
From: Dykes, Melissa H. - President/COO <dykemh@jea.com>
Sent: Wednesday, May 15, 2019 5:31 PM
To: Dykes, Melissa H. - President/COO
Subject: Your scan (Scan to My Email)
Attachments: scan_dykemh_2019-05-15-17-28-49.pdf

MD
Comments



USA[®]

Formatting is not consistent -
Please more titles, etc = consistent.

Approach to the status quo baseline

What the status quo
baseline IS...

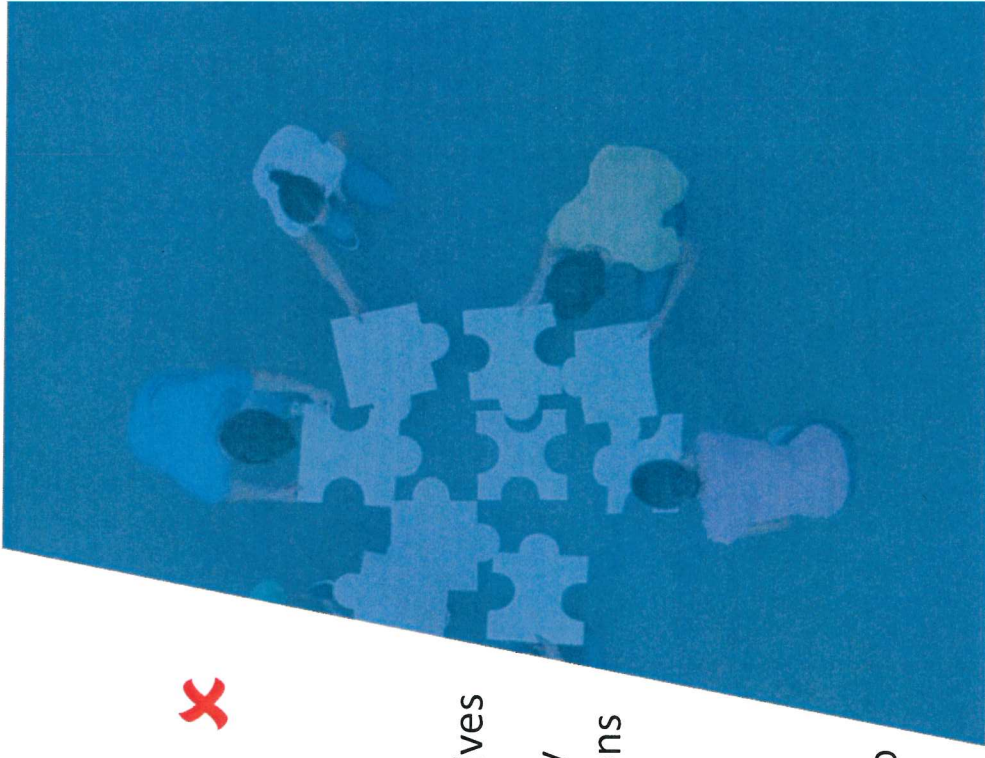


- A projection of JEA's finances through 2030 based on current plans only, reflecting the impact of external market forces on JEA
- A tool for JEA to develop a strategy and action plan to succeed in light of market forces

... 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



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



GUIDING PRINCIPLES

ACCELERATING UTILITY INNOVATION

Corporate Measures

Our mission will be guided by and evaluated against how we as employees drive these four Corporate Measures of JEA's Value

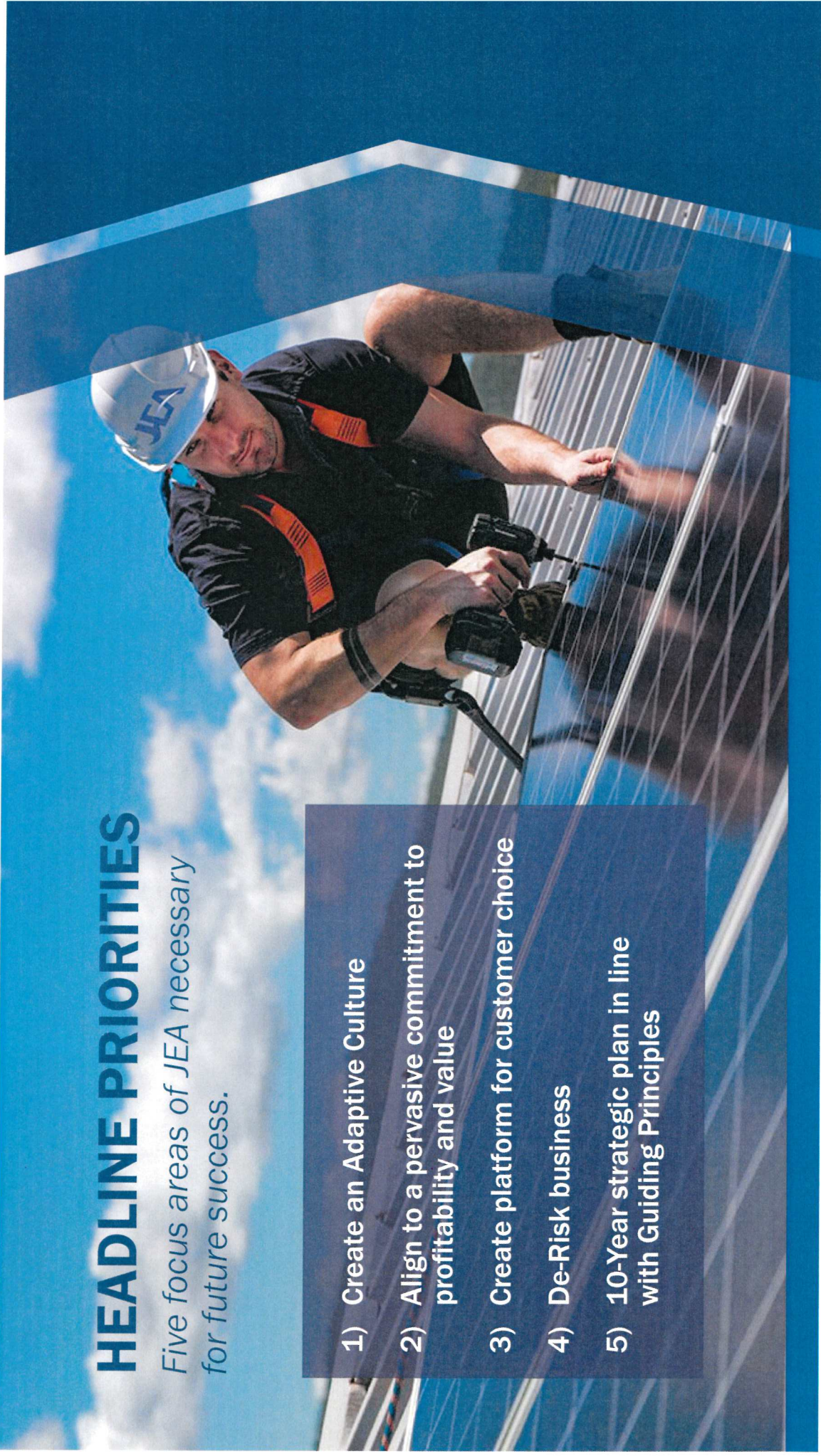
- 1) Customer Value
- 2) Financial Value
- 3) Environmental Value
- 4) Community Impact Value



HEADLINE PRIORITIES

Five focus areas of JEA necessary for future success.

