

#### Materials to assist the

# City Council Special Committee on the Potential Sale of JEA

March 15, 2018

#### Contents:

JEA Strategic Planning

American Public Power Association Member Benchmarking

Rating Agency Key Financial Metrics

Reserve Fund Quarterly Report

**Rating Agency Reports** 



# JEA STRATEGIC PLAN CASCADE AND EXECUTION

**BRIEFING TO JEA BOARD** 

**SEPTEMBER 16, 2013** 



### BOARD WORKSHOPS ON STRATEGIC PLAN

DATE	TOPICS
January 15, 2013	<ul> <li>Strategic plan objectives</li> <li>Strategic planning process</li> <li>Strategy implementation approach (ACT)</li> </ul>
February 18, 2013	<ul> <li>Assessment of strategic environment – external change drivers</li> <li>Preliminary strategic issue priorities</li> </ul>
May 21, 2013	<ul> <li>Confronting JEA's business reality</li> <li>Possible changes to mission, vision and values</li> <li>Change readiness and organizational effectiveness</li> <li>Preliminary strategic initiatives</li> <li>Operationalizing the initiatives</li> </ul>
July 16, 2013	<ul> <li>Refreshed mission, vision, and values</li> <li>Final strategic initiatives</li> <li>Commitments to Action process</li> <li>Cascade preview</li> </ul>
September 16, 2013	<ul><li> JEA branding materials</li><li> Cascade progress report</li><li> Execution process</li></ul>



### REFRESHED MISSION, VISION AND VALUES



Energizing our community through high-value energy and water solutions.

(fundamental purpose)



JEA is a premier service provider, valued asset and vital partner in advancing our community.

(desired future state)



- Safety
- Service
- Growth<sup>2</sup>
- Accountability
- Integrity

(guideposts for behavior)



# STRATEGIC COMMITMENTS AND DEFINITIONS OF SUCCESS

### **Our Strategic Focus Areas**



### Earn Customer Loyalty

- Be easy to do business
- Empower customers to make informed decisions
- Demonstrate community responsibility



#### Deliver Business Excellence

- · Grow net revenues
- Improve cost efficiency
- Improve operational performance



#### Develop an Unbeatable Team

- Institute agile employment and HR model
- Facilitate and expect employee growth and development
- Ensure a safe, healthy and ethical workplace

#### **Definition of Success**

What matters to our customers matters to us. We earn our customers' loyalty by continually improving.

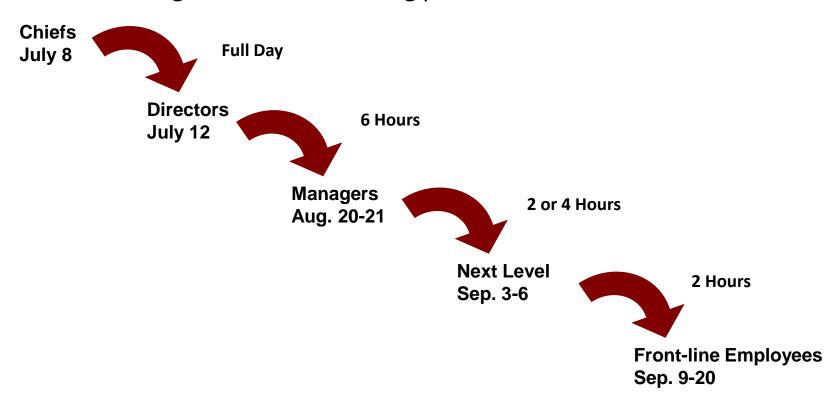
We provide high-quality service at an affordable cost. Service, safety and compliance are ingrained in our culture.

We deliver the highest level of proficiency and performance for our customers by attracting, retaining and developing a competent, motivated and agile workforce.



### JEA CASCADE SCHEDULE

**Objective**: effectively and efficiently bring groups together across all departments during the Cascade meeting process



- Cascade of strategic plan engagement and aligned goal-setting
- Orchestrated by Strategic Planning Team
- Supported by Chiefs, Transformation Support Team



### **CASCADE MEETING OBJECTIVES**

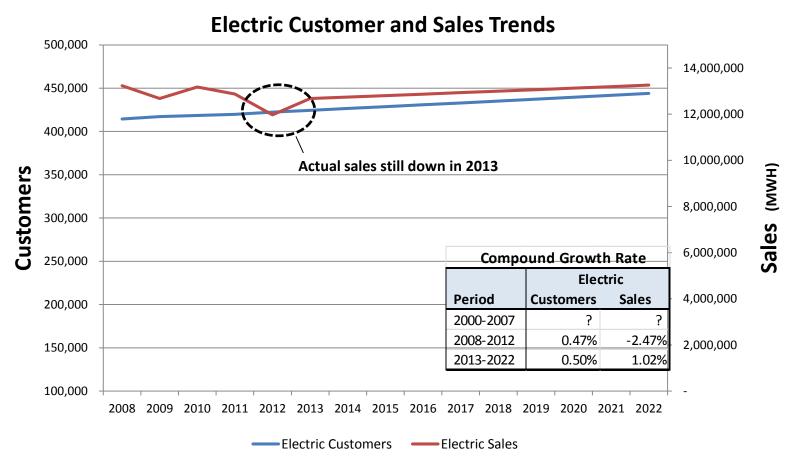
- ☐ To understand the overall effort to reposition JEA to meet its serious challenges successfully; our new "game plan" ☐ To understand the three resistant serious initiatives and the
- ☐ To understand the three major strategic initiatives and to make personal commitments to achieving them
- □ To understand JEA's core values, and make personal behavior change commitments to live those values and model them for your subordinates
- ☐ To understand and be ready to lead the all-employee, high-engagement cascade in your part of the company
- ☐ To take personal accountability for leading the transformation of JEA to achieve our strategic objectives and realize our vision



# CONFRONTING JEA'S BUSINESS REALITY



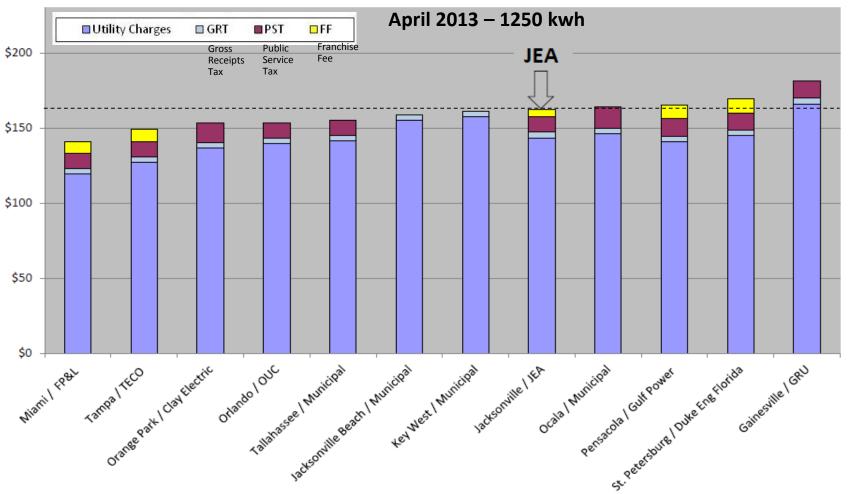
# JEA ELECTRIC CUSTOMER AND USAGE GROWTH



Sales and revenue have fallen significantly since 2008 in both Electric and Water; hoped-for turnaround has not materialized



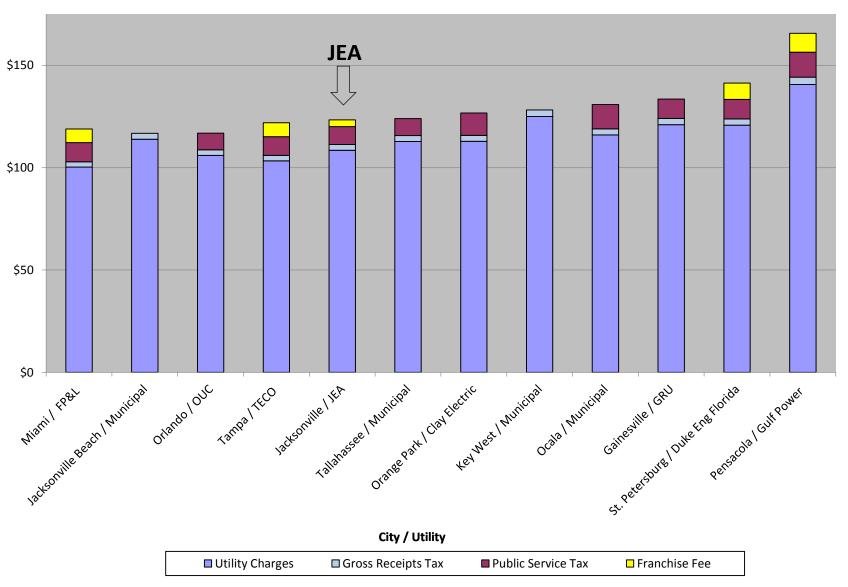
# UPDATED TYPICAL RESIDENTIAL ELECTRIC BILL COMPARISON



- JEA typical bills above Florida average; same for Water
- C&I rates among the highest in Southeast

#### Florida Utilities Monthly Residential Electric Bill Comparison

(Consumption @ 1,000 kWh)
Residential Rates as of February 2018





# FPL HAS MUNIS IN ITS SIGHTS... SOUTHERN AND DUKE ALSO LOOKING FOR GROWTH

- FPL promoting its "low rates, high reliability and excellent customer service" – fuel cost advantage due to nuclear and gas dominance in generation fleet
- FPL (as well as Southern and Duke) looking at opportunities to expand wholesale service to municipal utilities; also actively pursuing acquisition of municipal utilities
- Municipal/coop rates range from 11% to 51% above FPL's rates



# TOP STRATEGIC ISSUES FOR OTHER LARGE PUBLIC POWER UTILITIES

#### **Concerns**

- Flattening load growth
- More intense generation competition
- Decreasing rate advantage vs. IOUs
- Lack of appreciation of local control
- IOU advantages in scale, agility, and political influence
- Ability to attract good talent and transfer knowledge
- Environmental mandates
- Fuel management / fuel choices
- Workforce issues
- Changing technology
- Aging infrastructure
- Future of public power business model

### **Opportunities**

- Proactive messaging on value
- Developing strong consumer relationships
- Better competitive intelligence (IOUs, Coops, VCs)
- Sharing best practices
- Sharing resources to achieve scale
- Leveraging innovative technology
- Serving customers better

From May 2013 meeting of LPPC Council

- Look familiar?
- Similar themes to JEA
- All large public power utilities are facing these issues



# CONCLUSIONS FROM JEA'S BUSINESS REALITY

### JEA has a proud history.

- Operational excellence
- Environmental leadership
- Heart of service for our community

#### But dark clouds are on the horizon...

- Declining revenue
- Rising costs
- Dissatisfied customers
- Disruptive technologies
- Competitive and regulatory threats

...and they could harm our customers and our employees if not addressed.

We must rise to the challenge together.

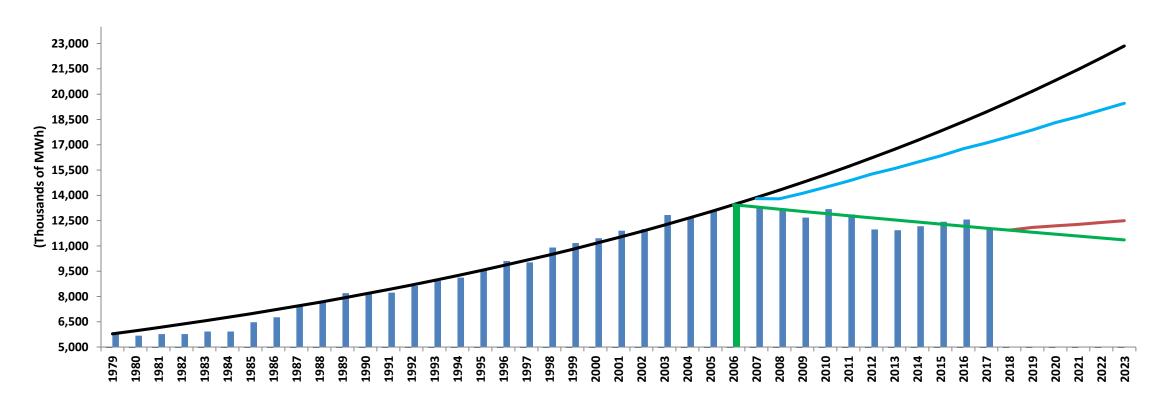
# 2012 - 2018

# 2013 Cascade Program Update

Area of Focus	<b>Goal Description</b>	2012 Established Goal	<u>Current Performance</u>
Earn Customer Loyalty	JD Power Business Survey	1st Quartile by 2016	1st Quartile (achieved FY14)
Earn Customer Loyalty	JD Power Residential Survey	1st Quartile by 2016	1st Quartile (achieved FY15)
Deliver Business Excellence	Customer Growth	Net new meters of 6,000 in ES and 5,000 in WS by FY15 over FY13 baseline	+8,145 ES & +12,438 WS FY15 v. FY13 +32,181 ES & +28,102 WS FY17 v. FY13
Deliver Business Excellence	Reduce Unbilled Production	\$1M for ES & WS in FY14	Yes, ES & WS
Deliver Business Excellence	Rate Competitiveness	Residential below FL median	Below median WS and ES
Deliver Business Excellence	Improve Debt-to-asset ratio	.71 (ES) and .58 (WS) by FY15	.63 (ES) and .50 (WS) in FY17
Deliver Business Excellence	Cost performance	Flat cost per unit delivered (kwh, kgal) vs. FY12 baseline	ES, yes. WS, no, due to increased investment in water/sewer system upgrades
Deliver Business Excellence	Revenue growth	Increase of 2% in weather- normalized gross revenues by FY15 over FY13 baseline	-3.50% FY15 v. FY13 +3.44% FY17 v. FY13
Develop an Unbeatable Team	Safety	Recordable Incident Rate of 1.2 in FY14	2.29 FY14 2.06 FY17
Develop an Unbeatable Team	Workplace survey overall rating	10% improvement in FY14	Baseline FY13 71% FY15 74.4%, 5% increase FY17 78.8%, 11% increase



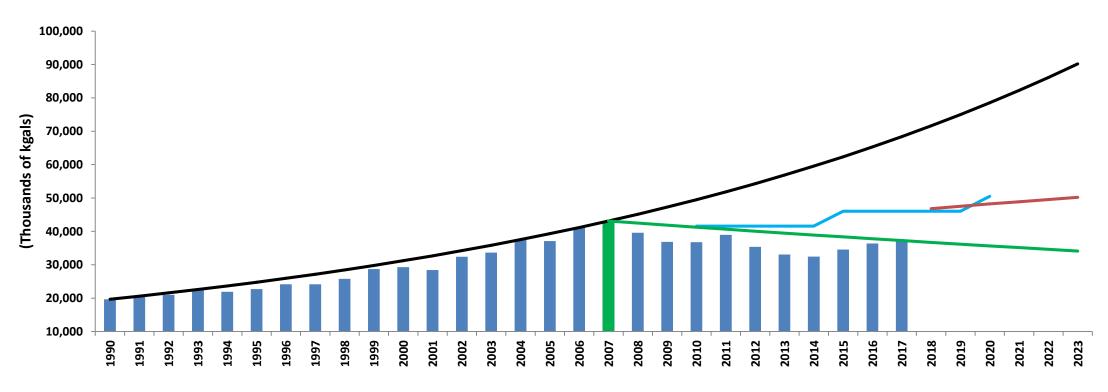
### JEA Electric Sales and Projections



- —Projection based on Annual Growth Rate 1979-2006
- —2006 Sales Projection (IRP-Based)
- —2017 Sales Projection (TSP-Based)
- —Projection Based on Annual Growth Rate 2006-2017



### JEA Water Sales and Projections



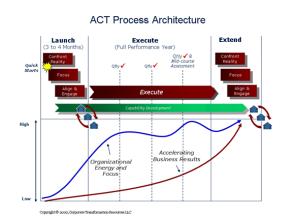
- —Projection based on Annual Growth Rate 1990-2007
- —2008 Sales Projection based on Water Resource Master Plan
- —2017 Sales Projection based on Water Resource Master Plan
- —Projection based on Annual Growth Rate 2007-2017



# 2018 Cascade

### **CEO Update – 5 Year Journey**

- JEA's began our initial strategic planning in the late fall of 2012.
- Our strategic planning was based on the Board's vision for JEA and executed using the Accelerated Corporate Transformation (ACT) model, ultimately involving each and every employee.
- Strategic Plan was launched in September 2013
- 2018 both completes our 5<sup>th</sup> year and begins a new opportunity to assess and update our strategic plan







### **CEO Update – 5 Year Journey**

### 2013 Goals

- Clean Power Plan Implementation ✓
- Improve Balance Sheet Flexibility: pay-down debt ✓
- Update Electric System Pricing to capture effect of customer-owned distributed generation (solar) and energy efficiency ✓
- Transform Cost Structure ✓
  - Lower costs to match declining revenue ✓
  - Leverage technology to improve productivity ✓
  - Challenging workforce civil service, union, pension and performance pay (3-5%)
  - Can we participate in additional business opportunities ✓
- Maintain/Improve
  - System Reliability ✓
  - Customer Satisfaction/Loyalty ✓
  - Employee Satisfaction and Engagement ✓
- Vital Partner in Advancing Our Community
  - Government Transfers ✓
  - Water/Sewer Expansion ✓
  - Nitrogen removal from the St. Johns River ✓
  - Economic development ✓





### **CEO Update – Success**

- In 2017 JEA posted a record high J.D. Power Residential **Electric Customer Satisfaction** score.
- In July, J.D. Power released the 2017 results showing our customers' overall satisfaction has improved for the fifth consecutive year to a score of 747 – our highest Overall **Customer Satisfaction ever!**

Customers scored us a whopping 44 points above our 2016 results and 28 JEA points above the Quartile Industry national average! JEA.

