From: Zahn, Aaron F. - Managing Director/CEO <zahnaf@jea.com>
Sent: Friday, March 8, 2019 10:17 AM
To: Mark Mills
Subject: RE: Follow up from yesterday
Attachments: 20190322 JEA Board presentation - SHORT DRAFT .pdf; 20190322 JEA Board presentation - ASSUMPTIONS_updated.pdf; Rating Agency Presentation - 2019 Feb-FINAL FITCH.pdf

Mark –
The pleasure was mine. Thanks for forwarding the reading plan. I have a "CEO corner" where I share information with the whole company. I'll make sure to include your material.

Item #1 – Follow up on Strategic Planning Discussion
As mentioned, JEA is in the beginning stages of strategic planning. We have already launched a "Culture" revision in order to move the company toward an adaptive model of 'market shaper' from the historic utility model of 'continuous improvement engine'. You can tell I'm a subscriber to the OHI models. Our next initiative is to public a 2030 Status Quo plan. Amazingly, JEA's prior management did not maintain forecasts so this will be the first management case forecast in the company's 125 year history. The 2030 Status Quo plan is effectively a case for change at JEA and is not a desired state.
See attached to documents. First is an overview of major assumptions. Second is an overview of the Status Quo. Both in very draft form and may vary a bit as we are working to finalize the scenario. I would enjoy getting your feedback if you have a moment to review. Basic question, given your unique perspective, is are we being too aggressive or too conservative in our major assumption? Also, are we missing something?

Item #2 – Longer Term Relationship
I would enjoy getting to know each other better. It sounds like we have similar perspectives and approaches. Once we conclude our case for change JEA will start on compiling a 10 year plan on shifting the utility to remain relevant in the changing market. I'm including our Rating Agency Presentation from this month as well. It provides a great overview of our company and major current initiatives / priorities.

Look forward to continuing the conversation.

Aaron Zahn
Managing Director & Chief Executive Officer
Direct: (904) 665-4396
Mobile: (312) 286-1040
Fax: (904) 665-4238
Email: zahnaf@jea.com

From: Mark Mills <mills@digitalpowergroup.com>
Sent: Friday, March 8, 2019 9:30 AM
To: Zahn, Aaron F. - Managing Director/CEO <zahnaf@jea.com>
Subject: Follow up from yesterday

Aaron,
A pleasure to meet, and thanks to you and your team for inviting me to speak.

As promised, my contact vectors herein. I'd enjoy chatting more about your ideas for JEA. There my be a more structured way I can be of help in building out your strategy; meantime happy to read what your (draft?) plan.

And, below, my recent *Forbes* column that, in essence, captures the theme of my speech yesterday, along with a small collection of other things I've written about issues relating to tech change and innovation more broadly than energy per se.
Best,
Mark

Mark P. Mills
Strategic Partner, Cottonwood Venture Partners
Senior Fellow, Manhattan Institute
Faculty Fellow, Northwestern University McCormick School of Engineering
www.tech-pundit.com
301.814.2800 (cell)

"You Say You Want A Revolution" In The Physics Of Energy: Good Luck Green New Deal, Mark P. Mills, *Forbes,* February 28, 2019.

Energy and the Information Infrastructure Part 4: Data is 'The New Oil,' Blowing Past the Zettabyte Era, Real Clear Energy, February 1, 2019.
Disruption Ahead—and Regulation, Mark P. Mills, *City Journal*, August 14, 2018
The Workforce Revolution That's Long Overdue, Mark P. Mills, *City Journal*, July 24, 2018
Robots Run the Farm, but You Can Eat Only So Much, *Wall Street Journal*, Mark P. Mills, June 25, 2018.
Health Care (Desperately) Needs More Robots, *Investors Business Daily*, June 12, 2018
Robots to the Rescue—of Manufacturing, Mark P. Mills, *City Journal*, June 4, 2018
Have We Reached Peak Entrepreneurship?, Julio M. Ottino & Mark P Mills, *Real Clear Policy*, March 07, 2017.
Tomorrow's Manufacturing Revolution, By Mark P. Mills, *Wall Street Journal*, February 2 2017
How Silicon Valley Could *Really* Change the World, Mark P. Mills, *City Journal*, 5 July 2015
Cracking the Code of the New Economy: You Don't Need a STEM Degree to Work in a STEM Field, *Pacific Standard* BY MARK P. MILLS & M. ANTHONY MILLS • June 19, 2014.

Status Quo Baseline

The first step in the process

Disclaimer

The following **“Status Quo Baseline”** financial projections are presented solely for JEA Board of Directors planning and action in connection with the development of a strategic plan. They are not a projection of future financial performance and, as such, should not be relied upon by present or prospective JEA bond investors to purchase or sell any security or to make an investment decision. The projections are a mathematical representation of a status quo business case and do not reflect numerous likely future events and future JEA actions that will likely cause actual results to differ materially from this business case. The presentation should be viewed in its entirety with individual slides or sections of the presentation having no greater or reduced significance relative to other slides or sections of the presentation

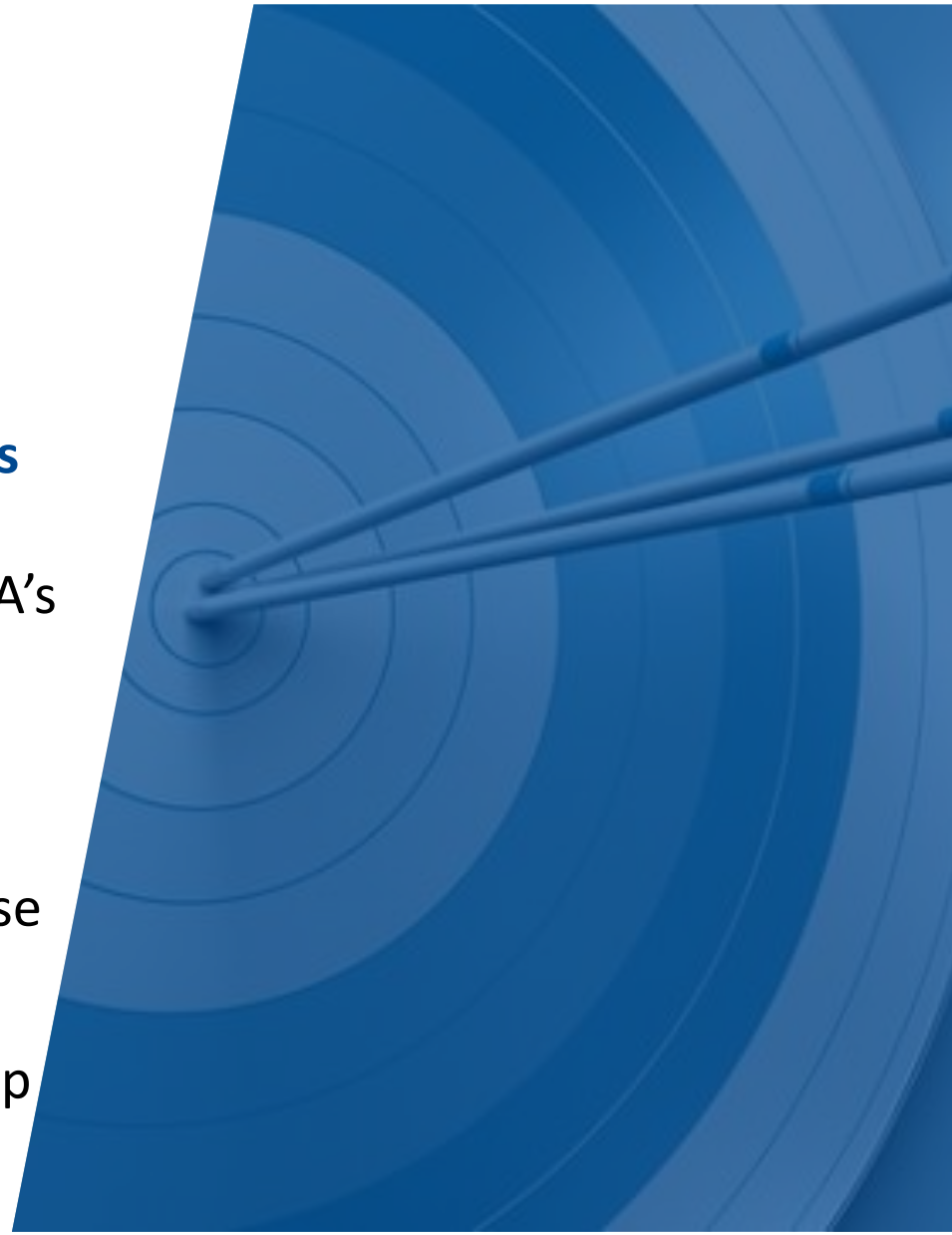
Goals for today

What we are sharing

- We have developed a **"status quo baseline"** for JEA's energy and water systems – financial projections for JEA if JEA were to take no action beyond business as usual through 2030
- The status quo baseline was developed using the **best available estimates of sales and costs**, including the impact of external trends, assuming current laws and regulations

Agenda

- Review JEA's **historical financial performance**
- Present the **emerging trends** affecting utilities nationally and how they will impact JEA's energy and water system
- Present **JEA's projected financial performance through 2030** in light of these market forces
- Review **next steps** to develop a strategic plan for JEA



Approach to the status quo baseline

What the status quo baseline IS…

- A projection of JEA's finances through 2030 based on current plans only, reflecting the impact of external market forces on JEA
- A tool for JEA to develop a strategy and action plan to succeed in light of market forces

… and IS NOT

- A financial forecast or most likely scenario for JEA
- A forecast that reflects potential JEA actions/initiatives
- A forecast that reflects likely changes to laws or regulations
- A tool for making specific resource planning or investment decisions
- A substitute for or input into the IRP / IWRP

The big picture for energy status quo : JEA faces difficult financial choices in the years ahead

In the last 20 years:

- JEA has added the population of Tallahassee to its customer base, driving up costs while sales have stayed flat

In the next 10 years:

- Sales decline accelerates even as JEA adds another Tallahassee, creating a cash flow gap of $1.9B by 2030
- JEA will need to raise rates by 24%, ($19.54 per month per customer) AND stop the city contribution post-2023

Beyond 2030: the new normal

- Rate increases of greater than 2% per year needed to cover growing deficits, with still no ability to pay the city contribution
- Potential system priorities like undergrounding T&D lines continue to go unfunded

The time is now to take bold action to fundamentally change the trajectory of the energy business

The big picture for water status quo: JEA is financially stable in the next 10 years, but will be challenged past 2030

2000 — 2018 — 2030

In the last 20 years

- JEA has invested heavily to improve its system, returning $8.5M per year in environmental credits to the city (equivalent to 3 months of city contribution)

In the next 10 years

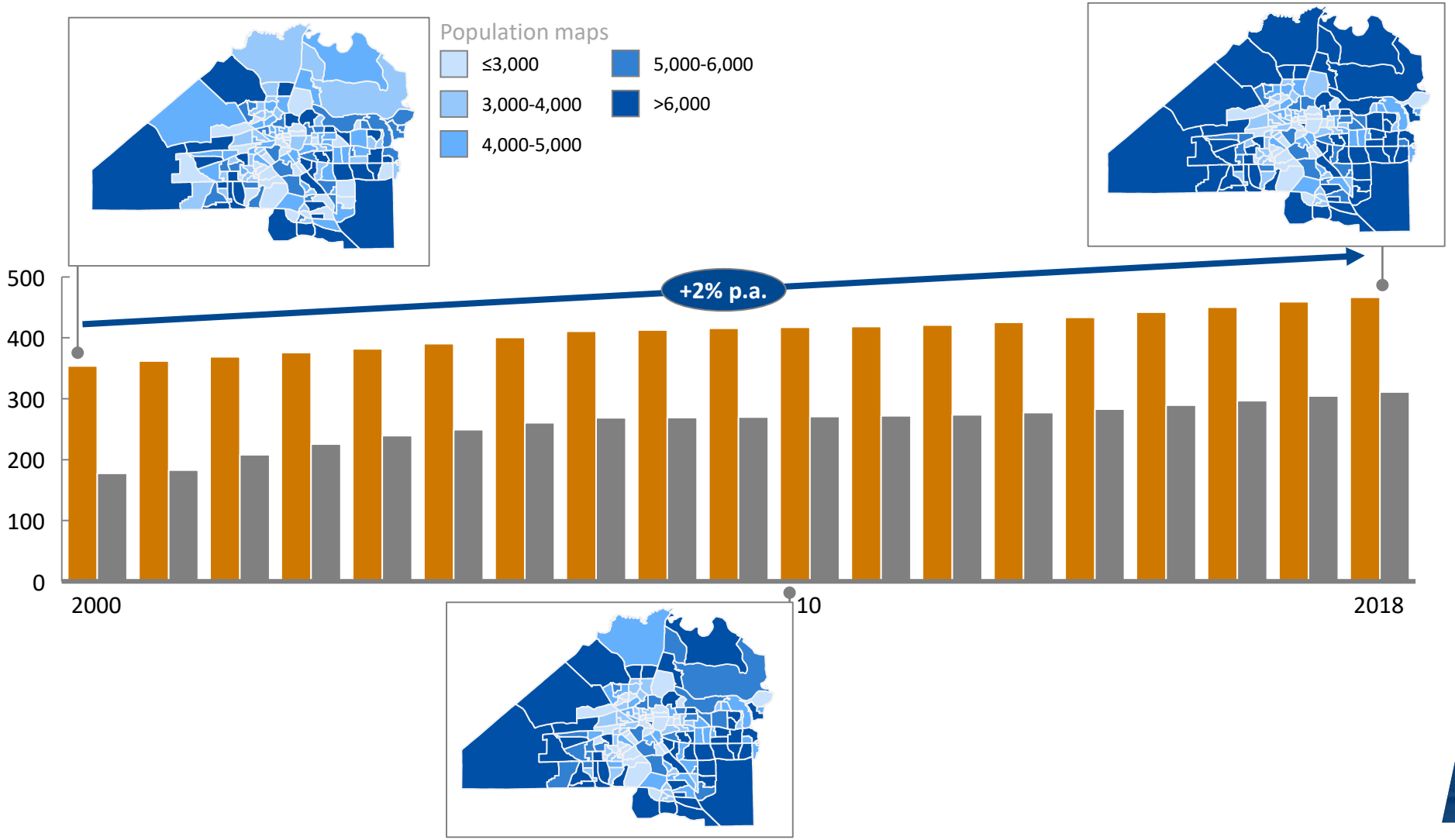
- Additional capital investments to address upcoming supply challenges and expand system lead to a funding challenge of $400M by 2030
- The funding challenged can be solved by temporarily raising rates by 15%, ($10 per month per customer) OR increasing net debt by $200M, WHILE continuing to pay the city contribution

Beyond 2030: the new normal

- Future priorities will create funding needs over $3B – septic tank phase-out, purification, river crossing
- JEA will need to raise rates, having limited ability to borrow additional capital

By taking action now, JEA can proactively strengthen its water business to address future challenges

Since 2000, JEA has added the city of Tallahassee to its customer load…



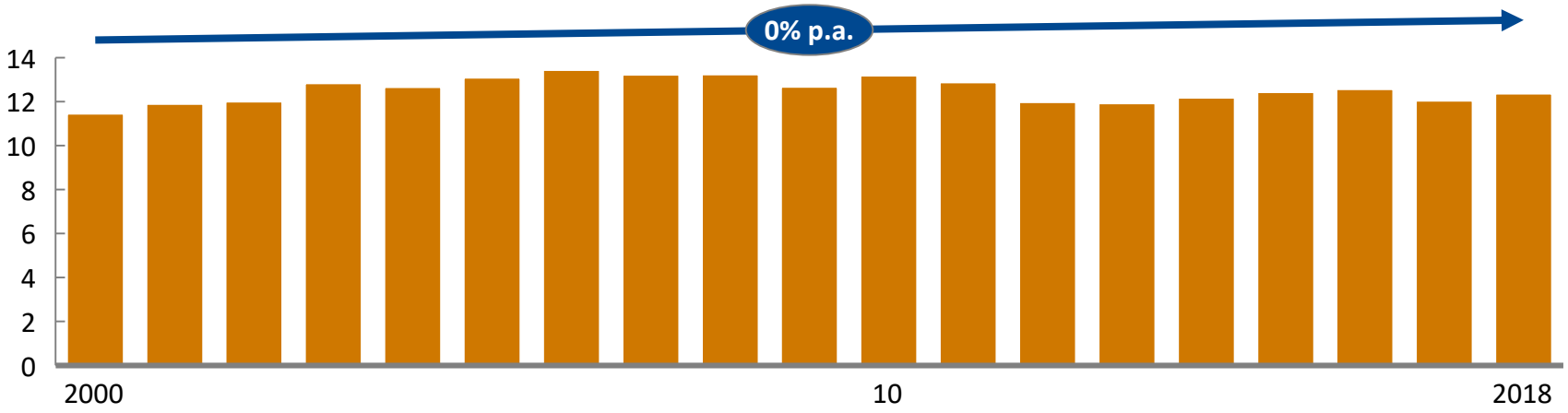
JEA has increased its electric customer base by **112,000 customers** since 2000 – equivalent to the city of Tallahassee's utility customer base (121,000 customers)

Water has increased even faster (3% annual customer growth)

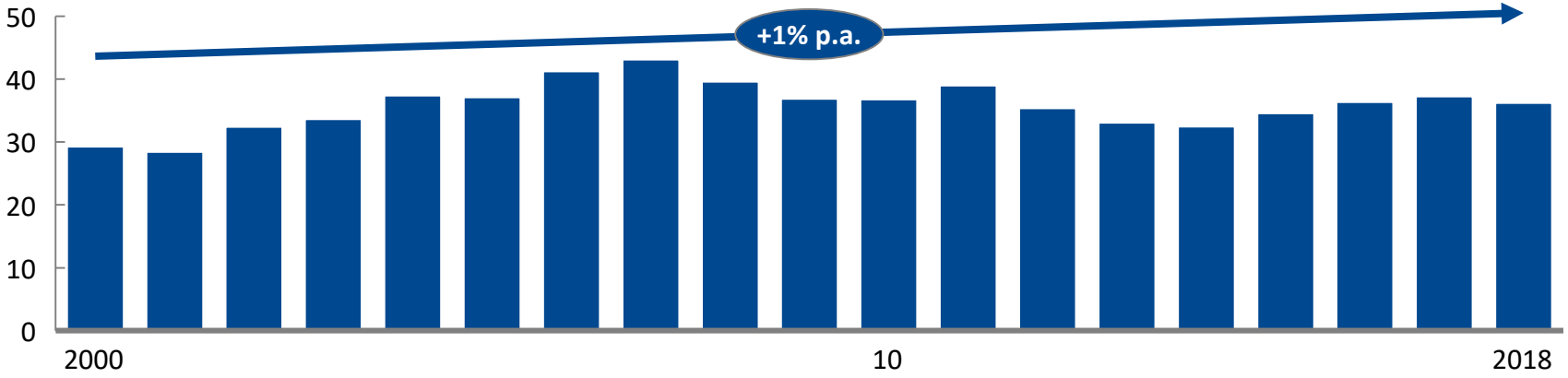
1 Based on distribution capacity spend per customer (7-10k new customers annually, $18-20M in distribution capacity spending)

…Without changing energy sales

Energy sales, million MWh



Water sales, M kGal



Energy sales have remained flat, and have declined since 2007

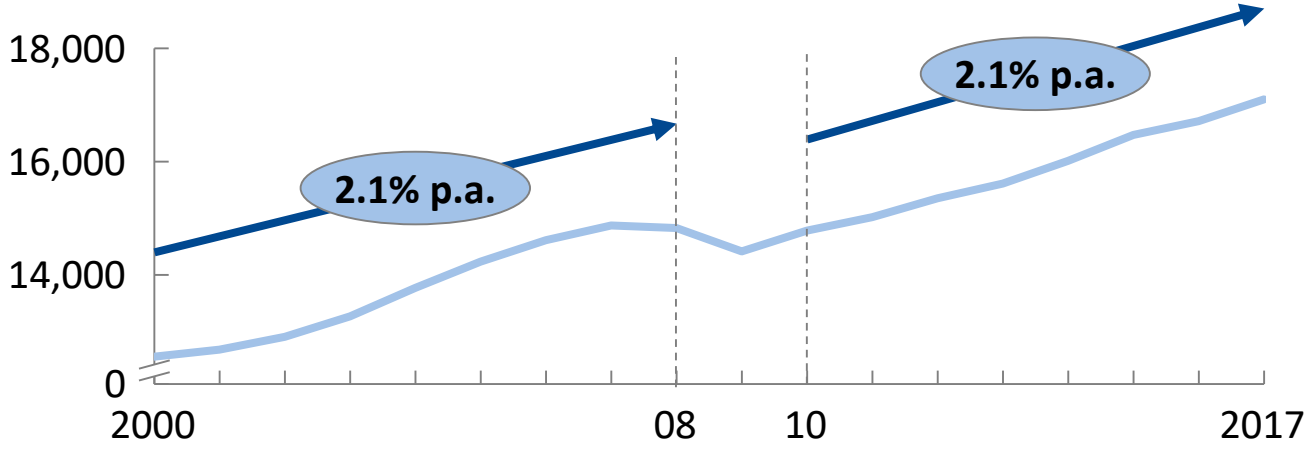
Each new customer adds **~$2,500** in energy capital costs and **$100-200** / year in ongoing operating costs[1], contributing to rising costs

Water sales have been affected by weather, water efficiency, and customer behavior, but have sustained growth

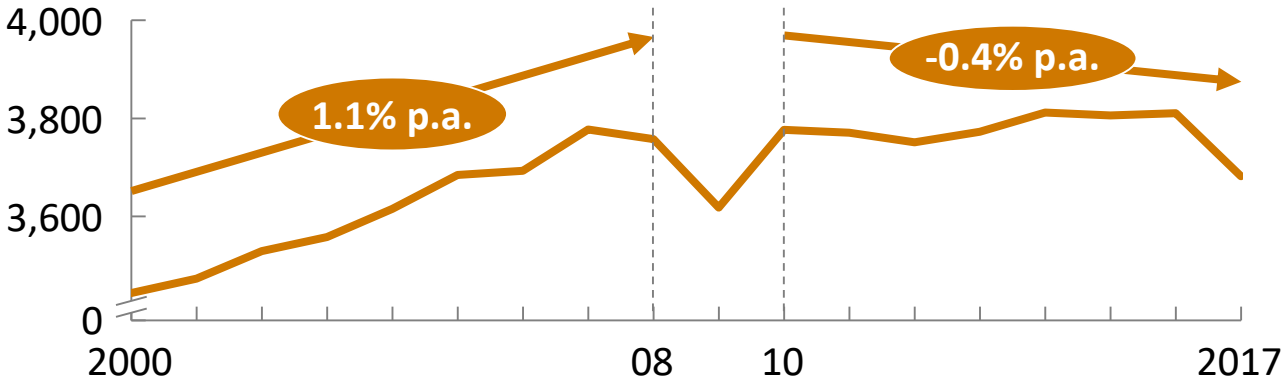
1 Based on distribution capacity spend per customer (7-10k new customers annually, $18-20M in distribution capacity spending) and additional materials & supplies spend / new customer

Energy usage has declined nationwide despite growing GDP – this trend is not limited to Jacksonville nor is it going away

Real GDP growth, USD, trillions



National retail electric sales volume, MWh, millions



Key drivers (have already impacted JEA)

- **Energy efficiency:** Residential electricity sales per customer have **declined over 10% since 2010**

Emerging drivers (limited impact on JEA to date)

- **Distributed generation:** Distributed solar accounts for 30% of US solar, with **~15-20% annual growth expected through 2030**
- **Electrification:** Emergence of electric vehicles (currently .2% of vehicles) and electrification presents opportunity to increase sales but has not offset losses to date

SOURCE: EIA, Energy Velocity, USGS

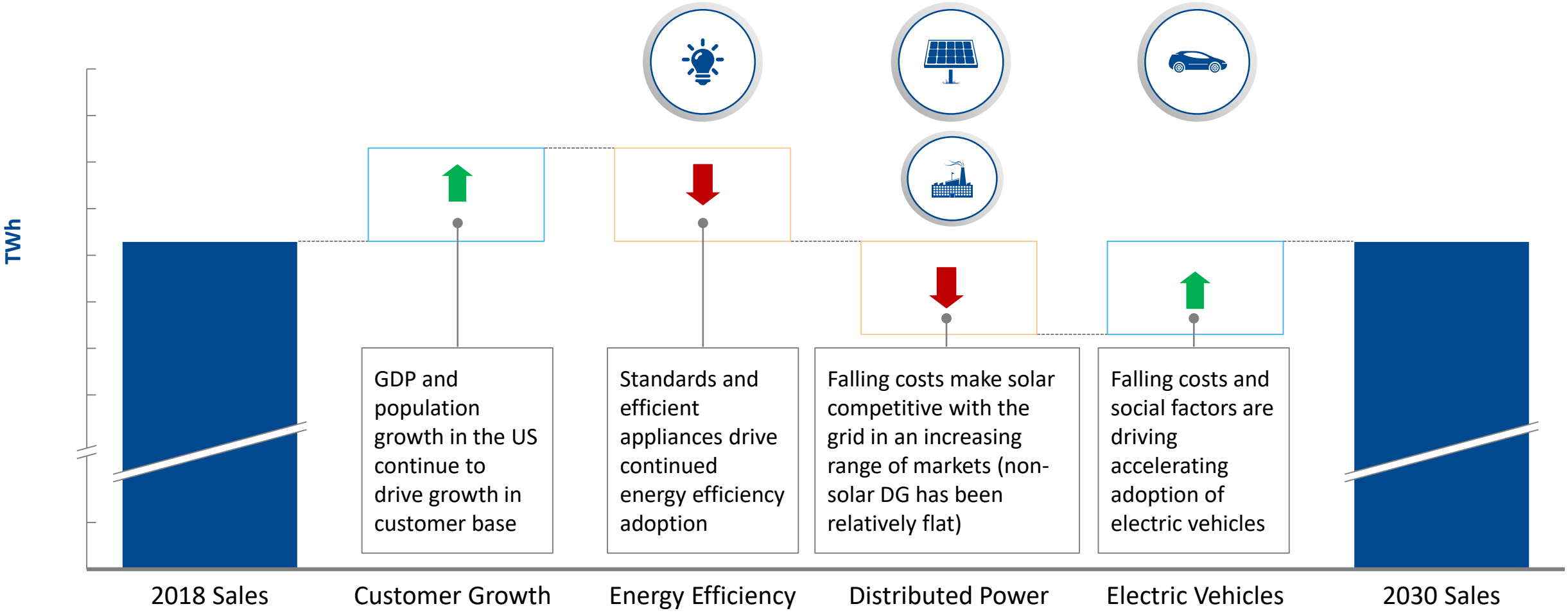
Emerging trends relevant to JEA will primarily impact energy sales and water costs

Key driver of projected change

	Sales	Costs
Energy	▪ Low fixed charges mean **revenues are highly dependent on sales** ▪ Sales forecast will be impacted by both **established trends** (energy efficiency) and **emerging technologies** (rooftop solar)	▪ **Limited and well-established** major cost items (e.g. to replace retiring coal capacity) in status quo case
Water	▪ Higher fixed charges mean **revenues are less sensitive to sales** compared with energy ▪ Sales forecast will see **continuation of established trends**, with limited technology impact	▪ **Growing investment** in new system priorities (e.g. in reclaimed water and purification)

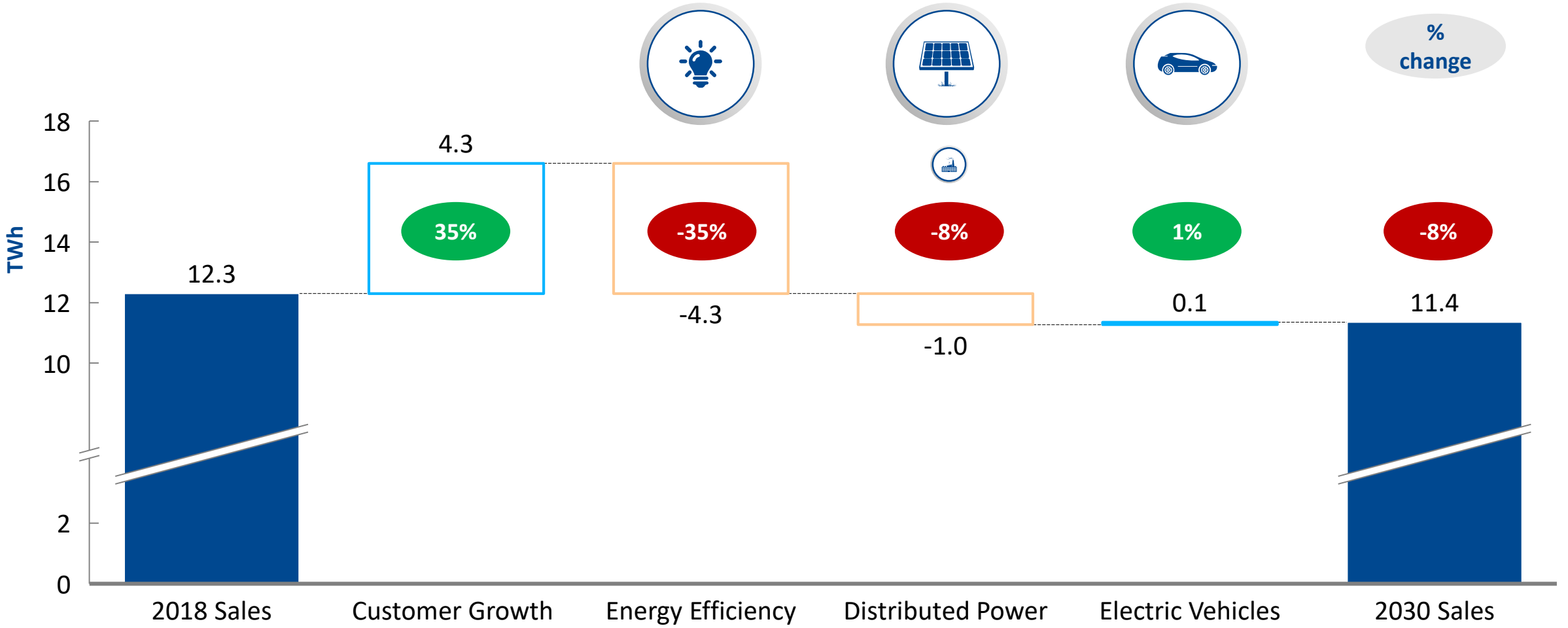
National trends will impact JEA substantially by 2030

2030 JEA energy sales drivers



Energy efficiency and solar will drive down JEA's sales by 8% through 2030 despite a growing customer base

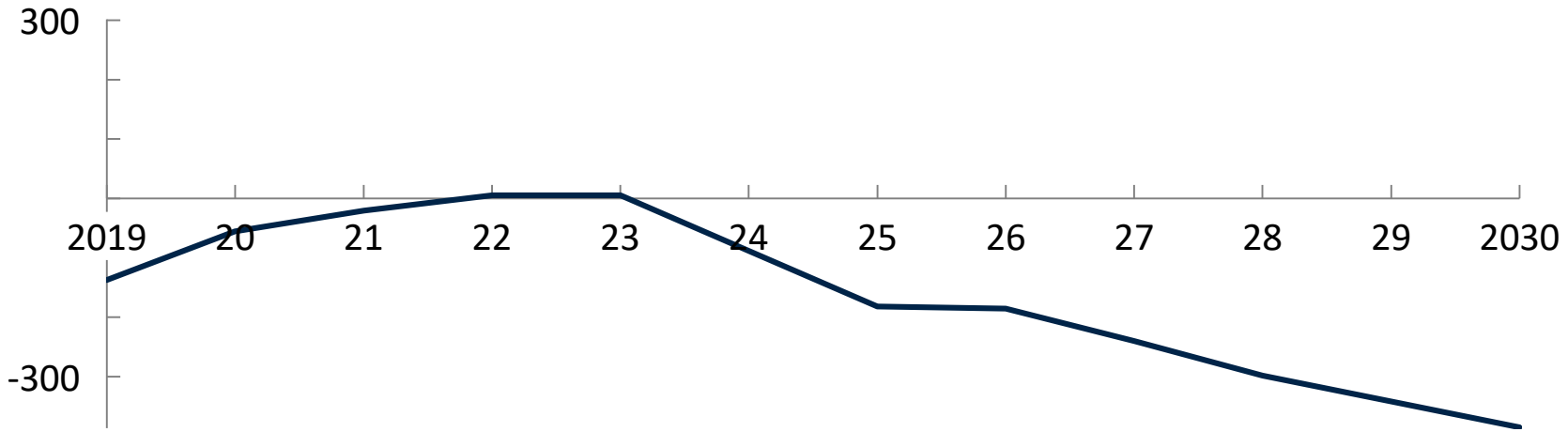
2030 JEA projected energy sales, TWh



Energy: Rising costs and lower sales lead to structural deficits by 2023 and a $1.9B cash flow gap

Cash flow projections, $M

(no rate increase, no additional debt, with city contribution)[1]



Key drivers and assumptions

- **Decreasing energy sales** despite increasing customer base
- **O&M** costs continue to increase
- Persistent need for **capital expenditures** to replace retiring capacity, connect new customers, and maintain infrastructure
- **Non-fuel purchased power** driven up by Vogtle
- Continued growth of **city contribution** requirement

To solve the cash flow gap:

Rate increase

42%

OR

Rate increase

24%

⊕

No city contribution past 2023

=

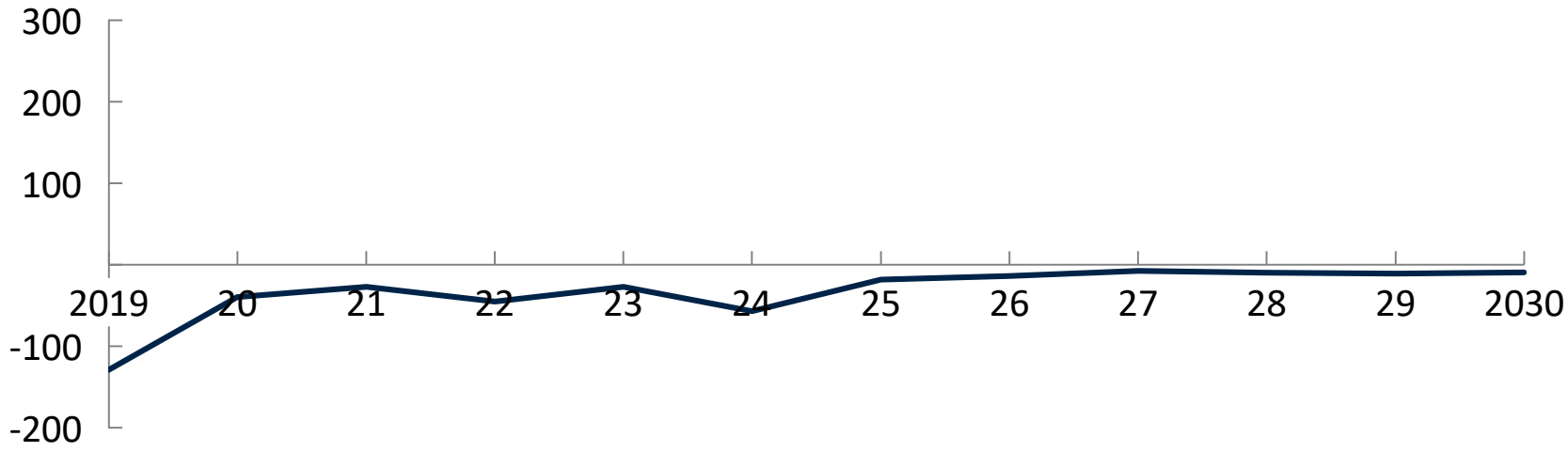
Zero cash flows and continued need for rate increases post 2030 to fund basic operations

1 Baseline cash flow projections assume no new debt outside of Greenland funding 2 Relative to 2019

Water: Need for capital investment in the water system and reduced customer usage leads to reduced cash flows by 2030

Cash flow projections, $M

(no rate increase, no additional debt, with city contribution)[1]



Key drivers and assumptions

- Persistent need for **capital expenditures,** particularly in early years of projection, to fund new supply, new connections, and system maintenance
- **O&M** costs continue to rise faster than revenues
- **11% growth in sales,** accounting for decreasing per-capita water use
- Continued growth of **city contribution** requirement

To solve the cash flow gap:

Additional debt

$200m

OR

5-year rate increase

15%

From 2020-2024

=

Zero cash flows and need for rate increases or additional debt to fund major capital investment post 2030

1 Baseline cash flow projections assume no new debt

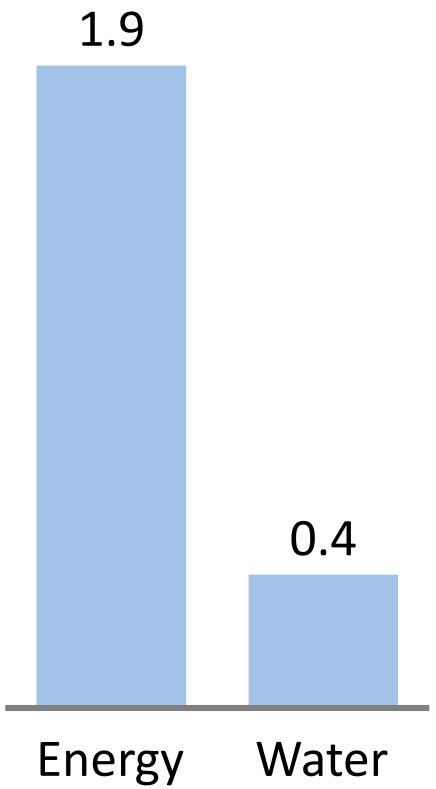
SOURCE: JEA

Beyond the status quo baseline: additional downside potential in both water and energy financial projections

Uncertainty	Energy impact	Water impact
Economic forecast	▪ A recession would drive down growth and per-capita consumption compared with current steady growth forecast 	▪ A recession would drive down consumption, though effect would likely be less pronounced than for energy 
Regulation	▪ Impact depends on regulatory change (e.g. carbon tax, solar incentives could drive DG, rollback of air quality regs support coal) 	▪ Impact depends on regulatory change (e.g. water quality or resiliency requirements could require more or less capex) 
Distributed technologies	▪ Accelerated adoption of DG (solar) driven by lower costs and ease of access could have significant impact on sales 	▪ Significant adoption of self-consumption technologies (e.g., showers) unlikely 
Adverse weather / climate change	▪ While weather forecast is uncertain, adverse effects (storms, lost winter sales) likely exceed positive impacts 	▪ While weather forecast is uncertain, adverse effects (e.g. droughts) likely exceed positive impacts 
Technological innovation	▪ Electrification and EVs could impact on sales at high levels of adoption, though impact is muted compared with DG 	▪ Increased integration of technology to manage leaks and system operations will improve recovery of non-revenue water 

To solve the cash flow gap, JEA will need to explore strategic action along all available levers

Cash flow gap, 2019-30, $B



Some combination of all available levers will be needed to close gap

Revenues

- Drive growth in business
- Overhaul rates

Expenses

- Reduce operating costs
- Reduce capital execution costs
- Reduce / reprioritize capex needs

Finances

- Optimize debt financing
- Negotiate city contributions

JEA will develop a plan of action consistent with its strategic goals

Strategic Goal: Drive an increase in the value of JEA now and in the future

Corporate measures and metrics

Value to our customer

- Provide JEA customers with safe and reliable electric, water and wastewater **services at a rate structure equal to or less than industry average**
- Maintain **customer service standards and experience** within the top quartile of the industry
- Expand our trusted partner **relationship with our customers**

Financial value

- **Maintain financial performance metrics** necessary to preserve aa3 / AA- ratings, or similar comparable risk measures as adopted and deemed appropriate by JEA from time to time
- **Establish growth initiatives** to drive values and efficiencies with respect to electric, water, sewer, natural gas and other utility services, systems and/or products

Community impact value

- Establish and maintain **open and transparent communication** with employee, customer and all our stakeholders
- Continue investment and leadership of **economic development within Jacksonville**
- Continue and drive **employment within the region**
- Foster an environment of **engaged employees** that treat JEA as owners
- Preserve the level of **financial contribution of JEA to the city**

Environmental Value

- Maintain **compliance with all regulations** and meet or exceed industry standards that impact the environment
- Establish and lead a **sustainability program** for the benefit of the region
- Set an example of **environmental stewardship**

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We are now more focused than ever on developing a strategic plan for JEA

Internal stakeholder alignment (Board, SLT, appointed employees, Union)

Phase 1

Transition Stabilize JEA, develop strategic framework, guiding principles, dashboard, financial tools, hire CEO

Phase 2

We are here

Develop status quo/business as usual financial projections

Assess current state of JEA health and culture

Develop scenarios

Set metrics and targets for per-formance and health

Set perfor-mance and health ambition + aspir-ations for JEA

Phase 3

Develop strategic portfolio of Initiatives to meet targets for performan ce and health

Launch no-regrets strategic initiatives

Phase 4

Finalize executable plan with **no regrets** near-term actions and **options** for long-term path

Phase 5

Align JEA Stakeholders & Charter with long-term plan to maximize value:
1) Customer;
2) Financial;
3) Environ-mental; and
4) Community Impact

External stakeholder consultation and feedback (e.g. City of Jacksonville)

Supplemental Information – appendix A

JEA®

ENERGY SYSTEM – MARCH 2019

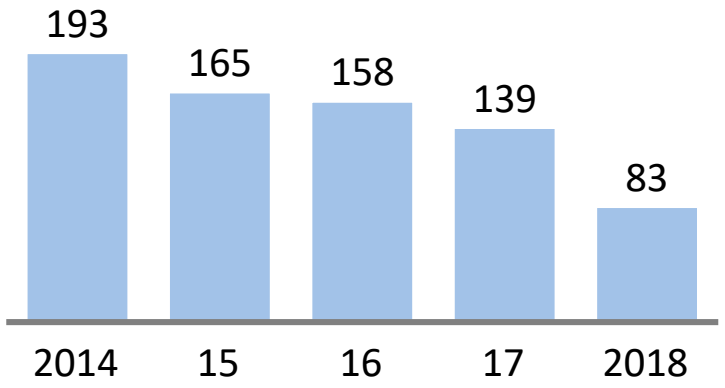
JEA has been able to sustain income in recent years despite flat sales through active debt management