- 1) Create an Adaptive Culture
- 2) Align to a pervasive commitment to profitability and value
- 3) Create platform for customer choice
- 4) De-Risk business
- 5) 10-Year strategic plan in line with Guiding Principles



ACCELERATING WATER INNOVATION

Integrated Water Resource Planning

Renewable Natural Gas

Beneficial Reuse of Byproducts

Organics Recycling

Conserving our Water Resource

Protecting the St. Johns River

Purified Water

IMPROVING LIVES BY



ACCELERATING INNOVATION

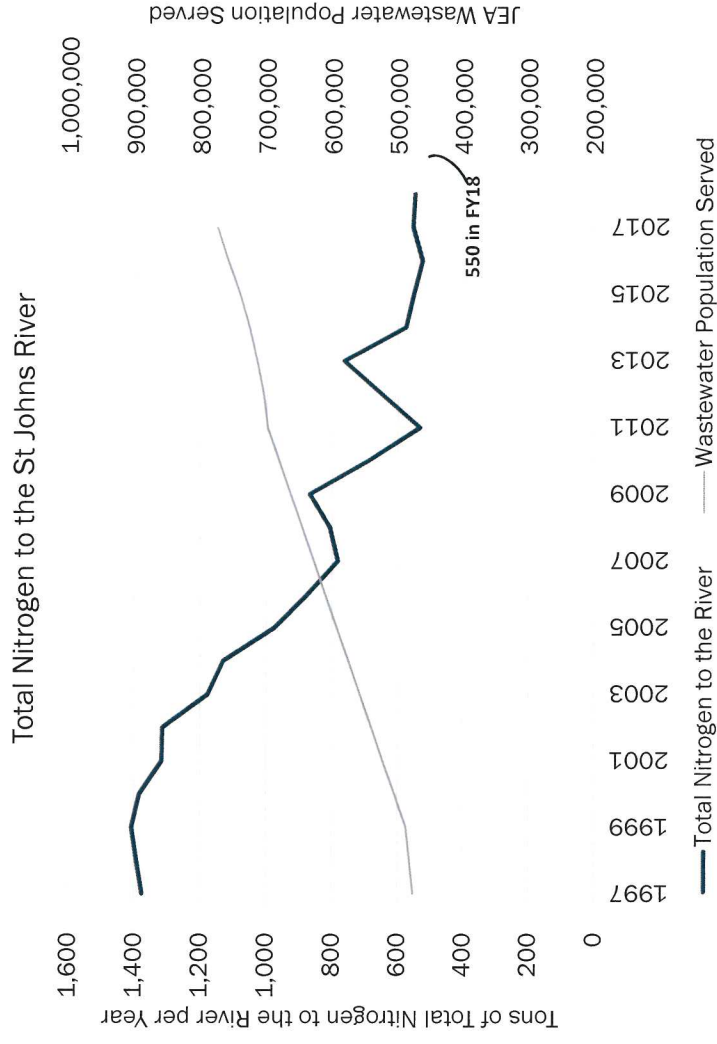
JEA reduced nitrogen discharge by 60% while population grew by 37%

- Improve treatment at regional facilities
- Phase out old technology
- Build reclaimed system



JEA's SUCCESSFUL STRATEGY

Lowest in JEA's History



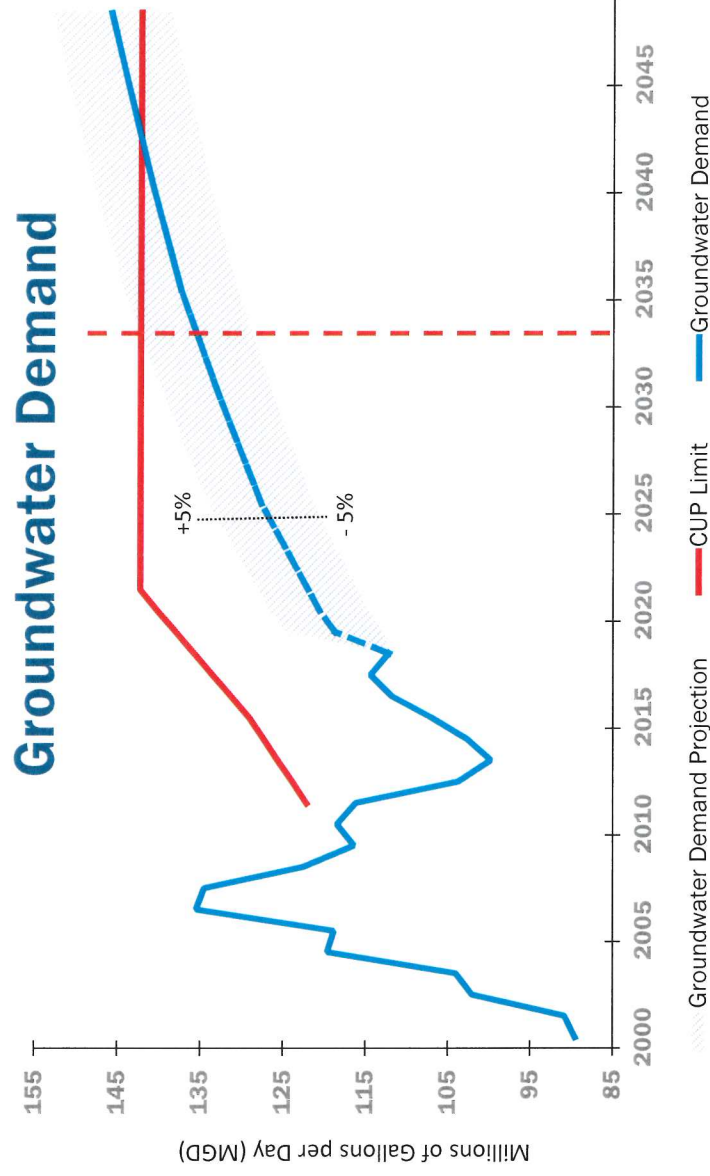
Protecting the Aquifer through Conservation