Rank

JEA. Rank

Florida

Residential

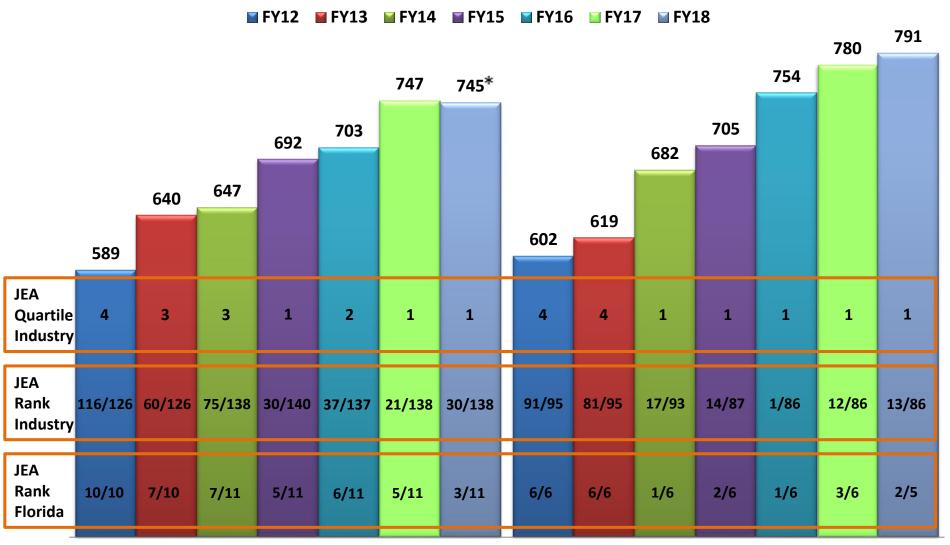


#### **Customer Satisfaction Index Scores**





### **Customer Satisfaction Index Scores**





Residential Business

22

#### 2018 W2 YTD Residential: JD Power Customer Satisfaction Index

Top Quartile (1st)	Mean	Rank	2nd Quartile	Mean	Rank	3rd Quartile	Mean	Rank	<b>Bottom Quartile (4th)</b>	Mean	Rank
Sawnee EMC	812	1	CPS Energy	742	36	Ameren Illinois	724	69	Lakeland Electric	702	104
NOVEC	806	2	Louisville Gas & Electric	742	36	Duke Energy-Carolinas	724	69	NIPSCO	702	104
Southern Maryland Electric Cooperative	798	3	Consumers Energy	740	38	Penelec	724	69	Tucson Electric Power	701	106
Walton EMC	795	4	OG&E	739	39	Wisconsin Public Service	724	69	NES	699	107
Clark Public Utilities	792	5	OUC	739	39	Xcel Energy-Midwest	724	69	Westar Energy	699	107
ЕРВ	791	6	Portland General Electric	739	39	<b>Green Mountain Power</b>	723	74	APS	698	109
SECO Energy	779	7	Florida Power & Light	738	42	ComEd	722	75	NorthWestern Energy	698	109
SRP	779	7	Lincoln Electric System	738	42	Dayton Power & Light	722	75	NYSEG	696	111
GreyStone Power	776	9	Minnesota Power	738	42	Pacific Power	722	75	Atlantic City Electric	695	112
Cobb EMC	775	10	Omaha Public Power District	738	42	NV Energy	721	78	Huntsville Utilities	695	112
Pedernales Electric	775	10	Gulf Power	737	46	Southern California Edison	721	78	Avista	694	114
Jackson EMC	774	12	Indianapolis Power & Light	737	46	Alliant Energy	720	80	Duke Energy-Florida	691	115
Rappahannock Electric Cooperative	773	13	Penn Power	736	48	Rocky Mountain Power	720	80	Appalachian Power	686	116
EnergyUnited	771	14	Seattle City Light	736	48	Xcel Energy-South	720	80	Empire District Electric	686	116
Kentucky Utilities	770	15	Intermountain Rural Electric Assoc.	735	50	Toledo Edison	719	83	MLGW	686	116
Entergy Mississippi	768	16	Central Maine Power	734	51	Xcel Energy-West	719	83	Entergy New Orleans	685	119
CoServ	767	17	Mississippi Power	734	51	Duke Energy-Midwest	718	85	Mon Power	685	119
SMUD	766	18	Withlacoochee River Electric Cooperative	734	51	Public Service Co. of Oklahoma	718	85	PSEG Long Island	685	119
MidAmerican Energy	762	19	BGE	733	54	KCP&L	717	87	National Grid	684	122
Clay Electric Cooperative	760	20	Dominion Energy	732	55	Lee County Electric Cooperative	717	87	Pacific Gas and Electric	683	123
Middle Tennessee EMC	759	21	Southwestern Electric Power	732	55	Delmarva Power	715	89	The Illuminating Company	683	123
Entergy Louisiana	758	22	Entergy Texas	731	57	Cleco Power	713	90	Jersey Central Power & Light	682	125
Great Lakes Energy	758	22	Potomac Edison	731	57	Puget Sound Energy	712	91	Eversource Energy	681	126
Connexus Energy	755	24	Duke Energy-Progress	729	59	Snohomish County PUD	712	91	Montana-Dakota Utilities	679	127
South Central Power	753	25	PSE&G	729	59	AEP Ohio	711	93	Knoxville Utilities Board	676	128
Entergy Arkansas	750	26	Santee Cooper	729	59	Con Edison	709	94	Orange & Rockland	674	129
Idaho Power	747	27	PECO	728	62	Tampa Electric	709	94	L. A. Dept. of Water & Power	668	130
PPL Electric Utilities	747	27	Indiana Michigan Power	727	63	West Penn Power	709	94	Central Hudson Gas & Electric	666	131
Ohio Edison	746	29	Ameren Missouri	726	64	Rochester Gas & Electric	708	97	El Paso Electric	663	132
JEA	745	30	Otter Tail Power Company	726	64	Рерсо	706	98	Emera Maine	660	133
Alabama Power	744	31	Madison Gas & Electric	725	66	Austin Energy	705	99	PNM	659	134
DTE Energy	744	31	Tacoma Power	725	66	Duquesne Light	704	100	United Illuminating	659	134
Imperial Irrigation District	744	31	We Energies	725	66	Met-Ed	704	100	Hawaiian Electric	657	136
Colorado Springs Utilities	743	34				San Diego Gas & Electric	704	100	Black Hills Energy	653	137
Georgia Power	743	34				South Carolina Electric & Gas	703	103	Vectren	647	138
									Kentucky Power	624	139

### **JD Power Business FY18 Final**

				<b>.</b>	чэп	1033 1 1 10 1 1					
Top Quartile (1st)	Mean	Rank	2nd Quartile	Mean	Rank	3rd Quartile	Mean	Rank	Bottom Quartile (4th)	Mean	Rank
Alabama Power	819	1	Duke Energy-Midwest	779	23	PECO	761	43	NYSEG	752	64
Duquesne Light	816	2	Atlantic City Electric	776	24	NES	761	43	West Penn Power	752	64
Portland General Electric	804	3	Con Edison	775	25	NorthWestern Energy	760	45	The Illuminating Company	752	64
Georgia Power	801	4	Kentucky Utilities	775	25	Entergy Louisiana	759	46	Dayton Power & Light	748	67
Entergy Mississippi	800	5	Ameren Missouri	774	27	OG&E	759	46	San Diego Gas & Electric	748	67
Gulf Power	799	6	Indianapolis Power & Light	774	27	Southern California Edison	759	46	NV Energy	747	69
Public Service Co. of Oklahoma	799	6	Ohio Edison	773	29	Louisville Gas & Electric	758	49	Delmarva Power	744	70
SRP	798	8	Xcel Energy - Midwest	773	29	Westar Energy	758	49	National Grid	742	71
Entergy Texas	797	9	PPL Electric Utilities	771	31	Rocky Mountain Power	757	51	Appalachian Power	741	72
SMUD	796	10	We Energies	771	31	PSE&G	756	52	El Paso Electric	741	72
DTE Energy	793	11	Duke Energy-Florida	771	31	AEP Ohio	756	52	Alliant Energy	736	74
Idaho Power	793	11	South Carolina Electric & Gas	771	31	Consumers Energy	756	52	Austin Energy	736	74
JEA	791	13	Duke Energy-Carolinas	769	35	L. A. Dept. of Water & Power	756	52	NIPSCO	735	76
BGE	790	14	Tampa Electric	766	36	Jersey Central Power & Light	755	56	Potomac Edison	734	77
Seattle City Light	790	14	ComEd	765	37	Met-Ed	755	56	Central Maine Power	731	78
Florida Power & Light	789	16	Indiana Michigan Power	765	37	Ameren Illinois	755	56	Penelec	725	79
MidAmerican Energy	784	17	Southwestern Electric Power	765	37	Puget Sound Energy	755	56	Eversource Energy	722	80
WPS	784	17	APS	765	37	Pepco	754	60	Avista	719	81
Dominion Virginia Power	784	17	Entergy Arkansas	763	41	KCP&L	754	60	MLGW	718	82
Omaha Public Power District	783	20	Xcel Energy - West	762	42	Pacific Gas and Electric	753	62	PSEG Long Island	710	83
CPS Energy	783	20				Pacific Power	753	62	Central Hudson Gas & Electric	710	83
Duke Energy-Progress	780	22							PNM	709	85

Mon Power

# **Review of 2017 YE Metrics**

### **Deliver Business Excellence**

### Co-Champions: Paul Cosgrave, Melissa Dykes and Ted Hobson

<b>Grow Revenues</b>	FY17 Goal	2017 YE
Reduce unbilled revenue		
<ul> <li>Grow non-core utility businesses</li> <li>Telecommunication/fiber <ul> <li>Dark Fiber</li> <li>Wireless Colocation</li> </ul> </li> <li>Natural Gas Sales</li> <li>Joint Dispatch (GRU)</li> <li>Pole attachments</li> </ul>		
Grow revenues from new business lines and unbilled revenue reductions	\$12M	\$11.9M



# **Deliver Business Excellence**

Leverage EAM Principles	FY17 Goal	2017 YE					
Leverage EAM principles to improve systems efficiency and cost structure							
Identify EAM principle-driven projects capable of producing \$10 million of annual value	\$10 million	>\$10M identified					
Cost performance: 1a. Non-Fuel Electric \$/MWh 1b. Water \$/kGal 1c. Wastewater \$/kGal	1a. < \$53.94/MWh 1b. < \$4.75/kGal 1c. < \$10.27/kGal	1a. \$52.50/MWh 1b. \$4.57/kGal 1c. \$9.20/kGal					
Debt/Asset Ratio Reduction - No new debt in FY2017	\$0	\$0					
No base rate increases projected for at least 5 years in electric, at least 10 years in water/sewer	No base rate increases	No base rate increases					



# **Deliver Business Excellence**

Leverage EAM Principles	FY17 Goal	2017 YE			
Optimize implementation of Oracle Projects (Q1) & Oracle eA	M (Q3) to improve EAM at	JEA			
Leverage EAM principles to improve electric, water sewer, & r	eliability				
Launch Demand Rate Pilot Program					
At least 100 customers on Demand Rate Pilot before 9/30	100	123			
Improve Reliability- CEMI-5	Meets < 1.5% Exceeds < 1.0%	1.07%			
Water pressure > 50psi	Meets > 95% Exceeds > 97%	96.1%			



# Develop an Unbeatable Team

### **Co-Champions: Angie Hiers and Brian Roche**

Improve Employee	FY17 Goal	2017 YE
Satisfaction & Engagement		
Improve the quality and measurement of job	factors/goals/object	tives
Engage employees in company Ambassadors	hip and Advocacy	
Continuously promote a workplace environment with similar and different backgrounds, expensed and utilized to maximize operational excellent	riences and perspec	• •
Consistent development of relevant, robust and measurable goals.	100% of audited goals pass criteria	100% of audited goals pass criteria
Roll out of "I Am An Ambassador" Program to all employees.	100%	100%
Delivery of Respect and Inclusion curriculum/activity to all employees.	100%	93% appointed 100% non-appointed



# Develop an Unbeatable Team

Engage Employees in Personal Growth	FY17 Goal	2017 YE
Build job-specific and general competencies		
Promote career path opportunities		
Design, completion and delivery of curriculum to address competency gaps.	Completed by 9/1/17	Design complete
At least 1 completed development activity from IDP for 75% of employees who have submitted an IDP	75%	87.6%
Design and completion of career path projects for various areas.	Completed and delivered at least 3 major job groups by $3^{rd}$ Qtr	Completed and delivered at least 3 major job groups by 3 <sup>rd</sup> Qtr



# Develop an Unbeatable Team

Ensure a Safe, Healthy and Ethical Workplace	FY17 Goal	2017 YE
Plan for zero RIRs		
Compliance with JEA's ethics standards and training	ng requirements	
Promote a culture of employee wellness and heal	th	
Safety - Recordable Incident Rate meets or exceeds established objective.	RIR 1.4	RIR 2.01
Ethics – 100% completion of new and enhanced ethics training with new employees completing within first 10 days of employment.	100% completion of new training by established guideline	100%
Participation of at least 70% of employees in at least one (1) wellness activity (sponsored activity, annual wellness exam, personal health assessment, bio-metric screening)	70%	64%

# **Earn Customer Loyalty**

### Co-Champions: Kerri Stewart, Mike Brost, Mike Hightower

Be Easy to Do Business With	FY17 Goal	2017 YE						
Ensure policies and processes produce a customer experience which is easy, timely, and accurate the first time								
Ensure customer facing technology provides customer centric functionality, including proactive and customized self-service tools and 24/7 reliability								
Demonstrate empathy, courtesy and knowledge i	n every customer into	eraction						
Provide consistent customer experience across al	l channels and all tou	ıch points						
Customer Service: Residential and Business	R: 1 <sup>st</sup> B: 1 <sup>st</sup>	R: 1 <sup>st</sup> B: 1 <sup>st</sup>						
Power Quality and Reliability: Residential and Business	R: 1 <sup>st</sup> B: 1 <sup>st</sup>	R: 1 <sup>st</sup> B: 1 <sup>st</sup>						



# **Earn Customer Loyalty**

Empower Customers to Make Informed Decisions	FY17 Goal	2017 YE						
Increase awareness of customer choice and parti	Increase awareness of customer choice and participation in customer solutions							
Enhance customer solution portfolio options leve	raging leading edge t	echnology						
Make JEA our customers' first and best source of utility information, and ultimately be their Trusted Advisor								
Communications: Residential and Business	R: 1 <sup>st</sup> B: 1 <sup>st</sup>	R: 1 <sup>st</sup> B: 1 <sup>st</sup>						
Billing & Payment: Residential and Business	R: 1 <sup>st</sup> B: 1 <sup>st</sup>	R: 1 <sup>st</sup> B: 2 <sup>nd</sup>						
Price: Residential and Business	R: 1 <sup>st</sup> B: 1 <sup>st</sup>	R: 2 <sup>nd</sup> B: 1 <sup>st</sup>						



### **Earn Customer Loyalty**

# **Demonstrate Community Responsibility**

FY17 Goal

2017 YE

Grow JEA's ambassador and volunteer programs to deepen customer and community engagement

Develop and communicate JEA's strategy to meet the community's future electric, water and sewer needs in an economically and environmentally responsible way

Proactively capture and incorporate the voice of customers, including silent and low-income customers, in business decisions

Demonstrate JEA's support of Economic Development in the local community

Demonstrate JEA's support of local governments and regulators through enhanced communication and collaboration

Citizenship	1 <sup>st</sup>	1 <sup>st</sup>
Corporate Citizenship	1 <sup>st</sup>	1 <sup>st</sup>



# 2018 CTAs and Initiatives

## Goals, Objectives and CTAs



- Performance Goals and Objectives
  - Keep lights on
  - Job description
- CTAs
  - Moving the organization forward
  - Increasing organization capabilities
  - Increasing productivity and efficiencies



## FY18 corporate CTAs

## **DELIVER BUSINESS EXCELLENCE**

 Increase productivity by making strategic process improvements and technology investments to facilitate \$40M/year sustained cost reductions

## **BUILD AN UNBEATABLE TEAM**

• Cultivate teamwork excellence by fostering a **Safe**, inclusive, engaged environment that embraces change.

## EARN CUSTOMER LOYALTY

Sustain nationally ranked customer satisfaction



## 2022 Vision

## Increase productivity, while improving service

- Produce more, while spending less
- Leverage technology and data to significantly reduce total costs
- Optimize capital investments and O&M resources

## More agile business

- A cost structure that is more responsive to changing customer, regulatory, and other external factors
- Greater operational flexibility and shorter-lived assets

## Improve operational performance and reliability thru Enterprise Asset Management

- Better production and process outcomes Plants
- Improved delivery performance Grids
- More efficient support systems Services

## Customer Satisfaction

 Continue providing superior customer satisfaction while streamlining business operations ... aka – improve customer satisfaction and lower costs



## **APPA 2016 Comparison**

		Custon	ner Siz	e	-		Reg	gion		_		Gene	ration	
Metric	1	2	3	4		1	2	3	4		1	2	3	4
1 Revenue per KWH														
All Retail Customers			✓					✓					✓	
Residential Customers		✓						✓				✓		
Commercial Customers			✓			✓ -							✓	
Industrial Customers			✓					✓					✓	
2 Debt to Total Assets			✓						✓				✓	
3 Operating Ratio	✓					✓ -					✓			
4 Current Ratio				✓					✓					
5a Times Interest Earned			✓				✓							
5b Debt Service Coverage				✓			✓							
6 Net Income per Revenue Dollar				✓					✓ .					
7 Uncollec. Accts per Rev Dollar	✓					✓ -								
8 Retail Cust. per Non-Pwr Gen Emp				✓					$\checkmark$					
9 Total O&M exp per KWH sold		✓				✓ -						✓		
10 Total O&M exp per Retail Cust (1)	$\checkmark$						✓							
11 Total Pwr Supply Exp per KWh sold		✓				✓ -						✓		
12 Purch Pwr Cost per KWh		✓				✓ -						✓		
13 Retail Cust per Meter Reader			✓						$\checkmark$					
14 Dist OM Exp per Retail Cust	$\checkmark$					✓ -								
15 Dist OM Expense per Circuit Mile	$\checkmark$					✓ -								
16 Cust Acct, Svc Sales exp per retail Cust			✓						✓					
17 Admin and Gen Exp per Retail Cust	<b>✓</b>						✓				✓			
18 Labor Expense per Worker - Hour	<b>✓</b>								<b>√</b>		✓ -			
19 Energy Loss Percentage			✓					✓						✓
20 System Load Factor			✓						✓					
21 Capital Expen to Depreciation Exp	✓					✓					<b>✓</b>			

(1) (Excl. Pwr Sup Exp)

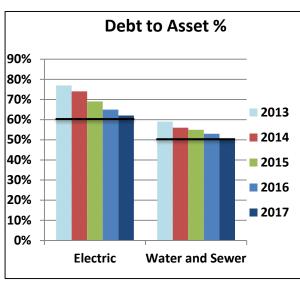
	Below Average			Above Average
Items shaded this color	1	2	3	4
Items shaded this color	1	2	3	4