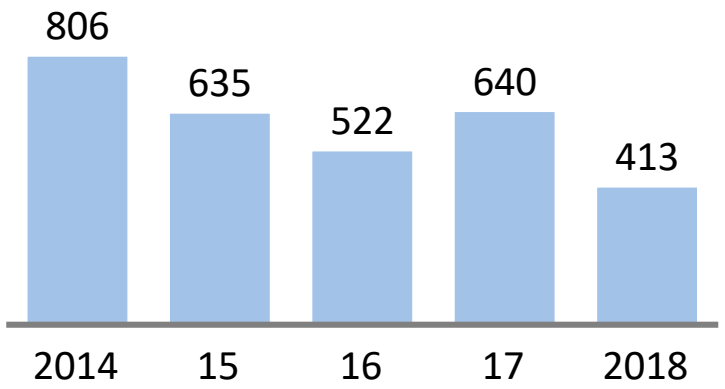
Water

Energy

Increased costs and flat revenues

Free cash flow less capex, $M





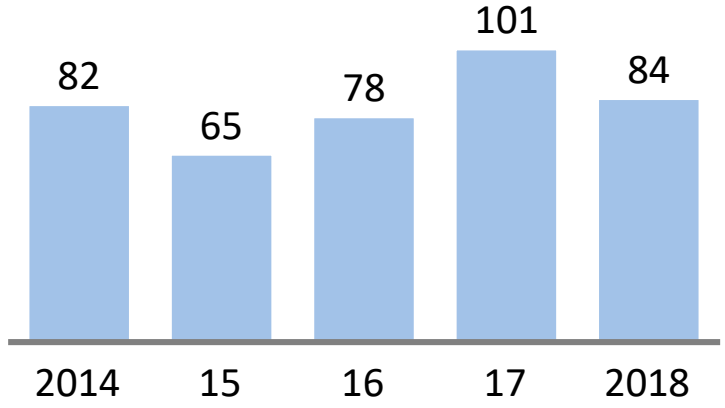
Active debt management

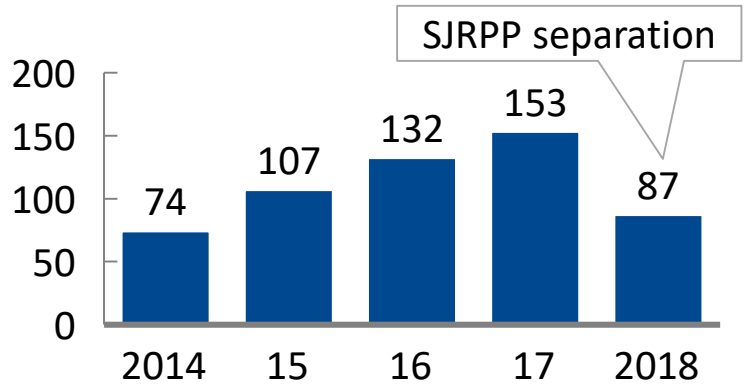
$260M debt service savings compared with 2011 schedule

$400M debt service savings compared with 2011 schedule

Stable income

Net income after contributions, $K





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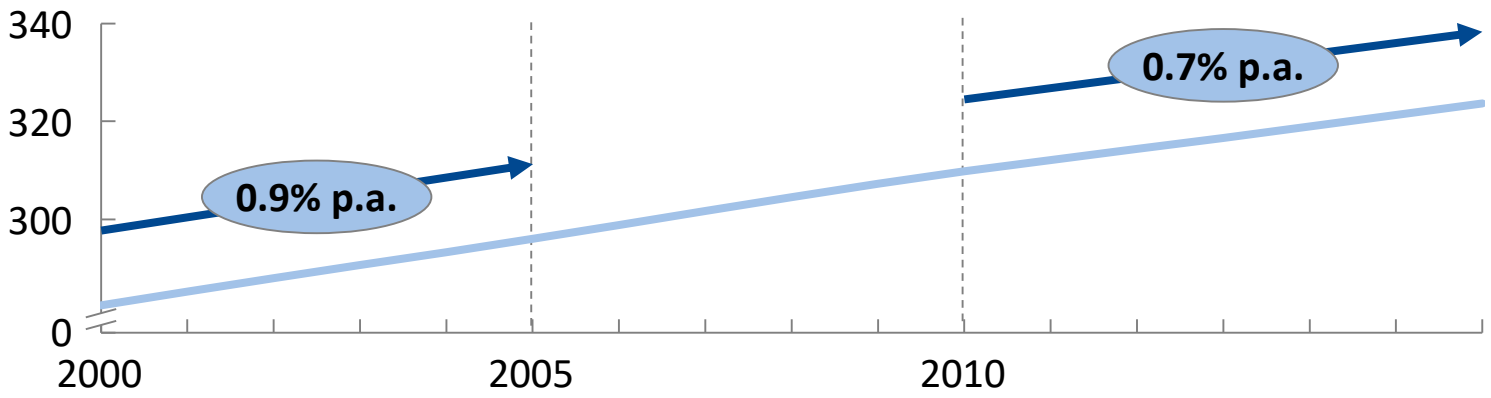
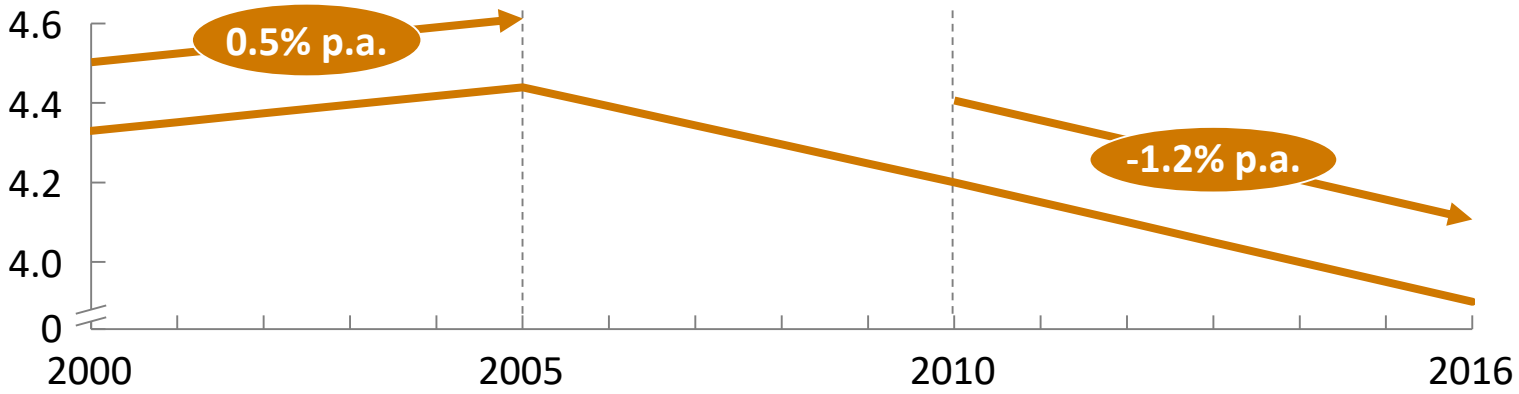
SOURCE: JEA

Water usage has declined nationwide as population has grown – this trend is expected to become more prevalent in Jacksonville

US Population, millions



National retail water sales volume,[1] billion gallons/day



Key drivers (have already impacted JEA)

- **Water efficiency:** residential efficiency increased **by over 20%,** driven by regulatory standards for appliances

Key drivers (less impact on JEA)

- **Sewer treatment:** systems have been expanded as septic tanks are removed, offsetting some efficiency losses
- **Increasing awareness:** drought and environmental awareness have led to regional reductions in customer use, particularly in the Western US (e.g., CA, AZ, NV)

1 Estimates available every 5 years

SOURCE: EIA, Energy Velocity, USGS

Projections are based on national and regional trends, tailored for JEA context

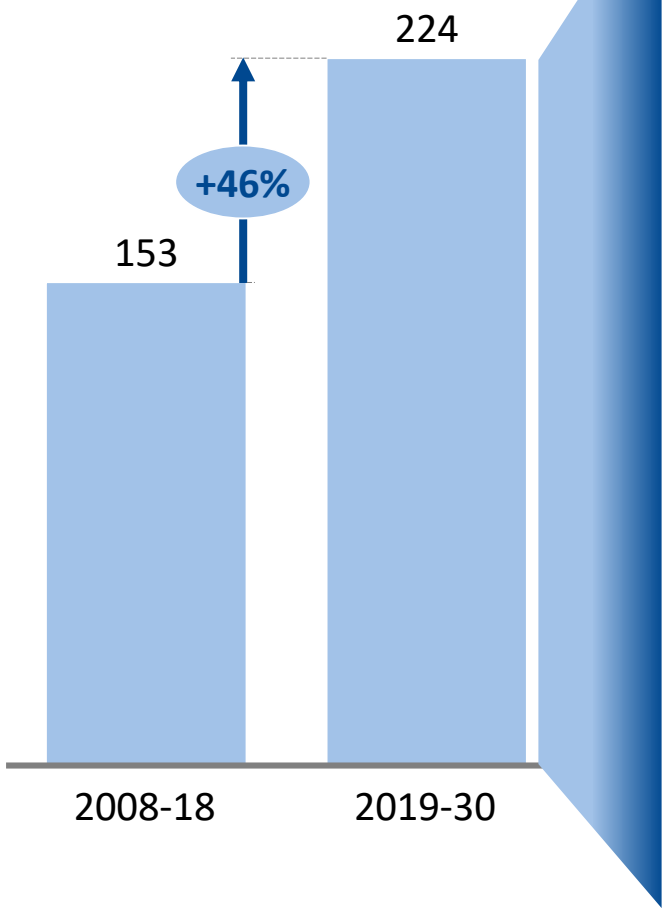
	Trends	2030 projections	
		National	JEA
Energy efficiency	▪ Increasingly efficient appliances reach higher penetration nationally as customers replace old units (10% since 2010) ▪ Jacksonville has exhibited similar energy efficiency trends	8-12%	11%
		Reduction in per-customer residential demand	
Distributed generation (solar)	▪ Total solar is forecasted to reach over 400 GW[1] by 2030 (over 30% of current total is distributed) ▪ Distributed solar currently lags in Florida due to poor economics, and is expected to pick up in mid-2020s	6.5x	34x
		Distributed solar growth	
Distributed generation (non-solar)	▪ CHP growth has been relatively flat in US following decades of policy-driven growth ▪ CHP adoption in Jacksonville has been non-existent despite ongoing conversations with most likely adopters	<1%	<1%
		Annual CHP growth	
Electric vehicles (EV)	▪ EVs are expected to grow from .2% of fleet today to 7-12% by 2030 ▪ Jacksonville EVs have grown at about half of the US average	7-12%	3-12%[3]
		Of vehicles	

1 Based on Sunshot 2030 for PV report 2 "EV" includes PHEV and BEV 3 Jacksonville vehicle penetration currently below US average; trend expected to continue barring external influence

SOURCE: EV automotive forecast, SEIA, EIA, Edison Foundation, IRENA, DOE

Water costs: system priorities will increase the capital investment needed to deliver service

Average annual water capex budget, $M



System priorities		Projected spend, 2019-30, $M
Supply challenges	▪ Proactively address emerging supply challenges on South Grid	327
Reclaimed water	▪ Lead Florida in increasing the use of reclaimed water in service territory	206
Population growth	▪ Connect and serve new customers, accounting for potential continued reductions in use per customer	478
Maintenance and resiliency	▪ Maintain condition of existing infrastructure; build for additional resiliency to outages and other system disruptions	996

Supplemental Information – appendix B

ENERGY SYSTEM – MARCH 2019

Financial assumptions used to develop energy and water status quo baseline scenarios

Financial assumption	Energy	Water
Use rate increases to meet cash flow gap	YES	NO
Raise additional debt to meet cash flow gap	NO (with exception of debt funding for Greenland)	YES
Fund city contribution post 2023	NO	YES

Energy financial dashboard

Metric	2019	2025	2030	CAGR	Notes
Residential bill[1]	$123.34	$133.09	$142.88	1.3%	Current Florida median is $125
Operating free cash flow	$553,944,609	$385,810,140	$387,364,043	-3.2%	
Capital expenditures	($275,000,000)	($321,529,960)	($179,027,619)	-3.8%	2025 capex driven in part by Greenland
Funds available[2]	$278,944,609	$64,280,179	$208,336,424	-2.6%	
Debt[3]	$1,942,959	$1,857,004	$1,394,117	-3.0%	
Debt to capital ratio	60%	62%	57%	-0.5%	Current target is 50%

1 After taxes
2 For debt service and city contribution
3 Net funded

DRAFT 3/7/2019

SOURCE: JEA

Water financial dashboard

Metric	2019	2025	2030	CAGR	Notes
Residential bill[1]	$70.45	$70.45	$70.45	0.0%	Current Florida median is $77
Operating free cash flow	$347,483,156	$330,707,226	$339,579,834	-0.2%	
Capital expenditures	($219,928,344)	($204,974,406)	($216,032,005)	-0.2%	Capex remains high through projection
Funds available[2]	$127,554,812	$125,732,820	$123,547,829	-0.3%	
Debt[3]	$1,216,806	$1,185,638	$922,200	-2.5%	
Debt to capital ratio	41%	35%	27%	-3.7%	

1 After taxes
2 For debt service and city contribution
3 Net funded

SOURCE: JEA

Status Quo Baseline – Assumptions review

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Goals for today

- Review goals of status quo baseline presentation
- Review assumptions underlying status quo projections and initial results
- Discuss communication to Board

Assumptions and key financial outputs

Summary: the status quo is a result of sales and cost drivers and trends, with assumption that JEA takes no action outside business as usual

	Sales drivers and trends	Cost drivers and trends
Energy	▪ **Customer growth:** growing with strong economic forecast ▪ **Energy efficiency:** continued reduction in sales ▪ **Distributed generation:** begins to drive reduction in sales ▪ **Electric vehicles:** minor growth in sales	▪ **O&M:** growing in line with historical trends ▪ **Capex:** steady throughout period, one major investment (Greenland) ▪ **Debt:** early debt retirement (STAR plan)
Water	▪ **Customer growth:** growing with strong economic forecast ▪ **Water efficiency:** continued reduction in sales	▪ **O&M:** growing in line with historical trends ▪ **Capex:** growth, especially through 2025 ▪ **Debt:** early debt retirement (STAR plan)

Energy Sales

		Key metric	2019	CAGR 2019-2030	2030	Source / rationale
1 Customer growth		Population (thousands)	969	1.2%	1,115	Moody's Duval county forecast
		GDP (Duval, Total, (Mil. Ch. 2009 USD))	55,930	3.1%	80,635	Moody's Duval county forecast
		Median household income ($)	60,476	3.7%	93,258	Moody's Duval county forecast
2 Energy efficiency		Residential efficiency (MWh/customer/yr)	12.5	-0.8%	11.3	Appliance-level adoption assumptions
		Commercial efficiency (MWh/customer/yr)	77.5	-1.0%	68.8	Appliance-level adoption assumptions
		Industrial efficiency (MWh/$M GDP)	57.8	-1.1%	50.4	JEA customer forecast
3 Distributed generation (DG) (solar + storage)	Cost	Residential solar cost ($/W)	$2.65	-6.6%	$1.17	2018 solar cost forecast model
		Residential storage cost ($/W/system)	$0.42	-6.4%	$0.19	2018 storage cost forecast model
		C&I solar cost ($/W)	$1.58	-4.5%	$0.91	GTM solar cost projection
		Incentives in place	ITC through 2022, battery rebate through 2030			Current regulation
	Value	Retail electricity price (R) ($/kWh)	0.103	1.6%	.126	Status quo rate projections (as of 2/17)
		Residential storage backup value ($/year)	$200	Constant	$200	Internal estimate based on sales trends
		Addnl consumption enabled by battery (% load)	35%	Constant	35%	Solar output and household consumption curves
		Retail electricity price (C&I) - weighted solar ($/kWh)	$0.07	2%	.09	Baseline (current projection) assumptions
	Adoption	Developer hurdle (% IRR)	9%	Constant	9%	Appetite for commercial offtaker risk & new market
		Pre-parity adoption rate - resi, C&I (% sales per year)	0.10%	Constant	0.10%	In line with historic pre-parity adoption trends
		Post-dvlper parity adoption rate - C&I (% sales per year)	1.25%	Constant	1.25%	High end of historic post-parity adoption trends
		Post-customer parity adoption rate – Resi (% sales per year)	1.00%	Constant	1.00%	High end of historic post-parity adoption trends
		Post-dvlper parity adoption rate – Resi (% sales per year)	1.50%	Constant	1.50%	High end of historic post-parity adoption trends
4 DG (non-solar)		Annual adoption (kW / year)	475	Constant	475	Consistent with national trends over past decade
		Economically viable for broad customer base		No		Consistent with national trends
5 Electric vehicles (EV)		EV penetration (%)	0.30%	23.2%	3.6%	2018 EV growth forecast model, current Jacksonville fleet
		EVs in fleet (#)	1,968	23.2%	30,751	2018 EV growth forecast model
		Consumption per BEV (weighted, MWh)	3,850	-2.8%	2,750	Current efficiencies and estimate of improvements

1 Assumes battery part of most installations by mid-2020s

Energy Costs

	Key metric	Assumptions	Source / rationale
6 O&M	O&M escalator (%)	7% CAGR 2018-20 4% CAGR 2021-30	2019-20 based on current budget / forecasted spend 2021 onwards based on historical growth by category, adjusted for known anomalies
Base rate	Base rate (inclusive of fuel) in 2019 ($/kWh)	$.103 in 2019	Baseline (current projection) assumptions
7 Capital costs	Average capital expense ($M)	Average annual spend 2019-2025: $193M Average annual spend 2026-2030: $184M	Based on Capital Budget Planning project list; future average excludes generation
	New capacity ($M)	New capacity (Greenland combined cycle) ($532M spend 2021-2025)	Costs based on IRP base case assumptions
Debt	New debt ($M)	Assumes STAR plan of early debt retirements of $413M (from 2019 – 2022). Greenland is debt financed in all scenarios	Based on stated STAR plan

Water Sales & Costs

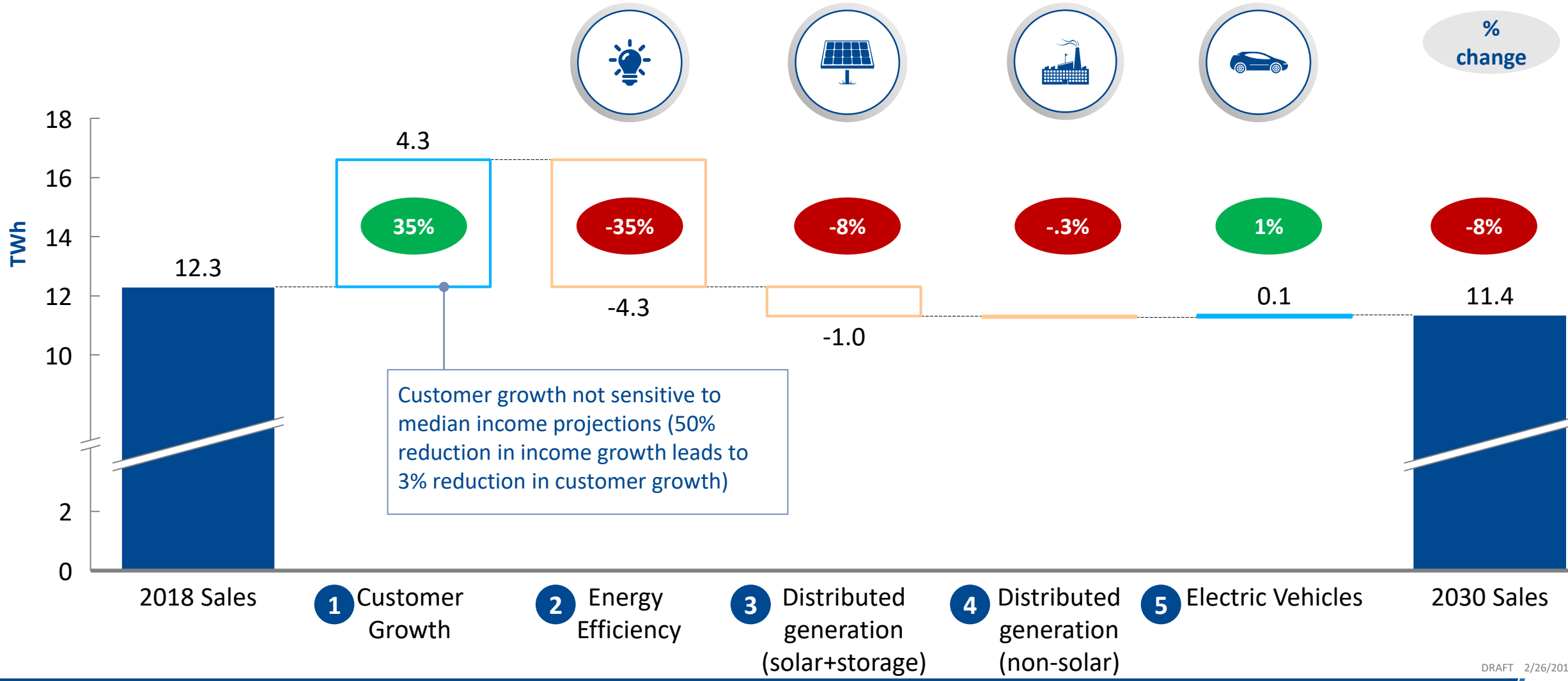
	Key metric	2019	CAGR 2019-2030	2030	Source / rationale
8 Customer growth	Water sales from customer growth (mn kgal / year)	35.8	1.3%	42.2	SPLASH model growth forecast based on BBER projections
	Reclaimed sales from customer growth (mn kgal / year)	3.5	5.7%	6.9	Higher rates in reclaimed service territory
	Sewer sales from customer growth (mn kgal / year)	26.9	1.3%	31.7	Same rate as water growth
9 Efficiency	Residential consumption[2] (kGal/ customer / yr)	74	-0.8%	67	Efficiency based on forecasted adoption of appliances
	Commercial & industrial consumption (kGal/yr)	650	-0.9%	582	Efficiency based on forecasted adoption of appliances
	Outdoor usage	No reduction			Assuming no behavioral change; no natural adoption of efficient technology
10 O&M	O&M escalator (%)	4% CAGR 2018-20 5% CAGR 2021-30			2019-20 based on current budget / forecasted spend 2021 onwards based on historical growth by category, adjusted for known anomalies
Base rate	Base rate in 2019 ($/kGal)	Water: $4.65 / Sewer: $9.16 / Reclaim: $4.47			Calculation based on yield per product
11 Capital costs	2019-2024 expenditures	Average $242M annual spend			Based on Capital Budget Planning project list (additional reclaimed water projects added)
	2025-2030 expenditures	Average $207M annual spend; based on extension of 2019-24 capacity and R&R spend, with additional supply projects included totalling $187M			Based on Capital Budget Planning project list (additional reclaimed water projects added)
Debt	New debt ($M)	Assumes STAR plan of early debt retirements of $140M (in 2019), additional borrowing of $333M			Based on stated STAR plan, revised capex plan

1 Customer growth assumption applied as aggregate growth across classes

The following "Baseline Conversation" financial projections are presented solely for JEA Board of Directors planning and action. They are not a projection of future financial performance and, as such, should not be relied upon by present or prospective JEA bond investors to purchase or sell any security or to make an investment decision. The projections are merely a mathematical representation of a hypothetical case for change. Actual results are likely to differ materially from this business case. Use of this presentation not in its entirety could result in material financial harm to the company.

Energy sales forecast: Energy efficiency and solar will drive down JEA's sales by 8% through 2030 despite a growing customer base

2030 JEA projected energy sales, TWh



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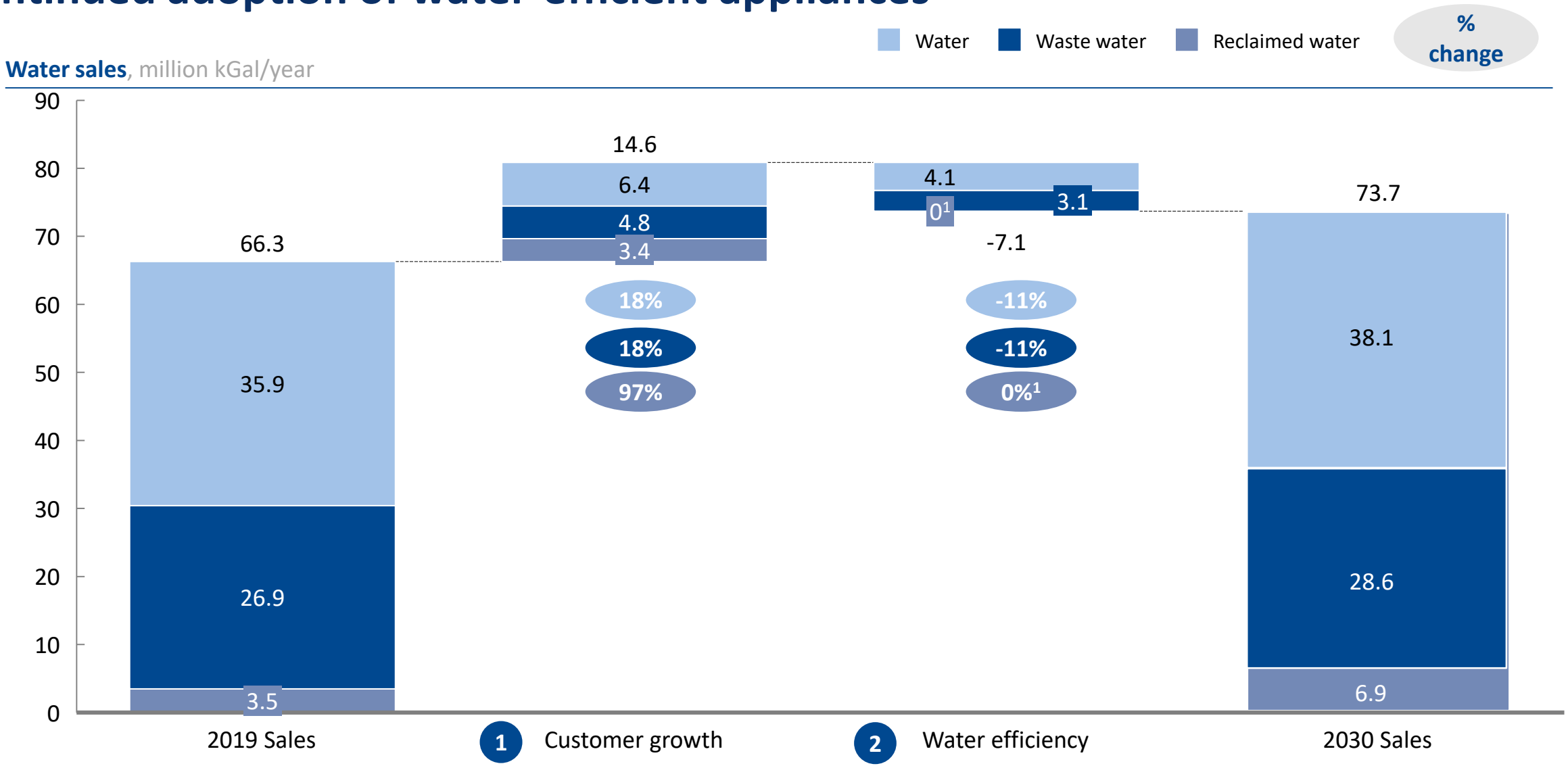
Water sales will see continued growth driven by population and tempered by continued adoption of water-efficient appliances



1 No change as water efficiency applies to indoor use water

DRAFT 2/26/2019

SOURCE: JEA

Additional financial assumptions used to develop energy and water status quo baseline scenarios

HAS NOT BEEN UPDATED TO LATEST O&M ASSUMPTIONS

Financial assumption	Energy	Water
Use rate increases to meet cash flow gap	YES	NO
Raise additional debt to meet cash flow gap	NO (with exception of debt funding for Greenland)	YES
Fund city contribution post 2023	NO	YES

Note: assuming no rate increases, no additional debt, and funding of the city contribution through 2030 results in a cumulative cash flow gap of

- **$2.4B** for energy
- **$.8B** for water

Energy financial dashboard

	Metric	2019	2025	2030	CAGR	Notes
Rates	Residential bill[1], ($/month)	$137.18	$137.18	$148.65	1.7%	Current Florida median is $125
Cash flow	Operating free cash flow, $M	$554	$396	$378	-3.4%	
	Capital expenditures, $M	($275)	($322)	($179)	-3.8%	2025 capex driven in part by Greenland
	Funds available, $M[2]	$279	$75	$199	-3.0%	
	New debt, $M	$0	$63	$0		
	Debt service, $M	($229)	($131)	($208)		Does not allow for city contribution
Balance sheet	Net funded debt, $M	$1,943	$1,833	$1,302	-3.6%	
	Debt to capital ratio, %	60%	59%	53%	-	Current target is 50%

1 Monthly bill after taxes

2 For debt service and city contribution

DRAFT 2/26/2019

SOURCE: JEA

Water financial dashboard

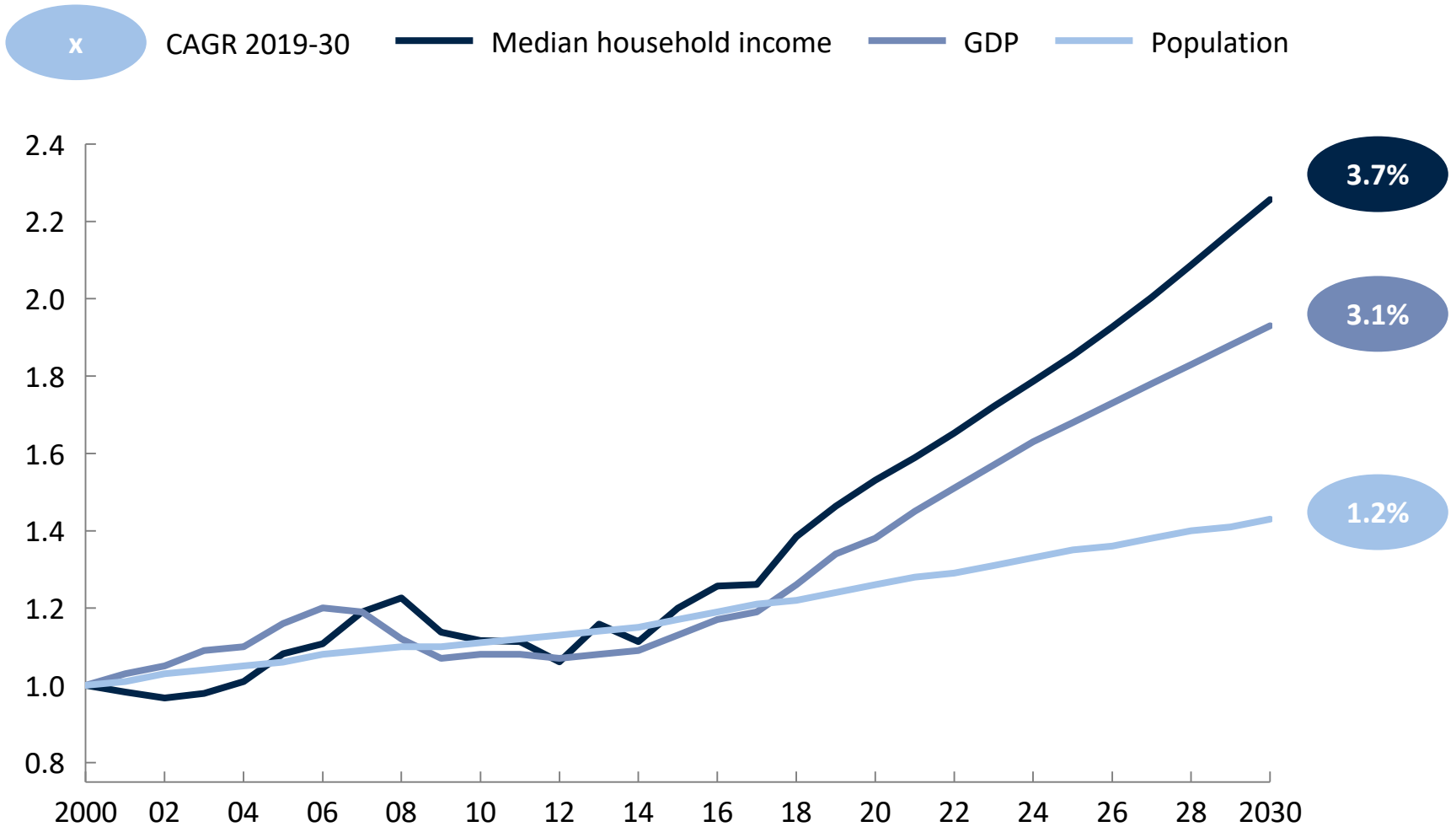
	Metric	2019	2025	2030	CAGR	Notes
Rates	Residential bill[1], ($/month)	$70.45	$70.45	$70.45	0.0%	Current Florida median is $77
Cash flow	Operating free cash flow, $M	$347	$304	$281	-1.9%	
	Capital expenditures, $M	($220)	($205)	($216)	-0.2%	Capex remains high through projection
	Funds available, $M[2]	$128	$99	$65	-6.0%	
	New debt, $M	$0	$49	$84		
	Debt service, $M	($108)	($116)	($126)		Allows for city contrib. after borrowing
Balance sheet	Net funded debt, $M	$1,217	$1,279	$1,272	0.4%	Total debt increases by 5% ($50m) 2019-2030
	Debt to capital ratio, %	41%	38%	37%	-	Current target is 50%

1 Monthly bill after taxes 2 For debt service and city contribution

Supplemental assumptions

1 Customer growth likely to continue in the foreseeable future

Duval County Specific economic indicators (Indexed to 2000)

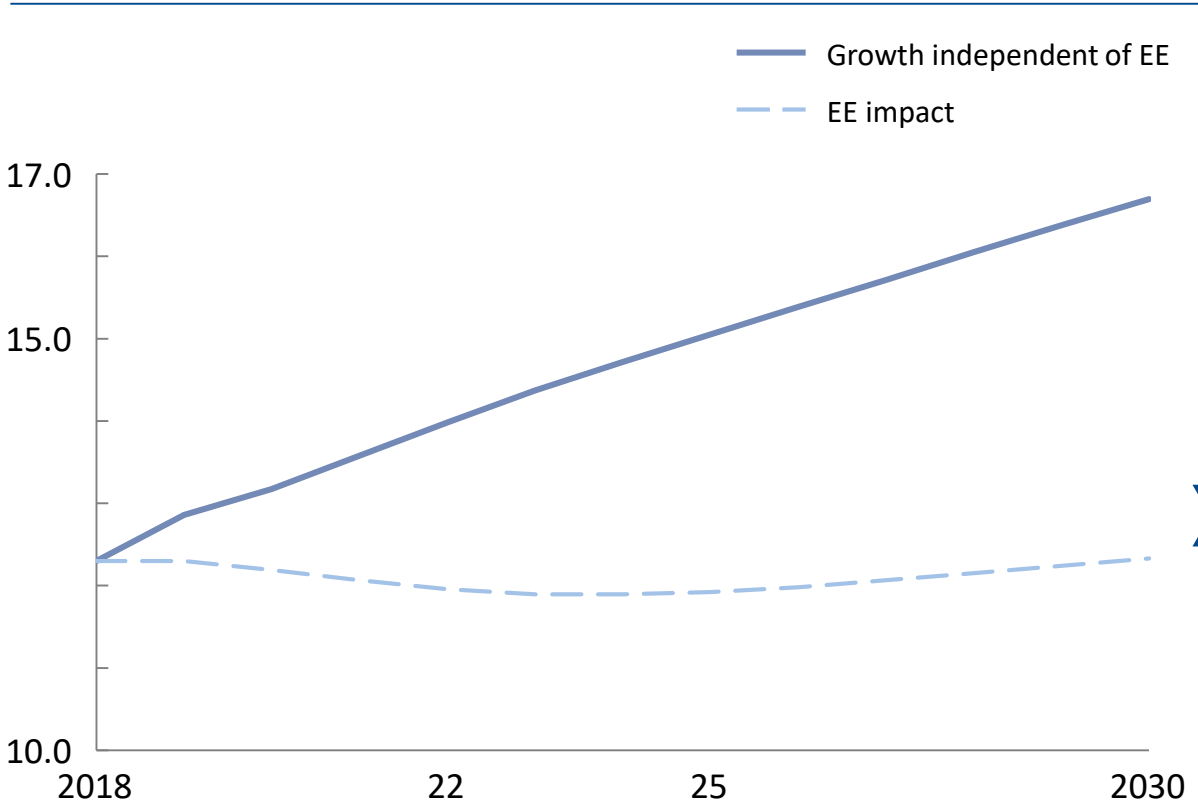


- Customer growth projections considers the U.S. Census Bureau (BOC): Population Estimates, Projections; Moody's Analytics Estimates and Forecasts for Duval County
- Residential customer growth is calculated based on projections for population (primary factor) and median household income (secondary factor)
- Commercial and industrial customer growth is calculated based on GDP projections
- For Duval County through 2030, Moody's Analytics projects GDP and median household income growth to outpace previous decade and outpace US average
- Primary driver of Moody's economics projections is increase in finance and insurance jobs (in US overall and in Jacksonville particularly), with wages ~50% higher than current local average

SOURCE: Moody's; US Census Bureau

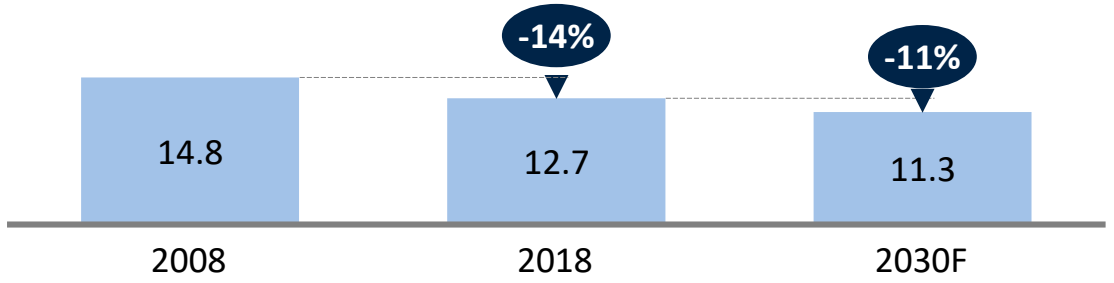
2 Energy efficiency momentum is the largest driver of energy sales reductions, consistent with US utility trends

Annual energy sales,[1] thousand MWh

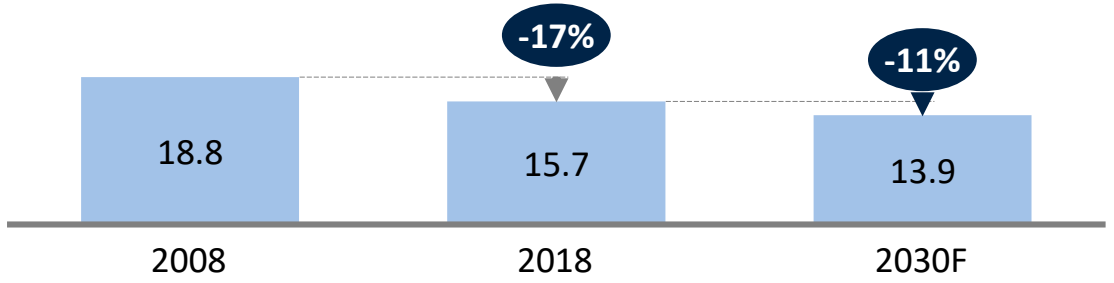


- Only considers commercial and residential EE adoption
- Gains driven by continued organic adoption of efficient products (e.g., cooling systems) as inventory turns in homes and additional uptake of "step-change" products such as LED lights and heat pump water heaters

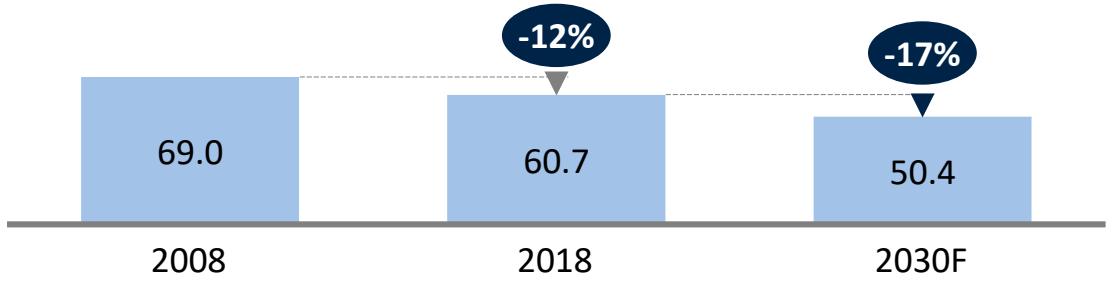
Residential consumption per capita, MWh / customer



Commercial consumption per capita, kWh / sq foot



Industrial consumption per capita, MWh / $M GDP[2]



1 Sales estimate prior to incorporation of impact of DG and EV

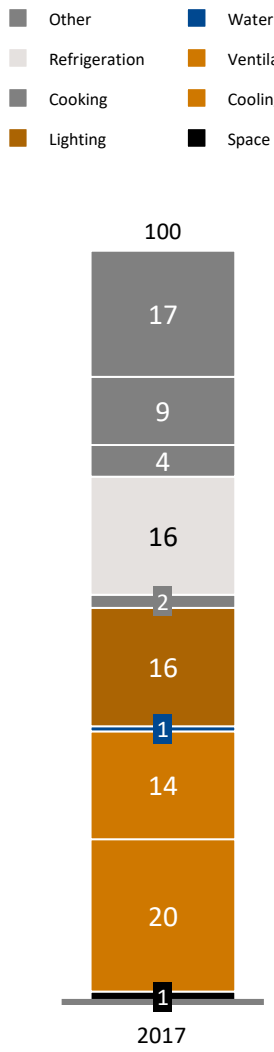
2 Flat industrial sales through period implies efficiency on a per-unit of GDP basis

SOURCE: JEA forecast, PowerIQ

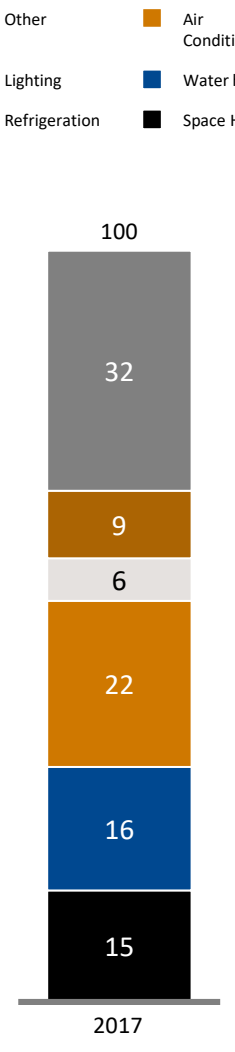
2 Natural EE improvements with new products will drive up EE; consumer choices regarding new water and space heating technologies can have outsize impact on efficiency

★ JEA 2013 survey results

Commercial energy consumption,[1] %



Residential energy consumption,[1] %

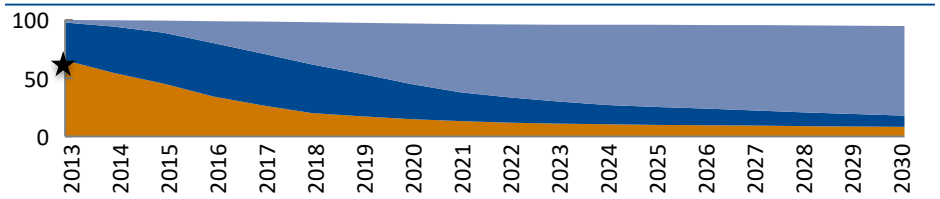


Main drivers

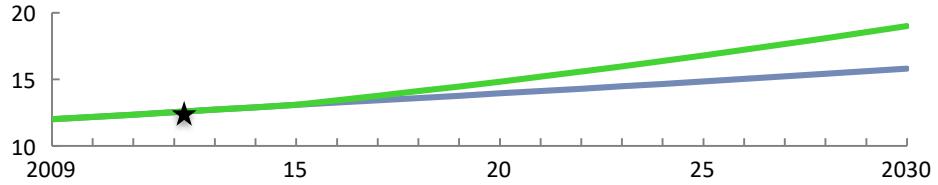
- Lighting
- Cooling
- Water heating
- Space heating
- Other *(examples, not exhaustive)*