Groundwater Allocation

- Consumptive Use Permit expires in 2031
- Capacity is limited to 142 MGD

Water Conservation

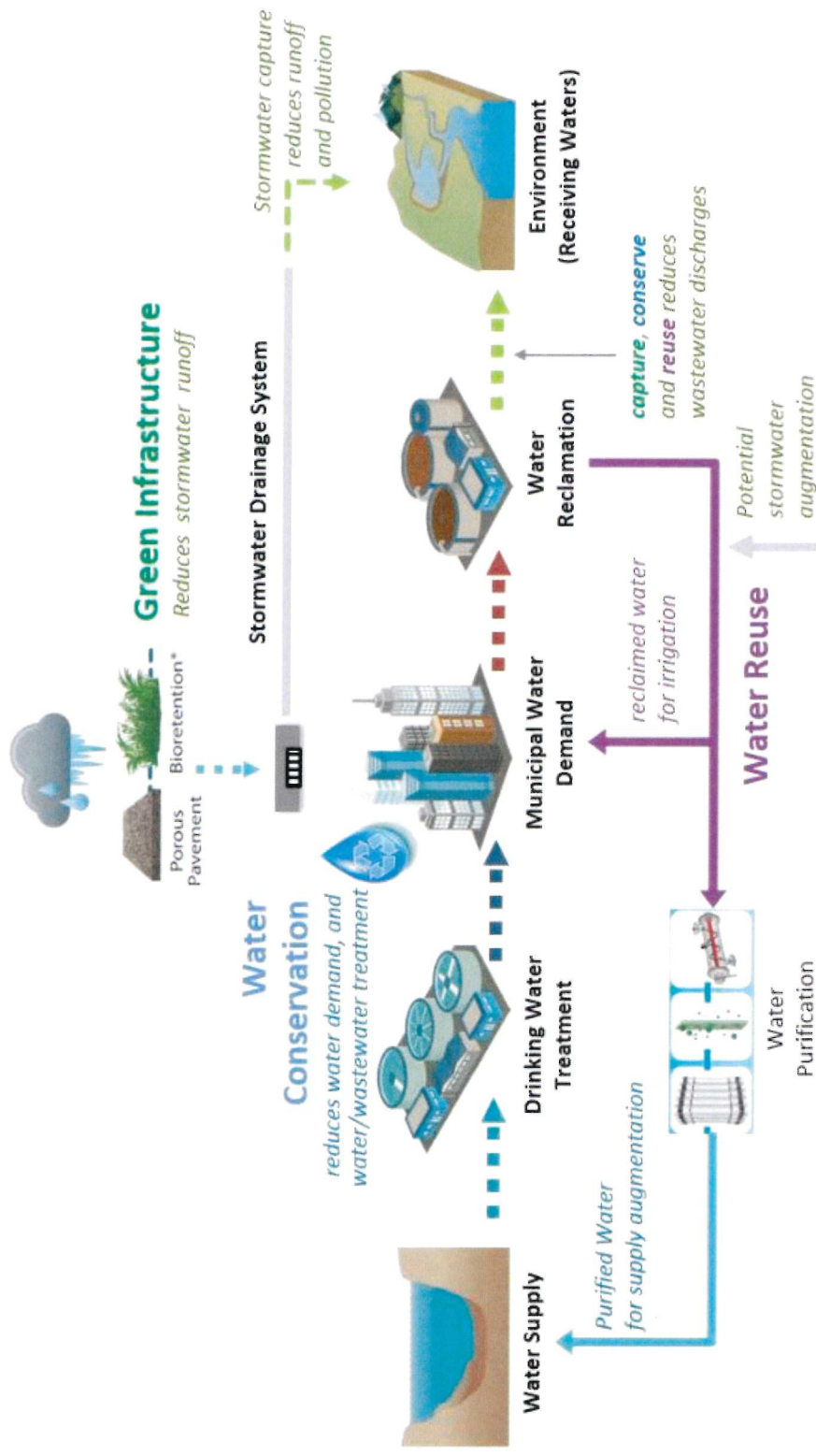
- Expansion of reclaimed system
- Tiered rates
- Public messaging/conservation efforts
- Housing fixture efficiencies





Placeholder for water video

JEVA[®]



INTEGRATED WATER RESOURCE PLAN (IWRP)

Investing in Our Water Evolution

SINCE 1997
\$4 Billion
invested in advancing
infrastructure

2019 - 2024
\$1.2 Billion
planned in expansion,
renewal & replacement
and environmental
stewardship

BEYOND 2024
\$3 Billion
unfunded community issues:
\$2B in Septic Tank Phase Out
and \$1B in alternative
water supplies
\$210M/year recurring
investment in water system

JEA leading State and Community on
STPO and Purified Water

- Additional \$15MM (\$45MM total)
- 1st neighborhood started
- RFP for STPO R&D issued
- Completed 1st purified water test
- Renewable natural gas research