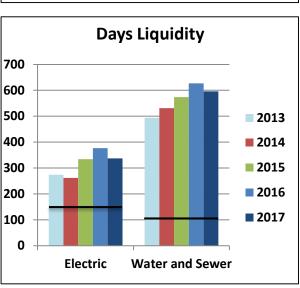
Green = Good Red = Bad

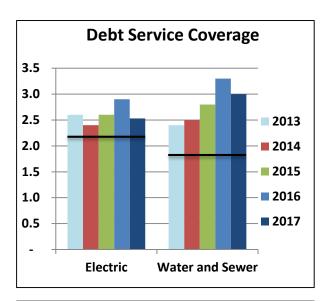
## **Key Financial Metrics**

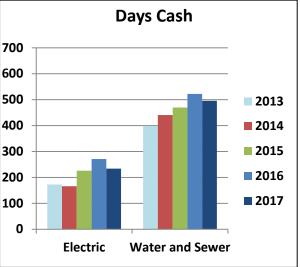
## FY2017 results demonstrated strong performance across all key financial metrics

- FY2017 Debt Service Coverage remains strong and provides financial flexibility to respond to industry challenges
- Debt-to-Asset % continues to improve and approach long-term targets
- Days Liquidity and Days Cash metrics continue to be strong and provide the ability to invest in infrastructure in both systems without the need for additional debt









<sup>-</sup> Long-term targets per JEA Pricing Policy

## II. F. 1.

## Electric System and Water and Sewer System

Reserve Fund Quarterly Report

Initially provided to the JEA Board Finance and Audit Committee May 7, 2012

## II. F. 1. Return to 03/12/2018 Agenda



## AGENDA ITEM SUMMARY

February 26, 2018

SUBJECT:	ELECTRIC SYSTEM AND V QUARTERLY REPORT	VATER AND SEWER SYSTE	M RESERVE FUND
Purpose:		Action Required	Advice/Direction
		r System Reserve Fund Quart cy into JEA's reserve fund acc	terly Report as of December 31, ounts and various cash
1	High. JEA's liquidity position i cial metrics, and carrying cost	is an important balance betwe of cash.	en operating security and
Effect: JEA op	erational needs, bond resoluti	on requirements, and credit ra	atings.
Cost or Benef credit ratings fa	•	ortant component of operating	security and flexibility, a critical
Recommende	d Board action: No action red	quired; provided for information	n only.
For additional	information, contact: Joe O	rfano, Treasurer, 665-4541	

Submitted by: PEM/MHD/JEO/BHG



## **Commitments to Action**





## INTER-OFFICE MEMORANDUM

February 26, 2018

ELECTRIC SYSTEM AND WATER AND SEWER SYSTEM RESERVE SUBJECT:

**FUND QUARTERLY REPORT** 

FROM: Paul E. McElroy, Managing Director/CEO

TO: JEA Finance and Audit Committee

Kelly Flanagan, Chair

Husein Cumber

## **BACKGROUND:**

At the May 7, 2012 Finance and Audit Committee meeting, JEA staff presented schedules reflecting historical and projected activity in JEA's Electric System and Water and Sewer System unrestricted and restricted fund balances. Many of these reserves are required under the respective System's bond resolutions or under Board approved policies such as Pricing Policy or Debt Management Policy. JEA staff also stated that these schedules would be provided to the JEA Board on a quarterly basis beginning in August 2012.

## **DISCUSSION:**

Attached are the reserve fund schedules referenced above for the period ending December 31, 2017.

## **RECOMMENDATION:**

No action required; provided for information only.

Paul E. McElroy, Managing Director/CEO

PEM/MHD/JEO/BHG

## II. F. 1. Return to 03/12/2018 Agenda

## Electric System and Water & Sewer System Reserve and Fund Balances (1)

For the Fiscal Quarter Ending December 31, 2017 (In Thousands of Dollars)

Electric System	j	Fiscal Year FY 2015		Fiscal Year FY 2016		Fiscal Year FY 2017		Fiscal Year FY 2018	<u>Detail</u> Page #
Unrestricted									
Operations/Revenue Fund	\$	46,624	Ś	56,665	Ś	54,815	Ś	55,216	
Self Insurance Reserve Fund				,		,		,	
<ul> <li>Property</li> </ul>		10,000		10,000		10,000		10,000	3
<ul> <li>Employee health insurance</li> </ul>		10,937		11,179		9,214		9,214	4
Rate Stabilization									
<ul> <li>Fuel</li> </ul>		150,742		180,115		131,716		92,095	5
<ul> <li>DSM/conservation</li> </ul>		2,886		3,515		3,695		3,625	6
<ul> <li>Environmental</li> </ul>		23,430		29,975		36,417		42,416	7
<ul> <li>Debt Management</li> </ul>		42,126		42,126		29,884		29,884	8
<ul> <li>Non-Fuel Purchased Power</li> </ul>		38,000		34,400		25,189		53,539	9
Environmental		18,662		18,556		18,556		17,647	10
Customer Deposits		42,389		41,084		42,105		42,603	11
Total Unrestricted		385,796		427,615		361,590		356,239	
Days of Cash on Hand (2)		225		270		234		202	
Restricted									
Debt Service Funds (Sinking Funds)		134,927		136,232		167,087		160,347	12
Debt Service Reserve Funds		64,595		60,582		60,582		60,582	13
Renewal and Replacement Funds/OCO (3)		145,711		192,179		201,368		195,467	14
Construction Funds									15
Total Restricted		345,233		388,993		429,037		416,396	
Total Electric System	\$	731,029	\$	816,608	\$	790,627	\$	772,635	
Water and Sewer System									
Unrestricted									
Operations/Revenue Fund Rate Stabilization	\$	22,588	\$	42,948	\$	69,199	\$	46,767	
Debt Management		20,290		20,290		14,209		14,209	16
Environmental		100000 <b>F</b> 0710000000		1,699		5,214		9,748	17
Customer Deposit		13,255		13,910		15,086		15,270	18
Total Unrestricted		56,133		78,847		103,708		85,994	
Days of Cash on Hand (2)		466		528		496		441	
Bouldered.									
Restricted		67.720		CF 410		02.200		04 727	10
Debt Service Funds (Sinking Funds) Debt Service Reserve Funds		67,720		65,410		82,208		81,727	19
Renewal and Replacement Funds		108,849		108,086		107,488		102,850	20
R&R/OCO (4)		76.020		76.020		54,699		E4 440	21
Capacity Fees/State Revolving Loans		76,020 90,912		76,020 103,411		95,620		54,440 57,590	21 22
Capacity rees/state Revolving Loans     Environmental		19,245		2,659		1,839		2,067	23
Construction Funds		664		152		1,039		-	24
Total Restricted	2	363,410		355,738		341,869		298,674	27
		555,410		333,730		3.1,003		233,074	
Total Water & Sewer System	\$	419,543	\$	434,585	\$	445,577	\$	384,668	

<sup>(1)</sup> This report does not include Scherer, SJRPP, DES or funds held on behalf of the City of Jacksonville.

<sup>(2)</sup> Days of Cash on Hand includes R&R Fund in the cash balances, and includes the Contribution to the City of Jacksonville General Fund with the Operating Expenses net of Depreciation.

<sup>(3)</sup> Balance includes \$47,000 of Electric System Renewal and Replacement Reserve for MADS calculation.

<sup>(4)</sup> Balance includes \$20,000 of Water & Sewer System Renewal and Replacement Reserve for MADS calculation.

## **Funds Established Per the Bond Resolutions**

Fund/Account Description	Electric System	Water and Sewer System
Revenue Fund	Net Revenues (i.e. Revenues minus Cost of Operation and Maintenance), pledged to bondholders, balance available for any lawful purpose after other required payments under the bond resolution have been made.	Pledged to bondholders; balance available for any lawful purpose after other required payments under the bond resolution have been made, however, revenues representing impact fees may only be used to finance costs of expanding the system or on the debt service on bonds issued for such expansion purposes.
Rate Stabilization Fund	Not pledged to bondholders; available for any lawful purpose.	Pledged to bondholders; able to transfer to any other fund or account established under the resolution or use to redeem Bonds.
Subordinated Rate Stabilization Fund	Pledged to bondholders; available for any lawful purpose.	Pledged to bondholders; available for any lawful purpose.
Debt Service Account	Pledged to bondholders; used to pay debt service on bonds.	Pledged to bondholders; used to pay debt service on bonds.
Debt Service Reserve Account	Pledged to bondholders; used to pay debt service on bonds in the event revenues were insufficient to make such payments.	Pledged to bondholders; used to pay debt service on bonds in the event revenues were insufficient to make such payments.
Renewal and Replacement Fund	Not pledged to bondholders but required amounts deposited into this Fund pursuant to the bond resolution are limited as to what they can be spent on (e.g. capital expenditures and, bond redemptions).	Pledged to bondholders; but required amounts deposited into this Fund pursuant to the bond resolution are limited as to what they can be spent on (e.g. capital expenditures and, bond redemptions).
Construction Fund	Pledged to bondholders; applied to the payment of costs of the system.	Pledged to bondholders; applied to the payment of costs of the system.
Subordinated Construction Fund	Pledged to bondholders; applied to the payment of costs of the system	Pledged to bondholders; applied to the payment of costs of the system
Construction Fund - Construction Reserve Account	Pledged to bondholders; applied to fund downgraded reserve fund sureties.	Pledged to bondholders; applied to fund downgraded debt service reserve fund sureties.
General Reserve Fund	Not pledged to bondholders; available for any lawful purpose.	n/a

Regardless of whether the Funds/Accounts are designated as pledged, in the event that monies in the Debt Service Account are insufficient to pay debt service on the bonds, pursuant to the respective bond resolutions, amounts in the various Funds/Accounts are required to be transferred to the respective Debt Service Accounts and used to pay debt service.

## Electric System Self Insurance - Property

For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Budget Appropriation

Metric: Budgeted Deposit = \$10 million

Definitions and Goals: JEA's self-insurance fund is for catastrophic damage to JEA's electric lines (transmission and distribution) caused by the perils of hurricanes, tornadoes, and ice storms. This fund was established in October, 1992, as an alternative to JEA's procurement of commercial property insurance.

	Actual as of 12/31/	of 12/31/	/2017			Full Year					Pro	Projection		disheroping
	Current				2018	2018	ā	Prior Year						
(In Thousands)	Quarter	Year	-to-Date	S.	Forecast	Budget		Actual	. 4	2019		2020	(A)	2021
Opening Balance Additions:	\$ 10,000	\$	10,000	₩.	10,000	N/A	Φ.	10,000	٠	10,000	\$	10,000	₩.	10,000
Reserve Contribution						N/A		1						
Sub-total Deductions: Reserve Withdrawal	s,	ω		φ.		·     ·	\s\		w	T	\$		<b>ν</b>	
						N/A								
Sub-total	\$	\s\ -		\$		\$	\s\		Ş		↔	Ē	\$	
Enging Balance	\$ 10,000	s	10,000	S	10,000	N/A	s	10,000	s	10,000	s	10,000	s	10,000

					Hist	Historical							Statistical	tical			
AAAN, AAAA GALOOTA	S 20.5	2013		2014	· NI	2015	, 1	2016		2017	Low	Σ	Median		Mean	т	High
Opening Balance Additions:	\$	10,000 \$ 10,000	s,		δ.	10,000	\$	10,000	₩.	10,000	\$ 10,000	<b>⋄</b>	10,000	s	10,000	<b>⋄</b>	10,000
Reserve Contribution											ĭ		î		ā		1
u do salana na											ř		ï		ī		1
Sub-total Deductions:	\$	1	\$	1	- δ		\$	1	s,		•		ŕ		ī		1
Reserve Withdrawal											ì		Ť		í		,
ringoles.											i		ï		¥		1
											t		i		ř		,
Sub-total	s	•	\$	1	\$	1	\$	1	ς.	t							
Ending balance	\$	10,000	\$	10,000	\$	10,000	\$	10,000	\$	10,000	\$ 10,000 \$		10,000	\$	10,000 \$ 10,000 \$	\$	10,000

# Electric System Self Insurance - Employee Health Insurance

## For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Florida Statute for self insured government plans

Metric: An actuary calculates amount annually

Definitions and Goals: This reserve fund is a requirement under Florida Statute 112.08 that requires self insured government plans to have enough money in a reserve fund to cover the Incurred But Not Reimbursed (IBNR) claims and a 60 day surplus of claims. The IBNR claims are claims that would still need to be paid if the company went back to a fully insured plan or dropped coverage all together. An actuary calculates this amount annually.

		Actual as of 12/31,	12/31/20	/2017			Full Year					Pro	Projection	Charles and	Section States
	J	Current			. 4	2018	2018	Pr	Prior Year						
(In Thousands)	ď	Quarter	Year .	Year -to-Date	S.	Forecast	Budget		Actual	,	2019	(2)	2020		2021
Opening Balance Additions:	\$	9,214	\$	9,214	\$	9,214	N/A	v.	11,179	\$	9,214	\$	9,214	\$	9,214
Employee Contributions Retiree & Other Contributions		1,494		1,494		6,155	N/A		5,862		6,463		98/9		7,125
Employer Contributions		4,650		4,650		21,915			19,004		22,898		23,940		6,154 25,041
Sub-total Deductions:	ς.	8,071	\$	8,071	\$	34,900	\$	S	31,309	\$	36,600	S	38,400	\$	40,300
Payments for Claims Actuary & Other Payments		7,682		7,682		32,574 2,326	N/A		30,994		34,228 2,372		35,980 2,420		37,832 2,468
Sub-total	\$	8,172	s	8,172	\$	34,900	\$	s	33,274	٠	36,600	\$	38,400	φ.	40,300
Ending Balance	\$	9,113	\$	9,113	\$	9,214	N/A	\$	9,214	\$	9,214	↔	9,214	φ.	9,214

(In Thousands)         2013         2014         20           Opening Balance         \$ 15,914         \$ 20           Additions:         5,893         4,573           Employee Contributions         5,701         5,188           Employer Contributions         20,629         14,252           Sub-total         \$ 32,223         \$ 24,013           Deductions:         Payments for Claims         29,354         27,157           Actuary & Other Payments         2,395         2,021					Stat	Statistical		Nathana.
since         \$         15,440         \$         15,914         \$           Contributions         5,893         4,573         4,573           Other Contributions         20,629         14,252         14,252           \$         32,223         \$         24,013         \$           for Claims         29,354         27,157         Other Payments         2,395         2,021	<u>2015</u>	2016	2017	Low	Median	Mean	High	-
Contributions         5,893         4,573           Other Contributions         5,701         5,188           Contributions         20,629         14,252           \$ 32,223         \$ 24,013         \$           for Claims         29,354         27,157           Other Payments         2,395         2,021	15,914 \$ 10,749	\$ 10,937	\$ 11,179	\$ 10,749	\$ 11,179	\$ 12,844	\$	15,914
Other Contributions         5,701         5,188           Contributions         20,629         14,252           \$ 32,223         \$ 24,013         \$           for Claims         29,354         27,157           Other Payments         2,395         2,021		5,460	5,862	4,573	5.460	5.447		5 893
Contributions         20,629         14,252           \$ 32,223         \$ 24,013         \$           for Claims         29,354         27,157           Other Payments         2,395         2,021	5,188 5,141	5,694	6,443	5,141	5,694	5,633		6,443
for Claims 29,354 27,157 5,021		24,231	19,004	14,252	20,629	20,067	7	24 231
for Claims 29,354 27,157 Other Payments 2,395 2,021	\$	\$ 35,385	\$ 31,309				•	-
29,354 nents 2,395								
2,395		32,946	30,994	27.157	30.408	30.172	ď	32 946
	2,021 2,212	2,197	2,280	2,021	2,212	2,221	1	2,395
Sub-total \$ 31,749 \$ 29,178 \$		\$ 35,143	\$ 33,274					
Ending balance \$ 15,914 \$ 10,749 \$		\$ 11,179	\$ 9,214	\$ 9,214	\$ 10,937	\$ 11,599	\$	15.914

- Self Insurance for Employee Health Insurance began in July 2009.
- Projections are using the 8% rate of increase based on information obtained from the Actuarial Memorandum and Report. Calendar year data is presented above in fiscal year format.

# Electric System Rate Stabilization - Fuel Management

## For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Bond Resolution and Pricing Policy

Metric: Targeted 15% of total annual projected energy costs

providing consistent revenue collection for expenditures impacted by external factors such as fuel, debt management and regulatory requirements or initiatives. Established pursuant to the section VII and Section IX of the Pricing Policy, the Fuel Reserve target is 15% of the greater of (a) the maximum 12-month historical fuel cost or (b) the projected 12-month fuel cost. Withdrawals from the Rate Stabilization Fund for fuel Definitions and Goals: The Electric System Bond Resolution authorizes the establishment of a Rate Stabilization Fund in which contributions or withdrawals shall be made as set forth in the current annual budget stabilization are limited to the following purposes: (a) to reduce the variable fuel rate charge to the customers for a determined period of time; (b) to reduce the excess of the actual fuel and purchased power or an amount otherwise determined by an authorized officer of JEA. The Rate Stabilization Fund provides a means to minimize the year-to-year impact to customer charges and support financial metrics by expense for the fiscal year over the variable fuel rate revenues; (c) to be rebated back to the customers as a credit against the electric bill; and/or (d) to reimburse the costs associated with any energy risk management activities.

		Actual as of	of 12/31/2017	2017			Full	Full Year					-	Projection		
	O	Current				2018	20	2018	Pr	Prior Year						
(In Thousands)	O	Quarter	Year	Year -to-Date	ŭ	Forecast	Buc	Budget		Actual		2019		2020		2021
Opening Balance Additions:	s	\$ 131,716	\$	131,716	\$	\$ 131,716	Z	N/A	\$	\$ 180,115	\$	92,095	\$	95,974	\$	100,497
Contributions						,				2,845		3,879		4,523		
Sub-total	S		φ.	1	<		\$	E	\$	2,845	S	3,879	\$	4,523	φ.	
Withdrawals Customer Fuel Rebate Credit		9,438		9,438		39,621		32,800		51,244						10,689
Sub-total Ending Balance	\$ \$	\$ 9,438 \$ 122,278	s s	9,438	s s	39,621 92,095	\$	32,800 N/A	\$	51,244	\$ \$	95,974	ww	100,497	S	10,689

					His	Historical								Statistical	tical			
		2013		2014		2015		2016		2017		Low	2	Median	-	Mean		High
Opening Balance	φ	92,362	\$	108,289	\$	105,457	\$	150,742	\$	180,115	<b>ب</b>	92,362	\$	108,289	\$	127,393	\$	180,115
Contributions		52,523		22,496		95,224		85,979		2,845		2,845		52,523		51,813		95,224
horaca accide												1		t		ı		ì
Sub-total Deductions:	ς, I	52,523	\$	22,496	\$	95,224	\$	85,979	S	2,845		T.		r		ı		
Withdrawals Fuel Rebate Credit		36,596		25,328		49,939		909'95		51,244		51,244 25,328		51,244 43,268		51,244		51,244
Sub-total	v	36 596	v	75 278		70 020	v	202 22	·	1 244		1		1		1		1
Ending balance	٠ \	108,289	·   «	105,457	s s	150,742	٠ •	180,115	\$	1	\$	105,457	s	\$ 105,457 \$ 131,716 \$ 135,264 \$ 180,115	φ.	135,264	φ.	180,115

## Observations:

Actual and historical numbers reflect fuel recovery contributions and withdrawls on a gross basis. Forecast and projected numbers reflected on a net basis. The fuel recovery charge ended 12/31/11.