Trends (residential forecasts)

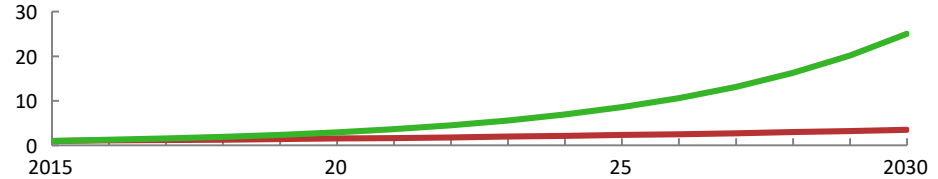
Installed lighting mix, DOE forecast %



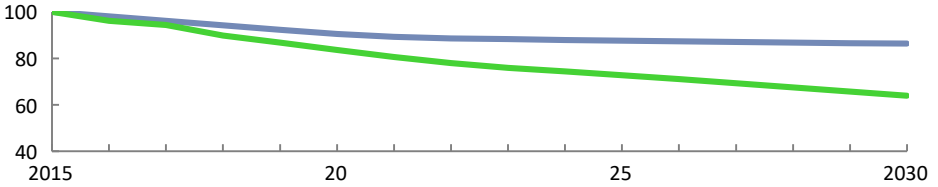
Residential HVAC heat pump efficiency, SEER rating



Heat pump water heater penetration[2], % installed



Residential heating energy intensity (Btu:Btu)[2], % indexed to 2015



Reduction assumptions

Base case — Low case - used for resi and commerical customers in forecast

- LED installed stock penetration increases to 100% for commercial and residential customers by 2030 (slightly above DOE estimate of 80%), enabling step-change in efficiency for bulbs replaced
- Lighting efficiency drives ~20% of residential and ~30% of commercial EE savings

- New units are 0.4% - 0.9% more efficient for the same level for each year between manufacture, resulting in natural EE as inventory turns; with assumption of 15 SEER rating by 2030
- JEA customers were slightly below regional average efficiency in 2030, indicating additional room to grow beyond what is forecasted
- Cooling drives ~30% of residential and ~20% of commercial EE savings

- Improvements in efficiency of resistance units have nearly plateaued; decision to switch to heat pump water heaters would have outsize impact. 20% install heat pump water heaters by 2030
- Impact is higher for residential customers (~10%) than C&I due to low electricity utilization for C&I water heating

- Adoption of heat pumps reduces winter heating in adopted homes by 50%-60%; expecting 5-10% adoption
- Impact of space heating higher for residential customers than C&I, as C&I typically utilize gas heating

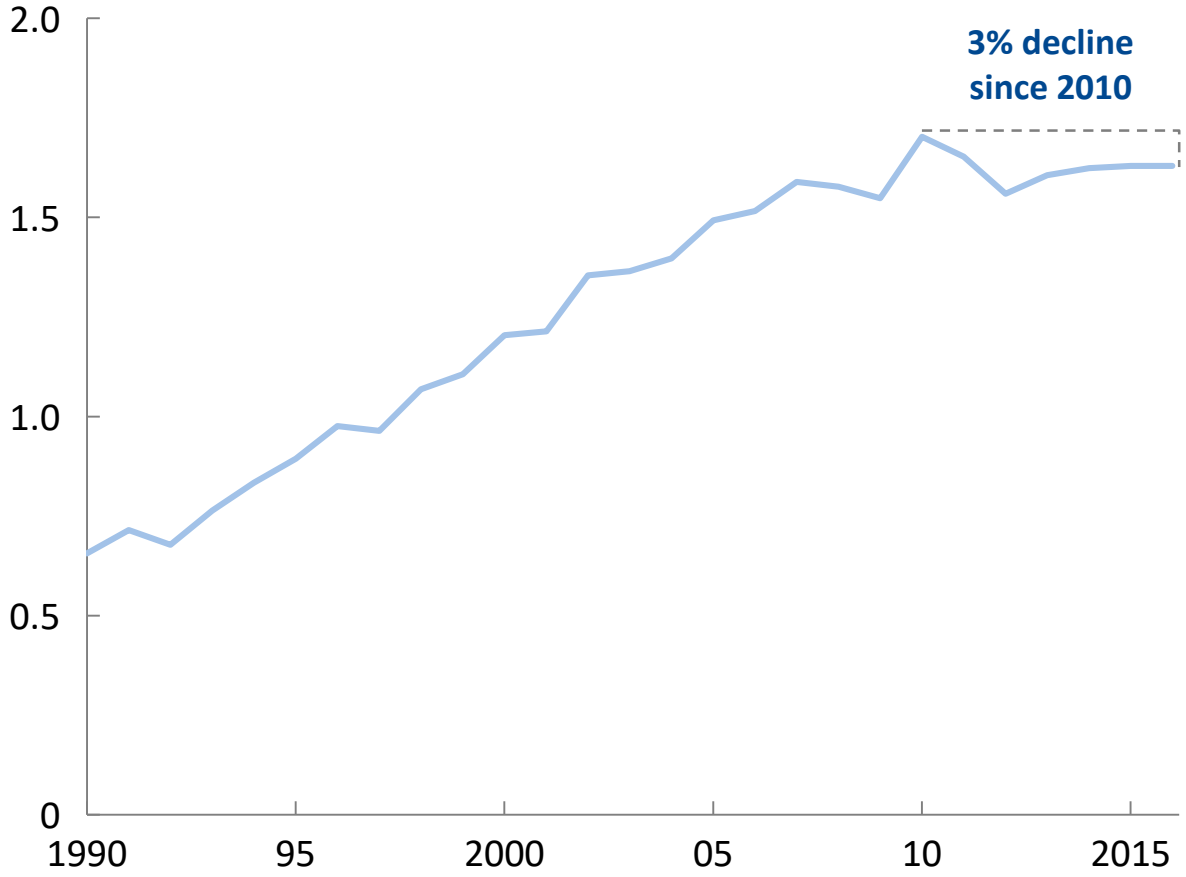
- **Appliance efficiency:** JEA average customer energy star rating may indicate room for continued residential update
- **New house characteristics:** continued increase in gas connections in new homes could lower energy use ~20-30% per customer; however increased size of new homes could increase energy use

1 ECS breakdown, South Atlantic, % 2 2013 JEA customer survey did not cover heat pump water heater penetration or residential heater age

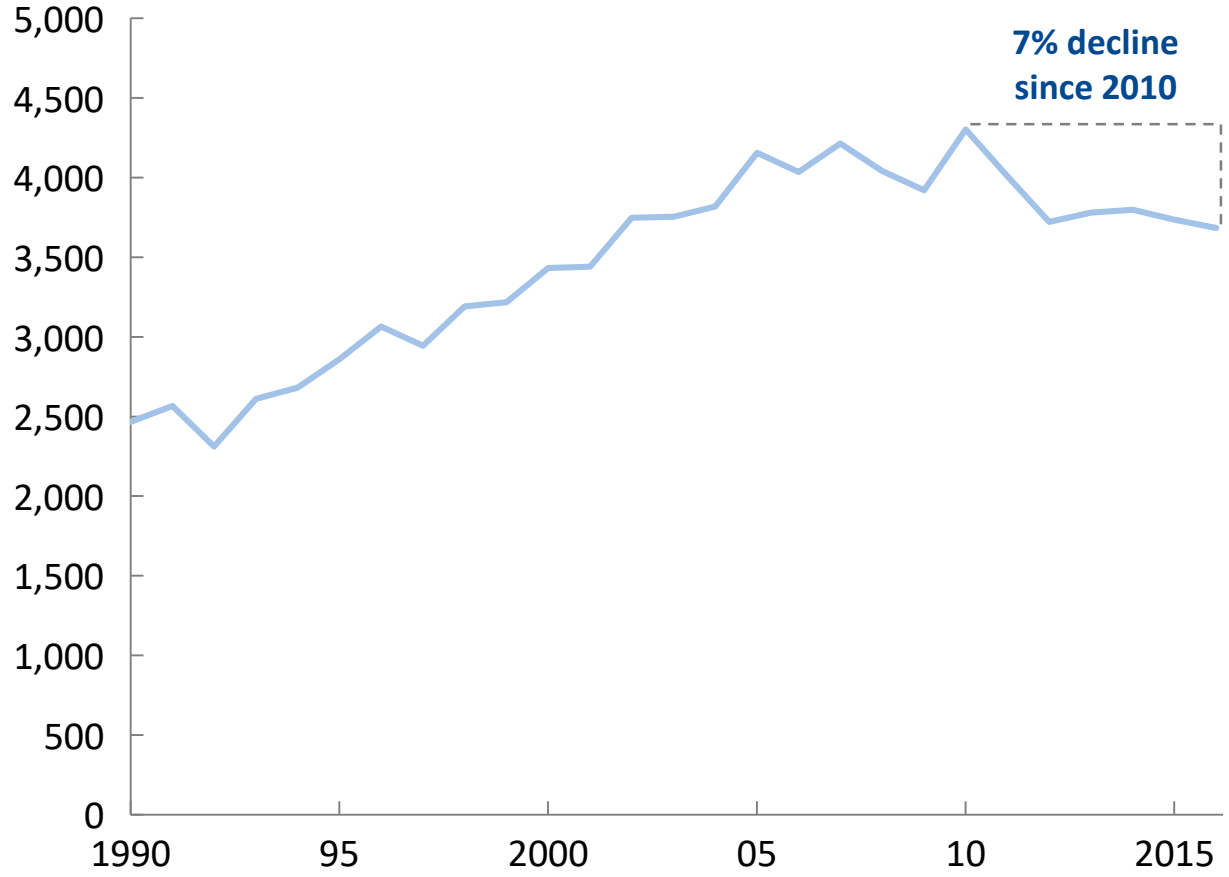
SOURCE: EIA RECS 2015 and CBECS 2012, Pathways database

2 National residential trends highlight declining use per capita after peaking in 2010

U.S. annual residential electricity sales, Trillion kilowatt-hours



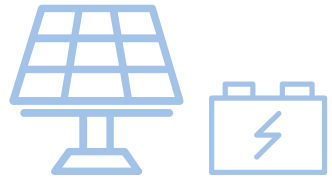
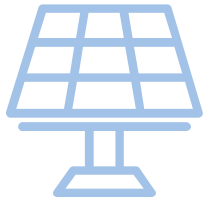
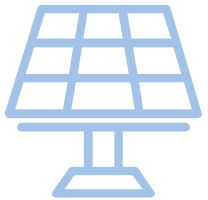
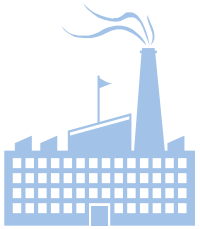
Residential electricity sales per capita, kilowatt-hours per persons



- Per-capita sales have declined since 2010, a trend which is forecast to continue
- These widespread efficiency gains are expected to drive further declines, even as electrification (e.g., of vehicles) increased demand

SOURCE: EIA

3 Customer needs will drive choice of DG system

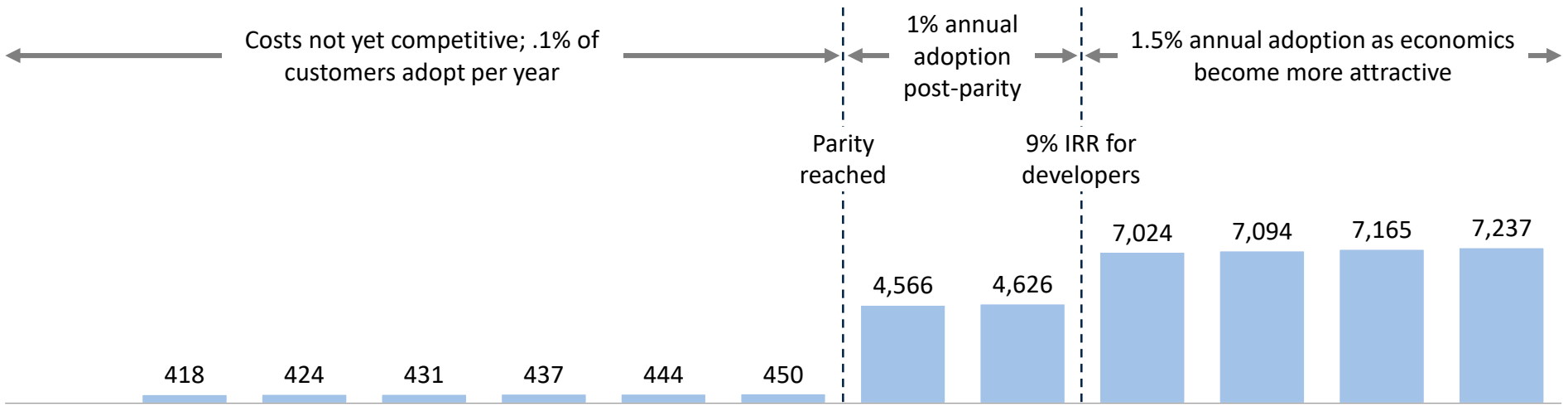
	% of total sales	Customer characteristics	Considerations for DG	DG system modelled
Residential	44	▪ Typical energy use: 1,000 kWh/month ▪ 69% single family homes ▪ 31% of homes built after 2000 (vs. 19% in US)	▪ Will consider solar DG once economic ▪ Typically generate more energy than consumed; storage needed to derive full value from solar ▪ Value attributed to backup power provided by storage	 **Solar plus storage**
Commercial	33	▪ Average peak demand < 1000 kW ▪ Peak demand typically occurs midday ▪ Largest customers include retail chain operators and campuses	▪ Will consider solar DG once economic, with short payback period ▪ Will consider third-party installation in exchange for reduced electricity costs ▪ Energy needs typically too large for solar to fully offset; storage consideration typically separate	 **Solar alone**
Industrial	22	▪ Average peak demand > 1000 kW ▪ Peak demand varies ▪ Largest customers include factories and hospitals	▪ Will consider solar DG once economic, with short payback period; lower electric rates make solar economics poorer[1] ▪ CHP may be economical for some customers with opportunity to increase operational efficiency (e.g., coincident heat and power loads) ▪ Customers are unlikely to build out full DG for resilience	 **Solar alone**  **CHP**

1 Industrial customers adoption solar receive standby rate

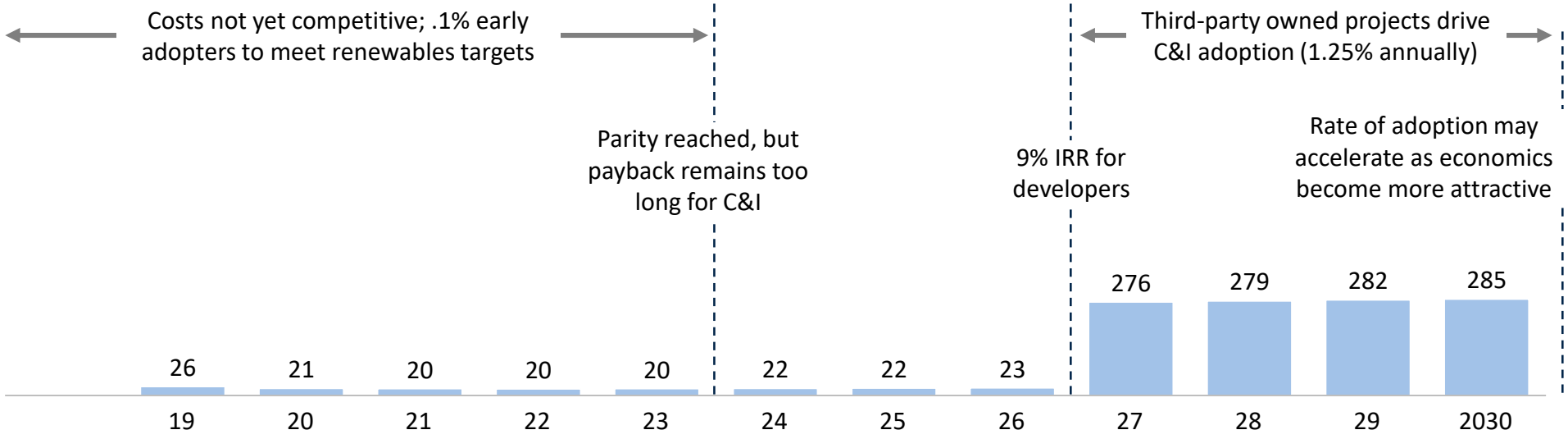
SOURCE: Solar cost model, SEIA

3 Solar adoption rates accelerate as economics improve for stakeholders

New residential solar + storage customers, # of customers



New commercial & industrial solar customers, # of customers



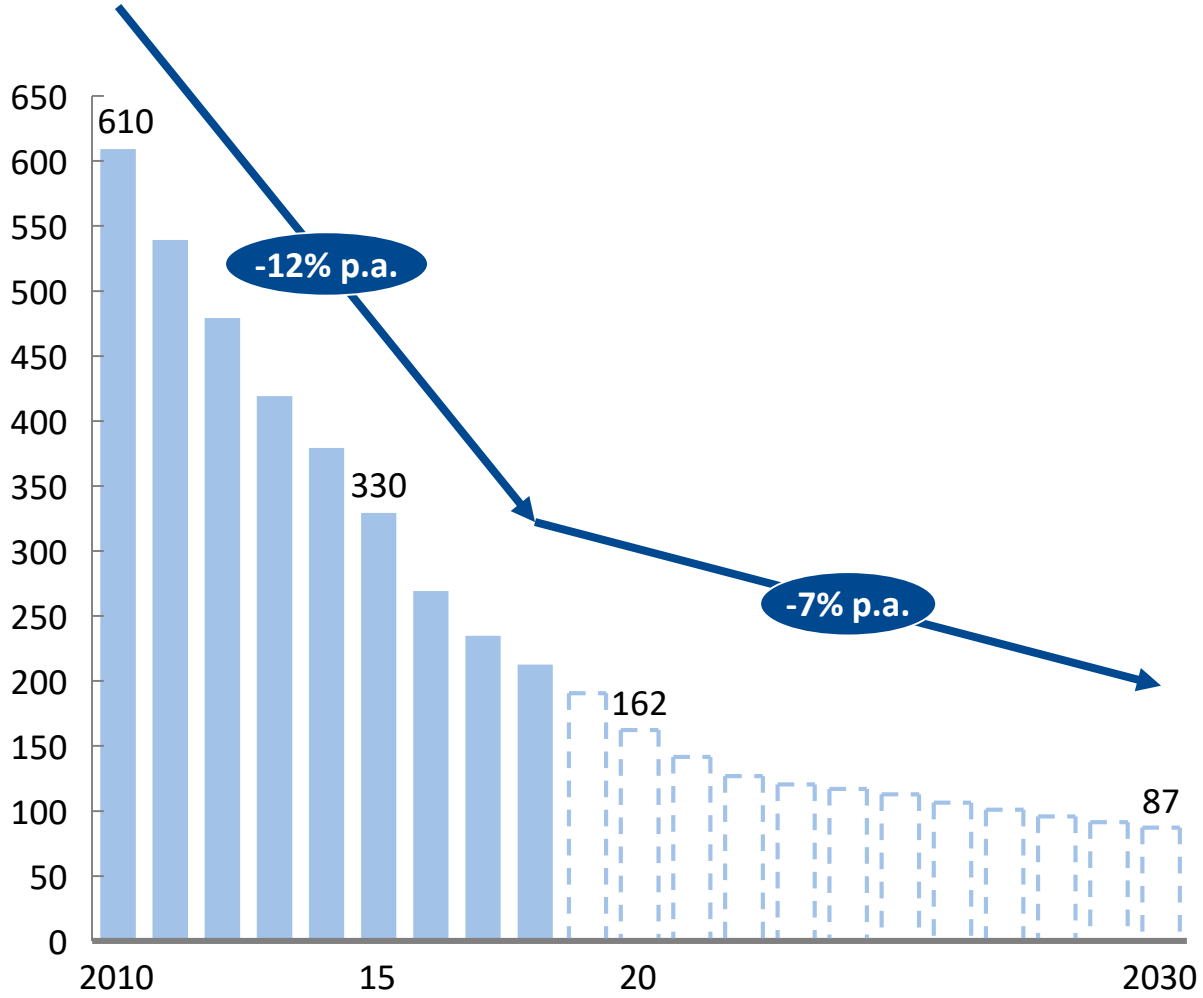
- Uptake is expected to increase as economics become viable for various stakeholders (e.g., system owners, developers)
- Rates of adoption are also expected to increase as parties become familiar with markets and are able to achieve better economics (e.g., lower risk, lower cost, potential for higher electricity prices)
- These trends will continue beyond the forecast period as some features become standard parts of upgrades and new homes (e.g., solar rooftops, mandated solar for new homes in California)

1 x

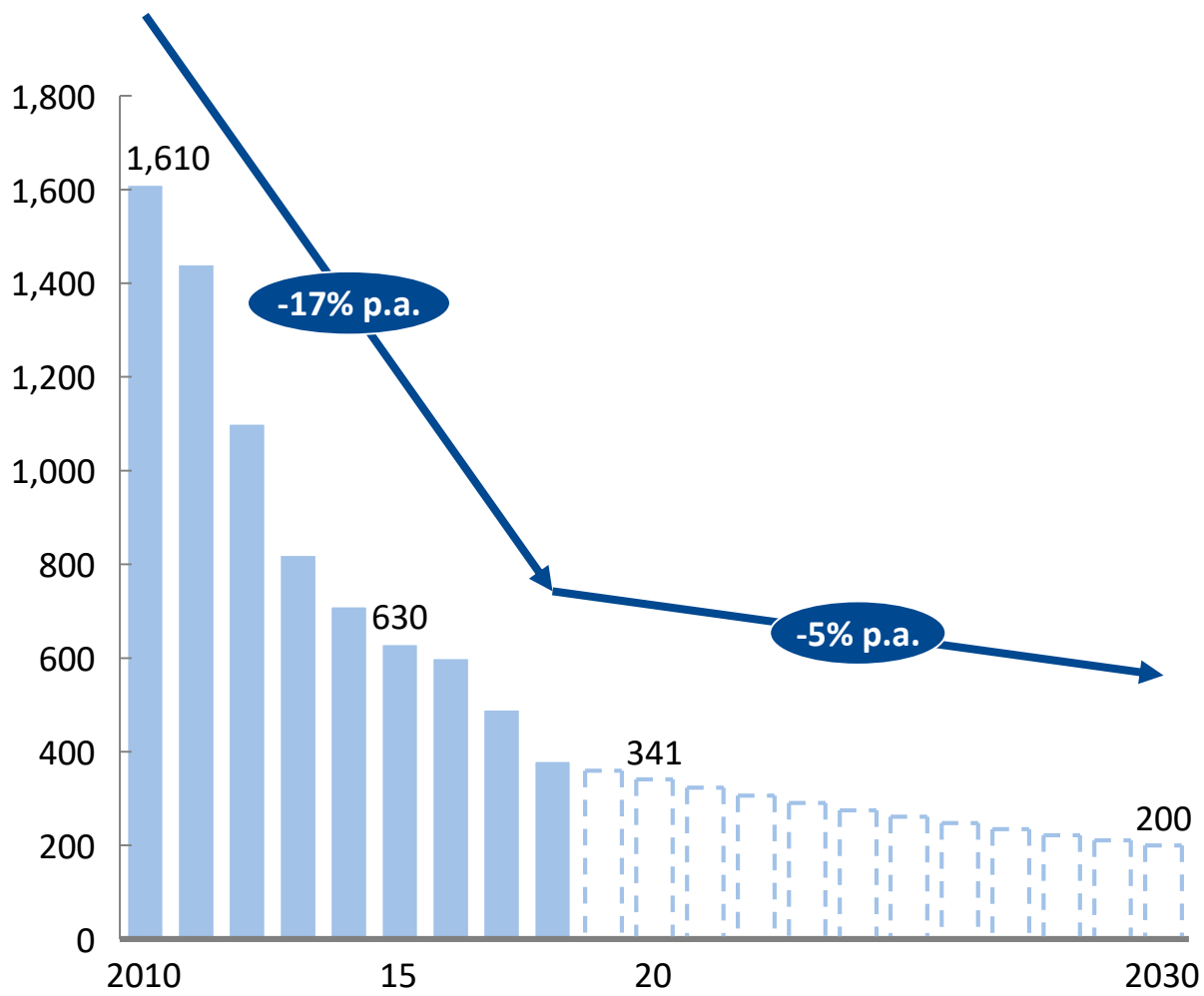
SOURCE: Sigrin and Drury, Diffusion into New Markets: Economic Returns Required by Households to Adopt Rooftop Photovoltaics, NREL

3 Battery and solar price trends and forecasts

Li-ion battery pack costs, $/kWh



Solar module pricing, $/kW



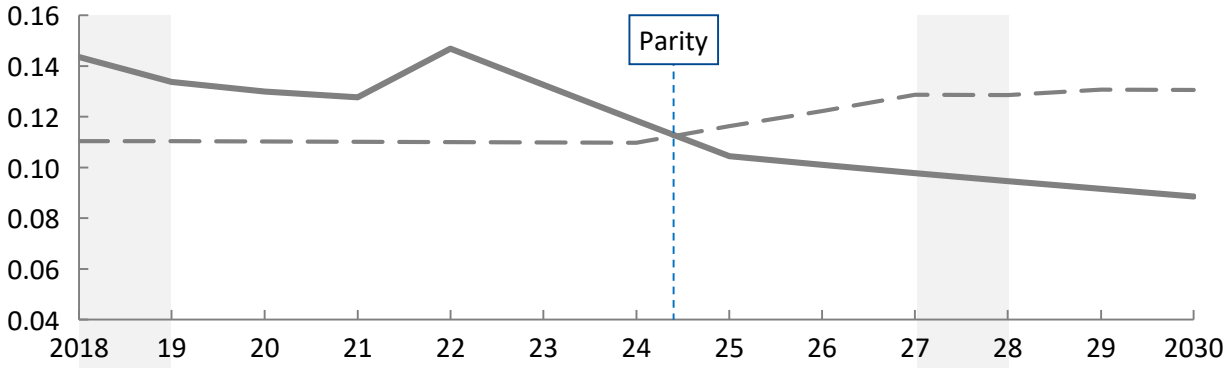
Both solar and storage costs have declined over 50% since 2010; additional price declines are expected to drive continued double-digit growth as costs become competitive with existing solutions

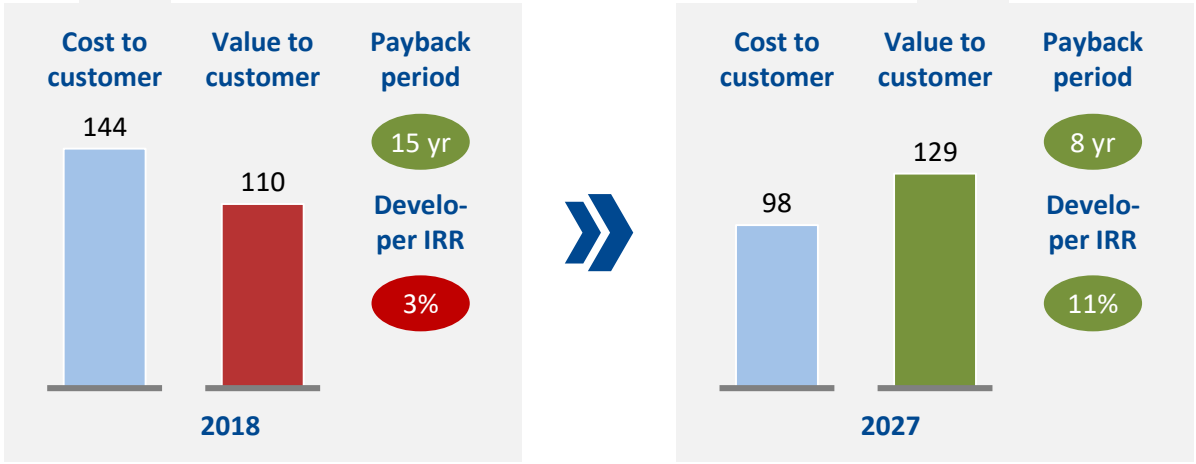
SOURCE: PV pricing trends: historical, recent, and near-term projections, DOE; BNEF; SNE research; Navigant; Avicenne Energy; Berstein; Battery Model (2018), NREL PV system pricing trends

3 Residential DG is attractive for homeowners whereas commercial is attractive for 3rd party developers

Levelized cost of solar + storage — — Value (current forecast)

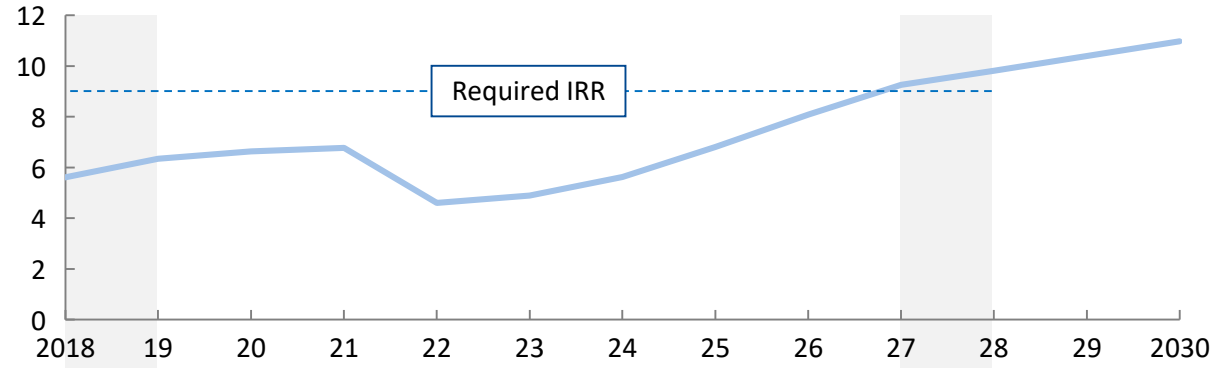
Residential cost and value of solar + storage,[1] $/kWh

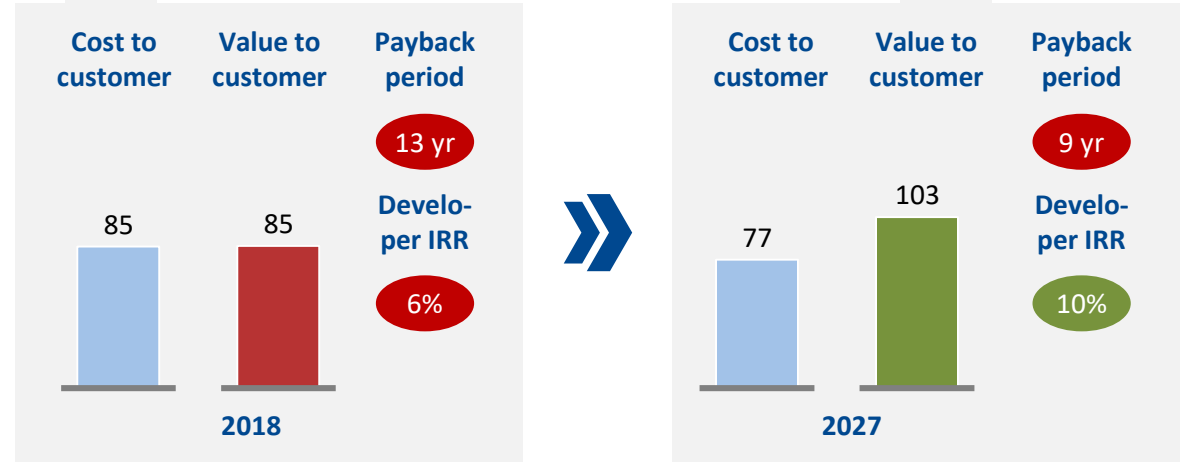




- Residential systems reach economic parity for customers in 2024
- Willingness to purchase despite long payback periods
- Third party-financed systems not attractive (>10% IRR) until 2027

Developer IRR, %





- Third party financed projects will become attractive in 2027 (IRR>9%)
- Economic parity reached in 2025, but payback periods >5 years make purchasing unattractive for commercial customers

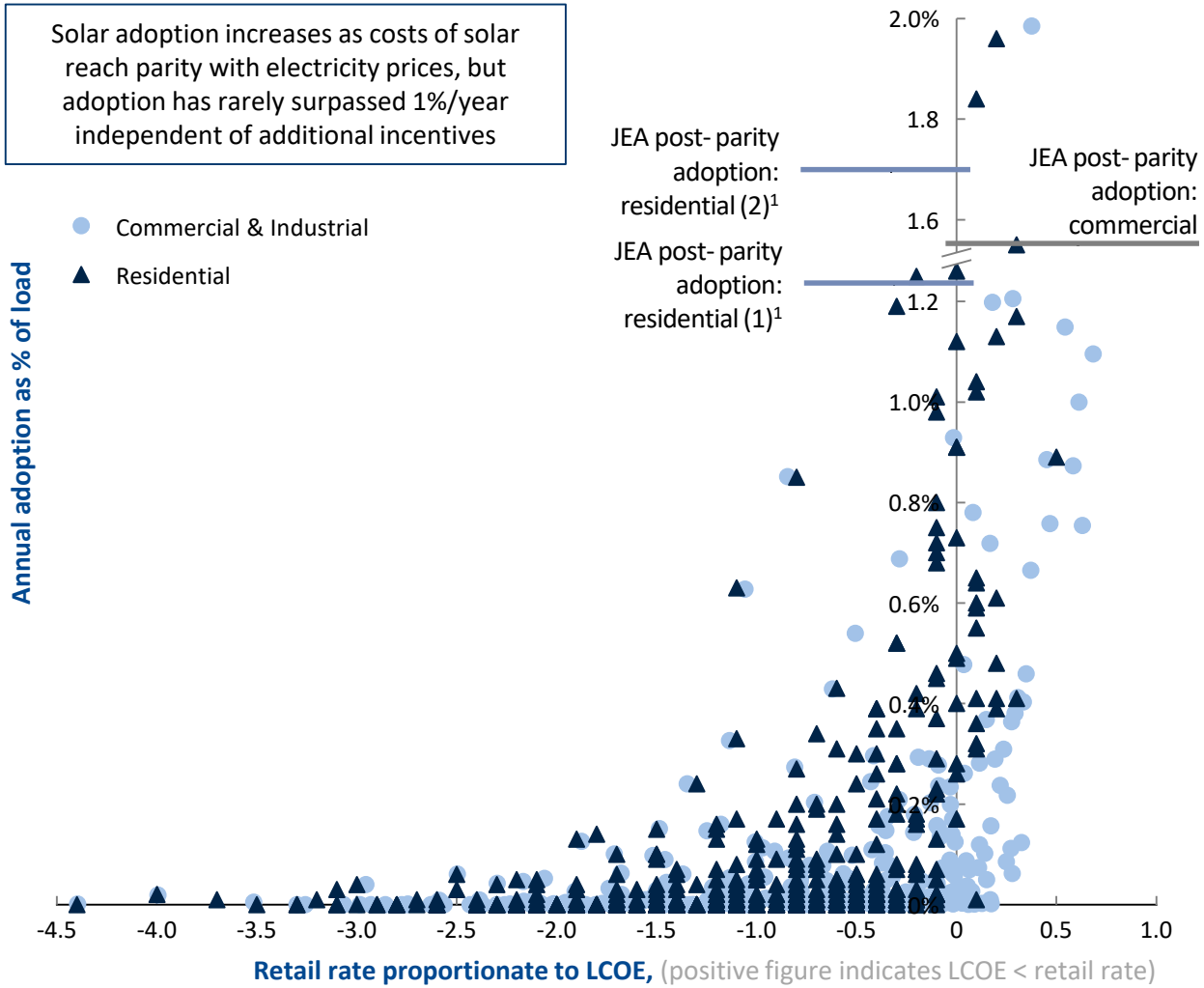
1 Assumes 7% discount rate, 20 year life, 3% annual degradation, 17% CF; considers backup as economic value towards payback
2 Does not include standby charge
3 Assumes value attributable to backup in return and payback calculations

SOURCE: PV pricing trends: historical, recent, and near-term projections, DOE; BNEF; SNE research; Navigant; Avicenne Energy; Berstein; Battery Model (2017)

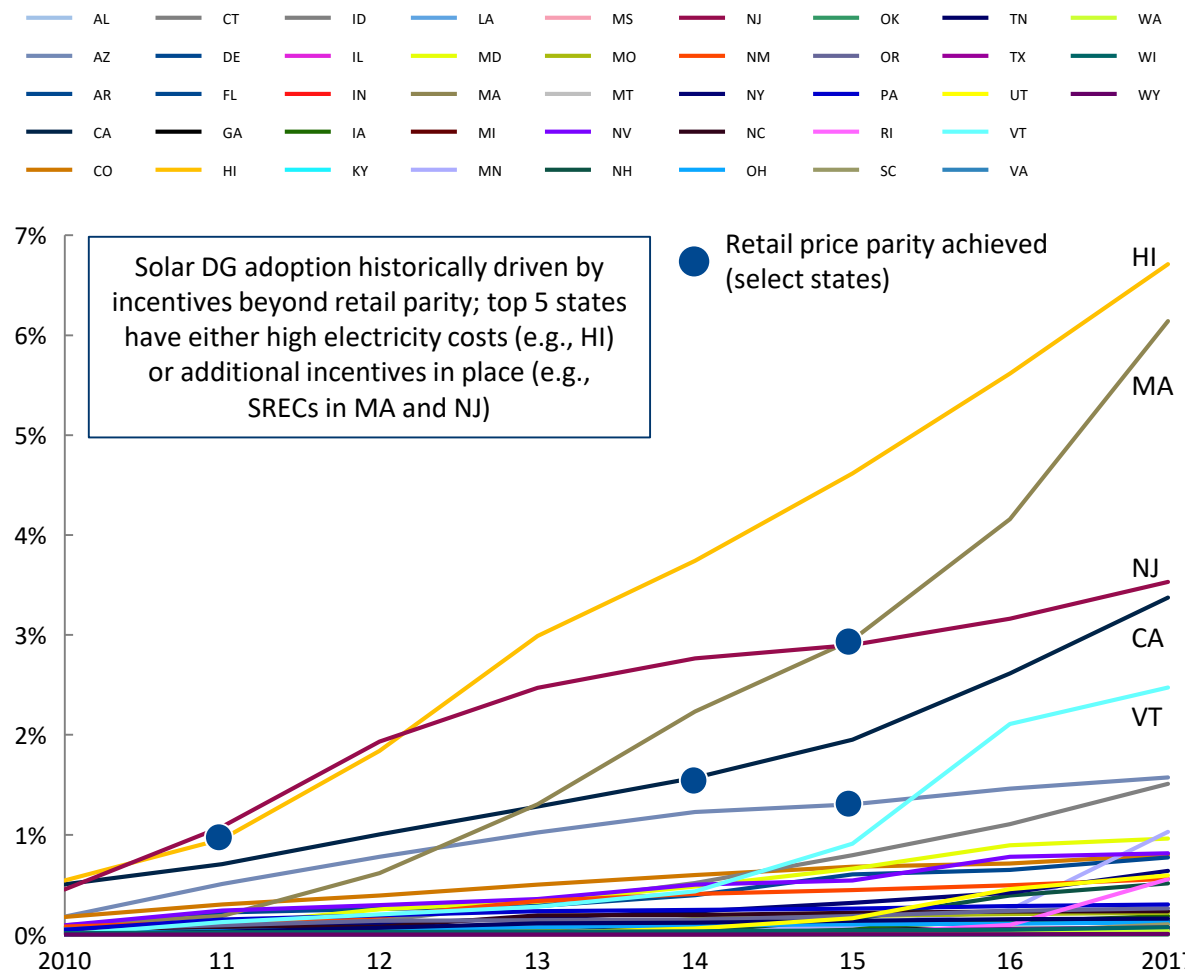
3 Countrywide trends provide indication of potential uptake after Jacksonville residential/C&I solar pricing reaches parity

Historical annual adoption relative to parity, % of load

Solar adoption increases as costs of solar reach parity with electricity prices, but adoption has rarely surpassed 1%/year independent of additional incentives



Cumulative C&I adoption by state, % of total

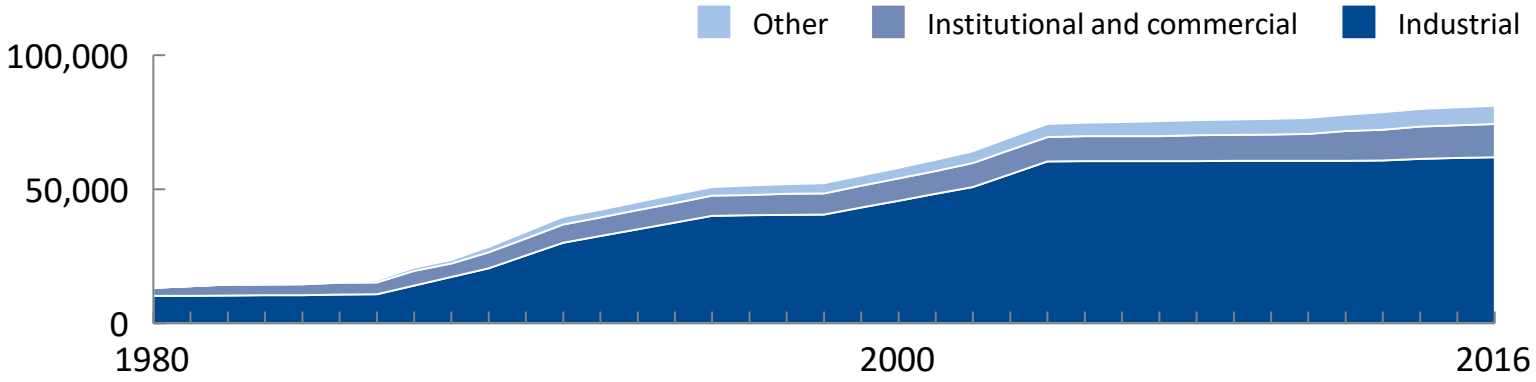


1 Residential adoption increase from 1% to 1.5% per year as developer IRR reaches x%

SOURCE: GTM, EIA

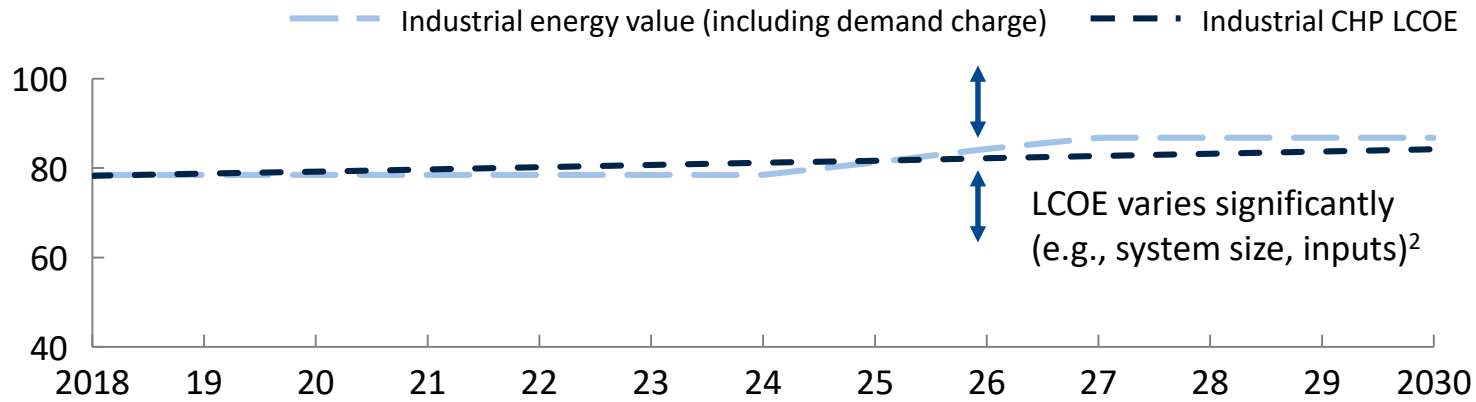
4 CHP economics for a generalized JEA industrial customer are not compelling, consistent with recent US installation history

