



FMPA BOARD OF DIRECTORS AND EXECUTIVE COMMITTEE
STRATEGIC PLANNING SESSION

Agenda

Wednesday, Feb. 15, 2023

9:30 – 9:35 am	Welcome and introductions	Barbara Quinones, Jacob Williams
9:35 – 9:45 am	Overview of agenda, strategic planning process, desired outcomes, and web-based voting system	Mark McCain
9:45 am – 12:30pm	Informational presentation and discussion of potential strategic priorities	FMPA
12:30 – 1:15 pm	Lunch	
1:15 – 2:30 pm	Review, edit and finalize list of potential strategic priorities	Mark McCain
2:30 – 2:50 pm	Break to set up voting	
2:50 – 3:15 pm	Conduct voting to rank top strategic priorities for the Board of Directors and Executive Committee	Mark McCain
3:15 – 3:30 pm	Discuss voting results, conduct second round of voting if necessary, and discuss next steps for finalizing the strategic plan	Mark McCain, Jacob Williams
3:30 pm	Adjourn	



FMIPA Strategic Planning Session

Board of Directors and
Executive Committee

Feb. 15, 2023



Session Outline

What We've Achieved and What's on the Horizon

1. Review of Vision, Mission and Values
2. Review of February 2021 Strategic Priorities
3. Review Strategic Planning Material and Identify Potential Priorities
 - A. Drivers of FMPA and Member Business
 - B. IRP Phase One to 20-Year Load and Resource Balance
 - C. Environmental Responsibility
 - D. Pool Expansion and Value Creation Opportunities
 - E. Asset and Capital Plan and Rate Projections
 - F. FMPA Risks and Opportunities
 - G. Review Overall Electric and Natural Gas Market Outlook (Background Information)
4. Lunch
5. Review and Categorize Identified Potential Strategic Priorities
6. Develop Consensus on Top Strategic Priorities for Next Two Years



Review of Vision, Mission and Values

FMPA Vision and Mission

Vision

- To sustainably be the lowest cost, and a reliable and clean wholesale power provider in Florida.

Mission

- To provide low-cost, reliable and clean power plus value-added services for FMPA's owner-customers that benefit their communities and customers.

We Want Your Feedback

How much do you agree or disagree with this Mission and Vision for FMPA? Please provide your feedback in the poll.

FMPA Values

- A culture that values both our employees and operating agents and their safety
- Teamwork among our employees and our public power member-owner-customers
- Trust built through honesty, integrity, transparency, open communication and respect
- Employee development, recognition, reward and empowerment
- Environmentally-responsible operations
- Member and employee diversity and inclusion
- Innovation and excellence
- The individual needs and desires of FMPA's owner-customers shall be given the strongest consideration, consistent with the best interests of all owner-customers



Review of February 2021 Strategic Priorities

We've Made Good Progress Since 2021

Good Success Despite Gas Prices, More Work to Do

Rank	Strategic Priority	Steps Taken
1	Lower Controllable Wholesale Power Costs for All Power Supply Projects	<ul style="list-style-type: none"> • Prepaid gas benefits ~\$10.5M in last two years • Low-cost units continue at 90+% availability • NS Gen replacing SEC 1 with ~\$11M capacity savings/yr. • ~\$26M net benefit of external sales ~\$2.17/MWh over last two years, with NS Gen costs fully offset
2	Stanton Optimization – Reduce Power Costs and Emissions	<ul style="list-style-type: none"> • SEC 1 to retire in 2025, lowering fixed cost and emissions, ARP replacing with NS Gen & peaking PPA • On track to reduce emissions rate 50% by 2027 • SEC 2 gas conversion to support peaking operation
3	Member Services – Evaluate FMPA’s Human Resource Requirements to Maintain/Expand Responsive Services	<ul style="list-style-type: none"> • Fully staffed Member Services with added team member to support substations • MSAC reduced billable threshold to 80 hours • Supported municipal SAIDI efforts to achieve goal of 60 minutes • 30 financial planning projects for members • 22 reliability projects proposed or conducted • 60 projects managed for members overall

We've Made Good Progress Since 2021

Good Success Despite Gas Prices, More Work to Do

Rank	Strategic Priority	Steps Taken
5	Transmission Costs – Develop Alternatives to address increasing transmission costs through pool expansion and associate transmission ties	<ul style="list-style-type: none"> • Conducted first-ever FMPP Value Proposition Study, broadening estimate of value to ~\$54M - \$70M annually • Met with potential new strategic partners, NDAs to explore further coordination with more depth executed in fiscal 2022 • Working to complete two new looped connections for members (Lake Worth Beach, Homestead)
6	Clean Energy – Evaluate additional solar/storage resources to support customer desires and/or meet additional emission targets	<ul style="list-style-type: none"> • Secured Poinsett termination w/Phase I replacement solar facility • Phase II PPA revisions pursued with Origis • Advanced Phase III solar efforts, 2-4 new facilities – 7 new Solar participants including potential new member to FMPPA • Negotiated \$13M Origis DEF funding flip to support fixed gas program flexibility • Storage prices increased materially in last 2 years, value remains limited

ARP Priorities Prior to Fuel Management Challenges

Good Success Despite Gas Prices, More Work to Do

Rank	Strategic Priority	Steps Taken
1	Pool Enhancements - consider FMPP operational improvements to reduce costs and increase reliability with growth of solar; consider structural changes creating value through significant Pool expansion	<ul style="list-style-type: none">• Pool Strategic Plan completed in 2022• Outage Coordination and Capacity Sharing ~\$2M• Load Forecasting Frequency Expansion ~\$0.5M• Reserve Policy and Solar Task Force proposed policy changes• Reserve Product Study completed Dec. 2022• Pool expansion evaluation phase for 2 – 3 new entities
2	Energy Storage - Evaluate an energy storage project in Key West that mitigates tie line limitations, supplements capacity and adds ancillary value for ARP	<ul style="list-style-type: none">• Completed Stock Island Feasibility study on KEYS storage, deferred project due to economics/cost• Actively monitoring Stock Island dispatch to determine appropriate timing for Storage addition
3	Load Management – Create low-cost demand-side management program to meet peak and defer capacity additions	<ul style="list-style-type: none">• Completed Phase I member survey and data warehouse• Engaged FMPP leadership on preliminary program operational parameters, new FMPP procedure• Priority realignment towards fixed gas price management efforts



Drivers of FMIPA and Member Business How Are We Doing?

FMPA's Mission Unchanged, Important for Floridians

Lower Wages, Less Disposable Income, Higher Consumption



LOW-COST POWER

Customers Need It



RELIABLE POWER

Customers Expect It

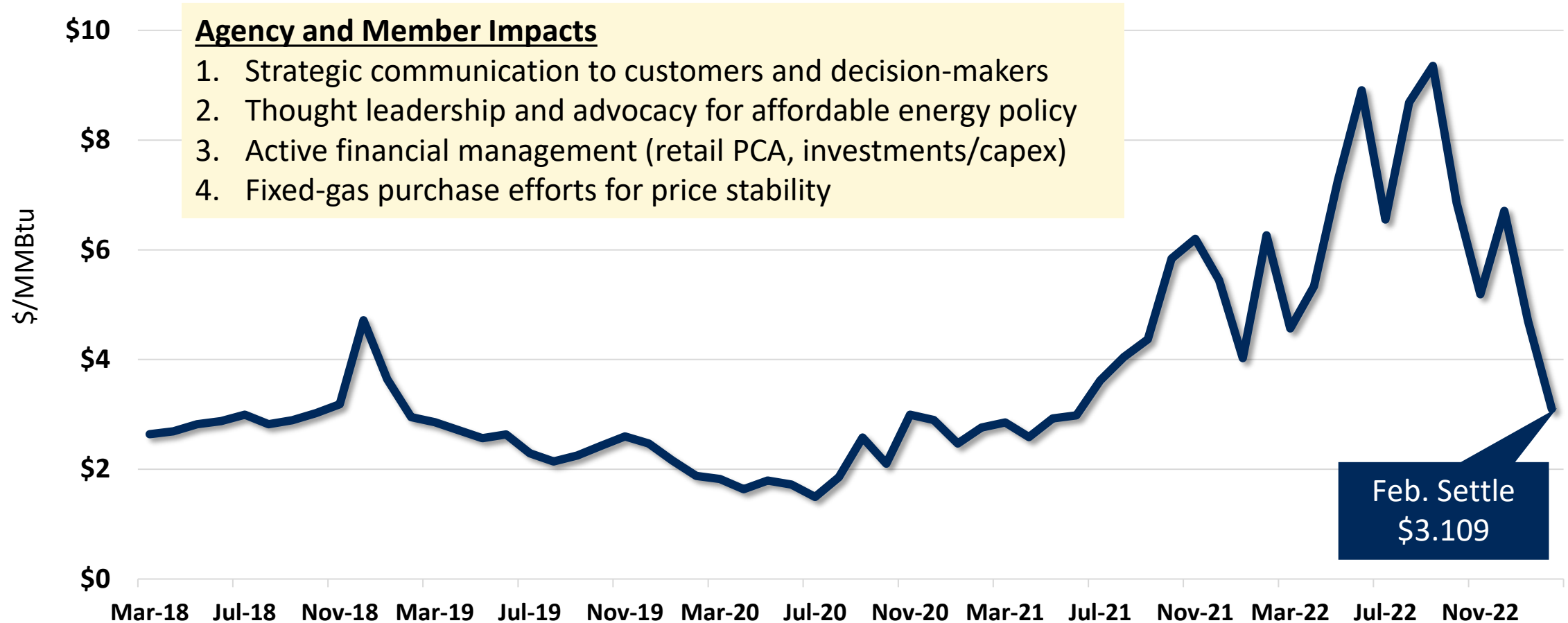


CLEAN POWER

Customers Want It

U.S. Natural Gas Prices Volatile Since Last Plan

Supply Growth Has Not Kept Pace with Normal Demand



Other Significant Challenges Since 2021

Macroeconomic Forces and Events Requiring Mitigation



- Price inflation for critical goods and services drives rate pressures and likely capital deferral
- Supply lead times for critical parts up to two years jeopardizing reliability
- Coal supply constraints lead to burn limits, further straining fuel switching
- Significant solar and battery cost increases, due to raw material shortage and lack of processing capability
- Generation team focused on Stock Island mitigation and managing GE on outages

Long-Term Municipal Challenges Remain

More to Achieve with Limited Resources

- Working to lower/stabilize cost of power and actively communicate while...
- Continuing to improve reliability of power system and managing staffing retention challenges
- Handling increased workloads (e.g., IT, compliance, new technology, communications)
- Responding to customer concerns and expectations (service options, day-to-day communications, and new technologies like EVs)
- Continued improvement in emissions reductions while keeping prices affordable
- Working for more balance (beyond gas and solar) in the portfolio on a longer-term basis
- Goal of increasing the member electric utilities' value to each of their communities and proactively communicating value
- Need to update customer understanding of relative importance of low cost, reliable and clean and similar strategic items

We Want Your Feedback

What do you feel are the biggest long-term municipal challenges?

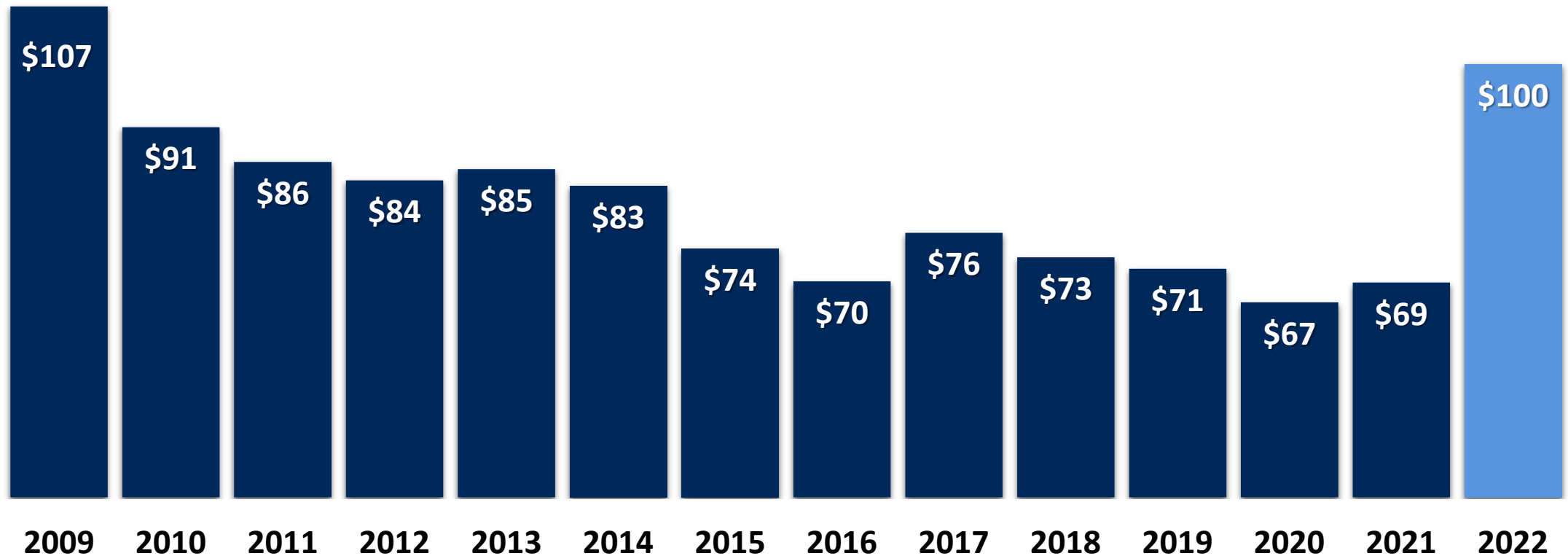
Please provide your feedback in the poll.

FMPA's Power Costs Up \$30 Per Megawatt Hour

First Time in Eight Years Above \$80

All-Requirements Project Power Costs

Actual cost incurred per 1,000 kWh

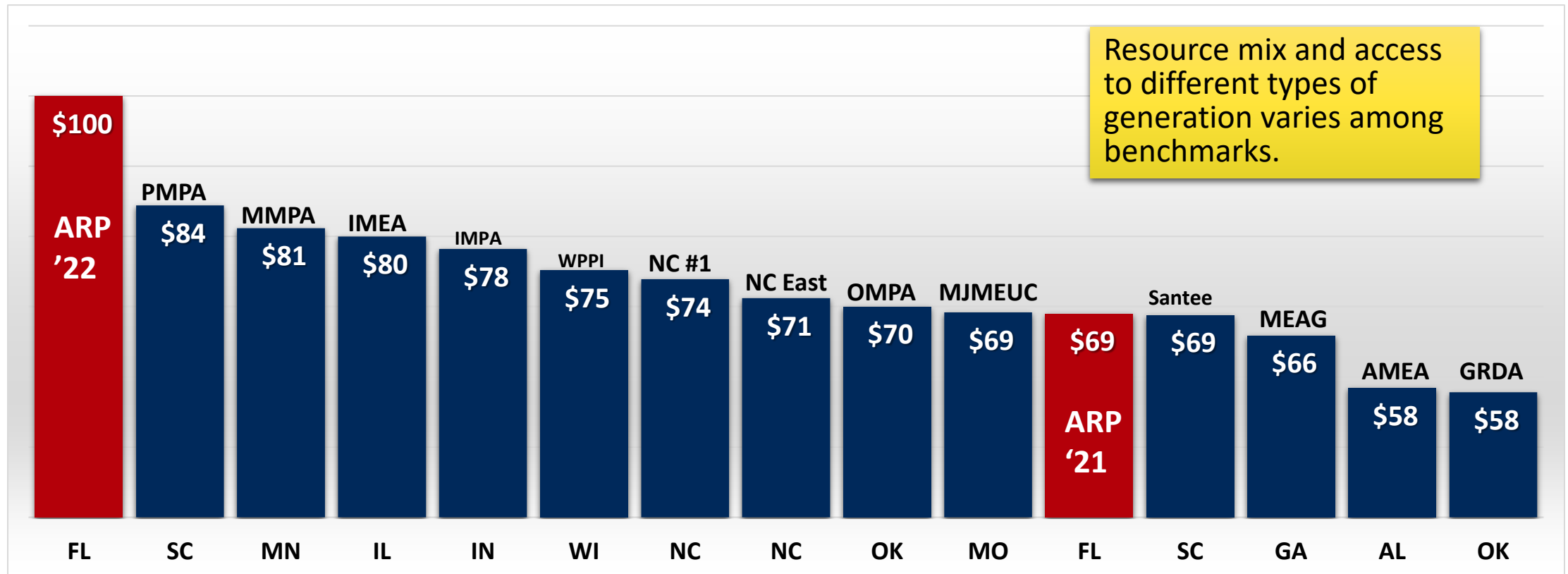


ARP Rates Competitive With Other JAAs

Fiscal 2022 Rates Up with Gas Prices, All JAAs Impacted

Annual Average Power Supply Costs by JAA (2021*)

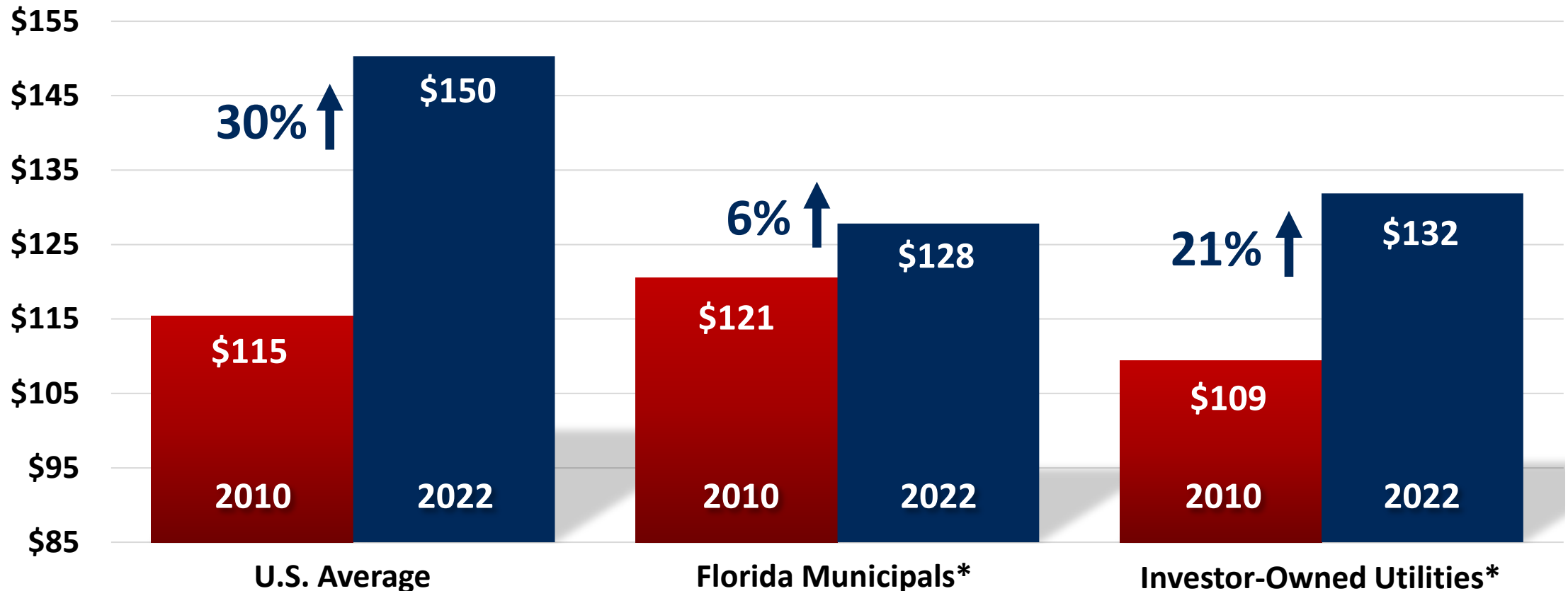
Average cost per 1,000 kWh billed. Source: PFM Financial, FMPA



Florida's Municipals Competitive

Municipal Rates 6% Higher than in 2010, U.S. Rates Up 30%

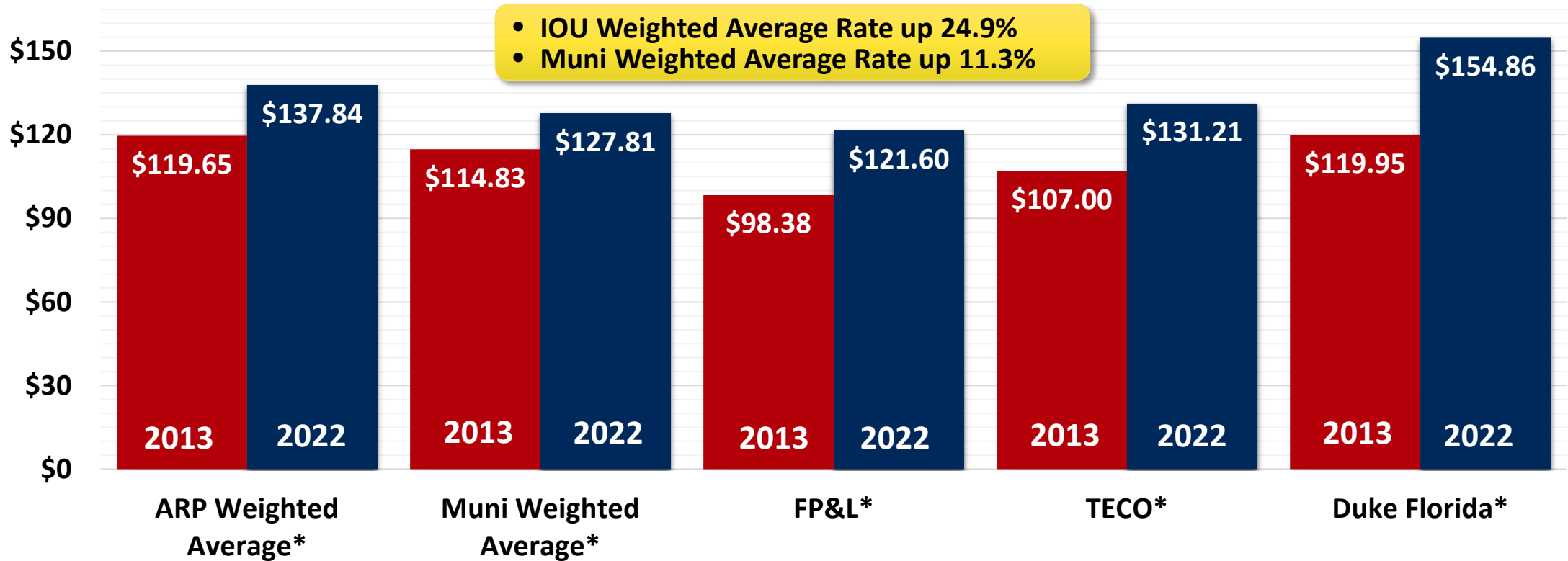
1,000 kWh Residential Bill Comparison



Retail Rates Competitive, Could Improve

Municipals Have Increased Less than Others

Residential Bill Comparison
Cost per 1,000 kWh, Calendar Year 2013 vs. 2022 Average Rate

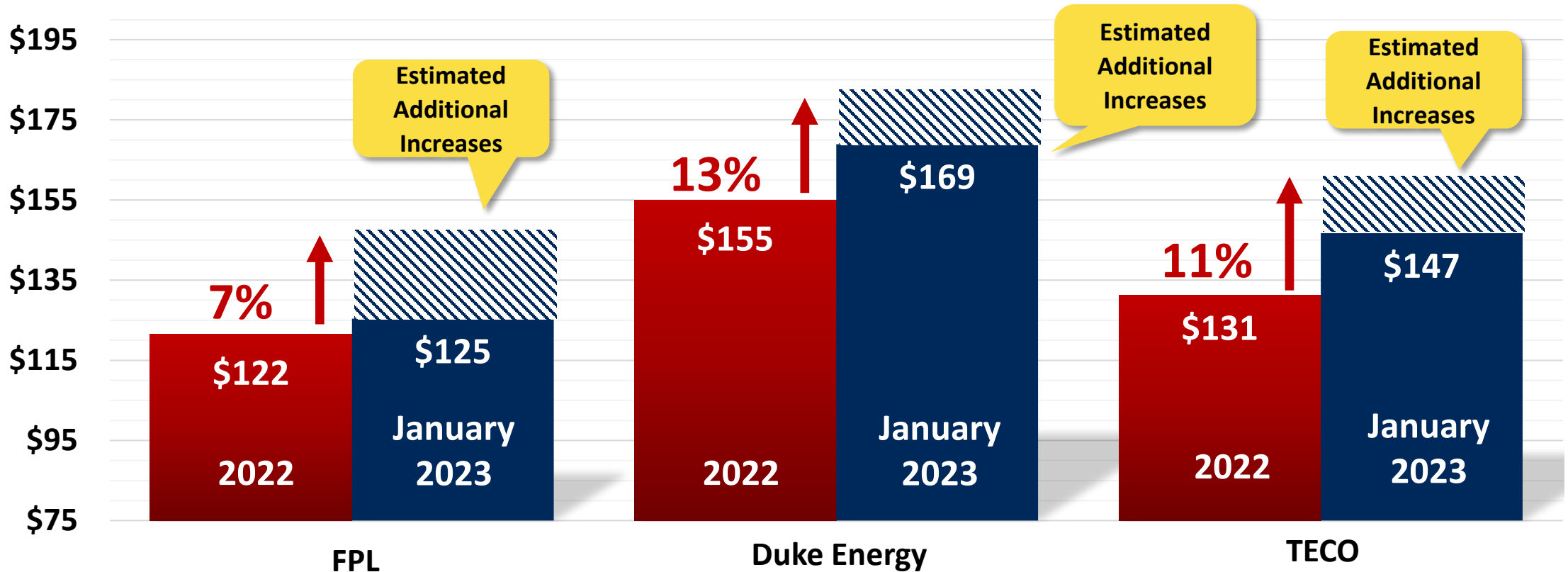


IOU Rates Increased 7-13% in January

Additional 10 – 20% for 2022 Fuel Under-Recovery in April

1,000 kWh Residential Bill Comparison

Today's Rates vs. January 2023 and Estimated* Spring Rates



*Estimated from publicly available information on potential range of under-recovered fuel. Assumes 21-month recovery period beginning in April 2023, which is subject to uncertainty and Public Service Commission approval.

Member Service Projects Increasing in Number

More FMPA Team Members Involved in Providing Services

July 2018	<ul style="list-style-type: none">Report to Board highlighted distribution assistance to members, noting <u>7 projects</u> for 5 cities
FY 2019	<ul style="list-style-type: none">Logged <u>27 member projects</u> in fiscal 2019 Management Goals
FY 2020	<ul style="list-style-type: none">Management goals logged <u>29 new member projects</u>, <u>11 cyber scorecards</u>, <u>5 SAIDI reductions</u>, <u>6 solar subscriptions</u>
Jan. 2020	<ul style="list-style-type: none">Adopted guidelines for chargeable services and have been engaged on <u>2 chargeable services</u> to date
Jan. 2021	<ul style="list-style-type: none">Tracking approximately <u>70 member-service efforts</u>
FY 2022	<ul style="list-style-type: none">Averaging ~100 active member-service efforts

TYPES OF SERVICES
Communications
Cybersecurity
Distribution Engineering
Distribution Reliability
Finance/Accounting
Financial Planning
Human Resources
Information Technology
Legal
NERC Compliance
Retail Power Delivery
Strategic Planning

Electric Reliability Improved throughout Florida

Munis Meet SAIDI Goal, Further Gains Now in Tactical Realm

Distribution Reliability Indices, Calendar Year 2021

Best Performance Highlighted in Green, Second Best Highlighted in Yellow

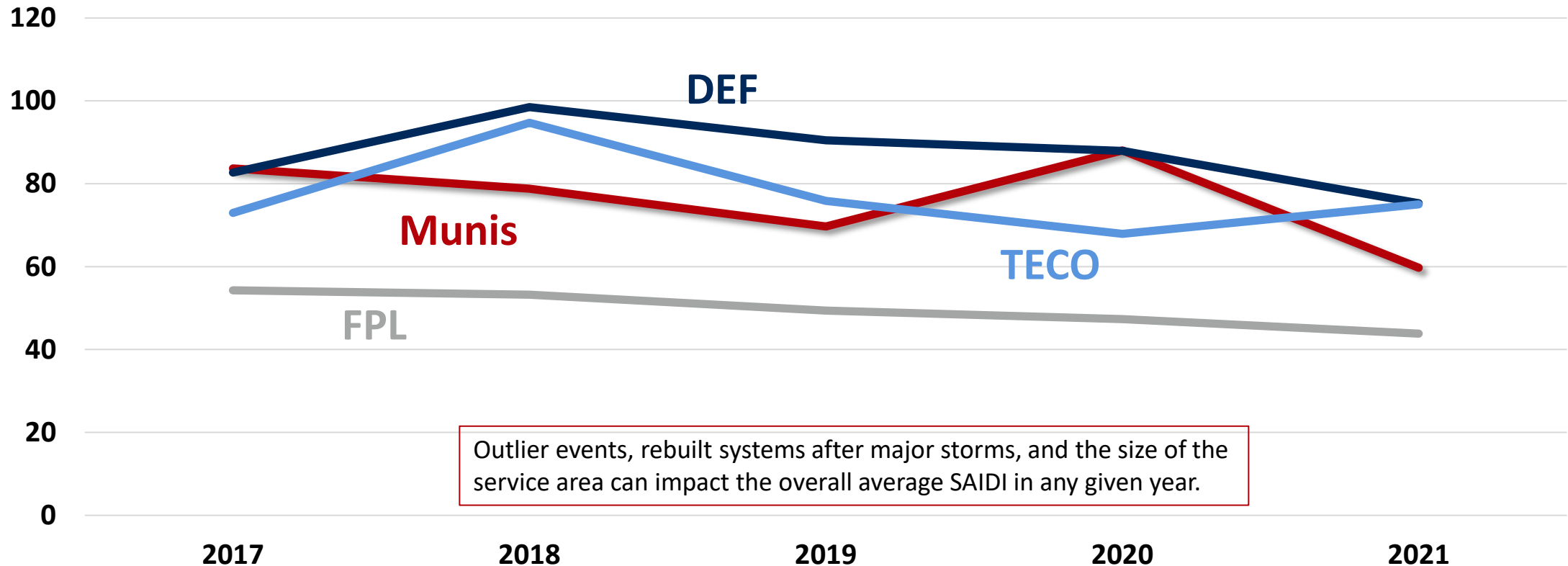
	Munis	FPL	TECO	Duke	Gulf	FPUC
Duration (SAIDI)	60	44	85	75	39	137
Restoration Time (CAIDI)	56	63	79	89	61	100
Frequency (SAIFI)	1.06	0.70	1.07	0.84	0.63	1.36
Momentaries (MAIFle)	2.89	2.31	6.50	4.60	1.60	n/a
Length (L-Bar)	104	183	175	144	98	103

SOURCES: Investor-owned data from Florida Public Service Commission. Municipal data weighted average for utilities in FMPA's Distribution Reliability Measurement Program.

Muni SAIDI Improved Over Time Towards Goal

Reliability Projects Support Maintaining and Improving SAIDI

All Municipal vs. Benchmarks SAIDI By Year



We Want Your Feedback

Which do you believe is the highest priority for FMPA:
Low cost, reliable or clean?