# Electric System Rate Stabilization - Demand Side Management (DSM)

## For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Bond Resolution and Pricing Policy

Metric: \$0.50 per 1,000 kWh plus \$0.01 per kWh residential conservation charge for consumption greater than 2,750 KWh monthly

budget or an amount otherwise determined by an authorized officer of JEA. The Rate Stabilization Fund provides a means to minimize the year-to-year impact to customer charges and support financial metrics by providing consistent revenue collection for expenditures impacted by external factors such as fuel, debt management and regulatory requirements or initiatives. Pursuant to section VII of the Pricing Policy, \$0.50 per 1,000 kWh plus \$0.01 per kWh residential conservation charge for consumption greater than 2,750 kWh monthly. These revenue sources are to fund demand side management and conservation Definitions and Goals: The Electric System Bond Resolution authorizes the establishment of a Rate Stabilization Fund in which contributions or withdrawals shall be made as set forth in the current annual programs.

A) reasoning		Actual as of 12/31,	12/31/2	1/2017			Ful	Full Year	STATE	1263015020			Pr	Projection	Bullet Ser	
	ರ	Current			2	2018	21	2018	Prio	Prior Year						
(In Thousands)	ā	Quarter	Year	r -to-Date	FO	Forecast	Bu	Budget	Ä	Actual	1.41	2019		2020		2021
Opening Balance	\$	3,695	\$	3,695	\$	3,695	2	N/A	₩.	3,515	\$	3,625	\$	3,397	⋄	3,169
Additions Contributions Other		1,535		1,535		7,029		7,515		6,685		6,871		6,871		6,871
Sub-total	\$	1,535	₩.	1,535	₩.	7,029	s,	7,515	φ.	6,685	\$	6,871	φ.	6,871	φ.	6,871
Withdrawals		1,199		1,199		2,099		8,126		6,505		7,099		7,099		7,099
Sub-total Ending Balance	v v	1,199	w w	1,199	<b>₩</b> ₩	7,099	sh  2	8,126 N/A	<b>₩</b>	6,505	w v	7,099	w	7,099	w	7,099

					Hist	Historical								Stati	Statistical			
		2013		2014	2	2015	2	2016	2	2017	_	Low	2	Median		Mean		High
Opening Balance Additions:	\$	6,912 \$	\$	3,891	φ.	3,570	₩.	2,886	₩.	3,515	₩	2,886	↔	3,570	₩.	4,155	₩	6,912
Contributions		6,683		6,929		7,059		7,232		6,685		6,683		6,929		6,918		7,232
I drister if orn key Fd												I		ì		1.		1
												1		ï		ı		ı
Sub-total	\$	6,683	\$	6,929	φ.	7,059	\$	7,232	\$	6,685								
Deductions: Withdrawals		9.704		7.250		7 743		6 603		505		6 505		7 250		7 561		707.0
								2000		2000		0,00		0.5,1		TOC'/		9,704
												ı		ï		£		ı
												į		ī		1		1
Sub-total	φ.	9,704	φ,	7,250	\$	7,743	\$	6,603	ς۰	6,505								
Ending balance	φ.	3,891	❖	3,570	\$	2,886	\$	3,515	\$	3,695	ş	2,886	φ.	3,570	٠	3,511	Ŷ	3,891

Rate Stabilization Fund for Demand Side Management began in April 2009.

# Electric System Rate Stabilization - Environmental

## For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Bond Resolution and Pricing Policy

Metric: \$0.62 per 1,000 kWh

Definitions and Goals: The Electric System Bond Resolution authorizes the establishment of a Rate Stabilization Fund in which contributions or withdrawals shall be made as set forth in the current annual budget or an amount otherwise determined by an authorized officer of JEA. The Rate Stabilization Fund provides a means to minimize the year-to-year impact to customer charges and support financial metrics by providing consistent revenue collection for expenditures impacted by external factors such as fuel, debt management and regulatory requirements or initiatives. Deposits to this fund began in fiscal year 2010 for amounts representing the Electric System Environmental Charge (\$0.62 per 1000 kWh). Withdrawals from this reserve will represent payments for regulatory initiatives such as the premium cost of renewable energy generation which is considered available for JEA's capacity plans.

	Act	Actual as of 12/31,	12/31/2017	17			Full Year	ear					Pro	Projection		
	Current	ent			20	2018	2018	8:	Prio	Prior Year						
(In Thousands)	Quarter	ter	Year -t	-to-Date	Fore	Forecast	Budget	get	Αc	Actual	, 1	2019	week!	2020		2021
Opening Balance Additions:	₩.	36,417	\$	36,417	\$	36,417	N/A	٠ ح	\$	29,975	φ.	42,416	\$	48,516	\$	53,396
Contributions		1,770		1,770		7,542		7,942		7,384		7,320		7,320		7,320
Sub-total	\$	1,770	\$	1,770	₩.	7,542	ψ.	7,942	S	7,384	s,	7,320	\$	7,320	φ.	7,320
Withdrawals		9		9		1,543		2,051		942		1,220		2,440		3,660
Sub-total Ending Balance	w w	6 38,181	w w	6 38,181	<b>₩</b>	1,543	\$ N/A	2,051 A	↔	942 36,417	ww	1,220	s s	2,440	w w	3,660

					Hist	Historical								Statistical	tical			
	-11	<u>2013</u>		2014	3-3-1	2015		2016	- 41	2017		Low	2	Median	2	Mean		High
Opening Balance	\$	5,343	₩.	5,343 \$ 10,023	⋄	16,639	\$	23,430	\$	29,975	<b>⋄</b>	5,343	<b>₩</b>	16,639	<b>ب</b>	17,082	₩.	29,975
Contributions		5,650		7,395		7,586		7,700		7,384		5,650		7,395		7,143		7,700
														ı		ï		,
Sub-total Deductions:	44	5,650	\$	7,395	\$	7,586	\$	7,700	\$	7,384		i		1		1.		1
Withdrawals		970		779		795		1,155		942		779		942		928		1,155
												ī		,		x		ı
Sub-total	v	020		OFF.		100			4	0.00		т		ı		ī		,
Ending balance	٠ \$	10,023	۰ ۰	16,639	Λ	23,430	^  <b>∿</b>	1,155 29,975	Λ \ \$	942 36,417	\$	10,023	↔	23,430	↔	10,023 \$ 23,430 \$ 23,297 \$	↔	36,417

## Observations:

Rate Stabilization Fund for Environmental began in June 2010.

# Electric System Rate Stabilization - Debt Management

## For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Bond Resolution and Pricing Policy

ourpose of managing JEA's debt portfolio. Deposits to this reserve reflect the difference in the actual interest rates for interest expense on the unhedged variable rate debt as compared to the budgeted assumptions reserve contributions shall cease in the event the reserve balance exceeds the cap of five percent of the par amount of the total outstanding variable rate debt of all systems. Withdrawals from the Rate Stabilization Definitions and Goals: The Electric System Bond Resolution authorizes the establishment of a Rate Stabilization Fund in which deposits or withdrawals shall be made as set forth in the current annual budget or an contribution (the remaining 50%). The reserve contributions will be calculated on a system by system basis; however, based on the calculation, any mandatory deposit will exclude the District Energy System. The for interest expense on the unhedged variable rate debt. Additionally, deposits can be made from excess debt service budget over the actual debt service expense for any fiscal year. However, the total amounts deposited (in addition to actual debt service costs for the fiscal year) cannot exceed the total amount of the budgeted debt service for any fiscal year. At a minimum, 50% of the calculated reserve contribution, if Fund for Debt Management Strategy can be made for expenses related to market disruption in the capital markets, disruption in availability of credit or unanticipated credit expenses, or to fund variable interest amount otherwise determined by an authorized officer of JEA. The Rate Stabilization Funds provide a means to minimize the year-to-year impact to customer charges and support financial metrics by providing consistent revenue collection for expenditures impacted by external factors such as fuel, debt management and regulatory requirements or initiatives. Deposits are made to this Rate Stabilization Fund for the any, will be recorded and deposited each fiscal year. Debt and Investment Committee will review and record at their option an additional contribution amount, up to the full value of the calculated reserve Metric: Difference in actual interest rates for interest expense on the unhedged variable rate debt as compared to the budgeted assumptions for interest expense on unhedged variable rate debt costs in excess of budget.

	Actual	Actual as of 12/31/2017	/2017			Full Year					Pro	Projection		School contra
	Current			2	2018	2018	4	Prior Year						
(In Thousands)	Quarter	Ye	Year -to-Date	For	Forecast	Budget		Actual		2019	21	2020		2021
Opening Balance Additions:	\$ 29,884	٠ د	29,884	<>	29,884	N/A	ν	42,126	\$	29,884	\$	29,884	\$	29,884
Contributions						N/A		ï						
Sub-total	\$	<sub>0</sub>		4		\$	\sqrt{s}	E	40		φ.		₩.	
Withdrawals								12,242						
Sub-total	\$	ا -	'	\$		- \$	\$	12,242	\$		\$		\$	
Ending Balance	\$ 29,884	\$ \$	29,884	٠,	29,884	N/A	\$	29,884	ş	29,884	s	29,884	s	29,884

					Hist	Historical								Statistical	tical			2000
		<u>2013</u>	•	2014		2015	, vI	2016		2017		Low	2	Median	2	Mean		High
Opening Balance Additions:	\$	41,611	\$	42,126	₩.	42,126	₩.	42,126	\$	42,126	\$	41,611	<>	42,126	<b>ب</b>	42,023	<b>⋄</b>	42,126
Contributions		6,581										6,581		6,581		6,581		6,581
0.000-6600												ı		r		ĭ		,
Sub-total Deductions:	s,	6,581	w		₩.	1	\$	6	s,			,		T		•		ı
Withdrawals		990'9								12,242		990'9		9,154		9,154		12,242
												ı		r		ř		
Sub-total	5	990.9			V		V		v	17 247		,		SID:		ï		
Ending balance	٠,	42,126	\$	42,126	· s	42,126	٠ \$	42,126	<b>→</b>	ı I	❖	29,884	\$	42,126 \$	\$	39,678	\$	42,126

Rate Stabilization Fund for Debt Management began in May 2009.

# Electric System Rate Stabilization - Non-Fuel Purchased Power

## For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Bond Resolution and Pricing Policy

consistent revenue collection for expenditures impacted by external factors such as fuel, debt management and regulatory requirements or initiatives. Deposits to the Rate Stabilization Fund for Non-Fuel Purchased Definitions and Goals: The Electric System Bond Resolution authorizes the establishment of a Rate Stabilization Fund in which deposits or withdrawals shall be made as set forth in the current annual budget or an amount otherwise determined by an authorized officer of JEA. The Rate Stabilization Funds provide a means to minimize the year-to-year impact to customer charges and support financial metrics by providing Metric: Difference in actual interest rates for interest expense on the unhedged variable rate debt as compared to the budgeted assumptions for interest expense on unhedged variable rate debt

Power Stabilization during the fiscal year are made with the approval of the CEO or CFO, provided such deposits are not in excess of JEA's total operating budget for the current fiscal year. Withdrawals from the Rate Stabilization Fund for Non-Fuel Purchased Power are to reimburse the costs associated with any non-fuel purchased power activities. Withdrawals can be made as necessary during the fiscal year and requires the approval of the CEO or the CFO.

	Actua	Actual as of 12,	12/31/2017				Full	Full Year					Pro	Projection		
	Current				2018	83	20	2018	Prio	Prior Year						
(In Thousands)	Quarter		Year -to-Date	Date	Forecast	cast	Buc	Budget	Ă	Actual	7.41	2019		2020		2021
Opening Balance Additions:	\$ 25,189	681	22	25,189	\$	25,189	z	N/A	\$	34,400	٠	53,539	δ	56,842	\$	36,842
Contributions					5400	40,000				t		17,630				
Sub-total	₩.				\$	40,000	\$		\$		s	17,630	s		\$	
Withdrawals	2,	2,842		2,842	J. 400.000	11,650		11,745		3,600		14,327		20,000		24,194
Sub-total Ending Balance	\$ 2,842	2,842	22	2,842	w w	11,650 53,539	φ Z	11,745 N/A	\$ \$	3,600	s s	14,327	\s\s	20,000	s s	24,194

Opening Balance         \$ 2014         2015         2016         2016         2017         Low         Median         Median         Mean           Opening Balance         \$ 12,000         \$ 12,000         \$ 38,000         \$ 34,400         \$ 12,000         \$ 16,880         \$ 16,406						Hist	Historical								Stati	Statistical			
\$         12,000         \$         38,000         \$         34,400         \$         12,000         \$         12,000         \$         12,000         \$         12,000         \$         12,000         \$         15,000         \$         15,000         \$         15,000         \$         15,000         \$         15,000         \$         15,000         \$         15,000         \$		2013		2	014		2015	201	9]	. 41	2017		Low	_	Aedian	_	Wean		High
12,000   15,000   1	Opening Balance Additions:	\$	0	\$	c	\$	12,000	\$	38,000	\$	34,400	<.	•	⋄	12,000	\$	16,880	\$	38,000
S	Contributions				12,000		26,000						12,000		19,000		19,000		26,000
S													т		r		į		1
ls 3,600 9,211 3,600 6,406 6,406 6,406 6,406 6,406 c. 4,006	Sub-total Deductions:	\$	11	\$	12,000	\$	26,000	\$	'	\$			r				1		ì
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Withdrawals								3,600		9,211		3,600		6,406		6,406		9,211
\$         -         \$         -         \$         3,600         \$         9,211           \$         -         \$         12,000         \$         38,000         \$         34,400         \$         25,189         \$         21,918																			r
\$ - \$ 12,000 \$ 38,000 \$ 34,400 \$ 25,189 \$ - \$ 25,189 \$ 21,918	Sub-total	\$		\$		\$		\$	3,600	s	9,211				ı				ī
	Ending balance	\$	c	\$	12,000	\$	38,000	\$	34,400	ş	25,189	\$	×	\$	25,189	\$	21,918	ş	38,000

## Observations:

The Non-Fuel Purchased Power Rate Stabiliation Fund began in FY 2014.

## **Electric System Environmental Reserve**

For the Fiscal Quarter Ending December 31, 2017 Reserve/Fund Authorization: Pricing Policy

Metric: Target equals the balance in the environmental liability account

Definitions and Goals: This reserve represents the initial amounts collected from the Electric System Environmental Charge and will be deposited until the balance in this reserve equals the balance in the environmental liability account. Withdrawals from this account will represent payments for these liabilities.

	Actual as of	Actual as of 12/31/2017		Full Year			Projection		
***************************************	Current		2018	2018	Prior Year				
(In Thousands)	Quarter	Year -to-Date	Forecast	Budget	Actual	2019	2020	<u>20</u>	2021
Opening Balance	\$ 17,672	\$ 17,672	\$ 17,672	N/A	\$ 18,556	\$ 17,647	\$ 17,647	s	17,647
Contributions			i	N/A	•				
Sub-total	\$	\$	\$	\$	\$	\$	\$	ν	1
Withdrawals	25	25	25	N/A	884				
Sub-tota	\$ 25	\$	30	-	200		4	,	
Ending Balance	\$ 17,647	\$ 17,647	\$ 17,647	N/A	\$ 884	\$ 17,647	\$ 17,647	w	17,647

					Hist	Historical								Statistical	tical			
	· 41	2013		2014	1.01	2015		2016		2017		Low	2	Median	2	Mean	_	High
Opening Balance Additions:	s	18,359		\$ 18,662	\$	18,662	\$	18,662	ς,	18,556	₩	18,359	₩	18,662	<b>↔</b>	18,580	<b>ب</b>	18,662
Contributions		970										970		970		970		970
n,economic di seconomic di seco												ť				ı		ï
Sub-total Deductions:	s	970	s,		ς,		\$	1	\$			ı		ı		ī		ī
Withdrawals		<b>299</b>						106		884		106		299		552		884
												ì				1		
Sub-total	\$	299	v		v		v	106	V	700		T.		ř		ī		Ī
Ending balance	· \$	18,662	·   •	18,662	\$	18,662	٠	18,556	٠ •		٠	17,672 \$	\$	18,662 \$	٠	18,443	φ.	18,662

Observations:

• The Environmental Reserve began in FY 2008.

## **Electric System Customer Deposits**

For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Management Directive 302 Credit and Collections and Internal Procedure CR40400 MBC302

Metric: Internal procedure CR40400 MBC302 Credit and Collections
Definitions and Goals: Pursuant to internal procedure CR40400 MBC302 Credit and Collections, JEA accesses customers a deposit that may be used to offset any future unpaid amounts during the course of providing utility

service to a customer.

	9	Actual as of	12/31/2017	117			Full Year					Pro	Projection		
	D.	Current				2018	2018	Pr	Prior Year						
(In Thousands)	ď	Quarter	Year -	Year -to-Date	S.	Forecast	Budget		Actual		2019	2	2020	20	2021
Opening Balance Additions:	\$	42,105	\$	42,105	ν	42,105	N/A	\$	41,084	\$	42,603	٠	42,603	φ.	42,603
Net Customer Activity Loan Repayment to ES Revenue Fund		498		498		498	N/A		1,021						
Sub-total	↔	498	\$	498	S.	498	\$	\$	1,021	\$		δ.	ic	\$	
Net Customer Activity Loan to ES Revenue Fund							N/A		1 )	(4)					
Sub-total Ending Balance	v v	42,603	\$\\$	42,603	\$ \$	42,603	\$ N/A	s s	42,105	\$ \$	42,603	\$	42,603	\$ \$	42,603

					Histo	Historical	が変え							Statistical	tical			
		2013		2014	2	2015	(3)	2016	7	2017	7	Low	Σ	Median	Σ	Mean	Ι	High
Opening Balance Additions:	\$	43,454 \$	\$	44,882	\$	42,688	\$	42,389	\$	41,084	<b>ب</b>	41,084	\$	42,688	<>	42,899	⋄	44,882
Net Customer Activity Loan Repayment to ES Revenue Fund		1,430								1,021		1,021		1,226		1,226		1,430
														e e		t		ī
Sub-total	\$	1,430	\$	1	ς		\$		\$	1,021		ı				ı		ī
Deductions: Net Customer Activity Loan to ES Revenue Fund		2		2,194		299		1,305				7		802		950		2,194
Sub-total Ending balance	w w	44,882	s s	2,194	S	299	s s	1,305	\$ \$	42,105	φ.	41,084 \$	<b>ب</b>	42,389	۰	42,630	v,	44,882

Observations:

• JEA is in the process of implementing a prepaid meter program which could reduce customer deposits starting in Fiscal Year 2014.