Cumulative US capacity installations, cumulative MW



750 MW in annual US CHP capacity additions, of which ~20% are small CHPs[3]

LCOE vs. industrial rates, $/MWh



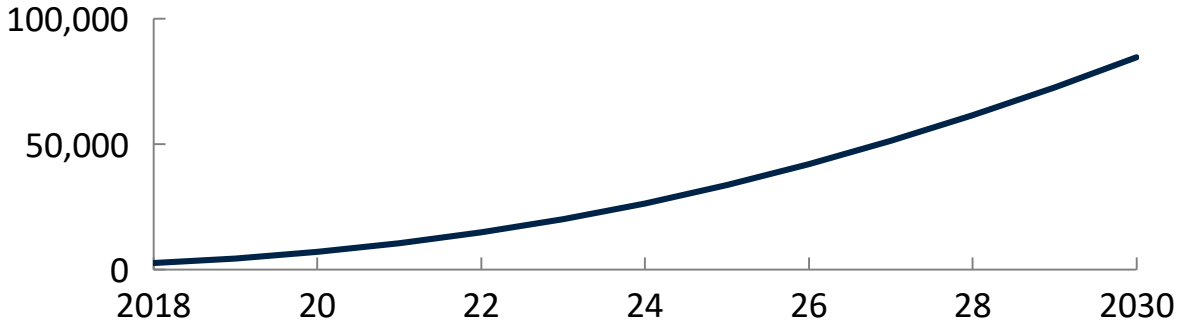
- Interest in CHP spiked following the passage of The Public Utility Regulatory Policies Act (PURPA) in 1978, which legalized the sale of non-utility-generated electricity to the grid. This led to a doubling of CHP capacity in a ~15 year period. CHP received a further boost from the Energy Policy Act of 1992
- CHP uptake has not increased significantly since the mid-2000's as regulatory policy and costs have been stable
- A generalized business model for a JEA industrial customer shows that while large CHP may be near parity, cost difference is minimal compared with electricity purchases from JEA, driving long payback periods and leading to unlikely adoption
- However, business model considerations for CHP vary widely by customer due to energy and heat needs

1 Based on JEA standard industrial rate (fixed charge not included in chart above); commercial value likely lower due to higher electricity costs and smaller generating solutions
2 LCOE can vary significantly based on technology, system size, and availability of fuel inputs among other factors
3 Small CHP defined as <50 MW

SOURCE: ICF, ACEEE, JEA, GTM

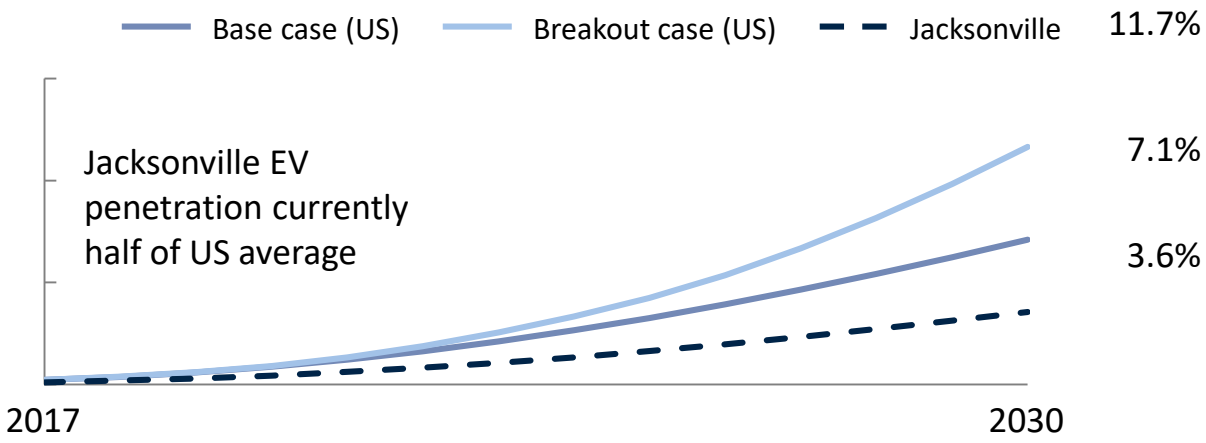
5 30k EVs expected in in JEAs territory by 2030 based on EV modeling and penetration today

EV fleet energy consumption, MWh



85k MWh in energy sales in 2030 because 31k EVs are added to Jacksonville fleet, constituting 3.6% of light duty vehicles

EV fleet penetration forecasts, %



Base case 2030 figures

		Base case 2030 assumptions
864k	Vehicles in Jacksonville	Vehicles projected in Jacksonville based on current FHSMV figures and economic projections
×		
7%	EV penetration in US	Forecast of EV growth in US
×		
50%	Current Jacksonville rate relative to US average	Proportion of EVs in Jacksonville remains consistently half of US average
=		
31K	EV on the road by 2030	
×		
2.8	MWh consumed per vehicle	Vehicles consume 3.9 MWh/yr today, gaining efficiencies of ~2%/yr
=		
85K	MWh energy sales	

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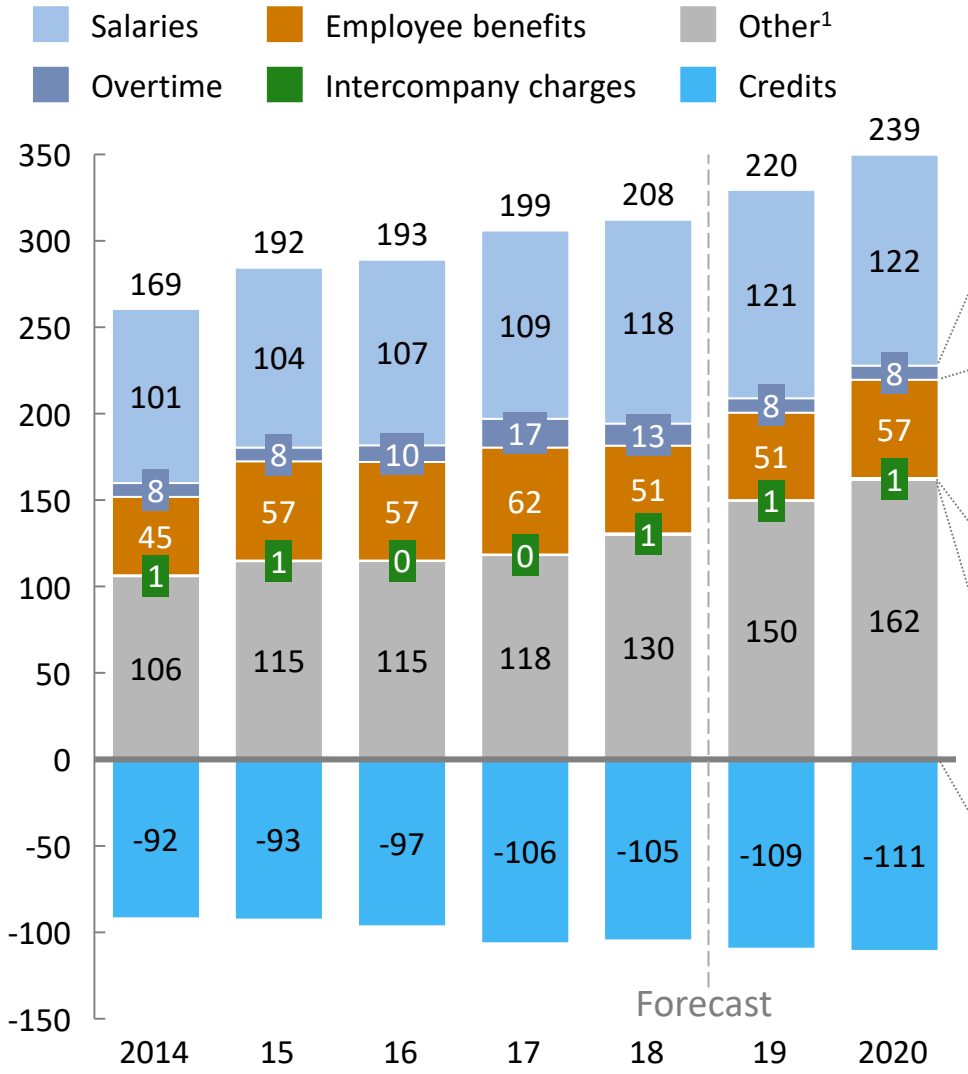
SOURCE: Federal Reserve income per capita data; Automotive practice TCO-based forecasting models, Florida Highway Safety and Motor Vehicles , Internal forecasts

6 Energy opex breakdown and assumptions

Yearly energy opex breakdown, $M



CAGR 2014-20 and drivers

2.8%	8% increase in 2018 (CBA)
0.2%	Storm recovery Increase 2017-18
3.3%	Reduction in pension liability 2018 Increased health care costs throughout
12%	Fluctuates throughout period
6.2%	10-15% growth 17-18 and 18-19 due to outages, professional services incl legal, contractors
2.7%	Increase in 2017 due to storm recovery capital work

CAGR 2021-2030 and assumptions

5%	Recent average historical growth (18-20)
5%	Tracks with salary growth
6%	Tracks with salary growth with 1% adder to account for healthcare costs
10%	Historical growth (using 2012-20)
4%	2012-18 historical growth (outsized outage impact 2019-20)
6%	Tracks with salary and benefits growth

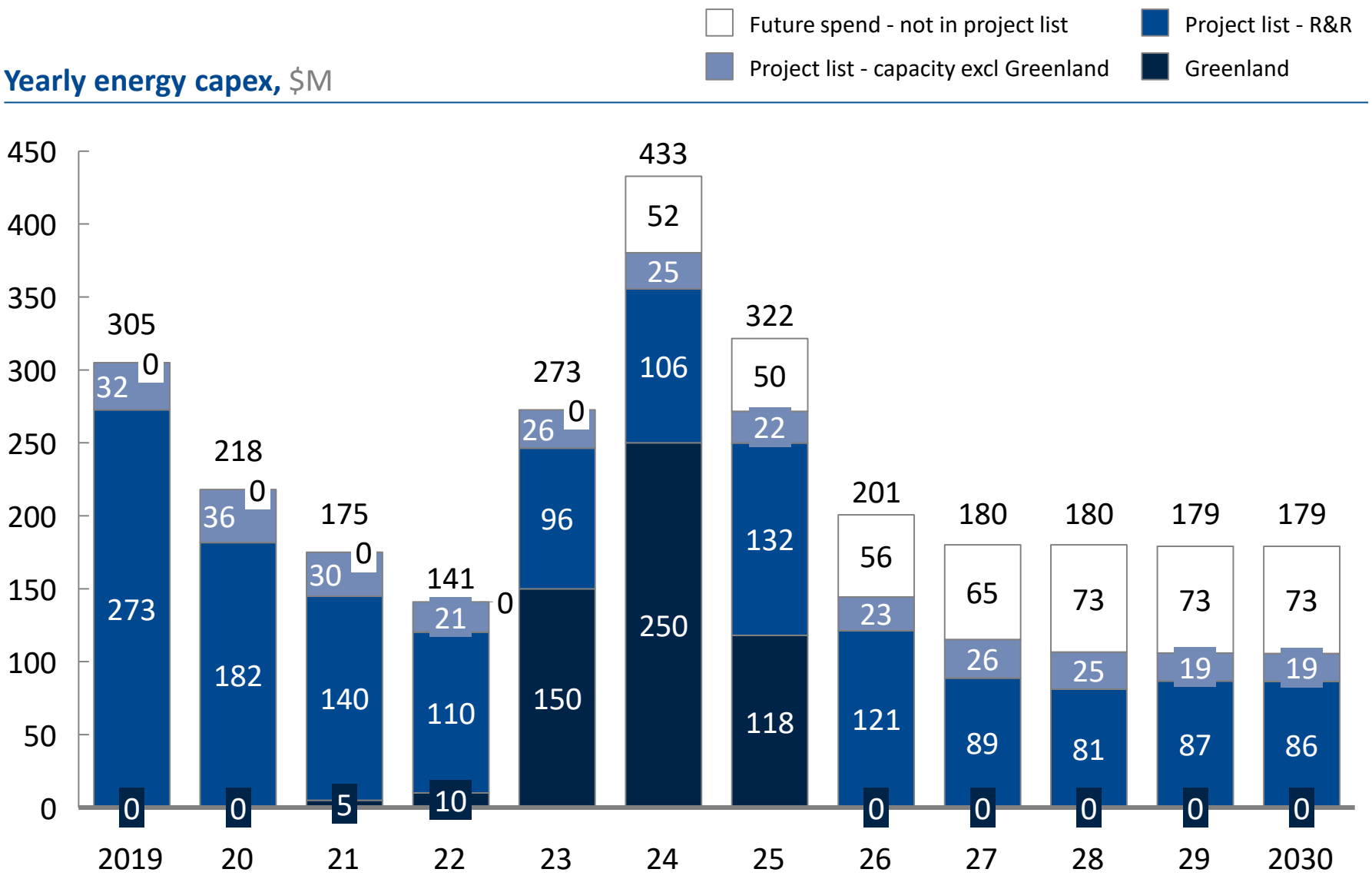
1 Interest, contracts & contingencies, city services, other services & charges, materials & supplies

2 Expected to fall in line with historic trends (e.g., barring one-time events)

SOURCE: JEA

7 Energy capex breakdown and assumptions

Yearly energy capex, $M



Key assumptions:

- Greenland CC replacement capacity project cost and schedule in line with IRP base case ($518M to be completed FY25)
- FY19-23 capacity and R&R spend based on current capital budget planning project list
- FY24-30 capacity and R&R spend based on current project list, with unspecified future spend added to bring each category in line with FY19-23 average
- Projects currently not on project list that could make up future spend include:
  - Resiliency / grid hardening investments
  - Grid modernization (e.g. AMS, remote monitoring and automation)
  - Communications infrastructure

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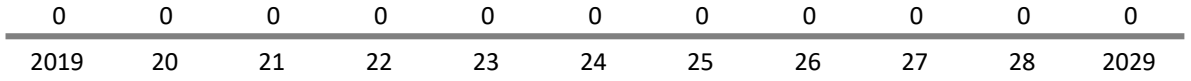
SOURCE: JEA

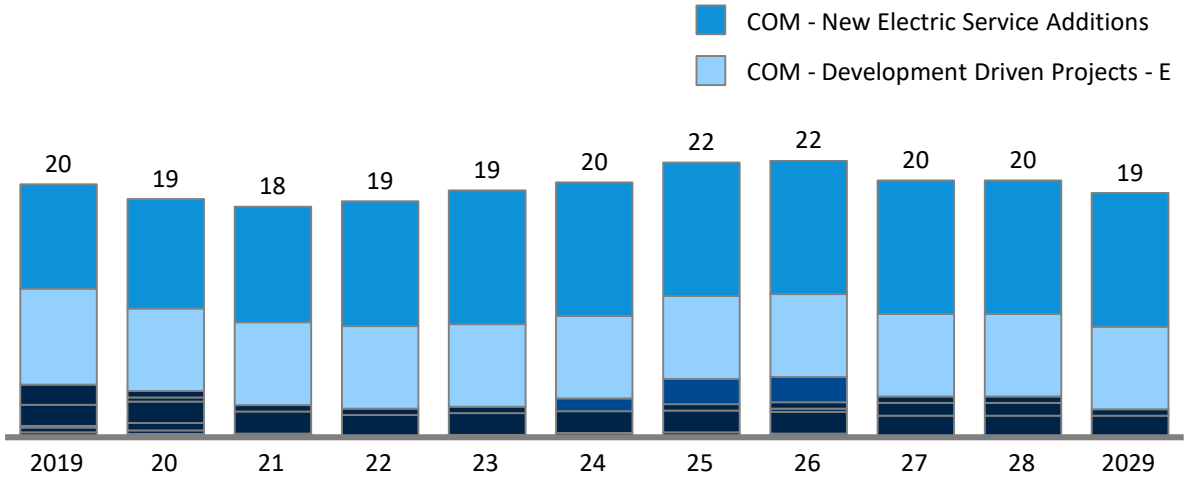
7 Breakdown of known capex spend: capacity

Large one-time project | Ongoing programs / spend | Smaller projects

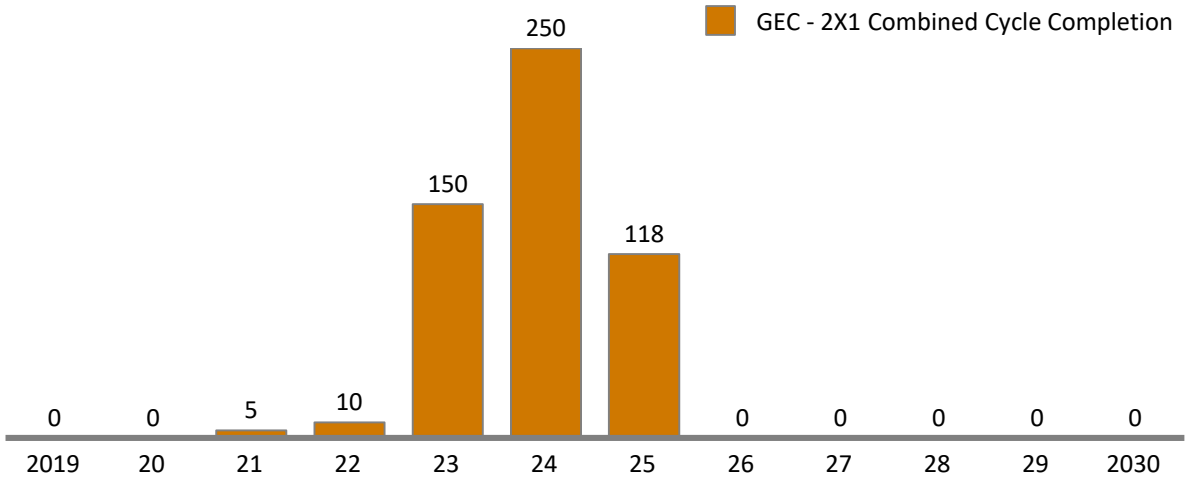
Electric Other – Capacity, top expenditures ($M)



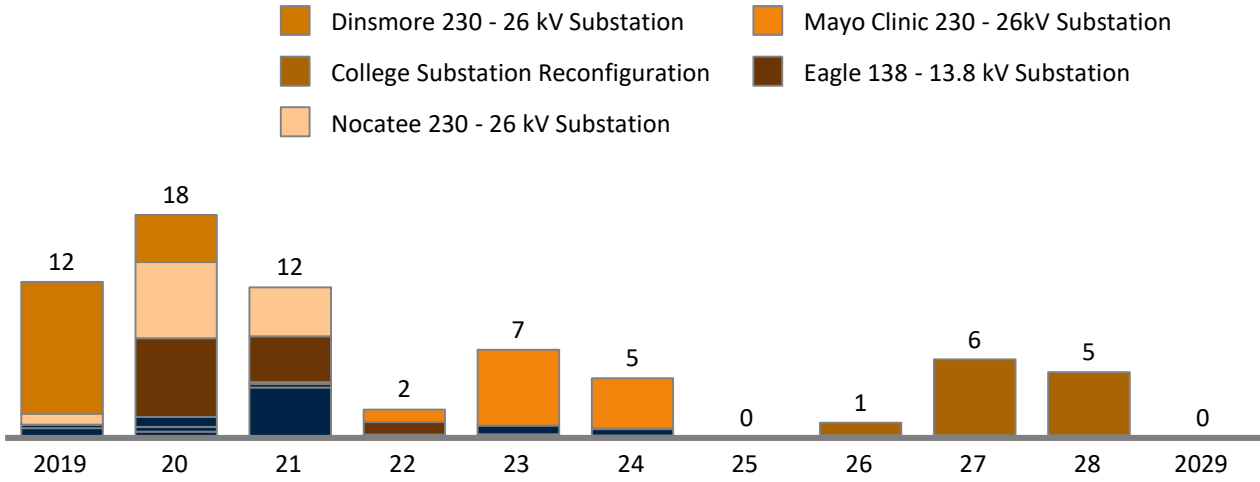
Electric Distribution – Capacity, top expenditures ($M)



Expanded Generation - Capacity, top expenditures ($M)



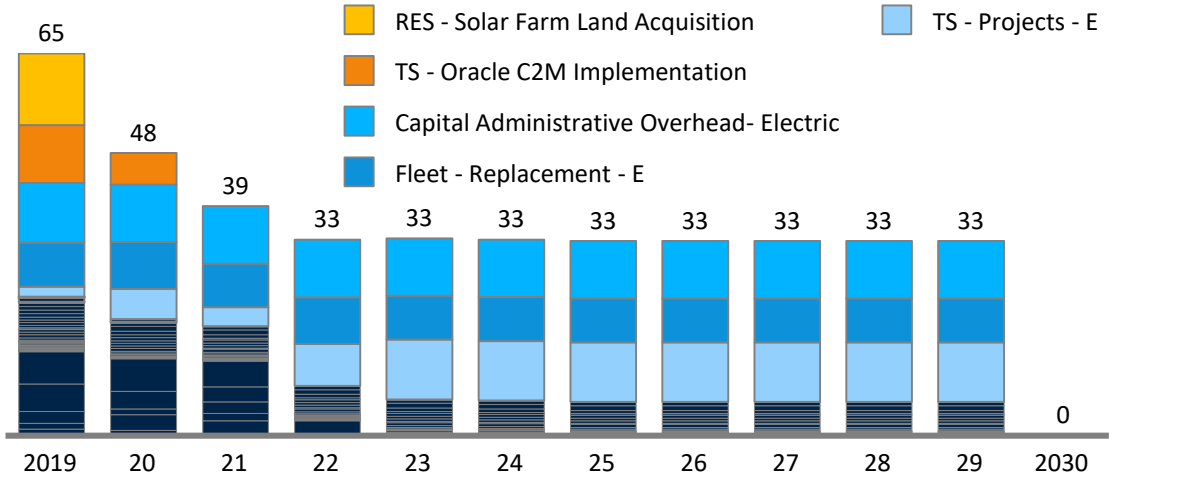
Electric System Substation 7 Transmission – Capacity, top expenditures ($M)



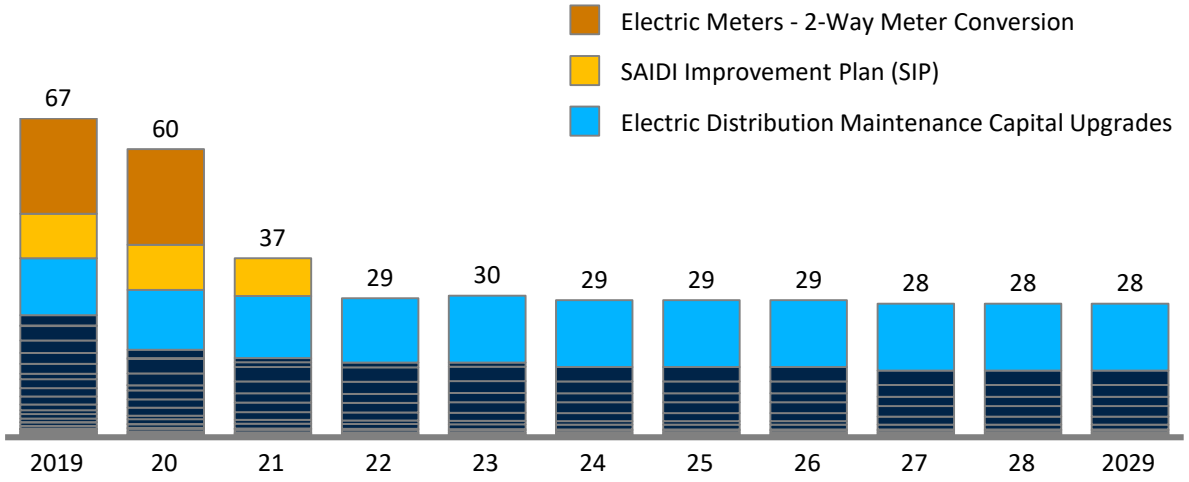
7 Breakdown of known capex spend: R&R

Large one-time project | Ongoing programs / spend | Smaller projects

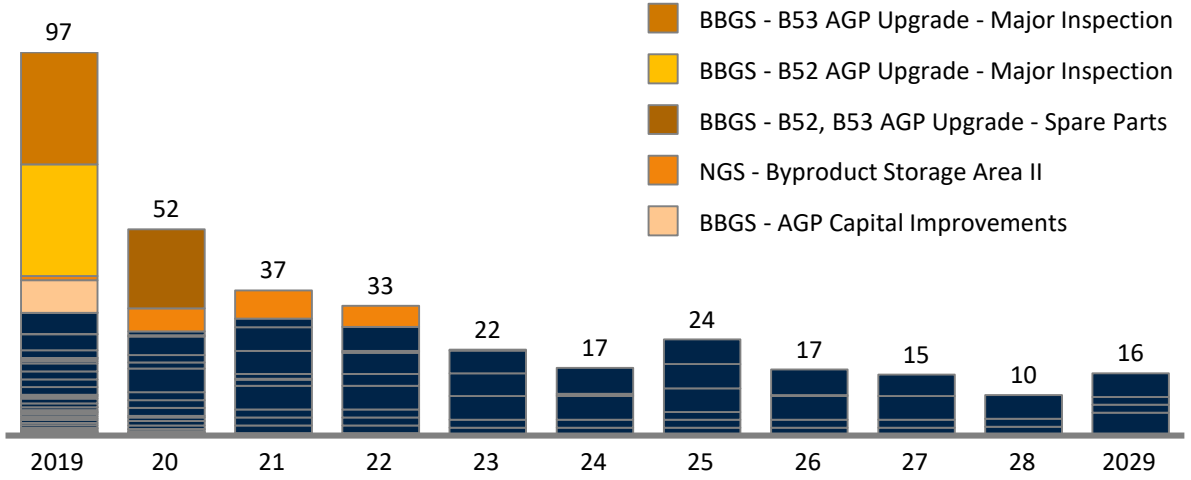
Electric Other – R&R, top expenditures ($M)[1]



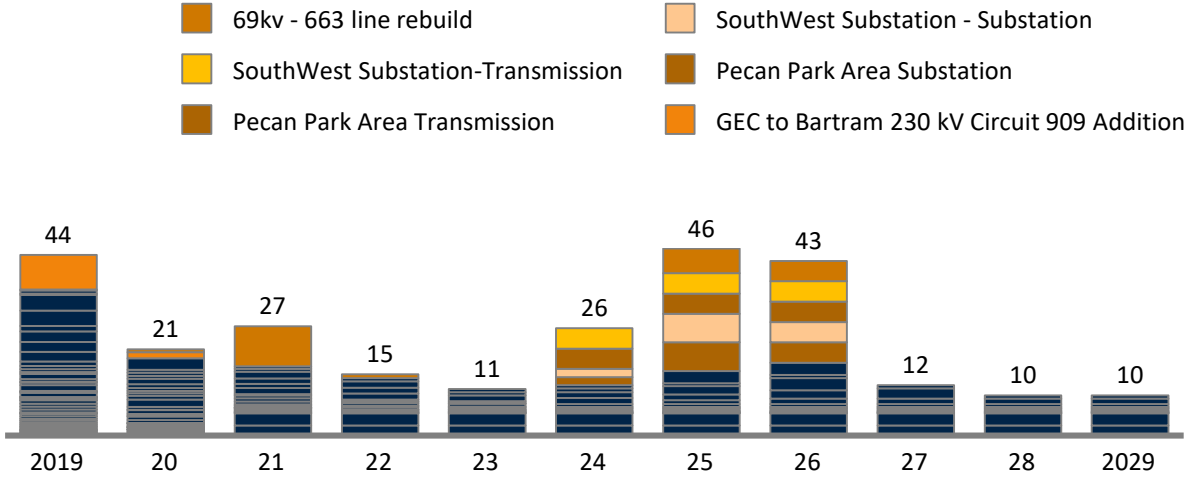
Electric Distribution – R&R, top expenditures ($M)



Electric System Generation – R&R, top expenditures ($M)



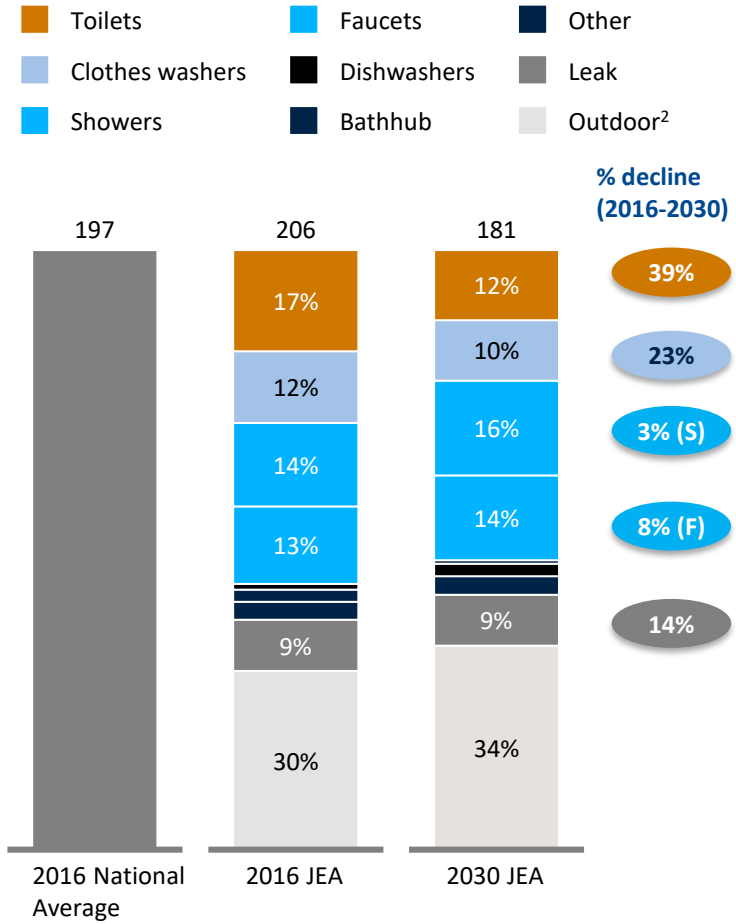
Electric Substation and Transmission – R&R, top expenditures ($M)



1 General Administration Office Building removed from energy forecast ($2, 33, and 15M in 2019 – 2021 respectively)

9 In the absence of action taken by JEA, water efficiency gains will continue to take place through replacement of indoor appliances

Average daily household use, gphd

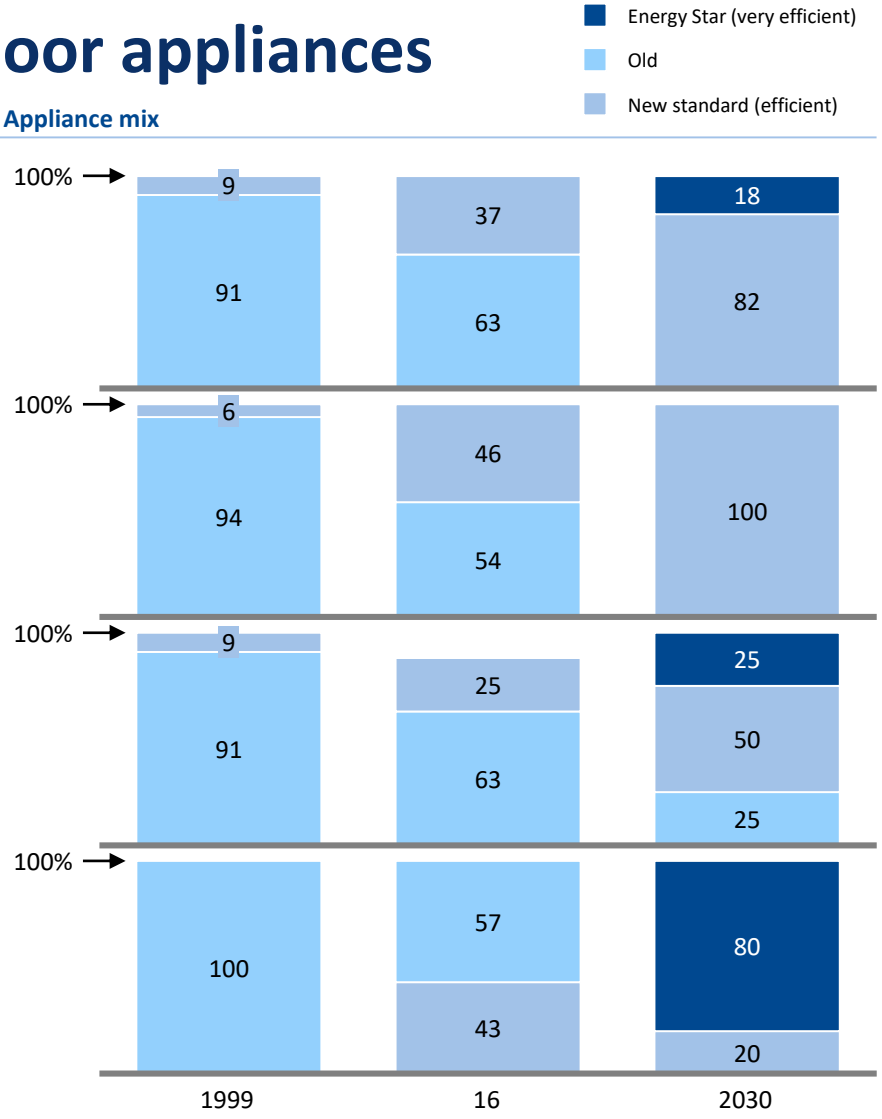


Natural adoption of more efficient technology which meets standards will lead to significant efficiency gains

Main drivers / Relevant specifications

Main drivers	Relevant specifications
Toilets	Old = 3.5 gpf Efficient = 1.6 gpf V. Efficient = 1.28 gpf New efficiency standard effective in 1994
Clothes washers[1]	Old = 41 gpl Efficient = 22.4 gpl New efficiency standard effective in 2011
Showers/faucets	Old = 2.75 gpm Efficient = 2.5 gpm V. Efficient = 2 (shower) / 1.5 (faucet) gpm New efficiency standards effective in 1994
Dishwashers	Old = 14 gpc Efficient = 6.5 (standard) / 4.5 (compact) gpc V. Efficient = 5.8 (standard) / 4.0 (compact) gpc New efficiency standard effective in 2010
Additional	Outdoor remains constant Leak declines with tech and new home adoption

Appliance mix



1 Assumes standard washer to remain consistent with relative impact in report 2 Outdoor use assumed constant barring incentive or behavioral change

SOURCE: Handbook of Water Use and Conservation, Amy Vickers, May 2001; Residential End Uses of Water, Version 2, Water Research Foundation, 2016; EIA; NRDC

9 Drivers of water savings

New Regulatory Standards and Flows

Types of use	Pre-Regulatory Flow[1]		New Standard (maximum)		Federal Standard	Year effective	WaterSense/Energy Star Current Specification+
Toilets	3.5 gpf		1.6 gpf		U.S. Energy Policy Act	1994	**1.28 gpf**
Clothes washers	41 gpl (14.6 WF)		~26.6 gpl (9.5 WF)		Energy Independence and Security Act of 2007	2011	**~22.4 gpl (8.0 WF)**
Showers	2.75 gpm		2.5 gpm at 80 psi		U.S. Energy Policy Act	1994	**2.0 gpm at 20 psi**
Faucets	2.75 gpm		2.5 gpm at 80 psi (1.5 gpm)		U.S. Energy Policy Act	1994	**1.5 gpm at 60 psi**
Dishwashers	14.0 gpc		6.5 gpc for standard; 4.5 gpc for compact		Energy Independence and Security Act of 2007	2010	**5.8 gpc for standard; 4.0 gpc for compact**

Key

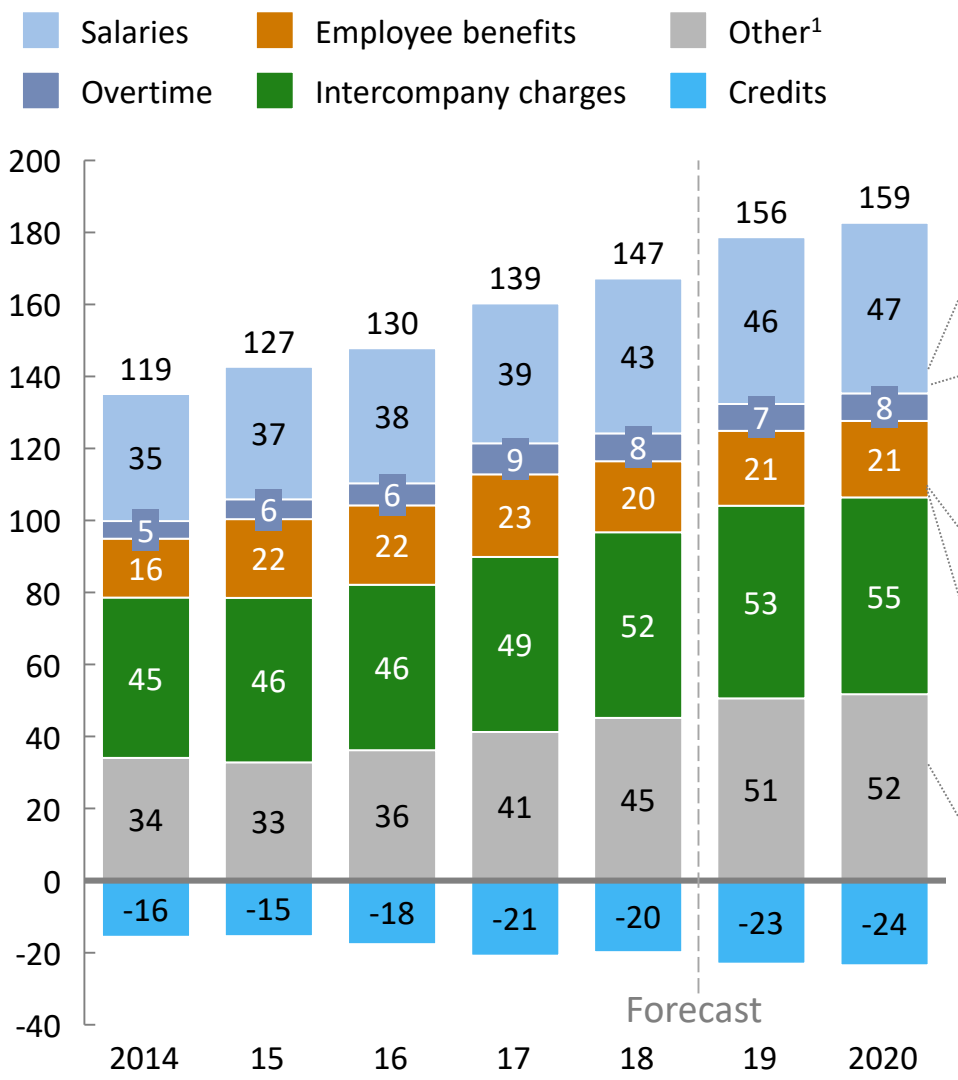
- Gpf: gallons per flush
- Gpl: gallons per load
- Gpc: gallons per cycle
- W.F: Water factor or gallons per cycle per cubic feet capacity of the washer

1 Average estimated gallons per load and water factor

Source: Handbook of Water Use and Conservation, Amy Vickers; WaterSense

10 Water opex breakdown and assumptions

Yearly energy opex breakdown, $M



CAGR 2014-20 and drivers

4.3%	▪ One-time increase 2018 (hiring) ▪ CBA negotiated XX-XX
6.6%	▪ Storm recovery Increase 2017 ▪ XX 2019-2020
3.8%	▪ Reduction in pension liability 2018 ▪ Increased health care costs throughout
3.0%	▪ Increased allocation starting 2017
6.1%	▪ 10+% growth 16-19 driven by increased professional services, supplemental workforce spend
6.0%	▪ xx

CAGR 2021-2030 and assumptions

5%	▪ Recent average historical growth (18-20)
5%	▪ Tracks with salary growth
6%	▪ Tracks with salary growth with 1% adder to account for healthcare costs
5%	▪ Historical growth (using 2012-20)
4%	▪ 2012-18 historical growth (outsized outage impact 2019-20)
6%	▪ Tracks with salary and benefits growth

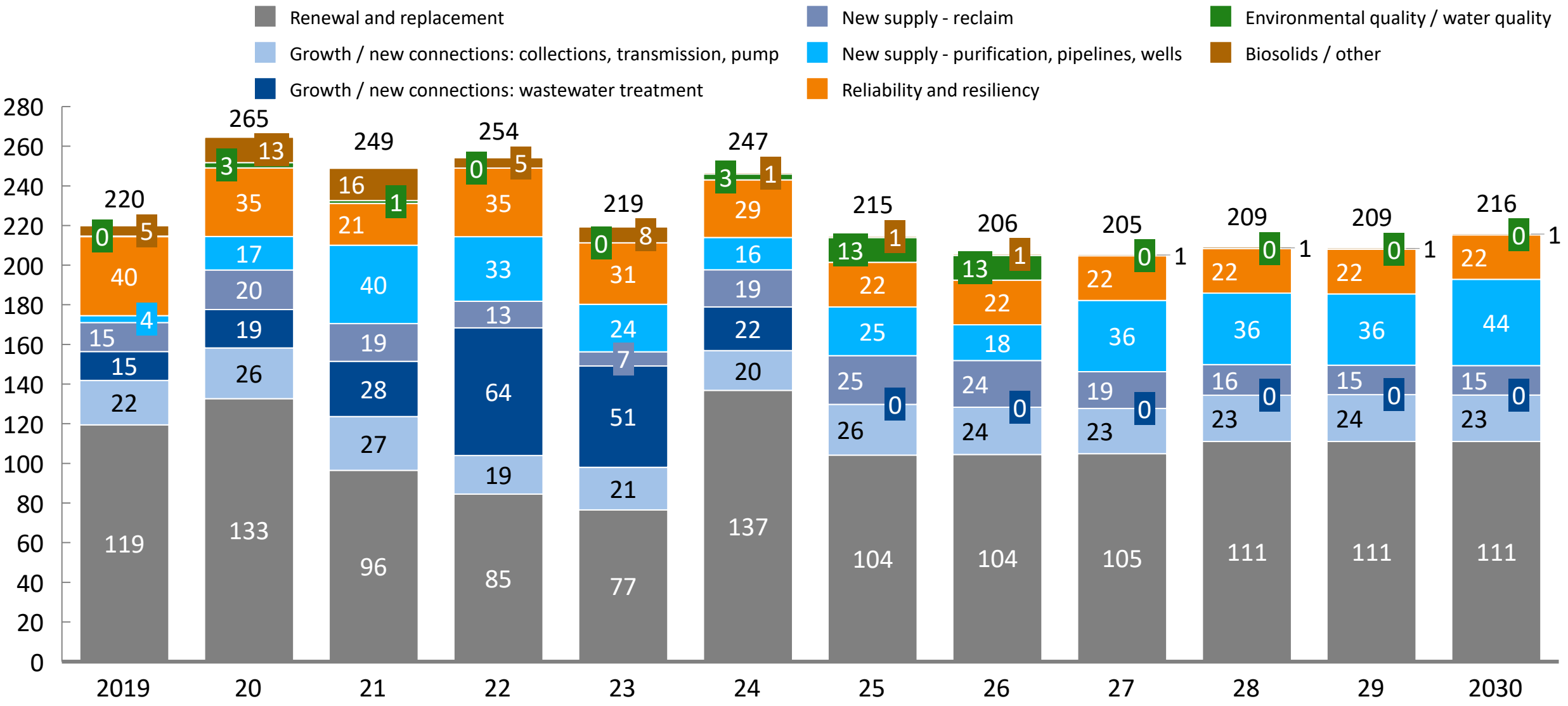
1 Interest, contracts & contingencies, city services, other services & charges, materials & supplies