 **ACCELERATING
INNOVATION**

ACCELERATING ENERGY INNOVATION

Intelligent
Transportation

Microgrids

Multi-Energy Station

Battery Storage
Systems

Big Data

Smart Buildings

Waste to Energy

Solar

Blockchain

Electric Bus

EV Car Sharing

Smart House

Sustainable Development

IMPROVING LIVES BY



ACCELERATING INNOVATION

AUGUST 8, 2005

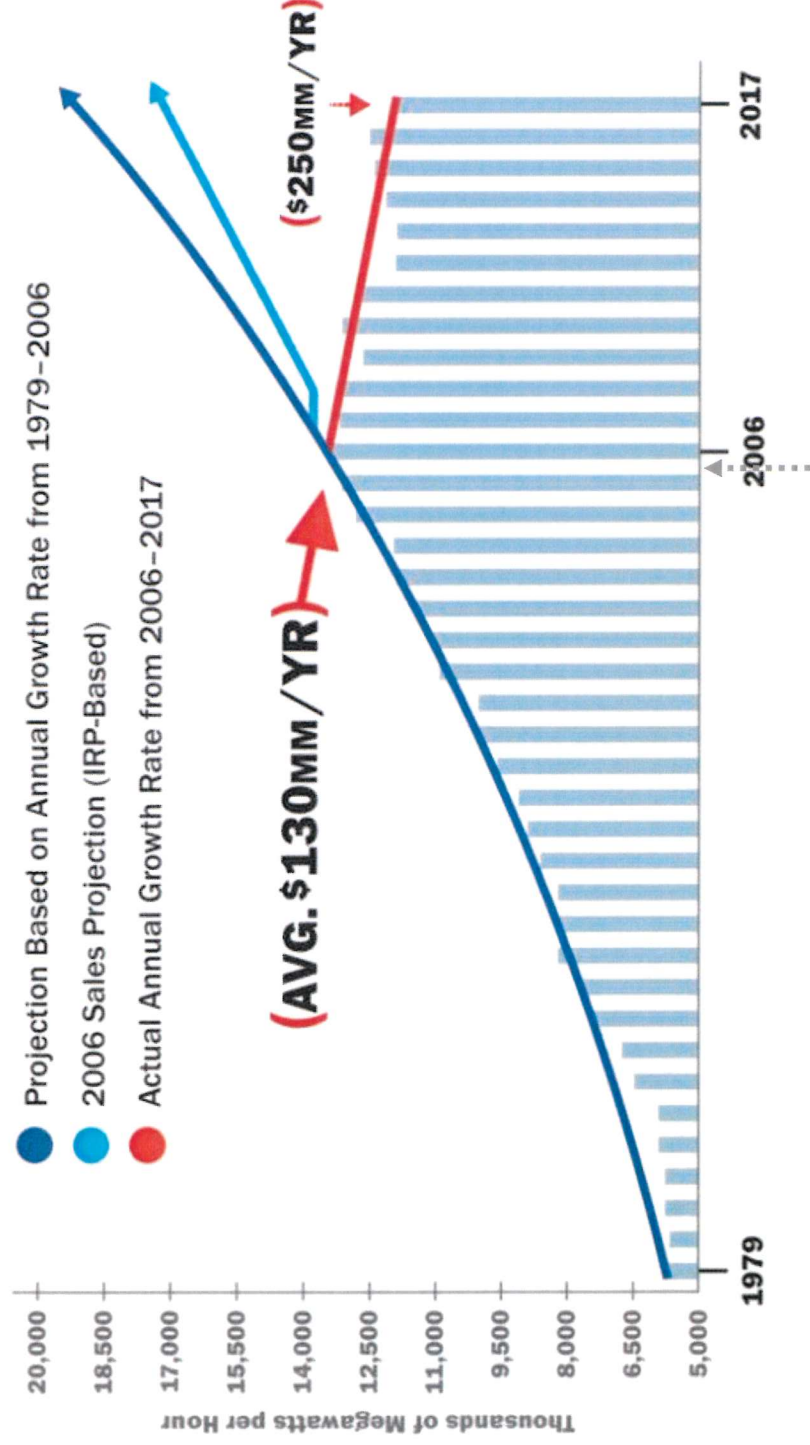


**ENERGY EFFICIENCY
2000's TECHNOLOGY TREND**



ENERGY POLICY ACT OF 2005

2007-to-2017: Loss Of \$1.4 Billion In Free Cash Flow



Energy Efficiency IMPACT

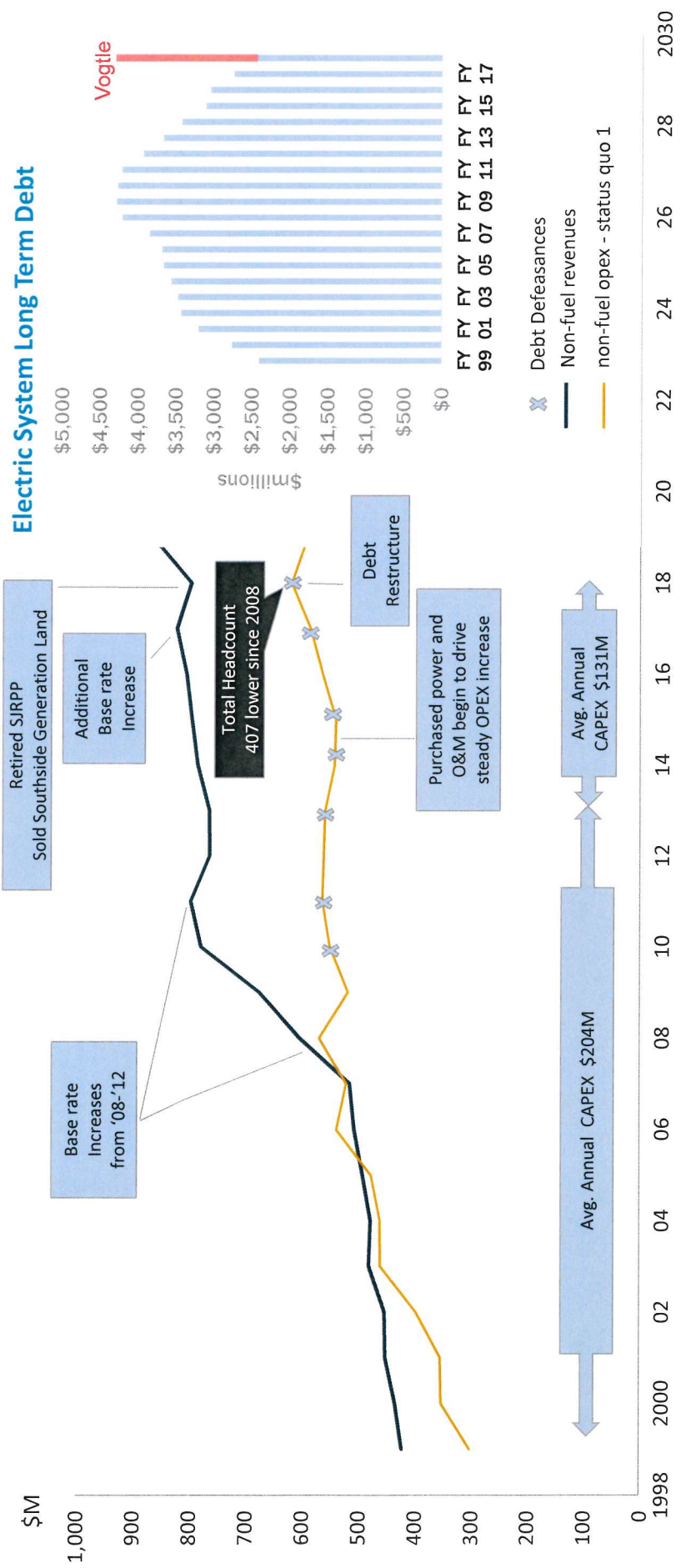
