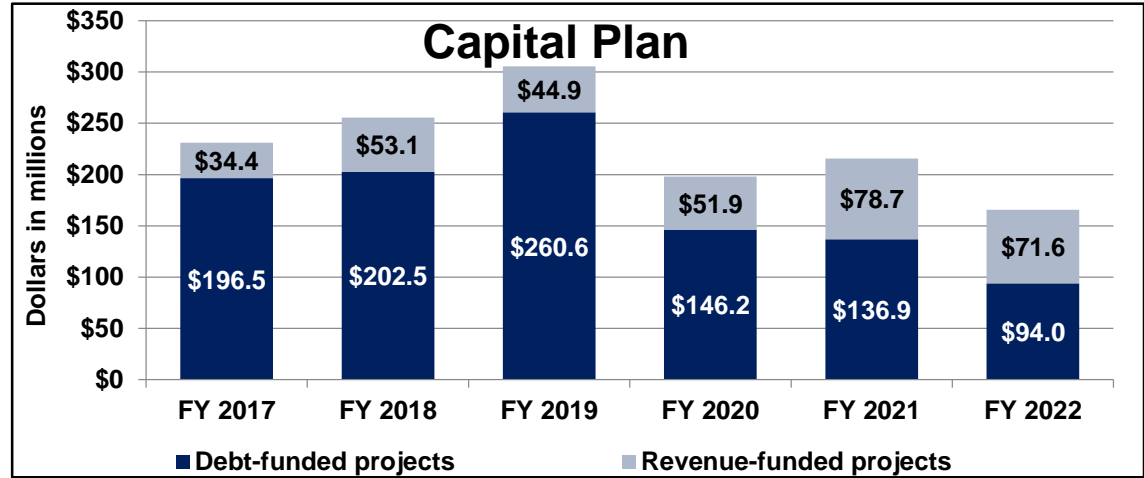


Note: One megawatt equals 1,000 kilowatts.

LCRA TSC – Capital and Rates

We're growing the transmission system to meet customer needs:

- LCRA TSC plans to spend about \$1.1 billion over the five-year planning period on capital projects to support the needs of the ERCOT and LCRA TSC systems.
- LCRA TSC plans to recover about \$1.1 billion of capital expenses for projects that are completed and energized through interim capital addition (ICA) filings in FY 2019 through FY 2022.
- LCRA TSC will continue to recover costs associated with additional projects once they are completed and energized beyond FY 2022.



LCRA TSC – Financial Summary

- LCRA continues to expand the Transmission organization, adding staff and equipment needed to increase its current capacity to operate and construct facilities for LCRA TSC and provide customer services.
- Transmission plans to manage costs to maintain its debt service coverage ratios between 1.30x and 1.41x.

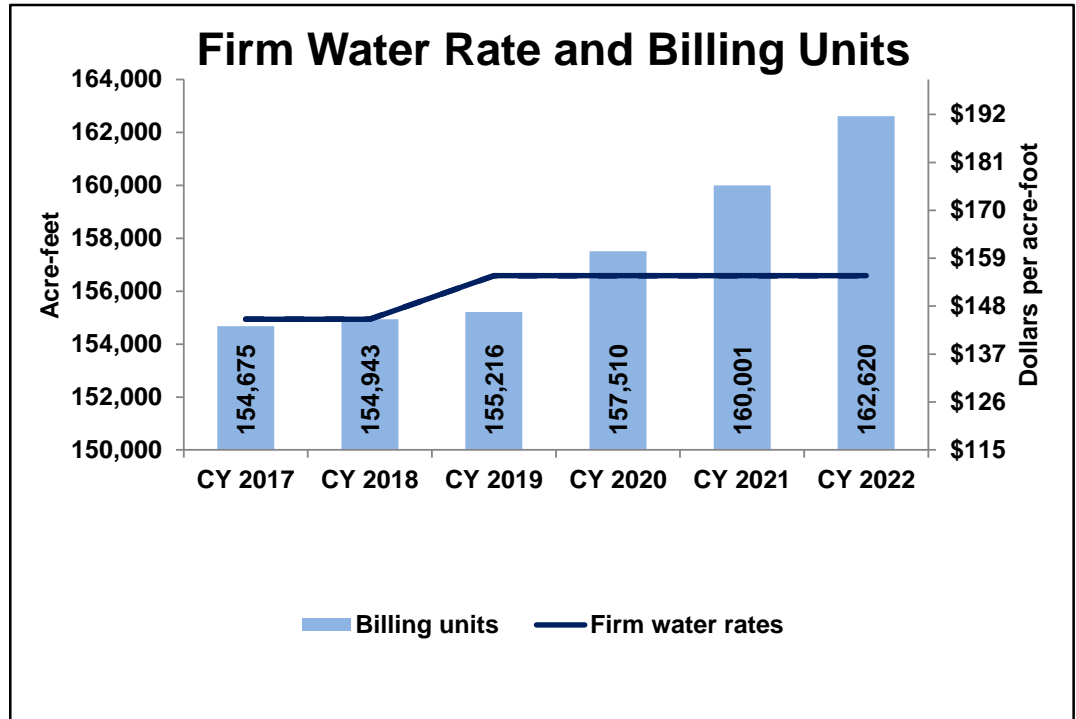
	Budgeted		Proposed		Forecast	
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
(Dollars in millions)						
Revenues	\$ 399.7	409.7	420.9	440.3	459.9	471.2
Operations and Maintenance	97.0	110.9	114.4	118.3	120.7	123.8
Net Operating Margin	302.7	298.8	306.5	322.0	339.2	347.4
Plus: Interest Income	0.8	2.6	2.7	2.7	2.8	2.8
Less: Assigned Enterprise Expense	43.4	44.2	42.7	48.0	48.2	51.0
Public Service Fund	12.0	12.3	12.6	13.2	13.8	14.1
Resource Development Fund	8.0	8.2	8.4	8.8	9.2	9.4
Net Margin Available for Debt Service	240.2	236.7	245.5	254.7	270.9	275.7
Debt Service	\$ 174.3	173.9	188.7	191.7	192.4	203.9
Debt Service Coverage	1.38x	1.36x	1.30x	1.33x	1.41x	1.35x
Net Margin After Debt Service	\$ 65.9	62.8	56.9	63.0	78.5	71.8

Water – Firm Billing Units and Rates

The firm water rate of \$145 per acre-foot is projected to increase to \$155 per acre-foot beginning with the January 2019 billing period. Lane City Reservoir financing costs are excluded from the firm water rate.

We are managing costs under a lower firm water rate:

- Billing units are forecast to be flat through calendar year 2019 and then grow about 1.5 percent annually.
- Lane City Reservoir financing costs are excluded from the firm water rate during the planning horizon.
- LCRA is identifying funding for the construction of future new regional water supply projects.
- The firm water rate is projected to increase to \$155 per acre-foot beginning with the January 2019 billing period to fund the ongoing rehabilitation projects at the Mansfield and Buchanan water supply dams.



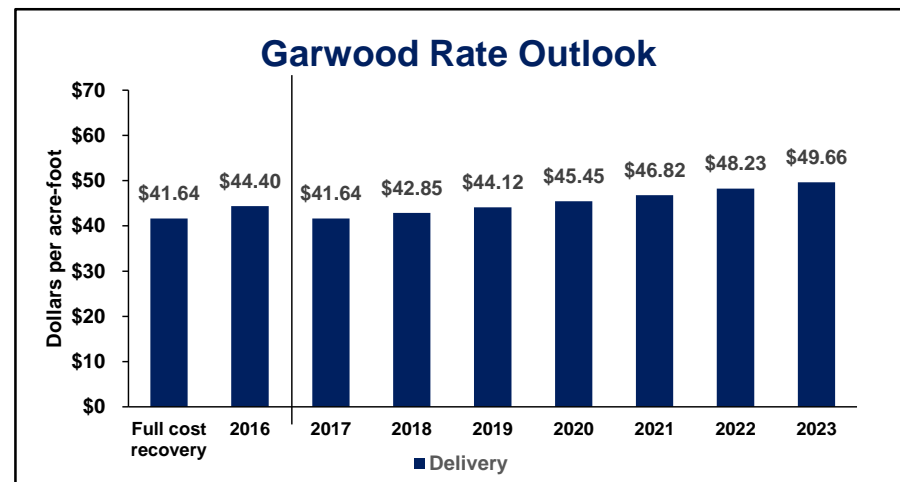
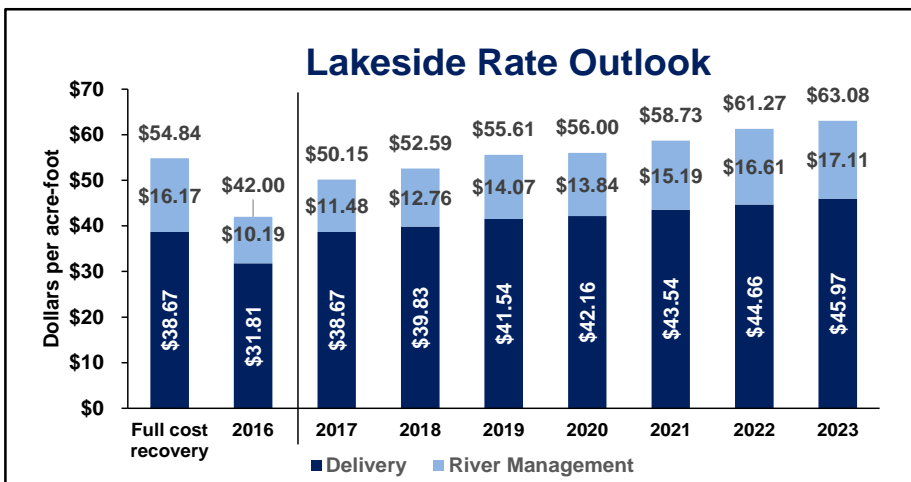
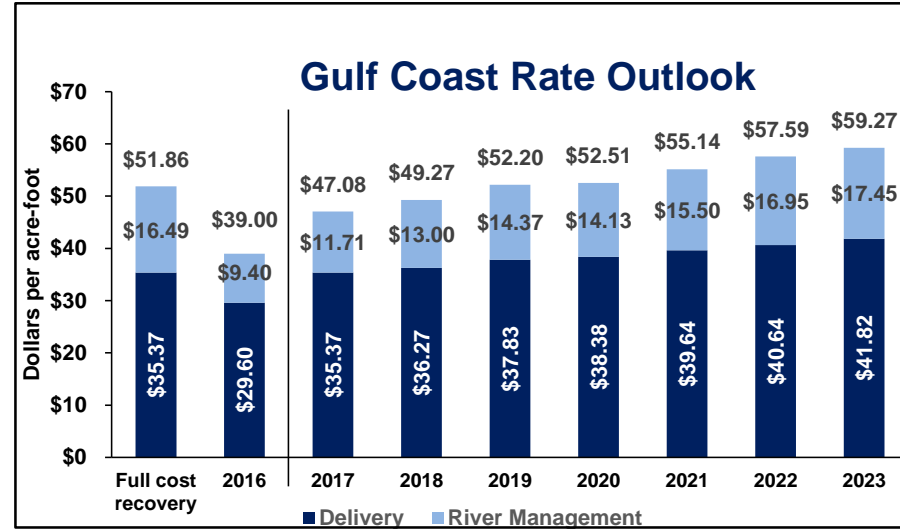
Note: Water supplies managed by LCRA are divided into firm and interruptible water. Firm water is available even during a severe drought. During water shortages, interruptible water is cut back or cut off.

Water – Interruptible Rates

Interruptible sales to Gulf Coast, Lakeside and Pierce Ranch resumed in 2016.

Full cost recovery assumes a gradual approach.

- The Board approved rates for calendar year 2017 in January 2017.
- Rates for Gulf Coast and Lakeside irrigation divisions are projected to increase to gradually recover the divisions' fully allocated share of river management costs by calendar year 2022, assuming full water availability. The Garwood division is not subject to river management costs. Rates for Gulf Coast, Lakeside and Garwood irrigation divisions are based on full cost recovery of delivery costs associated with operation of the divisions, with that component of the rate subject to change based on actual and projected costs.