2 Expected to fall in line with historic trends (e.g., barring one-time events)

SOURCE: JEA

11 Water capex breakdown

Yearly water capex, $M



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SOURCE: JEA

11 Water capex breakdown and assumptions

Category	2019-24 assumptions	2025-2030 assumptions	Total 2019-2030 spend, $M, % of total
Renewal and replacement	Project list categorized previously by Capital Budget Planning	Average yearly spend for 2019-24 assumed for all years	1,293 — 48%
Growth / new connections – wastewater treatment	Major expansions (Greenland, Southwest, Nassau)	No additional wastewater treatment expansion assumed needed	279 — 10%
Growth / new connections – collection, transmission, pump	Project list categorized by Capital Budget Planning	Average yearly spend for 2019-24 assumed for all years	199 — 7%
New supply – reclaim (including storage, new connections)	Project list categorized by capital budget planning	Project list from Planning added to forecast	205 — 8%
New supply – purification, pipelines, wells, other	TWMP, Rivertown, Nocatee South Water Repump; purified water phase 2 ($18/gal; 1MGD, FY20-22)	Purified water project (phase 3 = 10 MGD (FY25-30), $200M); 3rd River Crossing - $75M (FY30-34)	327 — 12%
Resiliency and reliability	Previously categorized by CBP	Average yearly spend for 2019-24 assumed for all years	325 — 12%
Environmental quality / water quality	Highlands Alternative Treatment project	Buckman BNR phase 2	32 — 1%
Biosolids and other	Buckman biosolids conversion upgrades and replacements	Buckman biosolids conversion upgrades and replacements	53 — 2%
			2,713

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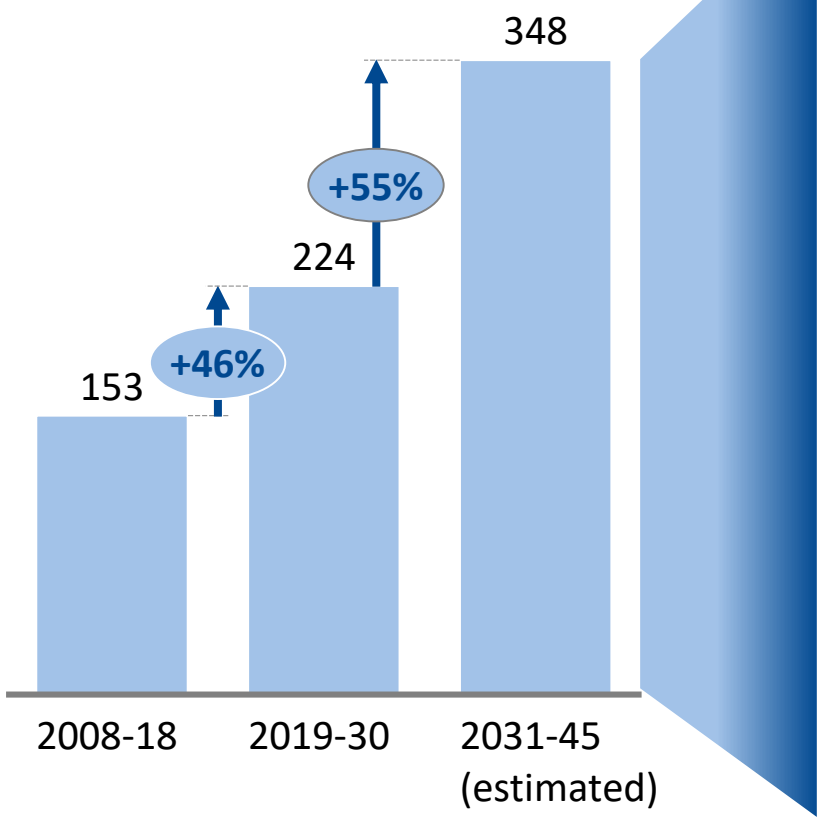
SOURCE: JEA

11 Post 2030 water capex needs

DIRECTIONAL COST ESTIMATES

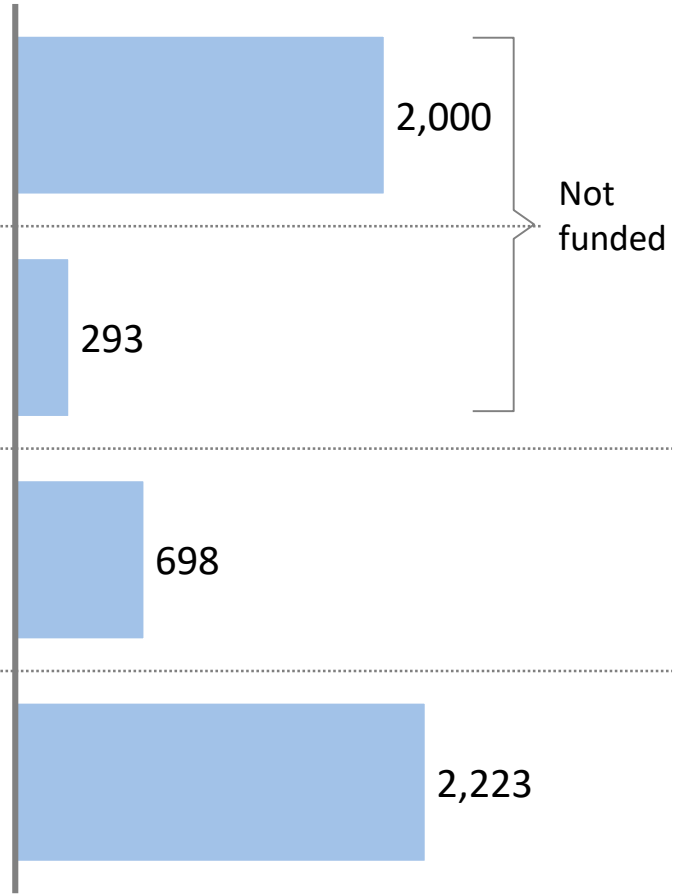
Average annual water capex budget, $M



Major system priorities

Centralization[1]	▪ Phase-out septic tanks in Duval County
Supply challenges[2]	▪ Proactively address supply challenges on South Grid
Growth and quality[3]	▪ Connect and serve new customers, while improving environmental quality of water treatment
Maintenance and resiliency[4]	▪ Maintain condition of existing infrastructure; improve resiliency to adverse events

Potential spend 2031-45, $M



1 Estimate to provide services to 35 identified areas in Duval County
2 Includes 3rd river crossing ($92m, $8M funded in 2030) and 1 additional installment of phase 3 water purification at $200M per installment
3 Includes identified future ww treatment plants ($200m), ww treatment water quality improvement installations (10 installations at $15m each), normal course distribution / collections capacity expansion (assume same yearly spend as 2019-30)
4 Includes normal course R&R and resiliency (same yearly spend as 2019-30), expansion of large diameter pipe program to all pipes ($200m)

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SOURCE: JEA

2018

JEA

Building Community®

RATING AGENCY PRESENTATION

FitchRatings

Since our last annual update

JEA is a Superior Electric Utility

- Maintained excellent financial and operational metrics
- Repaid $326 million of debt in FY2018 for a total reduction of $1.9 billion since 2009 with a continued commitment to aggressively accelerate deleveraging
  - Accelerated $100 million of debt reduction with February 2019 defeasance and plan to drive debt to a 40-year low
- Continued to strategically plan to absorb the cost of Plant Vogtle
  - Accelerating nearly all principal due before 2028, resulting in debt service coverage of 6x and fixed charge coverage of 2x when Vogtle comes online
- Capital program includes $897 million of projects over the next five years without the need of issuance of new debt and no base rate increases
- Rates are at the median in the state and expected to remain stable for at least five years while others are experiencing rising costs
- Closed the St. Johns River Power Park, reducing JEA carbon emissions by 30% and saving $50 million in operating expenses per year starting in 2020

Financial metrics reflect a thriving utility today & long into the future

FitchRatings

Since our last annual update

JEA is a Superior Water & Wastewater Utility

- All financial metrics are a fortress:
  - Strong balance sheet
  - Ample liquidity
  - Superior debt service coverage
- Debt service coverage expected to be 3.5x to 4x over the next five years
- Paid down $74 million debt in FY2018 for a total reduction of $532 million since 2011 projected to total $827 over the next five years
  - Accelerated $95 million of debt reduction with February 2019 defeasance
- Robust $1 billion capital program over the next five years with ability to be cash funded with no rate changes and no new debt
- Continued commitment to investing in infrastructure to ensure reliable operation now and into the future

Superior performance supports a credit rating upgrade

Since We Last Met

September 2018
Board approved engaging McKinsey & Company to consult with development of updated strategic plan

October 2018
Our Last Meeting

November 2018
- Increased Revolving Credit Facility to $500 million from $300 million, though May 2021
- Board approved Aaron Zahn as permanent Managing Director/CEO

December 2018
- Between 2/21/18 and 12/11/18 renewed and extended liquidity support for $545 million in variable rate bonds
- Board approved proceeding with execution of 250MW solar PPAs and Prepaid Gas Supply agreements
- Board approved Strategic and Timely Asset Realignment (STAR) Plan
- Published FY18 Annual Report within 81 days of FYE

January 2019
- Board adopted Guiding Principles as the basis and foundation for a forward-looking strategic planning process
- Board approved JEA Total Compensation Philosophy

February 2019
- City Council unanimously approved COJ contribution agreement, extending two years thru FY23
- $100 million Electric and $95 million Water-Sewer bonds defeased
- Executed natural gas prepay agreements for 12,000 MMBtu/day, saving a total of $6.5 million over five years

Table of Contents

Table of Contents

PART 1

Who We Are: Introduction

JEA

a place where each and every employee has a strong commitment to three things: delivering an unparalleled customer experience, working together to elevate the entire team, and innovating and evolving to match our customers' needs with market trends

JEA SERVICE TERRTORY

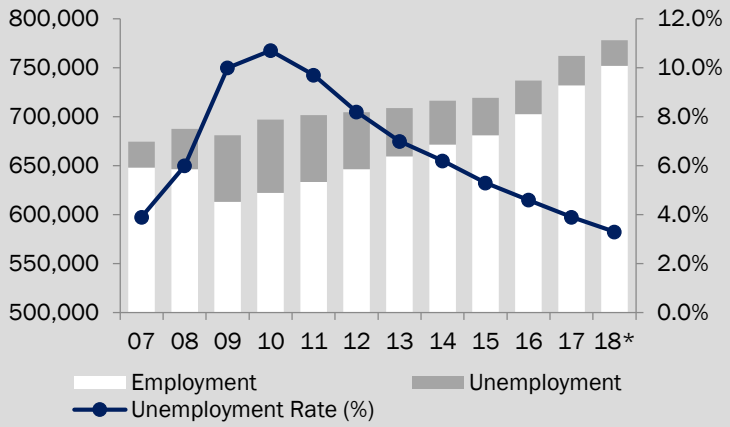
- Located in Jacksonville, Florida, our service territory includes the entire Jacksonville Metropolitan Statistical Area (MSA) which has an estimated population of 1.5 million [1]
- The Jacksonville MSA saw a 11.8% increase in population from April 1, 2010 to July 1, 2017[1]
- Our service territory also includes 130,454 meters in neighboring St. Johns, Nassau and Clay Counties

[1] U.S. Census Bureau, Population Division
Annual Estimates of the Resident Population as of July 1, 2017

ECONOMIC SNAPSHOT

Employment & Unemployment

The unemployment rate in December 2018 for the Jacksonville MSA is 3.1%*

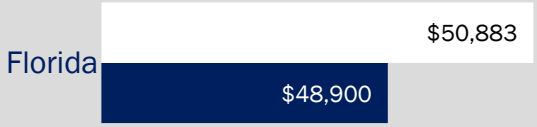


Source: Labor Market Statistics, Local Area Unemployment Statistic Program FREIDA (Florida Research and Economic Information Database Application) Annual not seasonally adjusted labor force, employment and unemployment data in Jacksonville MSA

Source: Bureau of Labor and Statistics Unemployment Rates for Metropolitan Areas, Not Seasonally Adjusted *Preliminary

2017 Median Household Income

Florida's median household income has increased 4.1% year over year.

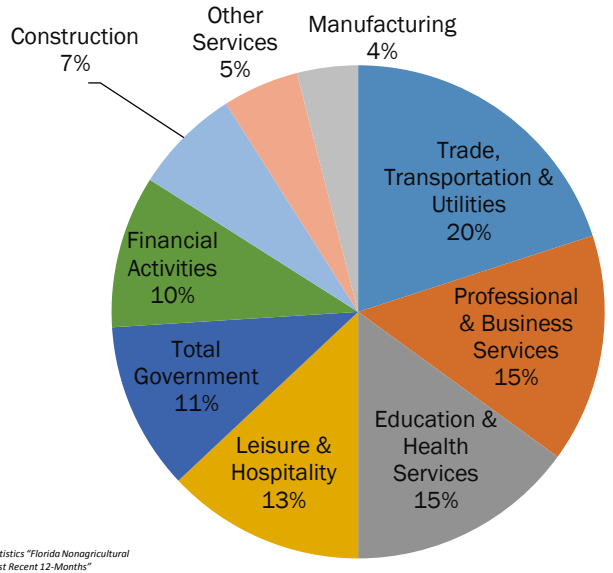


Duval County median household income has increased 4.3% year over year.

2017 **2016**

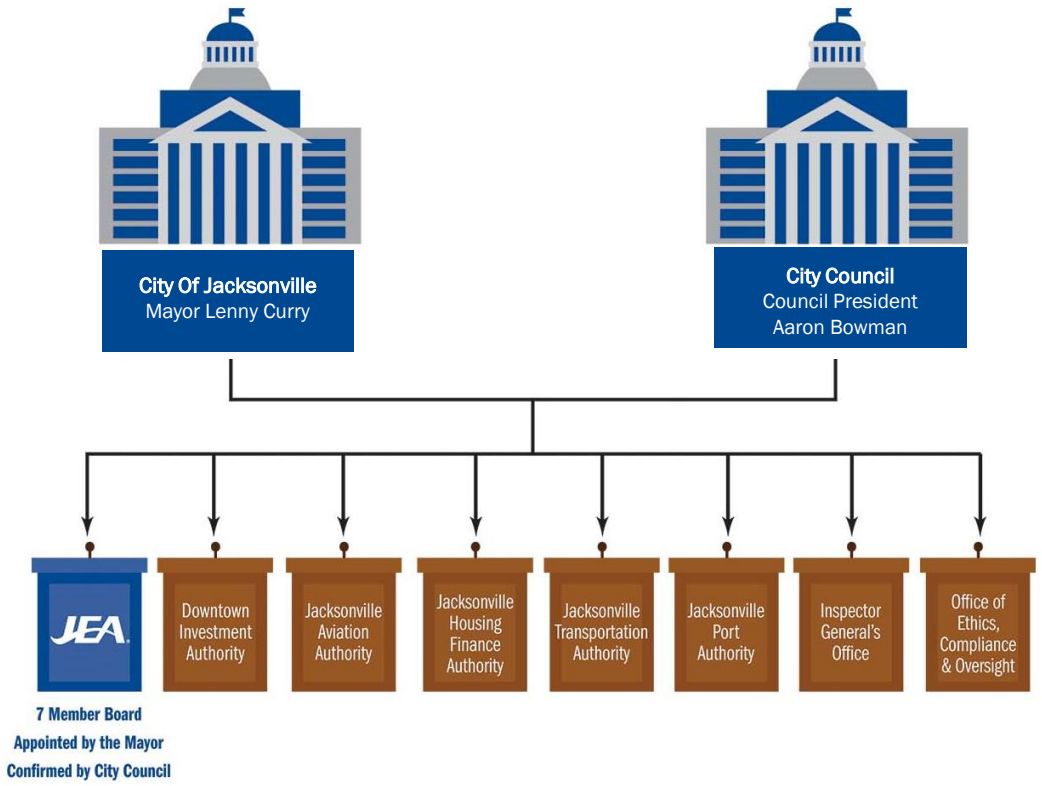
Source: U.S. Census Bureau, "2013-2017 American Community Survey 5-Year Estimates" Median household income in the past 12 months (in 2017 inflation-adjusted dollars)

The local economy is made up of a diverse mix of industries:



Source: Bureau of Labor Statistics "Florida Nonagricultural Employment – Most Recent 12-Months"

COJ's INDEPENDENT AUTHORTITES AND AGENCIES



Board Of Directors

We have been a municipal electric system since 1895 and independent agency of the City of Jacksonville, Florida since 1968

Our governing body is a Board of Directors appointed by the Mayor and confirmed by City Council

- The Board's primary responsibilities are policy, strategy, and rate making
- The Board is comprised of community leaders, professionals, and business people

Our finance and Audit Committee oversees financial policy, financial reporting, auditing, budgeting, and enterprise risk management

G. Alan Howard
Founder & President, Milam Howard Nicandri Gillam and Renner, P.A.
Term: 02/10/2019-02/28/2019

Fredrick Newbill
Pastor, First Timothy Baptist Church
Term: 01/12/2017-02/28/2019

John Campion
Chairman, CJJ Holding
Term: 07/25/2018-02/28/2022

Kelly Flanagan
Senior VP and CFO, Jacksonville Jaguars, LLC
Term: 11/25/2015-02/28/2020

April Green
Chief Operating Officer, Baxter Technology
Term: 12/01/2017-02/28/2021

Camille Johnson
President, Lee Wesley Companies
Term: 07/25/2017-02/28/2020

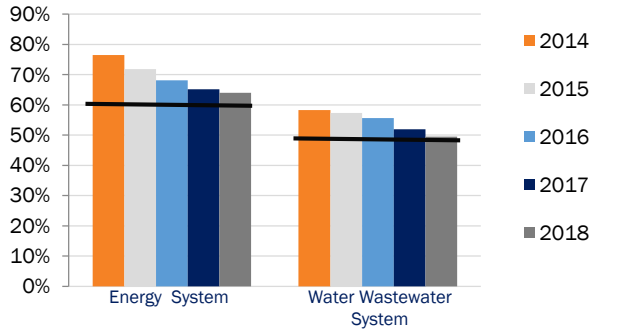
PART 2

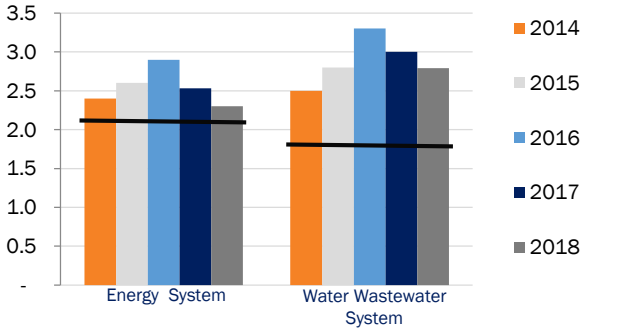
What We've Done: FY2018 Financial Results

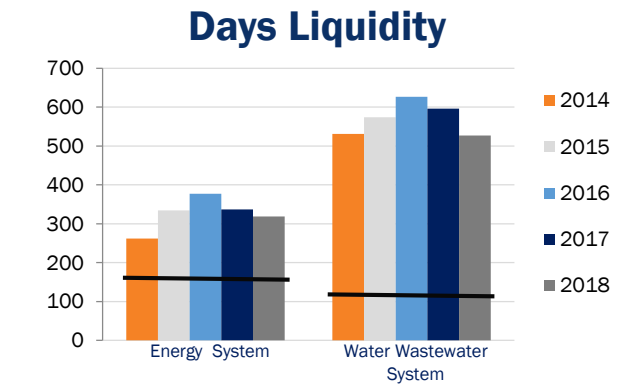
Historical Financial Metrics

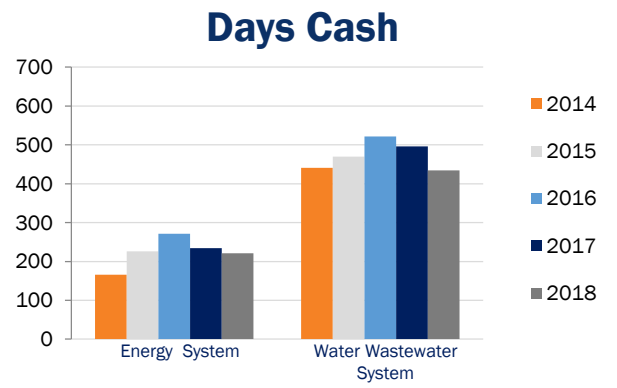
FY2018 RESULTS DEMONSTRATE STRONG PERFORMANCE ACROSS ALL KEY FINANCIAL METRICS

- FY2018 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 new debt









Long Term targets per JEA pricing policy

Energy System
Key Financial Metrics

WHAT WE SAID DECEMBER 2017

- 2.2x combined debt service coverage
  Days of cash on hand: 180 days
- Days of liquidity: 280 days
- Net funded debt reduction: $135 million
- Debt to Asset ratio: 71.8%
- Capital Expenditures: $166 million
- Decrease in system MWh sales of (0.4%)
- Base revenue reduction of (0.4%)

WHAT WE DID FY2018

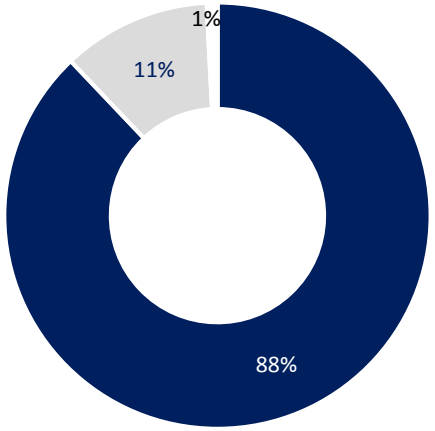
- 2.3x combined debt service coverage
- Days of cash on hand: 221 days
- Days of liquidity: 320 days
- Net funded debt reduction: $154 million
- Debt to Asset ratio: 71.0%
- Capital Expenditures: $174 million
- Increase in System MWh sales of 2.6%
- Base revenue increase of 2.9%

Energy System
Customer Breakdown

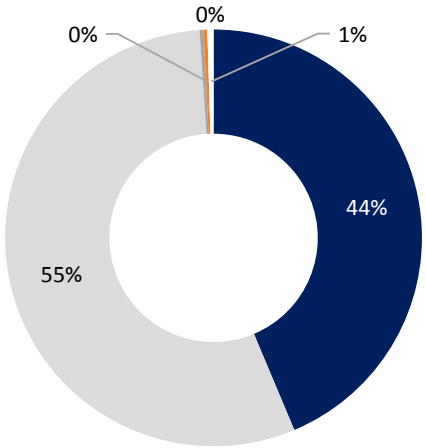
Top Ten Customer Accounts

Account	Annual Billed	Percent of Revenue
US Navy Public Works Center	$22,130,326	1.8
City of Jacksonville	21,660,130	1.8
CMC Steel Florida	18,726,308	1.5
WestRock CP LLC	15,236,857	1.2
Duval County School District	14,546,196	1.2
Anheuser Busch, Inc.	8,318,025	0.7
Southern Baptist Hospital of Florida Inc.	8,133,950	0.7
Publix Supermarkets Inc.	7,828,937	0.6
Johnson & Johnson Vision Care Inc.	7,343,645	0.6
Winn Dixie Stores, Inc.	7,173,720	0.6
TOTAL	$131,098,094	10.7

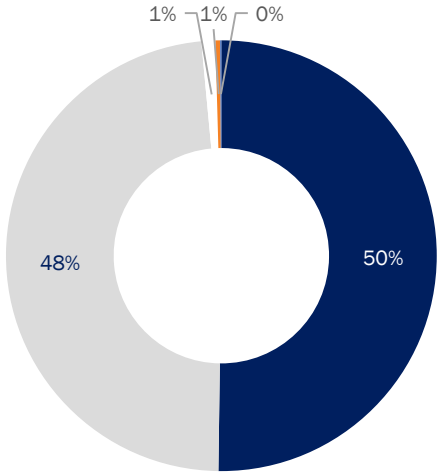
Average Number of Customer Accounts



Average Number of Accounts
Total = 466,411



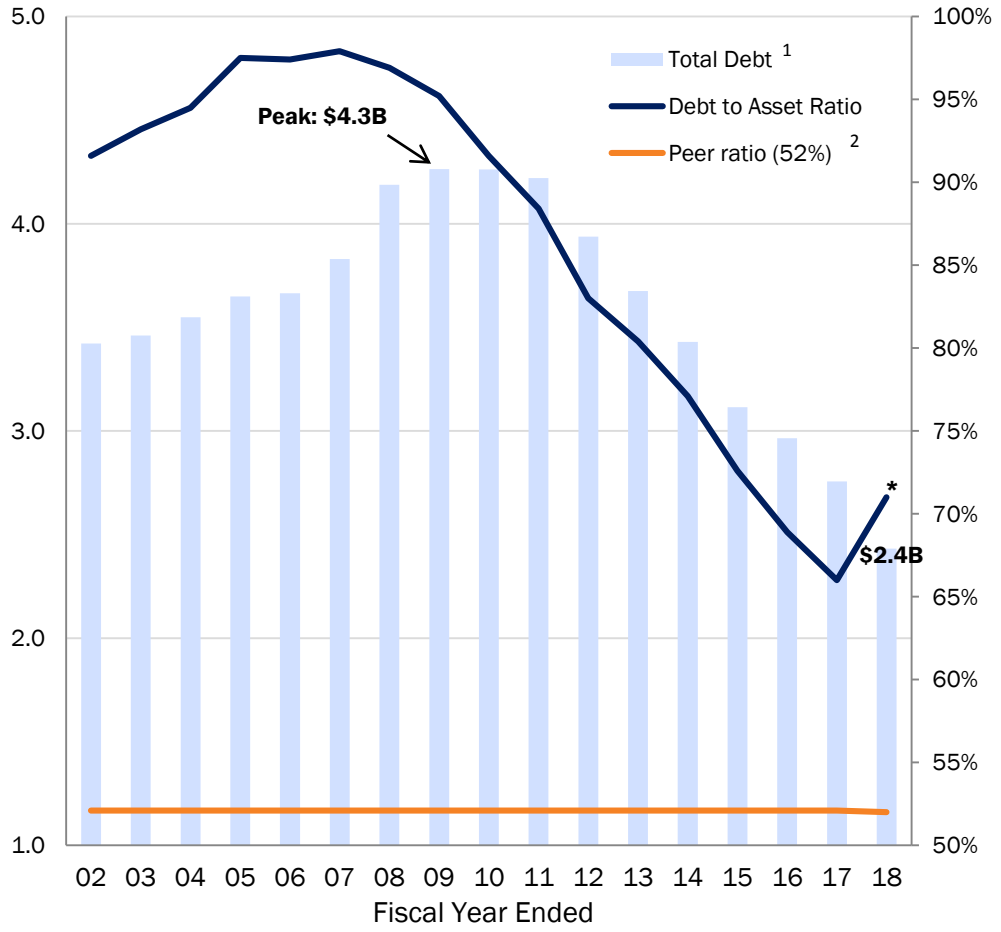
System Sales (MWh)
Total = 12,399,769



Revenues ($ in millions)
Total = $1,231

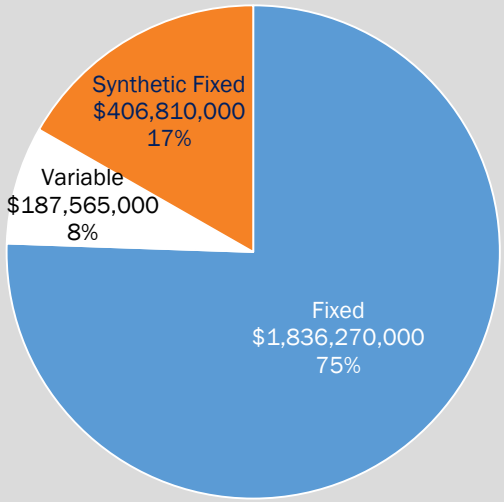
Residential | Commercial & Industrial | Public Street Lighting | Sales for resale - Territorial | Sales for resale - Off system

Energy System Debt Management



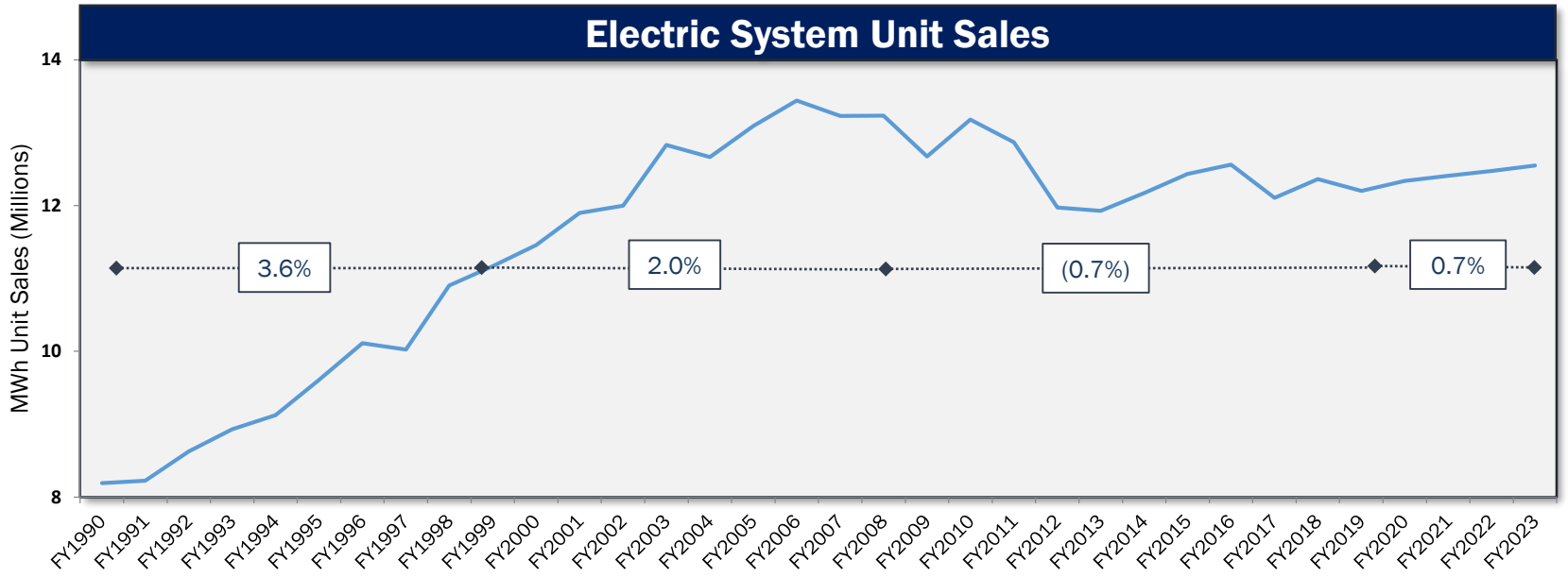
[1] Includes JEA, Scherer, and SJRPP
[2] Per Moody's Sector In-Depth Report "Public Power Medians – Sound metrics signal stability as carbon challenges loom", Sept. 2017
*Increase in Debt to Asset Ratio in FY18 due to SJRPP retirement

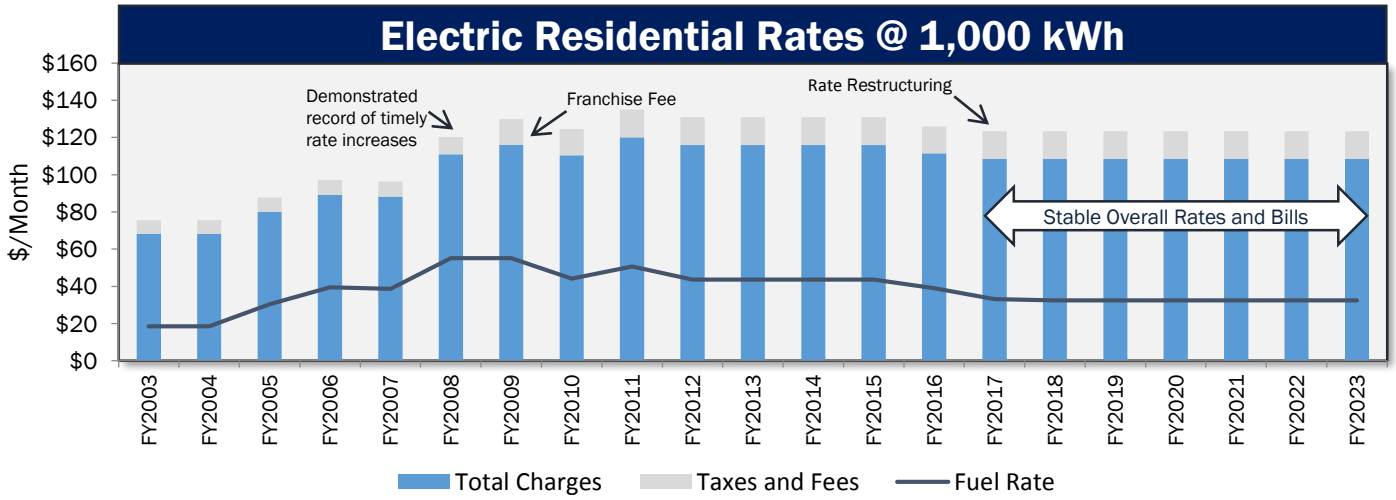
Debt Composition as of 9/30/18



- **$1.9 Billion reduction in debt since peak**
- **Variable rate exposure reduced from 20% in 2008 to 8%**

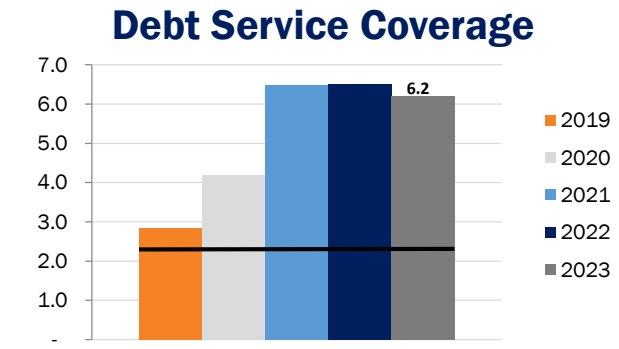
Energy System Unit Sales and Rates

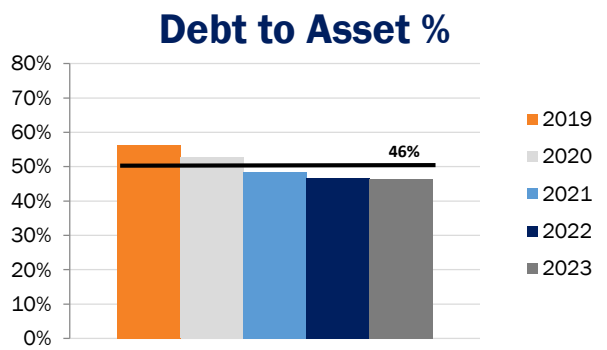


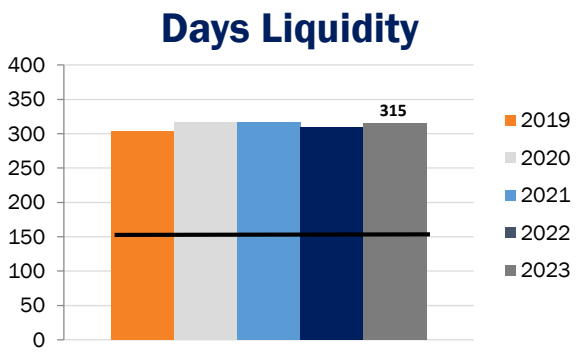


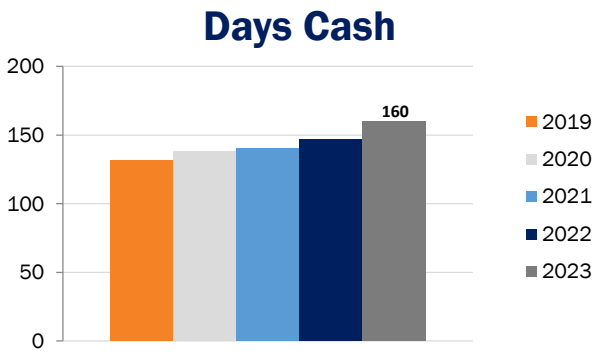
Energy System Financial Projections

- Acceleration of debt repayment drives debt to asset ratio to 46% by 2023
- Strong debt coverage will mitigate Vogtle impacts
- Significant liquidity to continue world class operations









Long Term targets per JEA pricing policy

Water & Wastewater System
Key Financial Metrics

WHAT WE SAID DECEMBER 2017

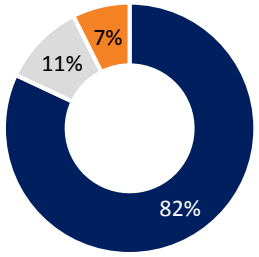
- 2.7x combined debt service coverage
- Days of cash on hand: 404 days
- Days of liquidity: 502 days
- Net funded debt reduction: $50 million
- Debt to Asset ratio: 49.6%
- Capital Expenditures: $215 million
- 2.0% increase in Water kgal sales
- Total system revenue decrease of (2.9%)

WHAT WE DID FY2018

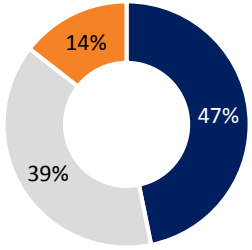
- 2.8x combined debt service coverage
- Days of cash on hand: 434 days
- Days of liquidity: 529 days
- Net funded debt reduction: $70 million
- Debt to Asset ratio: 49.5%
- Capital Expenditures: $199 million
- (2.8%) decrease in Water kgal sales
- Total system revenue decrease of (3.8%)

WATER SYSTEM CUSTOMER BREAKDOWN

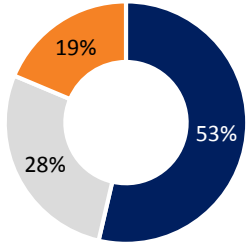
Ten Largest Customer Accounts	Annual $ Billed	Percent of Revenues
City of Jacksonville	$2,215,500	1.2
Duval County School District	1,149,128	0.6
St. Johns County Utility	771,120	0.4
Southern Baptist Hospital of Florida Inc.	540,573	0.3
The American Bottling Company	405,992	0.2
American Homes for Rent LP	394,243	0.2
St Vincents Health System Inc.	388,147	0.2
DR Horton, Inc. Jacksonville	357,536	0.2
Mayo Clinic Jacksonville	322,921	0.2
Jacksonville Housing Authority	314,430	0.2
TOTAL	6,859,588	3.7



Average # of Accounts
Total = 348,159



System Sales (kgal)
Total = 36,186,559



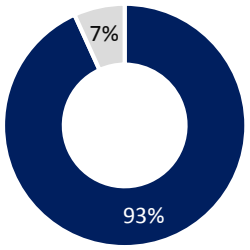
Revenues ($ in millions)
Total = $172

Residential Commercial & Industrial Irrigation

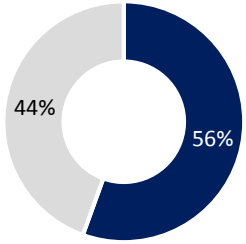
Average Number of Customer Accounts

SEWER SYSTEM CUSTOMER BREAKDOWN

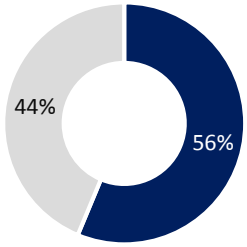
Average Number of Customer Accounts



Average # of Accounts
Total = 270,871



System Sales (kgal)
Total = 26,340,622

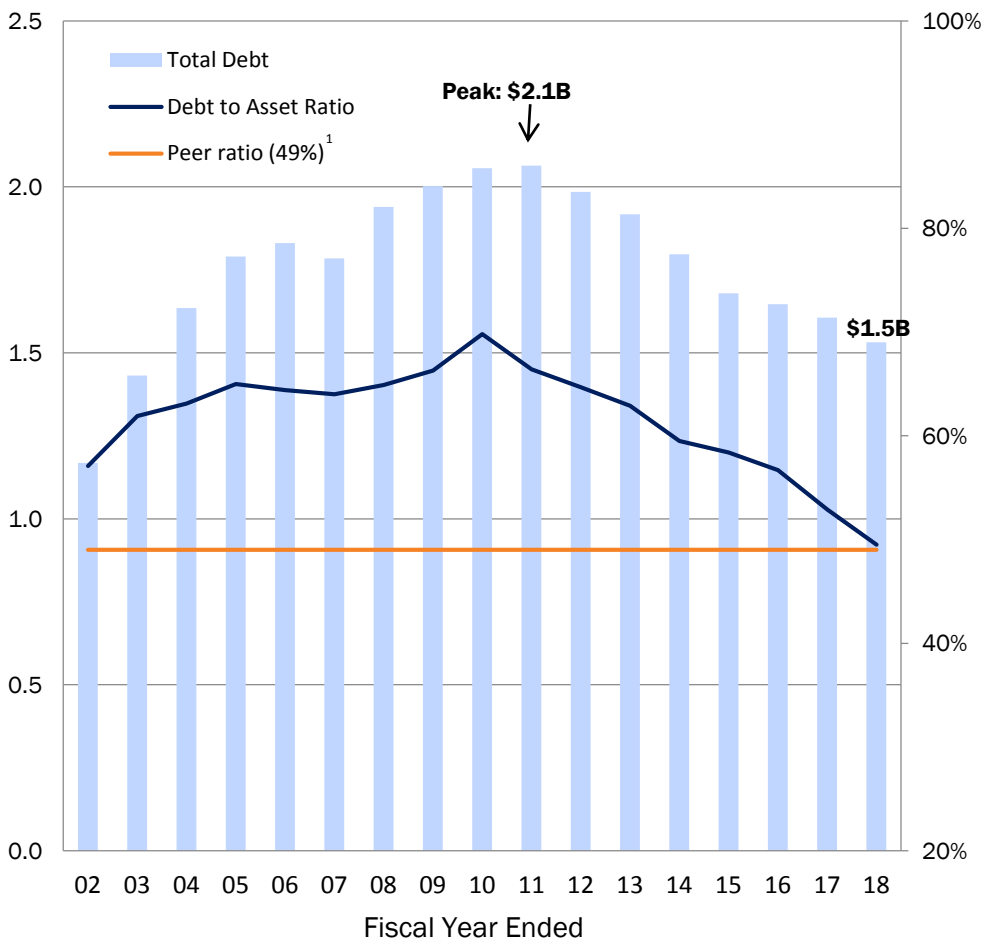


Revenues ($ in millions)
Total = $247

Residential Commercial & Industrial

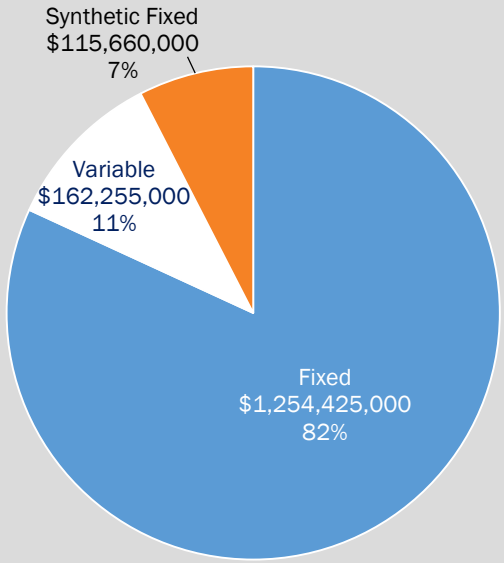
Ten Largest Customer Accounts	Annual $ Billed	Percent of Revenues
City of Jacksonville	$2,637,060	1.1
Duval County School District	2,177,213	0.9
St. Johns County Utility	1,294,095	0.5
The American Bottling Company	1,106,595	0.4
WWF Operating Company	971,058	0.4
St Vincents Health System Inc.	957,243	0.4
Southern Baptist Hospital of Florida, Inc.	933,540	0.4
Mayo Clinic Jacksonville	869,928	0.4
Symrise, Inc.	830,531	0.3
American Home Portfolio LLC	824,016	0.3
TOTAL	$12,601,279	5.1