- Efficiency accounts for >90% of reduction in electric sales
- 30% lower sales in 2017 than forecasted back in 2006
- City contribution would have been \$80 million per year higher

Energy Policy Act of 2005

3
FINANCIAL VALUE

Energy:
JEA responded by raising base rate to respond

Flat sales have been accompanied by continued rise in operating expenses, despite several actions taken to close the gap

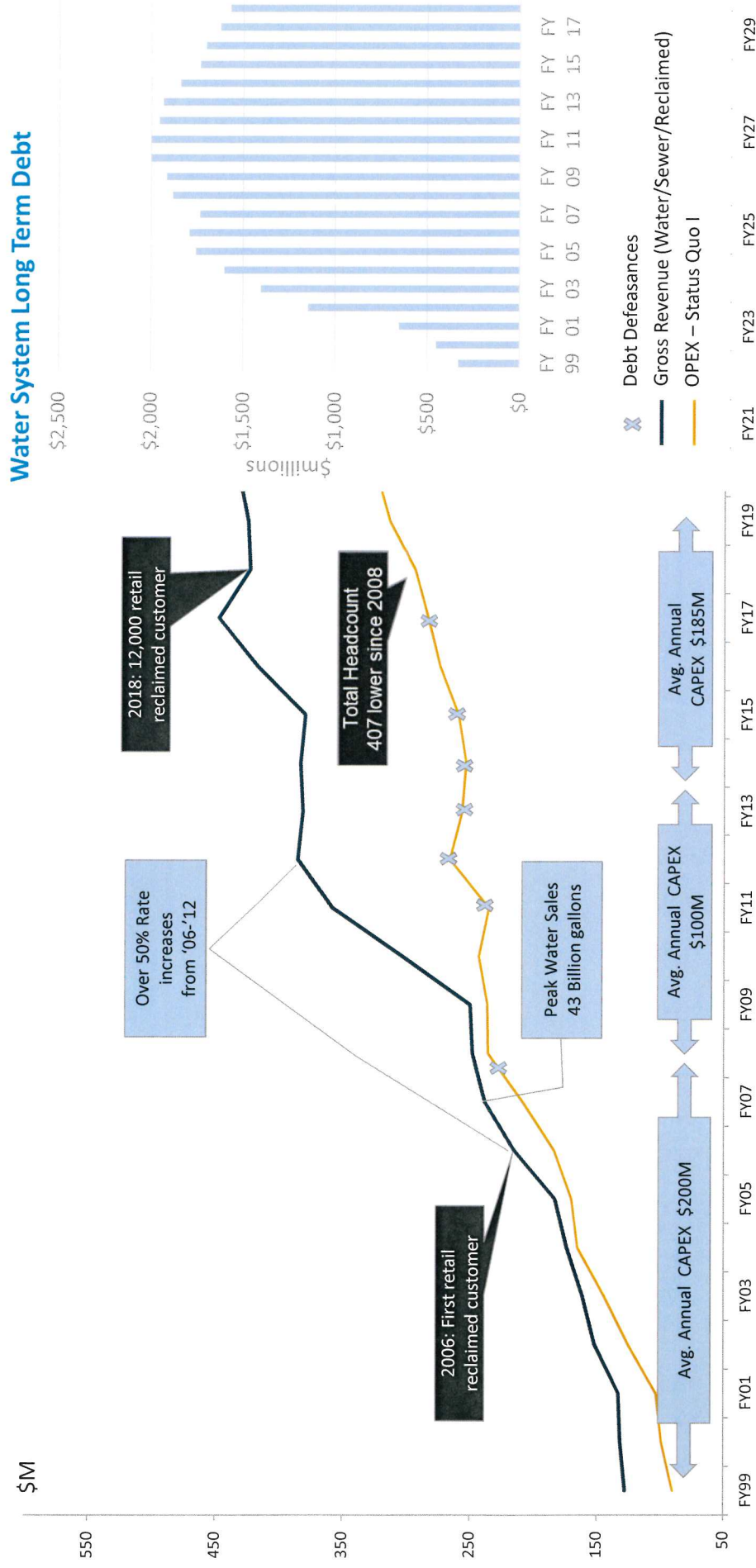


Water:

JEA took action to respond

Flat per customer sales have been offset partially by increasing accounts. Continued rise in operating expenses and higher capital needs.