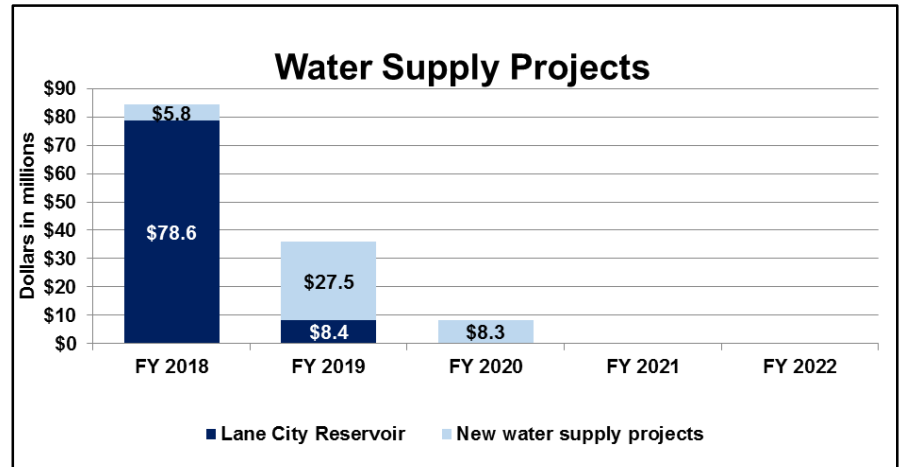
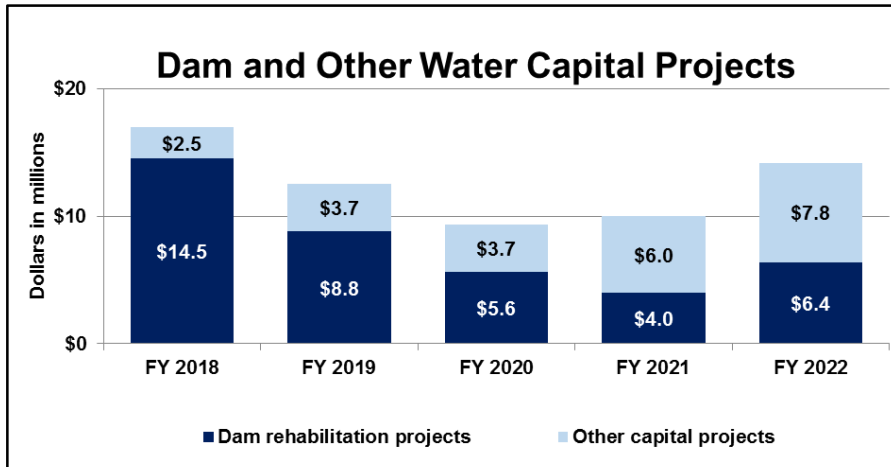
Water – Capital

Dam rehabilitation and other capital projects:

- LCRA plans to spend \$39.3 million on dam rehabilitation projects over the next five years for their safe and effective operation.
- As the projects continue, the costs to rehabilitate the dams could increase.
- LCRA will issue debt to pay for these projects and recover the costs in the firm water rate.

New water supply capital projects:

- Capital costs for the Lane City Reservoir will continue through FY 2019, but the financing costs are excluded from the firm water rate for the first 20 years.
- LCRA plans to spend more than \$41 million over the next five years for new regional water supply projects prior to the construction phases (e.g., permitting, engineering, etc.), which will be debt-funded.
- Timing and funding for the construction phases have not yet been identified.



Note: Other capital projects include capital for irrigation and minor capital needs for Water.

Water – Financial Summary

Providing long-term water supply at a lower rate.

- FY 2018 revenues reflect the firm rate of \$145 per acre-foot.
- A portion of firm revenues is deferred to a rate stabilization fund, which is excluded from revenues until the fund is used.
- The financial summary assumes agricultural water deliveries in every year using rolling historical averages for acres.
- Annual debt service includes the Texas Water Development Board Lane City Reservoir debt, paid from the Resource Development Fund.

	(Dollars in millions)					
	Budgeted FY 2017	Proposed FY 2018	Forecast			
	FY 2019	FY 2020	FY 2021	FY 2022		
Revenue						
Firm Water	\$ 20.3	17.9	20.9	23.0	23.6	24.5
Agriculture	11.5	11.8	12.5	12.9	13.4	13.8
Other	2.4	2.0	2.0	2.0	2.0	2.0
Total Revenues	34.2	31.6	35.5	37.9	39.1	40.4
Operations and Maintenance	17.7	16.9	17.7	17.8	16.4	16.4
Net Operating Margin	16.5	14.7	17.8	20.1	22.7	23.9
Plus: Interest Income	0.0	1.1	0.6	0.4	0.4	0.5
Less: Assigned Enterprise Expense	3.9	2.5	4.6	5.9	6.3	6.2
Public Service Fund	1.0	0.9	1.1	1.1	1.2	1.2
Net Margin Available for Debt Service	11.6	12.3	12.7	13.5	15.7	17.0
Debt Service	\$ 14.7	14.4	15.8	15.7	20.1	20.1
Debt Service Coverage	0.79x	0.85x	0.80x	0.86x	0.78x	0.84x
Plus: Resource Development Funding	10.2	10.2	10.5	10.5	12.8	12.9
Debt Service Coverage, Adjusted	1.48x	1.56x	1.47x	1.53x	1.42x	1.48x

Public Service Fund

LCRA uses the Public Service Fund to fund statutory programs that do not fully recover their costs.

- Public Service Fund activities include:
 - Parks.
 - Natural science centers.
 - Natural resource protection.
- These services provide some revenue, but require annual support to cover the costs of operations, Enterprise Support and capital.
- The PSF includes \$1 million annually for the Community Development Partnership Program.
- Fund sources include contributions from operations:
 - 3 percent from budgeted nonfuel Wholesale Power costs.
 - 3 percent of budgeted GenTex 1 revenue.
 - 3 percent of budgeted Transmission revenue.
 - 3 percent of budgeted Water revenue.
 - 3 percent from budgeted Strategic Services revenue.

	(Dollars in Millions)					
	Budgeted	Proposed	Forecast			
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenue	\$ 3.4	3.7	3.9	4.0	4.2	4.5
Total Operating Expense	17.9	17.8	18.1	18.2	18.5	18.6
Operating Funding Requirement	14.5	14.1	14.3	14.2	14.3	14.2
Capital Spending	2.5	1.7	2.3	2.4	2.4	2.3
Assigned Enterprise Capital	0.5	0.3	0.4	0.5	0.3	0.4
Reserves	0.0	0.0	0.1	0.0	0.1	0.0
CDPP	1.0	1.0	1.0	1.0	1.0	1.0
Total Funding Requirement	\$ 18.4	17.1	18.1	18.1	18.0	17.9

	(Dollars in Millions)					
	Budgeted	Proposed	Forecast			
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Sources						
Public Service Funds						
Wholesale Power	\$ 7.1	7.2	7.4	7.6	7.8	7.6
GenTex Power Corporation	1.3	0.8	1.0	1.1	1.0	1.1
Water	1.0	0.9	1.1	1.1	1.2	1.2
LCRA TSC	12.0	12.3	12.6	13.2	13.8	14.1
Strategic Services	0.5	0.5	0.5	0.5	0.5	0.6
Subtotal	21.9	21.7	22.6	23.5	24.3	24.6
Uses						
Public Service Activities	18.4	17.1	18.1	18.1	18.0	17.9
Environmental Lab	0.4	0.0	0.0	0.0	0.0	0.0
Resource Development Fund	3.1	4.6	4.5	5.4	6.2	6.7
Subtotal	21.9	21.7	22.6	23.5	24.3	24.6
Remaining PSF Funds	\$ 0.0	0.0	0.0	0.0	0.0	0.0

Strategic Services

Strategic Services include external services that people pay LCRA to provide.

- Strategic Services primarily include:
 - Transmission Customer Service.
 - Environmental Lab Services.
 - Telecommunication Radio sales.
- New initiatives that support LCRA's new business objectives will continue to be included in Strategic Services.

(Dollars in millions)

	Budgeted	Proposed	Forecast			
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenues	\$ 16.5	18.2	17.9	19.0	19.4	21.0
Expenses	11.6	13.6	13.0	13.1	12.9	12.9
Net Operating Margin	4.9	4.6	4.9	6.0	6.5	8.1
Less: Assigned Enterprise Expense	3.4	3.0	3.1	3.1	3.2	3.2
Public Service Fund	0.5	0.5	0.5	0.5	0.5	0.6
Resource Development Fund	0.2	0.2	0.2	0.2	0.2	0.3
Net Margin Available	0.8	0.9	1.1	2.1	2.6	4.0

Enterprise Support

Enterprise costs consist of essential functions that support business operations across all of LCRA.

- Enterprise Support includes:
 - Information Technology.
 - Facilities.
 - Legal.
 - Financial.
 - Regulatory.
 - Others.
- FY 2018 costs increase due to telecommunications and cybersecurity initiatives.
- Some costs are direct-charged when specific services are performed for a product line.
- Most other costs are assigned based on a three-factor formula of assets, labor hours and revenue.

	(Dollars in millions)		Forecast			
	Budgeted FY 2017	Proposed FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Net Enterprise Costs	96.7	103.1	104.5	106.0	107.7	108.9
<u>Cost Assignment</u>						
Wholesale Power - Nonfuel	26.7	25.4	25.8	26.0	26.3	26.9
Wholesale Power - Fuel	0.8	0.5	0.6	0.5	0.6	0.6
GenTex Power Corporation	2.0	1.4	1.3	1.4	1.4	1.4
WSC Energy	0.0	0.3	0.3	0.4	0.4	0.4
LCRA TSC	43.4	44.2	42.7	48.0	48.2	51.0
Water	3.9	2.5	4.6	5.9	6.3	6.2
Public Service Fund Activities	3.4	3.2	3.2	3.2	3.3	3.3
Strategic Services	3.4	3.0	3.1	3.1	3.2	3.2
Capital/Other	13.1	22.5	22.9	17.5	18.1	16.0
Total	\$ 96.7	103.1	104.5	106.0	107.7	108.9
<u>Capital Expenditures</u>						
Debt Funded	0.0	0.0	0.0	0.0	0.0	0.0
Revenue-Funded	29.7	11.4	18.9	18.7	13.1	14.3
Third Party / Proceeds-Funded	0.0	4.3	0.0	0.0	0.0	0.0
Total Capital	29.7	15.7	18.9	18.7	13.1	14.3

LCRA Capital Plan – by Status

- Approval of this capital plan authorizes the initiation of all recommended projects at their individually stated lifetime budgets as shown in the plan.
- Board approval of this plan also authorizes the proposed \$383 million budget for fiscal year 2018 capital spending, which includes \$140 million for recommended projects and \$243 million for projects the Board approved previously.
- The plan includes spending on future water supply projects in FY 2018 that will need additional Board authorization after this plan is approved.

FY 2018-FY 2022 Capital Spending for Recommended, Approved and Future Projects

LCRA Total (Including Austin Energy's Share and the City of San Marcos' Share)

(Dollars in millions)

	Budgeted	Proposed	Forecast					Five-Year Total	Lifetime
			FY 2017	FY 2018	FY 2019	FY 2020	FY 2021		
Recommended Projects	\$	139.6	146.6	43.9	90.8	100.0	520.8	521.1	
Approved Projects		243.4	97.5	50.1	5.9	5.6	402.5	885.5	
Subtotal Recommended and Approved		383.0	244.1	94.0	96.7	105.6	923.3	1,406.6	
Future Projects		3.8	145.1	164.2	164.9	108.5	586.5	603.2	
Total FY 2018 Capital Plan		386.8	389.2	258.2	261.6	214.0	1,509.8	2,009.8	
Less: Co-owners' Shares		0.6	1.5	2.1	0.3	2.9	7.4	8.4	
LCRA's Share		386.2	387.7	256.1	261.3	211.1	1,502.4	2,001.4	
Comparison to Previous Plan									
Total FY 2017 Capital Plan (with co-owners)		413.5	343.8	259.3	296.8	321.0	1,634.3	2,116.2	
Difference*	\$	n/a	(43.0)	(129.9)	38.6	59.4	n/a	106.3	

* Difference for five-year total is based on spending for FY 2018-FY 2022 from the current plan compared to FY 2017-FY 2021 from last year's plan.

LCRA Capital Plan – by Business

- LCRA's share of the total FY 2018 capital budget for recommended and approved projects, not including future projects included in the table to the right, is \$382.4 million. LCRA estimates it will fund about 24 percent of that amount with revenue.
- LCRA's share of the five-year total capital budget, including recommended, approved and future projects, is \$1.5 billion. LCRA estimates it will fund about 34 percent of that amount with revenue.
- Previously reserved funds are being used to fund and accelerate certain critical capital infrastructure projects throughout the organization.