Water & Sewer System Debt Management



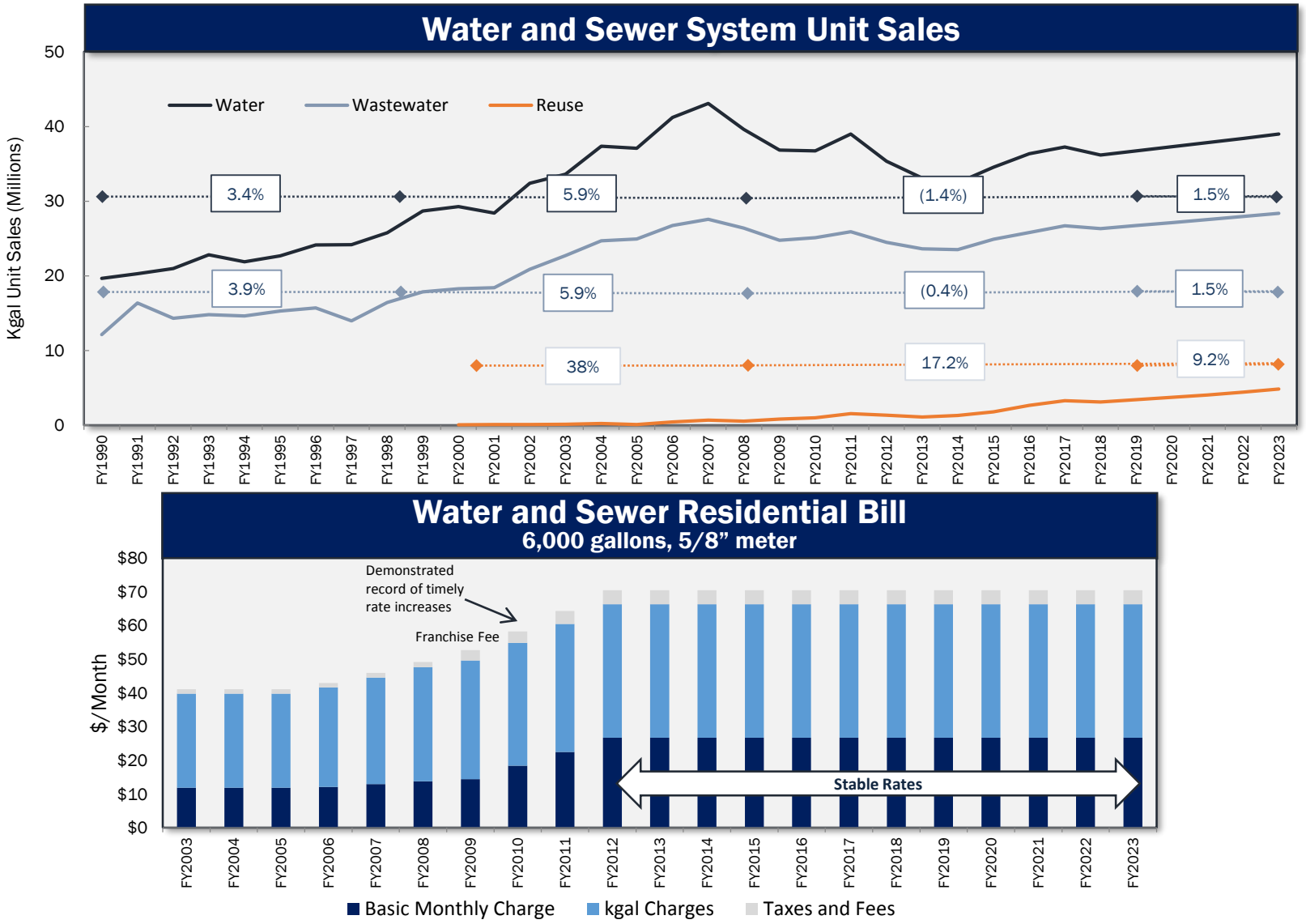
[1] Calculated from Moody's Municipal Financial Ratio Analysis database of 209 Aa rated public water-sewer utilities, Jan. 10, 2017

Debt Composition as of 9/30/18



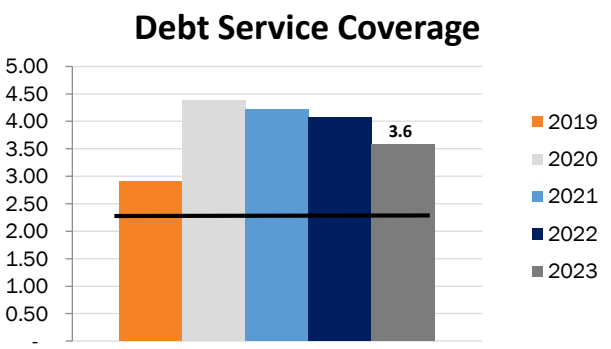
- **Over $532 million reduction in debt since peak**
- **Variable rate exposure reduced from 18% in 2009 to 11%**

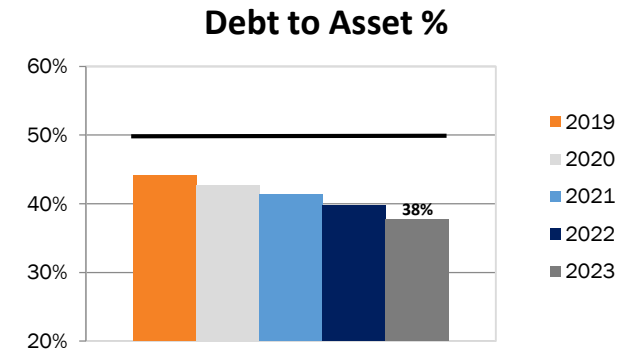
Water & Sewer System Unit Sales and Rates

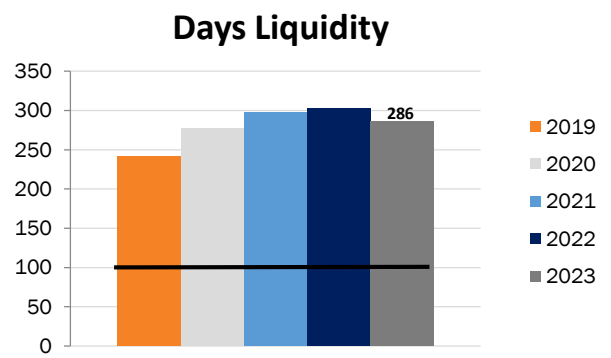


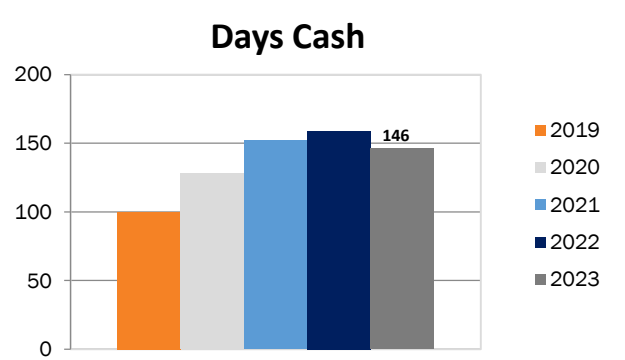
Water & Sewer System Financial Projections

- Debt to Asset ratio below 40% by 2023
- $1 billion capital plan with the ability to cash fund
- AAA financial health
- Opportunity to begin managing to target capital structure









Long Term targets per JEA pricing policy

PART 3.....

Where We Are Going: A New Dawn

New Strategic Framework

Our mission will be guided by and evaluated against how well we as employees drive these four basic corporate measures of JEA's value:

Customer Value
Financial Value
Community Impact Value
Environmental Value

Guiding Principles

Accelerating Utility Innovation

OUR VISION

Improve lives by accelerating innovation

OUR MISSION

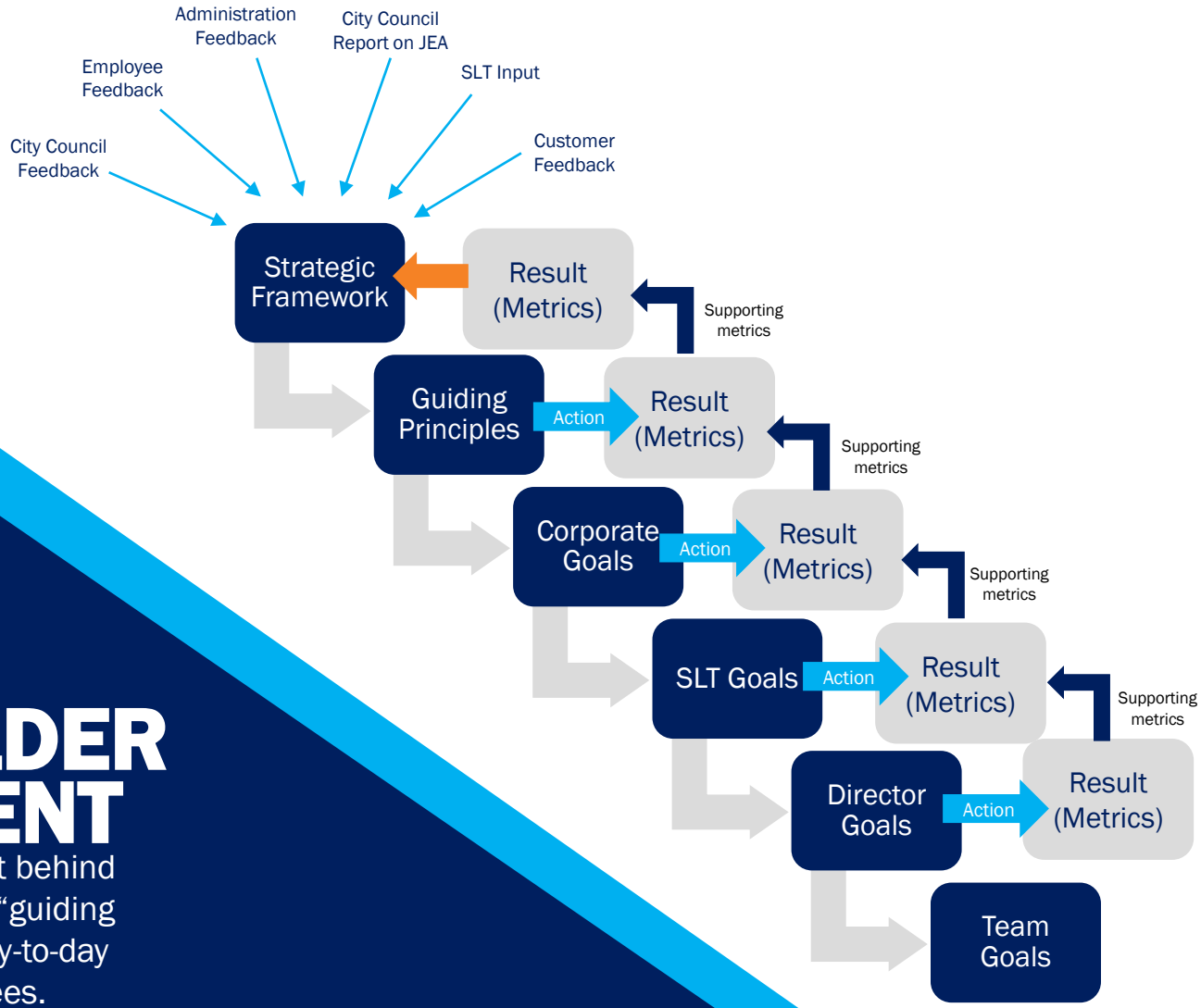
Provide the best service by becoming the center of our customers' energy and water experience

OUR CORE COMPETENCIES

- Deliver an unparalleled customer experience
- Work together to elevate the entire team
- Innovate and evolve to match our customers' needs with market trends

STAKEHOLDER ALIGNMENT

Basic logic of alignment behind "strategic framework," "guiding principles," through day-to-day actions of employees.



FY19 GOALS

Our Five Focus Areas That Are Necessary For Future Success

Priority One
Develop an adaptive culture

Priority Two
Align to a pervasive commitment to profitability and value

Priority Three
De-risk the business

Priority Four
Be a platform for customer choice

Priority Five
10-year strategic plan in line with our guiding principals

Priority One:

Develop an adaptive culture.

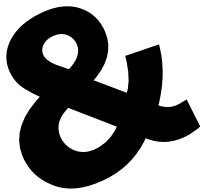
Our Cultural Values

Safety
Service
Growth^2
Accountability
Integrity
Ideas

STOP

Working Not To Fail

A culture where individuals are motivated by risk aversion striving not to fail rather than to succeed



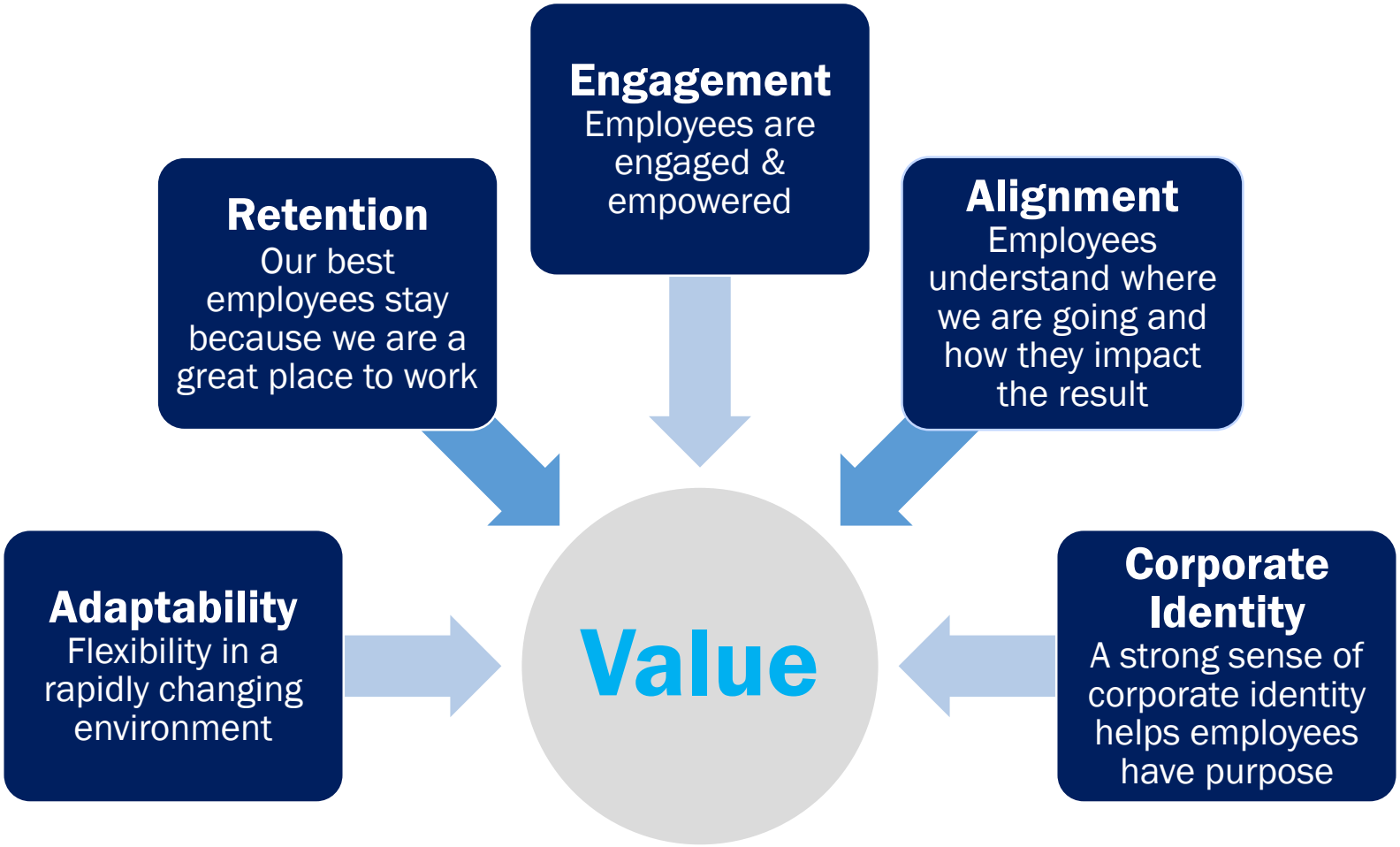
START

Driving Towards Success

Be willing to take appropriate and calculated risks to achieve extraordinary results

Our Mantra To Realize An Adaptive Culture

Why An Adaptive Culture Matters



Priority Two:

Align to a pervasive commitment to profitability & value.

Our fundamental goal is to maximize each of our corporate measures of value both now & in the future

1 Customer Value

What a customer expects to get in exchange for the price they pay

2 Financial Value

The monetary value and risk profile, both today and tomorrow, of JEA as it relates to the city

3 Environmental Value

Ensuring a sustainable environment for future generations

4 Community Impact Value

Improving the quality of life through innovative and cost-effective service offerings, employee volunteerism and ambassadorship, relevant and timely communications, and support of economic development and job growth throughout JEA's service territory; foster a collaborative and respectful corporate culture that provides exceptional employee value to equip the JEA team to deliver outstanding service and value to its community

Priority Three:

De-risk the business.

- Reevaluate our risks
- Develop the STAR plan
- Hedge our fuel expenses
- Strengthen our PPAs
- Extend our city contribution plan

Enterprise Risk Management

JEA's Enterprise Risk Management (ERM) program identifies, assesses, measures, and actively manages risk, including mitigation strategies and actions.

Our methodology has been modified to better prioritize risks, relative to each other, and better assess reputation impact of a risk event.

We have developed a new scoring metric and updated our tier one risks.

ERM Corporate Risk Heat Map Scoring

The risk score is a factor of the risk impact x likelihood which helps us evaluate the criticality of the risks and the need for mitigation.

Likelihood							
	Almost Certain >90	5	5	10	15	20	25
	Likely 65-90%	4	4	8	12	16	20
	Possible 35-65%	3	3	6	9	12	15
	Unlikely 5-35%	2	2	4	6	8	10
	Rare <5%	1	1	2	3	4	5
			1	2	3	4	5
			Minor	Moderate	Significant	Major	Severe
			Impact				

X2
Financial & Reputational Risk

Tier 1	20-29	31-50
Tier 2	13 -19	
Tier 3	2 - 6	7 - 12

Our New Tier 1 Risks

Risk Name	New Score	Long Term Risk Exposure Trend >5 Years
Tier 1 Risks		
E10 - Nuclear Power Portfolio	50	↑ Increasing
F01 - Revenues and Expenses Management	28	↑ Increasing
C03 - Disruptive Technologies/Electric Systems	26	↑ Increasing
F03 - Credit Availability/Cost	25	↔ Stable
T02 - Cyber Security Information Protection	24	↑ Increasing
C02 - Physical Security (Facilities Infrastructure Security and Regulatory Compliance)	24	↑ Increasing
E13 - Infrastructure Destruction Due to Severe Weather	24	↔ Stable
E06 - Long-term Planning/Load Forecast - Electric	24	↑ Increasing
H02 - Staffing	24	↔ Stable
E04 - Adverse Electric Commodity Supply and Pricing	21	↔ Stable
W01 - Water Supply Management/Long Term Planning	21	↑ Increasing

Risk Score - New risk score includes the reputational risk component. Based on adding the financial and reputational risk scores.

Rate Restructuring Review

What we said we'd do back in Fall 2016

1. JEA will pay down $190 million of debt early and customers will realize long-term savings of $100 million.
2. JEA will promote bill stability for customers.

What we actually did after the 2016 restructuring

1. In February 2017, JEA made accelerated debt payments of $157 million and $40 million in 2018, realizing an average debt service savings of $10 million annually with a total savings of over $88 million through 2025.
2. On December 1, 2016 JEA lowered electric bills to over 50,000 businesses in Northeast Florida. The lower electric rates have remained stable for two years and counting.

Strategic & Timely Asset Realignment (STAR) Plan

JEA's Financial Strength Revised

Approved Plan that increases operating efficiency and reduces corporate risk includes:

- Increased revolver by $200 million at same pricing / terms and conditions ✓
- Maintaining solid AA financial credit metrics ✓
- Increase cash flow by an average of ~$80 million annually through 2023
- Pay off ~$1 billion of debt by 2023 – all debt maturing before 2028
- Cash funding ~$1.9 billion in CAPEX for next 5 years
- Increase CAPEX by over 40% over the next 5 years vs. the last 5 years
- No projected base rate increases necessary to execute on plan

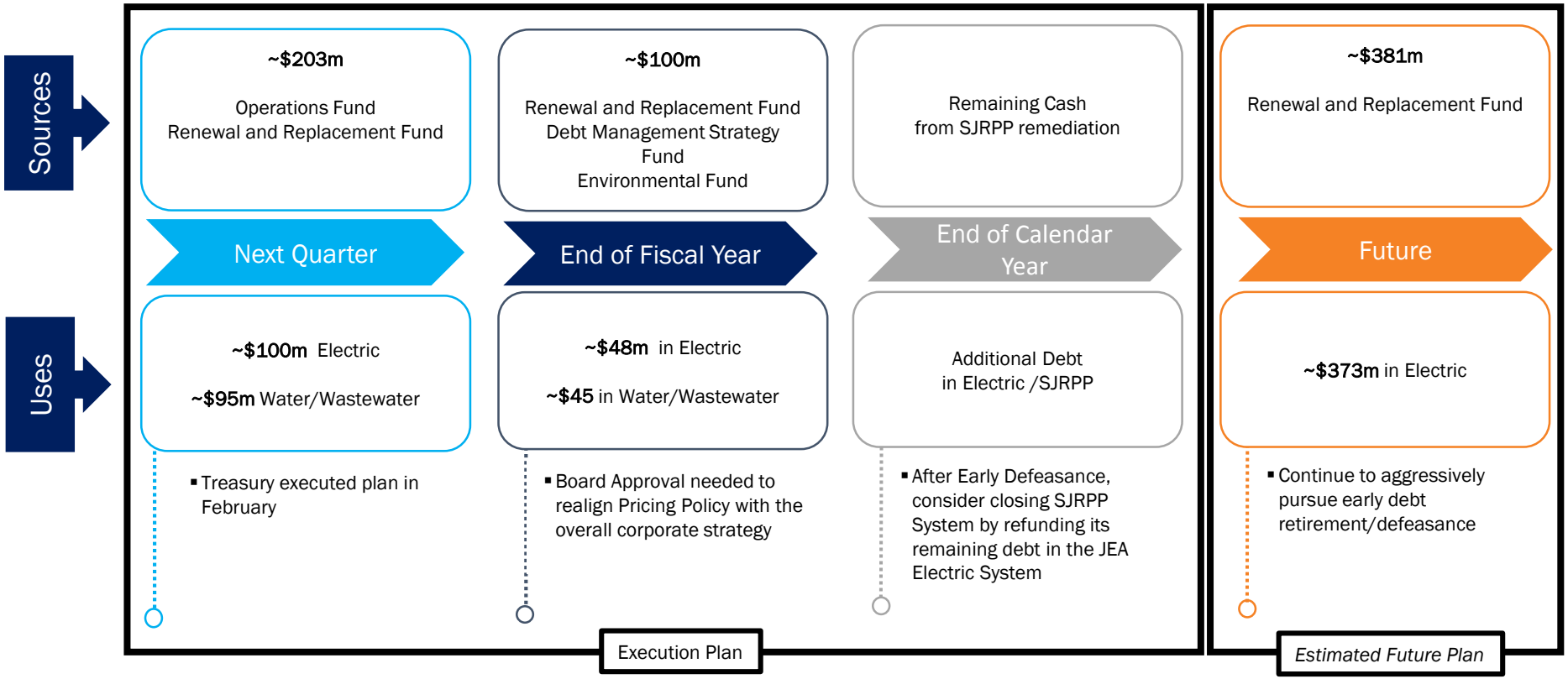
STAR Plan Projections

- Repay over $465 million in debt in 2019 and over $1 billion over the next 5 years between both systems
- Continue to invest $1.9 billion in the system over the next 5 years with no new debt and no base rate increases
- Electric debt to capitalization drops to 46% and water debt to capitalization drops to 35%
- Lowest electric debt in 40 years, lowest water debt in 20 years
- Demonstrate ability and willingness to pay
- Maintain solid AA financial credit metrics

($ millions)	2018	2019	2020	2021	2022	2023
Electric Debt Acceleration	$0	$148	$42	$163	$107	$61
Water Debt Acceleration	$0	$140	$0	$0	$0	$0
Cumulative Debt Acceleration	$0	$288	$330	$493	$600	$661
Operating FCF before CAPEX	$418	$496	$505	$607	$562	$535
CAPEX	$373	$475	$446	$356	$328	$332
Electric Debt Remaining[1]	$1,955	$1,689	$1,583	$1,402	$1,285	$1,217
Water Debt Remaining[1]	$1,378	$1,217	$1,199	$1,179	$1,155	$1,111
Total Debt	$3,333	$2,906	$2,782	$2,581	$2,440	$2,328
Debt to Capitalization (E/WWW)	65%/44%	58%/41%	55%/40%	49%/38%	47%/37%	46%/35%
Days Liquidity (E/WWW)	319/589	303/241	317/277	317/297	309/302	315/286
Base Rate Changes	0%	0%	0%	0%	0%	0%

[1] Net Funded Debt. Net Funded Debt is equal to bonds payable plus bonds due within one year less debt service reserve fund less debt service sinking fund plus accrued interest payable

STAR Plan
EARLY DEBT RETIREMENT PHASES



STAR Plan
Energy Financial Metrics

Metrics	FY18	Phase 2 Δ vs FY18	End of FY19	Phase 3 Δ vs FY18	End of FY23
Debt Service Coverage	2.3x	*0.5x*	2.8x	*3.7x*	6.5x
Fixed Charge Coverage	1.7x	*0.4x*	2.1x	*(0.1x)*	2.0x
Days of Cash	221	*(90)*	131	*29*	160
Days of Liquidity	319	*(16)*	303	*12*	315
Debt to Capitalization	65%	*(7%)*	58%	*(12%)*	46%

Balance Sheet ($millions)	FY18	Phase 2 Δ vs FY18	End of FY19	Phase 3 Δ vs FY18	End of FY23
Total Assets	$4,238	*($233)*	$4,005	*($643)*	$3,595
Total Debt Outstanding	$2,150	*($279)*	$1,871	*($877)*	$1,273
Total Other Liabilities	$1,021	*($84)*	$937	*($129)*	$892
Total Net Position	**$1,067**	***$130***	**$1,197**	**$363**	**$1,430**

STAR Plan
Water & Wastewater Financial Metrics

Metrics	FY18	Phase 2 Δ vs FY18	End of FY19	Phase 3 Δ vs FY18	End of FY23
Debt Service Coverage	2.8x	*0.1x*	2.9x	*0.8x*	3.6x
Fixed Charge Coverage	2.6x	*0x*	2.6x	*0.7x*	3.3x
Days of Cash	434	*(334)*	100	*(288)*	146
Days of Liquidity	527	*(286)*	241	*(241)*	286
Debt to Capitalization	44%	*(3%)*	41%	*(9%)*	35%

Balance Sheet ($millions)	FY18	Phase 2 Δ vs FY18	End of FY19	Phase 3 Δ vs FY18	End of FY23
Total Assets	$3,580	*($161)*	$3,419	*($29)*	$3,551
Total Debt Outstanding	$1,529	*($192)*	$1,337	*($308)*	$1,221
Total Other Liabilities	$466	*($32)*	$434	*($90)*	$376
Total Net Position	**$1,585**	**$63**	**$1,648**	**$369**	**$1,954**

GAS HEDGING

Current Hedges

2019 Gas Hedges in place for 20,000 MMBTU/day April – December.

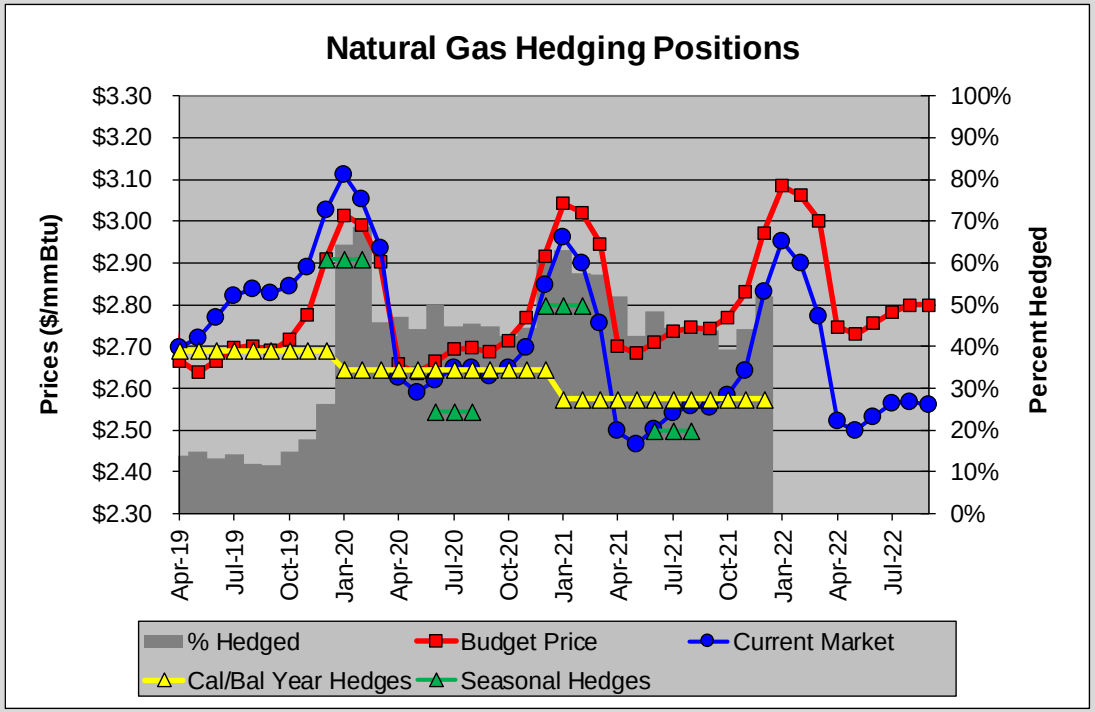
2020 and 2021 Gas Hedges in place for 60,000 MMBTU/day Calendar Strips and 10,000 MMBTU/day Winter and Summer.

Average price:

2019 – $2.702/MMBTU

2020 – $2.649/MMBTU

2021 – $2.577/MMBTU



GAS PREPAY PARTICIPATION PARAMETERS

In December 2018 the JEA Board delegated authority to the Managing Director and CEO to allow for the execution of gas supply agreements related to prepayment projects under certain key parameters:

- ✓ Term of the gas supply agreement shall not exceed 30 years
- ✓ Minimum savings of no less than 20 cents per MMBtu for all agreements in excess of 5 years
- ✓ Maximum committed volumes not to exceed 50% of estimated annual throughput
- ✓ JEA is obligated only if such natural gas supplies are delivered

JEA expects to enter into gas supply agreements with the Municipal Gas Authority of Georgia to purchase 12,000 MMBtus/day of pre-paid natural gas, resulting in a total savings of $6.5 million over the next five years

Participation in gas supply agreements associated with prepayment projects subject to certain thresholds

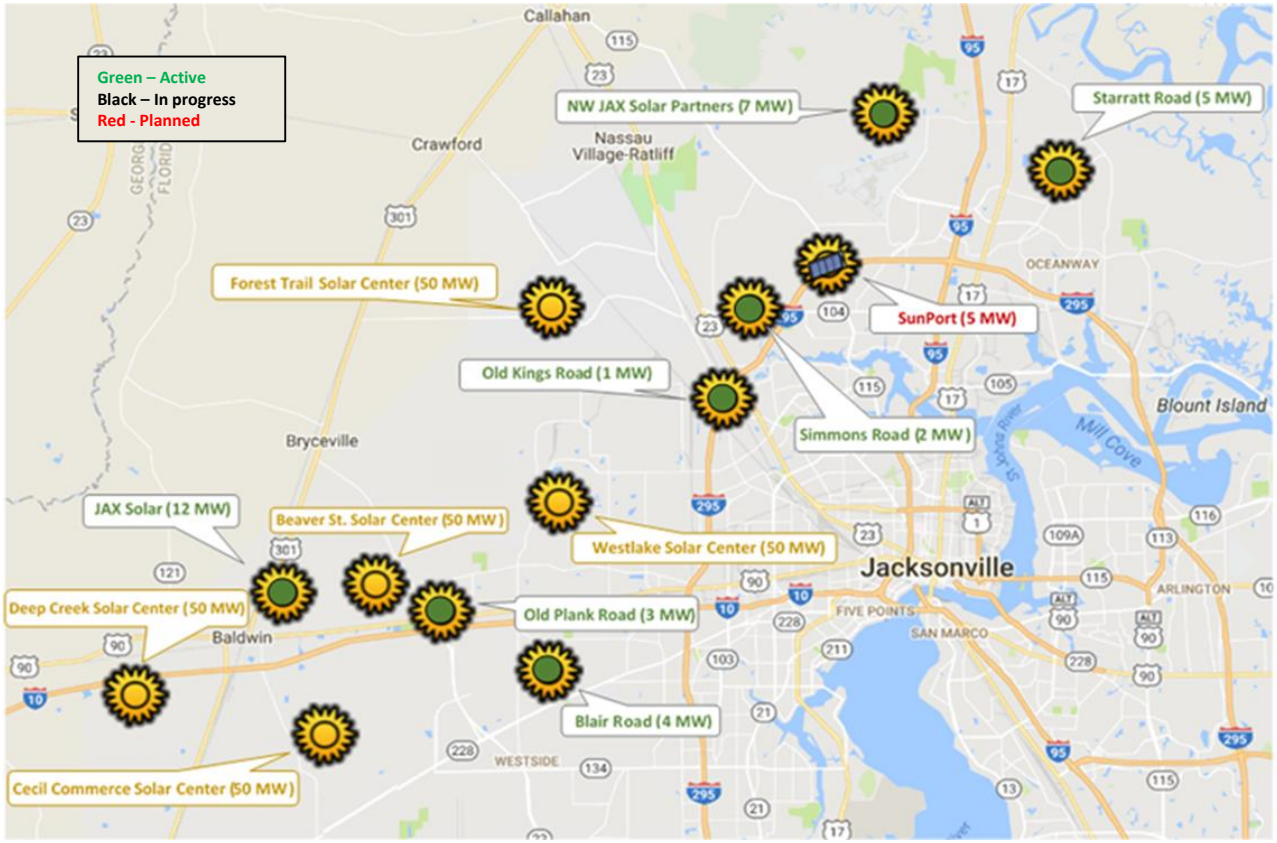
JEA Current & Future PV Solar Sites

JEA IS PURSUING A SUBSTANTIAL INCREASE IN SOLAR GENERATION

We have contracted to add up to 250 MW of universal solar by 2022, in addition to 34 MW installed, and 5 MW currently in progress making Jacksonville the largest solar city in the U.S.

WHAT THIS LOOKS LIKE:

- New sites, land owned by JEA
- Reduces exposure to fossil fuel volatility
- PPA prices below current fuel rate with no escalator providing a 20+ year fuel hedge



Contribution Agreement Extension

- Extends the terms & conditions of the current agreement through 2023
- Contribution rate stays stable at a rate of prior year plus 1%

- Continue JEA's contribution to COJ of 30.34 metric tons in water quality credits plus an additional 13.6 metric tons in water quality credits each year in perpetuity (the additional 13.6 metric tons comes from the decommissioning of SJRPP)

- Provide an additional $15 million contribution to the COJ/JEA Septic Tank Phase Out Program. This brings the total COJ and JEA contribution towards the septic tank phase out program to over $45 million since 2016.

- Provide a one-time $155,000 contribution for river level monitoring equipment that was damaged during recent hurricanes.

- City Council approved on February 12, 2019
- To be executed February 2019

This creates a stable operating environment through 2023

Priority Four:

Be a platform for customer choice.

Become a platform for customer choice:
Demand Rate Study

Our First Step:

Create a pricing platform for the future that provides *Revenue Stability* that delivers positive *Customer Impact* while promoting efficient *System Utilization.*

We believe our cost of service should align with our customers use of the electric system. As they reduce usage, we can equally reduce costs to match.

What We've Learned So Far:

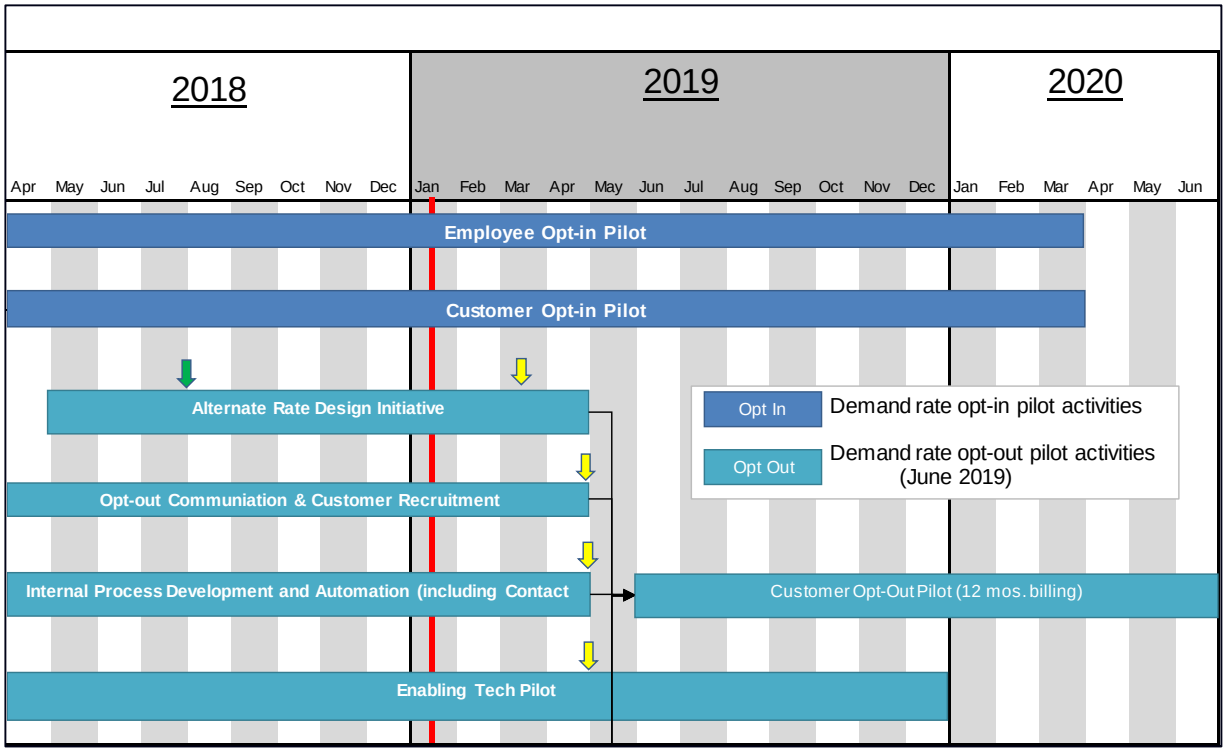
- Demand pricing is less impacted by weather and more stable than kWh
- Customers perceive more and longer demand intervals to be more fair
- Customers like the opportunity to save by avoiding peak periods
- Customers believe that technology (information and control) is needed to manage usage effectively

Jan 2014 Rate Design Working Group → April 2016 JEA Demand Rate Opt-In Pilot → June 2018 Alternate Rate Design Analysis → Aug 2018 Focus Group Test → Nov 2018 Weather Stress Test

Demand Program Pilot Timeline

Opt-Out Demand Pilot Goals

- Study how customer behavior change impacts revenue collected and peak generation
- Test and fine tune…
  - Communications (i.e., alerts), delivery method, and timing preferences to customers
  - Customer support responses using segmentation and call center feedback
  - Enabling technology offering
- Evaluate impacts to low income segments
- Review rate robustness to Distributive Energy Resources and technology innovations



Enabling Technology

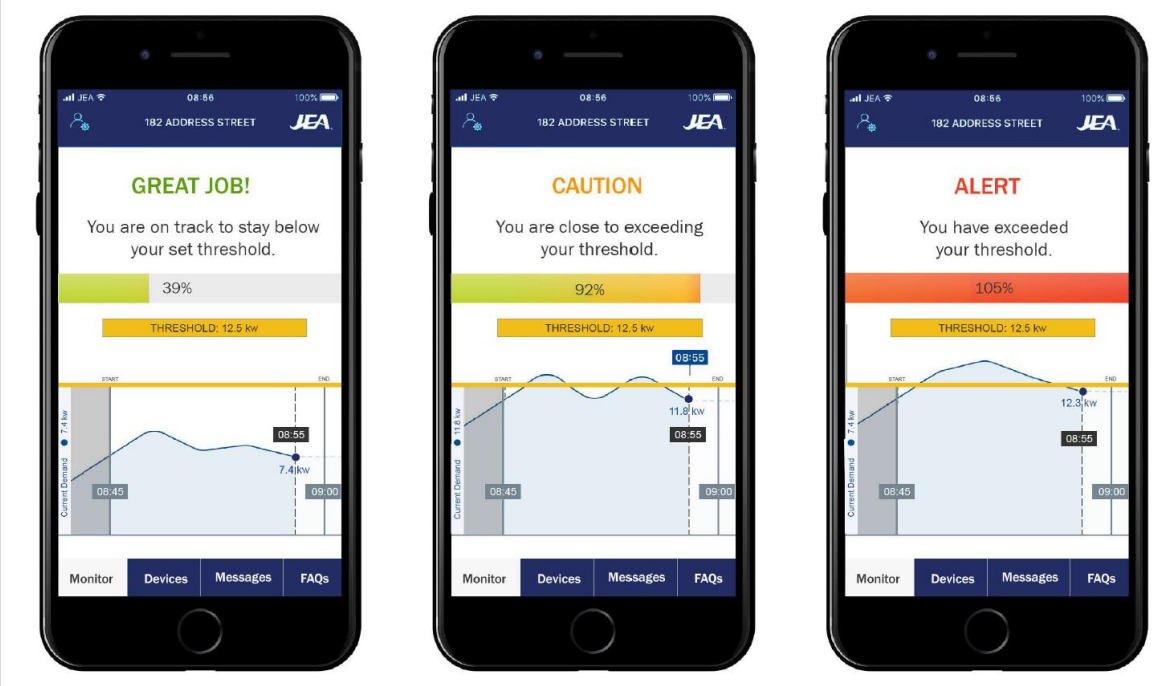
Customer Home Energy Management Tool Pilot

We are in the midst of conducting research and development into the enabling technology we feel is necessary to support the customer in a demand pricing scenario.