Please provide your feedback in the poll.

FMPA Focused on Lowering/Stabilizing Power Costs

Are Any Other Priorities Rising to the Strategic Level?

- FMPA's and Florida's costs up significantly due to natural gas prices
- Munis have competitive rates, IOUs lag on timing of fuel recovery requiring proactive communication to/by member cities, which FMPA supports
- We need to continue to advocate for policies to drive lower fuel costs
- Potential ways to lower power costs on annual basis:
 - Continue high availability of low-cost units \$8-10M?
 - Maximize asset value with significant Pool expansion \$3-9M?
 - Pursue more municipal 3rd party sales that bring added value to FMPA \$3-6M?
 - Act on additional pre-paid gas transactions at higher discounts \$1-3M?
- What can be done to bring more stable/predictable prices to members?
- Does not appear to be a need for additional Strategic Member Services?



IRP Phase I – 20-Year Supply and Demand Balance, Resource Competitiveness and Options



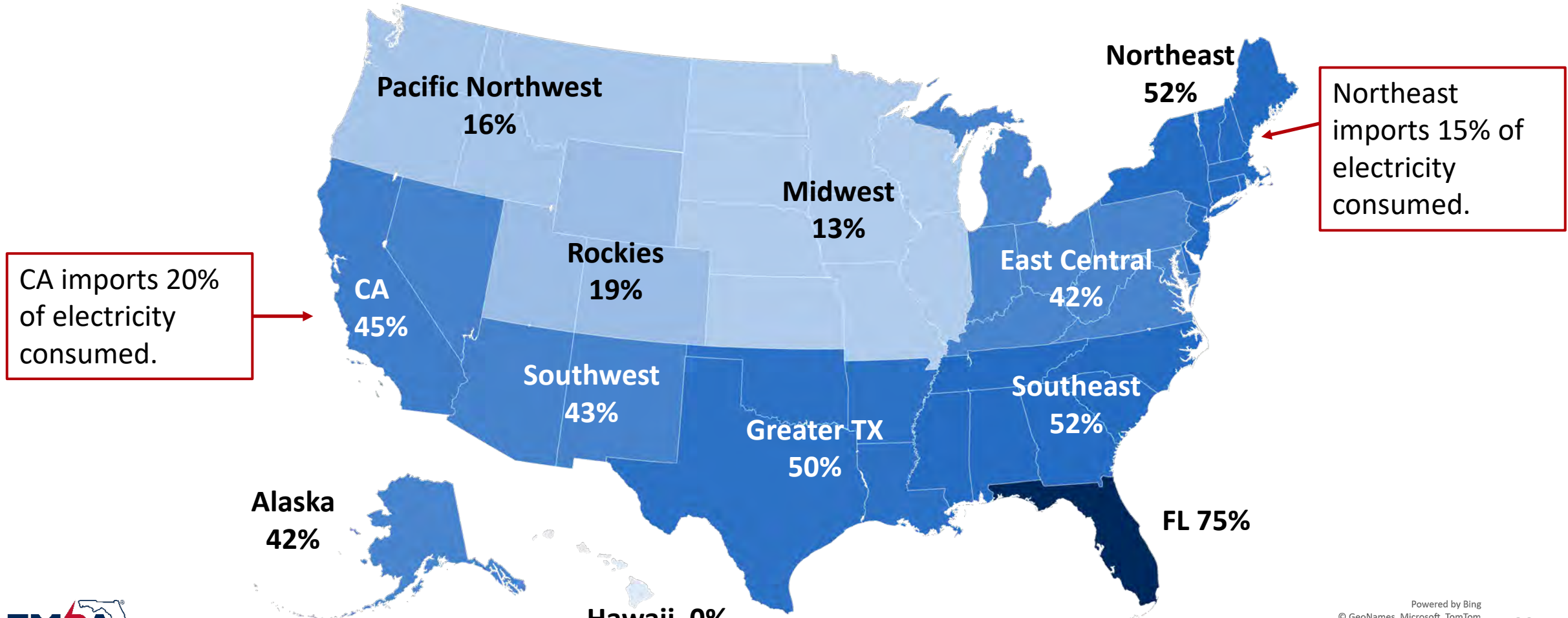
Energy Market Landscape



Florida is Most Gas-Dependent State in the Country

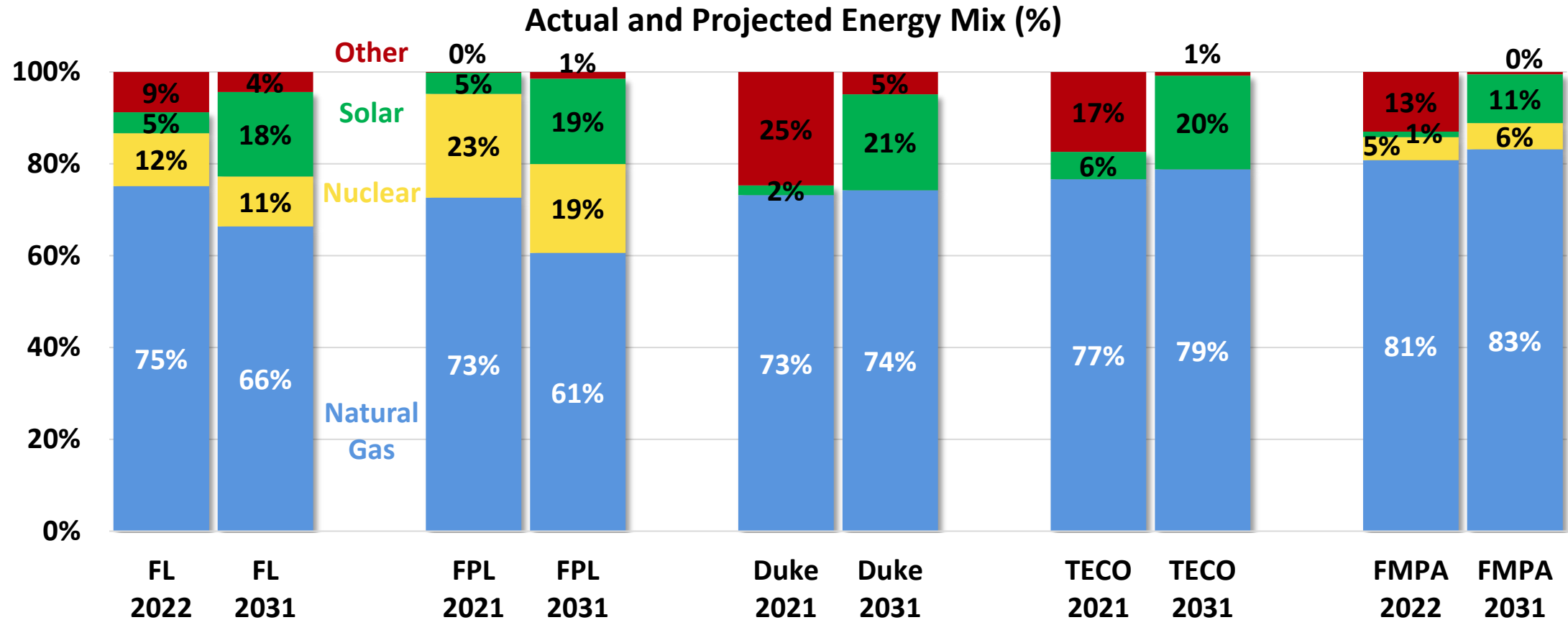
In Non-Wind or Hydro Regions, Natural Gas Dominant Fuel

Regional Electricity Generation from Natural Gas as Percentage of Total Generation (2022¹) (%)



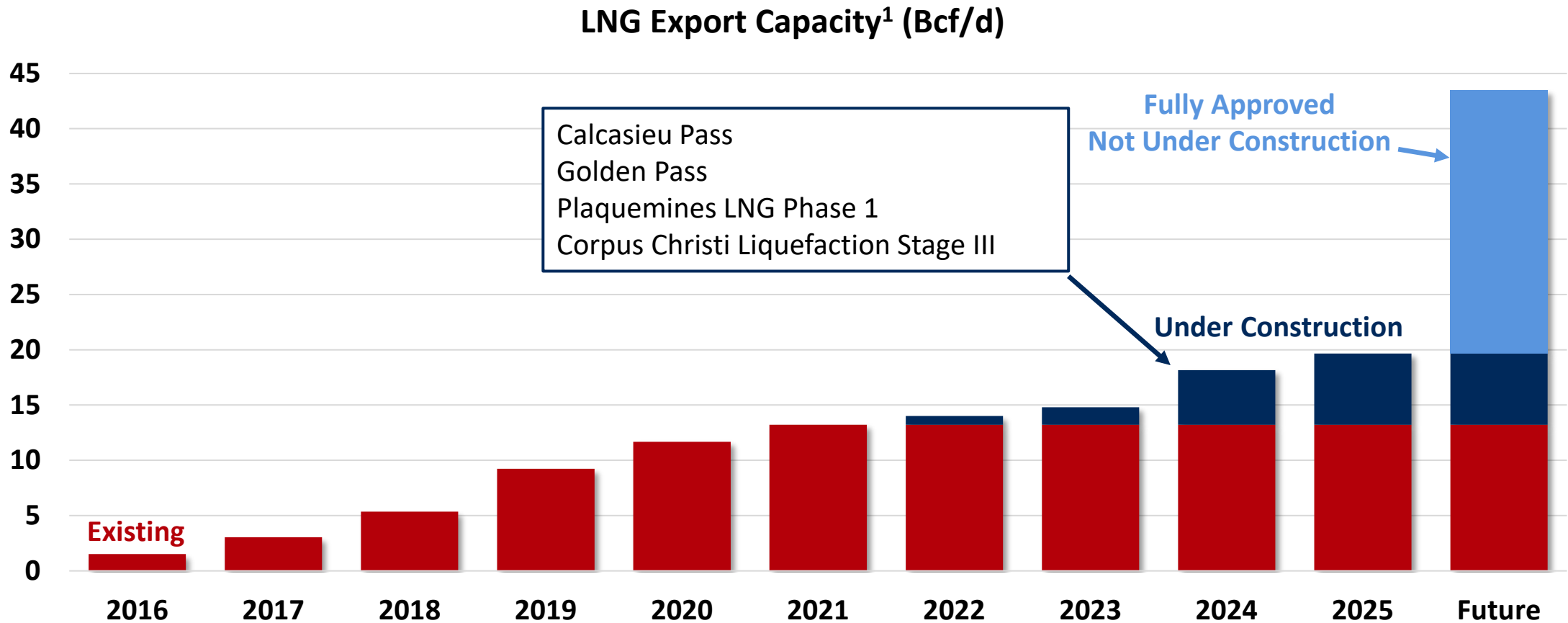
FMPA is More Gas Exposed than Others in Florida

Utilities Adding Solar, Storage and Some Gas



Approved Natural Gas Exports Set to Double

Higher Margins Abroad Expected to Drive LNG Expansion



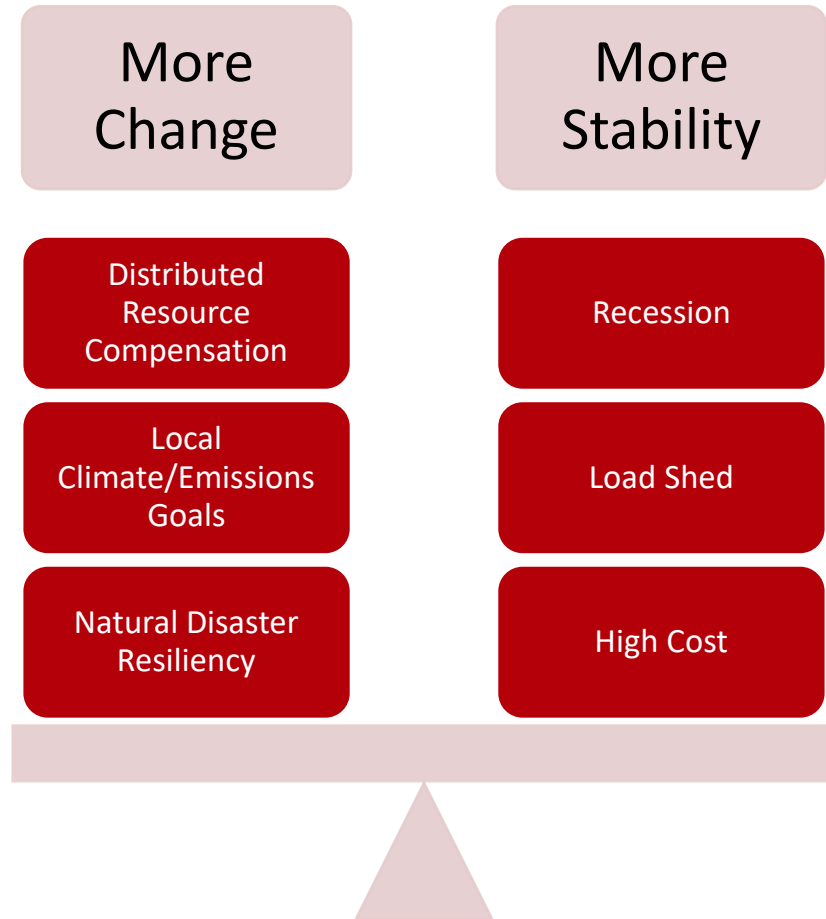
Policy Gridlock will Likely Continue

Incentive Driven Approach Only Successful Path

- No significant energy legislation expected at the Federal level with split government, so changes attempted through regulations
- Inflation Reduction Act extends/enhances incentives for solar and storage, but ...
 - Creates supply strains on raw materials such as steel, copper, nickel, cobalt, lithium, mostly produced outside the U.S., leading to cost escalation
- Administration support of international petrol production does not bode well for enhancing future domestic supplies
- Florida region solar installations subject to increasing permitting challenges and construction/operating costs
- FERC/NERC focus on cold weather resilience and energy sufficiency, may lead to some deferrals in existing resource retirements
- EPA continuing to pursue further rulemaking regarding regulation of GHG emissions from fossil-fired electric generating units

Customer Sentiments Interplay with Cost, Reliability

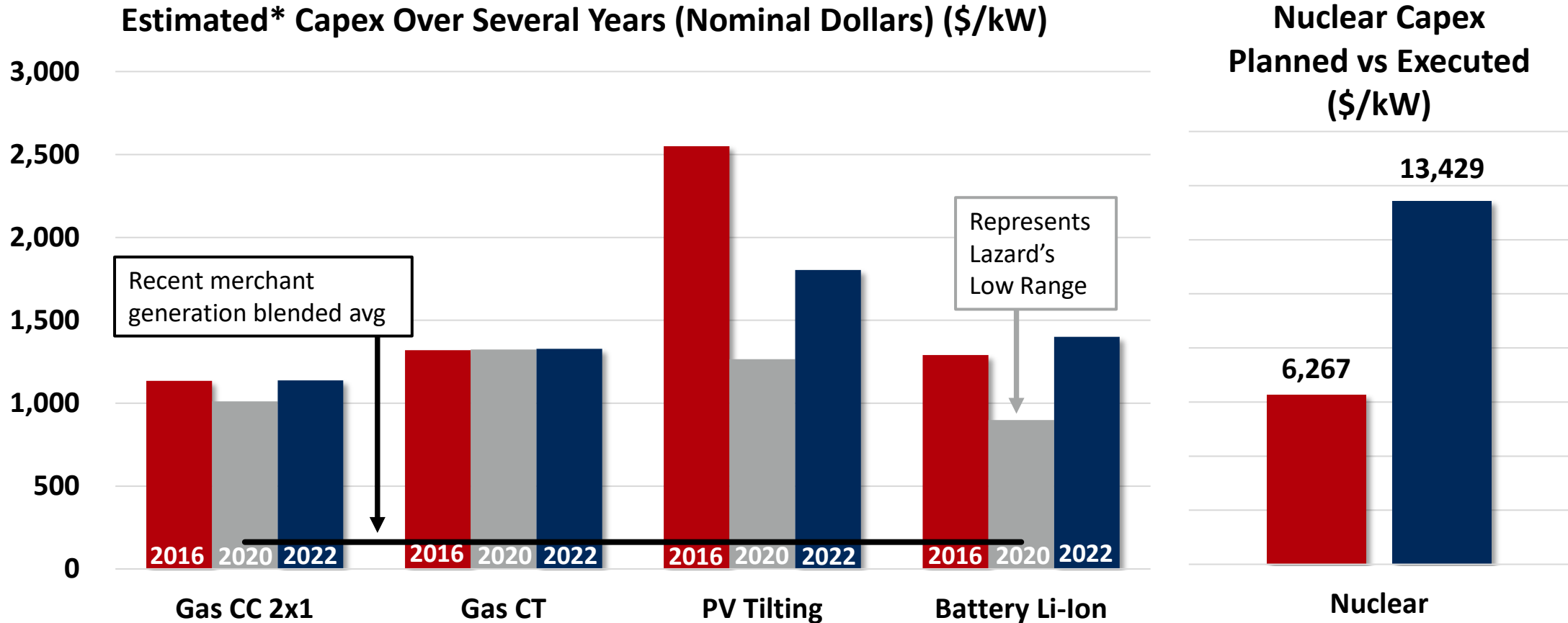
Preferences May Be Impacted by High Bills, Load Sheds



- Customer preferences for resource types and utility services influenced by many factors, but trending towards more change
- Pace of change likely to be balanced by key realities
 - Higher rates and economic contraction create standard of living challenges
 - Significant events (e.g., Winter Storms Uri & Elliott, California/other rolling blackouts) challenges views of resource adequacy
- Important to balance customer desires with reliable service and cost

Cost Increases for Resources Post-COVID

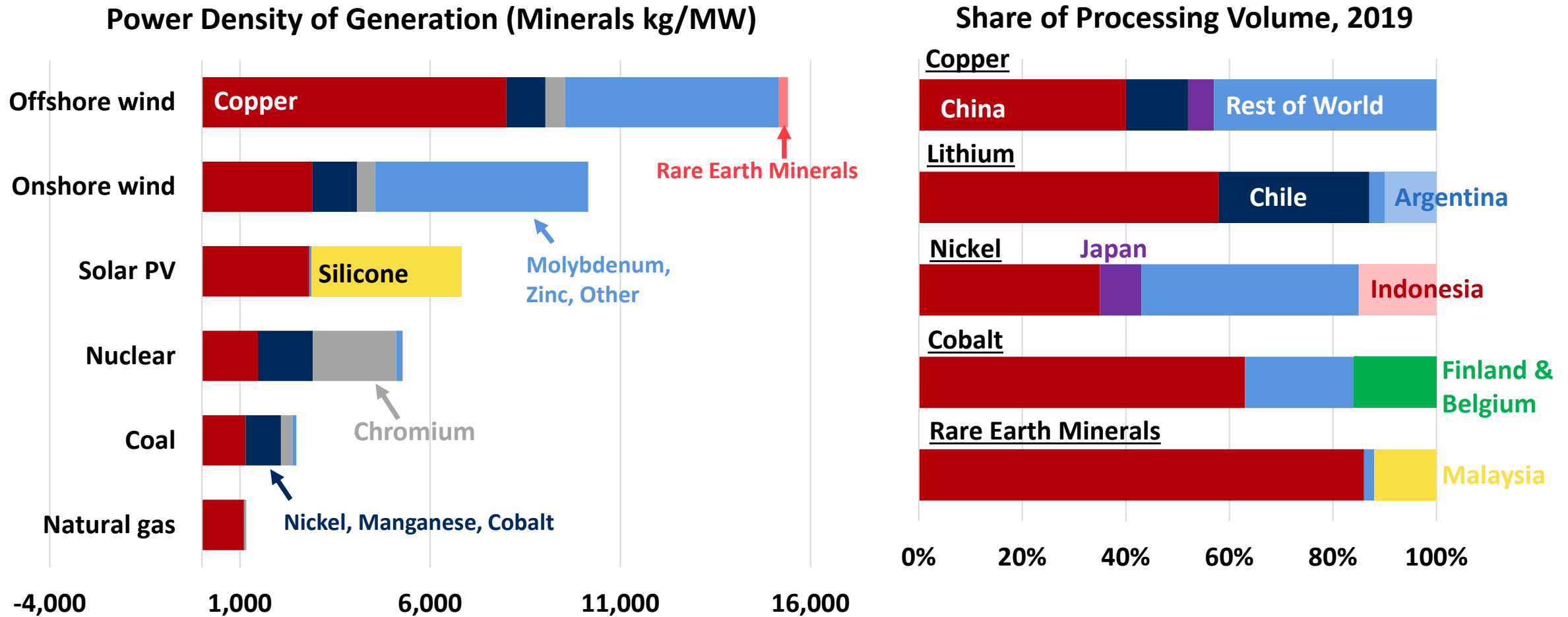
Raw Materials and Balance of Plant Costs Increasing



*2016 solar capex from Black and Veatch Report for generic assets. 2022 based on publicly available ranges. Battery costs (historical) derived from Burns and McDonnell market assessment for FMPA and Lazard. 2022 based on publicly available ranges. Gas costs derived from Black and Veatch, EIA, and Burns and McDonnell estimated ranges. Nuclear is estimated from Vogtle project costs. All costs shown subject to uncertainty.

Lower Power Density, Greater Material Intensity

China Dominates Mineral Pipeline for Renewables, U.S. Absent



Cost Increases Likely to Continue for Some Time

Developed Economies Push on Energy Transition, Increases Prices

- Input cost increases may well continue for years to come as the world tries to transition its energy from fossil fuels
 - Massive increases in the amounts of new steel, copper, nickel, cobalt, lithium and other rare earths, which are produced outside the U.S.
 - Still using fossil fuels to mine and process them, but in other countries
- Siting of new renewables projects will be getting much harder as local communities weigh in on the dramatic change of the “rural” areas
- At least 106 community rejections, bans or moratoriums for solar projects and at least 368 for wind since 2015*, and more are going to do it

There is No Risk-Free Future Resource Option

Seeking Feedback on Advancing Nuclear, Other Conversations

Resource Option	Key Strengths	Key Weaknesses/Risks
Slice of Large-Scale Nuclear	<ul style="list-style-type: none"> Emissions free Stable costs w/long lifespan 	<ul style="list-style-type: none"> Extreme capital cost uncertainty Delayed construction/regulatory
Small Modular Nuclear	<ul style="list-style-type: none"> Emissions free w/long lifespan Scalable for 100% ownership 	<ul style="list-style-type: none"> High capital cost uncertainty Not viable for ~10-15 years
New Solar or Solar + Storage	<ul style="list-style-type: none"> Fixed price energy model Only near-term diversity to gas 	<ul style="list-style-type: none"> Intermittency/ancillary impacts Storage high cost to shape PV
New Storage	<ul style="list-style-type: none"> ITC/PTC eligible as standalone Could defer other costly adds 	<ul style="list-style-type: none"> High holding cost vs. duration Still evolving past Li-ion?
New CC	<ul style="list-style-type: none"> Dispatchable, reliable baseload Far lower emissions vs. coal 	<ul style="list-style-type: none"> Surplus Energy, permitting/reg. Large n-1 vs. load net of PV
New Gas Peaking/Fast-Ramp	<ul style="list-style-type: none"> Best able to provide PV backup Smaller size enhances reliability 	<ul style="list-style-type: none"> Permitting/regulatory Higher heat rates and \$/kW
Existing Merchant Asset(s)	<ul style="list-style-type: none"> Low/discount cost to acquire Permits to operate already 	<ul style="list-style-type: none"> Remaining useful life bounded Unknown major capex

We Want Your Feedback

What resource types should we make sure to evaluate
in Phase II of the IRP?

Please provide your feedback in the poll.

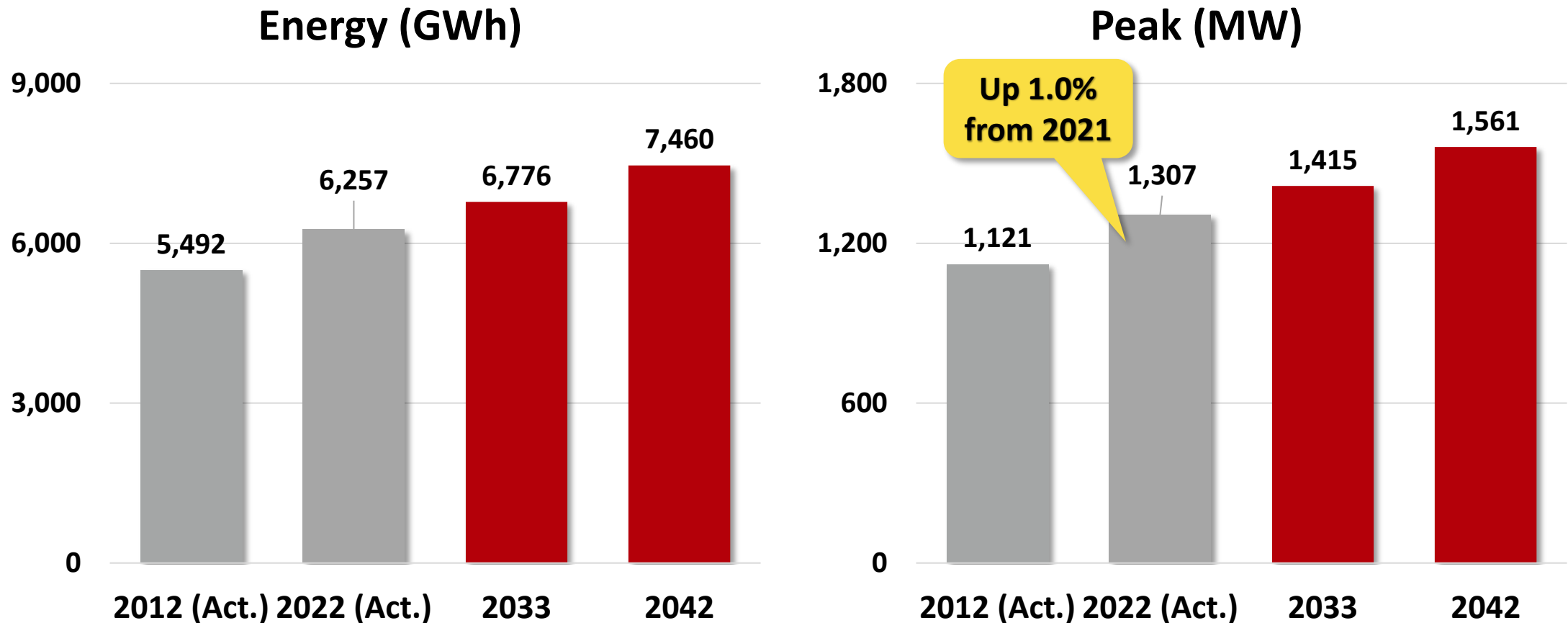


Future Load Growth



ARP Energy and Peak Grow ~1% Per Year¹

Post-Recession ('12-'22) Growth At ~1.5% Per Year



Some ARP Members Growing, Some Not

Load Growth Driven by New Residences

Member	Weather-Adj. ¹ ('13-'22) FY	Actual Growth ('13-'22) FY	FY 2022 Actual NEL (GWh)
Newberry	3.4%	3.7%	45
Kissimmee	2.2%	2.8%	1,779
Bushnell ²	1.2%	1.8%	59
Ft. Pierce	1.0%	1.3%	599
Leesburg	0.9%	1.3%	527
Ocala	1.1%	1.2%	1,377
Ft. Meade	0.5%	1.0%	44
Keys	0.6%	0.7%	783
Clewiston	-0.1%	0.4%	104
Jacksonville Beach	0.1%	0.3%	738
Starke	-0.3%	-0.1%	68
Green Cove Springs	-0.5%	-0.3%	110
Havana	-0.6%	-0.4%	24

Some Other Members Growing, Some Not

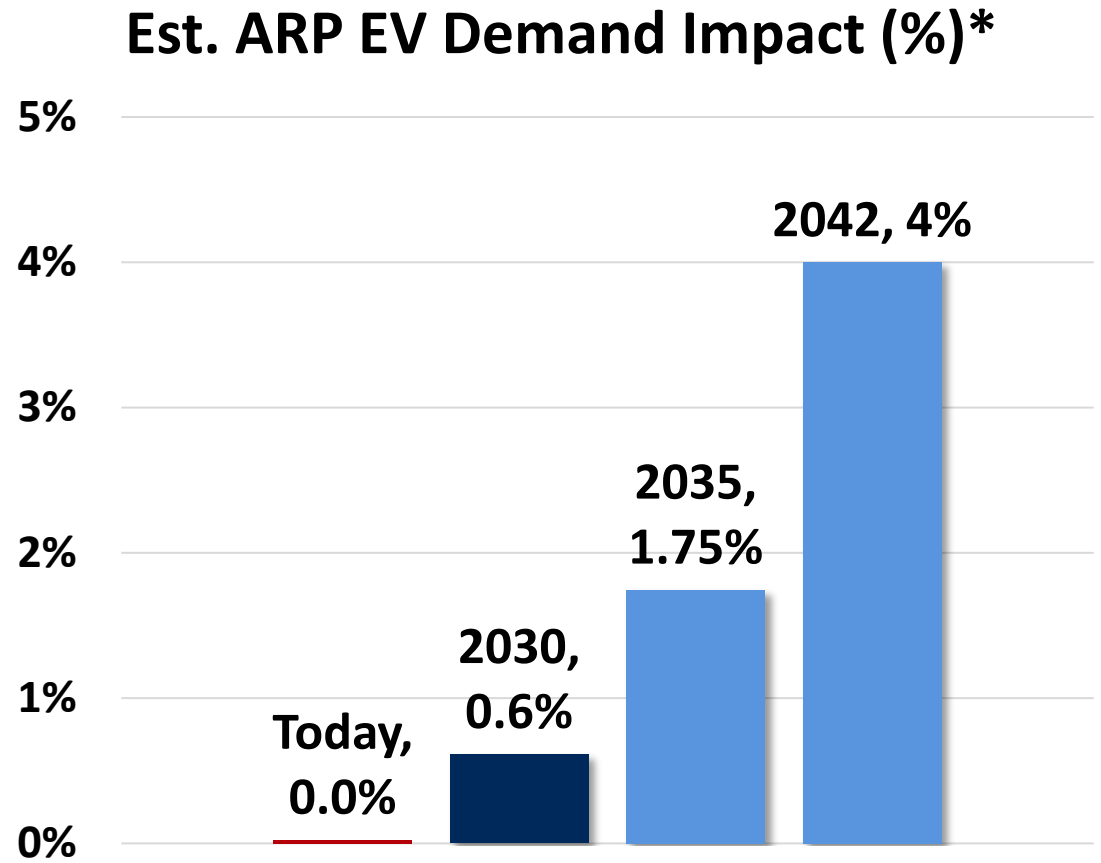
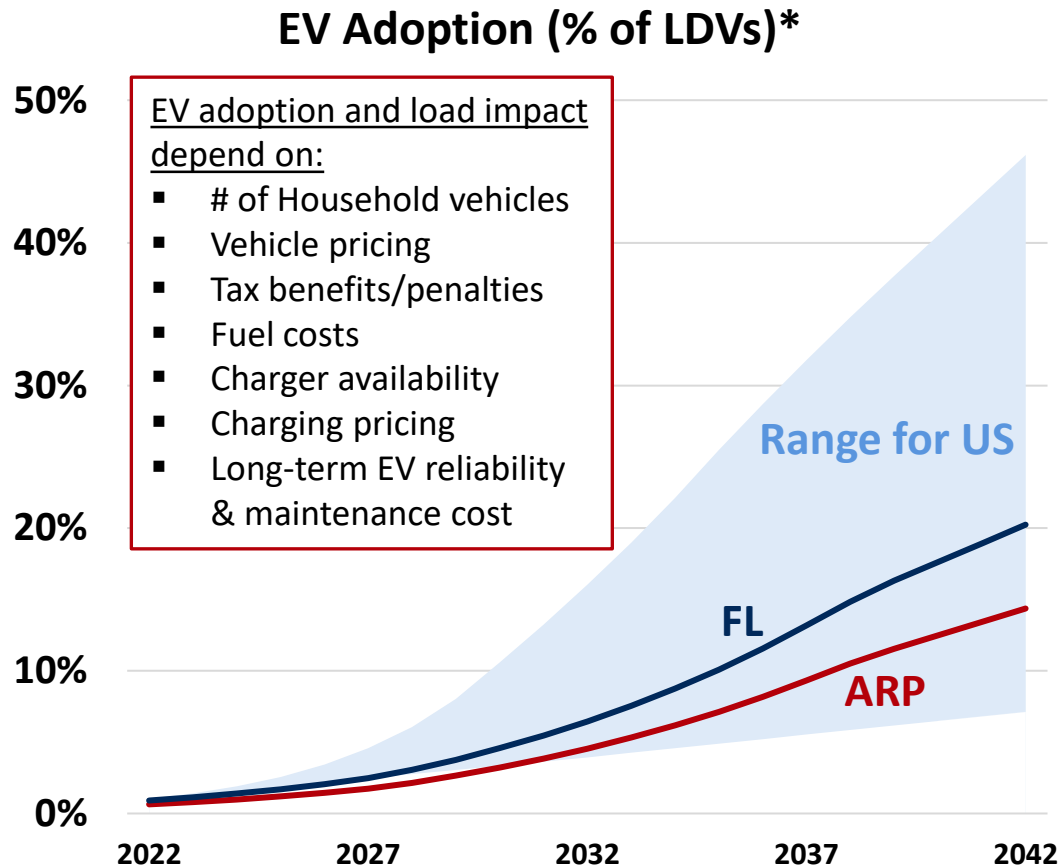
Growth Has Moderated Since 2019