## Electric System Debt Service Sinking Fund

## For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Bond Resolution

Metric: Accrued interest and principal currently payable on fixed and variable rate bonds pursuant to the Bond Resolutions

Definitions and Goals: JEA is required monthly to fund from revenues an amount equal to the aggregate of the Debt Service Requirement for senior and subordinated bonds for such month into this account. On or before such interest payment date, JEA shall pay out of this account to the paying agents the amount required for the interest and principal due on such date.

		Actual as of 12/31/2017	12/31/2	017			Full Year					Ā	Projection		ACCEPTANCE OF THE PARTY OF THE
	O	Current				2018	2018	а.	Prior Year						
(In Thousands)	O	Quarter	Year	Year -to-Date	ñ	Forecast	Budget		Actual		2019		2020		2021
Opening Balance Additions:	₩.	\$ 167,087	ν,	167,087	\$	167,087	N/A	\$	136,232	٠	160,347	w	151,213	s,	93,455
Revenue Fund Deposits Bond funded interest		49,966		49,966		208,066			209,450		198,989		141,056		136,439
Sub-total	s,	49,966	\$	49,966	\$	208,066	\$	\$	209,450	\$	198,989	s	141,056	s	136,439
Principal and Int Payments		172,279		172,279		214,806	N/A		178,595		208,123		198,814		139,464
Sub-total	\$	172,279	\$	172,279	\$	214,806	\$	٠,	178,595	\$	208,123	↔	198,814	ς	139,464
Ending Balance	\$	44,774	\$	44,774	\$	160,347	N/A	\$	167,087	ş	151,213	s	93,455	Ş	90.430

					Hist	Historical								Statistical	tical			
		2013		2014		2015		2016		2017		Low	2	Median	_	Mean	_	High
Opening Balance	\$	107,754 \$ 101,305	δ.	101,305	\$	120,458	\$	134,927	\$	136,232	<b>ب</b>	101,305	₩.	120,458	↔	120,135	❖	136,232
Revenue Fund Deposits Bond funded interest		159,072		167,340		181,006		177,847		209,450		159,072		177,847		178,943		209,450
Sub-total Dadurtions:	\$	159,072 \$ 167,340	\$	167,340	\$	181,006	\$	\$ 177,847	s	209,450		,		ī		1		1
Principal and Int Payments		165,521		148,187		166,537		176,542		178,595		148,187		166,537		167,076		178,595
Sub-total	v	165 521	v	148 187	V	166 527	v	176 543		101 071		t		1		1		1
Ending balance	٠ ه	101,305	~ \	120,458	٠ ٠	134,927	٠ ٥	136,232	n s	167,087	\$	\$ 101,305 \$ 134,927 \$ 132,002	٠	134,927	٠		٠	167,087

- September 30th ending balances are used to pay the October 1st interest and principal payments.
  - This report does not include any Scherer debt service sinking funds.
- Timing differences occur due to the accrual of debt service during one fiscal year and the payment in the following fiscal year (primarily fixed rate principal and interest on October 1st of the following fiscal year).

## **Electric System Debt Service Reserve Account**

## For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Bond Resolution

Metric: Maximum interest payable on outstanding senior Electric System bonds as required by the Bond Resolutions

Definitions and Goals: This reserve will be funded, maintained and held for the benefit of bondholders as specified in the Supplemental Resolution authorizing the sale of the bonds to pay principal and/or interest on the bonds should revenues from operations not be sufficient for such purpose in accordance with the appropriate bond resolution. It is JEA's current practice to fund this reserve account with cash from the sale of bonds; however, revenues may be utilized to fund this reserve if necessary.

	Actual as of 12/31/	s of 12/3	31/2017			Full	Full Year Budget Amounts	ounts				4	Projection		
	Current				2	2018	2018	T.	Prior Year						
(In Thousands)	Quarter	>	Year -to-	r -to-Date	Po	Forecast	Budget		Actual		2019		2020	(4)	2021
Opening Balance Additions:	\$ 60,582	\$ 		60,582	٠,	60,582	N/A	<b>⋄</b>	60,582	\$	\$ 60,582	S	60,582	٠٠	60,582
Sub-total	<	s   -			\$	9	\$	%	r	φ.	i	\$	1	ss.	
Release to Revenue Fund							N/A								nana demonstrata d
Sub-total	\$	\$		•	\$	1	\$	\ \ \	ľ	s	i	\$	,	S	,
Ending Balance	\$ 60,582			60,582	\$	60,582	N/A	\$	60,582	\$	60,582	S	60,582	s	60,582

					Historic	Historical Actuals			100				Sta	Statistical			
and makingan since		<u>2013</u>		2014	•	2015		2016		2017	Low	Σ	Median		Mean	_	High
Opening Balance Additions:	٠٠	72,226 \$	\$	64,841	\$	64,841	\$	64,595	φ.	60,582	\$ 60,582	\$	64,841	\$	65,417	<b>⇔</b>	72,226
Proceeds from Bonds								1		ĩ	•		í		1		,
													ī		1		
Sub-total	φ	1	\$		φ.		\$		ş	T	3		T		τ		
Deductions: Defeasance		7,385				246		4,013			246		4,013		3,881		7,385
											t		ï		1		,
Sub-total	\$	7,385	\$	-	S	246	Ş	4 013	V		1				I		ı
Ending balance	s	64,841	. \$	64,841	. ↓ \$	64,595	\ \ \	60,582	٠ \	60,582	60,582		64,595		63,088		64,841

- This report does not include any Scherer debt service reserves.
- In FY 2007, the debt service reserve requirement was satisfied 100% by the use of debt service reserve surety policies. In accordance with the bond resolution, beginning in FY 2008, cash/investments replaced the downgraded sureties due to their downgrade by the rating agencies. Sureties of \$67.6 million are still outstanding but are not eligible to be utilized as debt service reserve deposits per the Bond Resolutions.
  - increase in the reserve requirement caused by a future issuance of new money bonds and/or variable to fixed refunding bonds, (2) help satisfy cash reserve targets instituted by the rating agencies, and/or • The debt service reserve account balance is currently in excess of the the debt service reserve requirement under the bond resolution by \$8.0 million. The excess will be used, if needed, to (1) fund an (3) redeem bonds, in accordance with applicable tax laws.

# Electric Renewal and Replacement (R&R) / Operating Capital Outlay (OCO)

For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Bond Resolution, Article 21 of the City of Jacksonville Charter and Pricing Policy

Metric: Renewal and Replacement required to deposit from the revenue fund annually an amount equal to the greater of 10% of the prior year defined annual net revenues or 5% of the prior year defined gross revenues per JEA's Electric System bond resolutions. Operating Capital Outlay - by 2013 the goal is to fund all non-capacity capital expenditures.

ecover from current revenue a formula driven amount for capital expenditures which is referred to as Operating Capital Outlay. This amount is calculated separately from the R&R deposit and may be allocated funds shall be used for the purposes of paying the cost of extensions, enlargements or additions to, or the replacement of capital assets of the Electric System. In addition, as a portion of the base rate, JEA will Replacement of system assets. According to the bond resolutions the amount is equal to the greater of 10% of the prior year defined annual net revenues or 5% of the prior year defined gross revenues. The Definitions and Goals: Pursuant to the Electric System bond resolution and Article 21 of the City of Jacksonville Charter, JEA is required to deposit from the revenue fund annually an amount for Renewal and for use between capacity or non-capacity related expenditures based on the most beneficial economic and tax related financing structure incorporating the use of internal and bond funding.

	Ton Section	Actual as of 12/31/2017	12/31/2	717		AND THE PROPERTY AND ADDRESS OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN THE PERSON NAMED IN COLUMN TWO IS NAMED IN THE PERSON NAMED IN	Enll Vasr			THE PERSON NAMED IN			2	- inchie		
	. 3	Current	1-01-			2018	2018		Prior Year	'ear			Ē	rrojection		
(In Thousands)	ਰੱ	Quarter	Year	Year -to-Date	Ä	Forecast	Budget		Actual	<u>a</u>	2	2019	,	2020		2021
Opening Balance Additions:	₩.	201,368	\$	201,368	\$	201,368	N/A	ا ،	13	192,179	₩.	195,467	₩.	135,364	\$	214,673
R&R/OCO Contribution		44,401		44,401		153,818			15	196,589		201,157		290,802		200,465
Loans betw Capital Fds								£		1						
Other				1		38,181				5,074		12,340				
Sub-total	ş	44,401	ş	44,401	\$	191,999	\$	اً ا	3 20	201,663	\$	213,497	ş	290.802	ş	200.465
Deductions:																
Capital Expenditures		61,321		61,321		197,900			H	113,987		273.600		211.493		125.634
Transfers betw Capital Fds								1	,.,	37,200						
R&R/OCO Contribution																
Debt Defeasance									•	41,287						
Other		5,918		5,918												
Sub-total	٠,	67,239	\$	67,239	ş	197,900	\$	'	15	192,474	\$	273,600	\$	211,493	ş	125,634
Ending Balance	\$	178,530	\$	178,530	\$	195,467	N/A	''	3(	201,368	\$	135,364	s	214,673	\$	289,504

		30000		Ħ	Historical						Particular and the second	Statistical	stical	STANDARD SANS	SECTION SECTIO	
	2013		2014		2015		<u>2016</u>	2017		Low	-	Median		Mean		High
Opening Balance	\$ 105,235	\$	140,486	\$	146,910	\$	145,711	\$ 192,179	\$	105,235	↔	145,711	\$	146,104	<b>⇔</b>	192,179
Additions:																
R&R/OCO Contribution	124,630		85,639		110,351		200,692	196,589		85,639		124,630		143,580		200,692
Loans betw Capital Fds	T		Ē							1		1				t
Other	2,423		4,014		970		3,744	5,074		970		3,744		3,245		5.074
Sub-total	\$ 127,053	\$	89,653	\$	111,321	s	204,436	\$ 201,663				ij				
Deductions:																
Capital Expenditures	91,802		82,889		112,483		157,201	113,987		82,889		112,483		111,672		157.201
Bond Buy Back							2			2		2		7		2
Transfer to Scherer																
Loans betw Capital Fds			340		37		765	37,200								
Other			1			×,		41,287		i		,		13,762		41,287
Sub-total	\$ 91,802	\$	83,229	s	112,520	\$	157,968	\$ 192,474								
Ending balance	\$ 140,486	\$	146,910	\$	145,711	\$	192,179	\$ 201,368	s	140,486	\$	\$ 140,486 \$ 146,910 \$	\$	165,331	\$	201,368

- Other includes the Oracle Financing and Sale of Property.
- Includes \$47 million for Maximum Annual Debt Service calculation.

## Electric Construction / Bond Fund

## For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Bond Resolution

Metric: Target = Capital expenditures per year minus internal funding available

Electric System. The senior construction fund is limited to the costs of additions, extension and improvements relating to non-generation capital expenditures. The subordinated construction fund is used for capital Definitions and Goals: JEA maintains a senior and subordinated construction fund of which bonds proceeds are deposited and used for the payment of the costs of additions, extensions and improvements to the projects relating to all categories of capital expenditures but primarily targeted to fund generation capital expenditures.

	Actual as of	Actual as of 12/31/2017		がなるのではない	Full Year					Projection		
	Current		20	2018	2018	Р	rior Year					
(In Thousands)	Quarter	Year -to-Date	Fore	Forecast	Budget		Actual	2019	-	2020		2021
Opening Balance	\$	\$	⋄	ī	N/A	φ.	1	\$	1	ş		
Additions:											1	
Bond Proceeds	802	805		802		1	429					
Line of Credit						1	1					
Transfers b/w Capital Fds	•						.1					
Other						1	,					
Sub-total	\$ 805	\$ 805	\ \ \	802	\$	\s	429	Ş	'	\$		
Deductions:											1	
Capital Expenditures							•		,		1	
Bond Funded Interest						Y	,					
Transfers b/w Capital Fds							1					
Other	2	2		802			429					
Sub-total	\$ 2	\$ 2	\ \ -	805	\$	s	429	\$	r	\$	ا ای	
Ending Balance	\$ 803	\$ 803	\$	ī	N/A	   	1	\$	,	\$	ا ام،	
							-					

Mean High 7,678 \$ 4 990 3,091 103 10,039 745 1,563 1,046 \$			STATE OF			Historical								Stati	Statistical	Service of the service		
lance \$ 40,034 \$ 5,184 \$ 4 42 \$ 5 6 \$ 4 5 \$ 5 6 \$ 4 5 \$ 6 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	(In Thousands)	2013		2014		2015		2016		2	017	Low				<b>l</b> ean		High
ceeds         1,550         429         429         429         990         990           edit         3,091	Opening Balance	\$ 40,034				\$	42	<b>ب</b>	4	\$		\$ •	s	423	Ş	7,678	٠	40.034
155 L,550  Capital Fds	Additions:	,																
Capital Fds         3091         3,091	Bond Proceeds	1,550									429	429		066		066		1,550
Capital Fds   3,091	Line of Credit											i		1		ŧ		ı
ditures         34         340         37         \$         2         \$         36         103           ditures         \$         1,584         \$         3,431         \$         37         \$         \$         \$         429         \$         448         10,039         3           Interest         35,253         4,821         75         6         \$         429         6         \$         429         661         745           Capital Fds         35,184         \$         429         \$         429         661         745         745           \$         5,184         \$         5         6         \$         4         \$         1,046         \$	Transfers b/w Capital Fds			3,0	91							3,091		3,091		3,091		3,091
String   S	Other	34	-	'n	40		37		2			. 2		36		103		340
ditures         35,253         4,821         75         6         2,448         10,039         3           Interest         35         3,091         35         1,563         1,563         1,563         1,563           S         36,434         \$         8,573         \$         \$         \$         429         661         745           S         5,184         \$         4         \$         1,046         \$	Sub-total	\$ 1,584	\$	3,4.	31	\$	37	\$	2	\$	429							
ditures         35,253         4,821         75         6         2,448         10,039         3           Interest         35         3,091         35         1,563         1,745         2,545         661         745         2,545         2,5184         5         4         5         1,046         5         1,046         5	Deductions:				' 													
Interest   35 3,091   35 3,091   35 1,563 1,563   1,	Capital Expenditures	35,253		4,8	21		75		9			9		2,448		10,039		35.253
Capital Fds     35     3,091       1,146     661     745       \$ 36,434     \$ 8,573     \$ 75     \$ 6     \$ 429     661     745       \$ 5,184     \$ 42     \$ 6     \$ 429     661     745       \$ 5,184     \$ 42     \$ 6     \$ 429     \$ 429     661     745       \$ 5,184     \$ 42     \$ 429     \$ 429     \$ 445     \$ 445     \$ 445	Bond Funded Interest											í						
Capital Fds         35         3,091         3,091         1,563         1,663         1,046         \$	Line of Credit																	
1,146         661         745           \$ 36,434         \$ 8,573         \$ 75         \$ 6         \$ 429         661         745           \$ 36,434         \$ 42         \$ 429         661         745           \$ 5,184         \$ 42         \$ 429         661         745           \$ 5,184         \$ 42         \$ 429         661         745	Transfers b/w Capital Fds	35		3,0	91							35		1,563		1,563		3,091
\$ 36,434 \$ 8,573 \$ 75 \$ 6 \$ 429 \$ 5,184 \$ 42 \$ 4 \$ - 8 \$ 5 \$ 4 \$ 1,046 \$	Other	1,146		9	61						429	429		661		745		1.146
\$ 5,184 \$ 42 \$ 4 \$ - 8 \$ - \$ 4 \$ 1,046 \$	Sub-total	\$ 36,434	\$	8,5		\$	75	\$	9	\$	429							
	Ending balance	\$ 5,184	\$		42	\$	4	\$	1	s	-6	\$ 1:	ψ,	4	ψ,	1,046	\$	5,184

- JEA's philosophy has been to borrow bond funds on a "just-in-time" basis. Staff has used line of credit borrowings and loans between capital funds to decrease borrowing costs.
   No new debt issues for the FY 2017 2019 projection period.

# Water and Sewer Rate Stabilization Debt Management

For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Bond Resolution and Pricing Policy

Metric: Difference in actual interest rates for interest expense on the unhedged variable rate debt as compared to the budgeted assumptions for interest expense on unhedged variable rate debt.

Definitions and Goals: The Water & Sewer System Bond Resolution authorizes the establishment of a Rate Stabilization Fund in which deposits or withdrawals shall be made as set forth in the current annual budget contribution, if any, will be recorded and deposited each fiscal year. Debt and Investment Committee will review and record at their option an additional contribution amount, up to the full value of the calculated Rate Stabilization Fund for Debt Management Strategy can be made for expenses related to market disruption in the capital markets, disruption in availability of credit or unanticipated credit expenses, or to fund providing consistent revenue collection for expenditures impacted by external factors such as fuel, debt management and regulatory requirements or initiatives. Deposits are made to this Rate Stabilization Fund total amounts deposited (in addition to actual debt service costs for the fiscal year) cannot exceed the total amount of the budgeted debt service for any fiscal year. At a minimum, 50% of the calculated reserve for the purpose of managing JEA's debt portfolio. Deposits to this reserve reflect the difference in the actual interest rates for interest expense on the unhedged variable rate debt as compared to the budgeted assumptions for interest expense on the unhedged variable rate debt. Additionally, deposits can be made from excess debt service budget over the actual debt service expense for any fiscal year. However, the System. The reserve contributions shall cease in the event the reserve balance exceeds the cap of five percent of the par amount of the total outstanding variable rate debt of all systems. Withdrawals from the reserve contribution (the remaining 50%). The reserve contributions will be calculated on a system by system basis; however, based on the calculation, any mandatory deposit will exclude the District Energy or an amount otherwise determined by an authorized officer of JEA. The Rate Stabilization Funds provide a means to minimize the year-to-year impact to customer charges and support financial metrics by variable interest costs in excess of budget.