Our current 250 customer and employee pilot is testing a state-of- the art Customer Home Energy Management (HEM) tool.

Our HEM technology includes:

- Cellular gateway that provides 1 minute data off the meter
- A JEA app that will monitor energy usage and provide threshold alerts
- Appliance (HVAC and Water Heater) control
- Fun gamification that encourages education thru entertainment



Become a platform for customer choice: Electrification

What is electrification?

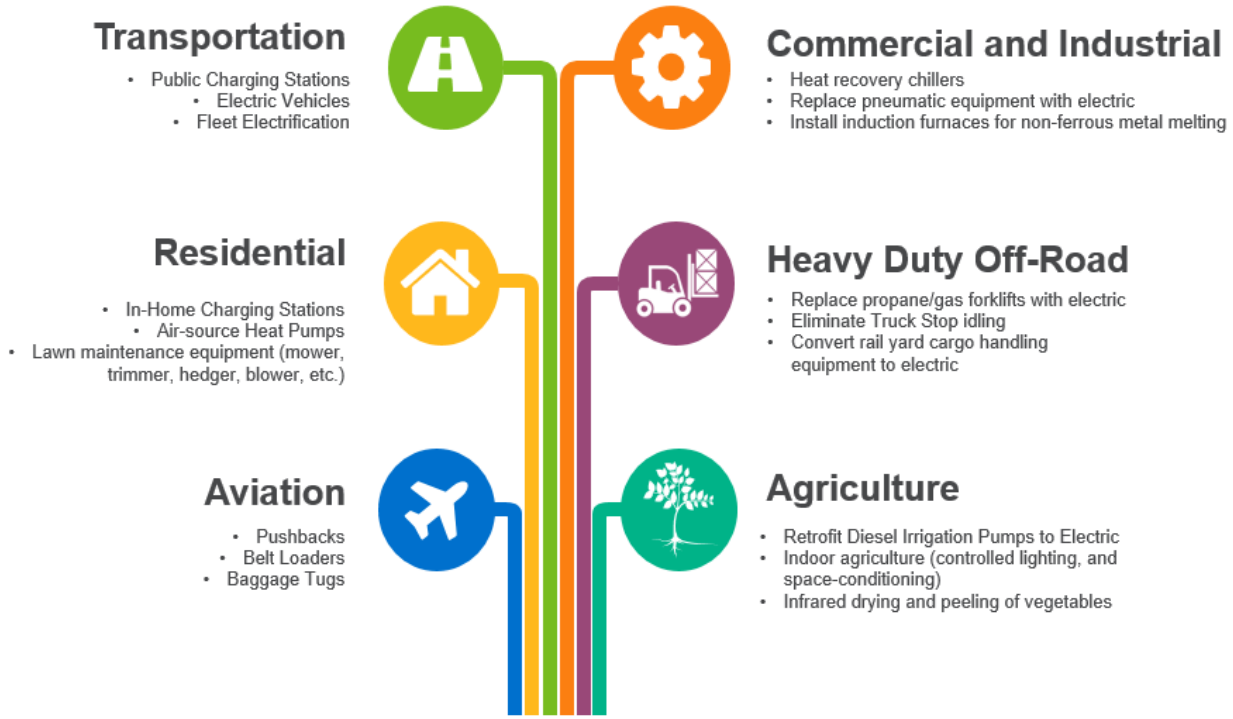
Electrification is the shift from any non-electric source of energy to electricity at the point of final consumption.

- National Renewable Energy Lab

How is it beneficial?

Beneficial Electrification requires that it be cost-effective for JEA, good for all customers (whether they participate in the program or not), and good or neutral for the environment.

-ICF



Electrification Programs

On-Road Program
Incentives on new electric vehicles

Components

- Strategic partnership with Transportation Planning Organization (TPO) and Drive Electric Florida
- EV Educational Forums
- Charging Infrastructures Support
- Trusted Advisor
- Promotional outreach

New Electric Vehicle	JEA Incentive
Battery size less than 15kWh	$500
Battery size of 15kWh or higher	$1,500

Electrification Programs

Non-Road Electro-technology (NRE) Program

Conversion of commercial and industrial diesel/propane equipment to electric

Components

- Direct business to business customer analysis and sales
- Marketing
- Vendor training
- Consultation with JEA customers
- Technical support
- Financial analysis
- QA/QC inspections

Electro-technology	JEA Incentive
Forklifts	$300
Airport Ground Support Equipment	$100-$600
Truck Refrigeration Units	$200
Heavy-Duty Truck Stop	$200
Cranes	$15,000-$75,000
Golf Carts	$50
Welders	$500

JEA's Electrification Future

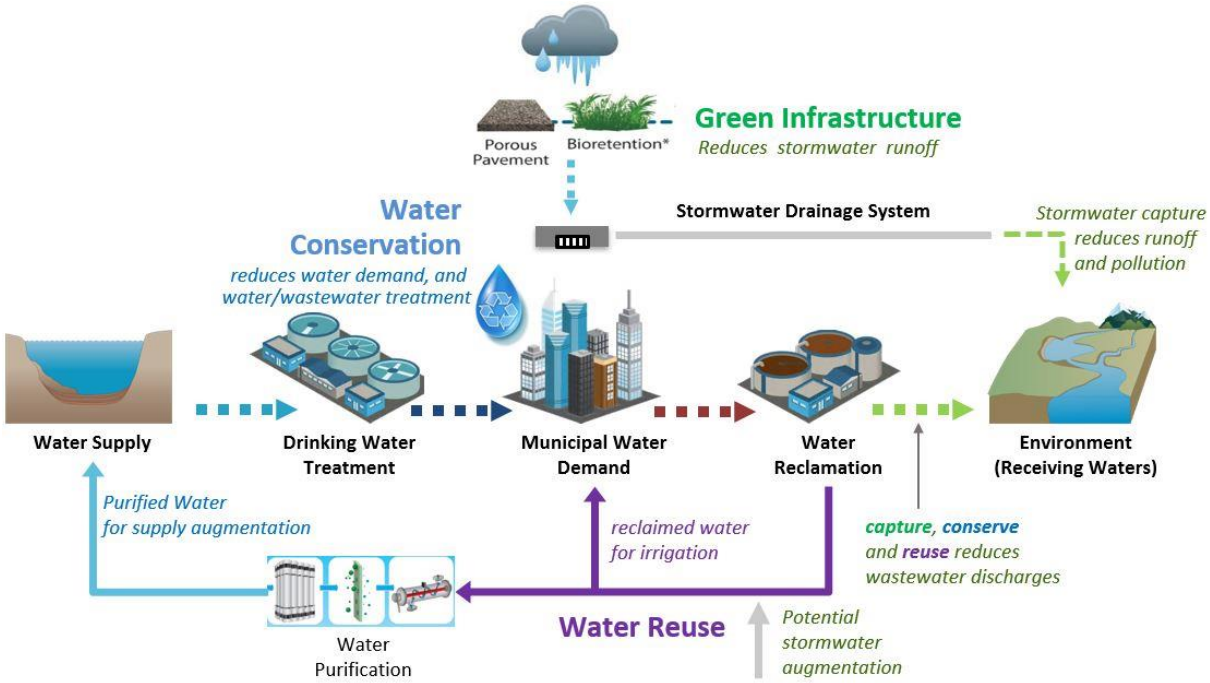
There exists an opportunity to increase the scale and scope of both the on-road and non-road program. By adding additional technologies, program design elements, and budget, JEA may be able to:

- Significantly increase the revenue and values from the programs
- Put downward pressure on rates
- Provide a more flexible and efficient JEA load shape
- Significantly reduce JEA's (and its customers') environmental footprint

JEA is currently conducting a study with ICF to quantify the costs and risks of pursuing this opportunity. The study will be complete in 2019.

Become a platform for customer choice: Integrated Water Resource Plan (IWRP)

- Water Resources
- Water Supply
  - Quality
  - Quantity
- Water Resources Recovery Facilities



Integrated Resources Drive Corporate Values

- Reduce air pollution and GHG emissions
- Reduce energy costs
- Support economic growth
- Improve energy and water efficiency
- Extend life of infrastructure and equipment
- Enhanced protection of public health
- Continue to demonstrate leadership

PUBLIC-PRIVATE PARTNERSHIP FOR ORGANIC RECYLING

Merchant Organics Recycling Facility (MORF) replaces Buckman's pelletizer as the next generation in beneficial use

- Reduces energy demand and landfill waste
- Greater market opportunity due to type of fertilizer produced
- Lower cost to customers and to City of Jacksonville

Renewable Natural Gas

- Biogas Credit Feasibility Study underway
- Upgrade biogas from Buckman WRF to a purified Renewable Natural Gas (RNG)
- Evaluate injecting RNG into commercial natural gas pipeline
- Optimize production of RNG from WRF digestion processes

By capturing waste gas produced by wastewater treatment, JEA reduces greenhouse gas emissions and increases financial value

Water Purification

One Potential Alternative Water Supply Option

PHASE 1 RESEARCH & DEVELOPMENT

- Tested two leading technologies at 2 Water
- Reclamation Facilities Report Completion Feb 2019

PHASE 2 DEMONSTRATION TESTING

- Selected best technology from Phase 1 for optimization
- Immersive public engagement at Demonstration Facility

PHASE 3 COMMERCIAL IMPLEMENTATION

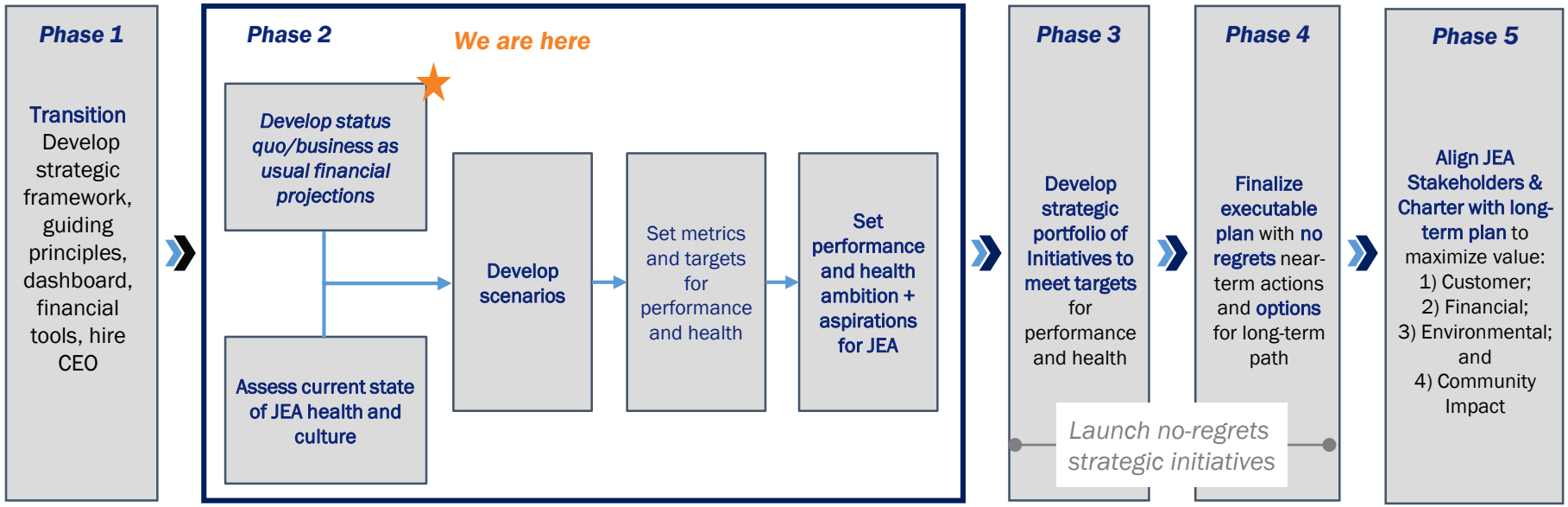
- Dependent upon Integrated Water Resource Plan insights
- Can be expanded as needed to meet demands

Priority Five:

10-year strategic plan.

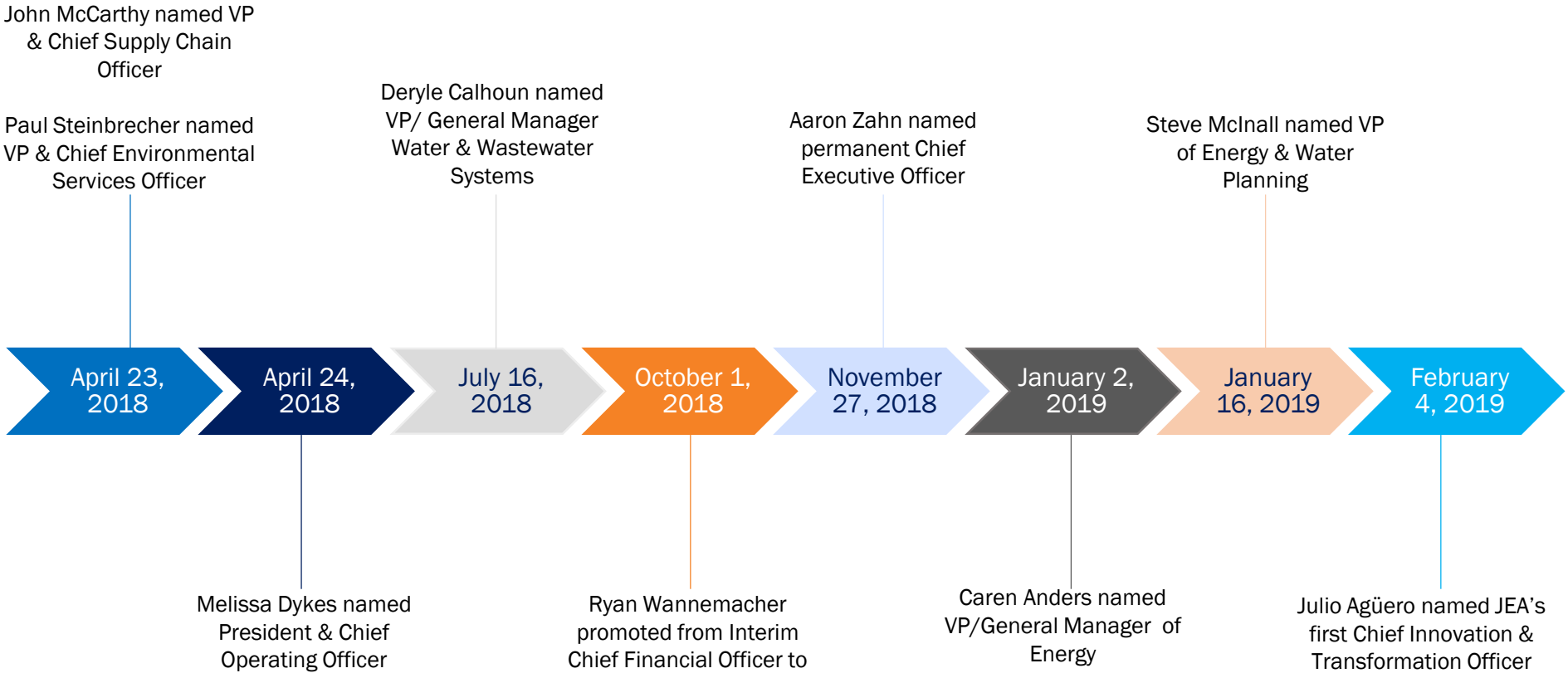
Our Strategy For Success

Internal stakeholder alignment (Board, SLT, appointed employees, Union)



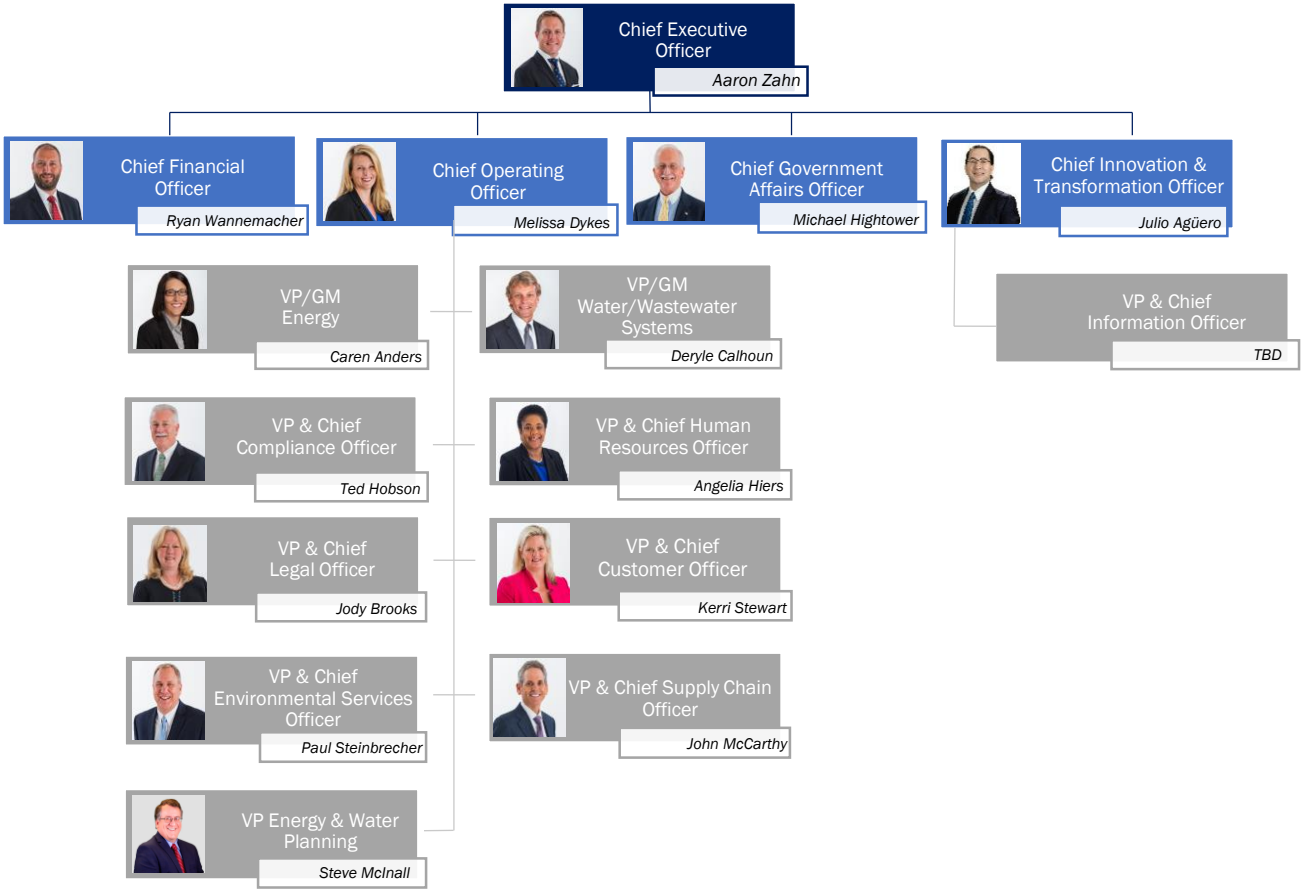
External stakeholder consultation and feedback (e.g. City of Jacksonville)

Step One: SLT Solidified



Meet Our Senior Leadership Team

JEA's Senior Leadership Team is committed to achieving our mission: providing the best service by becoming the center of our customers' energy and water experience.



PART 4

Energy System Overview

Energy System Infrastructure

Power Production Assets

- 5 Plants, 16 Units
- Net Capacity: 2,986 MW (3,319 MW winter)
- Fuel Sources: Oil, Natural Gas, Coal, Petroleum Coke
- Small amount of Landfill Gas

Transmission System

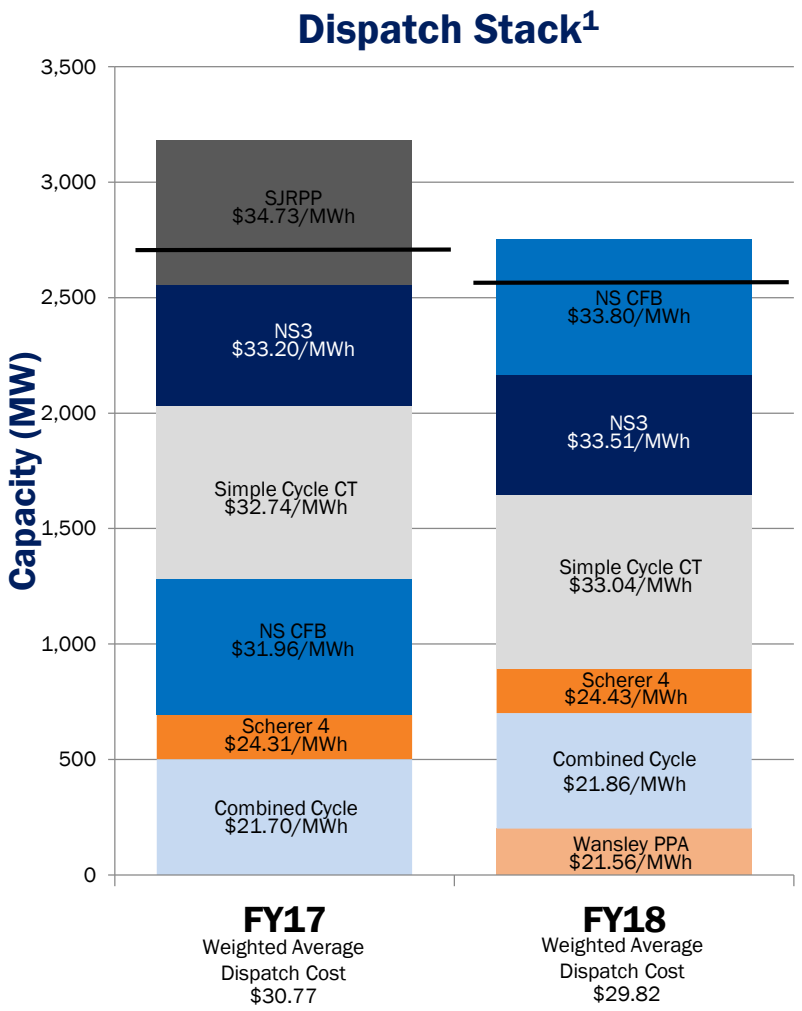
- Voltage Levels (KV): 500, 230, 138 & 69
- 744 Miles of Transmission
- 90 Substations (T&D)

Distribution System

- Voltage Levels (KV): 26.4, 13.2 & 4.16
- 340 feeders (224 – 26.4kV; 82 – 13kV; 34 – 4kV)
- 6,920 circuit miles (44% Overhead, 56% Underground)
- 104,700 transformers, 204,600 poles

Energy System Overview

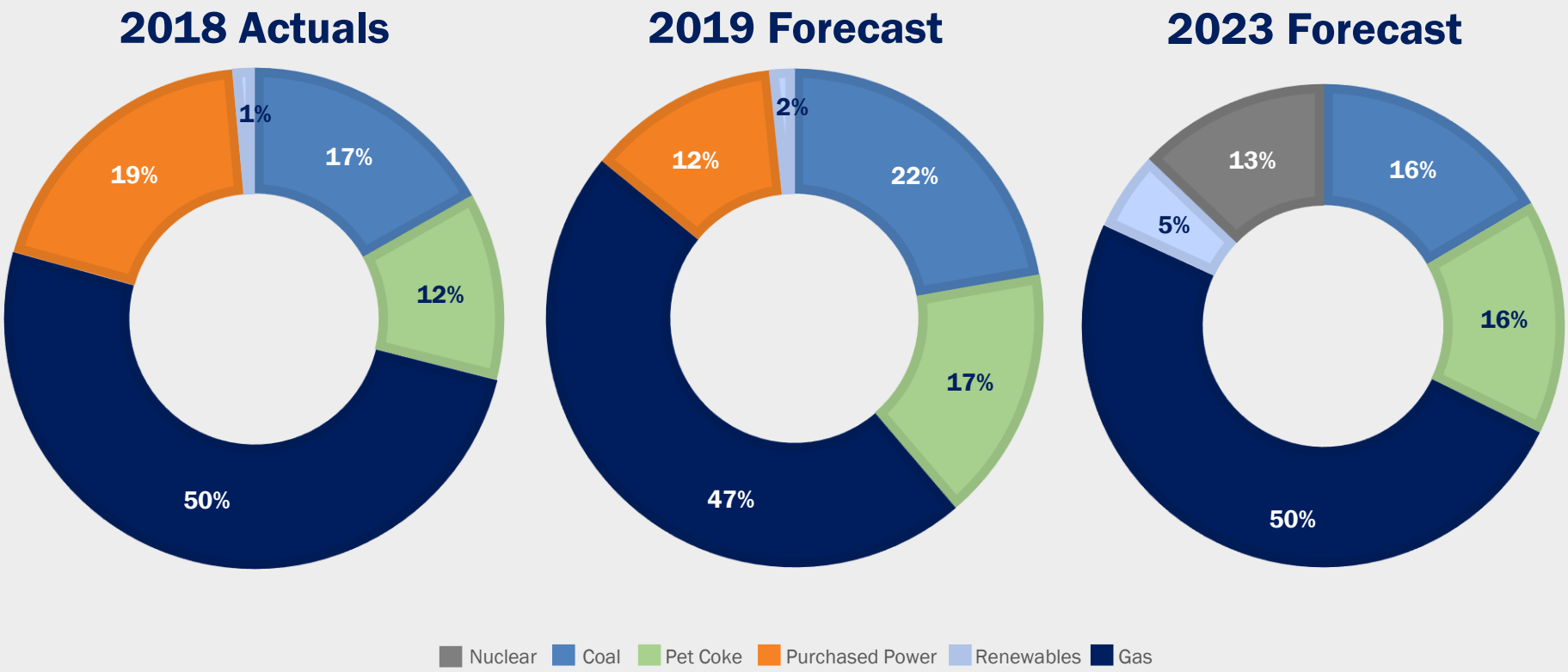
Facility	Primary Fuel Type	Generating Capacity (in MW)	Year in Service
Gas Fuel: 1,990 MW (72%)			
Brandy Branch	Natural Gas	651	2001 – 2005[2]
Northside Gen Unit 3	Natural Gas/Oil	524	1977
Kennedy	Natural Gas	300	2000 – 2009[2]
Greenland Energy Center	Natural Gas	300	2011
Landfill Energy Systems	Landfill Gas	15	1997 – 2015[2]
Southern Power	Natural Gas	200	2018 – 2019
Solid Fuel: 784 MW (28%)			
Northside Gen Units 1 & 2	Pet Coke	586	2003
Scherer 4	Coal	198	1989
Total: 2,770 MW			
Peaking Reserve: 212 MW			
Northside CTs	Diesel Fuel Oil	212	1975
Grand Total: 2,986 MW[3]			



[1] The average dispatch prices at maximum load for each unit from 10/1/2017 through 9/30/2018
Peaking reserve is not being included in dispatch stack
[2] Multiple units, multiple in service dates
[3] Based on summer net ratings and entitled capacity. Winter net ratings and entitled capacity is 3,309 MW as of 1/1/2019

Actual Peak

Energy Fuel Mix



Energy Performance Monitoring: T&D

Electric Service Reliability

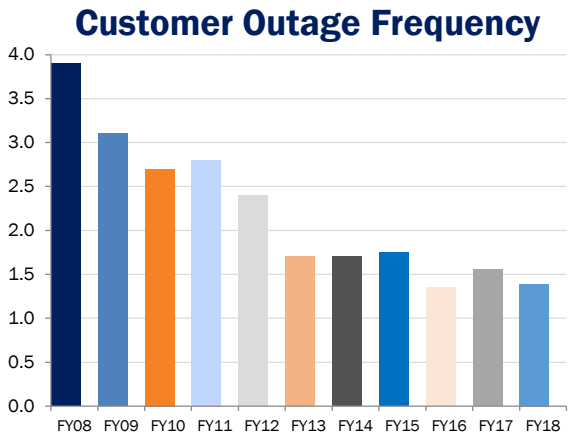
- Outage frequency and duration have been reduced significantly over the last 9 years; running flat this year and below the FY2018 targets
- The typical JEA customer sees 1.39 outages per year and a total outage duration of about 66.9 minutes
- Improvement trend over past four years for CEMI5 1,949 (0.4%) of our customers have experienced more than 5 outages in the past 12 months

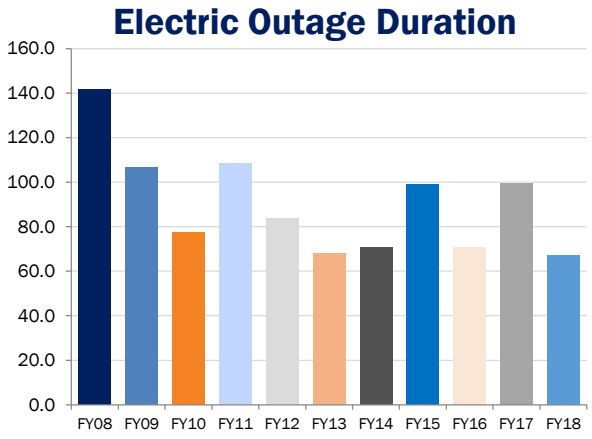
Transmission Line Reliability

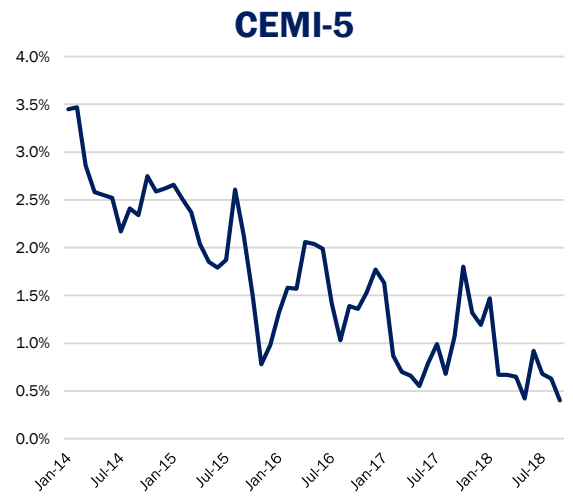
- Overall downward trend over the last nine years
- FY2018 (2.2) slightly over target

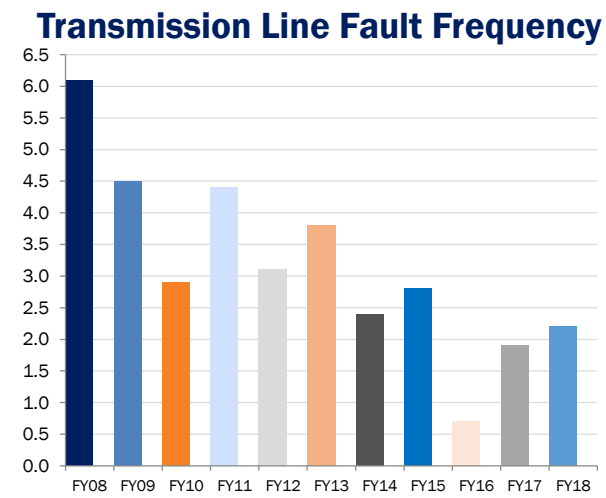
Other Operational Metrics

- Continue showing favorable trends over time



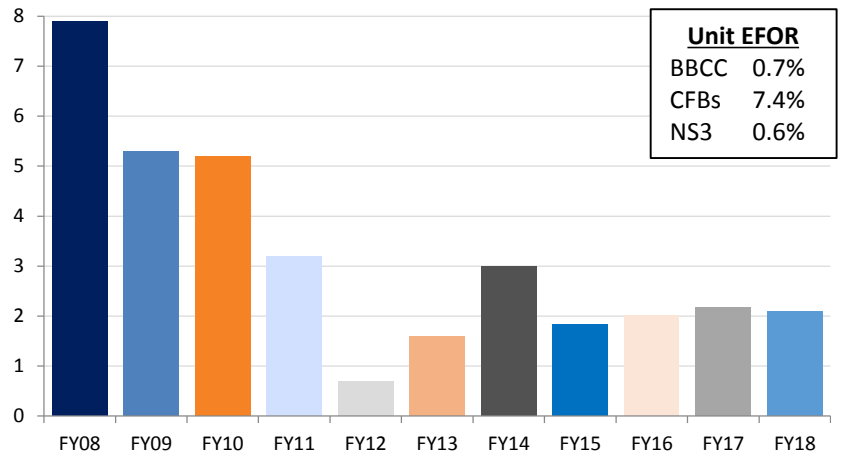




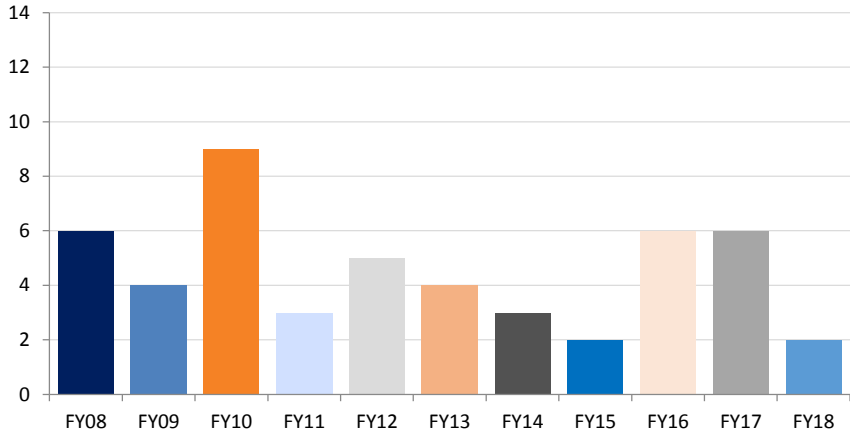


T&D Grid Performance	Metric	FY2018	FY2017	FY2016
Customer Outage Frequency	# of Outages per Year	1.39	1.55	1.4
Electric Outage Duration	# of Minutes out per Year	66.9	99.5	71
Transmission Line Faults	# of Faults per 100 miles	2.2	1.9	0.7
$CEMI_5$	% Customers > 5 outages per yr	0.4	1.07	1.4

Forced Outage Rate



Reportable Events



Generating Plant Performance	Metric	FY2018	FY2017	FY2016
Generation Fleet Reliability	Forced Outages Rate	2.10	2.17	2.0
Environmental Compliance	Reportable Events	2	6	6

Energy Performance Monitoring: Generation

Generating Fleet Reliability

- The JEA fleet Forced Outage Rate is in line with prior 7-year performance though ended slightly above the FY2018 target
- Successful outages completed this FY on steam units at Northside along with the Combined Cycle Unit at Brandy Branch
- High unit reliability contributes to lower fuel and non-fuel expenses

Environmental Compliance

- Excellent environmental performance in prior years. No air permit exceedances occurred in last three FYs.
- We experienced 2 reportable events at Northside during FY2018
- JEA remains actively engaged in and preparing for all new and emerging environmental regulations

Energy System Capital Needs and Funding Source

JEA has streamlined its capital plan, maintaining a healthy utility system in a low-growth environment

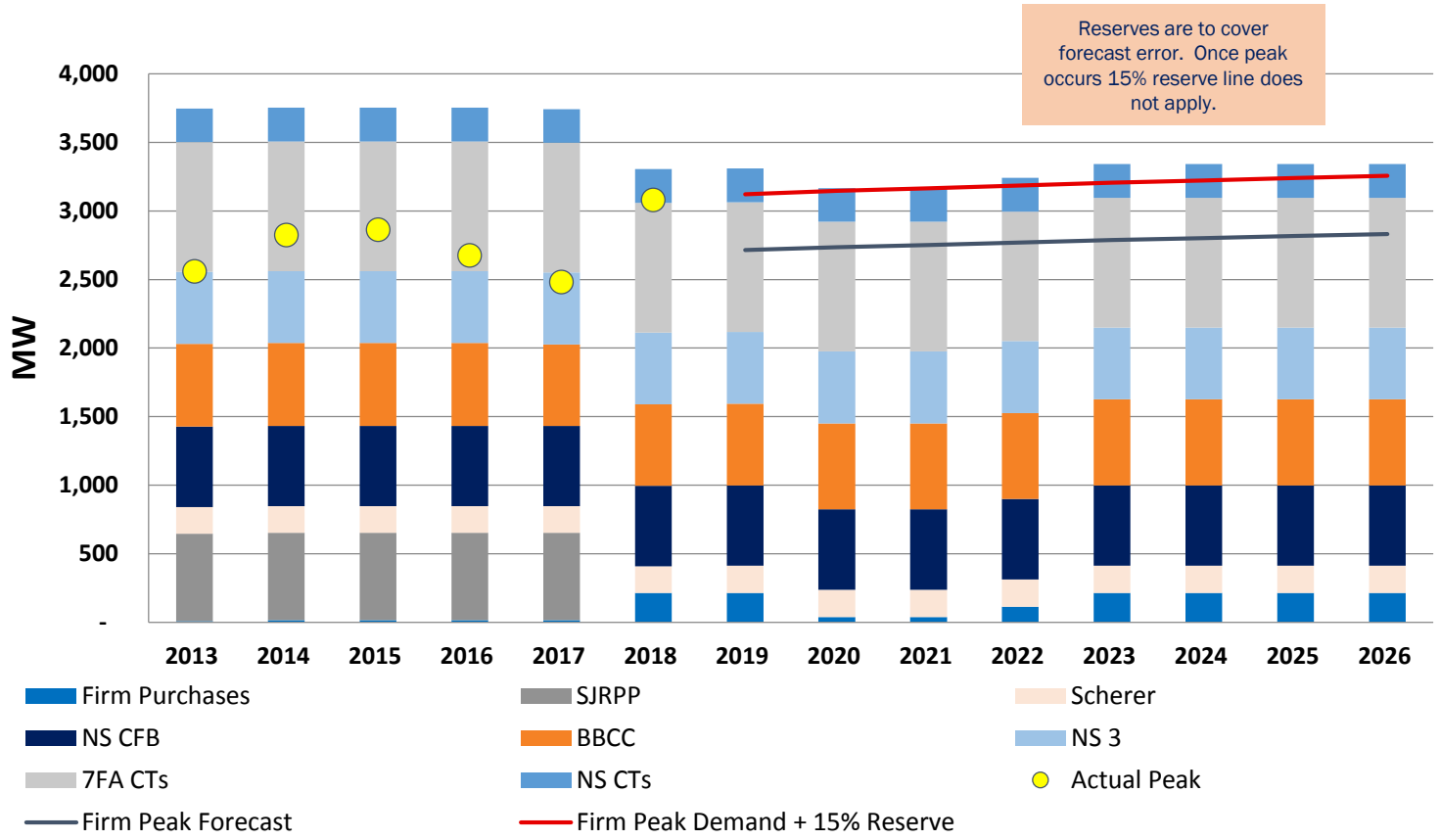
Electric System ($000s)	Actual 2018	2019	2020	2021	2022	2023	2019-2023 Average
Internally Generated Funds Available for Capital[1]	$162,873	$136,597	$226,871	$151,771	$129,041	$131,098	
Capital Fund Balance Withdrawals (Deposits)	0	$138,403	(7,397)	(29,957)	(39,230)	(41,682)	
Debt Financing	0	0	0	0	0	0	
Capital Plan Spend	**$174,319**	**$275,000**	**$236,000**	**$146,000**	**$118,000**	**$122,000**	**$179,400**
Capital Fund Balance[2]	$189,922	$51,519	$58,917	$88,873	$128,103	$169,785	

Scherer ($000s)	Actual 2018	2019	2020	2021	2022	2023	2019-2023 Average
Internally Generated Funds Available for Capital	$22,764	$10,058	$10,409	$4,527	$9,424	$4,810	
Capital Fund Balance Withdrawals (Deposits)	0	0	0	0	0	0	
Debt Financing	0	0	0	0	0	0	
Capital Plan Spend	**$22,764**	**$10,058**	**$10,409**	**$4,527**	**$9,424**	**$4,810**	**$7,846**

[1] Net of amounts used for planned accelerated debt repayments
[2] Excludes FEMA reimbursement

Fleet Optimization And Asset Utilization

Generation fleet provides sufficient capacity to meet current and future demand



St. Johns River Power Park

- After nearly 30 years in service, the St. Johns River Power Park closed on January 5, 2018
- JEA and FPL agreed to terminate the Joint Ownership Agreement and shut down the plant approximately 4 years prior to the JOA termination date
- SJRPP decommissioning is projected to continue until April 2020
- Decommissioning and fuel expenses are billed back to JEA and FPL in accordance to their JOA agreement
  - Currently there are fuel expenses related to railcar repairs, storage and leasing. These costs are expected to end in June 2019, when railcars are returned to lessor.
- The investment recovery team is working on selling most of SJRPP M&S Inventory. Currently M&S inventory is reserved at 97%

The total transaction NPV benefit to JEA is approximately $460 million

SJRPP Decommissioning Benefits of Transaction

This underscores JEA's commitment to operation excellence

Provides Rate Stability for Customers

- Transaction provides significant annual cost savings beginning in 2020
- Allows JEA to maintain stable rates and continue early debt retirement

Appropriately Sizes the Generation Fleet

- Increases asset utilization
- Maintains cost effective system resource mix

Reduces JEA's Impact on the Environment

- Reduces JEA's CO_2 output by 30% by 2030
- Decreases nitrogen to the St. Johns River
- Avoids future expense for compliance with environmental rules

Stimulates Economic Development

- Expands economic opportunities for industrial and manufacturing growth on 1,000 acres of property in and around the Port of Jacksonville

Proactively Addresses the Future of SJRPP

- Transaction provided a clear path for the termination of the SJRPP Joint Ownership Agreement and the retirement of the facility

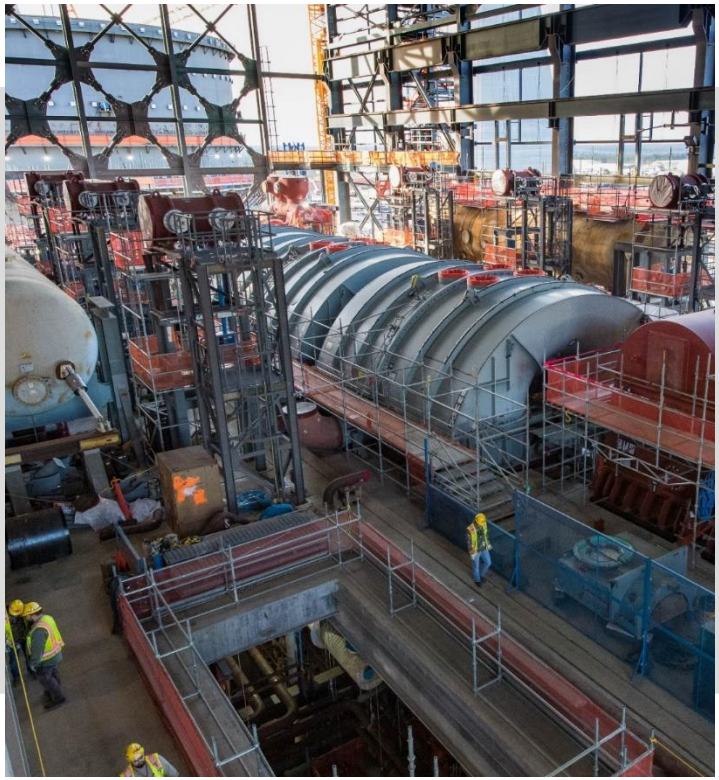
Energy System Summary Page

- ✓ Top quartile operational performance
- ✓ Capital plan funded without debt
- ✓ Rates stable for the five year planning horizon