Utility	Sales Growth CY 2014-21
Alachua	1.7%
Bartow	1.4%
Blountstown	-1.9%
Chattahoochee	-0.2%
Gainesville	0.7%
Homestead	2.0%
Jacksonville	0.4%
Lake Worth Beach	2.5%
Lakeland	1.4%

Utility	Sales Growth CY 2014-21
Moore Haven	3.0%
Mount Dora	0.6%
New Smyrna Beach	1.9%
Orlando	1.4%
Quincy	0.4%
Tallahassee	-0.2%
Wauchula	0.0%
Williston	1.1%
Winter Park	0.0%

EVs Could Increase ARP Load ~4% in Next 20 Years

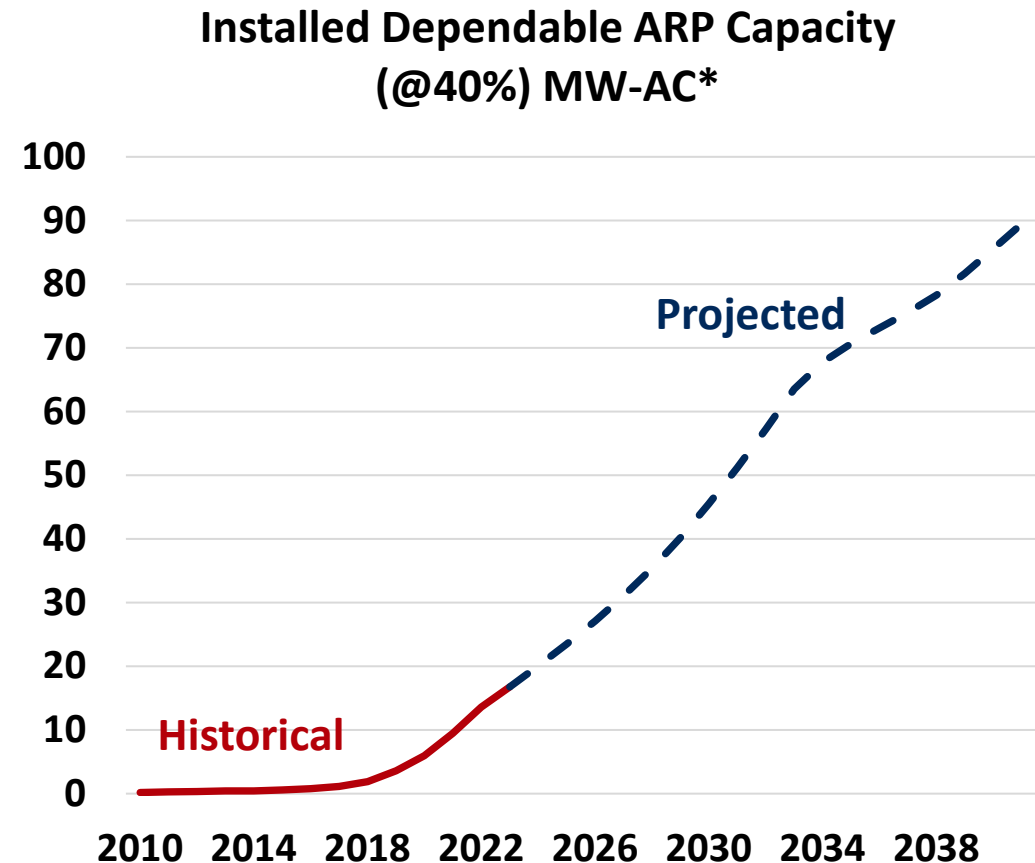
Concentration of Charging a Distribution-Level Concern



Distributed PV Could Offset Energy ~4% In 20 Years

Incentives and Market Conditions Continue to Drive Adoption

- Current forecast assumes ~4% energy offset from roof-top solar by year 20
- Net peak hour impacts lower, some Members have little to no roof-top
- Potential forecast drivers:
 - Electricity prices and rate structures
 - Panel cost increases, possible offset through tax credits
 - Home insurance risk premiums for panels
 - Better data on long term performance and maintenance costs from early adopters



*SOURCE: nFront Consulting LLC



Supply and Demand Balance



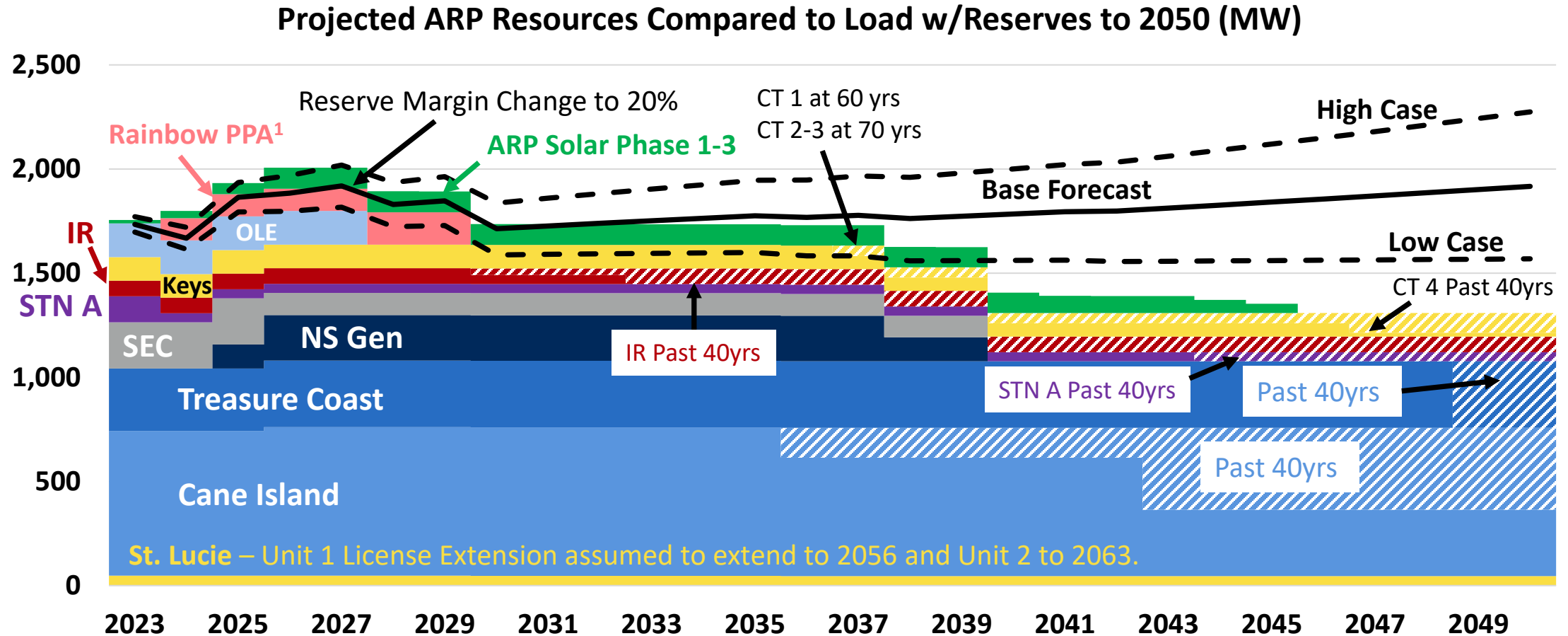
IRP Horizon to 2050 will Require New Resources

ARP Workhorse Plants Should Operate 40 Years

- Northern Star/PPA acquisitions fulfill ARP capacity needs through 2030 - '35, creating need to manage a potentially doubling of generation sites
- ARP has well managed, efficient and clean workhorse resources that, barring regulatory intervention, should operate 40+ years, providing greater value as debt paid off in 2032
- St. Lucie nuclear licensure extension would extend life beyond 2050
- Through 2050, ARP will require (i) new peaking solutions, (ii) replacement of Stock Island resources, (iii) intermediate replacement options and, (iv) likely new baseload resources late in study period
- IRP will focus on key incremental resource decisions that impact 2035 and beyond timeframe
- ARP does not have unilateral control over certain jointly owned peaking resources
- In Phase 2, examination of all viable resource options to be considered that balance cost, reliability, and emissions goals

ARP Projected Position through 2050

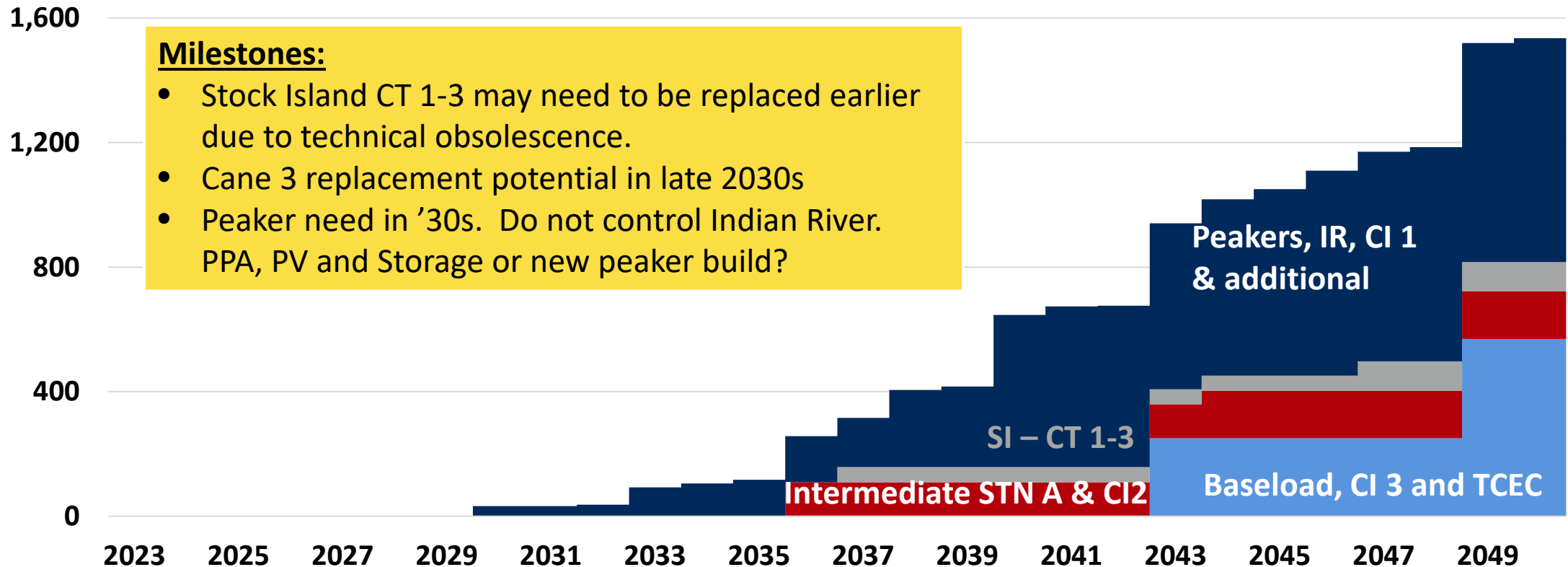
Asset Replacement Decisions Not Expected for 10 Years



ARP Workhorse Assets Still Have Long Life Ahead

Key Incremental Decisions through 2035 to Be Explored

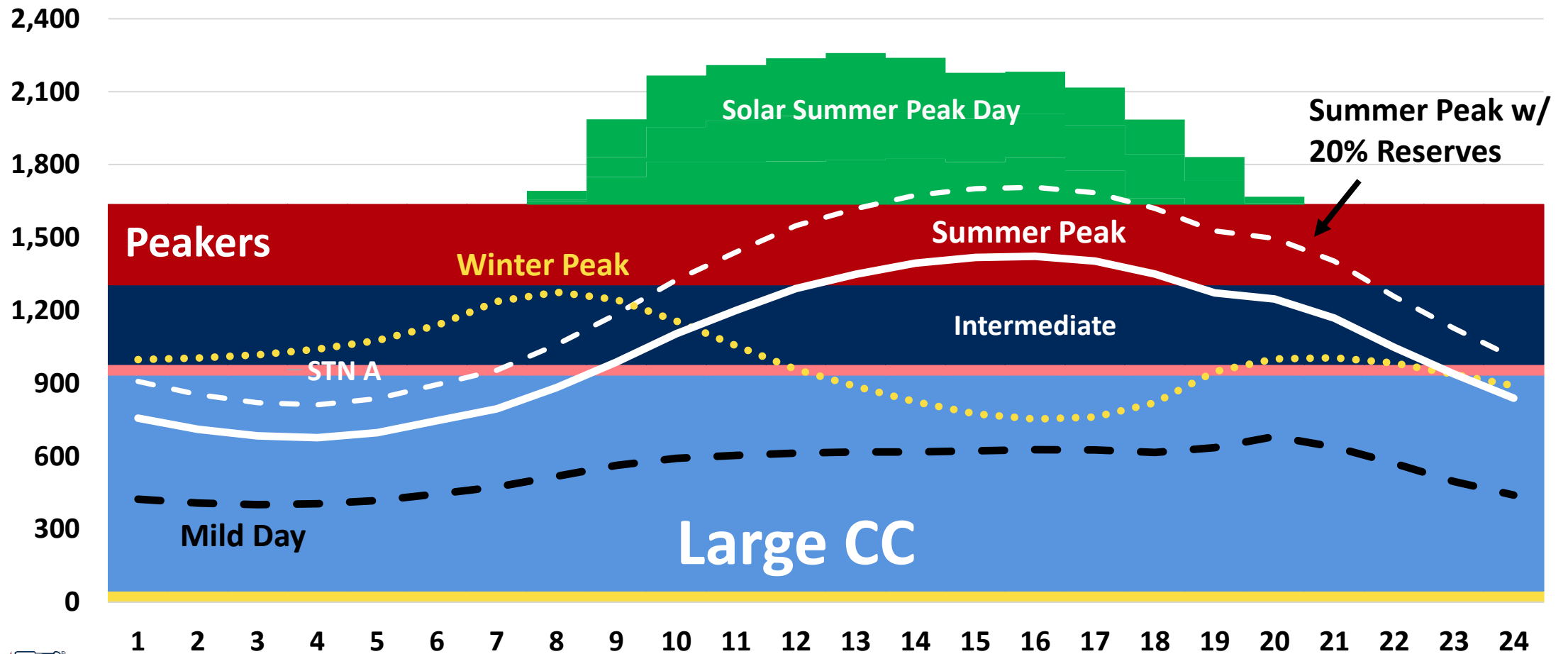
Projected ARP Need by Generation Type (MW)



Dispatchable Units Sufficient in the Mid-Term

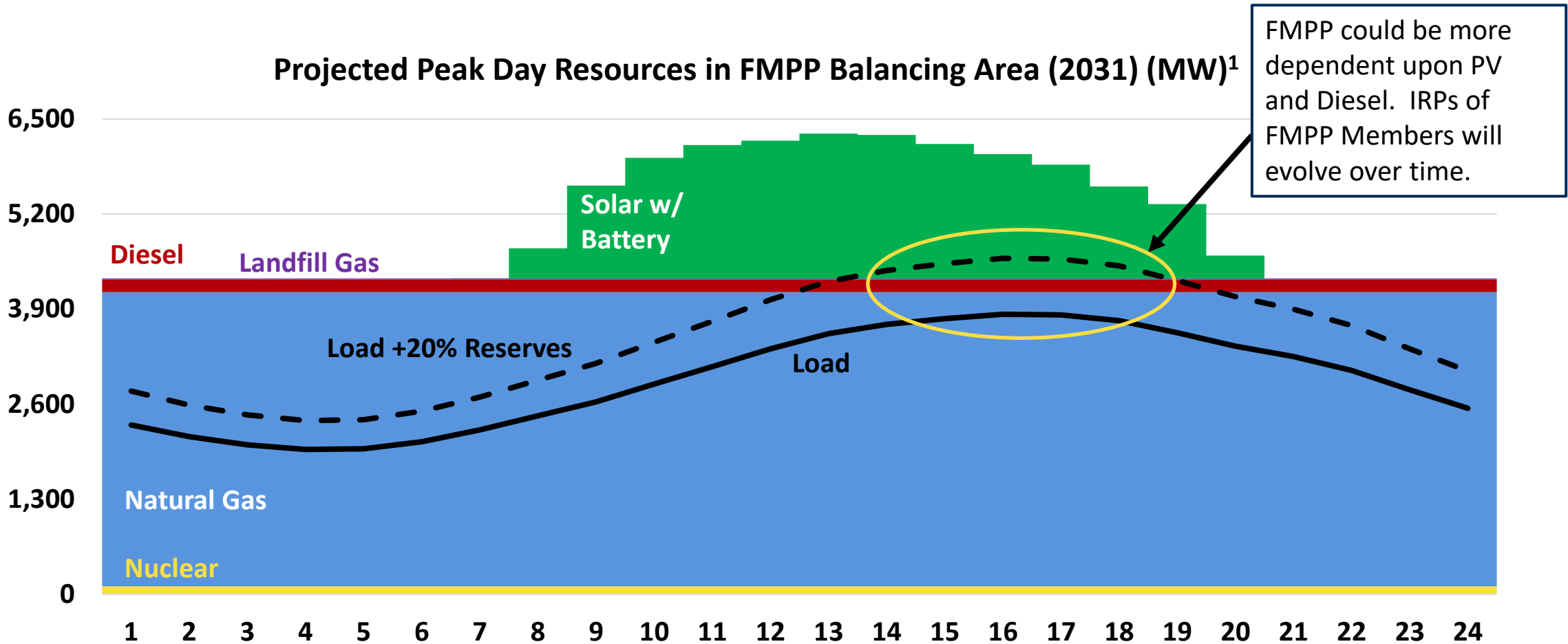
Hottest Day Likely High Solar, Must Actively Manage Reserves

Projected FMPA ARP Resources Compared to Load (2031) (MW)



FMPP More Renewable Dependent by 2031

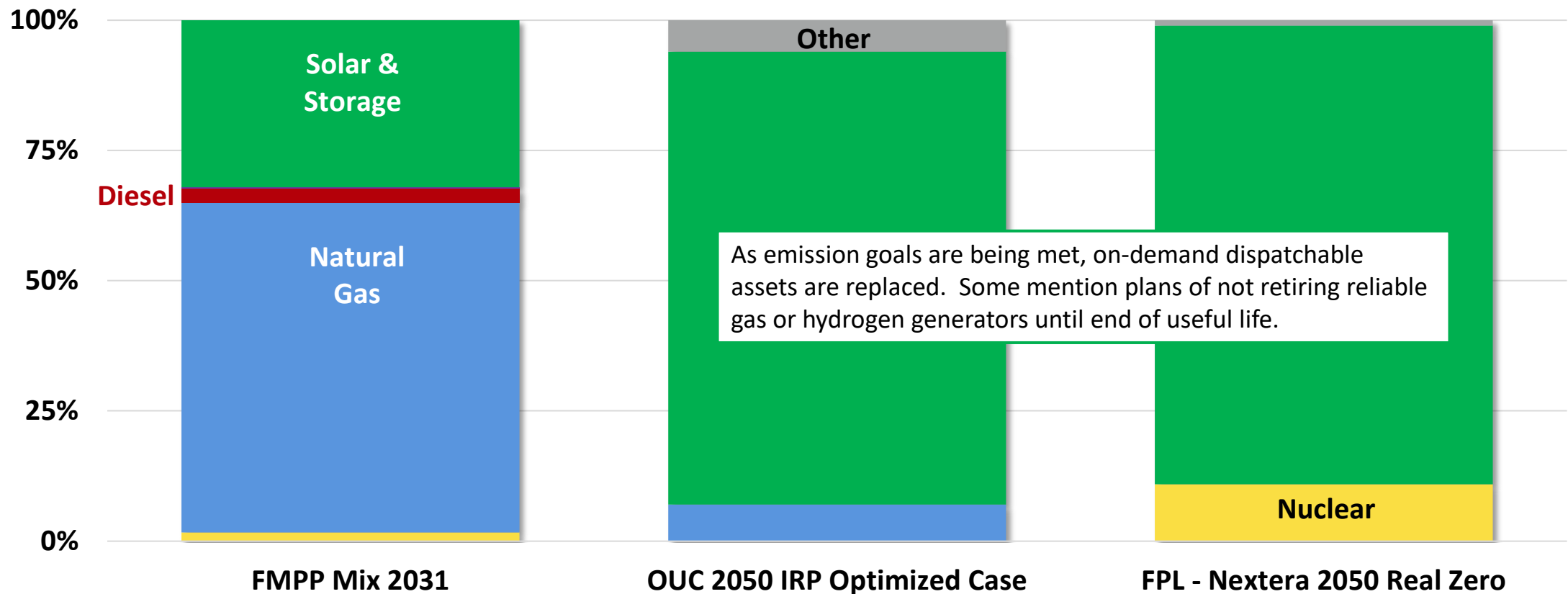
As Intermittent Resources Build Out, Must Plan For Reliability



Traditional Assets Displaced by Renewables

Reserve Margins May Be Challenged in Peak Conditions

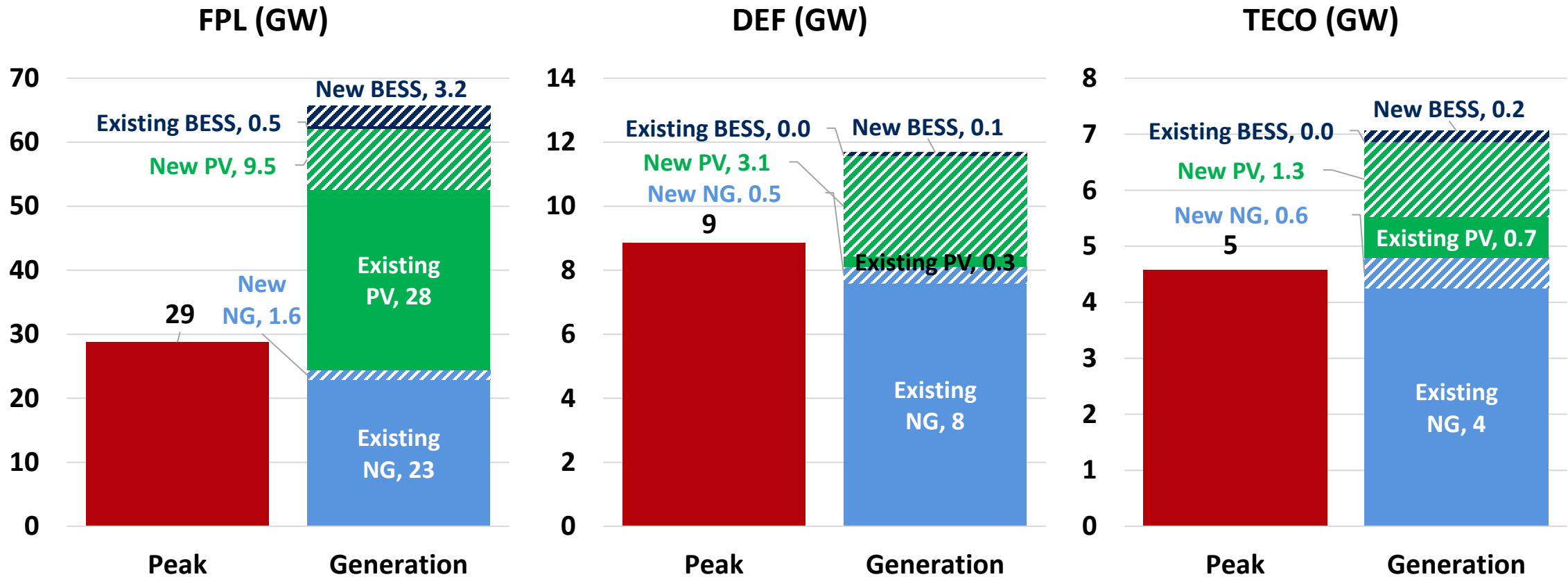
Projected Capacity Mix 2031 & Beyond (%)¹



1 – Nextera (FPL) projects the framework for Real Zero by 2050 will drastically change as new technology arrives and government incentives are active through the 2040's. Will not prematurely retire natural gas units and may convert to green hydrogen.

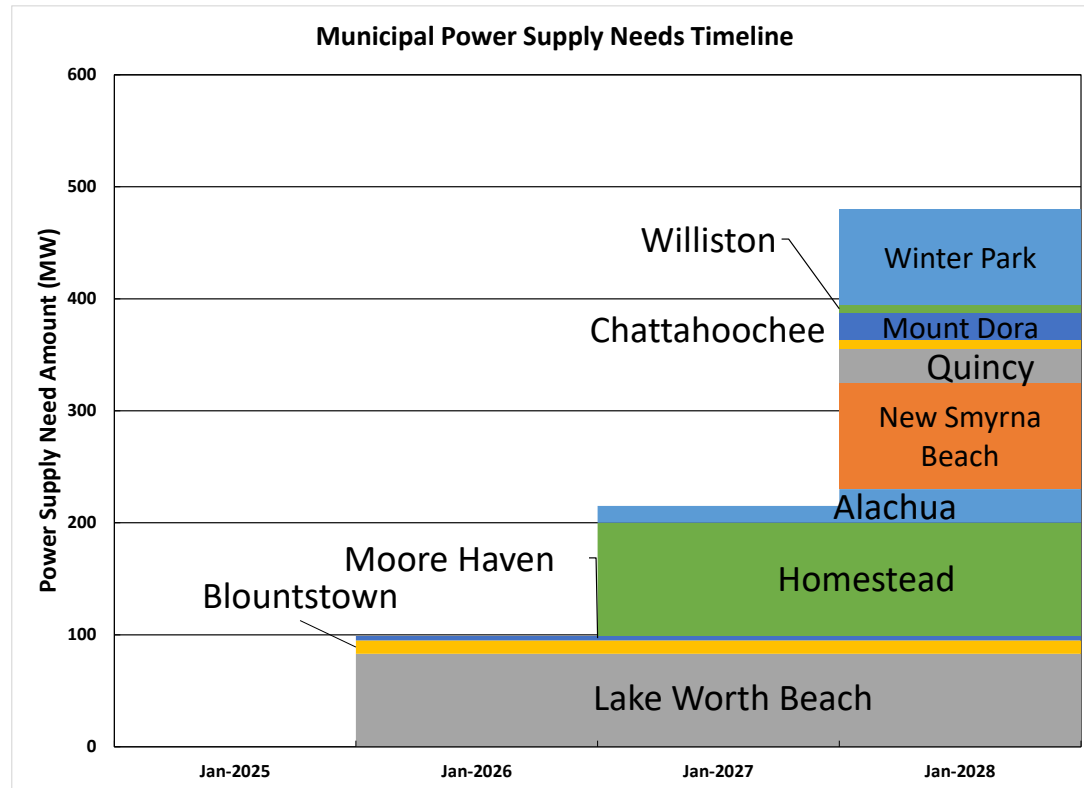
IOUs Upping PV, Hedge Against High Gas Next 10 Years

Still Adding Natural Gas, While Starting PV/Storage Overbuild



Municipals will Seek Nearly 500 MW by 2028

Could Influence IRP Supply Decisions in Mid-Term



- Municipals' existing mid-term arrangements with ARP and others begin to expire and require new arrangements by mid-decade
- Could present opportunity to strategically add resources to support long term with near to mid term sales offsetting costs
- Seeking feedback on securing resources several years before long term need if cost offsets are available

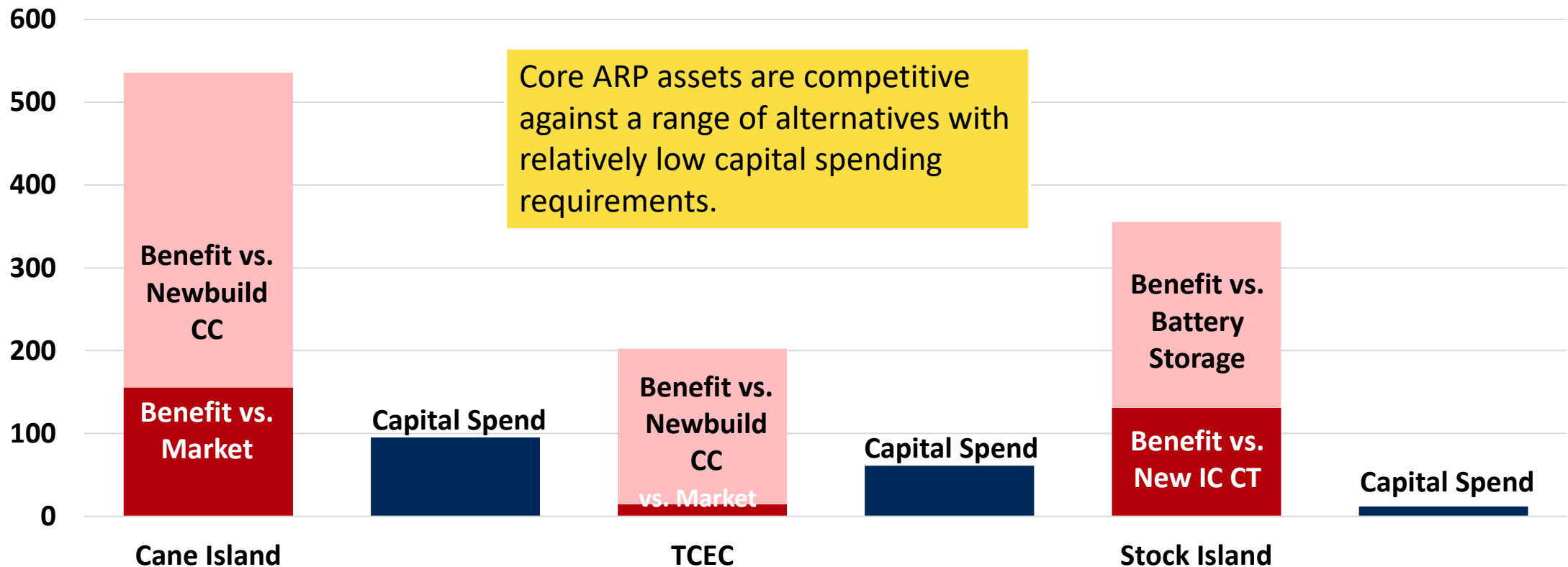


Existing Resource Competitiveness and IRP Phase 2 & 3 Resource Options

Existing Resources Competitive Next 10 Years

IRP Phases 2 & 3 Will Extend Evaluation to 20 Years

10 Year Benefit vs Capital Spend¹ (\$M NPV)

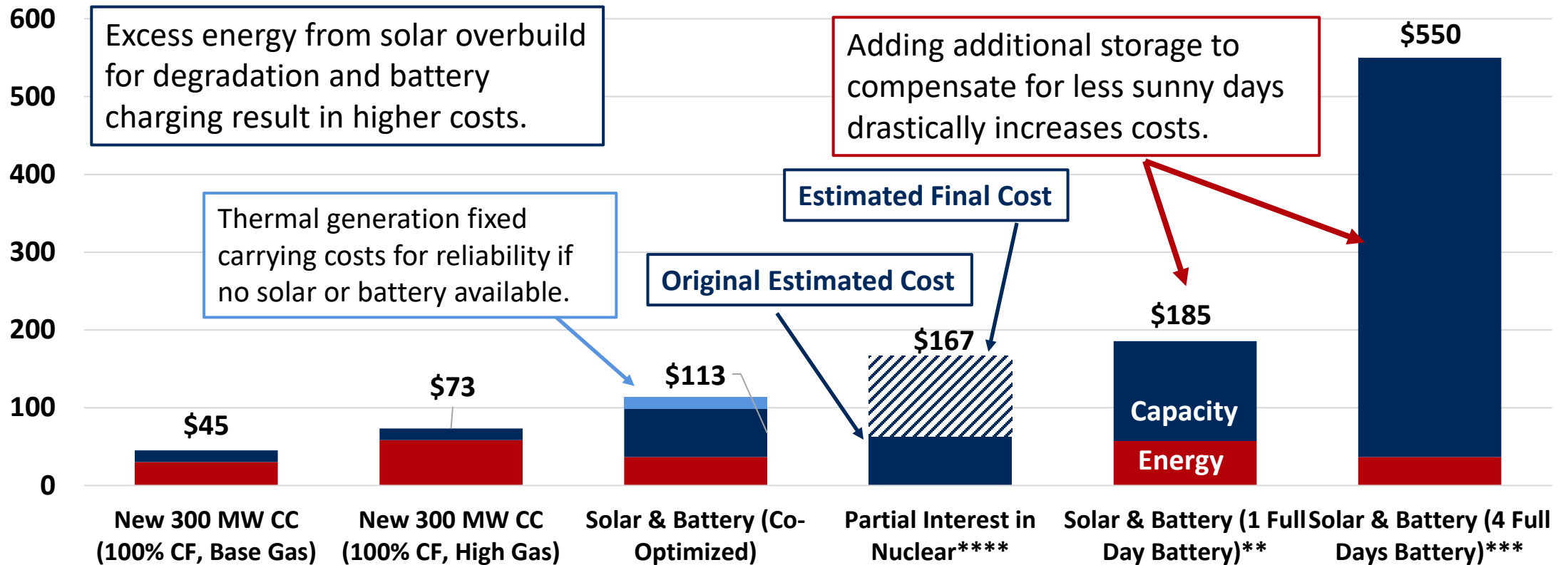


1 – Debt is sunk and not included in analysis. Capital spend shown is included in unbundled go forward cost of operation by site.