	Actual as of 12/31/2017	f 12/31/20	117			Full Year			STEEL STEEL		Pro	Projection	Charles Land	
	Current			21	2018	2018		Prior Year						
(In Thousands)	Quarter	Year -	Year -to-Date	For	Forecast	Budget		Actual		2019	21	2020	21	2021
Opening Balance Additions:	\$ 14,209	φ.	14,209	φ,	14,209	N/A	<b>⋄</b>	20,290	ν	14,209	S	14,209	\$	14,209
Contributions Financial Statement Rounding	ì		1		•	N/A		,						
Sub-total Deductions: Withdrawals	\[ \sigma_{\column} \]	ω		S		φ.	s   -		<sub>\sigma</sub>		φ		φ.	
Sub-total Ending Balance	\$ 14,209	ww	14,209	w w	14,209	\$ N/A	v   v	20,290	\w\w	14,209	w w	14,209	ww	- 14,209

					His	Historical							The second	Stati	Statistical		Salatate 8	
	and	2013		2014		2015	1	2016		2017		Low	_	Median		Mean		High
Opening Balance Additions:	s,	\$ 20,290 \$	\$	20,290	ς.	20,290	v	20,290	w	20,290	s	20,290	<>	20,290	<b>⋄</b>	20,290	₩.	20,290
Contributions												1		ı		ě		£
												x		,				
Sub-total	\$		\$		\$		ςs		s,			ı.		r		•		ī
Deductions: Withdrawals										6,081		6,081		6,081		6,081		6.081
												1		,		ı		٠
												2		,		1		ı
Sub-total	ჯ	1	s		s		\$	î.	s	6,081								
Ending balance	\$	20,290	s	20,290	s	20,290	\$	20,290	ş	14.209	S	14.209	v	20.290 \$	v	19 074	v	20 290

Contributions began in June 2009.

# Water & Sewer System Rate Stabilization - Environmental

## For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Bond Resolution and Pricing Policy

Definitions and Goals: The Water & Sewer System Bond Resolution authorizes the establishment of a Rate Stabilization Fund in which contributions or withdrawals shall be made as set forth in the current annual budget or an amount otherwise determined by an authorized officer of JEA. The Rate Stabilization Fund provides a means to minimize the year-to-year impact to customer charges and support financial metrics by providing consistent revenue collection for expenditures impacted by external factors such as debt management and regulatory requirements or initiatives.

		Actual as of 12/31/2017	12/31/20	117			Full Year					Pre	Projection	CONTRACTOR	
	3	Current			2	2018	2018		Prior Year						
(In Thousands)	ď	Quarter	Year -	Year -to-Date	Fo	Forecast	Budget		Actual		2019		2020	2	2021
Opening Balance Additions:	\$	\$ 5,214	₩	5,214	\$	5,214	N/A	ا ب	1,699	\$	9,748	₩	9,748	₩.	9,748
Contributions Regulatory Receivable		5,877		5,877		26,345			24,362						
Sub-total Deductions:	φ.	5,877	φ.	5,877	₩.	26,345	\$	w	24,362	\$		<b>S</b>		φ.	1
Withdrawals Regulatory Receivable		2,573		2,573		21,811			20,847						
Sub-total	⋄	2,573	₩	2,573	\$	21,811	\$	φ.	20,847	\$		\$		\$	
Ending Balance	\$	8,518	\$	8,518	\$	9,748	N/A	ς.	5,214	ş	9,748	s	9,748	\$	9,748

				Historical								Statistical	stical			
	2013	2014		2015		2016	(4)	2017		Low	2	Median		Mean	_	High
Opening Balance Additions:	\$	\$	1	\$	-γ-		ν	1,699	❖	1	↔	,	δ.	340	⋄	1,699
Contributions						23,635		24,362		23,635		23,999		23,999		24,362
										1		į		1.		1
Sub-total	\$	\$	11	<b>√</b>	%	23,635	φ.	24,362		u .		1		ı		ī
Withdrawals						21,936		20,847		20,847		21,392		21,392		21,936
												,		Ŀ		t
			1							ţ		1		,		1
Sub-total	· \$	\$	T	\$	\$	21,936	\$	20,847								
Ending balance	- \$	\$		- \$	<b> </b> ↔	1,699	\$	5,214	·s	i	s	•	Ş	1,383	\$	5,214

## Observations:

• Rate Stabilization Fund for Environmental began in June 2010.

## Water and Sewer System Customer Deposits

## For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Management Directive 302 Credit and Collections and Internal Procedure CR40400 MBC302

Metric: Internal procedure CR40400 MBC302 Credit and Collections

Definitions and Goals: Pursuant to internal procedure CR40400 MBC302 Credit and Collections, JEA accesses customers a deposit that may be used to offset any future unpaid amounts during the course of providing utility service to a customer.

	Actual as of 12/31/2017	f 12/31/2	017			Full Year					Pre	Projection		
	Current				2018	2018		Prior Year						
(In Thousands)	Quarter	Year	Year -to-Date	Ŧ.	Forecast	Budget		Actual		2019		2020	2	2021
Opening Balance	\$ 15,086	ν	15,086	\$	15,086	N/A	ا <sub>ك</sub>	13,910	٧,	15,270	\$	15,270	ν	15,270
Allocated from Electric Loan Repayment	184		184		184	N/A		1,176						
Sub-total Deductions:	\$ 184	\$	184	\$	184	\$	•   -	1,176	s		δ	ľ	δ.	
Allocated from Electric Loan to W&S Operations					ı ı	N/A		j						
Sub-total	\$	↔	'	\$		\$	\$   •	1	\$	1	\$		\$	1
Ending Balance	\$ 15,270	\$	15,270	φ.	15,270	N/A	\$	15,086	ς,	15,270	δ.	15,270	Ş	15,270

					Hist	Historical	SOUTH STATES	<b>张村村的村村村村村</b>						Statistical	tical	ROSE SAFETE STREET	100	
		2013	120	2014		2015		2016		2017		Low	2	Median		Mean	_	High
Opening Balance Additions:	\$	12,627 \$	\$	13,860	₩.	12,787	\$	13,255	\$	13,910	₩	12,627	₩	13,255	s	13,288	\$	13,910
Allocated from Electric Loan Repayment		1,233				468		655		1,176		468		655		766		1,176
Sub-total Deductions:	φ.	1,233	\$	0	\$	468	\$	655	S	1,176		ı		ī		1		1
Allocated from Electric				1,073				¥				3.		ï		1		,
Loan to was Operations												1 1		1 1		1		ı
Sub-total	\$	Ţ	\$	1,073	\$	1	s	r	\$							·		ı
Ending balance	\$	13,860 \$	\$	12,787	\$	13,255	\$	13,910	\$	15,086	Υ.	12,787	\$	13,860	ψ,	13,780	\$	15,086

## Observations:

• JEA is in the process of implementing a prepaid meter program which could reduce customer deposits at some future date.

## Water and Sewer Debt Service Sinking Fund

For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Bond Resolution

Metric: Accrued interest and principal currently payable on fixed and variable rate bonds pursuant to the Bond Resolutions

Definitions and Goals: JEA is required monthly to fund from revenues an amount equal to the aggregate of the Debt Service Requirement for senior and subordinated bonds for such month into this account. On or before such interest payment date, JEA shall pay out of this account to the paying agents the amount required for the interest and principal due on such date.

(In Thousands)  Quarter Year- Opening Balance \$ 82,208 \$ Additions: Revenue fund deposits 28,477			Full Year			Projection		
duarter   1		2018	2018	Prior Year				
lance \$ 82,208 fund deposits 28,477	Year -to-Date	Forecast	Budget	Actual	2019	2020		2021
fund deposits	\$ 82,208	\$ 82,208	N/A	\$ 65,410	\$ 81,727	\$ 85,952	\$	86,527
	28,477	117,032		114,873	119,748	120,110		120,310
Sub-total \$ 28,477 \$ Deductions:	\$ 28,477	\$ 117,032	\$	\$ 114,873	\$ 119,748	\$ 120,110	\s\	120,310
Principal and interest payments 87,310	87,310	117,513	N/A	98,075	115,523	119,535		118,867
Sub-total \$ 87,310 \$	\$ 87,310	\$ 117,513	\$	\$ 98,075	\$ 115,523	\$ 119,535	φ.	118.867
Ending Balance \$ 23,375 \$	\$ 23,375	\$ 81,727	N/A	\$ 82,208	\$ 85,952	\$ 86,527	\ \ \	87,970

		TO SERVICE STREET, STR			Hist	Historical								Stati	Statistical	STATE OF THE PERSON	
(In Thousands)		2013		2014		2015		2016		2017	7	Low	Σ	Median		Mean	High
Opening Balance Additions:	\$	81,675	\$	81,675 \$ 80,317	φ.	75,019	\$	67,720	\$	65,410	٠,	803	<.	71,370	\$	61,824	\$ 81,675
Revenue fund deposits Bond funded interest		119,535		117,444		102,789		770,79		114,873		770,76		114,873		110,344	119,535
Sub-total Deductions	\$	119,535 \$ 117,444	S	117,444	s	102,789	S	770,76	\$	114,873				,		ı.	C
Principal and interest payments		120,893		122,742		110,088		99,387		98,075		98,075		110,088		110,237	122,742
												, ,		ar i		ii i	
Sub-total	\$	120,893	\$	122,742	\$	110,088	\$	99,387	s	98,075						î	ı
Ending balance	Ş	80,317	\$	75,019	\$	67,720	\$	65,410	\$	82,208	\$	65,410 \$	\$	75,019	\$	74,135	\$ 82,208

- September 30th ending balances are used to pay Oct 1st interest and principal payments.
- Timing differences occur due to the accrual of debt service during one fiscal year and the payment in the following fiscal year (primarily fixed rate principal and interest on Oct 1st of the following fiscal year).

# Water and Sewer Debt Service Reserve Account

## For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Bond Resolution

should revenues from operations not be sufficient for such purpose in accordance with the appropriate bond resolution. It is JEA's current practice to fund this reserve account with cash from the sale of bonds; however, revenues Metric: 125% of average annual debt service on outstanding senior fixed and variable rate bonds plus subordinated fixed rate bonds as required by the Bond Resolutions
Definitions and Goals: This reserve will be funded, maintained and held for the benefit of bondholders as specified in the Supplemental Resolution authorizing the sale of the bonds to pay principal and/or interest on the bonds may be utilized to fund this reserve if necessary.

	Actual as of 12/31/201	12/31/2017			Full Year				Pro	Projection		
	Current			2018	2018	Prior Year						
(In Thousands)	Quarter	Year -to-Date	Ξ.	Forecast	Budget	Actual		2019	71	2020	12	2021
Opening Balance Additions:	\$ 107,488	\$ 107,488	\$	107,488	N/A	\$ 108,086	φ.	102,850	٠	102,850	₩.	102,850
Construction reserve fund/bond issues					A/N	1						
Revenue fund					N/A							
Rounding					•							
Sub-total	\$	\$	\$	'	\$	\$	\.		v		v	ľ
Deductions:									-		,	
Revenue fund	4,638	4,638		4,638		298						
Sub-total	\$ 4,638	\$ 4,638	\$	4,638	\$	\$ 598	ν.	3	ş		\$	T
Ending Balance	\$ 102,850	\$ 102,850	\ \ -	102,850	N/A	\$ 107.488	•	102.850		102.850		102 850

				His	Historical								Statistical	100			
		2013	2014		2015		2016		2017		Low	Σ	Median		Mean	I	High
Opening Balance Additions:	\$	119,131	\$ 119,915	φ	116,829	\$	\$ 108,849	\$	\$ 108,086	↔	108,086	\$	\$ 628,911	10	114,562	\$	119,915
Construction reserve fund/bond issues Revenue fund		784 3,821									784 3,821		784 3,821		784 3,821		784
Sub-total Deductions:	φ	4,605	\$ 	ς.		\$		s			,		ī		î		ì
Revenue fund		3,821	3,086		7,980		763		298		298		3,086		3,250		7,980
											1		ť		ĭ		,
											0		ι		î		ì
Sub-total	\$	3,821	\$ 3,086	\$	7,980	\$	763	ş	598								
Ending balance	\$	119,915	\$ 119,915 \$ 116,829	\$	108,849	ş	108,086	ş	107,488	\$	107,488	Ş	108,849 \$	5	112,233	Ş	119,915

• In 2008, debt service reserve sureties downgraded and JEA began replacing those downgraded sureties with cash/investments as required by the bond resolutions. Sureties of \$149.8 million are still outstanding but are not eligible to be utilized as debt service reserve deposits per the Bond Resolutions.

# Water and Sewer Renewal and Replacement (R&R) / Operating Capital Outlay (OCO)

or the Fiscal Quarter Ending December 31, 2017

Aeserve/Fund Authorization: Bond Resolution, Article 21 of the City of Jacksonville Charter and Pricing Policy

Metric: Renewal and Replacement required to deposit from the revenue fund annually an amount equal to the greater of 10% of the prior year defined annual net revenues or 5% of the prior year defined gross evenues per JEA's Water and Sewer System bond resolutions. Operating Capital Outlay - by 2013 the goal is to fund all non-capacity capital expenditures.

evenues. The funds shall be used for the purposes of paying the cost of extensions, enlargements or additions to, or the replacement of capital assets of the Electric System. In addition, as a portion of the base ate, JEA will recover from current revenue a formula driven amount for capital expenditures which is referred to as Operating Capital Outlay. This amount is calculated separately from the R&R deposit. In Renewal and Replacement of system assets. According to the bond resolutions the amount is equal to the greater of 10% of the prior year defined annual net revenues or 5% of the prior year defined gross Definitions and Goals: Pursuant to the Water and Sewer System bond resolutions and Article 21 of the City of Jacksonville Charter, JEA is required to deposit from the revenue fund annually an amount for sccordance with the Pricing Policy, by 2013, the objective is to fund an amount equal to all non-capacity capital expenditures with current year internally generated funds.

		Actual	Actual as of 12/31/2017	31/201	7			Full Year	ar.			の変形		Pr	Projection	2000	
Manual State of the State of th	0	Current				2	2018	2018		Pri	Prior Year						
(In Thousands)	O	Quarter		Year -to-Date	-Date	For	Forecast	Budget	¥	*	Actual		2019		2020		2021
Opening Balance	δ.	54,699	ار ارو		54,699	\$	54,699	N/A		\$	76,020	\$	54,440	s	23,047	\$	(29,583)
R&R/OCO Contribution		35,756	9.	(1)	35,756		153,053		•		108,119		163,689		140,589		140,935
Transfer from Capital Fds		ć	•		,		ř		,		137						
Sub-total	V	25 060	۰ اع	,	20.00		117	4		,	8,050	4	2,559	,	200		200
Deductions:	·	30,00	۲۱ ۱		005,50	م	133,704	^	-	^	116,306	^	166,248	٨	141,089	S	141,435
Capital Expenditures		33,527	7	(i)	33,527		154,023		1		132,588		196,991		193,069		179.220
Transfer to Capacity Fund									1		86						
Transfer to Construction Fund																	
Other											4,953		650		650		
Sub-total	\$	33,527	\$ 2		33,527	\$	154,023	\$		\$	137,627	\$	197,641	s	193,719	\$	179,220
Ending Balance	\$	57,132	32 \$	3,	57,132	\$	54,440	N/A		Ş	54,699	\$	23,047	\$	(29,583)	\$	(67,368)

	1			His	Historical		MANAGEMENTS.					1000	Statistical	tical			State Seal State
		<u>2013</u>	2014		2015		<u>2016</u>		2017		Low	2	Median	_	Mean		High
Opening Balance Additions:	₩.	64,260	\$ 78,689	δ	59,295	\$	37,337	\$	76,020	₩.	37,337	\$	64,260	\$	63,120	٠	78,689
R&R/OCO Contribution		91,245	48,373		62,793		124,574		108,119		48.373		91.245		87.021		124 574
Loans betw Capital Fds					22				137				22		53		137
Other (incl septic tank)		1,539	1,614		653		30,889		8,050		653		1.614		8.549		30.889
Sub-total	\$	92,784	\$ 49,987	\$	63,468	\$	155,463	s	116,306						!		
Deductions:																	
Capital Expenditures		68,355	67,488		85,426		116,674		132,588		67,488		85,426		94.106		132.588
Loan Repayment		i	1						86		í		, '		29		86
Transfer to Constr. Fund		10,000	1,893				106				106		1,893		4,000		10,000
Other (incl septic tank)		٠	·		ť		ï		4,953		i				991		4.953
Sub-total	\$	78,355	\$ 69,381	s	85,426	s	116,780	\$	137,627								
Ending balance	\$	78,689	\$ 59,295	\$	37,337	s	76,020	s	54,699	⋄	37,337	٠,	59,295	δ.	61,208	\$	78,689
								l					-	ı			1

- Other includes the Septic Tank Phase-out project, Sale of Property, and the transfer of RSF Environmental in FY 2016 2019
  - Includes \$20 million for Maximum Annual Debt Service calculation.
- \$57 million is projected to be withdrawn from this capital balance in FY 2016-2017 to support the capital program with lower Net Revenues as planned with the June 2012 approved reduction in the October 1, 2012 rate increase.

# Water and Sewer Capacity Fees / State Revolving Fund Loans

For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Florida Statute and Rate Tariff Metric: Tariff rate

Definitions and Goals: Capacity fees are charged to customers as a one-time fee for a new connection to the Water System and a one-time fee for a new connection to the Sewer System. Capacity charges may be used and applied for the purpose of paying costs of expansion of the Water and Sewer System or paying or providing for the payment of debt that was issued for the same purpose. In addition, the Water and Sewer System has received funds from the State Revolving Fund (SRF) program for the construction of water and wastewater treatment facilities. SRF loans are subordinated to all Water and Sewer System Revenue Bonds and Water and Sewer System Subordinated Revenue Bonds.