FINANCIAL VALUE



Historical Impact of Technology Disruption to JEA and the City of Jacksonville

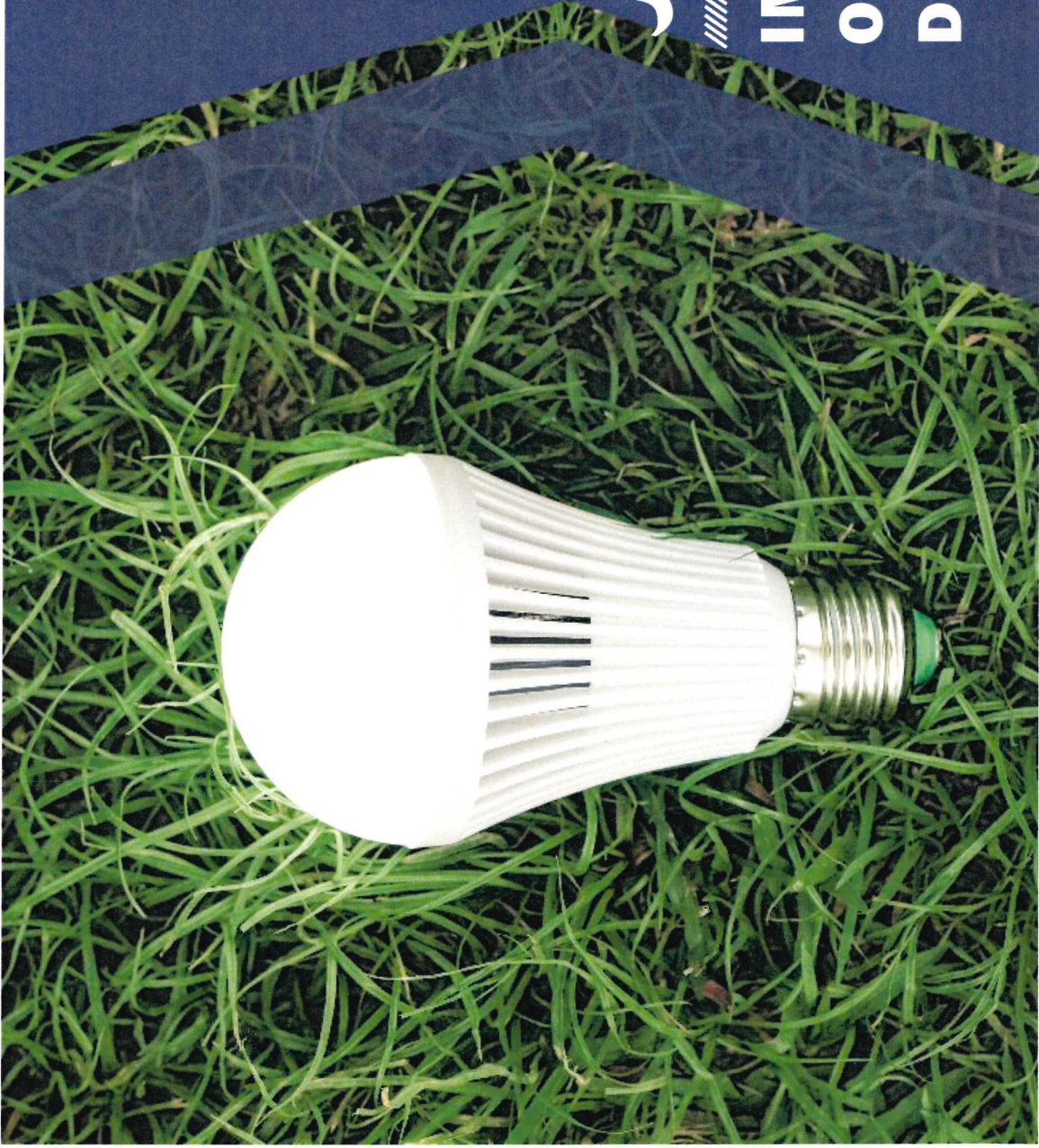
the last decade of business disruption

	2006 Actual	2018 Actual	Change	Change %
Rates (\$ yield per MWh)	36	62	26	71%
Unit Sales (MWh)	13,440,900	12,364,340	(1,076,560)	(8)%
# of Energy Customers	402,142	466,411	64,269	16%
Rates (\$ yield per kgal)	3.74	6.45	2.71	72%
Unit Sales (kgal)	57,463,877	65,646,920	8,183,043	14%
# of Water Customers	293,689	348,159	54,470	19%
Annual City Contribution	88,688	116,620	27,932	31%
Total JEA Headcount	2,598*	2,191	(407)	(16)%
Total Long-term Debt ('000) ¹	\$6,277,000	\$3,634,372	(\$2,642,628)	(42)%
Total Maintenance and other OpEx	\$282,282	\$445,953	\$163,671	58%

¹ Peak JEA Long-term debt in 2010 compared to April 2019 balances. Not shown - scheduled \$191M debt payment on 10/1/19.

- Customer rates increased 71% in the electric system (went from lowest in the state to median)
- Customer rates increased by 72% in the water system
- 407 jobs eliminated since 2008
- ~\$3 billion of debt repaid from 2010-2019

* Reflects headcount from 2008



IMPACT OF ONGOING DISRUPTION

SOLAR & OTHER (2010's tech trend)

Adoption Rate



- Solar growth increasing in JEA territory 67% CAGR since FY 14
- >\$2.5MM of Net Income lost to distributed generation annually

BATTERIES (2020's tech trend)

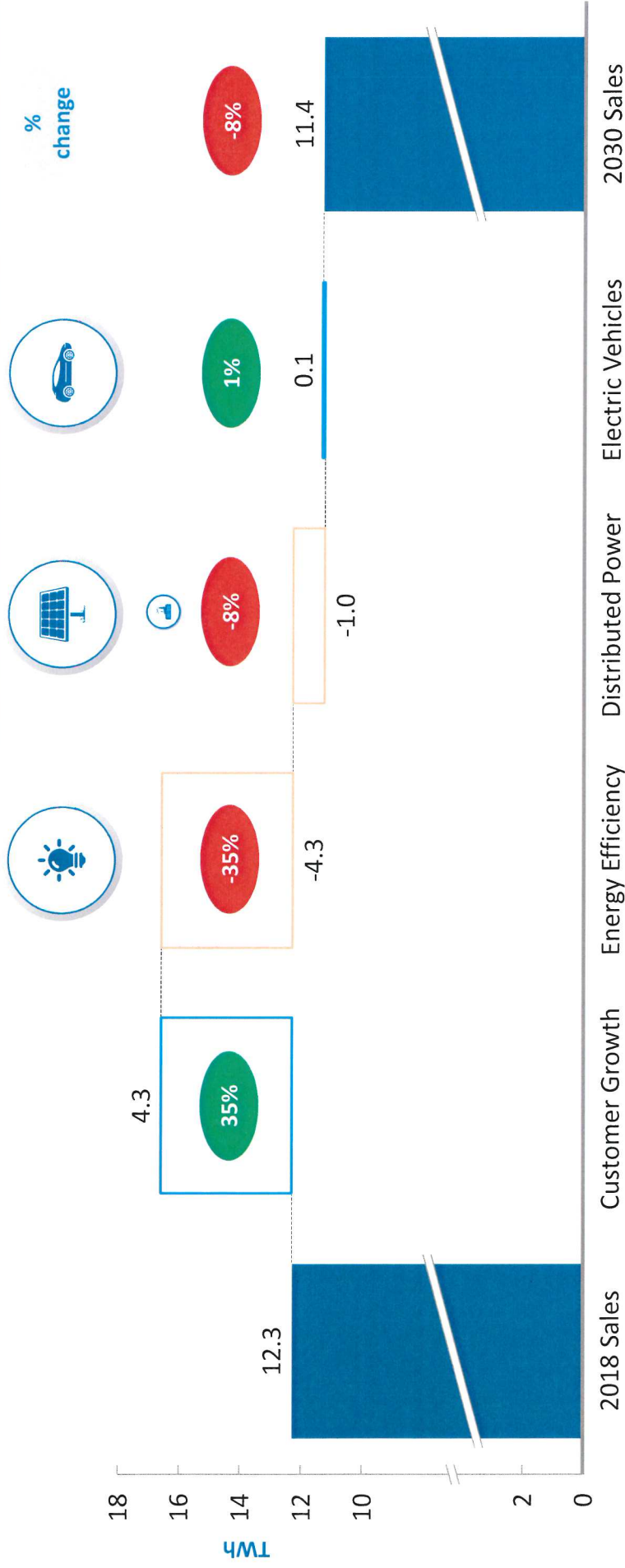
Adoption Rate



- Similar cost / performance trends to Distributed Generation (DG)
- DG + Storage will be at cost parity with utility by ~2025