Difficulty Replacing Year-Round Resource with PV

Far Lower Capacity Factor Plus High-Cost Storage to Shape

Levelized Total Cost Over 20 years (\$/MWh)



*Base case for new CC based on forward gas curve. High gas case reflects sustained twice as high prices. Assumes no new gas transportation capacity.

**Storage to cover 24 hours of 300 MWs, with PV to charge back in one day while contributing to load.

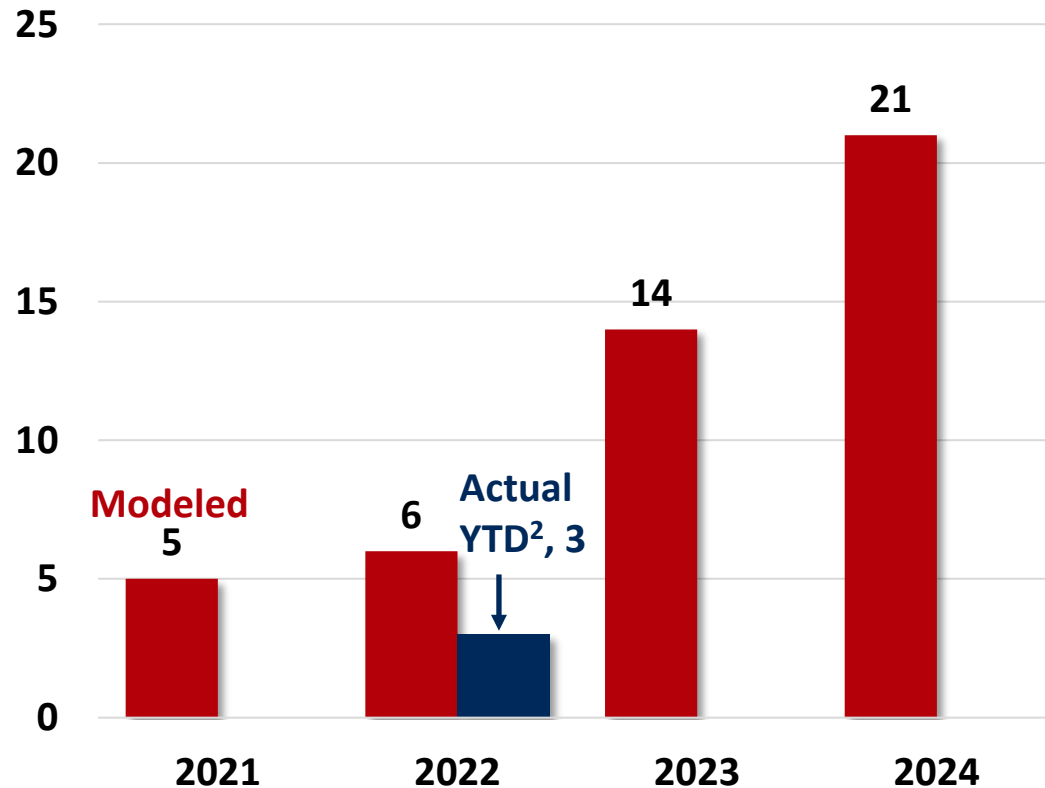
***Solar in 4-day case reflects the same amount of MWs as in the 1-day case. Storage increases to serve as basin for excess PV energy assumed to be collected to support 4-day contingency event with no sunlight.

****Modeled from best available Vogtle Data, with 33% spread over estimated range, with debt amortized over 40 years.

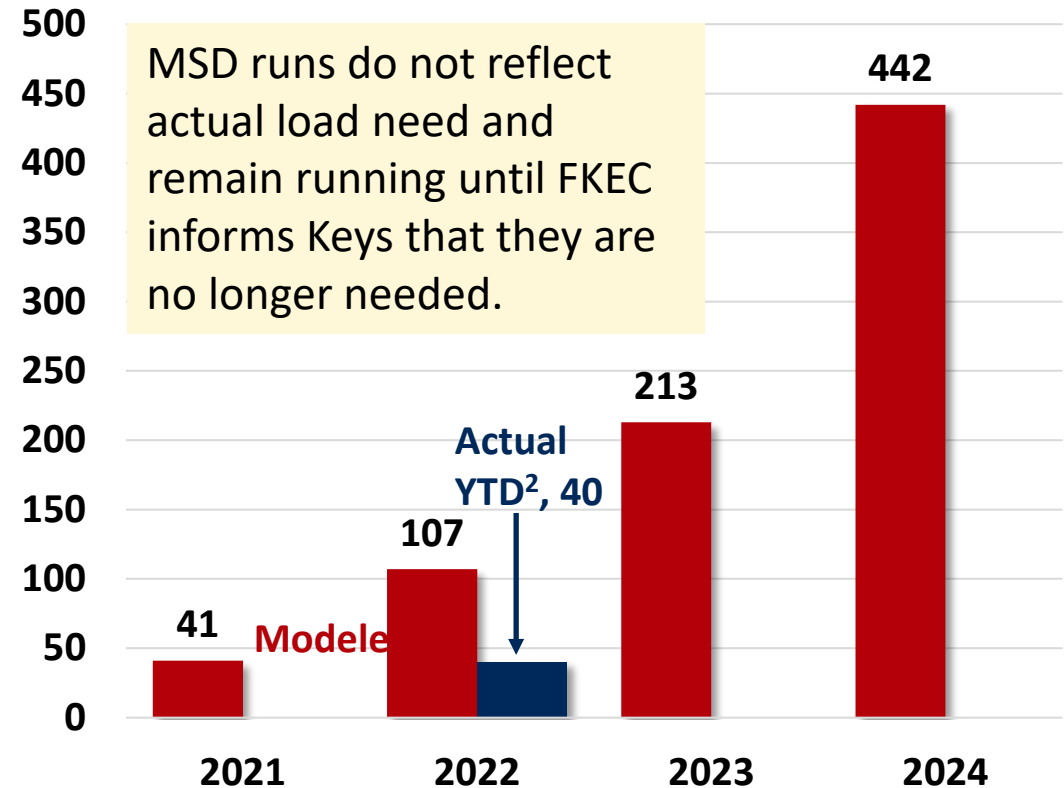
KEYS Runs Driving Potential Battery Need Behind Pace

Actuals Lag Modeled, Pushing Storage Benefit Further Away

Days Exceeding Tie-Line (Days)¹



MWh Exceeding Tie-Line (MWh)¹



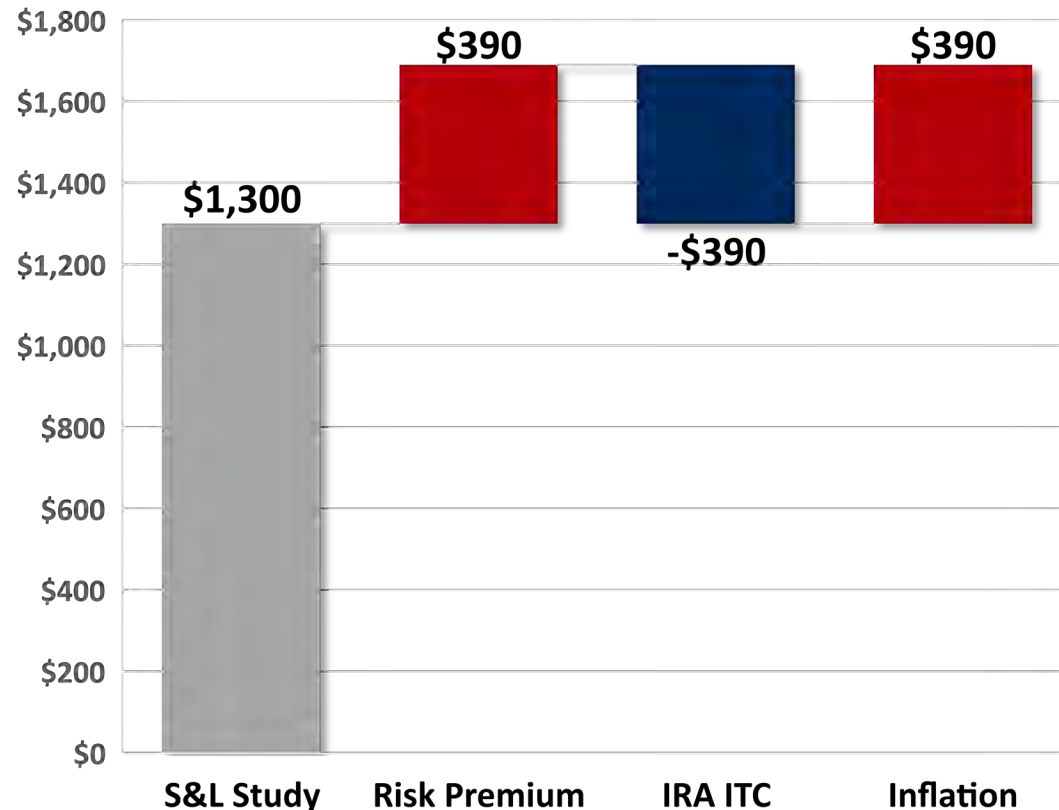
1 – Represents combined load exceeding Tie-Line limit for modeled.

2 – 2022 data is through August 22nd. Actual YTD represents consecutive MWh of MSD runs at time of tie-line events (OATI Data).

ITC Does Not Offset Increases in Battery Parts Cost

Political and Policy Uncertainty Fuels Price Increase

KEYS BESS Cost Baseline and Deltas (\$/kW)



- Estimated ITC of 30% for storage solutions with Inflation Reduction Act
- Offset by 900% lithium cost increase since Jan. 2021; energy freight and labor costs all have risen since pandemic*
 - Utility-scale costs up 10%-30% since 2021*
- Prices and inflation remain elevated and volatile, making cost projections unreliable
 - Phase 3 solar prices for co-located storage vary widely (as much as 2.8x variability)
- Impacts of key factors render cost declines extremely unlikely from 2021 base
 - Modeling ~10% increase at best w/o risk premium means ~1,400/kW

IRP Phase 2 Will Characterize All Resource Options

Seeking Feedback to Ensure Options Reflect Expectations

New Build

- New Combined Cycle
- New CT (Reciprocating, Aeroderivative)
- New Slice of Traditional Nuclear
- New Small Modular Nuclear Project
- Solar or Solar + Storage

Existing

- Further upgrades to existing resources
- Additional acquisitions
- Regional asset-specific power purchase agreements
- Coordinated retail load control
- Compensatory Participant control (local gen./storage)

Emerging

- Hydrogen for existing gas units
- High Voltage Wheeled Wind
- Ocean Thermal/Tidal
- Long-duration storage (Lithium-Ion Alternatives)

IRP Phases 2 and 3 Will Optimize Use of Resources

Support On Capex, Operating Assumptions, Scenario Modeling

Phase 1 (Complete)

- Load and Resource Balance to 2050
- Preliminary Resource Competitiveness Evaluation
- Listing/Framing Future Options

Phase 2 (OE Support)

- Technology Characterization (cost and performance assumptions)
- Refine 20 Year Existing Resource Competitiveness

Phase 3 (Simulation Support)

- Scenario Modeling – Base Case
- Scenario Modeling – Emission Constrained Case
- NPV Cost by Scenario and Results

Customer survey at onset of Phase 2 to determine desires for resources and services can aid full characterization.

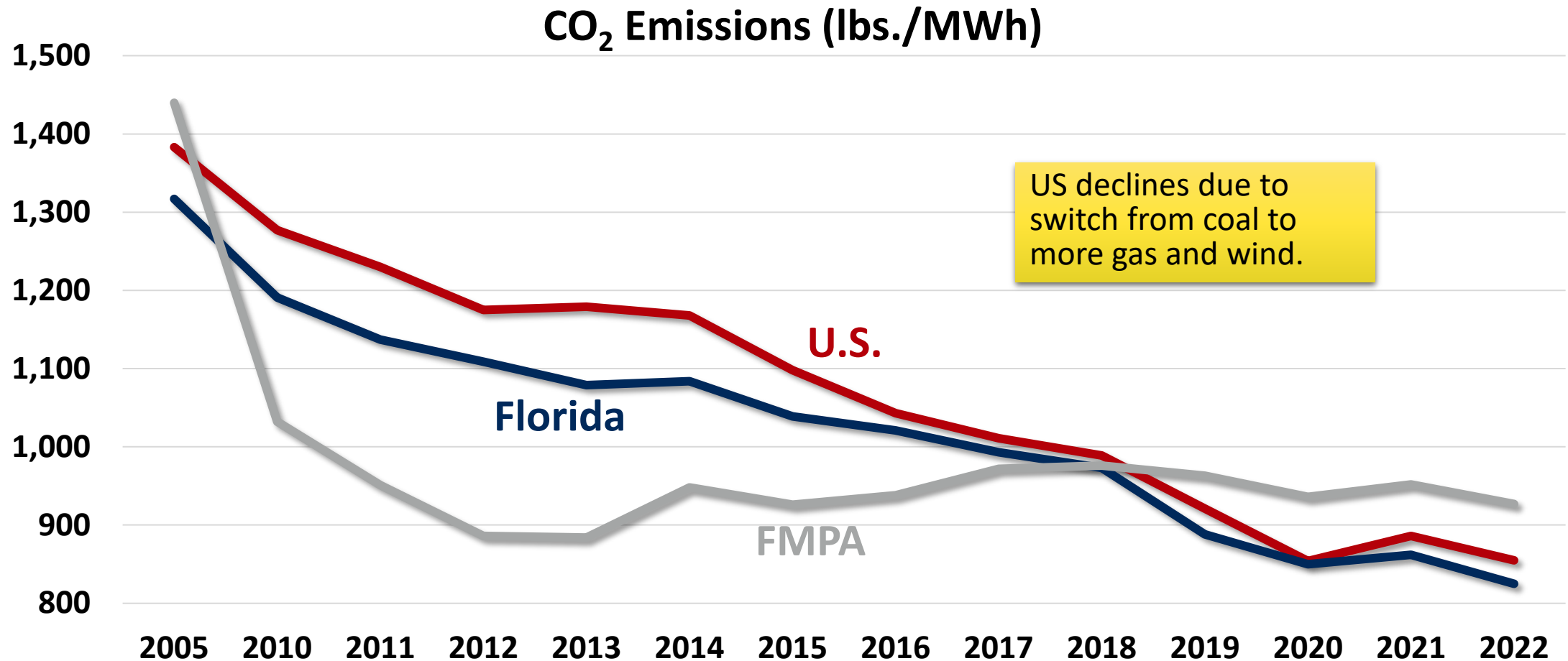


Environmental Responsibility



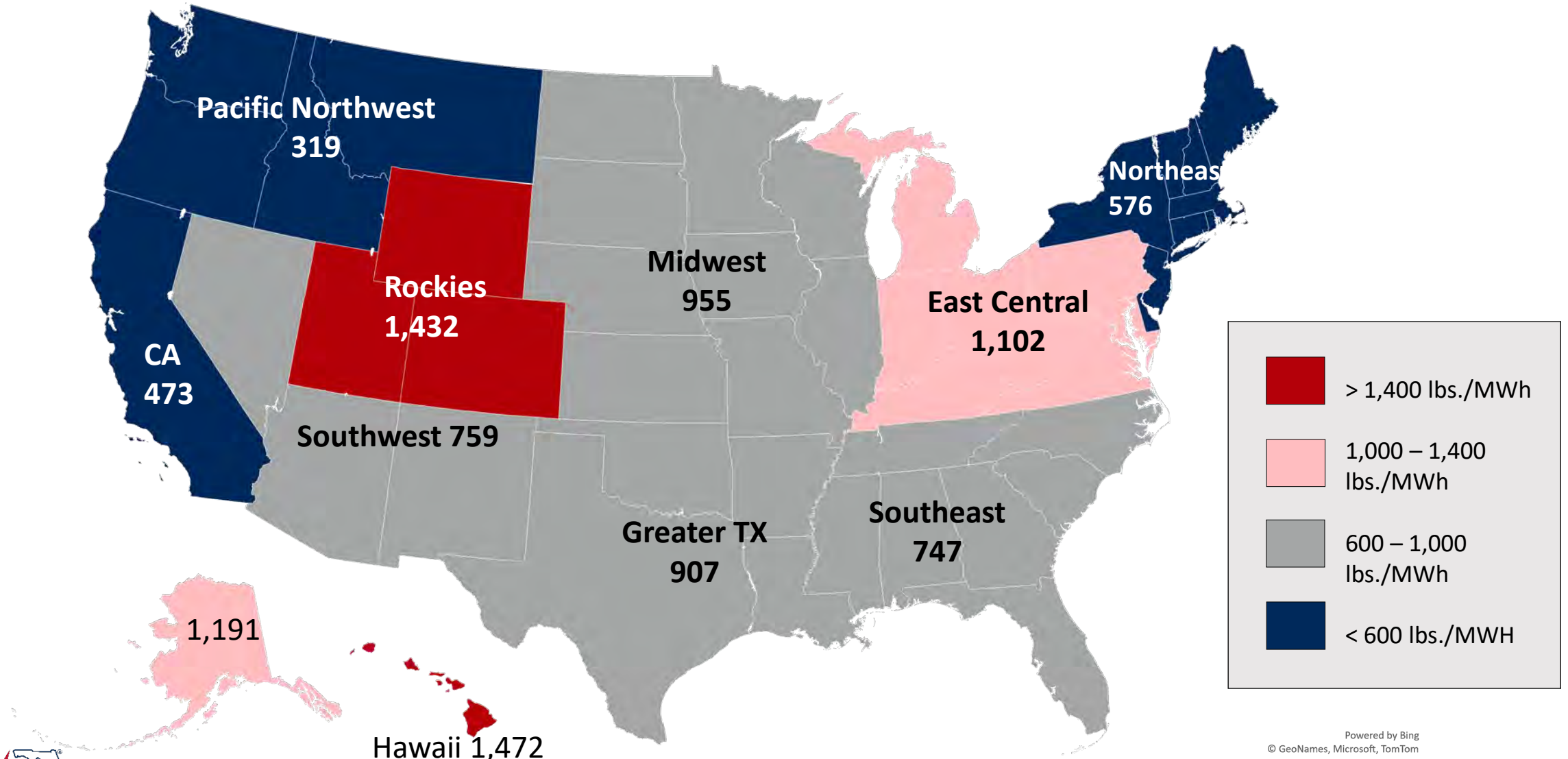
Power Sector CO₂ Declined ~38% Over Last 15 Years

FL/FMPA Emissions Declined by Switching from Coal/Oil to Gas



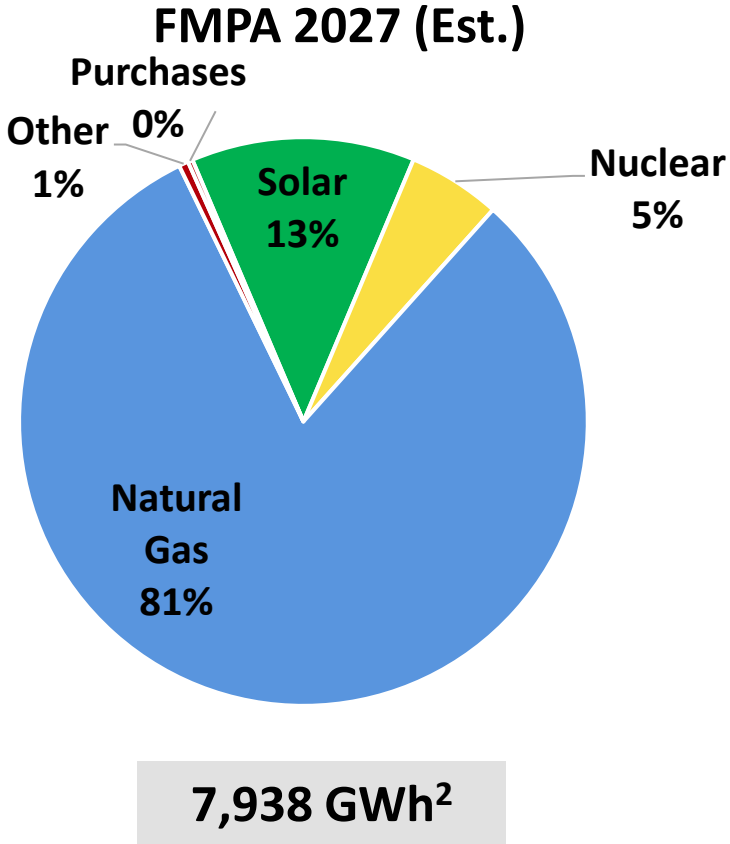
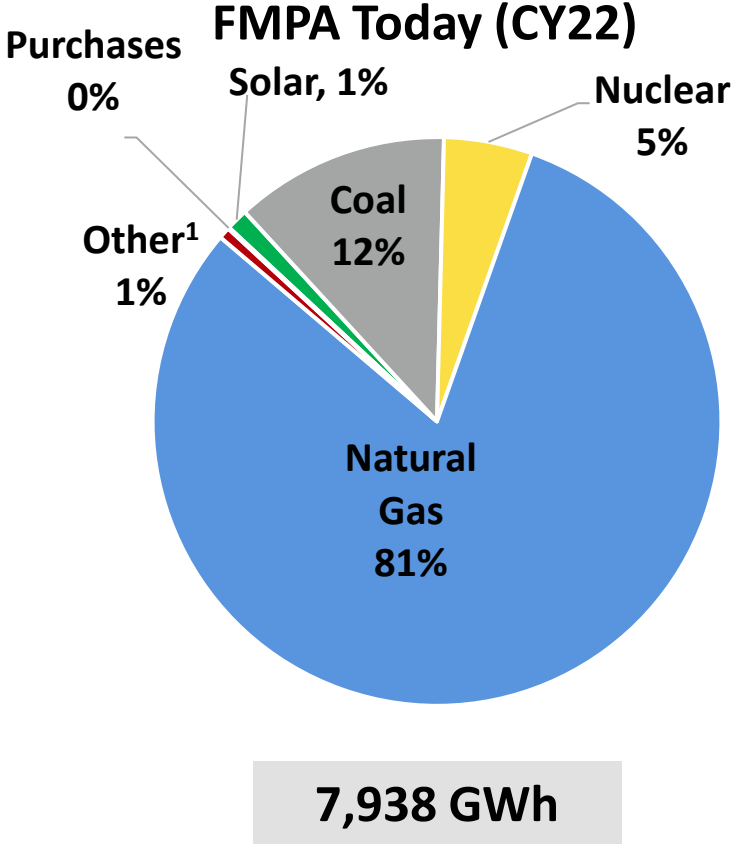
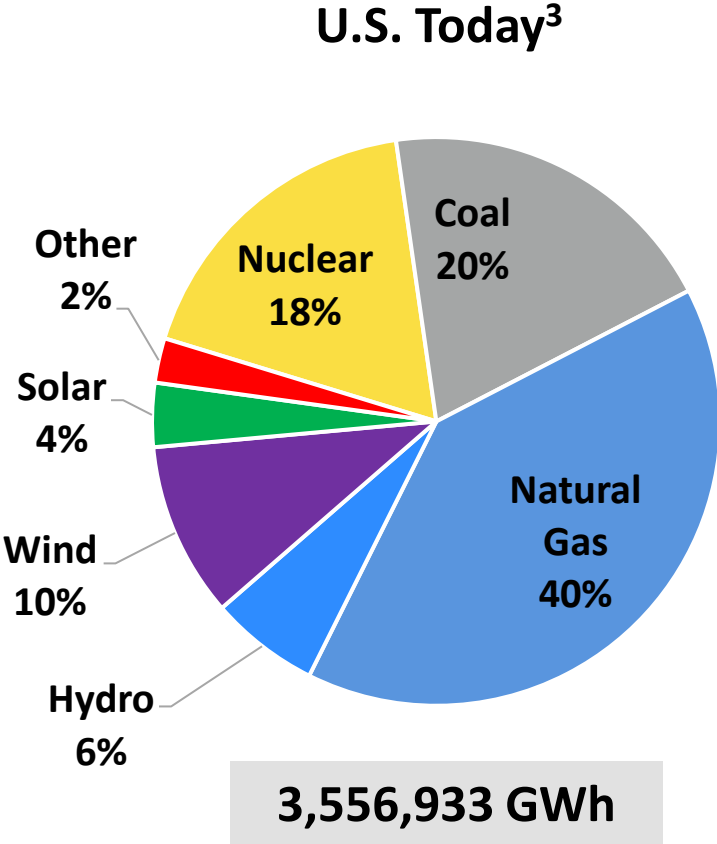
U.S. Regional Electric Generation Emissions (lbs./MWh)

Emissions Driven in Part by Access to Natural Resources



U.S. Energy Mix ~38% CO₂ Free, 20% Coal Remaining

FMPA Growing to 18% CO₂ Free by 2027, No Coal/More Solar



1 – Includes US Sugar, residual and distillate fuel oil.
 2 – Assumes same level of generation.
 3 – Through October 2022