		Actual as of	as of 12/31/2017	2017			Full Year	IL SENSOR			Marie	A Survey of Charles	Pro	Projection		Mr. Bronderen
	O	Current				2018	2018		Pric	Prior Year						
(In Thousands)	0	Quarter	Year	Year -to-Date	S.	Forecast	Budget	<b>+</b>	<b>⋖</b>	Actual	or 55)	2019	- 31	2020		2021
Opening Balance	\$	95,620	\$	95,620	\$	95,620	N/A		\$	103,411	\$	57,590	\$	47,812	\$	24,090
Capacity Fees		6,132		6,132		23,314		7		24,777		21,634		21,959		22,288
State Revolving Fd Loan Transfer from R&R/OCO Fund						31		1 T		1 1		650		650		
Other	v	6 123	v	6 133		776.55		•		- 1			,		,	
Deductions:	٥	0,132	٨	0,132	^	23,345	^		^	74,111	۸	77,784	\$	22,609	S	22,288
Capital Expenditures Other		13,971		13,971		61,375		r - r		32,654		32,062		46,331		53,877
								ī		,						
Sub-total	\$	\$ 13,971	\$	13,971	\$	61,375	\$	1	\$	32,654	\$	32,062	\$	46,331	ş	53,877
Ending Balance	ς	87,781	\$	87,781	\$	57,590	N/A		\$	95,534	\$	47,812	\$	24,090	\$	(7,499)

				Hist	Historical						Statistical	tical		
(In Thousands)		2013	2014		2015	2016		2017	Low	2	Median	_	Mean	High
Opening Balance Additions:	\$	45,454	\$ 60,360	s	76,887	\$ 90,912	\$	103,411	\$ 45,454	\$	76,887	\$	75,405	\$ 103,411
Capacity Fees		17,394	18,298		19,579	21,995		24,777	17,394		19,579		20.409	24.777
State Revolving Fd Loan		Ē	•						1		. •			
Loan Repayments		i	ſ		246	145			1		73		86	246
Other		12	ı		5	7		98	1		7		22	86
Sub-total	\$	17,406	\$ 18,298	\$	19,830	\$ 22,147	s	24,863						3
Deductions:														
Capital Expenditures		2,270	1,758		5,805	9,648		32,654	1,758		5,805		10,427	32,654
Loans betw Capital Fds													,	'
Other		230	13						13		122		122	230
		•	1		1	1								
Sub-total	s	2,500	\$ 1,771	\$	5,805	\$ 9,648	\$	32,654						
Ending balance	\$	60,360	\$ 76,887	\$	90,912	\$ 103,411	\$	95,620	\$ 60,360	\$	90,912	\$	85,438	\$ 103,411

## Water and Sewer Environmental

For the Fiscal Quarter Ending December 31, 2017 Reserve/Fund Authorization: Pricing Policy

Metric: Unit tariff rates times consumption

Definitions and Goals: The Environmental Charge will be applied to all water, sewer, irrigation and non bulk user reclaimed consumption. The environmental charge revenue will be collected from customers to partially offset current and future environmental and regulatory needs as specified in the Pricing Policy for specific environmental and regulatory programs.

	4	Actual as of 12/31/2017	12/31/20	117			Full Year			STATE OF THE PARTY	Misserrander our	Pro	Projection		
	Cur	Current			2	2018	2018		Prior Year				decino.		
(In Thousands)	Quí	Quarter	Year -	ear -to-Date	For	Forecast	Budget		Actual		2019	,	2020		2021
Opening Balance Additions:	\$	1,839	s.	1,839	s	1,839	N/A	δ.	2,659	۰	2,067	\$	1,000	s	1,000
Environmental Contributions		563		563		12,964	1	2	12,394		16,536		16,046		9.940
Loans betw Capital Fds							1				v)				
Other							'	2							error com
Sub-total	\$	563	φ.	563	ş	12,964	\$	\s	12.394	5	16.536	V	16.046	~	9 940
Deductions:								-			2000		2001	}	0+00
Capital Expenditures		1,786		1,786		12,736	•		13.214		17.603		16.046		9 940
Septic Tank Phase Out							•	200					2		2
Other		•			,		,		,						
Sub-total	\$	1,786	φ.	1,786	s	12,736	\$	\s	13,214	ş	17.603	Ş	16.046	v.	9 940
Ending Balance	\$	616	\$	616	\$	2,067	N/A	   	1,839	·	1,000	·	1,000	٠ ا	1,000
									THE R. P. LEWIS CO., LANSING, MICH.	-					

					Hist	Historical								Stati	Statistical			
(In Thousands)		<u>2013</u>		<u>2014</u>		<u>2015</u>		<u>2016</u>		2017		Low	_	Median	_	Mean	_	High
Opening Balance Additions:	\$	(8,158)	S.	(9,857)	₩.	5,299	\$	î	S	2,659	₩.	(9,857)	s	,	\$	(2,011)	\$	5,299
Environmental Contributions		21,193		21,018		22,056		15,539		12,394		12,394		21,018		18,440		22,056
Other		īī.		í								ı				ı		i
Sub-total	s	21,193	s	21,018	s	22,056	\$	15,539	\$	12,394						1		1
Deductions: Capital Expenditures		22,892		5,862		7,318		12,880		13.214		5.862		12,880		12 433		22 892
Septic Tank Phase Out						203		•				203		203		203		203
Other						19,834						19,834		19,834		19,834		19,834
Sub-total	φ.	22,892	\$	5,862	\$	27,355	φ	12,880	৵	13,214						•		
Ending balance	٠	(9,857)	ş	5,299	\$	i	φ.	2,659	s	1,839	\$	(9,857)	\$	1,839	٠,	(12)	\$	5,299

## Water and Sewer Construction / Bond Fund

For the Fiscal Quarter Ending December 31, 2017

Reserve/Fund Authorization: Bond Resolution

Metric: Capital expenditures per year minus internal funding available
Definitions and Goals: JEA maintains a senior and subordinated construction fund of which bonds proceeds are deposited and used for the payment of the costs of additions, extensions and improvements to the Water and Sewer System.

	A	Actual as of	s of 12/31/2017	117		Service and Service	Full Year					Projection		
	Current	ent			20	2018	2018	Pri	Prior Year					
(In Thousands)	Quarter	rter	Year -	Year -to-Date	Fore	Forecast	Budget	ď	Actual	2019		2020		2021
Opening Balance	\$	15	\$	15	\$	15	N/A	\$	152	\$	4	\$	<b>⋄</b>	,
Bond Proceeds		894		894		894			i					
Line of Credit						,								
Transfer from R&R/OCO Fund														
Other														
Sub-total	s	894	\$	894	\$	894	\$	Ş		\$	ŀ	\$	.  .	
Deductions:												>	\ ا	
Capital Expenditures									•					
Bond Proceeds									,					
Other		2		2		606	1		137					
Sub-total	\$	2	\$	2	\$	606	\$	\$	137	Ş	'	\$	·	'
Ending Balance	\$	907	\$	206	\$		N/A	s	15	\$	,	\$	ا د	

					Hist	Historical								Stati	Statistical			
(In Thousands)		<u>2013</u>		2014		2015		2016		2017		Low	_	Median		Mean		High
Opening Balance	<b>ب</b>	7,419	\$	2,305	₩.	326	٠,	664	ψ,	152	⋄	152	÷,	664	<b>√</b>	2 173	v	7 419
Additions:																	<b>)</b> -	7
Bond Proceeds		486										*		243		243		186
Line of Credit		1		t								ī		) , '		) '		6 '
Loans/trnsf btw CapFds		10,000		1,893								1.893		5.947		2 947		10.00
Other		3		476		344		17						181		210		727
Sub-total	\$	10,489	\$	2,369	\$	344	s	17	ş			ì		1		017		ř
Deductions:																		
Capital Expenditures		14,855		3,784		9						9		3.784		6.215		14 855
Bond Proceeds		411		48								48		230		230		411
Line of Credit		i		1										} '		) '		
Loans/trnsf btw CapFds		337		516								337		427		427		516
Other								529		137		,		69		167		529
Sub-total	\$	15,603	Υ	4,348	ş	9	\$	529	\$	137				1		<u>}</u>		3
Ending balance	\$	2,305	\$	326	\$	664	\$	152	\$	15	<b>ب</b>	15	Ś	326	٠	692	⟨5	2.305
						1				200000						1		1

Observations:

• JEA's philosophy has been to borrow bond funds on a "just-in-time" basis. Staff has used line of credit borrowings and loans between capital funds to decrease borrowing costs.

• No new debt issues for the FY 2017-2019 projection.



## **RatingsDirect**<sup>®</sup>

## **Summary:**

## JEA, Florida; Liquidity Facility; Retail **Electric**

## **Primary Credit Analyst:**

Jeffrey M Panger, New York (1) 212-438-2076; jeff.panger@spglobal.com

## **Secondary Contact:**

David N Bodek, New York (1) 212-438-7969; david.bodek@spglobal.com

## **Table Of Contents**

Rationale

Outlook

## **Summary:**

## JEA, Florida; Liquidity Facility; Retail Electric

Credit Profile		
US\$122.135 mil elec sys subord rev bnds ser	2017B due 10/01/2036	
Long Term Rating	A+/Stable	New
US\$107.645 mil elec sys rev bnds ser 3-2017	B due 10/01/2039	
Long Term Rating	AA-/Stable	New
JEA (St Johns River Pwr Pk)		
Long Term Rating	AA-/Stable	Affirmed

## Rationale

S&P Global Ratings has assigned its 'AA-' rating to JEA, Fla.'s electric system (senior-lien) revenue bonds series three 2017B; and its 'A+' rating to JEA's electric system subordinated revenue bonds 2017 series B. At the same time, S&P Global Ratings affirmed its 'AA-' and 'A+' ratings on the respective parity senior and subordinate obligations outstanding. S&P Global Ratings also affirmed its 'AA-' rating on debt issued for the St. Johns Power Park (SJRPP), which is payable as an operating expense of JEA. The outlook is stable.

In addition, S&P Global Ratings affirmed its ratings on the following JEA variable-rate demand bonds:

- Senior-lien series III 2008A, 2008B-2, and 2008B-3 (Royal Bank of Canada liquidity facility): 'AA-/A-1+';
- Senior-lien series III 2008C-1 and C-2 (JP Morgan liquidity facility): 'AA-/A-1';
- Subordinate-lien series 2008D (US Bank liquidity facility): 'A+/A-1'; and
- Various series of variable-rate demand obligations in the commercial paper mode (A-1).

In our view, the following factors support the ratings:

- Consistently solid financial metrics, including robust coverage of total fixed costs and strong liquidity;
- A diverse generation mix, with fuel flexibility that allows JEA to economically dispatch units based on variable expense (chiefly commodity costs); and
- A strong service area economy and customer profile.

Mitigating these strengths, in our opinion, are the following factors:

- Construction risks associated with nuclear generation;
- Very high debt levels including off-balance-sheet obligations, although JEA substantially reduced on-balance-sheet
- A sizable carbon footprint despite a diverse generation mix (coal-fired generation is expected to measure 35% of energy in 2017), making the utility susceptible to environmental regulation, despite uncertainties related to the Trump administration's efforts to dismantle the Clean Power Plan; and,
- Overall rates at about 103% of the state's average, which has largely eliminated the competitive advantage that JEA once had without respect to lower rates.

Bond proceeds will advance and current refund respective parity obligations.

The utility's business profile is '4' (on a scale of '1' to '10', with '1' being the strongest). The business profile assessment reflects JEA's rate-setting autonomy, a solid service area and customer profile, and a diversified power portfolio; a significant carbon footprint and exposure to nuclear construction cost overruns and delays temper these factors.

In our view, JEA's service area is solid. The service area includes Jacksonville and northern portions of Clay and St. Johns counties. The system also provides power to the Florida Public Utilities Co. (FPU) for resale for Fernandina Beach in Nassau County. JEA has a large customer base, at about 459,000 individuals, a number that has gradually trended upward in recent years. Residential customers make up nearly half of total revenue. The customer base is not concentrated, with just 12% of revenues coming from the top 10 customers. Sales have been largely level for the past three years. Median household buying income is about 92% of the national average, which suggests that there rate-raising flexibility could be constrained.

The electric system includes generation, transmission, interconnection, and distribution facilities. JEA has 3,408 megawatts (MW) of installed capacity, including wholly owned Northside and Brandy Branch units, and shares of the St. Johns River Power Park (SJRPP) and the Scherer Unit 4.

The generation system benefits from a mix of fuel resources capable of burning coal, natural gas, and pet coke. In 2017, the fuel mix was 35% coal, lower than in previous years as gas units were dispatched ahead of solid fuel units. JEA's generating units, which are generally newer vintage, are largely compliant with existing Environmental Protection Agency (EPA) regulations. Nevertheless, despite the utility's dispatch flexibility, the reliance on coal-fired generation remains a credit risk with respect to environmental regulation.

JEA's power supply is undergoing significant changes. We anticipate that coal-fired generation will continue declining, due to the following:

- The expected closure of the coal-fired 1,252 MW St. John's River Power Park in 2018;
- Plans to add up to 250 MW of solar energy by 2019;
- A two-year power purchase agreement (PPA) with Southern Power for 200 MW for unit specific, gas fired generation; and,
- The addition of nuclear energy (projected in 2021 and 2022, via a 20-year PPA with Municipal Electric Authority of Georgia (MEAG) to take 206 MW of capacity and energy from MEAG's Vogtle nuclear project units 3 and 4 -currently under construction, but facing uncertain completion prospects.

We expect coal-fired generation will decline to 18% in 2018, as JEA plans to shut down SJRPP in 2018. The utility estimates \$50 million annual operating cost saving.

In an effort to diversify its power supply and mitigate exposure to environmental regulations, JEA entered a 20-year PPA with MEAG to take 206 MW of capacity and energy from MEAG's share of Vogtle 3 and 4. JEA has a take-or-pay obligation to support a portion of the plant's debt service. Its share of fixed costs includes debt service for the Vogtle Project J bonds.

The Vogtle project has experienced significant delays and cost overruns. Originally expected to be "substantially complete" by April 2016 (unit 3) and April 2017 (unit 4), the project owners (which in addition to MEAG include

Georgia Power, Oglethorpe Power Cooperative, and Dalton Utilities) now estimate substantial completion by November 2021 (unit 3) and November 2022 (unit 4).

Lead construction contractor Westinghouse Electric Co. (WEC) has filed for Chapter 11 protection. Japan-domiciled Toshiba Corp., which owns WEC, has negotiated a settlement of its parental guarantee obligation to project owners: about \$344 million would be attributable to Project J (half to JEA, and half to MEAG). Furthermore, we understand that Toshiba has agreed to make settlement payments of the remaining \$301 million Project J portion in full by Dec. 15, 2017. Bechtel Corp. has taken over as lead construction contractor, but the project is no longer being built under a fixed-price contract, which means that the project owners, and JEA, bear construction risk.

Project owner Georgia Power must get Georgia Public Service Commission (PSC) approval for rate-based cost recovery. JEA, which no longer desires the power (for a combination of reasons -- higher costs and delays, flat demand growth, and other lower-cost options), would like to see the project canceled, and has filed a brief as an intervener. Given statements PSC commissioners have made, and the fact that JEA is a Florida (and not Georgia) utility, we do not expect an adverse ruling.

JEA is committed to servicing \$1.77 billion of debt issued for the first 20 years of a 40-year amortization schedule (MEAG will service the back end of the schedule). Debt issued to date does not include additional debt to complete the project, which, based on current estimates to the 80% probability level, will result in \$2.51 billion in Project J bonds outstanding. The \$743 million increase related to revised project completion costs, offset in part by the expectation of new Department of Energy guaranteed loan authority. We expect annual debt service costs to balloon, to \$123 million per year upon issuance of the additional debt (net of Build America Bond federal interest rate subsidies) from about \$87 million per year.

JEA has recorded solid historical financial metrics. Its financial projection, which is based on what we consider a conservative assumption for flat growth, suggests the utility should meet the additional carrying costs with no near-term base-rate increases and manageable base-rate increases after the Vogtle project is expected to achieve commercial operation -- while maintaining robust fixed cost coverage and strong liquidity, and further reducing debt. As well, JEA has provided a projection that suggests that strong metrics would also continue under a scenario that the units are abandoned.

However, significant construction and project completion risk remain, specifically through the possibility of additional cost over-runs and delays. Moreover, we note the legal, regulatory and political fallout that has accompanied the cancelation of a similar nuclear project in South Carolina. While financial projections suggest the utility expects strong metrics regardless of whether the project is completed, these risks continue to constrain upward credit improvement.

Since 2010, JEA has defeased a substantial amount of debt, which in our opinion has created budgetary space in allowing the utility to meet escalating debt costs associated with the MEAG PPA. We expect amortization costs to be relatively flat.

In 2017, JEA used a rather liberal draw on its previously accumulated rate-stabilization fund (unrestricted cash), and plans to do the same in 2018. However, we do not view this as a credit risk given the utility's strong liquidity and expected replenishing of the 2018 draw in 2019. Moreover, we believe the use of cash reserves was prudent insofar as it enabled JEA to avoid increasing rates, which have risen in recent years. According to the U.S. Department of Energy's Energy Information Administration, average revenue per kilowatt-hour was 3% above the state average in 2015, the most recent year of available comparative information. JEA does not forecast any rate changes over the next five years.

In 2016, the utility and the City of Jacksonville, Fla., agreed to a charter amendment to tie the utility's annual transfer to electric sales, and to eliminate annual escalators that were present in the previous formula. In addition, JEA and the city agreed that the electric system would pay a one-time contribution in fiscal 2016 of \$12 million. Jacksonville committed to using these funds for its water and sewer infrastructure projects. The transfer from the electric system was \$92 million in 2017, which was largely in keeping with years before 2016. The amendment will be in effect until September 2021.

Financial metrics have been solid over the past three years, Coverage of total debt service requirements (senior lien, operating expense, and subordinate lien) have been in the 2.50x-2.91x range since 2013. Coverage of fixed costs, which treats the transfer to the city as an operating expense, and capacity payments associated with purchased power as debt service, has similarly been robust. They've exceeded 1.56x, including 1.88x in 2017 (1.64x before the transfer in from the rate-stabilization account). Projections suggest that as fixed costs increase, coverage levels will come down somewhat, but remain in excess of 1.5x over the next 10 years, despite the Vogtle cost overruns to date.

We view JEA's liquidity as robust and project this will continue through 2022, despite the expected draws on rate-stabilization and fuel reserves. Cash and investments measured \$360 million at fiscal year-end 2017, or 168 days of operating expenses, up from 79 days in 2011. Total liquidity, which includes a \$300 million line of credit, boosted liquidity to 307 days, while renewal and replacement funds, which are restricted, but available for debt service and capital expenses brings total liquidity to about 400 days. Although projections suggest use of some cash to supplement operations and pay down debt over the next five years, we expect liquidity will remain robust, with each metric approximately in line with 2017 levels.

JEA's electric system is fairly leveraged. The utility has about \$2.76 billion in debt outstanding. But following debt accelerations and refinancing, debt-to-capitalization is projected to improve to 57% by 2022 from 70% in fiscal 2017. Direct debt per customer is about \$6,000, significantly lower than past years, and with \$906 million in capital spending expected to be funded internally, we anticipate that direct debt ratios will improve. However, this does not consider the impact of off-balance-sheet obligations associated with the MEAG/Vogtle PPA and the SJRPP debt. Inclusive of this, debt per customer is very high at roughly \$9,900.

## Outlook

The stable outlook reflects JEA's strong financial metrics, including a track record of robust coverage of fixed costs and liquidity, which we expect will continue over the next five years. We anticipate that coverage metrics will remain strong, and potentially support a higher rating. However, JEA faces lingering uncertainty regarding the construction of nuclear units and exposure to further delays and cost, and this risk constrains credit improvement.

## Upside scenario

Risk regarding project completion and costs associated with the Vogtle project constrain credit improvement. Although we believe that further progress toward project completion in keeping with the current schedule and costs could lead to an upgrade, this is not likely in the next two years.

## Downside scenario

We do not expect to lower the rating over the next two years unless there is erosion in financial metrics, or if there is significant further cost overruns or delay with the Vogtle units.