(Dollars in millions)

	Budgeted	Proposed	Forecast			
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
LCRA Capital Expenditures						
<u>Revenue-Funded</u>						
Wholesale Power and Nonprofit Corps.	12.7	7.1	11.0	19.2	20.2	14.7
Transmission Services Corporation	34.4	53.1	44.9	51.9	78.7	71.6
Water	4.4	5.7	3.1	5.4	6.0	7.3
Enterprise Support	29.7	11.4	18.9	18.7	13.1	14.3
Public Services	2.5	1.7	2.3	2.4	2.4	2.3
	83.7	79.1	80.2	97.6	120.4	110.3
<u>Debt-Funded</u>						
Transmission Services Corporation	196.5	202.5	260.6	146.2	136.9	94.0
Water	129.7	93.1	44.0	11.5	0.3	4.1
	326.2	295.6	304.6	157.7	137.2	98.1
<u>Third Party / Proceeds-Funded</u>						
Wholesale Power and Nonprofit Corps.	-	4.6	0.5	-	-	-
Transmission Services Corporation	1.2	0.2	1.0	-	-	-
Water	0.4	2.5	1.3	0.8	3.6	2.8
Enterprise Support	-	4.3	-	-	-	-
	1.6	11.6	2.8	0.8	3.6	2.8
Total LCRA Capital	411.5	386.2	387.7	256.1	261.3	211.1

LCRA Capital Plan – Approach

Capital Planning Approach

LCRA includes projects in the capital plan with the goal of ensuring LCRA can continue to offer its customers energy, water and public services in a reliable, competitively priced, environmentally responsible and safe manner. Each project undergoes a thorough review by LCRA's Asset Management work group and other staff members who separate the projects into three categories: recommended (projects management has reviewed and recommended for Board approval); approved (projects the Board approved previously); and future (projects staff may recommend implementing within the next five years).

Staff does not submit future projects for Board approval at this time and includes them in this document only for strategic planning purposes. The cost and timing of future projects presented in this document could change. For this reason, LCRA repeats the capital planning process annually and updates the plan as necessary. LCRA will bring future projects back to the Board for approval.

Determining Need and Financial Analysis

Capital plan projects must support the goals of the business plan within financial parameters established by LCRA's Board and chief financial officer.

LCRA includes projects based on multiple factors, such as current and anticipated demand for LCRA's services and the need to maintain or build facilities or infrastructure to meet those demands. Other factors include compliance with applicable state or federal regulations, safety and security needs, potential for increased revenues, and better management and protection of natural resources.

Staff has rigorously reviewed and analyzed the recommended projects. The project criteria may vary, but all will involve either a "payback period" test, net present value analysis or other analyses to ensure the project is the most cost-effective approach. Executive management reviews each project to ensure the project warrants funding and inclusion in the capital plan. When appropriate, affected customers and stakeholders have the opportunity to review and comment on the proposed project scope and budget.

LCRA Capital Plan – Approach (Continued)

Developing Project Estimates

LCRA staff develops project cost estimates using one of three estimating levels: preliminary, budgetary or final.

An estimate's accuracy is based on identifying the work and resources necessary to complete the project objectives. Cost estimates are revised and become more accurate as more information regarding the scope and deliverables is available.

The capital planning cycle involves these steps:

- Developing and refining a list of business needs based on planning criteria and asset owner input.
- Defining the scope and approach necessary to address those needs.
- Performing business analyses and cost estimates to establish a proposed project budget and to evaluate affordability, economic viability and portfolio prioritization.
- Seeking approval of the capital plan to validate strategic direction, establish lifetime and fiscal year budgets, and allow business planning for the future.

LCRA generally recommends projects to the Board for approval using a budgetary estimate. LCRA may recommend some projects using preliminary estimates because of the timing in determining the specific technology that would be implemented. Projects recommended in this plan at a preliminary estimate are noted in the project description.

Regardless of the estimating level or the method used to generate the cost estimate, LCRA Board Policy 301 – Finance and LCRA TSC Board Policy T301 – Finance require LCRA and LCRA TSC to bring previously authorized projects to the Board for additional review and approval if staff expects the projects to exceed the Board-approved lifetime budget by 10 percent and \$300,000.

Project Prioritization

LCRA reviews and prioritizes its projects based on criteria that include safety, cost, reliability, competitiveness, environmental considerations and other factors. The appropriate executive reviews staff recommendations.

LCRA Capital Plan – Approach (Continued)

Project Prioritization (Continued)

Projects that are essential to ensure the continued reliable and cost-effective delivery of LCRA services, concern public safety (including loss of life or property), or limit interruption of services receive the highest priority. The highest priority projects could have substantial financial, health or safety impacts to customers or stakeholders. LCRA also assigns higher priority to projects with regulatory issues that may result in substantial financial impacts for noncompliance, projects already in progress that have a substantial cost to stop, and projects with contractual requirements that could have substantial financial impacts to LCRA.

Medium priority projects include those in progress that have a moderate financial impact associated with stopping them, or those that have contractual, regulatory or reliability issues that would have a moderate to minimal financial or health and safety impact to LCRA, customers and stakeholders.

A lower priority project is not unimportant to LCRA or to stakeholders. Staff may assign lower priority rankings to projects that have a more moderate monetary or stakeholder impact and would have minimal impacts to safety, the environment, contractual obligations or revenue if they were stopped or delayed.

Project Approval and Monitoring

LCRA brings each capital project recommended to begin in the next fiscal year to the LCRA Board for approval with this plan. Board approval authorizes projects and delegates the authority to LCRA's executives to release funds to execute the identified projects. Executives may authorize funding in stages or all at once for the entire project.

Project management staff provides to LCRA's executives quarterly capital project status reports on approved projects. Reports include cost variances, estimated completion dates, comparisons of work completed to budget spent, fiscal year spending forecasts and project estimates at completion compared to the current capital plan. The reports also highlight any significant changes to the capital program, including project cancellations, delays and budget-to-actual expenditures. From time to time, conditions change rapidly and may create a need for immediate action. In these cases, LCRA identifies new projects, adjusts the plan and presents the new projects to the Board for approval.

LCRA Capital Plan – Approach (Continued)

Contingency

Contingency refers to a dollar amount added to a project's spending estimate to address items that are unknown when the estimate is prepared. This dollar amount is often based on a percentage of total construction or project costs, and the percentage is often based on the amount of planning and scope definition available at the time of the estimate. LCRA staff estimates and manages many different types of projects, including major wholesale power facilities, new electric transmission lines, dam and hydroelectric upgrades, water delivery and utilities, telecommunication facilities, software system installations, park development projects and facility improvements. Despite this diversity of project types, LCRA has arrived at certain standards for estimating, reporting and managing contingency for all of LCRA's capital projects.

LCRA discloses contingency amounts for all capital projects other than general additions and minor capital, which include multiple projects that may have different contingency amounts. Staff also discloses contingency for each recommended and approved project to the chief financial officer during the annual planning process. LCRA submits the capital plan, including the contingency amount in each recommended project lifetime budget, for Board review and approval. Project tables in the following pages show the contingency amount included in each recommended project.

Individual project managers manage contingency amounts included in the lifetime budgets in accordance with LCRA standards as part of the overall budgets for the projects. LCRA staff monitors the status of contingencies on all projects and provides reports at least quarterly to executive management.

Capital Plan Approval and Reporting

LCRA Board approval of this capital plan authorizes the initiation of all recommended projects at their individually stated lifetime budgets. These recommended projects include annual budgets for general additions and minor capital. General additions are small capital additions or replacement projects not to exceed \$300,000. Minor capital budgets are used to fund purchases of equipment that is ready to place in service upon delivery, such as fleet assets or Information Technology hardware.

LCRA Capital Plan – Approach (Continued)

Capital Plan Approval and Reporting (Continued)

Board approval of this plan also authorizes the proposed \$383 million budget for FY 2018 capital spending for recommended and approved projects.

LCRA incorporates spending projections in the capital plan into the financial performance and rate impacts shown in the business plan. Upon approval and throughout FY 2018, LCRA will provide to the Board regular reports on project progress and compliance with the project budgets and fiscal year spending constraints established in the plan.

The following pages include specific project details and proposed lifetime budgets for recommended projects, as well as annual spending projections for approved and future projects. At this time, LCRA is not seeking Board approval for future projects. LCRA will bring any future project determined to require initiation in FY 2018 to the Board for approval individually.

Wholesale Power Projects

Information about Wholesale Power capital projects included in the capital plan is considered confidential and has been removed from this version of the document.

Transmission Projects

The LCRA capital plan includes all capital projects approved separately in the LCRA TSC capital plan by the LCRA TSC Board of Directors. The transmission projects address transmission electric system reliability requirements, respond to ERCOT system needs, meet projected area load growth, respond to existing customer needs and connect new generators to the LCRA TSC electric system.

Recommended and approved transmission projects total \$255.8 million in FY 2018 and \$748.1 million over the next five years through FY 2022. Future projects total \$393.5 million through FY 2022.

LCRA TSC FY 2018 Requested Project Budget Increases

Blumenthal Substation Addition – LCRA TSC requests approval to increase the Blumenthal Substation Addition project's previously approved total lifetime budget by \$13.4 million, from \$15.1 million to \$28.5 million. The budget increase is due to the increased amount of transmission line – from 8.4 miles to 14.71 miles – and the increases in land acquisition and construction costs associated with the final route approved in November 2015 by the Public Utility Commission of Texas. The LCRA TSC Board initially approved this project in the LCRA TSC FY 2010-2014 business plan to provide a new load-serving substation for Central Texas Electric Cooperative customers east of Fredericksburg in southeastern Gillespie County and address the transmission reliability requirements at the Goehmann Lane Substation owned and operated by CTEC. In 2010, LCRA TSC placed the project on hold for re-evaluation due to changing conditions in the service area. In 2012, LCRA TSC determined the project was the most viable alternative to ensure reliability of service to CTEC customers in the studied area. This project required filing of a Certificate of Convenience and Necessity with the PUC, and the PUC-approved route is longer than the route anticipated before conditions changed in the service area.

Transmission Projects (Continued)

LCRA TSC FY 2018 Requested Project Budget Increases (Continued)

Environmental Permitting System Upgrade – LCRA TSC requests approval to increase the Environmental Permitting System Upgrade project’s previously approved total lifetime budget by \$632,000, from \$718,000 to \$1.35 million. The budget increase is due to the increased cost of environmental and legal consulting. The LCRA TSC Board initially approved this project in the LCRA TSC FY 2017-2021 business plan to obtain an LCRA Transmission Services Corporation systemwide Section 10(a)(1)(B) permit and Habitat Conservation Plan for maintenance and construction activities throughout the LCRA TSC service area. This permit will be issued by U.S. Fish and Wildlife Service and will provide coverage for the incidental take of endangered species covered by the permit.

Esperanza Substation Addition – LCRA TSC requests approval to increase the Esperanza Substation Addition project’s previously approved total lifetime budget by \$2.2 million, from \$5.1 million to \$7.3 million. The budget increase is to allow LCRA TSC to purchase the property and own the substation that meets LCRA TSC standards for new substations. The LCRA TSC Board initially approved this project in the LCRA TSC FY 2017-2021 business plan, and Pedernales Electric Cooperative was to purchase property and construct a new 138-kV substation on the Fair Oaks-Fair Oaks Ranch 138-kV transmission line in Kendall County. LCRA TSC was to own and construct the 138-kV high side of the substation and install a meter panel, a remote terminal unit and telecommunications equipment to support the project. LCRA TSC instead will purchase the property and own the entire substation, and PEC will purchase the property from LCRA TSC for its load-serving facilities.

Transmission Projects (Continued)

LCRA TSC FY 2018 Recommended Projects

Airline Transmission Line Relocation – The project’s scope is to relocate transmission facilities on the Airline-Laguna-Naval Base and Airline-Naval Base transmission lines in Nueces County to accommodate American Electric Power’s construction at the AEP-owned Airline Substation. The recommended project completion date is May 31, 2018.

Apparatus Connector Substation Upgrade – The project will improve system reliability and increase the capacity of the substation apparatus connectors at the Clear Springs, Gilleland Creek, Kendall, North McCamey, Salem and Zorn substations in Guadalupe, Travis, Kendall, Washington and Upton counties. The recommended project completion date is June 30, 2018.

Austrop-Bastrop City-Sim Gideon Transmission Line Storm Hardening – The project’s scope is to replace 19 lattice towers and harden three additional structures on the Austrop-Bastrop City-Sim Gideon 138-kilovolt transmission line in Travis and Bastrop counties to meet National Electrical Safety Code (NESC) storm hardening requirements. The project also will add optical ground wire and may require easement acquisition. The recommended project completion date is May 31, 2019.

Autotransformer Monitoring Additions – Phase 4 Substation Upgrade – The project will increase the reliability of substation equipment by installing additional apparatus monitoring equipment and improving communications at the Flatonia, Fredericksburg, Glidden and Luling substations in Caldwell, Colorado and Gillespie counties. The recommended project completion date is June 30, 2018.

Bastrop West-Bluebonnet Transmission Line Storm Hardening – The project’s scope is to replace two lattice towers with steel poles and a portion of the conductor and shield wire on the Bastrop West-Bluebonnet 138-kV transmission line in Bastrop County to meet NESC storm hardening requirements. The recommended project completion date is May 31, 2018.

Transmission Projects (Continued)

LCRA TSC FY 2018 Recommended Projects (Continued)

Battery Systems Substation Upgrade – The project will increase the reliability and safety of substation equipment by replacing aging batteries and battery chargers at the Alum Creek, Colorado, Comal, Sim Gideon, Glasscock, Flatonia, Pittsburg and Warda substations in Bastrop, Colorado, Comal, Fayette, Llano and Williamson counties. The recommended project completion date is June 30, 2018.