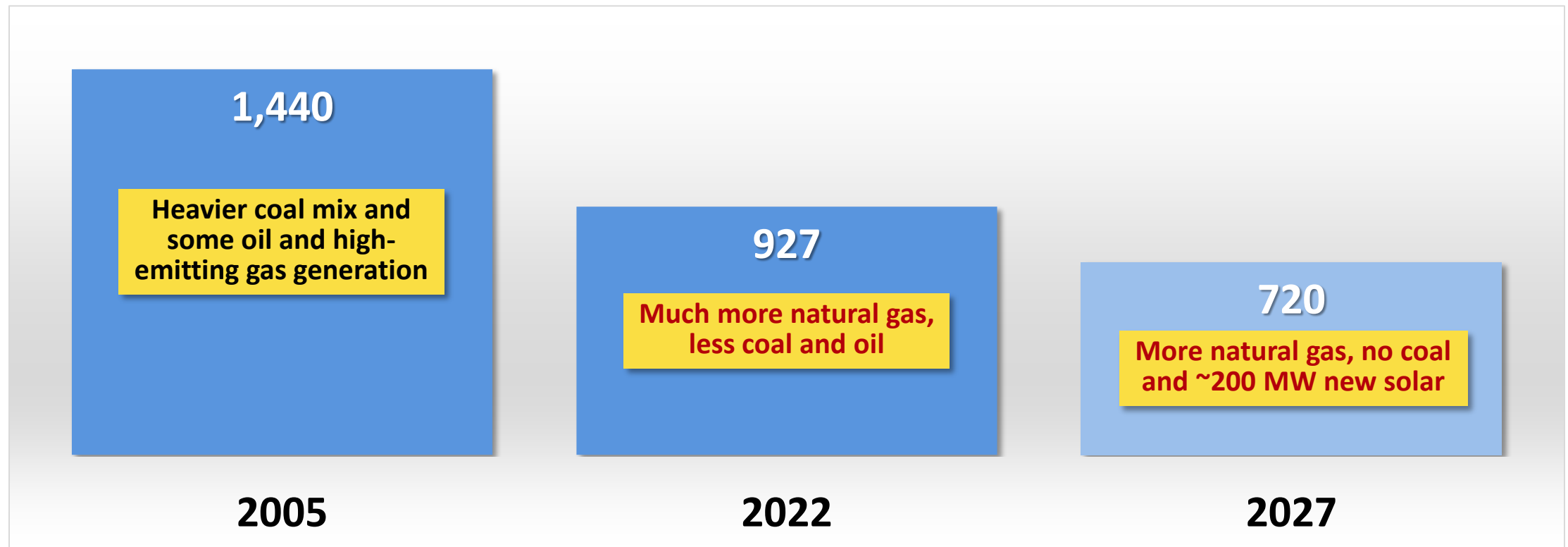


FMPA CO₂ Projected to Decline Significantly by 2027*

50% Decline from 2005 to 2027: More Gas and Solar, No Coal

CO₂ Emissions for FMPA's All-Requirements Project Generation

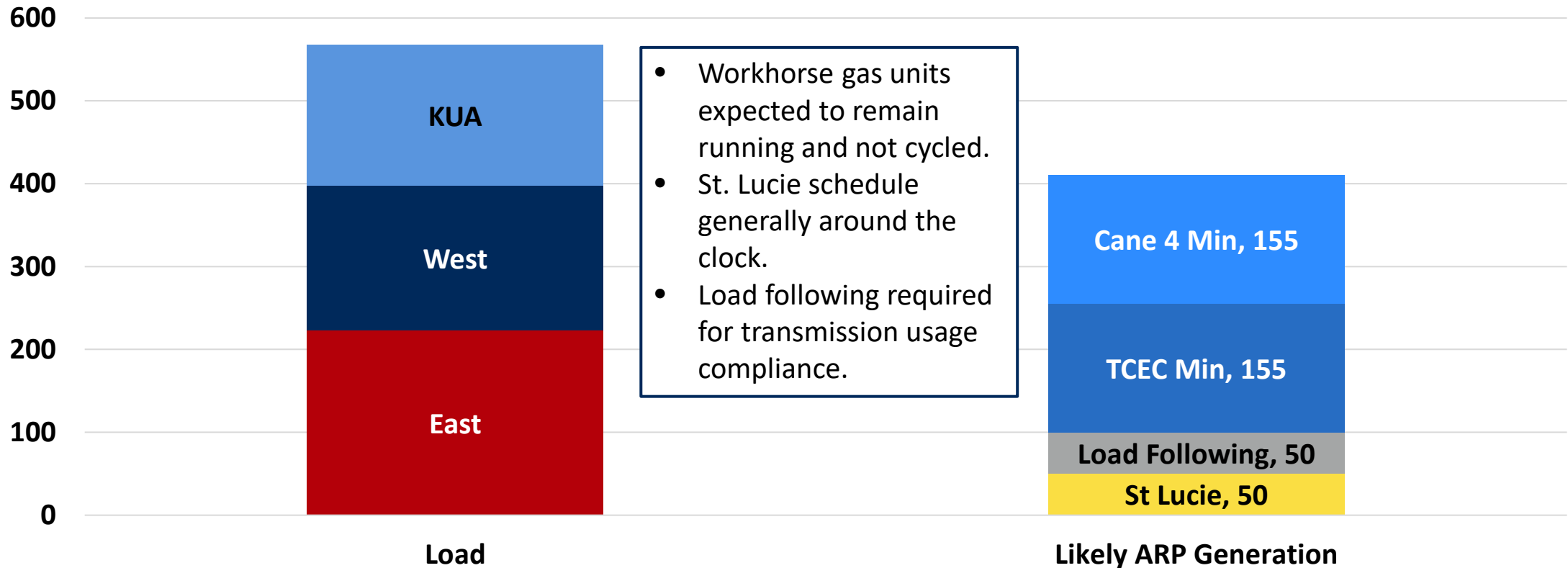
Pounds per Megawatt hour, historic and projected



ARP is Currently Well Aligned For Solar Intake

Low Load Days Will Require Careful Planning and Forecasting

Example Low Load Hour (MW) (10-19-31 HR 1400)



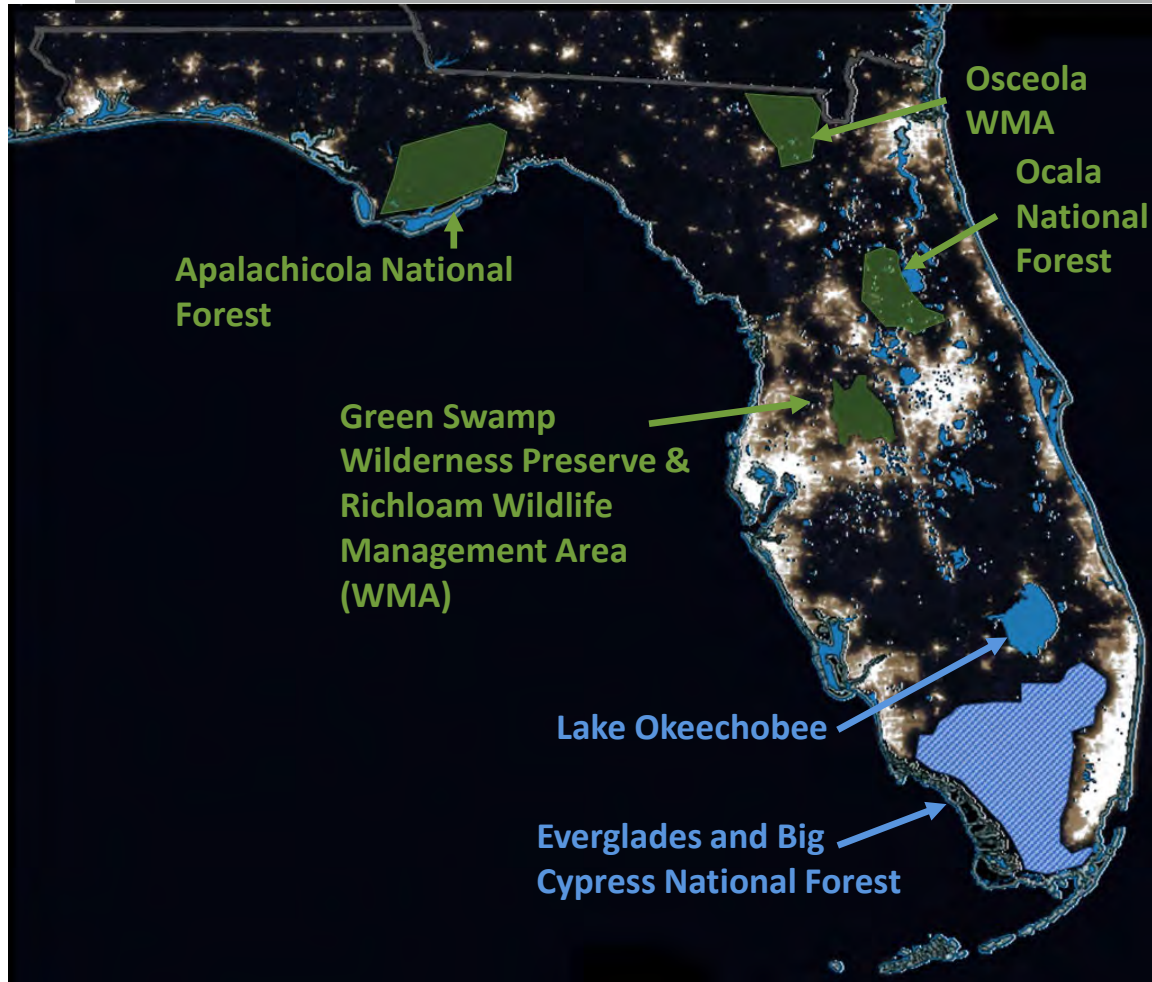
Strategies Exist to Address Solar Operational Issues

Range of Tactics to Support Reliable Integration

- Gradually add solar every few years - supports better operational data as more PV is included in day-to-day operations
- SEEM market deployment provides interval-based platform to market excess solar across Balancing Areas using residual transmission
- Coordination with transmission provider Balancing Areas for dynamic scheduling
- Redirect economy energy from baseload resources to alternative areas and actively pursue management of position using increased FMPP load forecast level of detail
- Storage still high cost and subject to inflationary pressures – can bolt-on to existing or future facilities and continue to monitor economics
- Curtailment of PV output as last resort – requires sufficient rights to curtail, still exposed to take or pay financial risks

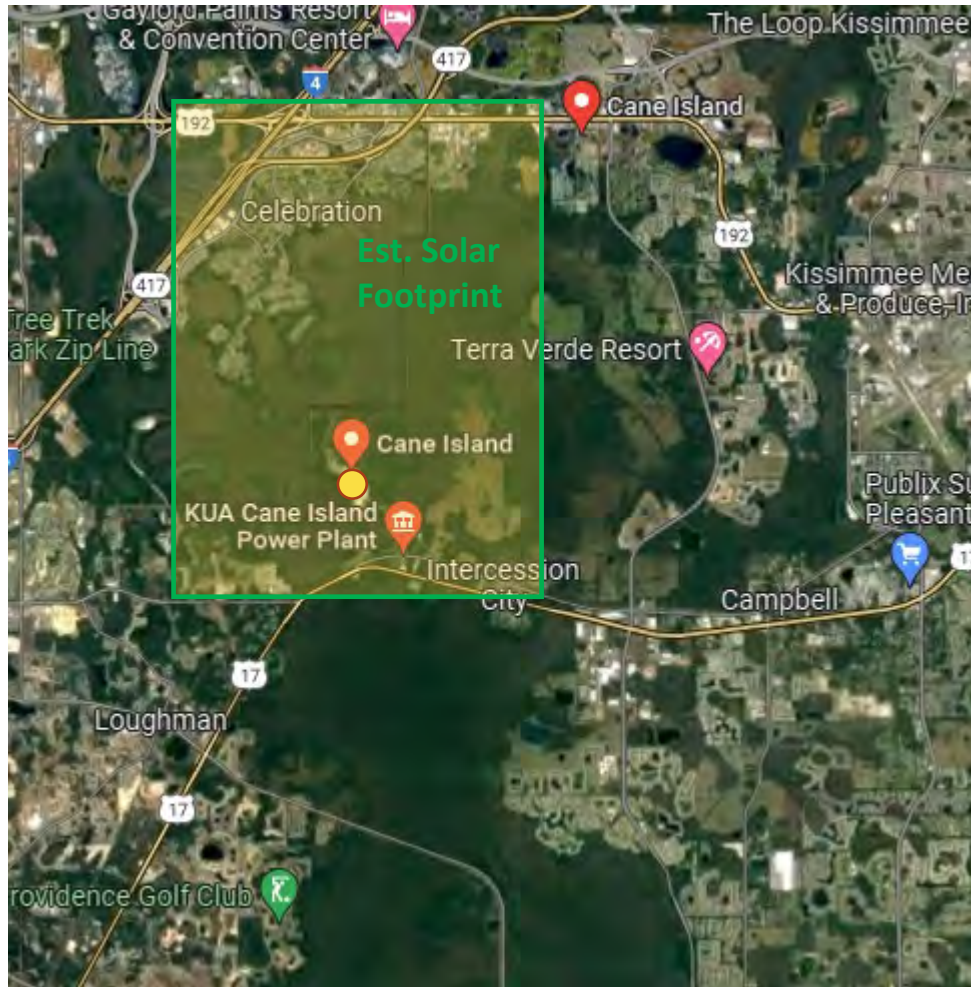
Land Utilization Constraints Likely Higher Over Time

Wetland/Water Areas, Conservation Areas Not Viable for PV



- Solar PV buildout requires dry land
- Florida contains 20% of all wetlands in the United States
- Florida is 18.5% water
- Florida has 4 million acres of conservation land (10% of FL)
 - 1.14 million acres of National Forest Area
- Expect Florida and local communities to continue to prioritize protecting natural land from any development

½ of Disney World's Footprint if Cane Island Was Solar *Capacity Factor < ½ Cane Island's, ~200x More Land Required*



- To replace 694 MWs of Cane Island:
 - 1,404 MW of solar
 - Estimated at 30% capacity factor
 - ~19 solar sites of 74.5 MWs
 - 12,638 acres vs 53 acres at Cane Island (generating facilities only)
- Challenges in Florida
 - Viability of dry land near transmission
 - Interconnection time involved
- Slightly larger footprint average in recent bids as compared to NREL average¹

More CO₂ Reduction Requires Balance With Cost

What Are the Next Emission Reduction Milestones Desired?

- FMPA still on track to reduce emissions 50% vs. 2005 by 2027 with Phase III adding ~110 MW of solar for the ARP
- Stanton 1 retirement in 2025, and Stanton 2 conversion to gas largest incremental change to overall emissions
- Choosing the path of continual CO₂ reduction requires a careful balance between cost, reliability, and emission reductions
 - Threshold exists beyond which operational mitigation strategies required
 - Storage can be added later or bolted-on based on economics
 - IRP Phases 2 and 3 will evaluate full range of viable future resource options
- Longer term, should nuclear be an option to investigate (expansion/new)

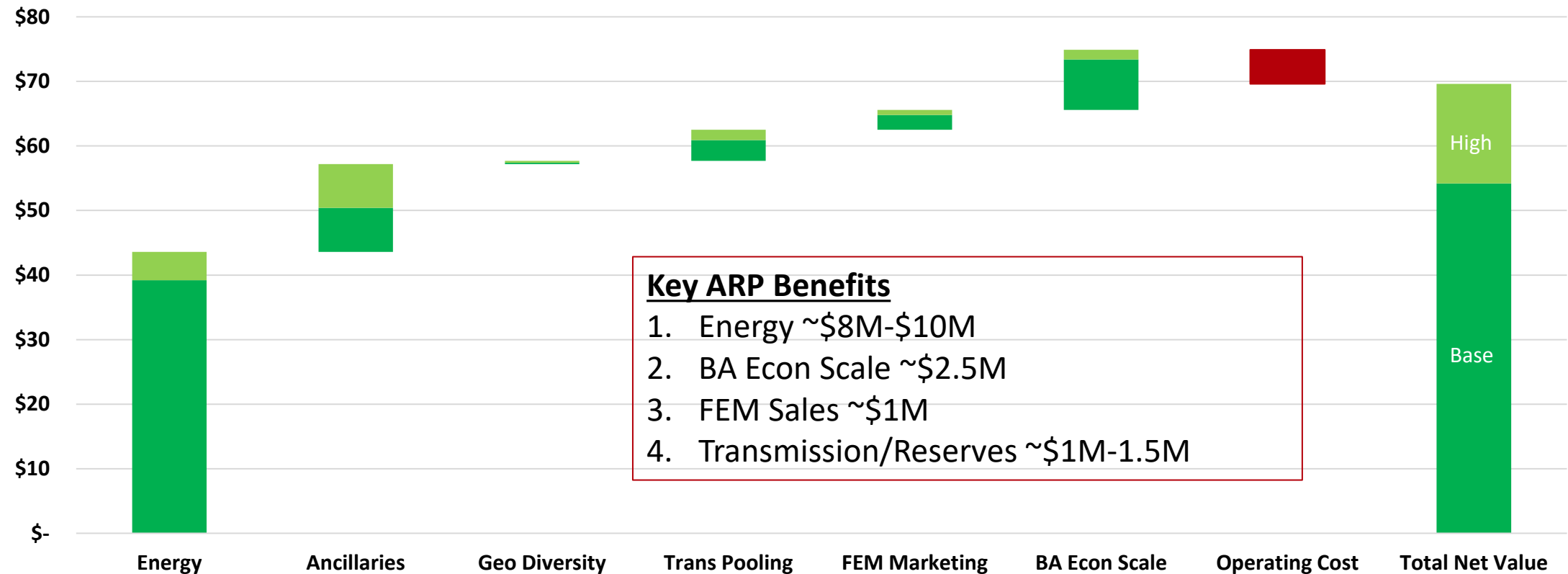


Pool Expansion and Value Creation Opportunities

FMPP Delivering ~\$54M-\$70M in Annual Value

ARP Share ~\$10M-\$15M Net of Operating Cost Allocation

Summary of Estimated FMPP Value (\$M)



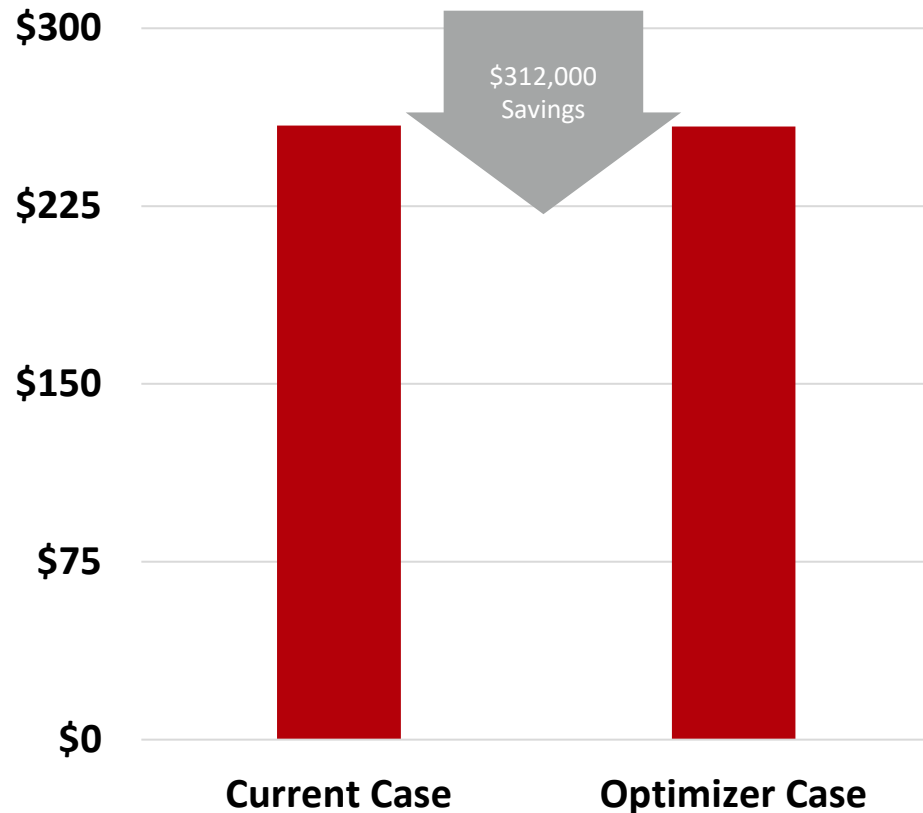
Key ARP Benefits

1. Energy ~\$8M-\$10M
2. BA Econ Scale ~\$2.5M
3. FEM Sales ~\$1M
4. Transmission/Reserves ~\$1M-1.5M

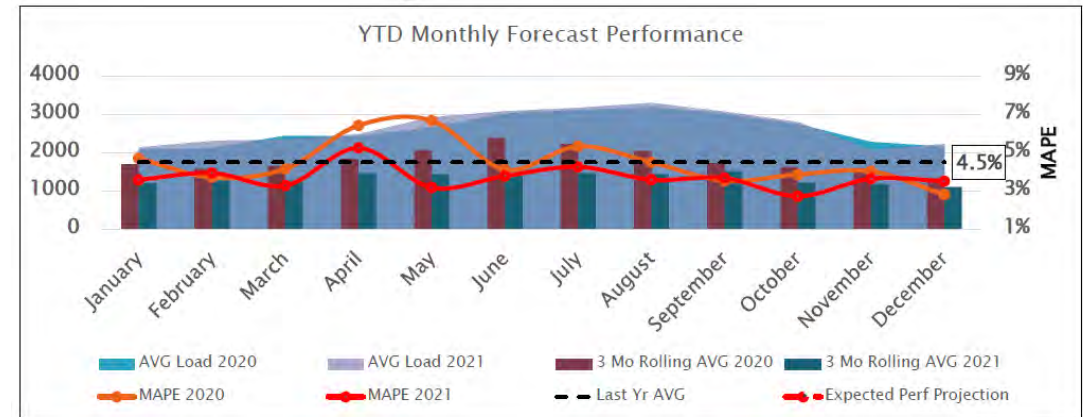
Self-Initiated Improvements Adding ~\$2.5M/Year

ARP Load Ratio Share ~\$1M in Savings

Estimated Production Cost Savings (\$M) from
Outage Optimizing (Jan '23 -June '23)



Comparison of Mean Average Percent Error
(MAPE) for FMPP – 2021 vs. 2020



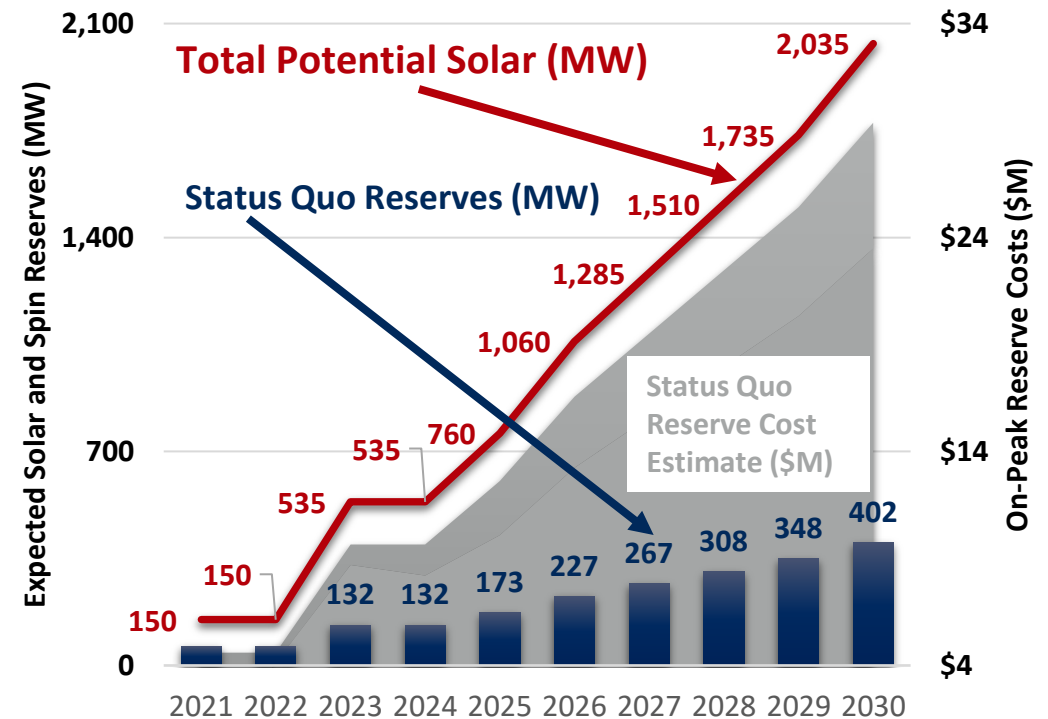
- More frequent forecasting enhances ability to commit and dispatch resources
- Avoids over-commitment cost
- Increases proactive attention and action during expected/extreme tail weather events
- RFP in process for more granular area forecasts frees up valuable FEM resources

Revised Reserve Approach Could Bring ~\$6M by 2030

ARP Could Add ~\$2.4M, Reserve Sharing Today ~\$1M Value

- Solar MWs could expand to as much as 2 GWs by 2030
- Application of improved reserve management and larger base can support reduction in reserves
- Geographic diversity of solar through joint coordination with other like-minded entities
- Current FMPP Total Reserve Management (sharing of FRSG reserve and coverage for loss of largest unit) already yielding \$6M-12M in total benefits and \$0.5M-\$1M benefit for ARP*

FMPP Expected Solar and Impact on Reserve Costs



Maintaining Reliability Comes at High Costs

Seeking New Relationships Can Help Mitigate Impacts

More Spin

- Required to adjust for PV intermittency
- Higher energy costs
- Other ancillary service products required

More Starts

- Increased cycling
- Higher maintenance costs

Reserves

- PV capacity is not guaranteed
- Higher operational and planning capacity reserves
- Idle capacity costs

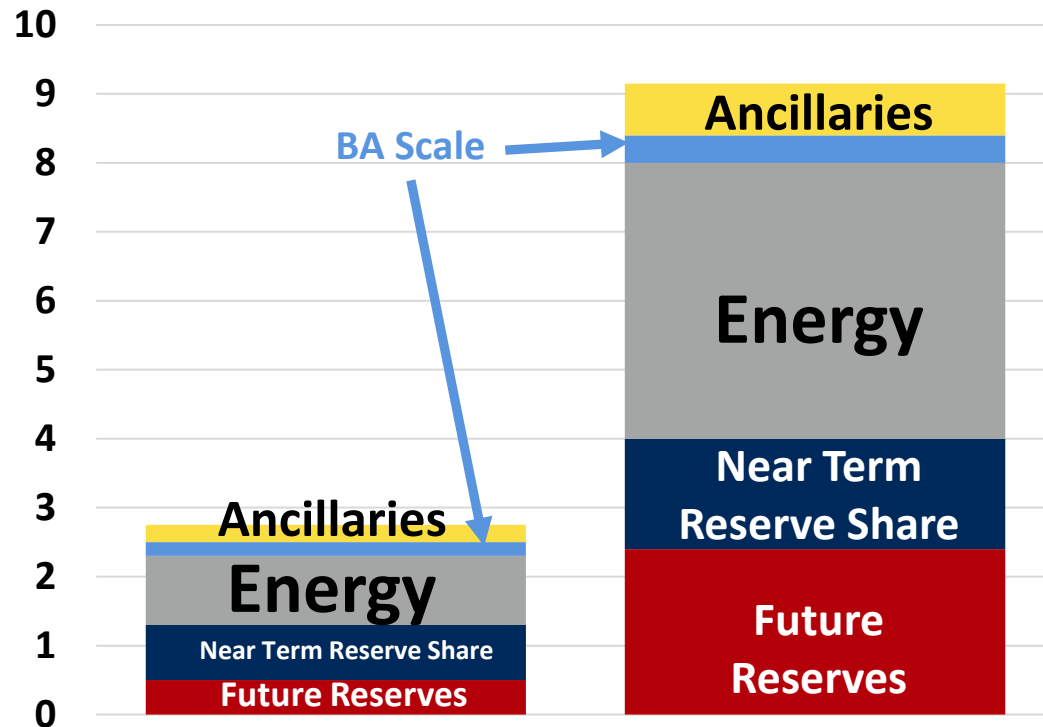
People

- Increased staffing
- Increased training
- Tech investments
- Increased coordination between entities

Major FMPP Expansion Could Bring ARP ~\$3M-\$9M

Based On ~10%-20% (~\$5-10M) Energy Benefit for FMPP

Estimated Incremental Value of FMPP Expansion* to ARP (\$M)



- Reserve sharing for solar integration reduces reserves by ~20%, could deliver ~\$6M annually by 2030
 - ARP Share ~\$2.4M
- Reserve management in the near term (FRSG reserves plus coverage of largest unit) by all could reduce required reserves on peak by as much as 1,700 MW (if pool expands to 14,000 MW with larger footprint and base of firm capacity)
 - ARP Reduced capacity hold for contingency of ~141 MW could bring ~\$1.6M in additional value even at \$1/kW-mo. sale
- Using current cost benefits of FMPP, applying 10%-20% incremental benefit from commitment /dispatch of much larger asset base delivers ~\$5M-\$10M annually
 - ARP Share ~\$1M-\$4M
- Spin provision and other ancillaries' benefits could double to as much as \$0.75M for ARP (~\$400k benefit today for spin)
- Scale and technology/teaming benefits at ~\$1M annually with gradual efficiencies built up over time
 - ARP Share ~\$400k

Gradual, Protracted Process to Collaborate Has Begun

Exact Timing of Milestones and Approvals to Be Determined

Critical mass of new parties and earnest effort to explore expansion has been reached. ***Seeking feedback on any potential roadblocks or concerns.***





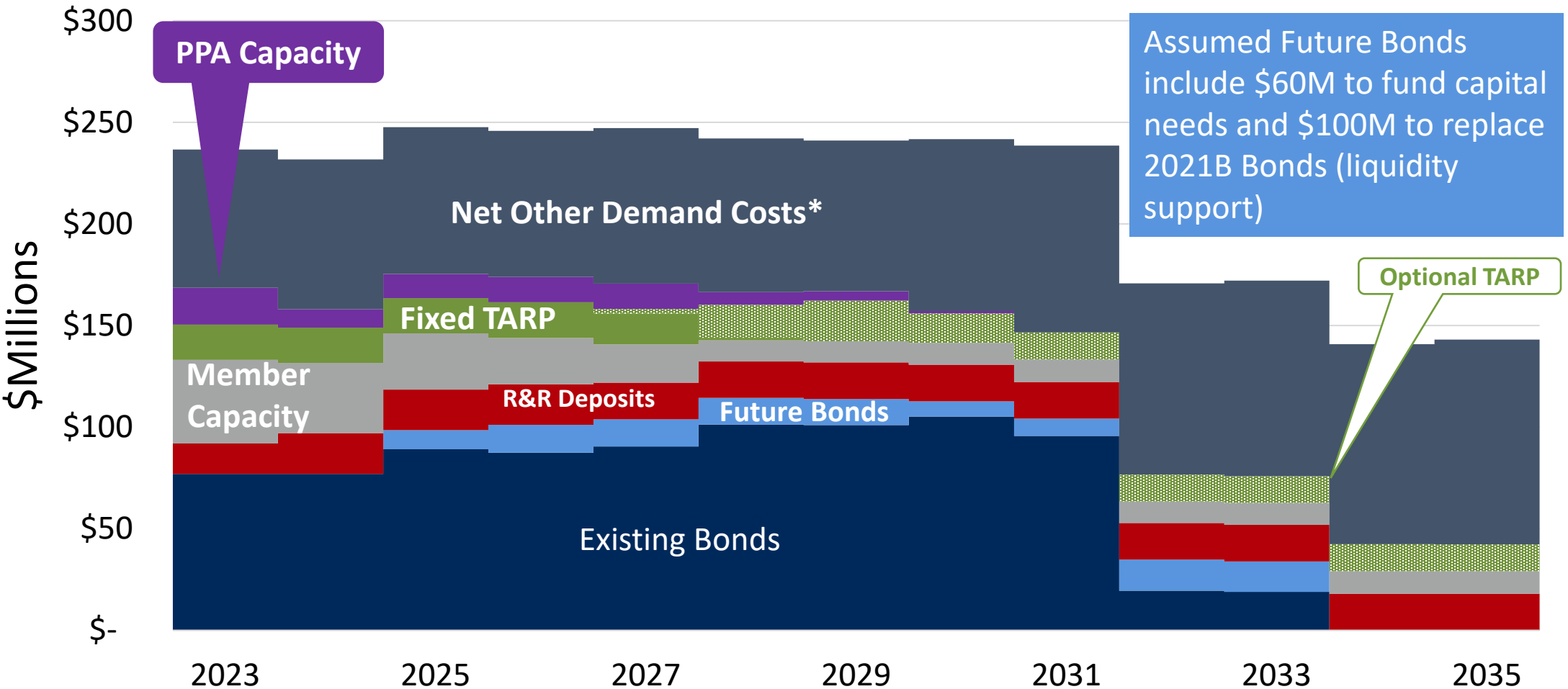
Asset and Capital Plan and Rate Projections

Summary of Financial Positions for FMPA Projects

- ARP fixed costs projected stable over next several years, with gas prices driving overall ARP costs
 - Pending plant acquisitions fill ARP capacity needs at low cost
- Stanton 1 retirement assumed in 2025; Stanton 2 gas conversion assumed in 2027
 - Stanton 1 ongoing post-retirement costs still to be determined but goal is no billings to Stanton and Tri-City project participants after retirement
 - Stanton 2 expected to reduce fixed cost post-conversion and operate more as peaking resource, with final debt payoff in 2027
- St. Lucie Project costs projected to remain stable
 - St. Lucie 2 operational license extension to 2063 pending
 - Current debt payoff is 2031 but capital costs to achieve 80-year unit life not yet known

ARP Demand Costs Projected to Remain Stable

Debt Service Declines Significantly After 2031

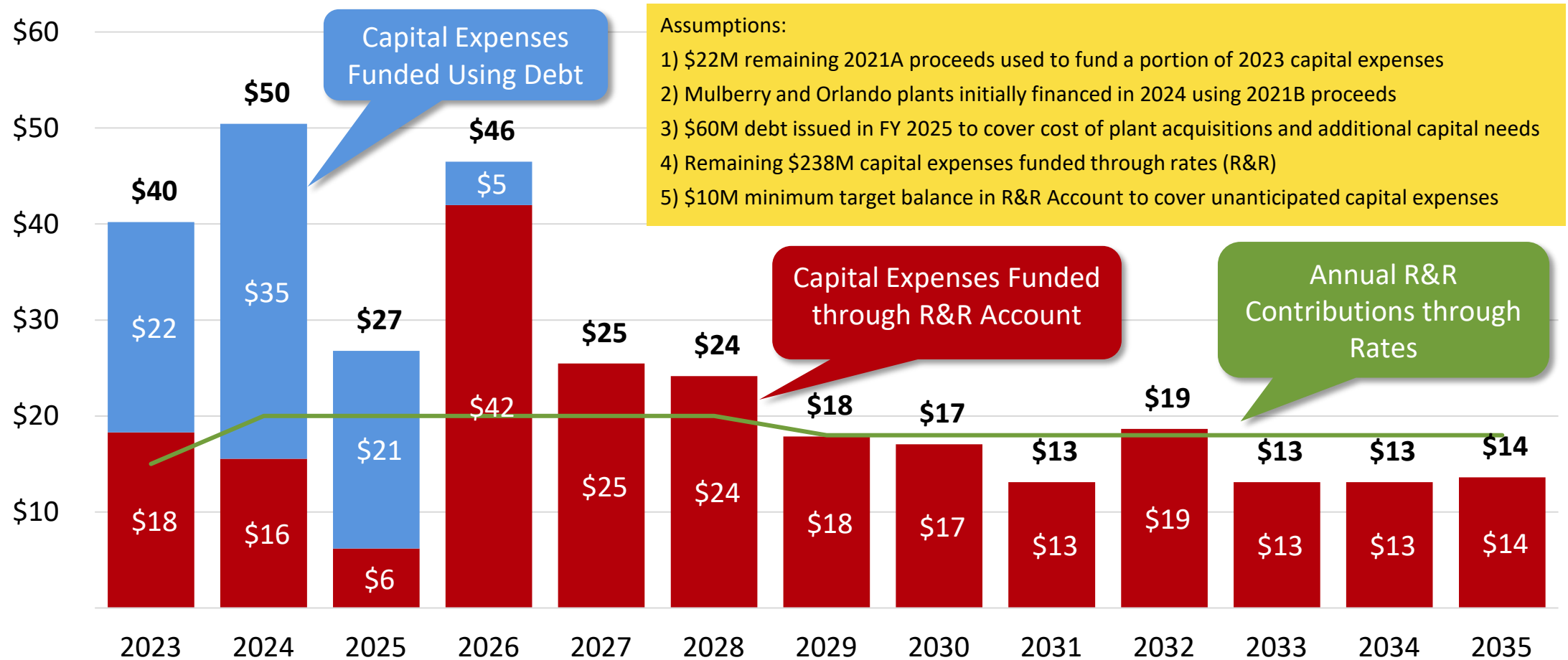


* Primarily includes fixed O&M costs, gas transportation costs, and allocated Agency costs.