By 2030 JEA's customers will increase 16% and energy sales will fall by 8%

2030 JEA projected energy sales, TWh

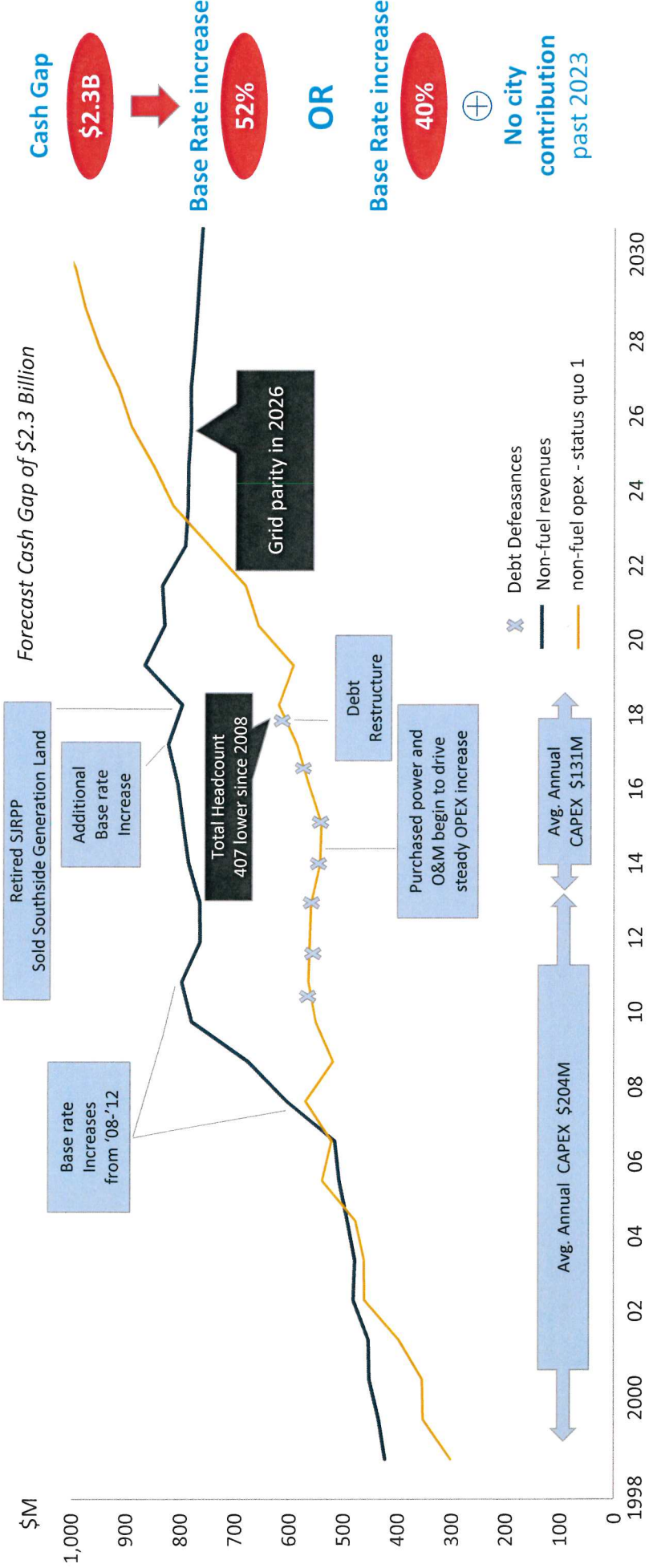


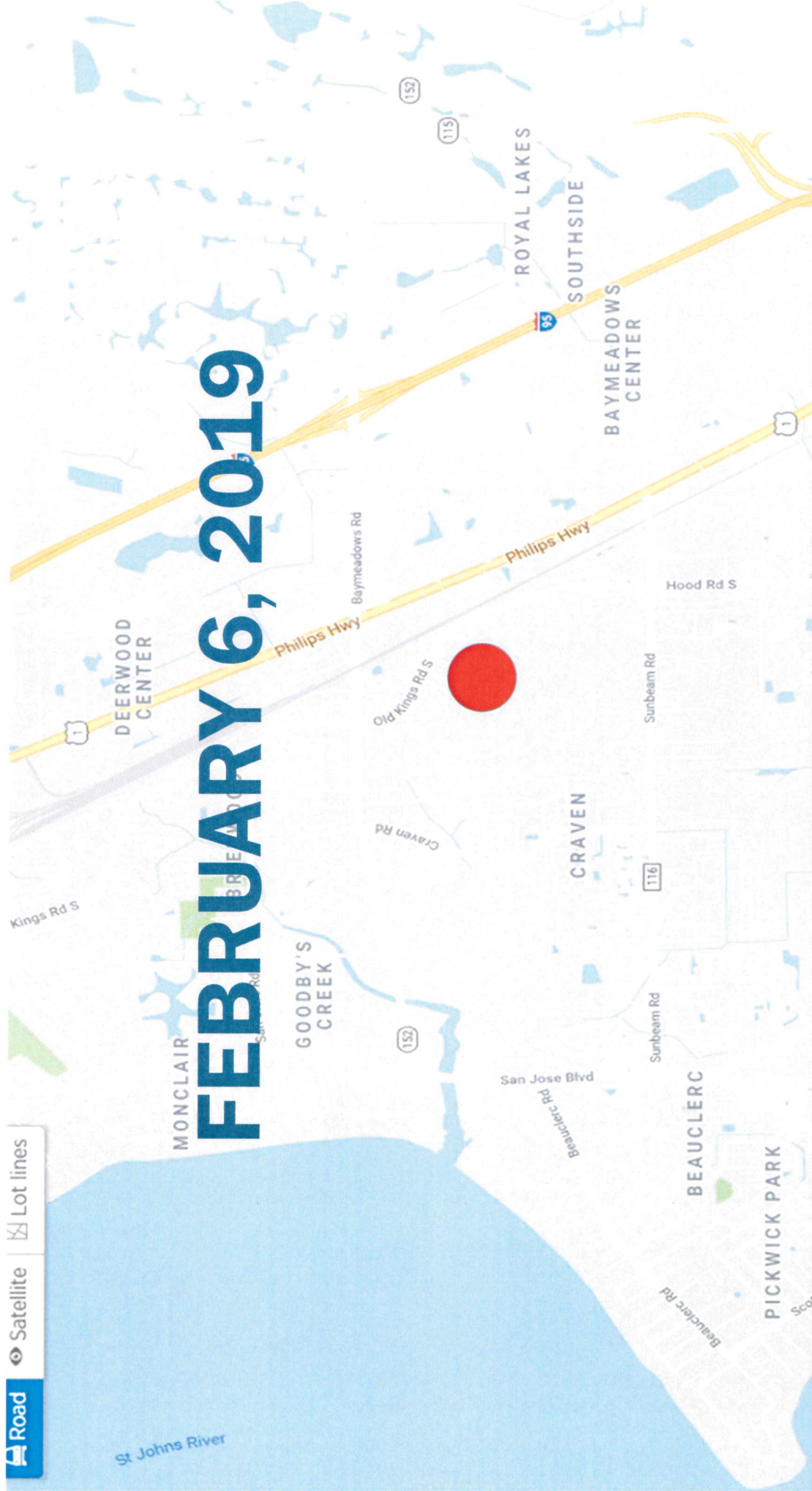
Energy Sales

		Key metric	2019	2025	2030	Source / rationale
1	Customer growth	Population (thousands)	969	1,050	1,115	Moody's Duval county forecast
		GDP (Duval, Total, (Mil. Ch. 2009 USD))	55,930	70,030	80,635	Moody's Duval county forecast
		Median household income	57,204	76,609	93,258	Moody's Duval county forecast
2	Energy efficiency	Residential efficiency (kWh/customer)	12.5	11.5	11.3	Appliance-level adoption assumptions
		Commercial efficiency (kWh/customer)	77.5	69.6	68.8	Appliance-level adoption assumptions
		Industrial per-capita consumption (kWh/customer)		Constant		JEA customer forecast
3	Distributed generation (DG) (solar)	Residential solar cost (\$/W)	\$2.65	\$1.41	\$1.17	2018 solar cost forecast model
		Residential storage cost (\$/W/system)	\$0.42	\$0.23	\$0.19	2018 storage cost forecast model
		C&I solar cost (\$/W)	\$1.58	\$1.12	\$0.91	GTM solar cost projection
		Retail electricity price (R) (\$/kWh)	0.103	0.110	0.126	Baseline (current projection) assumptions, with February 2019 O&M updates
		Incentives in place	ITC through 2022, battery rebate through 2030			Current regulation
4	DG (non-solar)	Residential storage backup value (\$/year)	\$200	\$200	\$200	Internal estimate based on sales trends
		Self-consumption (w/o battery) ¹	65%	65%	65%	Solar output and household consumption curves
		Retail electricity price (C&I) - weighted solar (\$/kWh)	\$0.07	\$0.08	\$0.09	Baseline (current projection) assumptions
		Developer hurdle (% IRR)	9%	9%	9%	Appetite for commercial off-taker risk & new market
		Pre-parity adoption (residential, C&I)	0.10%	0.10%	0.10%	High end of historic post-parity adoption trends
5	Electric vehicles (EV)	Post-parity adoption (C&I developer economics)	1.25%	1.25%	1.25%	High end of historic post-parity adoption trends
		Post-parity adoption (Resi customer economics)	1.00%	1.00%	1.00%	High end of historic post-parity adoption trends
		Post-parity adoption (Resi developer economics)	1.50%	1.50%	1.50%	High end of historic post-parity adoption trends
		Annual adoption (kW)	475	475	475	Consistent with national trends over past decade
		Economically viable for broad customer base	No			Consistent with national trends
5	Electric vehicles (EV)	Consumption per BEV (weighted, MWh)	3,850	3,208	2,750	Current efficiencies and estimate of improvements
		EVs in fleet (#)	1,968	12,635	30,751	2018 EV growth forecast model
		EV penetration (%)	0.30%	1.60%	3.60%	2018 EV growth forecast model, current JEA fleet