Bellville North Circuit Breaker Addition – The project will improve reliability of transmission service to loads that exceed 10 megawatts during peak loading conditions by adding 138-kV circuit breakers to the Bellville North Substation in Austin County. The recommended project completion date is June 30, 2018.

Bellville South-Glidden Transmission Line Storm Hardening – The project's scope is to replace 30 structures on the Bellville South-Glidden 138-kV transmission line in Colorado and Austin counties to meet NESC storm hardening requirements. The project also will add optical ground wire and may require easement acquisition. The recommended project completion date is May 31, 2019.

Bellville South-Waller Transmission Line Storm Hardening – The project's scope is to replace 51 structures on the Bellville South-Waller 138-kV transmission line in Austin and Waller counties to meet NESC storm hardening requirements. The project also will add optical ground wire and may require easement acquisition. The recommended project completion date is May 31, 2019.

Butler Circuit Breaker Addition – The project will improve reliability of transmission service for loads that exceed 10 megawatts during peak loading conditions by adding 138-kV circuit breakers to the Butler Substation in Bastrop County. The recommended project completion date is June 30, 2018.

Transmission Projects (Continued)

LCRA TSC FY 2018 Recommended Projects (Continued)

Circuit Breaker Operator Upgrades – Phase 5 Substation Upgrade – The project will increase reliability of substation equipment at the Marion and Zorn substations in Guadalupe County by replacing seven 345-kV circuit breaker operators. The recommended project completion date is June 30, 2018.

Colton Circuit Breaker Addition – The project will improve reliability of transmission service for loads that exceed 10 megawatts during peak loading conditions by adding 138-kV circuit breakers to the Colton Substation in Travis County. The project also will add optical ground wire and may require easement and property acquisition. The recommended project completion date is Dec. 31, 2018.

Cooks Point Substation and Transmission Line Addition – LCRA TSC will construct a new 138-kV transmission line about 19.2 miles long to serve load for Bluebonnet Electric Cooperative. LCRA TSC will construct the line in Burleson County between the existing Lyle Wolz Substation and a proposed new LCRA TSC-owned Cooks Point Substation. The new substation will interconnect with a new transmission line constructed by Bryan Texas Utilities. The project will require endorsement by the Electric Reliability Council of Texas, a Certificate of Convenience and Necessity and property acquisition. The recommended project completion date is May 31, 2021.

Crosswinds Substation Addition – The project's scope is to construct a new load-serving substation for Pedernales Electric Cooperative in Hays County. The Crosswinds Substation will be located on LCRA TSC's 138-kV Goforth-Turnersville transmission line. The project will require the purchase of about 7.5 acres of land. The recommended project completion date is Nov. 30, 2019.

Transmission Projects (Continued)

LCRA TSC FY 2018 Recommended Projects (Continued)

Cuero-Guadalupe Transmission Line Overhaul – The project will help maintain safe and reliable operation of the transmission network by replacing 28 structures with 138-kV-capable structures on a 2.9-mile section of the Cuero-Guadalupe 69-kV transmission line in DeWitt County. The project’s scope also includes replacing the existing conductor with 795 aluminum conductor steel-reinforced Drake conductor and installing optical ground wire. The new structures will meet PUC storm hardening requirements. The recommended project completion date is May 31, 2018.

Cypress Creek Circuit Breaker Addition – The project will improve reliability of transmission service to loads that exceed 10 megawatts during peak loading conditions by adding 138-kV circuit breakers to the Cypress Creek Substation in Kendall County. The project will require the purchase of about 5 acres of land. The recommended project completion date is June 30, 2019.

Darst Creek Circuit Breaker Addition – The project will improve reliability of transmission service to loads that exceed 10 megawatts during peak loading conditions by adding 138-kV circuit breakers to the Darst Creek Substation in Guadalupe County. The project will require the purchase of about 2.5 acres of land. The recommended project completion date is June 30, 2019.

Desert Mesa Circuit Breaker Addition – The project will improve reliability at a wind farm and meet ERCOT telemetry requirements by adding 138-kV circuit breakers to the new Desert Mesa Substation in Pecos County. The project will require the purchase of about 5 acres of land. The recommended project completion date is June 30, 2019.

Easement Enhancement – FY 2018 System Upgrade – The project will help ensure the safe and efficient operation of the LCRA TSC transmission system by acquiring new transmission line easements and amending existing ones along three LCRA TSC transmission lines in Gillespie, Bastrop and Gonzales counties. The recommended project completion date is June 30, 2018.

Transmission Projects (Continued)

LCRA TSC FY 2018 Recommended Projects (Continued)

Energy Management System Upgrade – Phase 4 System Upgrade – The project’s scope is to upgrade the System Operations Control Center’s existing Energy Management System, which allows transmission operators to monitor and control energy flows on the transmission grid. The existing system hardware and software are approaching the end of their useful lives, which means hardware and software support will become increasingly difficult and expensive to maintain and secure. The recommended project completion date is June 30, 2019.

Evant Circuit Breaker Addition – The project will improve reliability of transmission service to loads that exceed 10 megawatts during peak loading conditions by adding 138-kV circuit breakers to the Evant Substation in Lampasas County. The recommended project completion date is June 30, 2018.

Fayette Power Project-Fayetteville 138-kV Transmission Line Overhaul – The project will improve the reliable operation of the transmission network by rebuilding the 9.6-mile FPP-Fayetteville 138-kV transmission line in Fayette County, replacing the conductor with 959 Suwannee steel-supported trapezoidal aluminum conductor and installing optical ground wire. The new structures will meet PUC storm hardening requirements. The recommended project completion date is May 31, 2018.

Fayette Power Project-Fayetteville 345-kV Transmission Line Storm Hardening – The project’s scope is to harden eight double-circuit structures on the FPP-Fayetteville 345-kV transmission line in Fayette County to meet NESC storm hardening requirements. The recommended project completion date is May 31, 2018.

Fayetteville-Salem Transmission Line Storm Hardening – The project’s scope is to harden 40 double-circuit, lattice towers on the Fayetteville-Salem 138-kV transmission line in Washington, Austin and Fayette counties to meet NESC storm hardening requirements. The recommended project completion date is May 31, 2018.

Transmission Projects (Continued)

LCRA TSC FY 2018 Recommended Projects (Continued)

Flatonia-Waelder Transmission Line Overhaul – The project will improve the reliable operation of the transmission network by rebuilding the 11.8-mile Flatonia-Waelder 69-kV transmission line in Fayette and Gonzales counties with 138-kV capable structures, replacing the conductor with 795 ACSR Drake conductor and installing optical ground wire. The new structures will meet PUC storm hardening requirements. The recommended project completion date is May 31, 2019.

Flood Mitigation – FY 2018 System Upgrade – The project will reduce the risk of flood damage to substation equipment at the Bastrop City Substation and to transmission structures on the Brenham North-Waller, Glidden-Schulenburg and Bastrop West-Sim Gideon transmission lines in Bastrop, Fayette, Waller and Washington counties. The recommended project completion date is June 30, 2019.

Fort Mason Substation Upgrade – The project will improve system reliability by fully converting the Fort Mason Substation to 138-kV operation, establishing a ring bus configuration, relocating the power transformer to the 138-kV bus and increasing the capacity of LCRA TSC-owned terminal equipment for the Fort Mason-Mason AEP transmission line in Mason County. The recommended project completion date is May 31, 2018.

Fourmile Circuit Breaker Addition – The project will improve reliability at a wind farm and meet ERCOT telemetry requirements by adding 138-kV circuit breakers to the new Fourmile Substation in Pecos County. The project will require the purchase of about 5 acres of land. The recommended project completion date is June 30, 2019.

General Additions – The project will fund required but unplanned system improvements to accommodate load increases, failed equipment, substation reliability enhancements or changing system conditions as they occur through June 30, 2018.

Transmission Projects (Continued)

LCRA TSC FY 2018 Recommended Projects (Continued)

Giddings-Lexington Transmission Line Storm Hardening – The project’s scope is to harden six lattice towers on the Giddings-Lexington 138-kV transmission line in Lee County to meet NESC storm hardening requirements. The recommended project completion date is May 31, 2018.

Gilleland Creek-Hutto Transmission Line Upgrade – Oncor will upgrade its Gilleland Creek-Hutto 138-kV transmission line to achieve a higher rating. LCRA TSC’s portion of the project is to increase the capacity of terminal equipment in the LCRA TSC-owned Gilleland Creek Substation in Williamson County to match the new rating of Oncor’s transmission line. The recommended project completion date is May 31, 2018.

Gonzales-Luling Transmission Line Overhaul – The project will maintain safe and reliable operation of the transmission network and meet NESC storm hardening requirements by replacing or repairing 35 wood H-frame structures on the 10.3-mile Gonzales-Luling 138-kV transmission line in Caldwell and Gonzales counties. The recommended project completion date is May 31, 2018.

Hamilton Road-Uvalde Fiber Addition – The project will increase reliability and capability of the fiber network in Val Verde, Kinney and Uvalde counties by adding optical ground wire and related telecommunication equipment to three transmission lines. The recommended project completion date is Aug. 31, 2018.

Harper Road Power Transformer Upgrade – Kerrville Public Utility Board will upgrade a power transformer at the Harper Road Substation in Kerr County. LCRA TSC will install a meter panel and telecommunication equipment and modify existing relaying schemes to support the project. The recommended project completion date is June 30, 2018.

Transmission Projects (Continued)

LCRA TSC FY 2018 Recommended Projects (Continued)

Harwood-Luling Double-Circuit Transmission Line Overhaul – The project will maintain safe and reliable operation of the transmission network by replacing 45 double-circuit, lattice towers with 138-kV capable double-circuit steel poles on the 9.1-mile Harwood-Luling 69-kV transmission line. The project also will replace the existing conductor with 795 ACSR Drake conductor and install optical ground wire. The new structures will meet PUC storm hardening requirements. The project is located in Caldwell and Gonzales counties and may require easement acquisition. The recommended project completion date is May 31, 2019.

Harwood-Waelder Transmission Line Overhaul – The project will maintain safe and reliable operation of the transmission network by inspecting and replacing deteriorated poles, structures, cross arms and braces on the 12.6-mile Harwood-Waelder 69-kV transmission line in Caldwell and Gonzales counties. The replacement structures will be 138-kV capable with 795 ACSR Drake conductor and optical ground wire. The new structures will meet PUC storm hardening requirements. The recommended project completion date is May 31, 2019.

Kendall Central Texas Electric Cooperative Circuit Breaker Addition – The project will improve reliability of transmission service to loads that exceed 10 megawatts during peak loading conditions by adding 138-kV circuit breakers to the Kendall Central Texas Electric Cooperative Substation in Kendall County. The recommended project completion date is June 30, 2018.

King Mountain Circuit Breaker Addition – The project will improve reliability at two wind farms and meet ERCOT telemetry requirements by adding 138-kV circuit breakers to the King Mountain Substation in Upton County. The project will require the purchase of about 5 acres of land. The recommended project completion date is June 30, 2019.

LCRA TSC Fiber Build-out – FY 2018 Telecommunications Upgrade – The project will increase reliability and capability of the fiber network in Burnet, Gillespie, Guadalupe, Hays, Kendall, Llano and Travis counties by adding optical ground wire and related telecommunication equipment to six transmission lines. The recommended project completion date is Dec. 31, 2018.

Transmission Projects (Continued)

LCRA TSC FY 2018 Recommended Projects (Continued)

Lon Hill-Nueces Bay Transmission Line Upgrade – The project will increase reliability of the 17.3-mile Lon Hill-Nueces Bay 138-kV transmission in Nueces County by installing dampers on all structures and increasing the clearances on 29 transmission line spans to meet LCRA TSC’s minimum design clearances. The recommended project completion date is May 31, 2018.

McElmurray Circuit Breaker Addition – The project will improve reliability of transmission service to loads that exceed 10 megawatts during peak loading conditions by adding 138-kV circuit breakers to the McElmurray Substation in Taylor County. The recommended project completion date is June 30, 2018.

Minor Capital – The scope of minor capital projects is to purchase equipment that is ready to place in service upon delivery for projects related to transmission lines, substations or related equipment.

Mountain Home Substation and Transmission Line Addition – LCRA TSC will construct a new 138-kV transmission line that will be about 19 miles long between the existing Hunt and Harper substations in Gillespie and Kerr counties. The new LCRA TSC Mountain Home Substation’s location will be along the new transmission line near Interstate 10 and will support the load-serving needs of Central Texas Electric Cooperative. In addition, an existing 69-kV transmission line between Live Oak and Harper substations will be upgraded for operation at 138 kV. The project will require endorsement by ERCOT, a Certificate of Convenience and Necessity and property acquisition. The recommended project completion date is Nov. 30, 2021.