ARP Capital Spending ~\$36M/Year Avg. through 2028

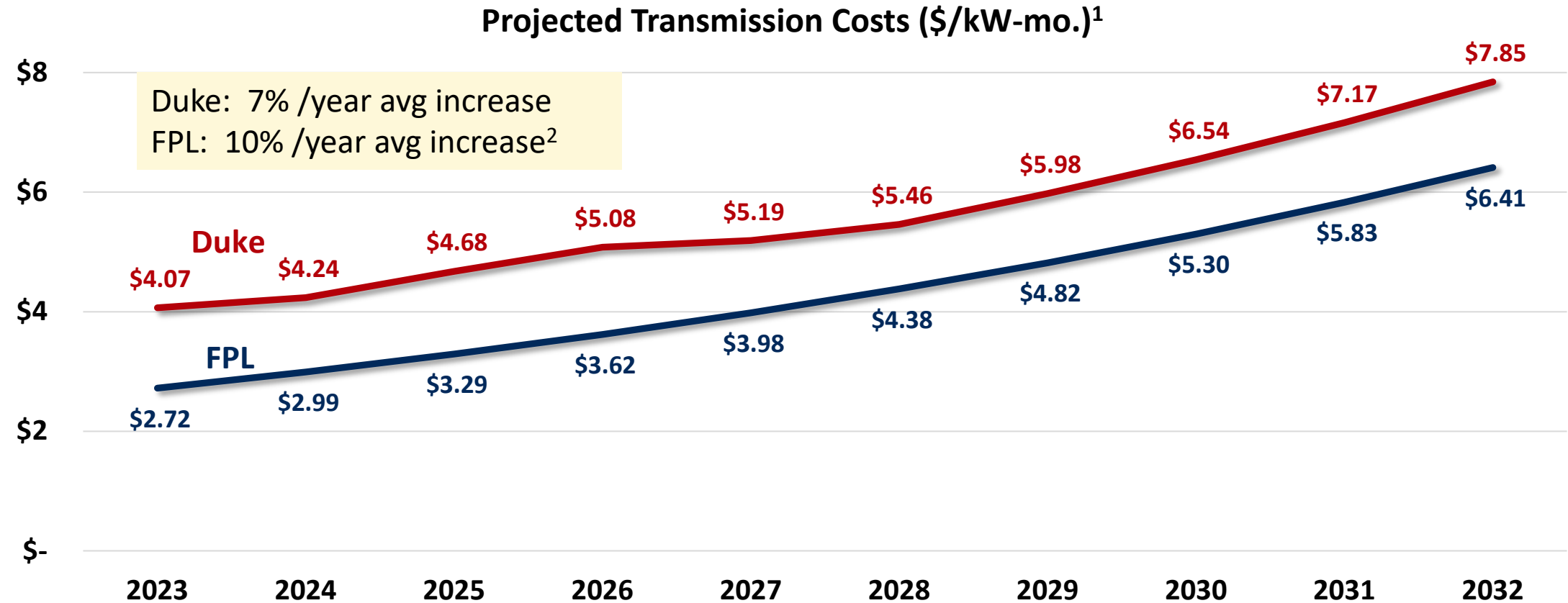
New Debt Likely Needed to Fund High Near-Term Capital

Projected Annual ARP Capital Expenses and Funding Plan (\$Millions)



Transmission Costs Projected to Continue Escalating

Both Duke and FPL Continue to Make Significant Capital Investments



1 – Includes storm adder, where applicable

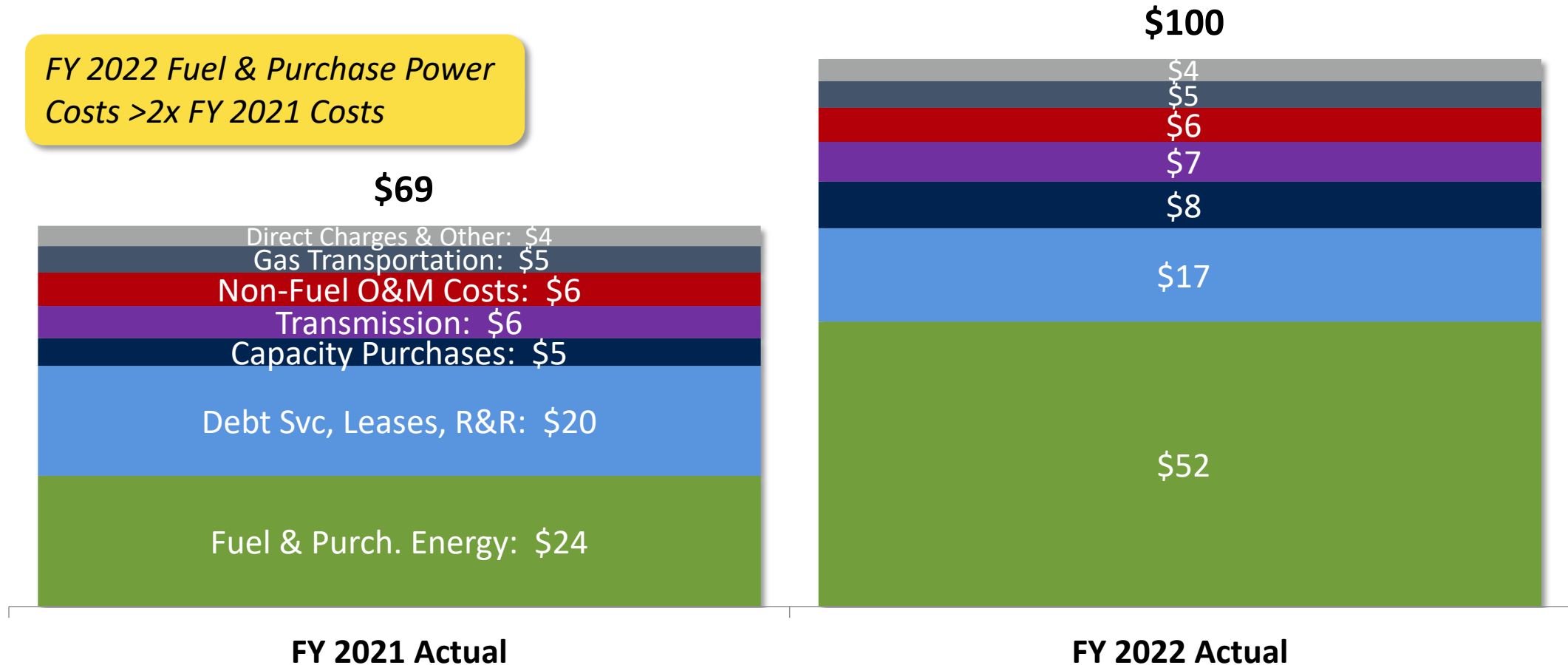
2 – Duke estimates based on Duke's November 2022 projections, with rates effective each June; FPL estimates based on FMPA assumption.

Natural Gas Prices Largest Driver of ARP Costs

Fuel Costs 35% of Participant Costs in FY 2021 but 52% in FY 2022

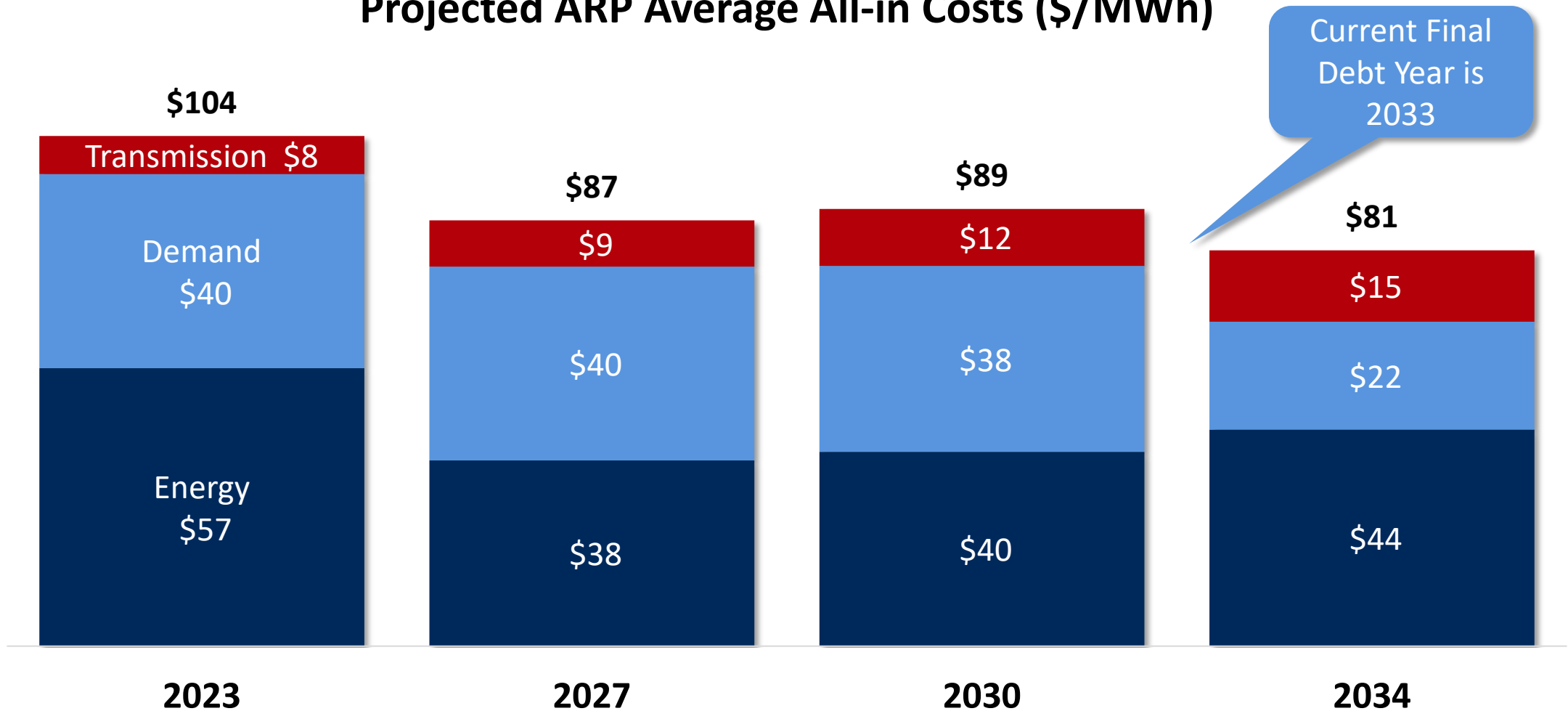
Total ARP Participant Costs (\$/MWh)

FY 2022 Fuel & Purchase Power Costs >2x FY 2021 Costs



ARP Costs Projected ~\$80 - \$90/MWh After 2023

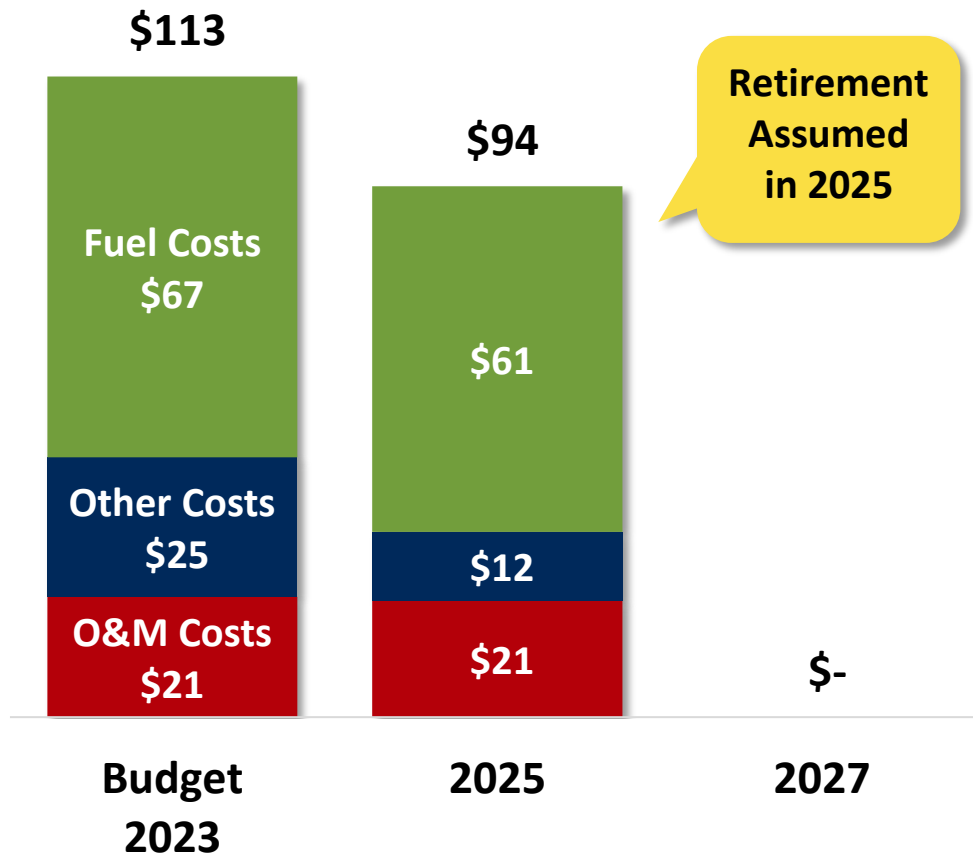
Projected ARP Average All-in Costs (\$/MWh)



Stanton 1 Retiring by End of 2025

Building Funds to Cover Post-Retirement Costs

Projected Stanton Project Participant Costs (\$/MWh)

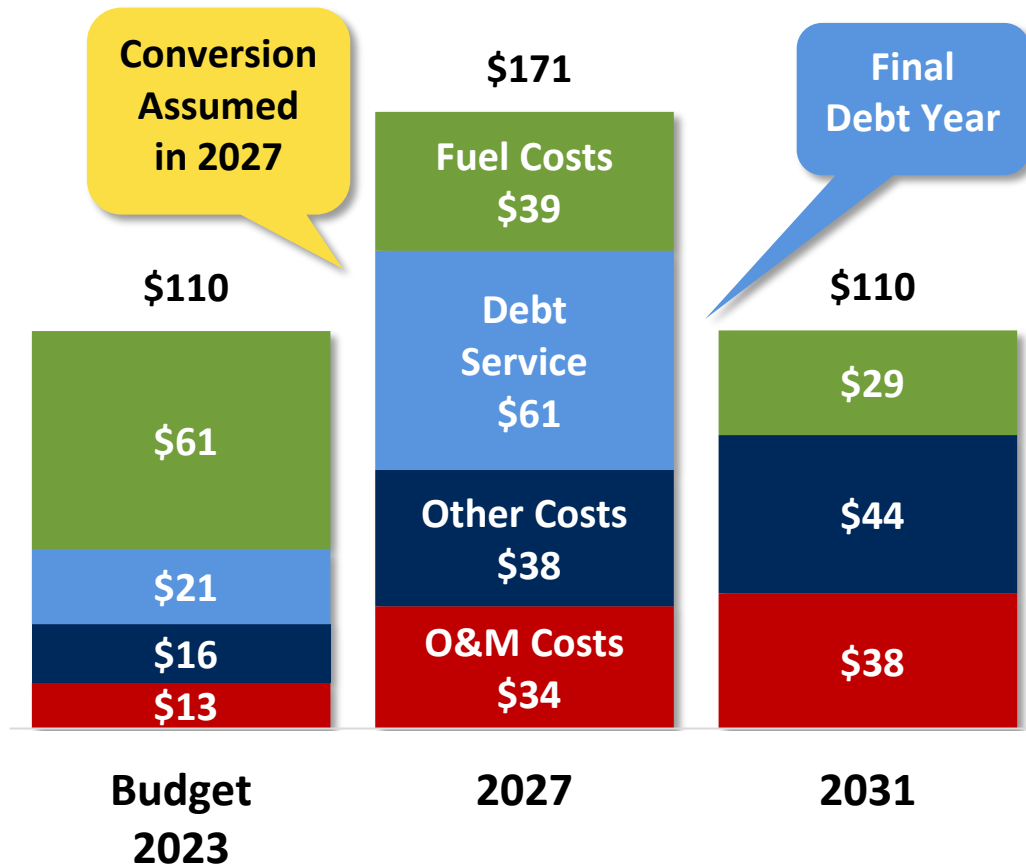


- Utilization currently limited due to coal transportation constraints
- OUC has committed to retire Stanton 1 no later than 2025
- Working with OUC to minimize post-retirement costs
- Some costs ongoing, including pond and landfill maintenance
- Building reserves in Stanton & Tri-City Projects to avoid billing participants for post-retirement costs

Stanton II Conversion Allows Operation for Peaking

Participants Should See Lower Post-Conversion Costs Overall

Projected Stanton II Project Participant Costs (\$/MWh)

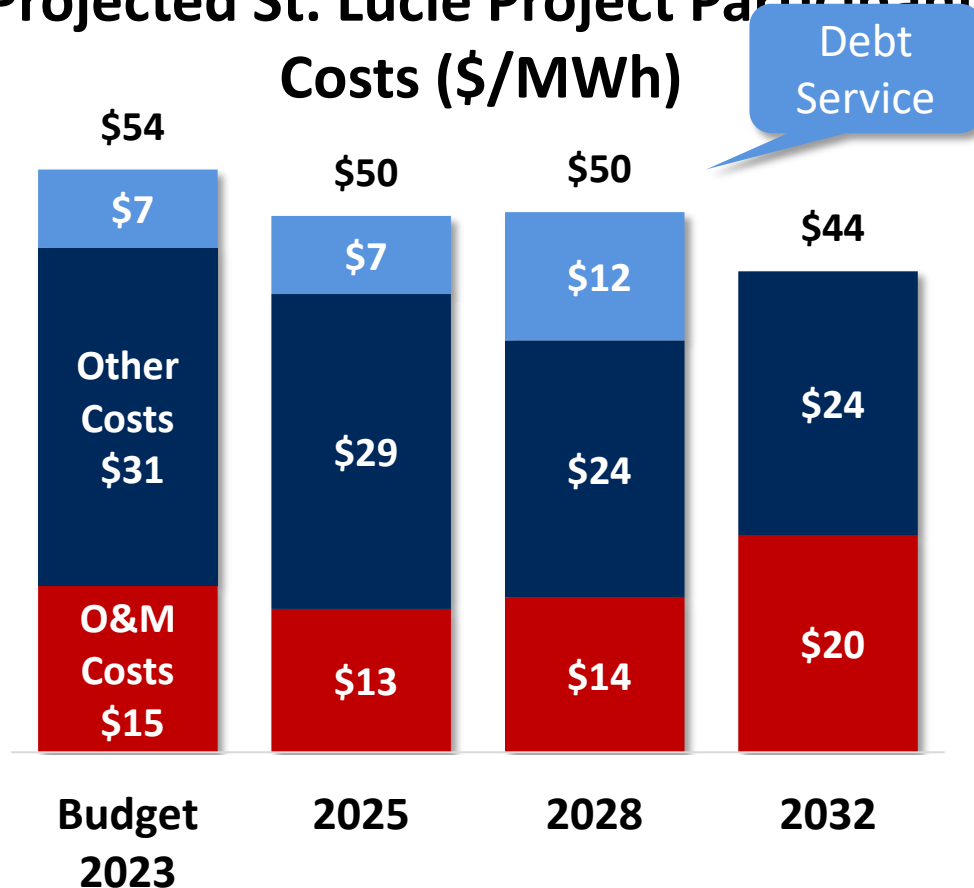


- Utilization currently limited due to coal transportation constraints
- OUC currently plans to convert Stanton 2 to natural gas no later than 2027
- Project fixed costs and utilization should decrease with conversion
- 2027 is current final debt year for Stanton II Project; portion of final debt payment covered with funds on hand

St. Lucie Costs Expected to Remain Stable

Extending Debt Life Allowed For Lower Participant Costs

Projected St. Lucie Project Participant Costs (\$/MWh)



- St. Lucie nuclear facility is cost competitive with no carbon emissions
- Debt extension to 2031 facilitated rate decrease to ~\$50/MWh
- FPL has applied for 20-year license extension to operate until 2063
- Future capital needs to accommodate life extension still unknown



Risks and Opportunities



Risks for FMPA

Fuel Prices, Inflation, Regulations, Transmission and Solar

- Gas price swings affect end customers' rates – market or environmentally initiated with higher gas exposure for FMPA and FL vs. US
- Energy policy choices and impact on coal and gas prices
- Continued inflationary and supply chain pressures on renewables and major equip.
- Cost of balancing system with significant solar higher than expected
- Steam generator replacement on St. Lucie or other life extension investment
- Loss or lack of growth of member load due to economic conditions and protracted recession event
- Transmission cost headwinds

Major Opportunities for FMPA

High Availability, Excess Sales, Pool Expansion and Fuel Supply Risk/Cost Mitigation

- Asset management supporting continued strong plant availability while integrating acquisition resources
- Sell excess economic energy at margin above FMPP option and intra-period capacity when long
- Exploration of additional pool partners or expanded imbalance markets
- Optimize the intra-year energy and capacity positions, unit outages, natural gas position
- Deliver on cost targets for SEC 1 replacement and expedited conversion of SEC 2
- Complete IRP Phases II and III for key 20-year resource decisions
- Leverage opportunities associated with any new or extended renewable tax credits

We Want Your Feedback

What do you think are the best opportunities now
to manage FMPA's costs?

Please provide your feedback in the poll.

20-Year Planning Horizon Has Risks

Mitigation Options Exist for Longer-Term Focus Areas

Risk	Impacts	Mitigation Options
Natural Gas Price Volatility	Volatile fuel prices may cause: <ul style="list-style-type: none"> • high rates for ARP with high gas prices • high coal Project rates with low gas prices 	<ul style="list-style-type: none"> • Active Fuel Cost Management • Secure additional prepaid gas • Solar and potentially nuclear additions to partially offset
Penetration rate of Distributed Generation	<ul style="list-style-type: none"> • Could result in load loss and solar PV integration issues (e.g., PV oversupply) • Could increase demand for additional utility services for some customers 	<ul style="list-style-type: none"> • Understand cost of service and interconnection needs • Solar subscription product • Larger pool/imbalance market
Load decline instead of growth	<ul style="list-style-type: none"> • Load loss could result in additional excess capacity increasing rates 	<ul style="list-style-type: none"> • Reduce retail energy cost to encourage sales • Sell excess in wholesale
Environmental Regulations or desire for reduced carbon footprint	<ul style="list-style-type: none"> • Increased retail rates in trade-off between accelerated reduction • Early retirement of thermal units possibly stranding debt 	<ul style="list-style-type: none"> • Incremental resource reviews • Complete 20-year IRP • Add solar to offset



Conclusions



There is More Work to Do

Build Off Progress Since 2021 with New Targets

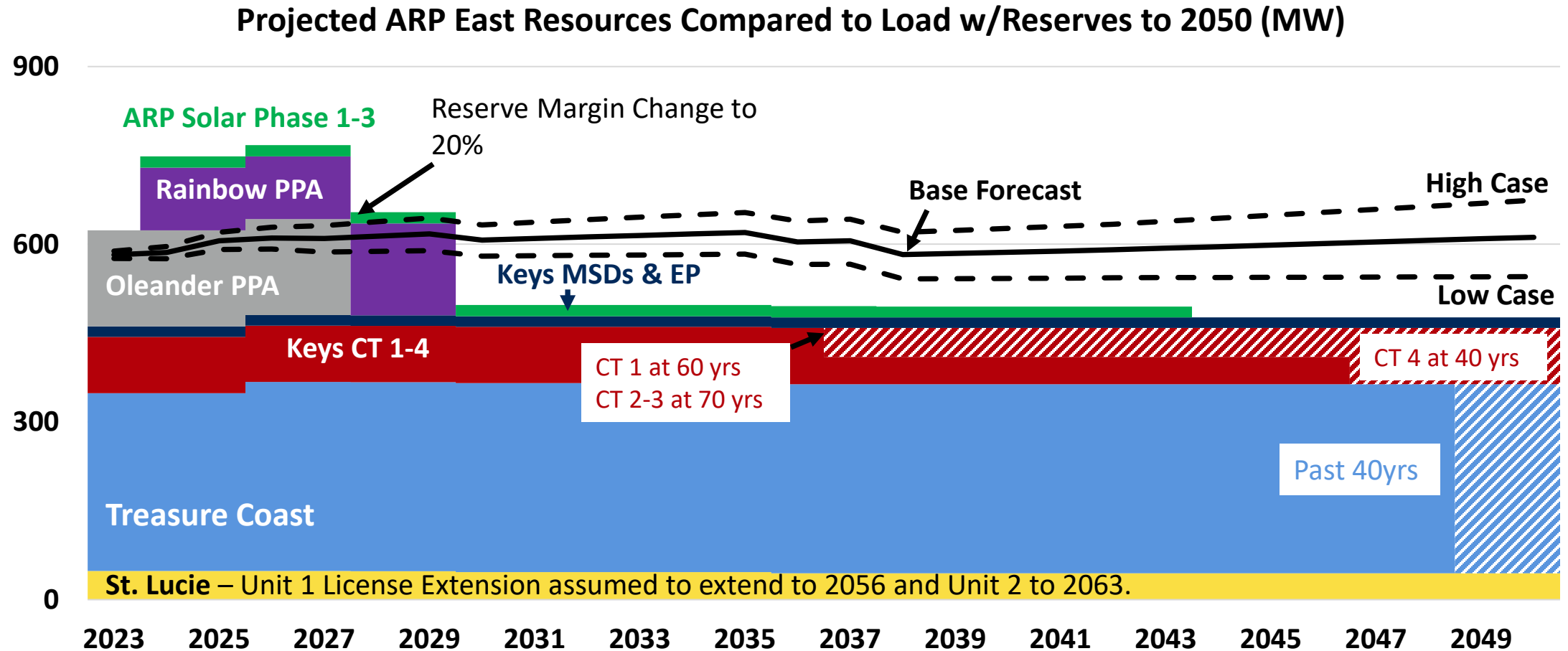
- Rates exposed to high gas prices and FL IOU rate increases, with FMPA and FL overall more exposed vs. rest of US – focus on major cost reductions?
- Diversity to gas and solar options, nuclear – start conversations with key entities on potential for nuclear expansion?
- Continued exploration of much larger pool and imbalance markets to offset cost increases from integration of solar
- Solar and storage additions must balance cost and customer desires with reliability - consider additional solar gradually or with emissions milestone?
- ARP capacity needs through 2030 resolved, but still room to optimize capacity position with member sales and mid-term opportunities
- IRP Phases II and III will be completed for key 20-year resource needs