Ratings Detail (As Of December 12, 2	017)	
JEA elec sys rev bnds		
Long Term Rating	AA-/Stable	Affirmed
JEA elec sys sr lien rev bnds		
Long Term Rating	AA-/Stable	Affirmed
JEA elec sys subord (AGM)		
Unenhanced Rating	A+(SPUR)/Stable	Affirmed
JEA elec sys VRDB sub ser 2000F		
Short Term Rating	A-1	Affirmed
JEA JACKSONVILLE ELEC AUTH (ST JOH	INS RIVER PWR PK SYS) SPL OBLIG 4TH	CROSSOVER SER
Long Term Rating	AA-/Stable	Affirmed
JEA JACKSONVILLE ELEC AUTH (ST JOH	INS RVR PWR PK SYS) SPL OBLIG 1ST CI	ROSSOVER SER
Long Term Rating	AA-/Stable	Affirmed
JEA elec sys sr lien rev bnds		
Long Term Rating	AA-/Stable	Affirmed
JEA elec sys sr lien rev bnds		
Long Term Rating	AA-/Stable	Affirmed
JEA elec sys sr lien rev bnds		
Long Term Rating	AA-/Stable	Affirmed
JEA LQDTYFAC		
Short Term Rating	A-1	Affirmed
JEA RETELEC		
Short Term Rating	A-1	Affirmed
JEA (St Johns River Pwr Pk)		
Long Term Rating	AA-/Stable	Affirmed
JEA (St Johns River Pwr Pk)		
Long Term Rating	AA-/Stable	Affirmed
JEA (St Johns River Pwr Pk)		
Long Term Rating	AA-/Stable	Affirmed
JEA (St Johns River Pwr Pk)		
Long Term Rating	AA-/Stable	Affirmed
JEA (St Johns River Pwr Pk)		
Long Term Rating	AA-/Stable	Affirmed

Ratings Detail (As Of December 12, 2017) (co	ont.)	
JEA (St Johns River Pwr Pk)		
Long Term Rating	AA-/Stable	Affirmed
JEA (St Johns River Pwr Pk)		
Long Term Rating	AA-/Stable	Affirmed
JEA (St Johns River Pwr Pk)  Long Term Rating	AA-/Stable	Affirmed
JEA (St Johns River Pwr Pk)	AA-/ Stable	Aillinieu
Long Term Rating	AA-/Stable	Affirmed
JEA retail elec		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
JEA retail elec sr lien		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Long Term Rating	AA-/Stable	Affirmed
JEA retail elec sr lien ser III ser 2008B-1		
Unenhanced Rating	NR(SPUR)	
JEA retail elec subord		
Unenhanced Rating	A+(SPUR)/Stable	Affirmed
JEA retail elec subord lien 2009 ser C		
Unenhanced Rating	A+(SPUR)/Stable	Affirmed
JEA retail elec sys VRDB ser 2008B-2		
Long Term Rating	AA-/A-1+/Stable	Affirmed
JEA retail elec sys VRDB ser 2008B-3		
Long Term Rating	AA-/A-1+/Stable	Affirmed
JEA retail elec VRDB sr lien ser III 2008A		
Long Term Rating	AA-/A-1+/Stable	Affirmed
JEA retail elec VRDB sr lien ser III 2008C-1		
Long Term Rating	AA-/A-1/Stable	Affirmed
JEA retail elec VRDB sr lien ser III 2008C-2		
Long Term Rating	AA-/A-1/Stable	Affirmed
JEA retail elec VRDB sr lien (group 4) ser 3 200	8 D-1	
Long Term Rating	AA-/Stable	Affirmed
JEA retail elec VRDB subord lien ser 2008D		
Long Term Rating	A+/A-1/Stable	Affirmed
JEA retail elec (St Johns River Pwr Pk)		

## Ratings Detail (As Of December 12, 2017) (cont.)

Affirmed **Unenhanced Rating** AA-(SPUR)/Stable

Many issues are enhanced by bond insurance.

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on the S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

Copyright © 2017 by Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw or suspend such acknowledgment at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com and www.globalcreditportal.com (subscription), and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

STANDARD & POOR'S, S&P and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.



## CREDIT OPINION

8 December 2017

New Issue

Rate this Research



#### Contacts

Edward (Ted) +1.212.553.6990 Damutz

VP-Sr Credit Officer edward.damutz@moodys.com

Leonard Jones +1.212.553.3806 MD-Public Finance leonard.jones@moodys.com

Tiphany Lee-Allen +1.212.553.4772

AVP-Analyst

tiphany.lee-allen@moodys.com

#### **CLIENT SERVICES**

Americas 1-212-553-1653
Asia Pacific 852-3551-3077
Japan 81-3-5408-4100
EMEA 44-20-7772-5454

# JEA, FL Water and Sewer Enterprise

New Issue - Moody's assigns Aa2 to JEA, FL's \$372.115M Water & Sewer Revenue 2017 Bonds

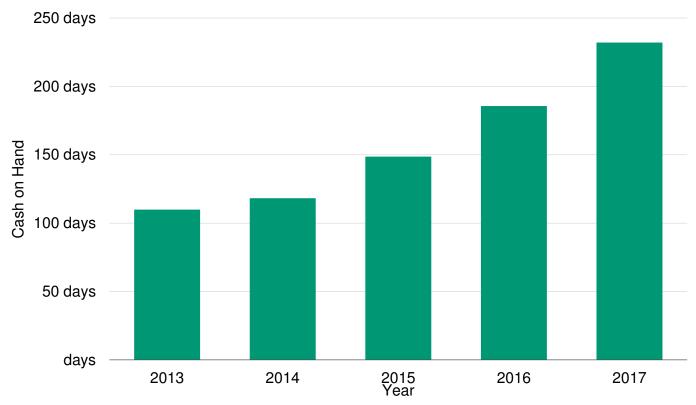
## **Summary Rating Rationale**

Moody's Investors Service assigns Aa2 rating to JEA's (FL) \$316.765 million Water and Sewer System Revenue Bonds, 2017 Series A and \$55.35 million Water and Sewer System Subordinated Revenue Bonds, 2017 Series A. Moody's maintains the Aa2 ratings and stable outlooks on \$1.34 billion senior lien bonds and \$263.4 million subordinated bonds.

The Aa2 senior and subordinate lien ratings reflect the credit strengths of JEA's water and sewer system, which include the utility's sizable and diverse service area that also contains acquired systems outside Jacksonville (Aa2 stable); good financial operations characterized by healthy total debt service coverage; competitive rates and sound liquidity; and a manageable capital program. The long-term planning of JEA officials is also a key credit aspect of the system.

Further, the Aa2 rating on the subordinated water and sewer bonds recognizes the moderate amount of subordinated debt (16.4% of total water and sewer indebtedness) in relation to the significant amount of senior lien debt, the maintenance of debt service reserves (on fixed rate bonds), and the healthy coverage afforded subordinate bonds, which mitigate the legal distinctions related to the sum-sufficient rate covenant and additional bonds test.

Exhibit 1
Improved Liquidity Despite Strong Pay-Go Program



Source: Moody's Investors Service, JEA Annual Financial Reports

# **Credit Strengths**

- » Strong management
- » Improved liquidity
- » Large and diverse customer base
- » Affordable capital program

# **Credit Challenges**

- » Open loop funding which allows for the transfer of excess funds between the water and sewer and electric system
- » Slightly below average wealth indices of service area

## **Rating Outlook**

The stable outlook reflects consistent financial performance and strong management team with prudent long-term planning.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

## Factors that Could Lead to an Upgrade

- » Improved debt service coverage and liquidity
- » Sustained customer and usage growth

## Factors that Could Lead to a Downgrade

- » Weakened debt service coverage and liquidity
- » Material leveraging of the system with debt
- » Sizable contributions to city

## **Key Indicators**

Exhibit 2

JEA Water & Sewer Enterprise, FL					
System Characteristics					
Asset Condition (Net Fixed Assets / Annual Depreciation)	18 years				
System Size - O&M (\$000)	\$163,293				
Service Area Wealth: MR % of US median	88.10%				
Legal Provisions					
Pate Covenant (x)	1.25x				
Debt Service Reserve Requirement	DSRF funded at the lesser of the standard 3-prong test (Aa)				
Management					
Pat e Management	Aa				
Regulatory Compliance and Capital Planning	Aa				
Financial Strength					
	2013	2014	2015	2016	2017
Operating Revenue (\$000)	\$390,692	\$393,355	\$389,733	\$427,750	\$457,908
System Size - O&M (\$000)	\$133,979	\$131,675	\$137,921	\$155,043	\$163,293
Net Revenues (\$000)	\$261,982	\$272,591	\$265,221	\$286,295	\$305,025
Net Funded Debt (\$000)	\$1,717,267	\$1,605,537	\$1,503,126	\$1,473,019	\$1,416,809
Annual Debt Service (\$000)	\$116,027	\$114,371	\$111,273	\$95,417	\$112,791
Annual Debt Service Coverage (x)	2.3x	2.4x	2.4x	3.0x	2.7x
Cash on Hand	110 days	118 days	149 days	186 days	232 days
Debt to Operating Revenues (x)	4.4x	4.1x	3.9x	3.4x	3.1x

Source: Moody's Investors Service, JEA Annual Financial Reports

## **Detailed Rating Considerations**

## Service Area and System Characteristics: Expanding Local Economy

Jacksonville (Aa2 stable) is the largest city in Florida and a regional center for the northeastern part of the state. The 909 square mile utility service area includes not only Duval County (excluding beach communities), but also parts of Nassau County (Aa2) and parts of St. Johns (Aa1 stable) and Clay counties. The system provides sewer service to a majority of the service territory. Acquisitions have expanded the system allowing for significant future growth potential. Military installations provides large-scale employment opportunities.

The city's economy has moved beyond recovery to expansion mode and is expected to continue to grow and diversify in the intermediate term. The economy is varied with transportation and distribution, financial services, consumer goods, information services, manufacturing and insurance and is less dependent on tourism than most parts of Florida. Military installations provides large-

scale employment opportunities. The local economy is attractive to financial institutions as a low cost center. The port plays a key role as a distribution hub.

The system provides service to 341,000 water customers and 264,300 sewer customers. There is no large customer dependency in this highly residential system, and the top ten customers represent 3.7% and 5.0% of billings for water and sewer, respectively, in fiscal 2017. Residential customers account for about two-thirds of the water and wastewater revenues.

Water supply from the Floridan Aquifer is ample and there are no competing users. The system is comprised of 37 (19 major and 18 smaller) water treatment plants (304 MGD total capacity) and 134 active supply wells. Withdrawals are regulated by the St. Johns River Water Management District (SJRWMD) under a consolidated consumptive use permit (CUP) with a current combined average permitted withdrawal of 131.2 MGD as compared to calendar year 2016 average day usage of 111 MGD (154 MGD maximum usage). JEA renewed its permit with SJRWMD in 2011 for a 20-year period with increasing withdrawal allocations (to 155 MGD) through 2031. Officials have developed a South Grid Water Supply Plan through 2025 that includes identifying supply options, conservation, expanded north grid supply, and reclaimed water enhancements to meet anticipated demand. The system has 74 MG of storage and 4,637 miles of water distribution mains. Northeast Florida is listed as a potential priority water source caution area by the St. Johns River Water Management District (SJRWMD). JEA may be required to provide a portion of its water supply through increased conservation, expansion of reclaimed water and/or alternative water supply projects.

The sewer system has 11 treatment plants with a daily average rated capacity of 120.4 MGD in relation to average flow of 52.5 MGD, and peak capacity of 240.8 MGD in relation to peak demand of 146.8 MGD in fiscal 2017. Each plant is operating within permit discharge limits. Effluent disposal is almost entirely conducted by surface water discharge currently, although JEA has 33.1 MGD in water reclamation capacity. Sludge is hauled for anaerobic digestion, dewatering and pelletization in preparation for beneficial use. There are also 3,972 miles of gravity sewers and force mains and 1,388 pumping stations. Treatment capacity is deemed to be adequate for several years.

#### Debt Service Coverage and Liquidity: Consistently Favorable Financial Operations

We believe that JEA's operating performance will remain positive due to favorable long-term planning and forecasting, a demonstrated willingness to adjust rates as needed, and ongoing operating efficiencies. JEA's steady customer base and prudent budgeting have provided satisfactory annual debt service coverage on all water and sewer bonds of 2.7 times in fiscal 2017.

The system has been able to increase debt service coverage despite no new rate increases in 2010, and no additional rate increases are currently projected. JEA enjoys full rate-setting authority. Current monthly combined water and sewer residential bills are regionally competitive (mid-range).

JEA and the City of Jacksonville have a millage-based transfer policy based on the amount of potable water and sewer service provided, including a minimum annual increase of 1% per year (combined with electric). The water and sewer transfer was \$23.6 million in fiscal 2017, down from \$25.5 million in fiscal 2016.

#### LIQUIDITY

At the end of fiscal 2017, JEA had \$103.7 million in total unrestricted cash in the system (232 days of cash-on-hand). JEA historically targeted a minimum of 100 days, however built reserves up in recent years for future pay-go capital improvement projects. Days-incash increases significantly when including the system's allocated million lines of credit of 51.3 million to approximately 596.

## **Debt and Legal Covenants**

The slightly above average 50.8% debt ratio in fiscal 2017, has been significantly reduced from 62.9% in fiscal 2012, and will continue to decline as no new debt is planned to be issued in the medium term.

Water and sewer senior lien bonds are secured by net revenues of the combined water and sewer system as well as legally-available capacity charges (subordinated debt has a subordinate lien pledge on these revenues). Senior lien security features include a debt service reserve fund and a 125% rate covenant and additional bonds test. The 125% provision in both the rate covenant and additional bonds test must be met from net operating revenues alone.

Legal provisions on the subordinated bonds include a rate covenant with either net revenues (excluding capacity fees) equal to the aggregate senior and subordinated debt service, or net revenues (including capacity fees) equal to the aggregate 100% senior and 120% subordinated debt service. In addition, the additional bonds test includes a prospective test (next three succeeding full bond years) having net revenues (excluding capacity fees) equal to 100% of senior and 120% of the aggregate subordinated debt service, or a historical test (12 consecutive of preceding 24 months) having net revenues (including capacity fees) equal to the greater of 100% senior and 110% subordinated debt service or 100% senior and subordinated debt service plus deposits to the R&R fund. There is no bond resolution requirement to maintain a debt service reserve fund on subordinated bonds unless otherwise stated in the supplemental bond resolution.

#### **DEBT STRUCTURE**

The \$1.04 billion, five-year (2018 to 2022) capital program is centered on renewal and replacement, capacity additions, efficiencies to lower operating costs, and regulatory compliance and environmental issues. The program includes primarily sewage collection and water (supply and distribution) needs. All of the capital program is expected to be financed internally with expectations of no capital borrowing.

Management has reduced the variable rate exposure from over 20% to about 11% currently. The system's debt profile includes \$281.2 million in variable rate obligations, representing about 11% of total outstanding debt, \$119.9 million of which is hedged. This amount of variable rate exposure presents a manageable level of vulnerability in certain increased interest rate environments or rating downgrade. Moody's believes that the overall favorable five year term out provisions of the credit facilities, as well as the system's favorable liquidity and ability to implement rate increases within a short period, are important mitigating factors.

JEA has \$297 million in revolving lines of credit (available for either the water and sewer system or electric system). There is a five-year term-out provision under both lines and a rating termination threshold below Baa3 for senior lien bonds. There was only a \$3 million draw on the revolving credit facility related to water and sewer in fiscal 2017.

#### **DEBT-RELATED DERIVATIVES**

JEA also has two interest rate swaps for a total \$119 million notional amount. One is based on the SIFMA index and the other on a CPI index. JEA is not required to post collateral, but if JEA's rating falls below Baa2, this would constitute an additional termination event and the swaps could be terminated.

#### PENSIONS AND OPEB

JEA employees participate in the city of Jacksonville's plan. Moody's total Adjusted Net Pension Liability (ANPL) for the city is \$5.5 billion. Moody's adjusted net pension liability is 6.7% of assessed value and a very high 4.4 times of operating revenues in fiscal 2016. Fixed costs account for 37% of the budget and rising. Notably, however, the city has recently ratified a new pension reform plan that is estimated to generate \$1.4 billion in savings to the city over 35 years, significantly improving the reported funded ratio to 80% by 2030. The city successfully obtained voter approval in the August 30, 2016 referendum for the utilization of a half cent sales tax to help address pension pressures. However, the half cent sales tax would not begin until 2031.

Favorably, the JEA has a low other post employment benefit (OPEB) liability. The city has a \$34.5 million reported unfunded OPEB liability as of October 1, 2015. The annual required contribution was \$4.1 million in fiscal 2017.

## **Management and Governance**

JEA has a strong management team and benefits from a level of autonomy from the city.

## **Legal Security**

The Series 2017 A bonds are secured by a senior lien on net revenues of the combined water and sewer system and legally-available capacity fees. The Series 2017 A subordinated bonds are secured by a subordinate lien on net revenues of the combined water and sewer system and legally-available capacity fees.

## **Use of Proceeds**

Bond proceeds will be used to refund outstanding bonds for net present value savings of at least 7.5% with no extension of final maturity.

## **Obligor Profile**

JEA is an authority created by the city of Jacksonville to better provide public power, water and sewer services to the area. The City of Jacksonville serves as an economic hub to the southeast and is the largest city in Florida (Aa1 stable). The city's population is estimated to be approximately 890,066.

## Methodology

The principal methodology used in this rating was US Municipal Utility Revenue Debt published in October 2017. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

## **Ratings**

Exhibit 3

**JEA, FL Water & Sewer Enterprise** 

Issue	Rating
Water and Sewer System Revenue Bonds, 2017	Aa2
Series A	
Rating Type	Underlying LT
Sale Amount	\$316,765,000
Expected Sale Date	12/12/2017
Rating Description	Revenue: Government
	Enterprise
Water and Sewer System Subordinated Revenue	Aa2
Bonds, 2017 Series A	
Rating Type	Underlying LT
Sale Amount	\$55,350,000
Expected Sale Date	12/12/2017
Rating Description	Revenue: Government
	Enterprise

Source: Moody's Investors Service

© 2017 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS ON TO CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS AND MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE. HOLDING, OR SALE.

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at <a href="https://www.moodys.com">www.moodys.com</a> under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors. It would be reckless and inappropriate for retail investors to use MOODY'S credit ratings or publications when making an investment decision. If in doubt you should contact your financial or other professional adviser.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER 1102120

## **CLIENT SERVICES**

 Americas
 1-212-553-1653

 Asia Pacific
 852-3551-3077

 Japan
 81-3-5408-4100

 EMEA
 44-20-7772-5454