Multiprotocol Label Switching Network Telecommunications Upgrade – The project’s scope is to upgrade the multiprotocol label switching (MPLS) network by replacing obsolete equipment with the current versions and optimizing network configuration throughout the LCRA TSC telecommunication network. The project also will install MPLS equipment at six new locations. The recommended project completion date is June 30, 2018.

Transmission Projects (Continued)

LCRA TSC FY 2018 Recommended Projects (Continued)

Physical Security – FY 2018 Substation Upgrade – The project’s scope is to implement physical security measures and related telecommunication system improvements for 24 LCRA TSC-owned substations in various counties throughout the LCRA TSC service territory. The project will require the purchase of about 1.5 acres of land. The recommended project completion date is June 30, 2019.

Pinto Creek Substation Addition – The project’s scope is to construct a new load-serving substation for Rio Grande Electric Cooperative in Kinney County. The Pinto Creek Substation will be located on LCRA TSC’s 138-kV Hamilton Road-Uvalde transmission line. The project will require the purchase of about 5 acres of land. The recommended project completion date is Nov. 30, 2018.

Potential Transformer Substation Upgrade – The project will increase the reliability of substation equipment at Altair, Bastrop City, Bellville South, Burnet, Eagle Lake, FPP 345-kV Switchyard No. 1, FPP 345-kV Switchyard No. 2, Gabriel, Gillespie, Hallettsville, Henne, Marion, Smithville and Verde Creek substations by replacing aging potential transformers that have an elevated risk of failure. The project is located in Colorado, Bastrop, Austin, Burnet, Fayette, Williamson, Lee, Gillespie, Lavaca, Comal, Guadalupe and Kerr counties. The recommended project completion date is June 30, 2019.

Remote Terminal Unit Additions – FY 2018 Substation Upgrade – The project will give LCRA TSC’s System Operations Control Center the ability to remotely operate the substation equipment by adding a remote terminal unit and associated telecommunication equipment at the Luling Magnolia and Nimitz substations in Caldwell and Gillespie counties. The recommended project completion date is June 30, 2018.

Robbins Switch Circuit Breaker Addition – The project will improve reliability at three wind farms and meet ERCOT telemetry requirements by adding 138-kV circuit breakers to the Robbins Switch Substation in Upton County. The project will require the purchase of about 5 acres of land. The recommended project completion date is June 30, 2019.

Transmission Projects (Continued)

LCRA TSC FY 2018 Recommended Projects (Continued)

Seguin West Power Transformer Addition – The project's scope is to add a new power transformer and associated equipment at the Seguin West Substation in Guadalupe County to serve load growth on the northeast side of Seguin. The recommended project completion date is June 30, 2018.

Shiner Circuit Breaker Addition – The project will improve reliability of transmission service to loads that exceed 10 megawatts during peak loading conditions by adding 138-kV circuit breakers to the Shiner Substation in Lavaca County. The project will require the purchase of about 2.5 acres of land. The recommended project completion date is June 30, 2019.

Sim Gideon Substation-Smithville Transmission Line Storm Hardening – The project's scope is to replace 47 single-circuit steel poles on the Sim Gideon Substation-Smithville 138-kV transmission line in Bastrop County to meet NESC storm hardening requirements. The recommended project completion date is Dec. 31, 2018.

Stempel Substation Addition – The project will support load-serving needs for the City of Seguin in Guadalupe County by constructing the new Stempel Substation. The new substation will be located on LCRA TSC's 138-kV Geronimo-Seguin transmission line. The project will require the purchase of about 5 acres of land. The recommended project completion date is Nov. 30, 2019.

Study Butte Substation and Transmission Line Addition – LCRA TSC will construct a new substation and 69-kV transmission line that is 138-kV capable and about 61 miles long. The new transmission line in Brewster County will connect the existing Rio Grande Electric Cooperative Cienega Substation to a new LCRA TSC-owned Study Butte Substation that will be a load-serving substation for RGEC. The project will require endorsement by ERCOT, a Certificate of Convenience and Necessity and property acquisition. The recommended project completion date is May 31, 2022.

Transmission Projects (Continued)

LCRA TSC FY 2018 Recommended Projects (Continued)

System Operations Control Center HVAC Facility Upgrade – The project’s scope is to replace the existing heating, ventilating and air conditioning chiller and related equipment at the System Operations Control Center in Travis County with more efficient and reliable equipment that provides the same cooling capacity. The recommended project completion date is June 30, 2018.

System Spare Power Transformer Additions – The project’s scope is to acquire two 20-megavolt ampere and 138-kV system spare power transformers to provide fleet coverage during failures or other short-term events. The recommended project completion date is June 30, 2018.

Tippett Circuit Breaker Addition – The project will improve reliability at a wind farm and meet ERCOT telemetry requirements by adding 138-kV circuit breakers to the Tippett Substation in Pecos County. The project also will add optical ground wire and may require easement acquisition. The recommended project completion date is June 30, 2018.

Warda Circuit Breaker Addition – The project will improve reliability of transmission service to loads that exceed 10 megawatts during peak loading conditions by adding 138-kV circuit breakers to the Warda Substation in Fayette County. The project will require the purchase of about 1.5 acres of land. The recommended project completion date is June 30, 2019.

Webberville Circuit Breaker Addition – The project will improve reliability of transmission service to loads that exceed 10 megawatts during peak loading conditions by adding 138-kV circuit breakers to the Webberville Substation in Travis County. The project also will add optical ground wire and may require easement acquisition. The recommended project completion date is June 30, 2018.

Transmission Projects (Continued)

LCRA TSC FY 2018 Recommended Projects (Continued)

Winchester Autotransformer Additions – The project will improve transmission system reliability by installing two new 672-megavolt ampere autotransformers and constructing a 345-kV ring bus and a 138-kV breaker-and-a-half bus at the Winchester Substation. It also will loop the Austin Energy-owned 345-kV transmission line between FPP Switchyard No. 1 and Lost Pines Substation into the new 345-kV Winchester bus. This Fayette County project will require endorsement by ERCOT and may require property or easement acquisition. The recommended project completion date is June 30, 2020.

Transmission Projects (Continued)

LCRA Transmission Services Corporation FY 2018 Capital Plan Recommended Projects

(Dollars in thousands)

Project Name	Contingency	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five-Year		
							Total	Lifetime	
Recommended									
Airline Transmission Line Relocation	0%	1,324	-	-	-	-	1,324	1,324	
Apparatus Connector Substation Upgrade	0%	637	-	-	-	-	637	637	
Austrop-Bastrop City-Sim Gideon Transmission Line Storm Hardening	0%	580	5,257	-	-	-	5,837	5,837	
Autotransformer Monitoring Additions – Phase 4 Substation Upgrade	0%	439	-	-	-	-	439	439	
Bastrop West-Bluebonnet Transmission Line Storm Hardening	0%	610	-	-	-	-	610	610	
Battery Systems Substation Upgrade	0%	339	-	-	-	-	339	339	
Bellville North Circuit Breaker Addition	0%	3,320	-	-	-	-	3,320	3,320	
Bellville South-Glidden Transmission Line Storm Hardening	0%	949	5,640	-	-	-	6,589	6,589	
Bellville South-Waller Transmission Line Storm Hardening	0%	869	12,293	-	-	-	13,162	13,162	
Butler Circuit Breaker Addition	0%	2,288	-	-	-	-	2,288	2,288	
Circuit Breaker Operator Upgrades – Phase 5 Substation Upgrade	0%	889	-	-	-	-	889	889	
Colton Circuit Breaker Addition	0%	4,068	8,363	-	-	-	12,431	12,431	
Cooks Point Substation and Transmission Line Addition	0%	776	1,552	7,941	29,188	-	39,457	39,457	
Crosswinds Substation Addition	0%	75	2,768	2,018	-	-	4,861	4,861	
Cuero-Guadalupe Transmission Line Overhaul	0%	2,383	-	-	-	-	2,383	2,383	
Cypress Creek Circuit Breaker Addition	0%	332	3,494	-	-	-	3,826	3,826	
Darst Creek Circuit Breaker Addition	0%	391	3,858	-	-	-	4,249	4,249	
Desert Mesa Circuit Breaker Addition	0%	507	4,583	-	-	-	5,090	5,090	
Easement Enhancement – FY 2018 System Upgrade	0%	3,381	-	-	-	-	3,381	3,381	
Energy Management System Upgrade – Phase 4 System Upgrade	0%	500	6,700	800	-	-	8,000	8,000	
Evant Circuit Breaker Addition	0%	3,441	-	-	-	-	3,441	3,441	
Fayette Power Project-Fayetteville 138-kV Transmission Line Overhaul	0%	5,523	-	-	-	-	5,523	5,523	
Fayette Power Project-Fayetteville 345-kV Transmission Line Storm Hardening	0%	458	-	-	-	-	458	458	
Fayetteville-Salem Transmission Line Storm Hardening	0%	912	-	-	-	-	912	912	
Flatonia-Waelder Transmission Line Overhaul	0%	581	8,228	-	-	-	8,809	8,809	
Flood Mitigation – FY 2018 System Upgrade	0%	3,817	1,693	-	-	-	5,510	5,510	

Transmission Projects (Continued)

LCRA Transmission Services Corporation FY 2018 Capital Plan Recommended Projects

(Dollars in thousands)

Project Name	Contingency	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five-Year Total	Lifetime
Recommended (continued)								
Fort Mason Substation Upgrade	0%	4,831	-	-	-	-	4,831	4,831
Foumle Circuit Breaker Addition	0%	303	4,376	-	-	-	4,679	4,679
General Additions		4,000	-	-	-	-	4,000	4,000
Giddings-Lexington Transmission Line Storm Hardening	0%	399	-	-	-	-	399	399
Gilleland Creek-Hutto Transmission Line Upgrade	0%	189	-	-	-	-	189	189
Gonzales-Luling Transmission Line Overhaul	0%	1,412	-	-	-	-	1,412	1,412
Hamilton Road-Uvalde Fiber Addition	0%	4,637	1,896	-	-	-	6,533	6,533
Harper Road Power Transformer Upgrade	0%	84	-	-	-	-	84	84
Harwood-Luling Double-Circuit Transmission Line Overhaul	0%	933	8,552	-	-	-	9,485	9,485
Harwood-Waelder Transmission Line Overhaul	0%	567	9,704	-	-	-	10,271	10,271
Kendall Central Texas Electric Cooperative Circuit Breaker Addition	0%	2,085	-	-	-	-	2,085	2,085
King Mountain Circuit Breaker Addition	0%	374	5,283	-	-	-	5,657	5,657
LCRA TSC Fiber Build-out – FY 2018 Telecommunications Upgrade	0%	7,812	12,874	-	-	-	20,686	20,686
Lon Hill-Nueces Bay Transmission Line Upgrade	0%	4,490	-	-	-	-	4,490	4,490
McElmurray Circuit Breaker Addition	0%	2,578	-	-	-	-	2,578	2,578
Minor Capital		359	-	-	-	-	359	359
Mountain Home Substation and Transmission Line Addition	0%	778	1,893	3,686	33,830	38,902	79,089	79,089
Multiprotocol Label Switching Network Telecommunications Upgrade	0%	926	-	-	-	-	926	926
Physical Security – FY 2018 Substation Upgrade	0%	13,022	3,474	-	-	-	16,496	16,496
Pinto Creek Substation Addition	0%	1,100	4,279	-	-	-	5,379	5,379
Potential Transformer Substation Upgrade	0%	1,627	960	-	-	-	2,587	2,587
Remote Terminal Unit Additions – FY 2018 Substation Upgrade	0%	526	-	-	-	-	526	526
Robbins Switch Circuit Breaker Addition	0%	401	4,643	-	-	-	5,044	5,044
Seguin West Power Transformer Addition	0%	2,338	-	-	-	-	2,338	2,338
Shiner Circuit Breaker Addition	0%	218	2,414	-	-	-	2,632	2,632
Sim Gideon Substation-Smithville Transmission Line Storm Hardening	0%	350	3,495	-	-	-	3,845	3,845

Transmission Projects (Continued)

LCRA Transmission Services Corporation FY 2018 Capital Plan Recommended and Approved Projects

(Dollars in thousands)