Appendix A – Area Load And Resource Balance

ARP East Projected Position through 2050

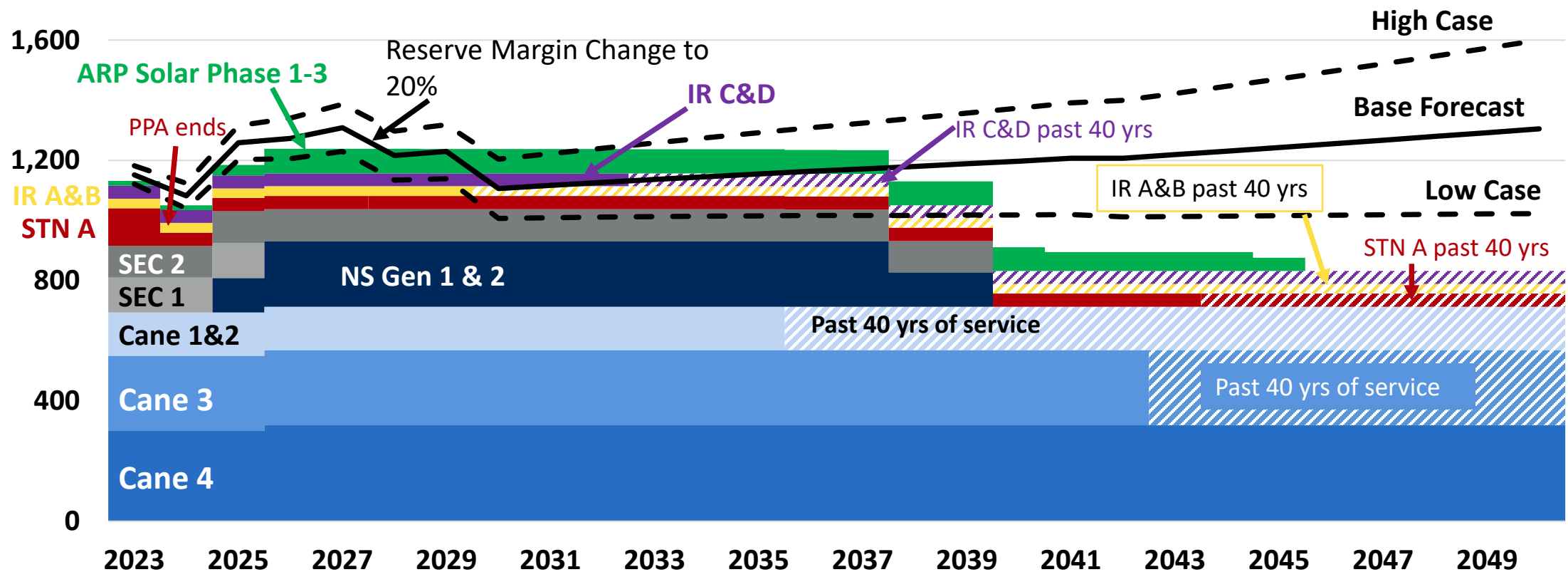
Second Half of Period Baseload CC and Keys CT Near EOL



ARP West Projected Position through 2050

Peakers Near EOL Sooner than Baseload CCs

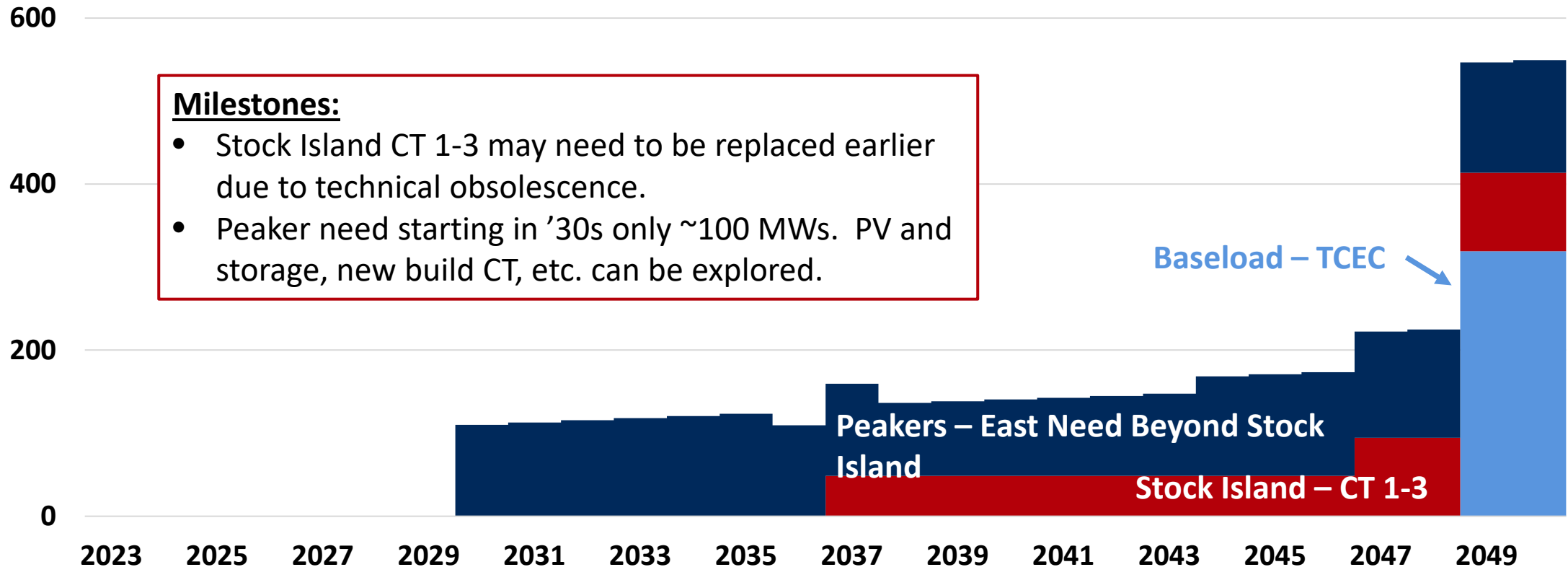
Projected ARP West Resources Compared to Load w/Reserves to 2050 (MW)



East Needs Driven by Peaker PPA Expirations

Capacity Needed with Units Retiring at EOL and PPA Expirations

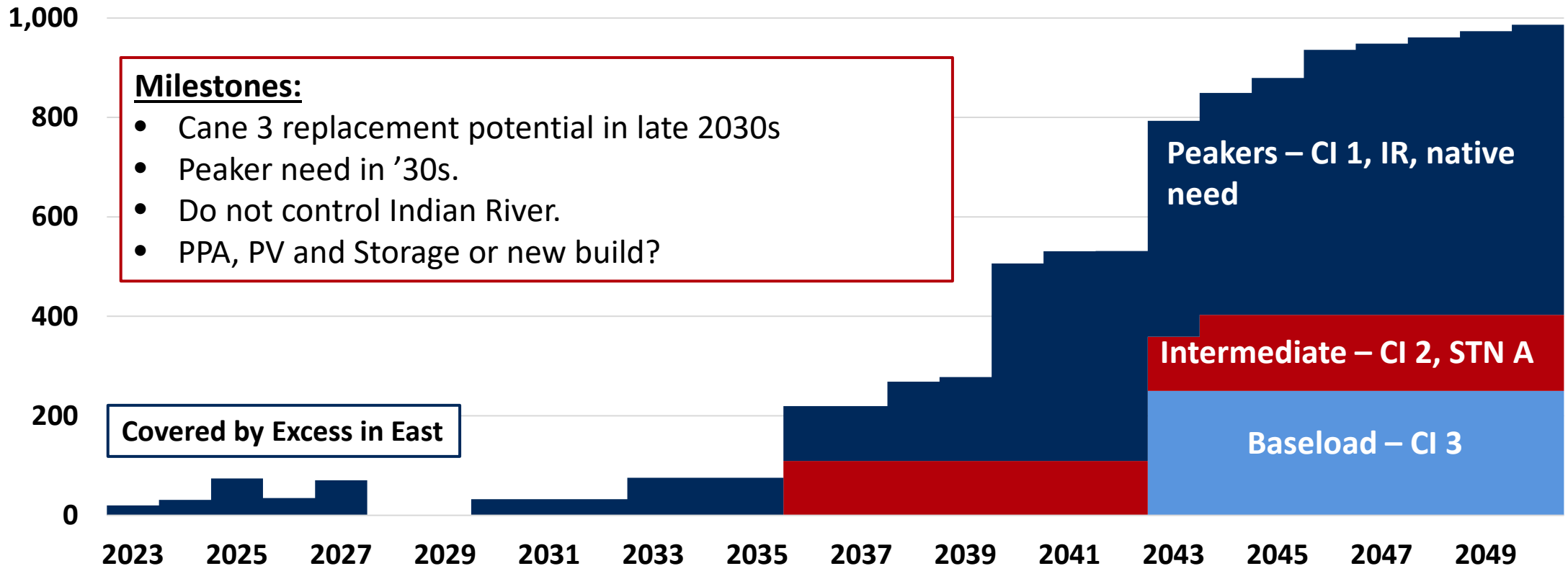
Projected East Need by Generation Type (MW)



West Needs Driven by EOL and Load Growth

Capacity Needed with Units Retiring at EOL and PPA Expirations

Projected West Need by Generation Type (MW)

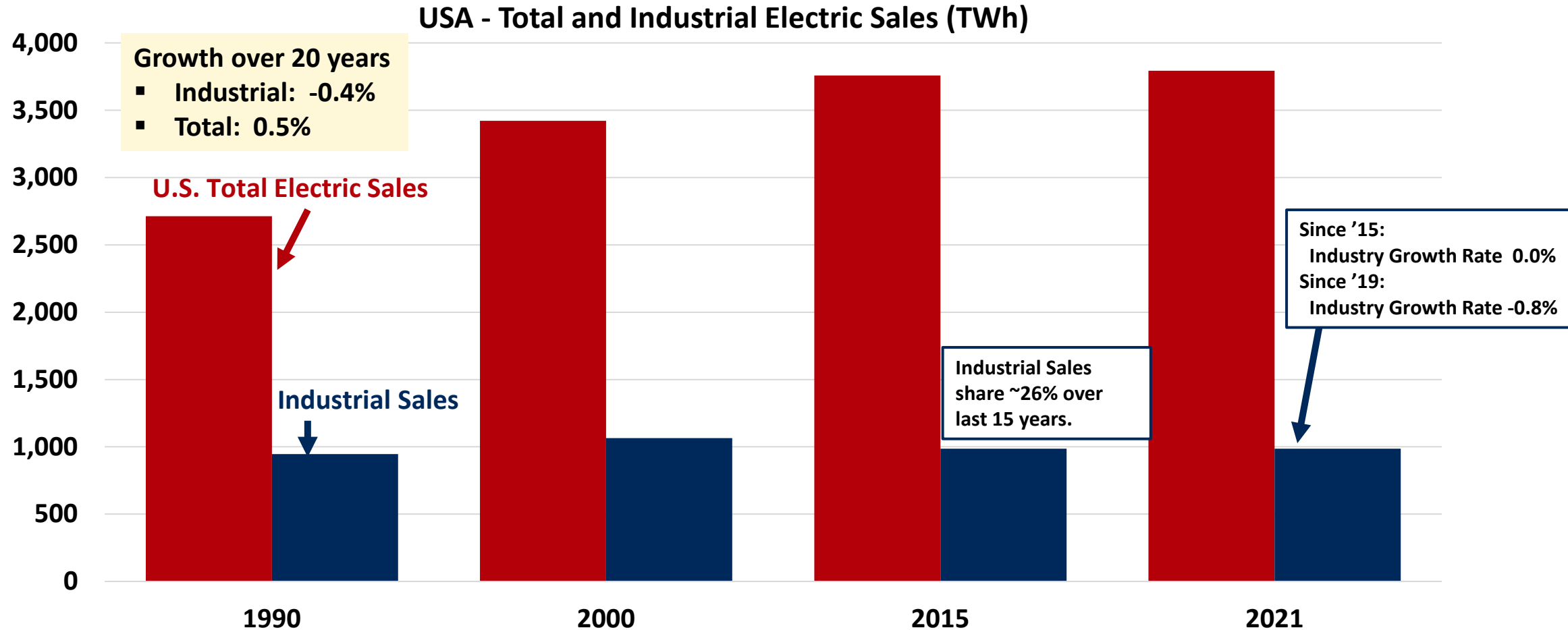




Appendix B - Electric Demand, Supply and Generation Mix Changes and Natural Gas Market Expectations

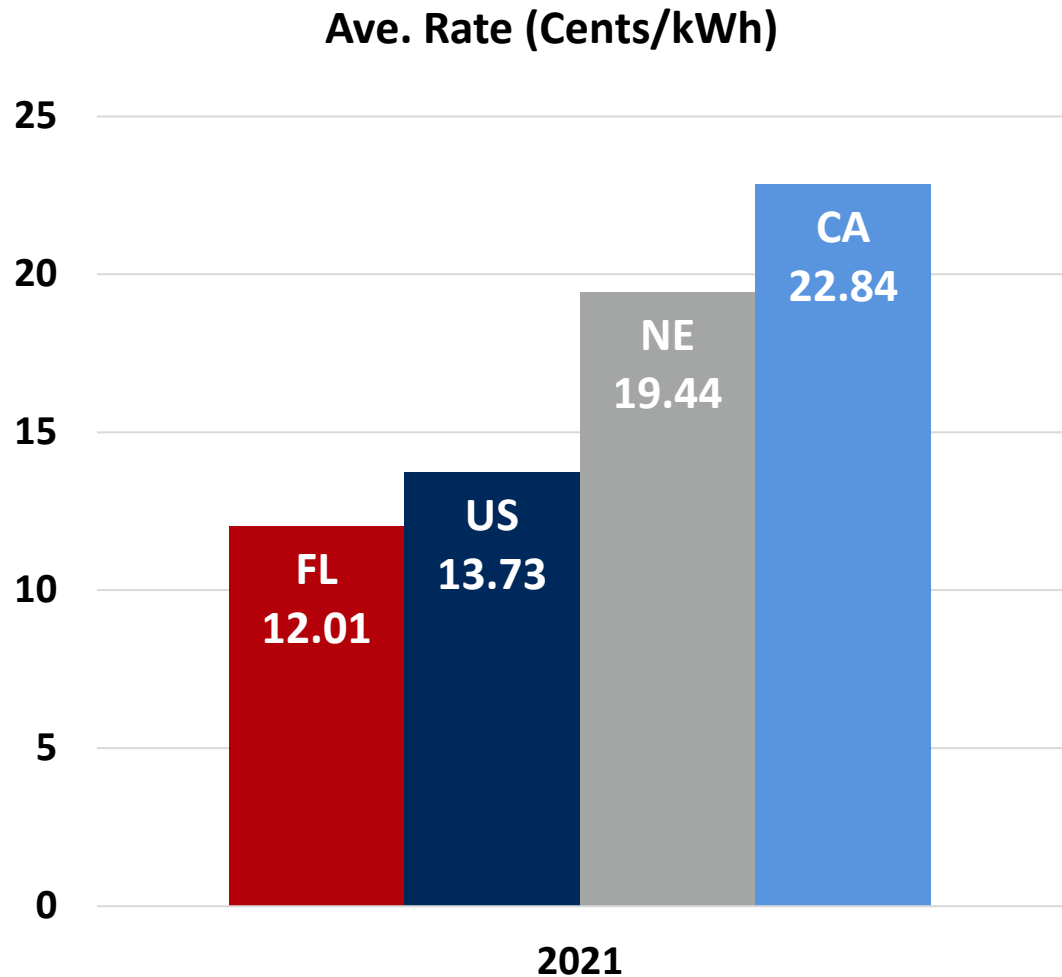
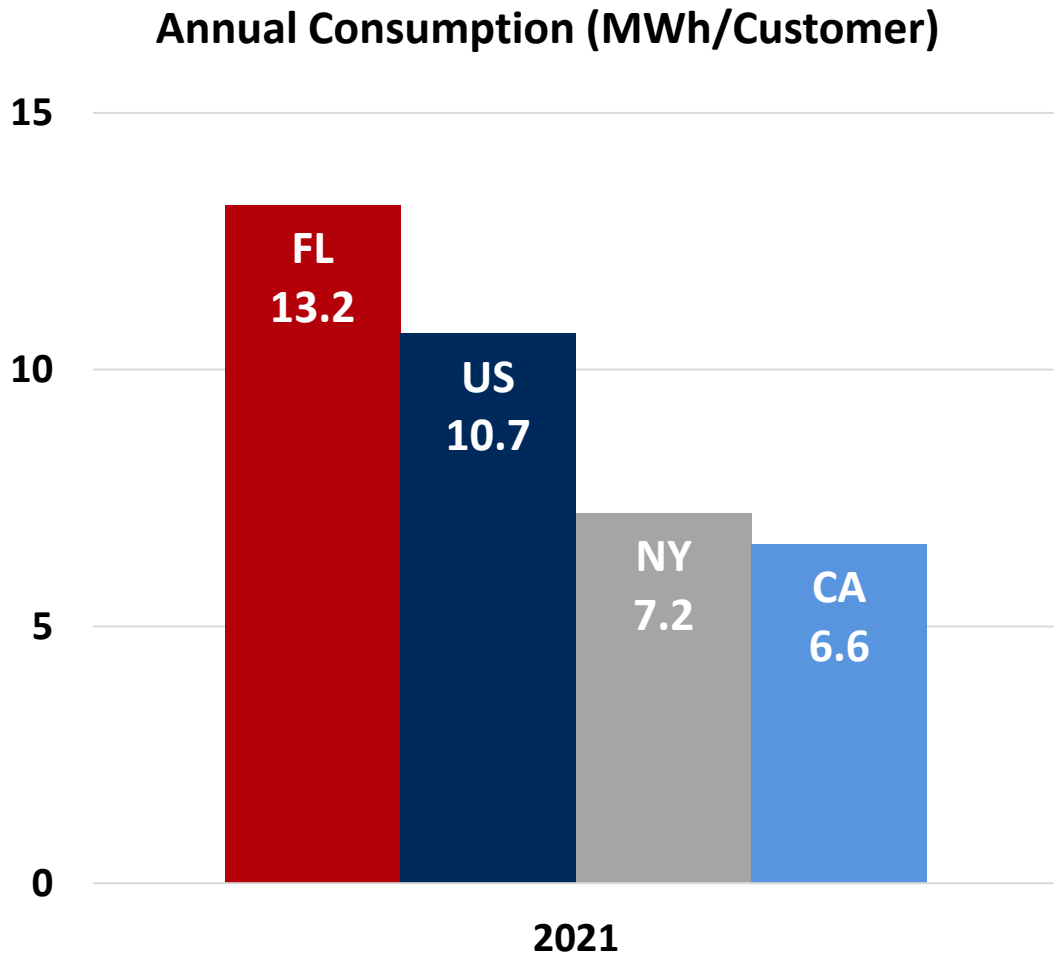
Total U.S. Electric Sales Have Declined 0.6% Since 2018

Only 0.2% Per Year Recovery Since 2012



Florida Uses More Electricity Per Customer

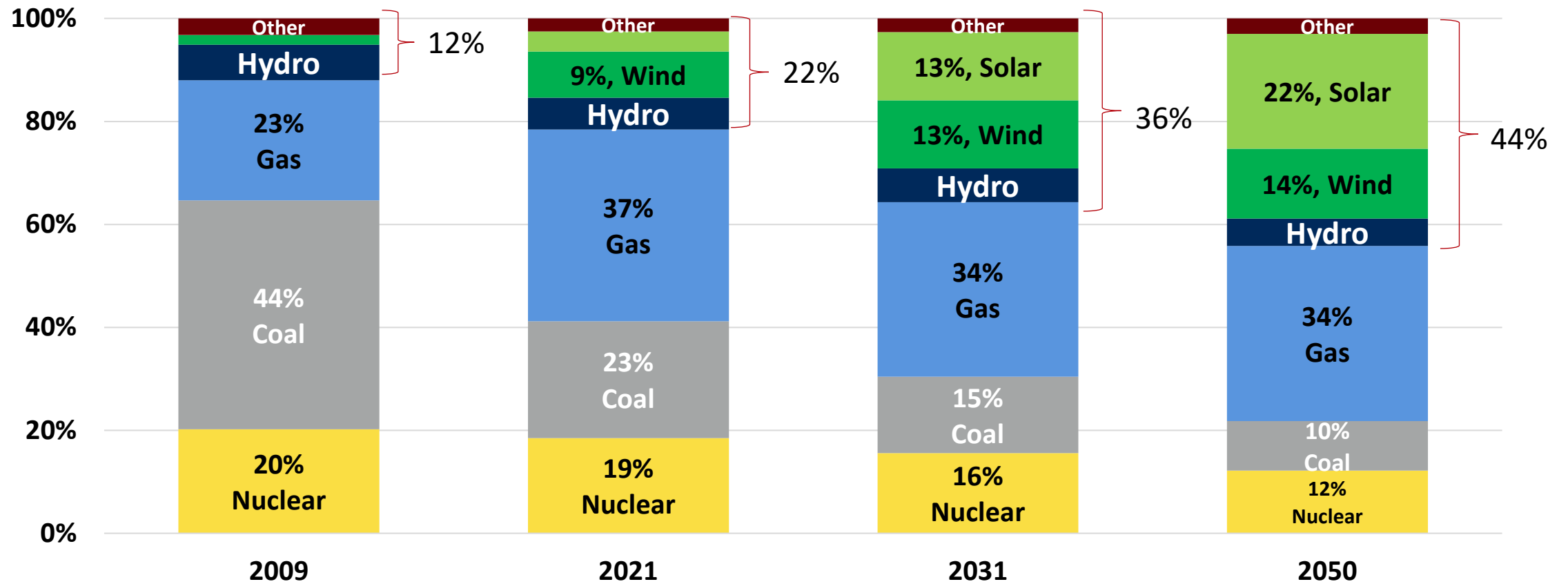
Cooling Load Drives Higher Residential Need



U.S. Far More Balanced Overall than Florida

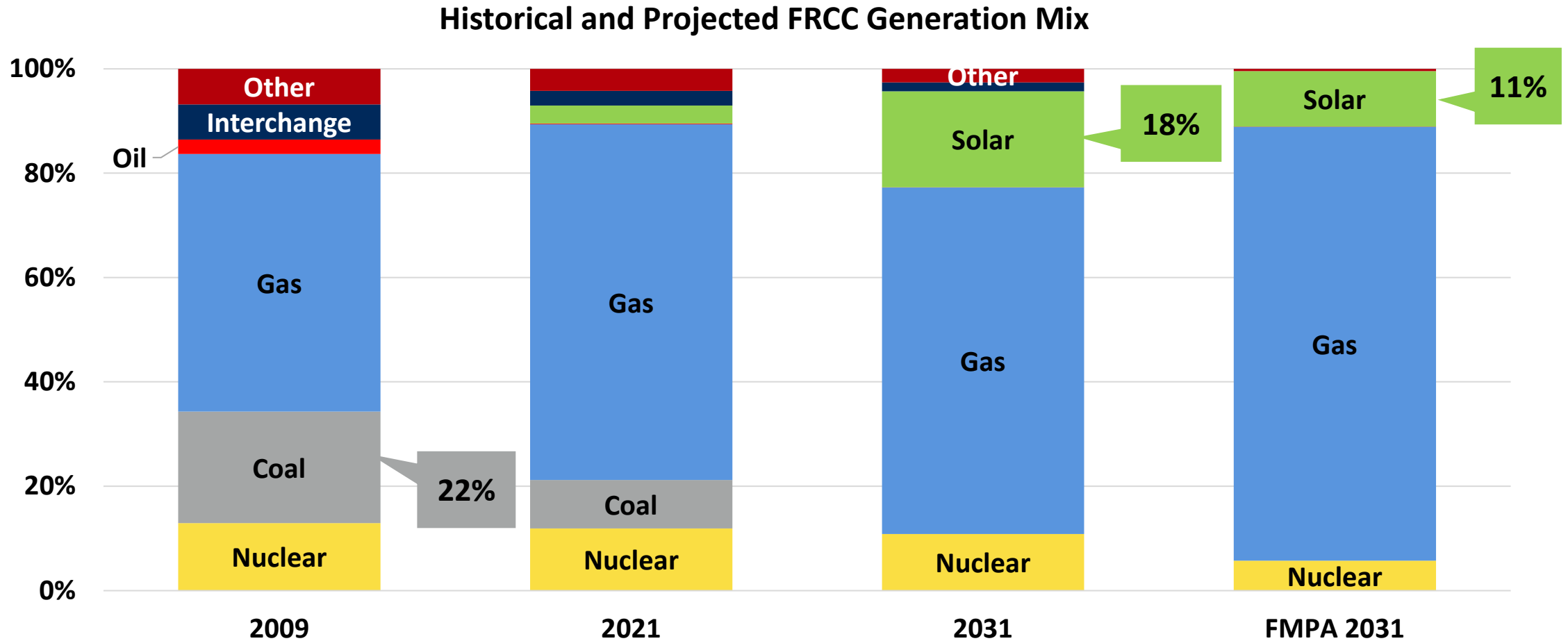
Solar and Wind are Steadily Growing

Historical and Projected US Generation Mix



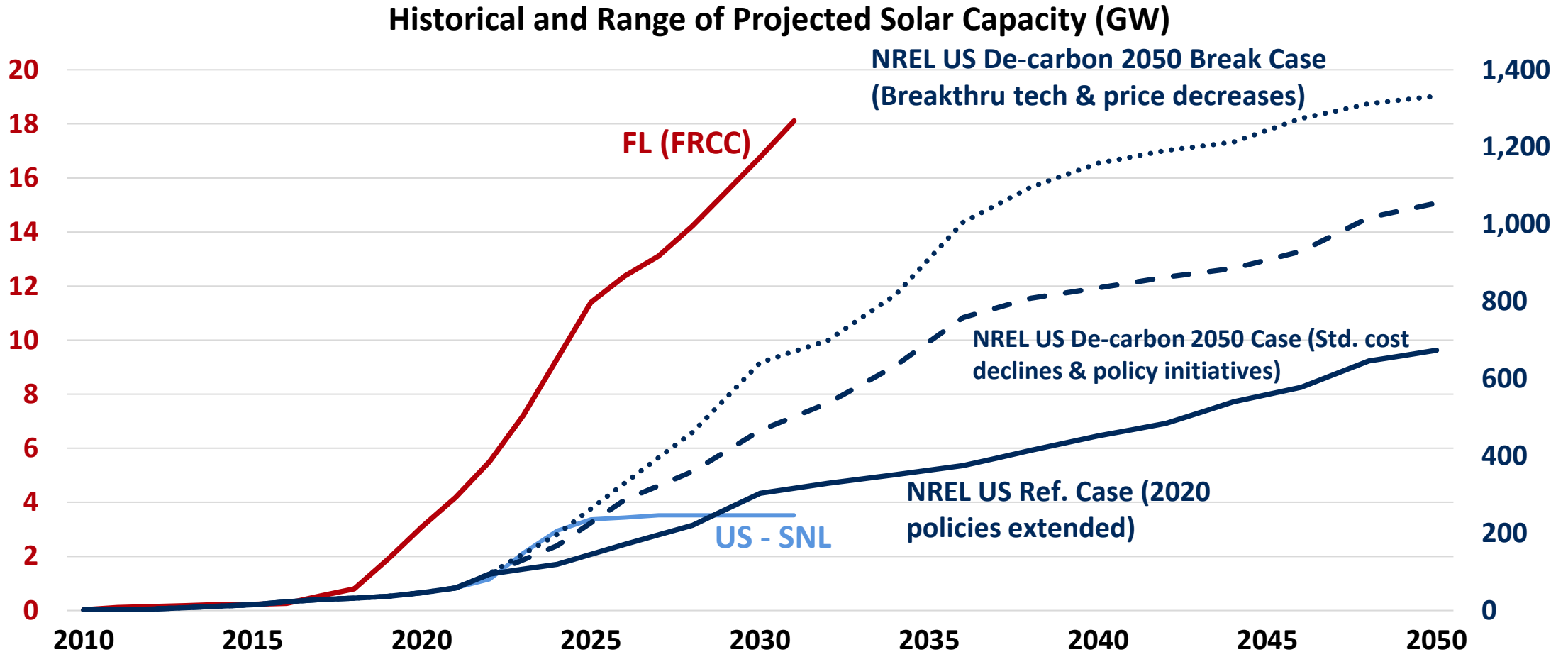
Gas Drives Florida Generation Mix

Coal Expected to Be Displaced by Solar and Gas by 2031¹

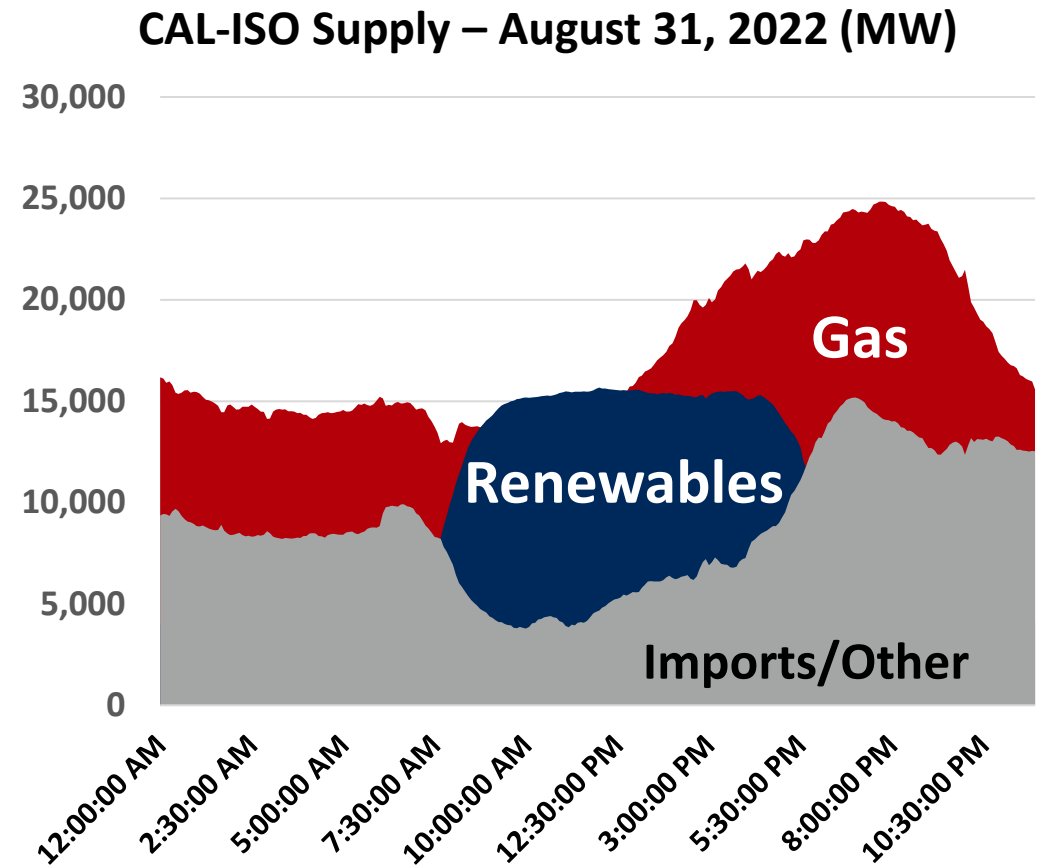
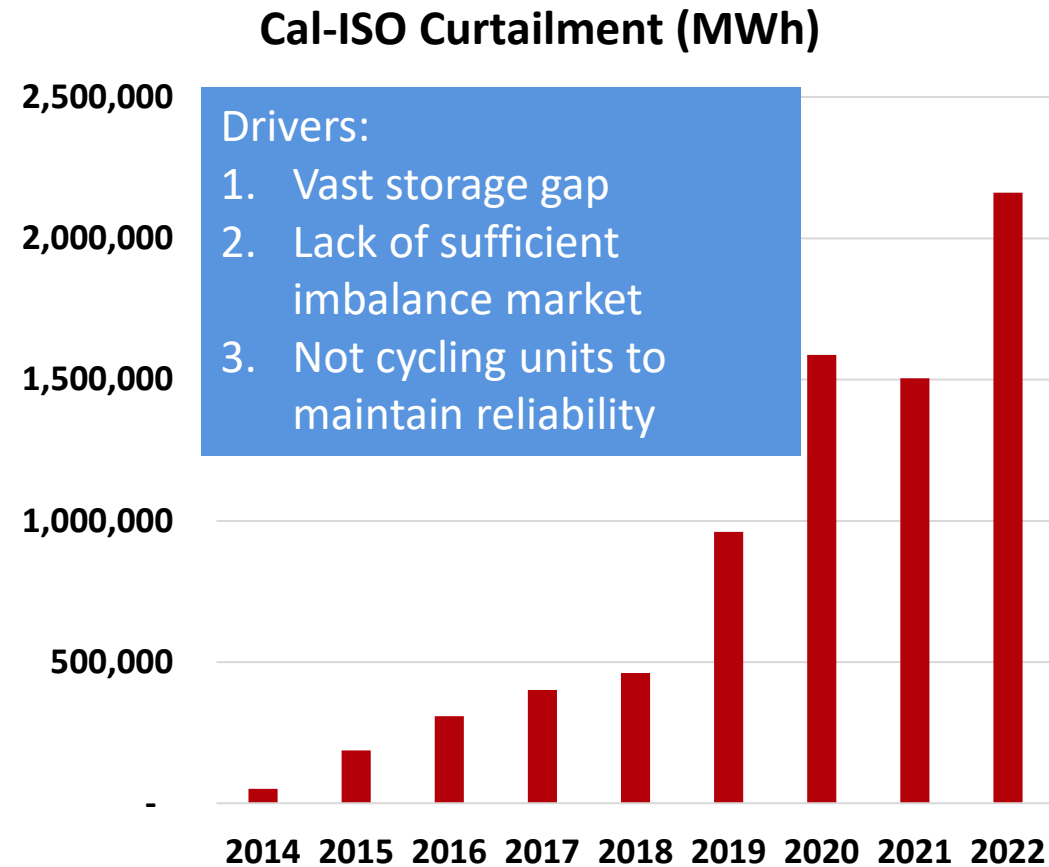