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

Energy: Rising costs and lower sales lead to structural deficits by 2023





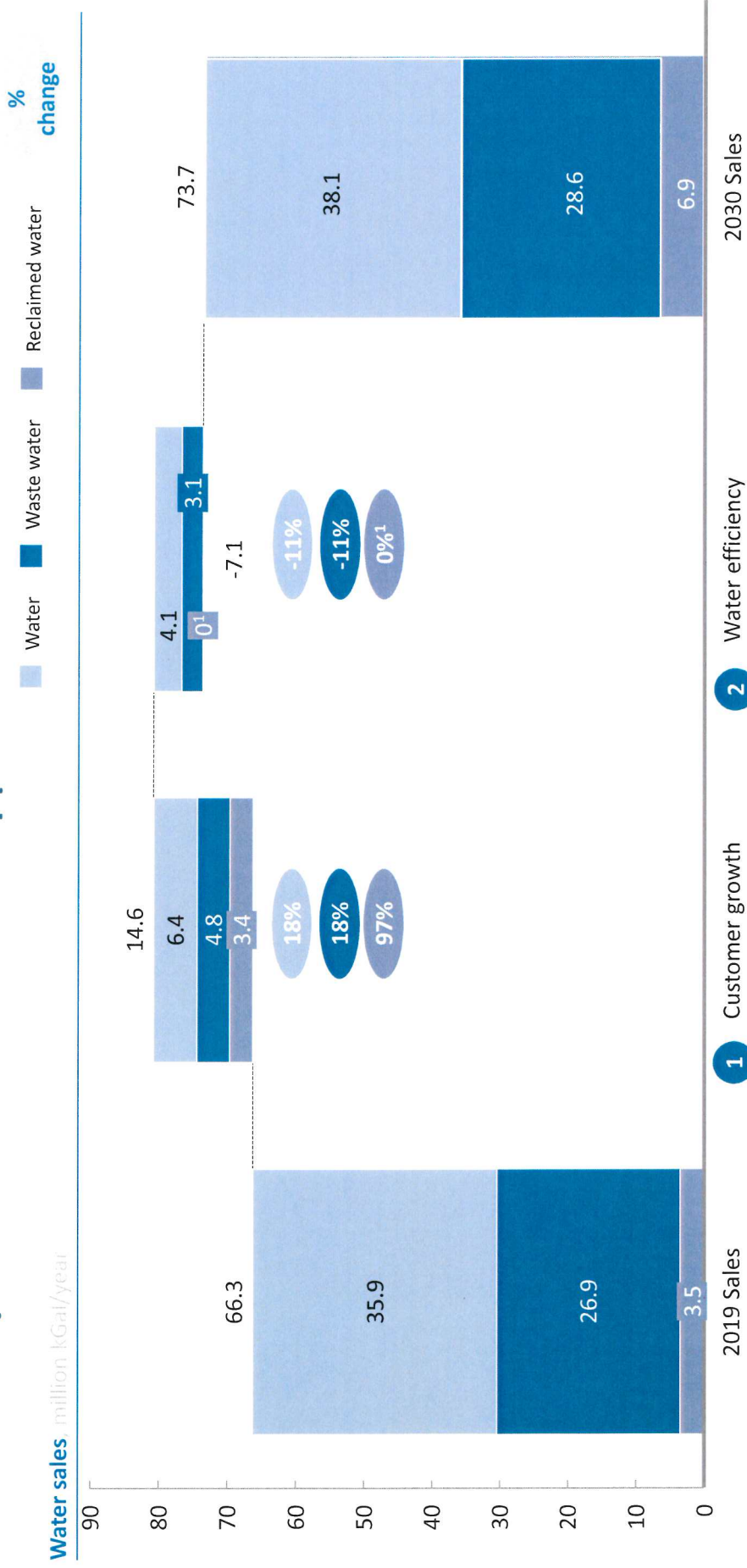
FEBRUARY 6, 2019



SOUTHSIDE JACKSONVILLE

- 1,900 sq ft, Built 1993
- 3 bedrooms, 2 bathrooms
- Estimated value: \$250,000

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

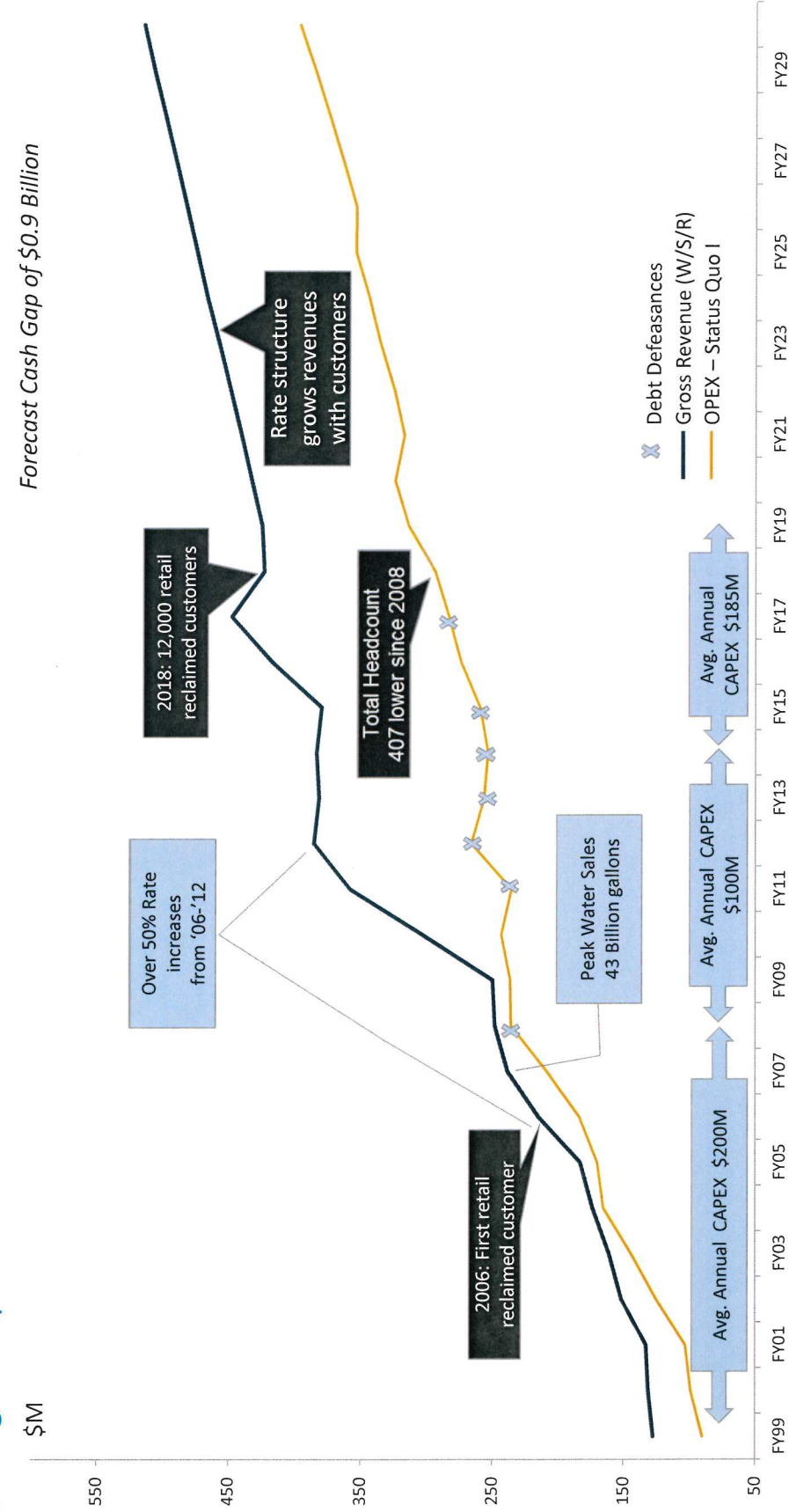


1 No change as water efficiency applies to indoor use water

SOURCE: JEA

Water: Financially sustainable with rate increases

Flat per customer sales have been offset partially by increasing accounts. Continued rise in operating expenses and higher capital needs.



Cash Gap

\$0.9B

Rate increase

16%

OR

Rate increase

9%

⊕

No city contribution past 2023

The Next Decade of Business Disruption

Projected Impact of Technology Disruption to JEA and the City of Jacksonville

	2018 Actual	2030 Projection	Change	Change %
Rates (\$ yield per MWh)	62	94	32	52%
Unit Sales (MWh)	12,364,340	11,382,447	(981,893)	(8)%
# of Customers - Energy	466,411	542,502	76,091	16%
Rates (\$ yield per kgal)	6.45	7.42	0.97	15%
Unit Sales (kgal)	65,646,920	73,695,324	8,048,404	12%
# of Customers - Water	348,159	416,470	68,311	20%
Total Annual City Contribution	116,620	131,256	14,636	13%
Total JEA Headcount	2,191	*	*	*
Total Long-Term Debt ('000)	\$4,018,136	\$2,268,154 <i>483 bn</i>	(\$1,749,982)	(44)%
Total Maintenance and other OpEx	\$393,657*	\$737,376	\$343,719	87%

* Customer rates increased 71% in energy
 * Customer rates increase 15% in water
 * \$1.7 bn of debt repaid, ~~leaving~~
 leaving \$5.2 bn of direct contract debt outstanding

→ [contract debt delegation] - right words?

*2018 Actual Maintenance and other OpEx adjusted to exclude SJRPP

Focused More Than Ever on Remaining Relevant to Our Customers

Internal Stakeholder Alignment (Board, Leadership, Appointed Employees, Unions)



We Are Here



TRANSITION

Stabilize JEA, develop strategic framework, Guiding Principles, corporate dashboard, financial tools



ESTABLISH BASE LINE

Assess current "business as usual" organizational health and financial projection
"Status Quo"



STRATEGY DEVELOPMENT

Design multiple strategies to meet future targets / challenges:
1) Mgmt response
2) Unconstrained plan



FINALIZE EXECUTABLE PLAN

Publish long-term plan with specific tactics and targets



POSITION FOR LONG TERM

Align JEA stakeholders and charter with long-term plan to maximize value:

- 1) Customer
- 2) Financial
- 3) Environmental
- 4) Community Impact

LAUNCH 'NO REGRETS' INITIATIVES



External Stakeholder Feedback (City of Jax, Community Leaders, Customers)

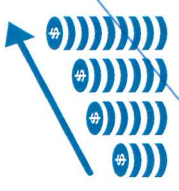
Make this a -
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 (1) is all about to
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To solve the cash flow gap, JEA will need to explore strategic action along all available levers



Cash flow gap, 2019-30,
 \$B

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



Revenues

- Drive growth in business
- Additional rate increases



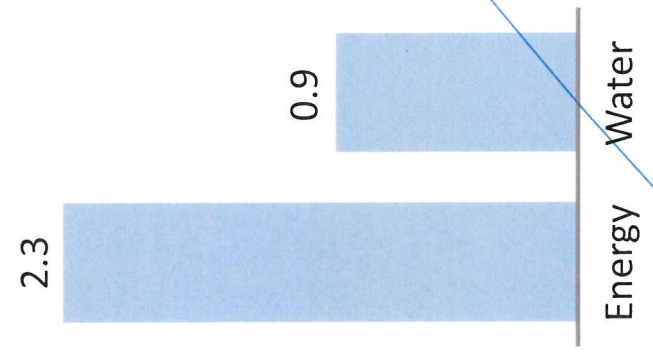
Expenses

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



Finances

- Limited debt financing increased customer money
- Negotiate city contributions





IMPROVING LIVES BY ACCELERATING INNOVATION