Project Name	Contingency	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five-Year Total	Lifetime
Recommended (continued)								
Stempel Substation Addition	0%	75	290	4,115	-	-	4,480	4,480
Study Butte Substation and Transmission Line Addition	0%	908	2,481	3,496	24,076	56,166	87,127	87,127
System Operations Control Center HVAC Facility Upgrade	0%	631	-	-	-	-	631	631
System Spare Power Transformer Additions	0%	1,442	-	-	-	-	1,442	1,442
Tippett Circuit Breaker Addition	0%	6,019	-	-	-	-	6,019	6,019
Warda Circuit Breaker Addition	0%	323	3,453	-	-	-	3,776	3,776
Webberville Circuit Breaker Addition	0%	2,041	-	-	-	-	2,041	2,041
Winchester Autotransformer Additions	0%	891	10,969	20,861	-	-	32,721	32,721
Recommended Subtotal		108,058	145,465	42,917	87,094	95,068	478,602	478,602
Approved								
Altair-Garwood Pump Transmission Line Upgrade		769	-	-	-	-	769	1,507
Altair-Glidden Transmission Line Overhaul		188	-	-	-	-	188	11,877
Arco Tap Circuit Breaker Addition		1,849	-	-	-	-	1,849	5,886
Bakersfield Reactor Addition		3,228	-	-	-	-	3,228	3,789
Bergheim Substation Upgrade		7,996	408	-	-	-	8,404	11,320
Blumenthal Substation Addition		18,199	1,050	-	-	-	19,249	28,450
Brady Asset Purchase Addition		1,233	240	-	-	-	1,473	1,647
Bus Differential Redundancy Substation Upgrade		2,203	-	-	-	-	2,203	2,829
Camp Wood-Leakey Transmission Line Overhaul		520	6,099	22,373	-	-	28,992	29,609
Castillo Substation and Transmission Line Addition		1,200	-	-	-	-	1,200	8,708
Circuit Breaker Replacement – Phase 5 Substation Upgrade		1,401	-	-	-	-	1,401	1,901
Clear Springs Substation Upgrade		738	1,924	-	-	-	2,662	2,783
Cost Substation Addition		2	2	247	-	-	251	254
Cuero-Luling Transmission Line Overhaul		75	-	-	-	-	75	9,022
Cuero-Yoakum Gartner Road Transmission Line Overhaul		48	-	-	-	-	48	4,356
Digital Versatility Microwave Telecommunications Upgrade		676	335	-	-	-	1,011	2,888

Transmission Projects (Continued)

LCRA Transmission Services Corporation FY 2018 Capital Plan Approved Projects

(Dollars in thousands)

Project Name	Contingency	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five-Year	
							Total	Lifetime
Approved (continued)								
Environmental Permitting System Upgrade		479	450	51	-	-	980	1,350
Esperanza Substation Addition		799	4,007	2,420	-	-	7,226	7,318
Flatonia-Hallettsville Transmission Line Upgrade		12	1,482	4,570	-	-	6,064	7,740
Flood Remediation Substation Upgrade		4,495	-	-	-	-	4,495	5,930
FM 758 Substation Addition		450	1,033	-	-	-	1,483	1,881
FPP Bus Tie Substation Upgrade		4,066	-	-	-	-	4,066	6,258
Freiheit Road Substation Upgrade		1,740	-	-	-	-	1,740	3,503
Galloping Remediation Transmission Line Upgrade		778	-	-	-	-	778	1,840
Garfield Substation Upgrade		50	-	-	-	-	50	223
Georgetown-Rivory Transmission Line Upgrade		204	1,000	-	-	-	1,204	1,642
Giddings Substation Upgrade		847	-	-	-	-	847	1,124
Gilleland Creek Autotransformer Addition		1,607	-	-	-	-	1,607	8,667
Glidden Area Transmission Line Upgrade		551	5,742	2,641	-	-	8,934	10,300
Goldthwaite-Lampasas Transmission Line Upgrade		4,829	-	-	-	-	4,829	73,085
Hays Energy Substation Upgrade		4,373	-	-	-	-	4,373	4,767
Henne-Comal Transmission Line Upgrade		9,902	250	-	-	-	10,152	12,583
Henne-McCarty Lane Transmission Line Upgrade		7,257	-	-	-	-	7,257	13,996
Kerville Stadium-Harper Road Transmission Line Upgrade		179	4,076	-	-	-	4,255	5,131
Kimbrow Substation Addition		300	4,019	-	-	-	4,319	4,510
Lambda Substation Addition		100	2,691	-	-	-	2,791	3,678
Leander-Parmer-Round Rock Transmission Line Addition		5,614	21,012	11,016	-	-	37,642	43,867
Lincoln Substation Addition		2,566	68	-	-	-	2,634	3,387
Lockhart-Luling Transmission Line Upgrade		1,980	-	-	-	-	1,980	12,664
Marion Power Transformer Addition		1,367	54	-	-	-	1,421	1,715
Marion Substation Upgrade		1,300	2,132	-	-	-	3,432	5,012
Mason Central Texas Electric Cooperative Circuit Breaker Addition		283	-	-	-	-	283	1,115

Transmission Projects (Continued)

LCRA Transmission Services Corporation FY 2018 Capital Plan Approved and Future Projects

(Dollars in thousands)

Project Name	Contingency	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five-Year	
							Total	Lifetime
Approved (continued)								
Meadow Lake Substation Addition		2,355	54	-	-	-	2,409	2,963
Megastar Microwave Telecommunications Upgrade		354	458	-	-	-	812	2,033
Mobile Transformer Hookup Switches – Phase 2		56	-	-	-	-	56	1,722
Out-of-Band Management System Telecommunications Upgrade		732	-	-	-	-	732	754
Power Transformer Bypass Capability Substation Upgrade		1,830	-	-	-	-	1,830	2,523
Protection System Upgrades – Substation Upgrade		565	1,164	-	-	-	1,729	6,125
Radial Autotransformer Redundancy Substation Upgrade		219	-	-	-	-	219	931
Sherwood Shores Circuit Breaker Addition		1,013	-	-	-	-	1,013	3,897
Sim Gideon-Winchester Transmission Line Overhaul		3,807	41	-	-	-	3,848	8,042
Smithville-Winchester Transmission Line Overhaul		6,101	-	-	-	-	6,101	12,311
Sonne Substation Addition		2,409	413	-	-	-	2,822	3,810
Station Service Substation Upgrade		54	-	-	-	-	54	1,724
Twin Buttes Autotransformer Addition		3,140	-	-	-	-	3,140	9,255
Warda-Giddings Transmission Line Upgrade		445	-	-	-	-	445	2,501
Zorn-Marion Transmission Line Addition		28,236	18,222	-	-	-	46,458	83,346
Approved Subtotal		147,769	78,426	43,318	-	-	269,513	512,049
Future								
Bergheim Substation Upgrade		-	90	-	-	-	90	90
Blockhouse Substation Upgrade		-	90	-	-	-	90	90
Chief Brady Substation Upgrade		-	-	-	-	90	90	90
Columbus-Stafford Hill Circuit Breaker Addition		-	2,555	-	-	-	2,555	2,555
Deer Creek-Luling Transmission Line Upgrade		-	-	-	750	6,638	7,388	7,388
Dimmit Circuit Breaker Addition		-	-	2,451	-	-	2,451	2,451
Direct Current Supply System Improvements – Phase 1		-	100	-	-	-	100	100
Dobyville-Graphite Mine Circuit Breaker Addition		-	-	-	-	2,438	2,438	2,438
E. Babe Smith-Naruna Circuit Breaker Addition		-	-	1,775	-	-	1,775	1,775

Transmission Projects (Continued)

LCRA Transmission Services Corporation FY 2018 Capital Plan Future Projects

(Dollars in thousands)

Project Name	Contingency	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five-Year Total	Lifetime
Future (continued)								
Easement Enhancement – FY 2019 System Upgrade	-	2,000	-	-	-	-	2,000	2,000
Easement Enhancement – FY 2020 System Upgrade	-	-	2,000	-	-	-	2,000	2,000
Easement Enhancement – FY 2021 System Upgrade	-	-	-	2,000	-	-	2,000	2,000
Easement Enhancement – FY 2022 System Upgrade	-	-	-	-	-	2,000	2,000	2,000
Energy Management System Upgrade – Phase 5 System Upgrade	-	-	-	-	-	1,000	1,000	1,000
Far West Texas Transmission Line Addition	-	-	-	-	3,000	-	3,000	3,000
Fayette County Substation and Transmission Line Addition CCN	-	500	2,000	27,416	-	-	29,916	29,916
Flood Mitigation – FY 2019 System Upgrade	-	2,000	-	-	-	-	2,000	2,000
Flood Mitigation – FY 2020 System Upgrade	-	-	1,500	-	-	-	1,500	1,500
Four Point Substation Addition	-	-	-	-	-	200	200	200
Frelsburg-Mockingbird Circuit Breaker Addition	-	-	-	-	2,335	-	2,335	2,335
Gabriel Substation Upgrade	-	-	90	-	-	-	90	90
Gabriel-Gabriel Split Transmission Line Upgrade	-	5,465	-	-	-	-	5,465	5,465
General Additions	-	4,000	4,000	4,000	4,000	4,000	16,000	16,000
Giddings Power Transformer Addition	-	-	-	-	2,000	-	2,000	2,000
Glasscock Power Transformer	-	2,500	-	-	-	-	2,500	2,500
Gonzales-Harwood Transmission Line Overhaul	-	8,348	-	-	-	-	8,348	8,348
Hallettsville-Hallettsville City Transmission Line Addition	-	-	-	-	5,355	-	5,355	5,355
Harris Branch Substation Upgrade	-	-	2,000	-	-	-	2,000	2,000
High Point Substation Addition	-	-	2,000	-	-	-	2,000	2,000
Horseshoe Bay Substation Upgrade	-	90	-	-	-	-	90	90
Howard Lane Substation Upgrade	-	-	-	-	2,974	-	2,974	2,974
Hunter Substation Upgrade	-	-	-	-	90	-	90	90
Kempner Circuit Breaker Addition	-	-	-	-	2,646	-	2,646	2,646
LCRA TSC Fiber Build-out – FY 2019 Telecommunications Upgrade	-	10,000	10,000	-	-	-	20,000	20,000
LCRA TSC Fiber Build-out – FY 2020 Telecommunications Upgrade	-	-	10,000	10,000	-	-	20,000	20,000

Transmission Projects (Continued)

LCRA Transmission Services Corporation FY 2018 Capital Plan Future Projects

(Dollars in thousands)

Project Name	Contingency	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five-Year	
							Total	Lifetime
Future (continued)								
LCRA TSC Fiber Build-out – FY 2021 Telecommunications Upgrade	-	-	-	-	10,000	10,000	20,000	20,000
LCRA TSC Fiber Build-out – FY 2022 Telecommunications Upgrade	-	-	-	-	-	10,000	10,000	20,000
Lexington Circuit Breaker Addition	-	-	-	2,286	-	-	2,286	2,286
Lockhart-Mendoza Transmission Line Storm Hardening	-	-	7,339	-	-	-	7,339	7,339
Luling Magnolia-Magnolia Mercer Circuit Breaker Addition	-	-	-	2,428	-	-	2,428	2,428
Merrelltown Substation Addition	-	-	-	-	2,831	-	2,831	2,831
Minor Capital	-	-	350	430	493	462	1,735	1,735
New Bremen-Willow Springs Circuit Breaker Addition	-	-	-	2,349	-	-	2,349	2,349
Obsolete Circuit Breaker Replacement – FY 2019	-	-	2,000	-	-	-	2,000	2,000
Obsolete Circuit Breaker Replacement – FY 2020	-	-	-	2,000	-	-	2,000	2,000
Obsolete Circuit Breaker Replacement – FY 2021	-	-	-	-	2,000	-	2,000	2,000
Obsolete Circuit Breaker Replacement – FY 2022	-	-	-	-	-	2,000	2,000	2,000
Physical Security – FY 2019 Substation Upgrade	-	-	3,500	6,500	-	-	10,000	10,000
Physical Security – FY 2020 Substation Upgrade	-	-	-	3,500	6,500	-	10,000	10,000
Physical Security – FY 2021 Substation Upgrade	-	-	-	-	3,500	6,500	10,000	10,000
Physical Security – FY 2022 Substation Upgrade	-	-	-	-	-	3,500	3,500	3,500
Pisek-Welcome Circuit Breaker Addition	-	-	-	2,417	-	-	2,417	2,417
Pooley Road Circuit Breaker Addition	-	-	-	1,905	-	-	1,905	1,905
Protective Relaying System Upgrade	-	-	2,000	2,000	-	-	4,000	4,000
Ranch Road 12 Circuit Breaker Addition	-	-	-	2,009	-	-	2,009	2,009
Riverside Circuit Breaker Addition	-	-	-	2,446	-	-	2,446	2,446
Telecommunications Tower Additions	-	-	-	-	-	1,000	1,000	1,000
Transmission Line Clearance Mitigation – FY 2019	-	-	5,000	-	-	-	5,000	5,000
Transmission Line Clearance Mitigation – FY 2020	-	-	-	5,000	-	-	5,000	5,000
Transmission Line Clearance Mitigation – FY 2021	-	-	-	-	5,000	-	5,000	5,000
Transmission Line Clearance Mitigation – FY 2022	-	-	-	-	-	5,000	5,000	5,000

Transmission Projects (Continued)

LCRA Transmission Services Corporation FY 2018 Capital Plan Future Projects

(Dollars in thousands)

Project Name	Contingency	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five-Year Total	Lifetime	
Future (continued)									
Transmission Line Overhauls – FY 2019		-	9,754	-	-	-	9,754	9,754	
Transmission Line Overhauls – FY 2020		-	-	17,396	-	-	17,396	17,396	
Transmission Line Overhauls – FY 2021		-	-	-	10,256	-	10,256	10,256	
Transmission Line Overhauls – FY 2022		-	-	-	-	6,828	6,828	6,828	
Transmission Line Storm Hardening – FY 2019		-	10,000	-	-	-	10,000	10,000	
Transmission Line Storm Hardening – FY 2020		-	-	5,000	-	-	5,000	5,000	
Transmission Line Storm Hardening – FY 2021		-	-	-	5,000	-	5,000	5,000	
Transmission Line Storm Hardening – FY 2022		-	-	-	-	5,000	5,000	5,000	
TXI Transmission Line Addition CCN		-	3,000	8,000	12,838	-	23,838	23,838	
Weimar Circuit Breaker Addition		-	-	-	2,788	-	2,788	2,788	
Whisper Valley Substation Addition		-	400	3,600	-	-	4,000	4,000	
Wolf Creek Circuit Breaker Addition		-	-	-	2,558	-	2,558	2,558	
XS Ranch Substation Addition		-	-	-	-	3,900	3,900	3,900	
Yorktown-Nordheim Circuit Breaker Addition		-	-	-	2,165	-	2,165	2,165	
Zorn Autotransformer Replacement		-	1,575	4,742	-	-	6,317	6,317	
Future Subtotal		-	82,656	111,824	128,495	70,556	393,531	403,531	
Total LCRA Transmission Services Corporation			255,827	306,547	198,059	215,589	165,624	1,141,646	1,394,182

Water Projects

Water projects in the capital plan include capital improvements for managing and delivering raw water. This plan focuses resources on managing the river, improving infrastructure – including LCRA’s Hydromet system – and planning to meet the basin’s future water needs.