PART 5

Plant Vogtle Update

Vogtle 3 & 4 Overview



- No changes to in-service dates
- Co-owner agreement to continue construction
- Sustained improvement on Cost Performance Index
- 3 of 4 Chinese AP1000 units (Sanmen 1 and 2 and Haiyang 1) completed and connected to grid

Expected completion: November 2021 (Unit 3) and November 2022 (Unit 4)

Vogtle 3 & 4 Milestones
Completed In 2018

Q1
- ✓ Set Unit 4 Reactor Vessel Inside Containment
- ✓ Achieve 90 percent pass rate on the 3rd NRC Initial License exam
- ✓ Integrated System Validation retest completed on Main Control Room Simulator

Q2
- ✓ INPO renewed the accreditation of Operations training program
- ✓ Unit 3 Shield Building reinforced concrete completed to allow set of full panel-rings

Q3
- ✓ Set Unit 4 Steam Generator B inside Containment
- ✓ Delivery of Unit 3 Cyber Security Monitoring System hardware and software
- ✓ Established Southern-controlled IT technology platform for site

Q4
- ✓ Design completed for site-specific engineering and nuclear island electrical raceway design optimization
- ✓ Set Unit 4 Generator Stator for Turbine Assembly
- ✓ 34 ITAAC Closure Notifications (ICNs) and 154 uncompleted ITAAC Notifications (UINs) submitted to NRC for review

Source: Southern Company 4th Quarter 2018 Earnings Presentation

PART 6

Water & Wastewater System Overview

Water & Wastewater System Infrastructure

Water System

- 20 major and 18 small water treatment plants and two re-pump facilities
- 136 active water supply wells, 4,755 miles of water distribution mains and total finished water storage capacity of over 81 million gallons
- Two major and four small distribution grids

Wastewater System

- Approximately 4,027 miles of gravity sewers and force mains
- 1,422 pumping stations, 697 low pressure sewer units, and 11 treatment plants currently ranging in rated average daily treatment capacity from approximately 0.2 to 52.5 MGD

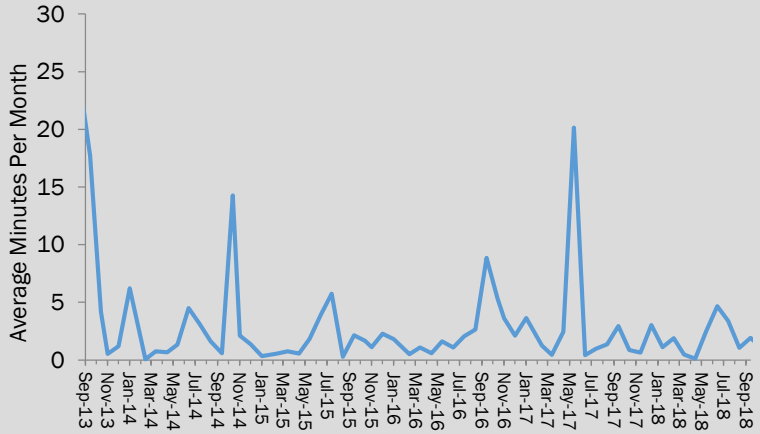
Water & Wastewater System Performance Monitoring

Water Pressure (minutes per month < 30 psi)
Measured by 132 pressure monitoring stations in the distribution system. Pressure must be greater than 20 psi, and is expected to be greater than 50 psi

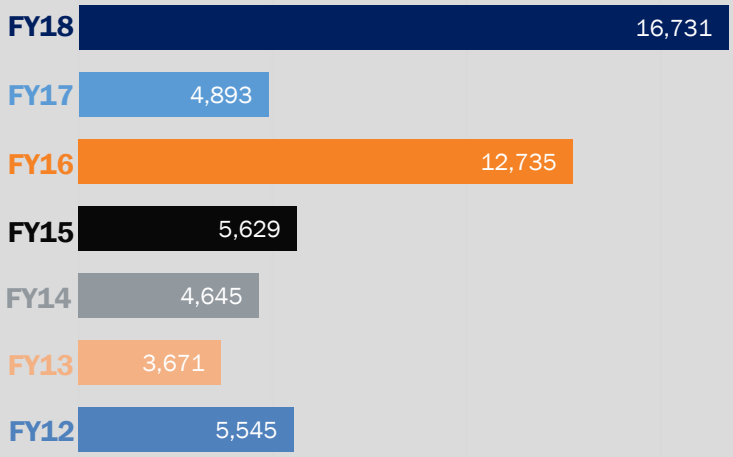
Unplanned Water Outages
Less than 2% of customer base experience an unplanned outage annually

Consumptive Use Permit (CUP)
Condition 12: Annual average daily flow has a range between 5% to 20% below the annual limit

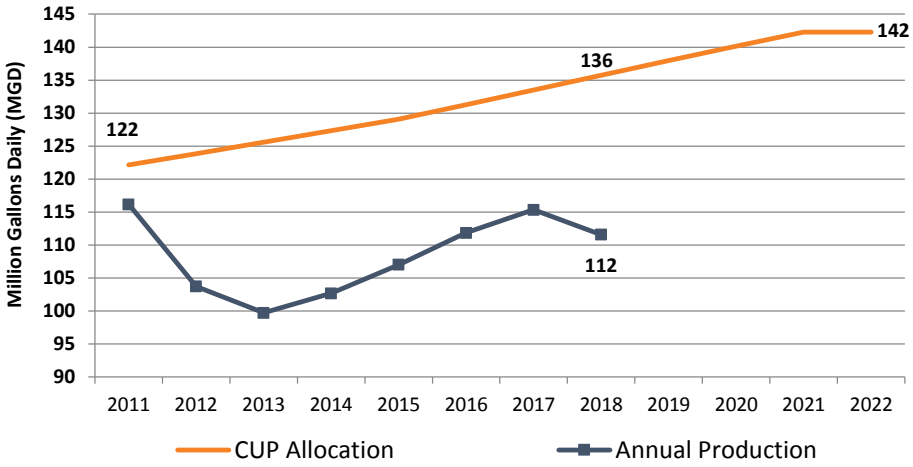
Average Minutes Water Pressure Less Than 30 PSI



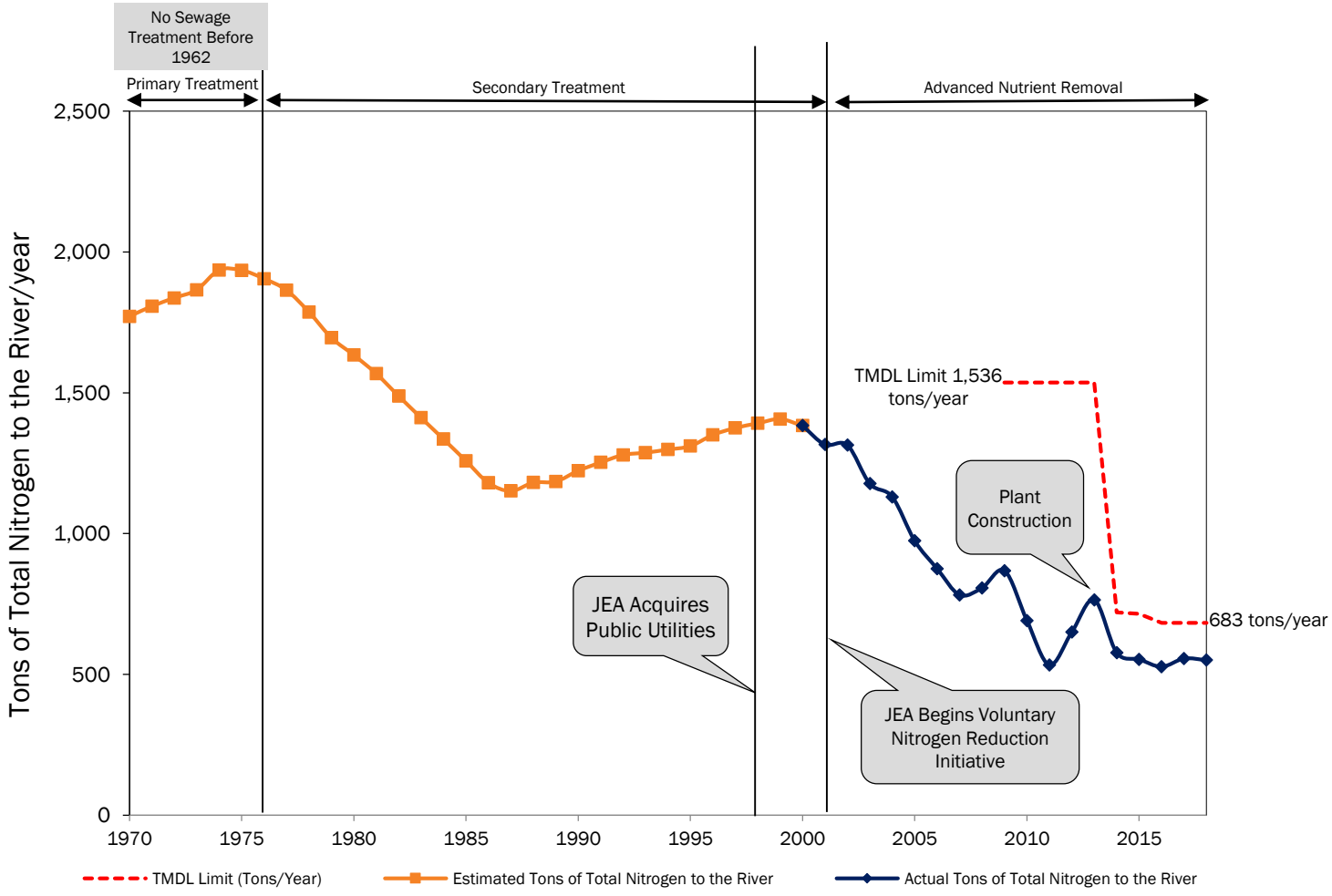
Of Customers Affected By Unplanned Water Main Outages



Consumptive Use Permit (CUP)



Health of the St Johns River:
Nitrogen Reduction Goals



Water & Wastewater System
Capital Needs and Funding Source

The Water and Sewer capital plan increases are driven by: growth in both systems, projects necessary for regulatory compliance, and programs to rehabilitate and harden infrastructure critical to system operation and reliability

- Current rates (1.5% customer growth) are adequate to fund recurring and reinvestment type projects over planning horizon
- Over 1/3rd of projected capital spend is directly growth – capacity expansion related
- Entire projected capital plan of $1B over 5 years continues to be funded without the need for issuance of new debt
- Accelerated debt repayment in 2019 allows for additional internally generated funds to be available for capital over the next 5 years

Funding with NO NEW DEBT!

Water and Sewer System ($000s)	Actual 2018	2019	2020	2021	2022	2023	2019-2023 Average
Internally Generated Funds Available for Capital[1]	$181,406	$85,271	$223,234	$224,710	$215,853	$203,411	
Capital Fund Balance Withdrawals (Deposits)	$8,904	$114,729[2]	($13,234)	($14,710)	($5,853)	$6,589	
Debt Financing	0	0	0	0	0	0	
Capital Plan Spend	**$199,314**	**$200,000**	**$210,000**	**$210,000**	**$210,000**	**$210,000**	**$208,000**
Capital Fund Balance	**$141,415**	**$26,686**	**$39,920**	**$54,630**	**$60,483**	**$53,894**	

[1] Internally generated funds available for capital are sourced from R&R and operating capital outlay along with surplus funds from prior budget appropriation restrictions
[2] Net of amounts taken from capital fund balance for accelerated debt repayments

CUP: Water Supply Sustainability Plan

iWater
JEA Water Supply Testing and Rehabilitation Program

FY15 to FY20

IWRP Study
Integrated Water Resource Plan

FY19 to FY21

Implementation Plan
JEA Water Supply and Demand Program

FY20 …

Production & Transmission
- Well rehab and performance for 84 of JEA's 137 raw water wells
- Hydraulic and water quality modeling
- Identify transmission piping projects

Supply & Transmission
- Maximize reclaimed water
- TWMP* (FY 2000 to Present)
- Water purification demonstration plant
- 3rd river crossing evaluation
- Aquifer storage and recovery

* JEA's Total Water Management Plan (TWMP)

IWRP Implementation
- Alternative water supplies
- Conservation messaging
- Demand-side management program
- Comprehensive communication plan

- JEA obtained a 20-year consolidated Consumptive Use Permit (CUP) in May 2011
- JEA continues to implement the wellfield rehabilitation and Reclaimed System expansion program
- Sustainable water supply will integrate outcomes of the IWRP

Framework to Resiliency

In response to the challenges JEA experienced during Hurricanes Matthew and Irma, the resiliency program was developed to better understand system vulnerabilities and proactively improve system reliability and operational continuity of JEA's Water, Wastewater, Reclaimed Water, and Chilled Water Systems.

- Signed a contract with CH2M/Jacobs on May 7, 2018 to provide Resiliency Assessment, Program Management and Engineering Services. A large portion of this contract will look to identify system vulnerabilities and provide recommendations to address these issues. New Standards will be developed based on the findings from these assessments as well as projected future climate conditions.

- Collaborating with JEA's Electric System Analysis Group to proactively evaluate the power quality of the electric circuit that is serving some of JEA's critical Class III and IV pump stations. The end in mind is to identify dual electric feed opportunities at specific pump stations and thus enhancing its reliability.

- Initiated system hardening projects like converting the primary and secondary electric lines serving critical pump stations from overhead to underground. At the end of FY18, 26 secondary electric lines and 19 primary electric lines were converted from overhead to underground.

- Having backup generation is essential to maintaining operational continuity especially during extreme weather conditions. JEA has purchased multiple types of assets for backup generation. JEA has also entered into a lease agreement to rent backup generation during the Storm Season. At the end of FY18 JEA had procured the following assets under the Resiliency Program:

[1] JEA signed a lease agreement with Sunbelt to lease 100 portable generators and 50 portable pumps during Storm Season (June 1st thru November 30th)

Fixed Generators	Fixed Pumps	Portable Pumps	Rental Generators[1]	Rental Pumps[1]
103	33	12	100	50

Water & Wastewater System Summary Page

- ✓ Top quartile operational performance
- ✓ Capital plan funded without debt
- ✓ Rates stable for the five year planning horizon

PART 7

Conclusion

JEA's financials, operations, governance, strategic planning, and overall business remain sound.

Energy

JEA merits a AA credit rating

- ✓ Maintained excellent financial and operation metrics
- ✓ Repaid $426 million in debt for a total of $2.1 billion since 2009 with continued commitment to actively and aggressively deleverage and de-risk the business
- ✓ Continued to strategically plan to absorb the cost of Plant Vogtle
- ✓ Capital program will continue to be funded with no new debt & no planned base rate increases
- ✓ Strengthened our fuel diversity and purchased power agreements
- ✓ Re-evaluated our risks and continued actively seeking ways to mitigate them

Water & Wastewater

JEA merits a AAA credit rating

- ✓ Superior operational and financial metrics
- ✓ Robust growth in sales and customers
- ✓ Ability to fund capital program funded with no new debt & no rate increases
- ✓ Repaid $263 million in debt for a total of $676 million since 2011
- ✓ Continued commitment to investing in infrastructure to ensure reliability in operations now and into the future
- ✓ Initiated system hardening projects
- ✓ Researched and developed potential alternative water supply options

PART 8

Supplemental Information

G. Alan Howard

G. Alan Howard is a native of St. Simons Island, Georgia. Mr. Howard received his law degree and undergraduate degree, with high honors, from the University of Georgia.

Mr. Howard is a transactional attorney whose practice focuses on mergers, acquisitions, project finance, corporate finance and securities matters. His clients span a range of industry sectors, including energy, technology, insurance and financial services. He regularly advises clients on corporate governance issues. Mr. Howard represents buyers and sellers of small to mid-market companies in mergers, stock purchase and asset purchase transactions. He is experienced in the structuring, negotiation and documentation of a broad spectrum of syndicated and non-syndicated credit transactions involving both domestic and foreign companies in a wide variety of industries. These transactions include public and private bond financing, secured and unsecured loan facilities, senior, subordinated and mezzanine credit facilities, asset based loan facilities, and construction loan facilities. Mr. Howard also represents individual, family office and institutional investors in selected investment transactions. Mr. Howard represents startup to early market companies in exempt limited offerings. Mr. Howard also represents both lenders and sponsors in project finance transactions involving the acquisition, construction and financing of electric power generation and landfill gas conversion facilities.

Reverend Frederick Newbill

Jacksonville native, Frederick Douglas Newbill has been pastor of First Timothy Baptist Church since May 1987. Under his leadership, the congregation has grown from 150 to more than 1000 members. Early in his pastorate, First Timothy physically moved from a small building at Hart and Barnett to its present location on Biscayne Blvd. in north Jacksonville. He is an innovative and energetic practitioner of his faith. Pastor Newbill is a Spirit-filled, gifted pastor and teacher who is totally committed to his calling and ministries. As a result, many hearts have been blessed and many souls have been saved throughout his 29 year tenure at First Timothy. He believes in striving for the advancement of God's Church and promoting its prosperity and spirituality.

Pastor Newbill has served as former president of the Baptist Ministers Conference of Duval and Adjacent Counties, former president of Union Saint James Association Congress of Christian Education, former chairperson for the Congress of National Black Churches and former secretary of the Local One Church/One Child National Organization. Through this program a number of children have been adopted locally and nationwide. He has also served as first Vice Moderator of Union Saint James Association and was a sponsor of a church start Providence Christian Fellowship, on the West Side of Jacksonville.

Kelly Flanagan

A Jacksonville native, Kelly Flanagan was named the Jacksonville Jaguars' senior vice president and Chief Financial Officer in August 2014, after joining the organization in 2012 and being promoted to vice president in 2013. She is responsible for developing and leading the team and related entities' financial strategy, including planning and business analytics, corporate accounting and financial reporting and analysis.

Flanagan has extensive experience in sports business. Prior to joining the Jaguars, along with now Jaguars President Mark Lamping, she was a member of the executive team at the New Meadowlands Stadium, later MetLife Stadium, home to the New York Giants and New York Jets. Flanagan served in the finance department during the construction and commissioning of the new stadium, ultimately being named controller and lead stadium finance representative to the venue's primary tenants and owners, the Giants and Jets.

Prior to serving at MetLife Stadium, Flanagan was a member of the Entertainment & Media practice of PricewaterhouseCoopers in New York City, where she consulted for both public and private sports and entertainment clients and obtained her C.P.A. license. She has been named a "Game Changer" by SportsBusiness Journal.

A graduate of Episcopal School of Jacksonville where she currently serves as a member of its Board of Trustees, Flanagan holds a M.S. in Sports Management degree from Columbia University in New York City and a bachelor's degree in Accounting as well as an M.B.A. from the Ervin K. Haub School of Business at Saint Joseph's University in Philadelphia. She was appointed by the Mayor and confirmed by the City Council to serve as a member of the Board of Directors of the Jacksonville Electric Authority.

John J. Campion

John J. Campion is the co-founder and chairman of APR Energy, a global company specializing in the rapid deployment of cost-efficient reliable electricity satisfying temporary and longer-term power needs. Campion is active in his philanthropic endeavors, international business expertise and rare rally car collection.

A native of Cork, Ireland, Campion immigrated to the United States in 1984 with $26 in his pocket and a job working as a member of the lighting crew for a rock 'n' roll band. Campion spent more than two decades in the entertainment industry working with international musical artists such as Michael Jackson, U2, David Bowie and others, as well as for the Olympic Games in Atlanta and Sydney.

Passionate about the rock 'n' roll industry and determined to leave his mark, Campion co-founded his first company Showpower, Inc., which was originally funded by Michael Jackson. This new endeavor provided portable power generators to the entertainment industry, a need Campion recognized through his years on the road. Showpower was later acquired by General Electric (GE) Energy Rentals. Campion joined GE as its executive vice president of sales and marketing. Following his time with GE, Campion served as president of Alstom Power Rentals, a subsidiary of Paris-based Alstom Power, Inc. In 2004, Campion acquired Alstom and created what is today known as APR Energy.

A true entrepreneur with an innovative spirit, Campion holds various patents, including two for a scalable portable modular power plant, and has received numerous awards and recognitions. Recently, Campion earned the 2016 Ellis Island Medal of Honor award and the Jacksonville Business Journal's Ultimate CEO Award. He has also been a featured commentator on national media outlets such as Bloomberg TV, CNBC, Fox News, Forbes and other national publications.

In 2014, Campion and his wife, Suzanne, founded the John and Suzanne Campion Foundation, a charitable giving organization focused on health, education and nutrition for the less privileged. Through their Foundation, the Campion's sponsored 100 children for Christmas 2016 at the Sulzbacher Center, an organization devoted to empowering homeless and at-risk women, children and men through health, housing and income services thereby restoring hope and self-sufficiency. John and Suzanne also support the Julia's Butterfly Foundation, a charitable organization dedicated to improving the lives of terminally and chronically ill children and their families. Eva's Village is another non-profit they support, helping to provide shelter, food, and education for homeless and needy adults and their children.

Campion was integral in the launch of Team Ireland, an international program designed to support young drivers in the sports of rallying, racing and carting. He also provides ongoing financial assistance and mentorship to the University of North Florida's Osprey SAE Student Race Team. Campion is a partner in Just a Bunch of Roadies (JABOR), a global humanitarian group that provides resources and relief to areas following a disaster and serves on the Advisory Board of the Tim and Steph Busch School of Business for The Catholic University of America, where Campion helps students develop both personally and academically. In 2017, John received an Honorary Degree from the University of North Florida College of Computing, Engineering and Construction.

Camille J. Lee-Johnson

Camille J. Lee-Johnson is Chief Operating Officer for Lee Wesley & Associates, a 2nd generation family-business. Since joining the Company in 2007 Camille has been committed to delivering top-notch results for the organization. Lee Wesley owns and operates several Burger King and Panda Express' in Orlando, Jacksonville, and Norfolk, Virginia. In addition, Lee Wesley also has two (2) joint venture partnerships with HMS Host in the Orlando and Jacksonville Airport and is the Operating Partner with Levy Restaurants in the Camping World Stadium and Amway Center in Orlando, FL (home of the Orlando Magic).

"Lead by example" is Mrs. Lee-Johnson's motto. Her down-to-earth approach to leadership is how she has created an employee-centric organization. Currently, she spends most of her time within the Operations of the business and planning for Company growth.

As part of her background, Camille graduated from Wake Forest University with a Bachelor of Arts in Communications and International Studies. During that time, she played Division I golf for the Wake Forest Women's Golf Team. As the first black female golfer, Camille helped lead the team to a runner up finish in the 2002 NCAA ACC Championship. She gained international work experience in London as part of a business development program with Boston University. She also earned her Masters in Business and Entrepreneurship from the Entrepreneurship Masters program at the University of Florida as well as a business certification from Harvard University.

Her past work experience includes holding positions as a Strategic Consultant and Marketing Account Executive for Zenith Media and Wasserman Media Group. Camille managed the multi-million dollar title sponsorship and lead the strategic development and execution of the inaugural St. Paul Travelers' Championship – a PGA TOUR event.

In 2017, Camille was elected by Governor Rick Scott to serve on the Board of Directors for CareerSource Florida. She is also currently deeply rooted within Burger King holding several positions including Board Member for the National Franchise, Vice President of the Minority Franchise Association and Inclusion Council Association.

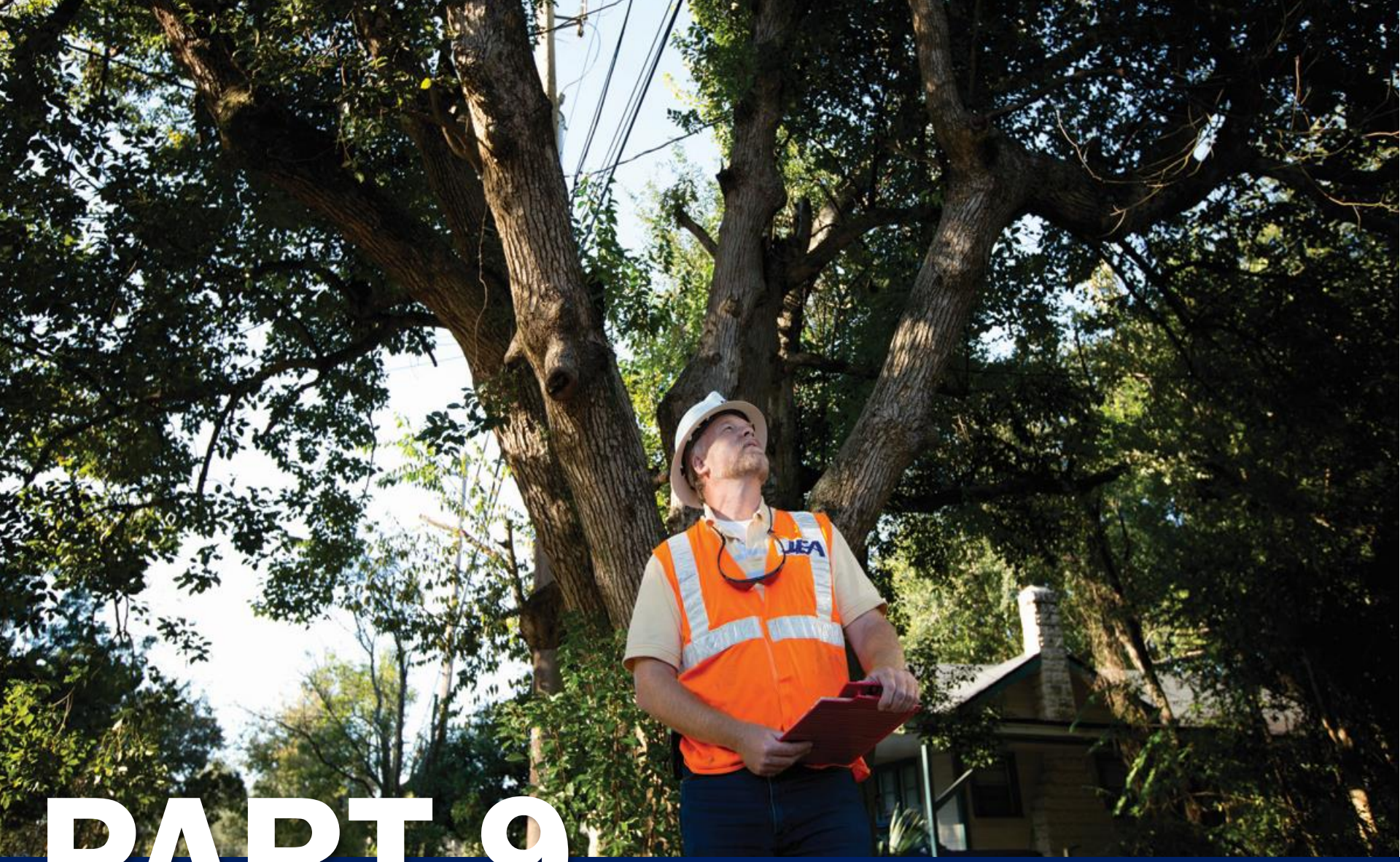
She is a member of the Young Presidents Organization (YPO) and also a member of Leadership Jacksonville, Class of 2014. Camille and her husband of six years, Lorenzo, currently reside in Atlantic Beach, FL.

April Green

April Green currently serves as chief operating officer for Baxter Technology, in addition to being the CFO/COO for Bethel Baptist Institutional Church in Jacksonville. She previously served as corporate tourism director for the Jacksonville Convention & Visitors Bureau and senior vice president secondary marketing for Bank of America.

An Air Force Veteran who served in Desert Storm, Mrs. Green brings to the table copious experience in business and marketing, along with a deep-seated connection with the community through religious faith and philanthropy.

Mrs. Green's community involvement activities include: serving as a board member with the Jacksonville Chamber of Commerce, Hands On Jacksonville, and B.E.S.T Academy. She is also a member of the 2015 Leadership Florida class.



PART 9

Supplemental Financial Information

Electric System: IRP Sales Assumption

DEBT SERVICE COVERAGE PROJECTIONS	Actual	Projection	Projection	Projection	Projection	Projection
OPERATING REVENUES:	*Fiscal Year 2018*	*Fiscal Year 2019*	*Fiscal Year 2020*	*Fiscal Year 2021*	*Fiscal Year 2022*	*Fiscal Year 2023*
Base Rate System Revenues	771,955,029	761,887,030	770,648,088	774,978,004	778,998,267	783,602,338
Fuel Rate System Revenues	398,297,723	391,543,750	396,051,607	398,279,493	400,348,053	402,717,001
Off System Sales Revenues	1,109,990	4,447,582	2,944,000	1,944,000	1,876,000	2,608,000
Uncollectibles	(1,288,188)	(1,895,811)	(1,927,010)	(1,928,583)	(1,929,245)	(1,930,947)
Franchise and Gross Receipts Taxes	59,551,139	58,492,162	59,165,048	59,497,604	59,806,377	60,159,989
Other Revenues	35,815,718	34,610,544	32,770,427	34,437,733	35,237,087	33,864,666
Net Amt (Paid Into)/Rec'd From Rate Stabilization Fund	(33,825,277)	44,810,885	16,679,781	29,371,669	(4,971,894)	(4,999,787)
Net Amt (Paid Into) Rec'd From Fuel Reserve	57,339,075	26,614,336	(12,459,758)	(13,587,032)	(5,592,621)	(10,679,694)
Total Operating Revenues	$ 1,288,955,209	$ 1,320,510,478	$ 1,263,872,184	$ 1,282,992,888	$ 1,263,772,026	$ 1,265,341,567
OPERATING EXPENSES:						
O&M incl PSC Fee	204,981,910	220,001,635	212,289,053	217,805,264	228,082,619	232,737,628
Fuel and Purchased Energy	328,159,602	301,331,196	277,271,427	281,447,841	299,209,090	296,613,474
Non-Fuel Purchased Power	244,477,875	205,362,982	202,872,839	206,951,267	249,644,025	293,932,701
Franchise and Gross Receipts Taxes	59,551,139	58,686,740	59,366,436	59,706,040	60,022,109	60,383,271
Total Operating Expenses	$ 837,170,526	$ 785,382,553	$ 751,799,755	$ 765,910,413	$ 836,957,843	$ 883,667,074
Net Revenues	$ 451,784,683	$ 535,127,925	$ 512,072,429	$ 517,082,476	$ 426,814,182	$ 381,674,493
OTHER DEDUCTIONS						
Debt Service: Principal	129,900,000	116,230,000	60,790,000	17,430,000	7,720,000	6,860,000
Debt Service: Interest	71,459,451	78,326,733	67,396,717	68,217,892	64,130,735	61,041,047
Less Interest on Sinking Fund and Build America Bond Subsidy	(5,001,394)	(6,032,733)	(6,025,315)	(5,999,472)	(5,993,007)	(5,952,591)
Total Debt Service	$ 196,358,057	$ 188,524,000	$ 122,161,401	$ 79,648,420	$ 65,857,728	$ 61,948,457
Contribution To City	$ 91,471,795	$ 92,952,147	$ 93,881,668	$ 94,820,485	$ 95,768,690	$ 96,726,377
SENIOR AND SUBORDINATED DEBT SERVICE COVERAGE	2.30 x	2.84 x	4.19 x	6.49 x	6.48 x	6.16 x
ADJUSTED DEBT SERVICE COVERAGE	1.83 x	2.35 x	3.42 x	5.30 x	5.03 x	4.60 x
FIXED COVERAGE with PPA Contract Payments	1.69 x	2.06 x	2.66 x	3.31 x	2.41 x	1.96 x
PPA Contract Payments	*$ 28,871,075*	*$ 35,017,307*	*$ 34,475,562*	*$ 34,647,362*	*$ 29,762,907*	*$ 29,685,175*
Vogtle Principal Debt Service Payments	*$ 11,695,768*	*$ 15,126,253*	*$ 21,607,556*	*$ 34,325,078*	*$ 92,762,934*	*$ 141,407,881*
System Sales excl FPU	12,328,910	12,200,000	12,340,459	12,409,877	12,474,331	12,548,144
FPU Sales	35,429	0	0	0	0	0
TERRITORIAL SYSTEM MWH SALES	12,364,339	12,200,000	12,340,459	12,409,877	12,474,331	12,548,144
Growth Rate: System MWH Sales (%)	2.61%	-1.33%	1.15%	0.56%	0.52%	0.59%
OFF SYSTEM MWH SALES	35,429	137,634	113,300	78,600	81,100	127,000
TOTAL MWH SALES	12,399,768	12,337,634	12,453,759	12,488,477	12,555,431	12,675,144

Electric System: Flat Sales

DEBT SERVICE COVERAGE PROJECTIONS	Actual	Projection	Projection	Projection	Projection	Projection
OPERATING REVENUES:	Fiscal Year 2018	Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021	Fiscal Year 2022	Fiscal Year 2023
Base Rate System Revenues	771,955,029	761,887,030	749,412,136	749,412,136	749,412,136	749,412,136
Fuel Rate System Revenues	398,297,723	391,543,750	385,125,000	385,125,000	385,125,000	385,125,000
Off System Sales Revenues	1,109,990	4,447,582	2,944,000	1,944,000	1,876,000	2,608,000
Uncollectibles	(1,288,188)	(1,895,811)	(1,884,953)	(1,877,951)	(1,870,651)	(1,863,235)
Franchise and Gross Receipts Taxes	59,551,139	58,492,162	57,534,038	57,534,038	57,534,038	57,534,038
Other Revenues	35,815,718	34,610,544	32,770,427	34,437,733	35,237,087	33,864,666
Net Amt (Paid Into)/Rec'd From Rate Stabilization Fund	(33,825,277)	44,810,885	17,057,691	29,826,633	(4,445,387)	(4,391,347)
Net Amt (Paid Into) Rec'd From Fuel Reserve	57,339,075	26,614,336	(12,598,069)	(13,753,545)	(5,785,318)	(10,902,378)
Total Operating Revenues	$ 1,288,955,209	$ 1,320,510,478	$ 1,230,360,269	$ 1,242,648,044	$ 1,217,082,905	$ 1,211,386,881
OPERATING EXPENSES:						
O&M incl PSC Fee	204,981,910	220,001,635	212,289,053	217,805,264	228,082,619	232,737,628
Fuel and Purchased Energy	328,159,602	301,331,196	266,206,509	268,126,835	283,793,340	278,798,789
Non-Fuel Purchased Power	244,477,875	205,362,982	202,872,839	206,951,267	249,644,025	293,932,701
Franchise and Gross Receipts Taxes	59,551,139	58,686,740	57,735,426	57,742,474	57,749,769	57,757,320
Total Operating Expenses	$ 837,170,526	$ 785,382,553	$ 739,103,826	$ 750,625,841	$ 819,269,754	$ 863,226,437
Net Revenues	$ 451,784,683	$ 535,127,925	$ 491,256,443	$ 492,022,203	$ 397,813,152	$ 348,160,443
OTHER DEDUCTIONS						
Debt Service: Principal	129,900,000	116,230,000	60,790,000	17,430,000	7,720,000	6,860,000
Debt Service: Interest	71,459,451	78,326,733	67,396,717	68,217,892	64,130,735	61,041,047
Less Interest on Sinking Fund and Build America Bond Subsidy	(5,001,394)	(6,032,733)	(6,025,315)	(5,999,472)	(5,993,007)	(5,952,591)
Total Debt Service	$ 196,358,057	$ 188,524,000	$ 122,161,401	$ 79,648,420	$ 65,857,728	$ 61,948,457
Contribution To City	$ 91,471,795	$ 92,952,147	$ 93,881,668	$ 94,820,485	$ 95,768,690	$ 96,726,377
SENIOR AND SUBORDINATED DEBT SERVICE COVERAGE	2.30 x	2.84 x	4.02 x	6.18 x	6.04 x	5.62 x
ADJUSTED DEBT SERVICE COVERAGE	1.83 x	2.35 x	3.25 x	4.99 x	4.59 x	4.06 x
FIXED COVERAGE with PPA Contract Payments	1.69 x	2.06 x	2.54 x	3.14 x	2.25 x	1.81 x
PPA Contract Payments	*$ 28,871,075*	*$ 35,017,307*	*$ 34,475,562*	*$ 34,647,362*	*$ 29,762,907*	*$ 29,685,175*
Vogtle Principal Debt Service Payments	*$ 11,695,768*	*$ 15,126,253*	*$ 21,607,556*	*$ 34,325,078*	*$ 92,762,934*	*$ 141,407,881*
System Sales excl FPU	12,328,910	12,200,000	12,000,000	12,000,000	12,000,000	12,000,000
FPU Sales	35,429	0	0	0	0	0
TERRITORIAL SYSTEM MWH SALES	12,364,339	12,200,000	12,000,000	12,000,000	12,000,000	12,000,000
Growth Rate: System MWH Sales (%)	2.61%	-1.33%	-1.64%	0.00%	0.00%	0.00%
OFF SYSTEM MWH SALES	35,429	137,634	113,300	78,600	81,100	127,000
TOTAL MWH SALES	12,399,768	12,337,634	12,113,300	12,078,600	12,081,100	12,127,000

Water & Sewer System Base Case

DEBT SERVICE COVERAGE PROJECTIONS	Actual	Projection	Projection	Projection	Projection	Projection
OPERATING REVENUES:	*Fiscal Year 2018*	*Fiscal Year 2019*	*Fiscal Year 2020*	*Fiscal Year 2021*	*Fiscal Year 2022*	*Fiscal Year 2023*
Water Sales	153,821,089	156,354,154	158,699,467	161,079,959	163,496,158	165,948,600
Sewer Sales	231,514,092	235,022,718	238,548,059	242,126,280	245,758,174	249,444,546
Reclaimed Sales	12,772,343	14,284,342	15,968,284	17,697,130	19,616,149	21,746,261
Environmental Sales	23,829,016	24,140,990	24,601,335	25,069,947	25,556,969	26,063,927
Franchise Fee Revenues	10,475,721	10,671,007	10,870,000	11,072,499	11,282,396	11,500,281
Uncollectibles	(589,900)	(859,604)	(875,634)	(891,947)	(908,855)	(926,407)
Capacity Fees	18,478,894	17,028,000	16,687,440	16,353,691	16,026,617	15,866,351
Extension Fees: Growth	9,519,430	8,772,000	8,596,560	8,424,629	8,256,136	8,173,575
Investment Income	7,096,822	3,526,635	3,526,635	3,526,635	3,526,635	3,526,635
Amounts Paid From Rate Stabilization Fund into Revenue Fund	16,127,966	51,744,507	25,536,309	25,551,219	25,551,219	25,551,219
Amounts Paid From Revenue Fund into Rate Stabilization Fund	(23,829,016)	(24,140,990)	(24,601,335)	(25,069,947)	(25,556,969)	(26,063,927)
Other Revenues net of Uncollectibles	11,830,747	9,201,514	9,298,290	9,396,034	9,494,755	9,594,463
Total Operating Revenues	$ 471,047,204	$ 505,745,273	$ 486,855,408	$ 494,336,128	$ 502,099,385	$ 510,425,525
OPERATING EXPENSES:						
Operations and Maintenance Expenses	149,646,476	160,701,533	164,643,512	168,223,699	171,884,353	175,627,284
Franchise Fee Taxes	10,475,723	10,671,007	10,870,000	11,072,499	11,282,396	11,500,281
Total Operating Expenses	$ 160,122,198	$ 171,372,541	$ 175,513,512	$ 179,296,198	$ 183,166,749	$ 187,127,565
Net Revenues	$ 310,925,005	$ 334,372,732	$ 311,341,896	$ 315,039,930	$ 318,932,635	$ 323,297,960
OTHER DEDUCTIONS:						
Debt Service: Principal	51,720,000	54,705,000	17,435,000	19,840,000	24,255,000	38,090,000
Debt Service: Interest	62,181,131	63,203,183	55,920,254	57,503,306	56,454,875	54,979,905
Less Interest on Build America Bond Subsidy	(2,493,760)	(2,494,629)	(2,481,117)	(2,458,248)	(2,452,384)	(2,447,854)
JEA's Total Debt Service	$ 111,407,371	$ 115,413,554	$ 70,874,138	$ 74,885,058	$ 78,257,491	$ 90,622,051
Contribution to City	25,148,020.00	39,810,179.48	25,058,281.28	25,308,864.09	25,561,952.73	25,817,572.26
SENIOR AND SUBORDINATED DEBT SERVICE COVERAGE	2.79 x	2.9 x	4.39 x	4.21 x	4.08 x	3.57 x
FIXED COVERAGE	2.57 x	2.55 x	4.04 x	3.87 x	3.75 x	3.28 x
WATER SALES (KGALS)	36,186,559	36,731,993	37,282,973	37,842,217	38,409,850	38,985,998
Growth Rate		1.5%	1.5%	1.5%	1.5%	1.5%
SEWER SALES (KGALS)	26,340,622	26,737,291	27,138,350	27,545,426	27,958,607	28,377,986
Growth Rate		1.5%	1.5%	1.5%	1.5%	1.5%
RECLAIMED WATER SALES (KGALS)	3,118,695	3,407,289	3,730,522	4,062,375	4,430,731	4,839,606
Growth Rate		9.3%	9.5%	8.9%	9.1%	9.2%

District Energy System Five Year Financial Projections

Net Revenues and Debt Service Coverage Ratios

District Energy System ($000s)	Actual 2018	2019	2020	2021	2022	2023
Sales Revenue	$8,757	$8,578	$8,578	$8,578	$8,578	$8,578
Other Income	$103	$36	$0	$0	$0	$0
Rate Stabilization Transfer	$0	$0	$0	$0	$0	$0
Total Revenue	$8,859	$8,614	$8,578	$8,578	$8,578	$8,578
Operating Expenses	$4,603	$4,575	$4,696	$4,621	$4,743	$4,668
Net Revenue	$4,256	$4,039	$3,882	$3,957	$3,835	$3,910
Total Debt Service	$3,019	$3,020	$3,021	$3,024	$3,021	$3,022
Debt Service Coverage	1.4x	1.3x	1.3x	1.3x	1.3x	1.3x

Projected Funding Plan

District Energy System ($000s)	Actual 2018	2019	2020	2021	2022	2023
Internal Funds [1]	$1,233	$1,018	$862	$933	$814	$889
Construction Fund [2]	$0	$2,053	$488	$850	$334	$51
Debt Financing[3]	$0	$0	$0	$0	$202	$410
Capital Plan	$1,193	$3,071	$1,350	$1,783	$1,350	$1,350
Principal Payments	$1,660	$1,690	$1,725	$1,770	$1,815	$1,870

[1]Internal funds are generated from R&R and operating capital outlay
[2]Draw down from the capital fund and the debt management strategy fund
[3]Drawing from revolving credit line

2018

JEA

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