Water recommended and approved projects total \$97.6 million in FY 2018 and \$138.2 million over the next five years through FY 2022. Future projects total \$53.3 million through FY 2022.

FY 2018 Recommended Projects

Buchanan Dam Seven-Gate Section Spillway Improvements – This project will include geotechnical investigations of the riverbed rock downstream of the seven-gate section spillway to determine the best option for mitigating any scouring and protecting the spillway and adjacent powerhouse during use of the seven-gate section in the future. Upon completion of the geotechnical investigations, improvements will be recommended to mitigate any potential future dam safety risk. The cost estimates for this project are preliminary.

Mansfield Dam Bridge and Structures – The Mansfield Dam bridge functions as the platform from which floodgate stop logs are deployed and serves as a redundant access to the penstock gates. The 75-year-old bridge is a structural steel superstructure that was last recoated in the late 1970s. A recent inspection found the structure in exceptionally good condition, but noted the external girders are showing large areas of coating failure for both the top coat and the primer. The project’s scope is to recoat the main girders of the bridge on their outside faces and upper inside faces.

Water Projects (Continued)

FY 2018 Recommended Projects (Continued)

Mansfield Dam Dehumidification System – Mansfield Dam’s dehumidification system was designed to lower humidity levels in the dam’s tunnels. The current approved project to rehabilitate the paradox gates and put them back into service has increased the condensation on equipment inside the dam by increasing humidity in the tunnels. Condensation water increases corrosion within the dam’s piping, valves and other metals, including metals in electrical equipment. The condensation also has increased slip hazards throughout the tunnels. The project’s scope is to replace the existing system with a new system and replace the roof of the current dehumidification building.

Prairie Conservation Reservoir – LCRA received an \$8 million federal grant to help construct a new reservoir in Colorado County. The Prairie Conservation Reservoir will increase the efficiency of LCRA’s irrigation operations and help conserve water. The project’s scope is to construct a new 2,000-acre-foot, off-channel reservoir and possibly a new pump station. The cost estimates for this project are preliminary.

General Additions – General addition projects will maintain infrastructure and improve reliability and efficiency for the following:

- Hydromet.
- Irrigation systems.
- Raw water.

Minor Capital – The scope of minor capital projects is to purchase equipment that, essentially, is ready to place in service upon delivery for the following:

- Hydromet.
- Irrigation systems.

Water Projects (Continued)

Water

FY 2018 Capital Plan Recommended and Approved Projects

(Dollars in thousands)

Project Name	Contingency	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five-Year Total	Lifetime
Recommended								
Buchanan Dam Seven-Gate Section Spillway Improvements	20%	1,500	-	-	-	-	1,500	1,500
General Additions – Hydromet		95	-	-	-	-	95	95
General Additions – Irrigation Systems		950	-	-	-	-	950	950
General Additions – Raw Water		440	-	-	-	-	440	440
Mansfield Dam Bridge and Structures	10%	1,670	-	-	-	-	1,670	1,670
Mansfield Dam Dehumidification System	10%	375	-	-	-	-	375	375
Minor Capital – Hydromet		49	-	-	-	-	49	49
Minor Capital – Irrigation Systems		307	-	-	-	-	307	307
Prairie Conservation Reservoir	10%	809	926	823	3,660	4,905	11,123	11,340
Recommended Subtotal		6,195	926	823	3,660	4,905	16,509	16,726
Approved								
Buchanan Dam Spalling Concrete Rehabilitation – Phase 3		2,646	2,818	3,263	3,394	4,974	17,095	36,000
Buchanan Floodgate Rehabilitation – Phase 2		6,912	3,531	674	-	-	11,117	50,072
Dam Instrumentation Raw Water		33	-	-	-	-	33	765
Lane City Reservoir		78,604	8,416	-	-	-	87,020	250,000
Mansfield Dam Paradox Gate Rehabilitation – Phase 2		1,170	1,005	996	636	611	4,418	10,416
New Regional Water Supply Projects – Phase 1		2,000	-	-	-	-	2,000	6,179
Approved Subtotal		91,365	15,770	4,933	4,030	5,585	121,683	353,432

Water Projects (Continued)

Water

FY 2018 Capital Plan Future Projects

(Dollars in thousands)

Project Name	Contingency	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five-Year	
							Total	Lifetime
Future								
Buchanan Dam Intake Structure	-	-	-	-	-	798	798	798
Buchanan Dam Seven-Gate Deck and Hoist Recoating	-	-	-	500	-	-	500	500
Garwood Dam Rehabilitation	-	500	-	-	-	-	500	500
General Additions – Hydromet	-	100	100	100	100	100	400	400
General Additions – Irrigation Systems	-	1,030	705	506	400	400	2,641	2,641
General Additions – Raw Water	-	250	300	200	200	200	950	950
Gulf Coast Plant No. 1 – Pumps 1 and 2	-	-	-	-	-	700	700	700
Gulf Coast Wadsworth Gates	-	365	-	-	-	-	365	365
Irrigation Supervisory Control and Data Acquisition (SCADA) System	-	426	318	-	-	-	744	744
Lakeside Automated Gates	-	-	370	370	370	370	1,110	1,850
Lakeside Canal Easement Acquisition	-	300	300	300	300	300	1,200	1,200
Lakeside Lake Plant Building Office and Meeting Room	-	-	-	300	-	-	300	300
Lakeside Lake Plant Variable Frequency Drive and Switch Gear Building	-	-	500	-	-	-	500	500
Lakeside Prairie Plant Automated Trash Rack	-	-	-	-	-	300	300	300
Mansfield Dam Floodgate Hydraulic Piping	-	785	-	-	-	-	785	785
Minor Capital – Hydromet	-	167	167	167	167	167	668	668
Minor Capital – Irrigation Systems	-	297	350	350	350	350	1,347	1,347
New Regional Water Supply Projects – Phase 2	-	3,775	27,453	8,281	-	-	39,509	39,509
Future Subtotal		3,775	31,673	11,891	2,293	3,685	53,317	54,057
Total Water		101,335	48,369	17,647	9,983	14,175	191,509	424,215

Public Service Projects

LCRA acts under its legislative authority and Board direction to develop and manage parks, recreation facilities and natural science centers in its statutory district, providing public recreation and water access along the Colorado River and its tributaries and LCRA's power plant reservoirs. LCRA's public park system includes more than 40 parks, recreation areas, natural resource areas and river access sites on about 11,000 acres. The parks and natural science centers enhance the public's use and enjoyment of LCRA lands and provide diverse outdoor recreation and education opportunities.

LCRA's public service funding aims to keep pace with the growing Central Texas population and expected increases in park visitation; protect natural resources and water quality along the Colorado River; and develop facilities that help achieve LCRA's cost-recovery goals for parks.

Public Service recommended and approved projects total \$1.7 million in FY 2018 and over the next five years through FY 2022. Future projects total \$9.4 million through FY 2022.

FY 2018 Recommended Projects

Camp Creek Recreation Area Park Host Facilities – During heavy rains, the Camp Creek Recreation Area entrance road becomes impassable, and water levels can take several days to recede to safe levels. Floods create a public safety hazard when visitors are unaware that flooding can strand them inside the park. An on-site park host will manage weather alerts and evacuations, perform specific park maintenance, and ensure visitors pay daily use fees. The project's scope is to construct a park host site comparable to those at other LCRA parks.

General Additions – General addition projects will maintain infrastructure and improve safety for park visitors.

Minor Capital – The scope of minor capital projects is to purchase equipment that, essentially, is ready to place in service upon delivery for the following:

- Parks.
- Other Public Services.

Public Service Projects (Continued)

Public Services

FY 2018 Capital Plan Recommended, Approved and Future Projects

(Dollars in thousands)

Project Name	Contingency	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five-Year Total	Lifetime
Recommended								
Parks								
Camp Creek Recreation Area Park Host Facilities	10%	480	-	-	-	-	480	557
General Additions		300	-	-	-	-	300	300
Minor Capital		160	-	-	-	-	160	160
Other Public Services								
Minor Capital		58	-	-	-	-	58	58
Recommended Subtotal		998	-	-	-	-	998	1,075
Approved								
Parks								
Camp Creek Recreation Area Facilities		239	-	-	-	-	239	480
McKinney Roughs Nature Park Equestrian Camping		439	-	-	-	-	439	1,280
Approved Subtotal		678	-	-	-	-	678	1,760
Future								
Parks								
General Additions		-	2,000	2,000	2,000	2,000	8,000	8,000
Minor Capital		-	157	311	256	190	914	914
Other Public Services								
Minor Capital		-	192	130	101	108	531	531
Future Subtotal		-	2,349	2,441	2,357	2,298	9,445	9,445
Total Public Service		1,676	2,349	2,441	2,357	2,298	11,121	12,280

Enterprise Support Projects

Enterprise Support capital projects provide the facility, telecommunications and information technology infrastructure that support the business operations of the organization. LCRA's power, transmission and water rates fund the projects, making predicting costs to include in LCRA's rates especially important. Unless an emergency arises, LCRA adjusts Enterprise Support priorities throughout the year to stay within the approved capital plan budget for each fiscal year instead of seeking additional funding authority from the Board.

Enterprise Support recommended and approved projects total \$15.7 million in FY 2018 and \$16.1 million over the next five years through FY 2022. Future projects total \$64.7 million through FY 2022.

FY 2018 Recommended Projects

Backbone Fiber Upgrades – FY 2018 – LCRA-owned optical ground wire in some locations is nearing its end of life. Field observations identified OPGW and attachment hardware problems that may result in failure if they are not addressed. The replacement of OPGW and related components is required to prevent a telecommunication system failure and reduce the risk of unplanned outages and unplanned expenditures. This project will reduce the risk of system failure and the likelihood of an outage that affects customer service while providing greater system capacity. The project's scope is to increase the reliability of the telecommunication system by upgrading OPGW and related hardware on the Smithville-Winchester 138-kV transmission line.

Commercial Data Analytics – The project's scope is to implement a system to provide a consolidated repository for Wholesale Power Commercial Operations market data that can be easily accessed by business-area analysts for self-service reporting. The system also will ensure the market data has been validated for accuracy. The cost estimates for this project are preliminary.

Enterprise Support Projects (Continued)

FY 2018 Recommended Projects (Continued)

Enterprise Financial Operations Re-engineering – This re-engineering project will restructure LCRA’s chart of accounts to align daily transactions and activities of the business areas with LCRA’s financial reporting tools. It also will provide guidance for business area financial decision-making and reporting under the umbrella of LCRA’s financial goals and strategies. The project’s scope is to review, refine and implement a new structure and taxonomy of the chart of accounts, including system changes required to accommodate the new chart structure in PeopleSoft, other applications and integrations between applications. The cost estimates for this project are preliminary.

Tower Upgrades – Phase 3 – Telecommunication towers are subject to increased loading constraints as additional equipment is installed to serve LCRA and/or customer requirements. Towers are evaluated under the most recent code as additional equipment is planned for each tower. The project’s scope is to increase the capacity and reliability of telecommunication tower equipment at the Marshall Ford and Taylor telecommunication facilities and the Gabriel, Marion and Winchester substations.

Western Hays County Radio Site – Many public safety users in Hays, eastern Blanco and northern Comal counties rely on the OpenSky™ communication system. There are 200 square miles in western Hays County that lack reliable coverage due to the hilly terrain. The project will establish a new LCRA communication site at a leased location near Wimberley that will provide additional coverage for LCRA and other customers, including police, fire and other emergency responders.

Wireless Replacement – The hardware and software components of LCRA’s wireless infrastructure, installed in 2008, are aging and hindering LCRA’s ability to pursue mobility process improvements. About half of LCRA’s wireless access points reached their end-of-support dates in May 2016. The firmware only can accept software updates to the point that the access points will function. The project’s scope is to upgrade the hardware and software to current technology, expand capacity to support a wider range of devices and bandwidth requirements, increase information security controls, and expand wireless access to more areas of LCRA.

Enterprise Support Projects (Continued)

FY 2018 Recommended Projects (Continued)

General Additions – General addition projects will maintain infrastructure and regulation compliance, and improve reliability for the following:

- Facilities.
- Information Technology.
- Telecommunications.

Minor Capital – The scope of minor capital projects is to purchase equipment that, essentially, is ready to place in service upon delivery for the following:

- Facilities.
- Information Technology.
- Public Safety.
- Telecommunications.
- Unregulated Transmission.

Enterprise Support Projects (Continued)

Enterprise Support FY 2018 Capital Plan Approved and Future Projects

(Dollars in thousands)

Project Name	Contingency	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five-Year Total	Lifetime
Recommended								
Facilities								
General Additions		960	-	-	-	-	960	960
Minor Capital		141	-	-	-	-	141	141
Information Technology								
Commercial Data Analytics	10%	750	-	-	-	-	750	750
Enterprise Financial Operations Re-engineering	10%	3,000	-	-	-	-	3,000	3,000
General Additions		2,175	-	-	-	-	2,175	2,175
Minor Capital		800	-	-	-	-	800	800
Wireless Replacement	10%	411	180	164	-	-	755	755
Public Safety								
Minor Capital		510	-	-	-	-	510	510
Telecommunications								
Backbone Fiber Upgrades – FY 2018	10%	964	-	-	-	-	964	964
General Additions		1,640	-	-	-	-	1,640	1,640
Minor Capital		447	-	-	-	-	447	447
Tower Upgrades – Phase 3	10%	571	-	-	-	-	571	571
Western Hays County Radio Site	10%	360	-	-	-	-	360	360
Unregulated Transmission								
Minor Capital		1,959	-	-	-	-	1,959	1,959
Recommended Subtotal		14,688	180	164	-	-	15,032	15,032
Approved								
Information Technology								
Scheduling Tool		300	-	-	-	-	300	300
Time and Attendance System		280	-	-	-	-	280	280
Treasury Management – Phase 1		290	-	-	-	-	290	405

Enterprise Support Projects (Continued)

Enterprise Support FY 2018 Capital Plan Approved and Future Projects

(Dollars in thousands)

Project Name	Contingency	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five-Year Total	Lifetime
Approved (continued)								
Telecommunications								
Tower Upgrades – Phase 2		155	-	-	-	-	155	715
Approved Subtotal		1,025	-	-	-	-	1,025	1,700
Future								
Environmental Lab								
Minor Capital		-	215	280	165	167	827	827
Facilities								
General Additions		-	772	500	500	500	2,272	2,272
General Office Complex Campus Lighting		-	250	-	-	-	250	250
GOC Hancock Building Chiller Plant Magnetic Drive		-	-	1,000	-	-	1,000	1,000
GOC Xeriscaping		-	300	-	-	-	300	300
Minor Capital		-	362	1,265	1,122	1,151	3,900	3,900
Information Technology								
Document Management		-	-	500	-	-	500	500
Enterprise Data Discovery		-	-	500	-	-	500	500
General Additions		-	1,400	1,400	1,400	1,400	5,600	5,600
Generation Billing System		-	1,000	1,000	-	-	2,000	2,000
Generation Management System		-	600	-	-	-	600	600
LCRA Enterprise Historian		-	-	500	-	-	500	500
Learning Management System		-	400	-	-	-	400	400
Minor Capital		-	900	1,340	500	1,000	3,740	3,740
Multifactor Authentication		-	-	500	-	-	500	500
Virtual Private Network (VPN) Upgrade		-	365	-	-	-	365	365
Water Administration Management System		-	1,000	-	-	-	1,000	1,000

Enterprise Support Projects (Continued)

Enterprise Support FY 2018 Capital Plan Future Projects

(Dollars in thousands)

Project Name	Contingency	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five-Year		
							Total	Lifetime	
Future (continued)									
Public Safety									
Minor Capital		-	248	428	259	283	1,218	1,218	
Physical Access Control System – Phase 4		-	420	-	-	-	420	420	
Physical Access Control System – Phase 5		-	-	330	-	-	330	330	
Telecommunications									
Backbone Fiber Upgrades – FY 2019		-	4,000	-	-	-	4,000	4,000	
Backbone Fiber Upgrades – FY 2020		-	-	4,000	-	-	4,000	4,000	
Backbone Fiber Upgrades – FY 2021		-	-	-	4,000	-	4,000	4,000	
Backbone Fiber Upgrades – FY 2022		-	-	-	-	4,300	4,300	4,300	
General Additions		-	1,500	1,500	1,500	1,500	6,000	6,000	
Kyle Radio Site		-	300	-	-	-	300	300	
Minor Capital		-	283	196	169	264	912	912	
Site Uninterruptible Power Source Replacement		-	-	224	224	224	672	672	
Unregulated Transmission									
Minor Capital		-	4,383	3,091	3,295	3,536	14,305	14,305	
Future Subtotal		-	18,698	18,554	13,134	14,325	64,711	64,711	
Total Enterprise Support			15,713	18,878	18,718	13,134	14,325	80,768	81,443

Appendix – Financial Tables

LCRA Consolidated (Including Nonprofit Corporations)

(Dollars in millions)

	Budgeted	Proposed	Forecast			
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenues						
Total Net Revenue¹	849.8	884.8	922.1	954.5	995.3	1,009.3
Expenses						
Total Net Expense¹	445.9	482.6	496.9	513.0	532.6	539.5
Net Operating Margin	403.9	402.2	425.2	441.5	462.7	469.8
Less: GenTex 1 Funds ²	(1.1)	(0.1)	(2.1)	(2.2)	(0.6)	(2.5)
Net Margin for Debt Service, Adjusted	402.8	402.2	423.1	439.3	462.1	467.3
Debt Service	\$ 296.0	291.1	314.9	319.7	325.1	333.5
Debt Service Coverage, Adjusted	1.36x	1.38x	1.34x	1.37x	1.42x	1.40x
Net Margin After Debt Service³	\$ 107.9	111.1	110.3	121.8	137.7	136.3
Less:						
Operating Reserves	10.4	7.5	4.7	6.2	6.9	4.5
Revenue-Funded Capital	83.7	79.1	80.2	97.6	120.4	110.3
Noncash Revenue	1.9	1.9	1.9	1.9	1.9	1.9
Resource Development Fund	7.6	7.0	9.9	10.5	3.9	4.4
Restricted for Capital/Debt Retirement	3.3	14.8	12.6	4.6	3.6	14.2
CDPP Grants	1.0	1.0	1.0	1.0	1.0	1.0
Net Cash Flow	\$ 0.0	0.0	0.0	0.0	0.0	0.0

¹ Total net revenues and total net expenses are net of intracompany transfers. Total revenues include interest income. Operations and maintenance expense excludes the LCRA TSC capital charge, which is a capital expense for LCRA consolidated.

² Includes adjustments related to GenTex 1 capital funding and reserve funding.

³ Net Margin After Debt Service includes funds dedicated to GenTex 1.

LCRA TSC

(Dollars in millions)

	Budgeted	Proposed	Forecast			
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenues	\$ 399.7	409.7	420.9	440.3	459.9	471.2
Operations and Maintenance	97.0	110.9	114.4	118.3	120.7	123.8
Net Operating Margin	302.7	298.8	306.5	322.0	339.2	347.4
Plus: Interest Income	0.8	2.6	2.7	2.7	2.8	2.8
Less: Assigned Enterprise Expense	43.4	44.2	42.7	48.0	48.2	51.0
Public Service Fund	12.0	12.3	12.6	13.2	13.8	14.1
Resource Development Fund	8.0	8.2	8.4	8.8	9.2	9.4
Net Margin Available for Debt Service	240.2	236.7	245.5	254.7	270.9	275.7
Debt Service	\$ 174.3	173.9	188.7	191.7	192.4	203.9
Debt Service Coverage	1.38x	1.36x	1.30x	1.33x	1.41x	1.35x
Net Margin After Debt Service	\$ 65.9	62.8	56.9	63.0	78.5	71.8
Less:						
Operating Reserves	9.5	6.8	2.8	4.0	1.4	2.0
Assigned Enterprise Capital	7.4	6.1	7.7	8.8	6.6	7.2
Assigned Transmission Minor Capital	15.3	1.9	4.2	3.0	3.2	3.4
Revenue-Funded Capital	34.4	53.1	44.9	51.9	78.7	71.6
Transfer to LCRA ¹	6.5	4.1	7.3	6.7	1.1	1.1
Plus:						
Amortization of Enterprise/Minor Capital ²	7.0	9.2	10.2	11.4	12.5	13.5
Net Cash Flow	\$ 0.0	0.0	0.0	0.0	0.0	0.0

¹ An initial transfer from LCRA TSC to LCRA was authorized by the LCRA and LCRA TSC boards of directors in April 2014. Under the initial contractual commitment entered into by LCRA and LCRA TSC, the Board must make an annual determination to authorize each year's transfer. Such annual transfers are payable only if all other financial commitments have been met as required by LCRA TSC's financial policies.

² In FY 2012, LCRA TSC began funding minor capital and its share of enterprise capital with current year revenues. It will include an amortization of the amount in each year to recover in rates.

Water

(Dollars in millions)	Budgeted	Proposed	Forecast			
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenue						
Firm Water	\$ 20.3	17.9	20.9	23.0	23.6	24.5
Agriculture	11.5	11.8	12.5	12.9	13.4	13.8
Other	2.4	2.0	2.0	2.0	2.0	2.0
Total Revenues	34.2	31.6	35.5	37.9	39.1	40.4
Operations and Maintenance	17.7	16.9	17.7	17.8	16.4	16.4
Net Operating Margin	16.5	14.7	17.8	20.1	22.7	23.9
Plus: Interest Income	0.0	1.1	0.6	0.4	0.4	0.5
Less: Assigned Enterprise Expense	3.9	2.5	4.6	5.9	6.3	6.2
Public Service Fund	1.0	0.9	1.1	1.1	1.2	1.2
Net Margin Available for Debt Service	11.6	12.3	12.7	13.5	15.7	17.0
Debt Service	\$ 14.7	14.4	15.8	15.7	20.1	20.1
Debt Service Coverage	0.79x	0.85x	0.80x	0.86x	0.78x	0.84x
Plus: Resource Development Funding	10.2	10.2	10.5	10.5	12.8	12.9
Debt Service Coverage, Adjusted	1.48x	1.56x	1.47x	1.53x	1.42x	1.48x
Net Margin After Debt Service	7.1	8.1	7.4	8.3	8.4	9.7
Less:						
Operating Reserves	0.0	0.0	0.7	0.3	0.0	0.0
Assigned Enterprise Capital	0.8	0.5	1.7	0.8	0.5	0.6
Revenue-Funded Capital	4.4	5.7	3.1	5.4	6.0	7.3
Noncash Revenues	1.9	1.9	1.9	1.9	1.9	1.9
Net Cash Flows	\$ 0.0	0.0	0.0	0.0	0.0	0.0

Strategic Services

(Dollars in millions)	Budgeted	Proposed	Forecast			
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Revenues	\$ 16.5	18.2	17.9	19.0	19.4	21.0
Expenses	11.6	13.6	13.0	13.1	12.9	12.9
Net Operating Margin	4.9	4.6	4.9	6.0	6.5	8.1
Less: Assigned Enterprise Expense	3.4	3.0	3.1	3.1	3.2	3.2
Public Service Fund	0.5	0.5	0.5	0.5	0.5	0.6
Resource Development Fund	0.2	0.2	0.2	0.2	0.2	0.3
Net Margin Available	0.8	0.9	1.1	2.1	2.6	4.0
Less:						
Operating Reserves	0.0	0.4	0.1	0.0	0.0	0.0
Assigned Enterprise Capital	0.5	0.2	0.4	0.6	0.3	0.3
Assigned Transmission Minor Cap	0.7	0.1	0.1	0.1	0.1	0.1
Plus:						
Environmental Lab Support	0.4	0.0	0.0	0.0	0.0	0.0
Net Cash Flow	\$ 0.0	0.2	0.5	1.4	2.1	3.6



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P.O. Box 220, Austin, TX 78767-0220
lcra.org | 800-776-5272