U.S. Solar Expected to Grow 7%–10% Annually

Local & Federal Policies & Supply Influence Range of Growth

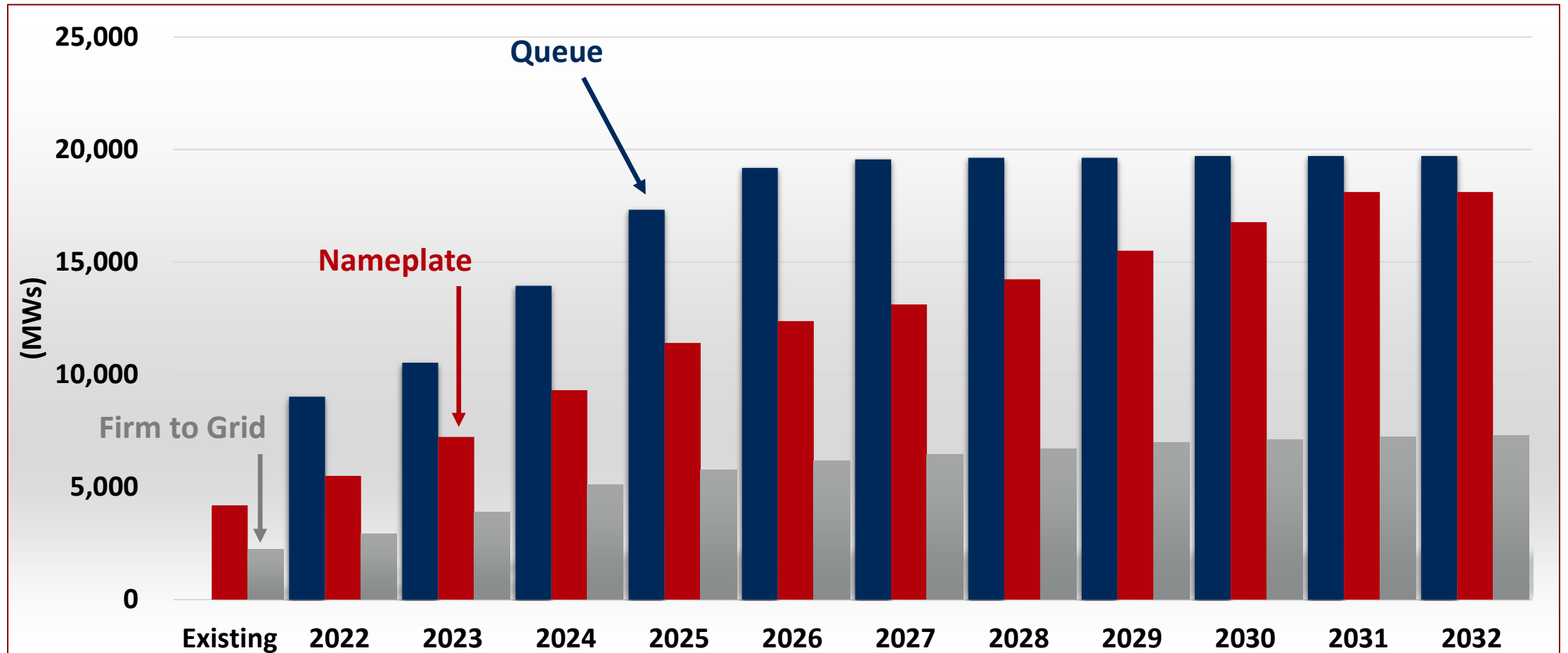


Important to Be Mindful of Oversupply and Net Peak Curtailment Growing in High PV Areas with Gas Crucial to Peak



Florida Utility Solar Grows to ~20 GW by 2032

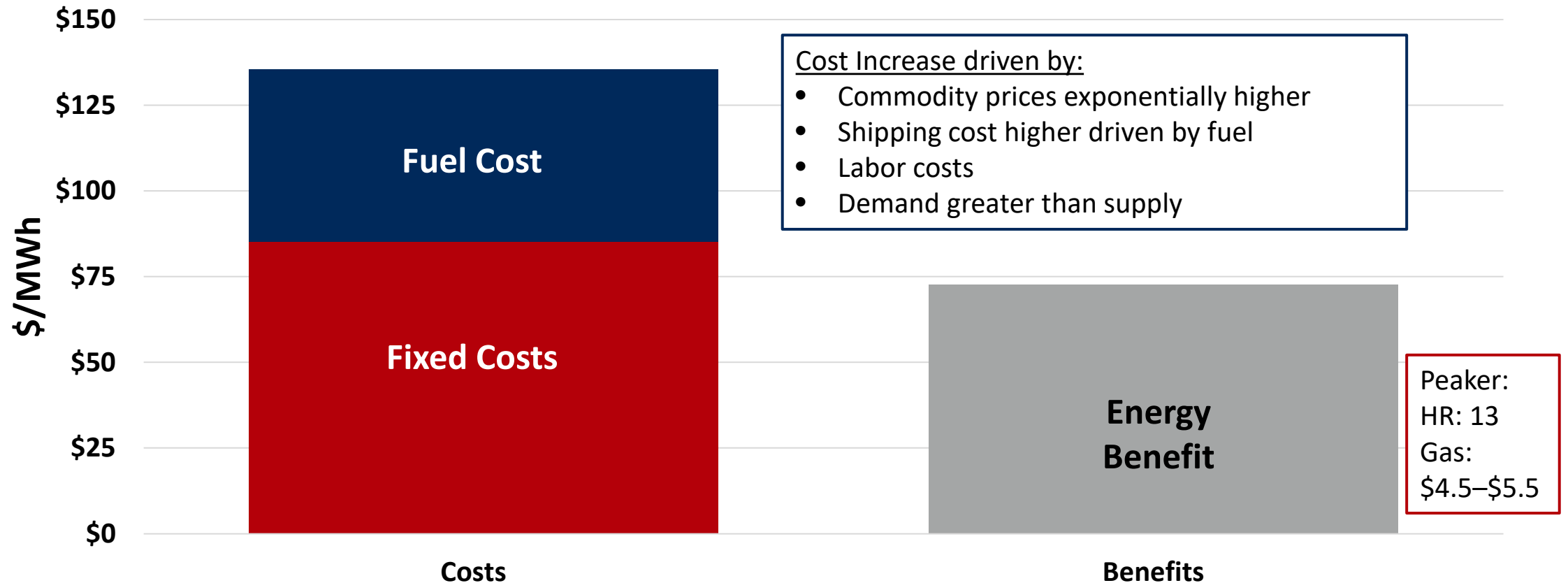
Transmission Queue Far Exceeds Site Plans



Material Costs Increases Exceed ITC Benefits

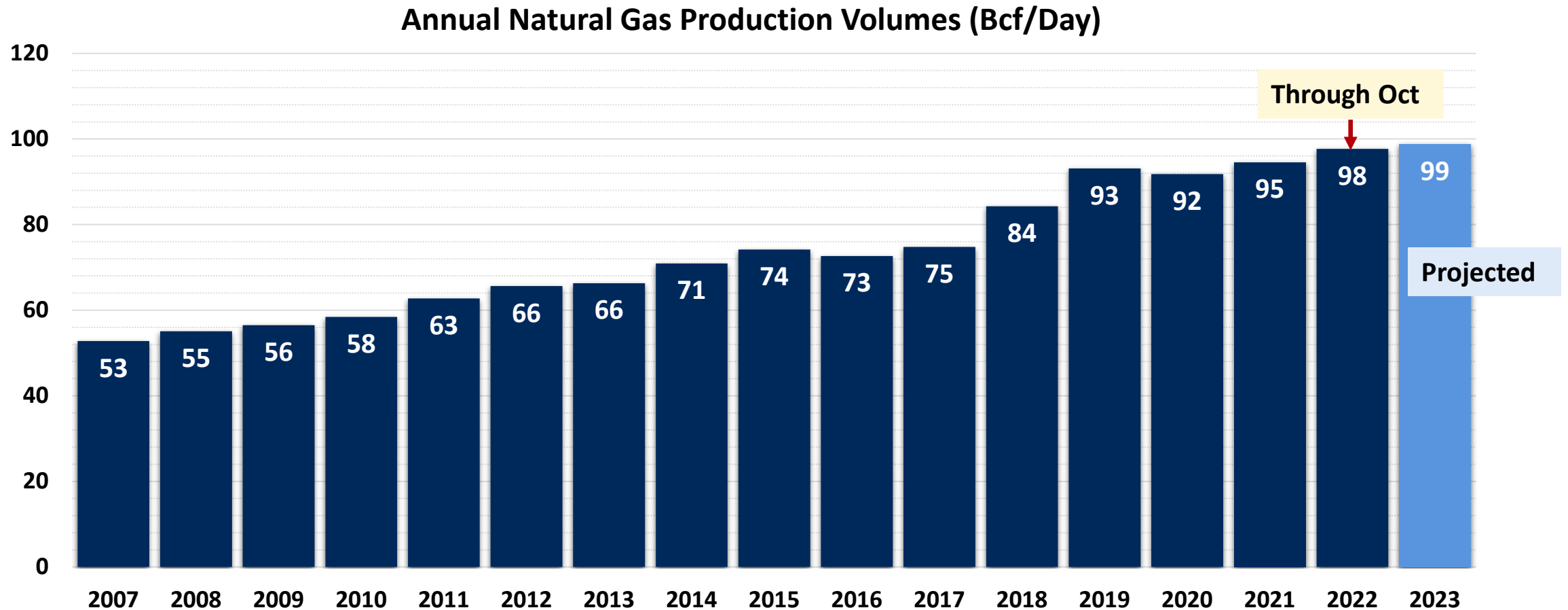
Capital Cost Needs to Decline ~75% for Net Energy Benefit

Long Term Average Cost of Battery Storage¹ Vs. Benefit



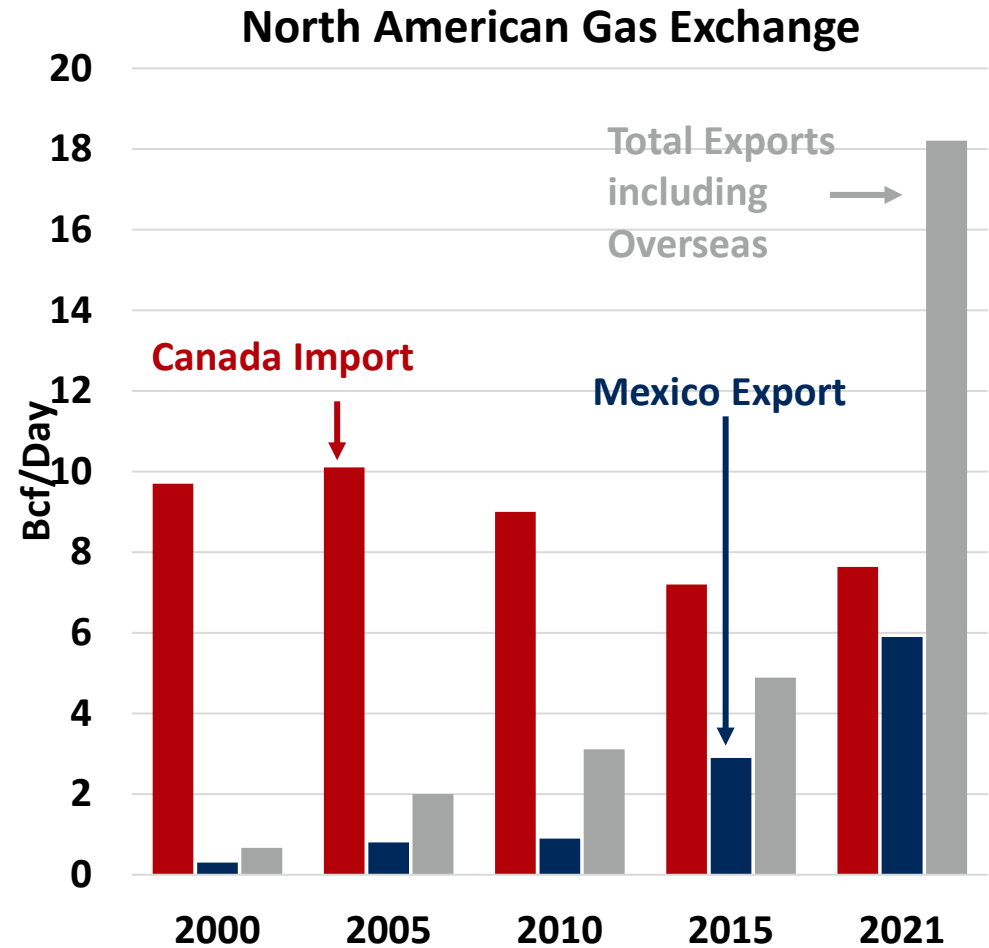
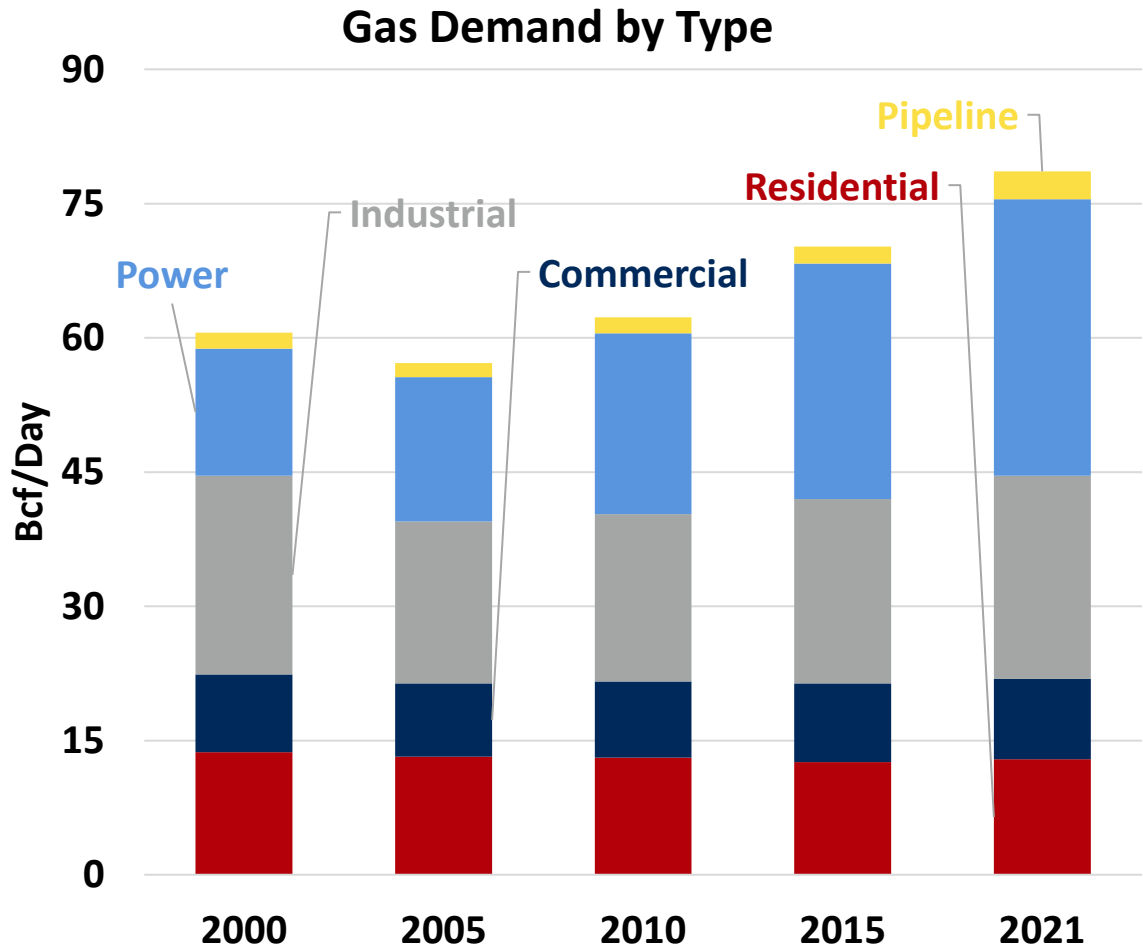
Shale Gas Rapidly Increased Production

Global Uncertainty Could Affect Continual Production Increase



Power Demand, Mexico Export Way Up

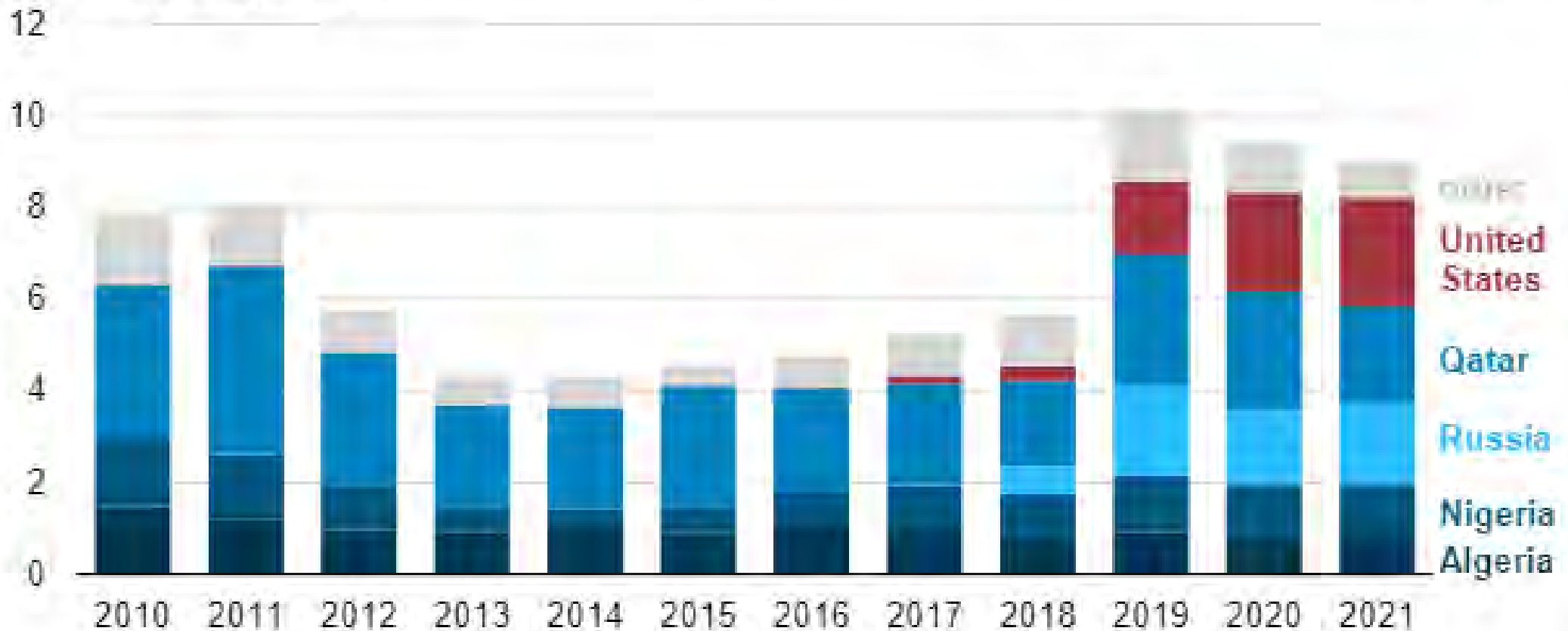
Power Demand has Outpaced Industrial Demand



United States LNG Exports Have Grown Significantly

Global Economic Uncertainty & EU Policy Could Alter Imports

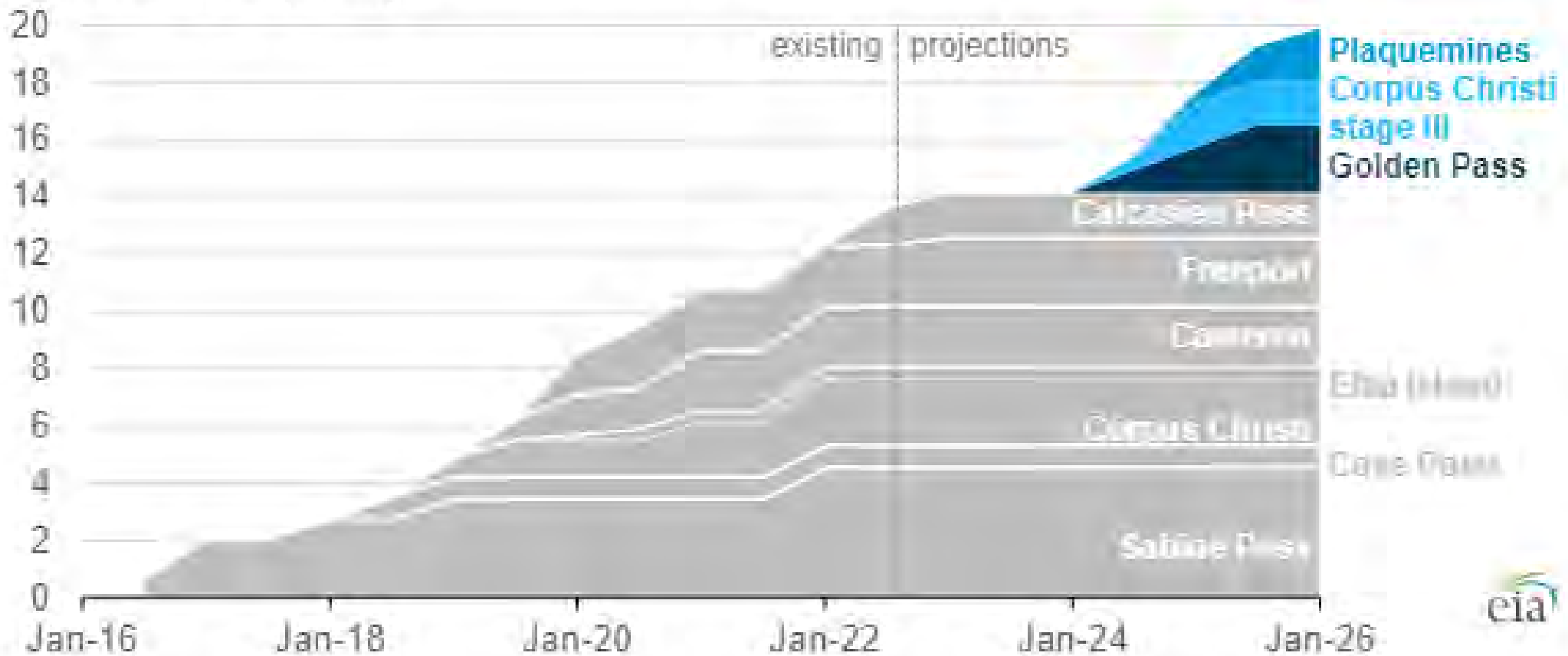
Europe (EU-27 and the UK) liquefied natural gas imports by source country (2010–2021)
billion cubic feet per day



LNG Export Capacity in 2022-25 Projected to Increase 50%

Global Economic Uncertainty Clouds Growth Projections

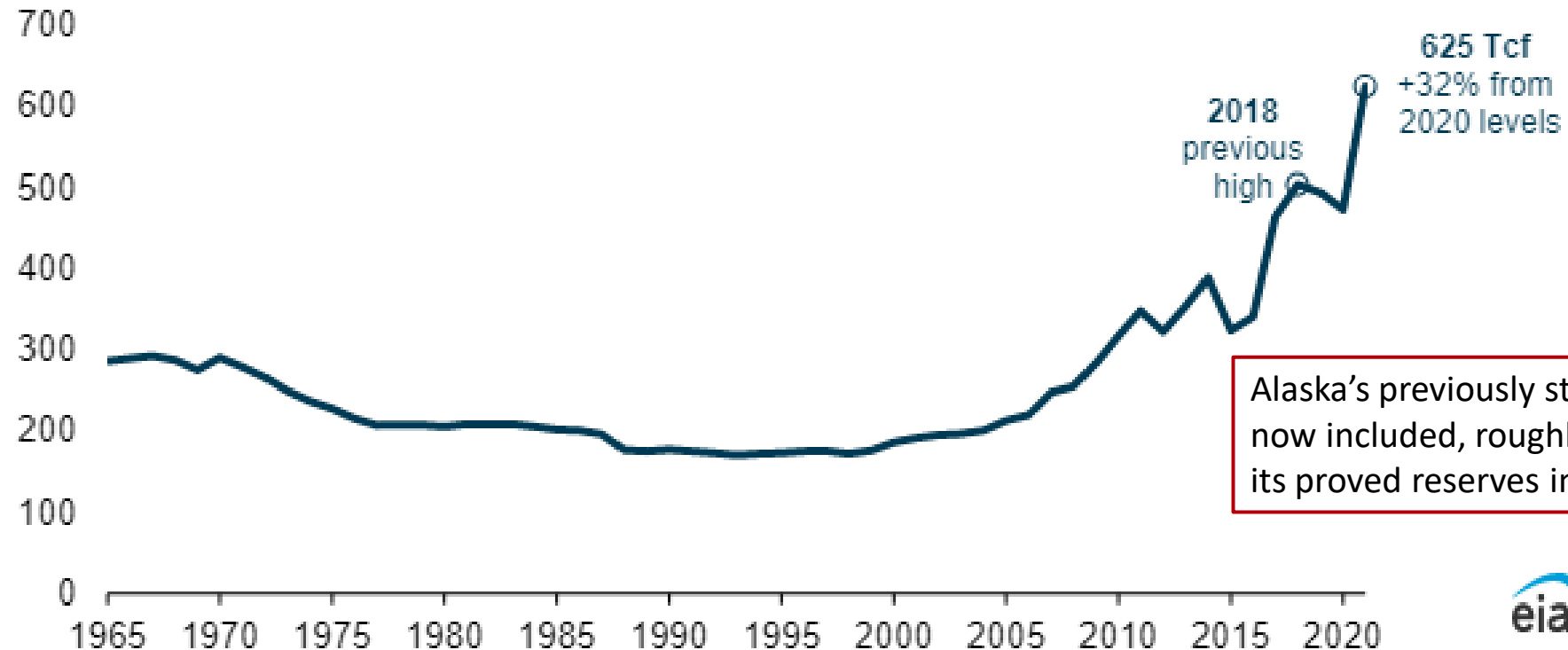
U.S. liquefied natural gas export projects: existing and under construction (2016–2025)
billion cubic feet per day



Natural Gas Proved Reserves Increase ~32% From '20

5 of 8 States Recorded New Record Volumes

U.S. total natural gas proved reserves (1965–2021)
trillion cubic feet (Tcf)



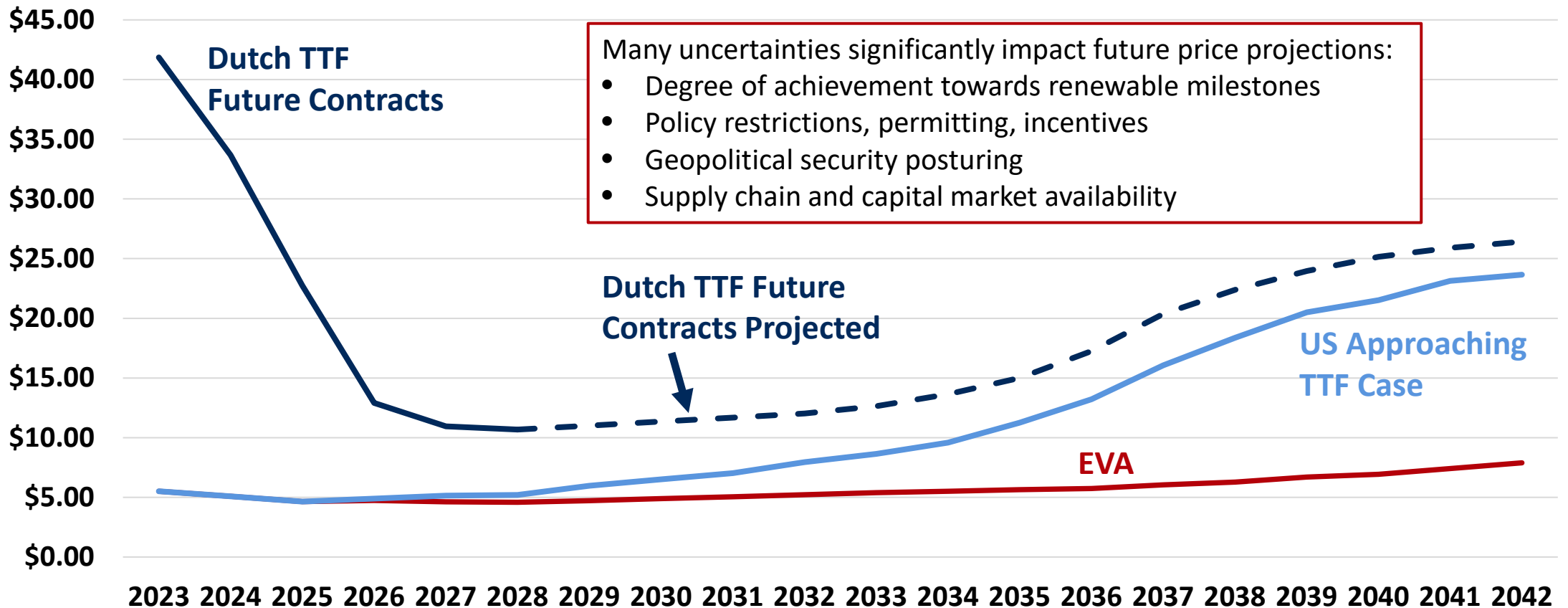
Alaska's previously stranded gas now included, roughly tripling its proved reserves in 2021.

Note: Proved reserves are operator estimates of the volumes of oil and natural gas that geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions.

Natural Gas Could Head Towards One Global Market

Lower Demand, Lower Supply, Lower Trade Barriers

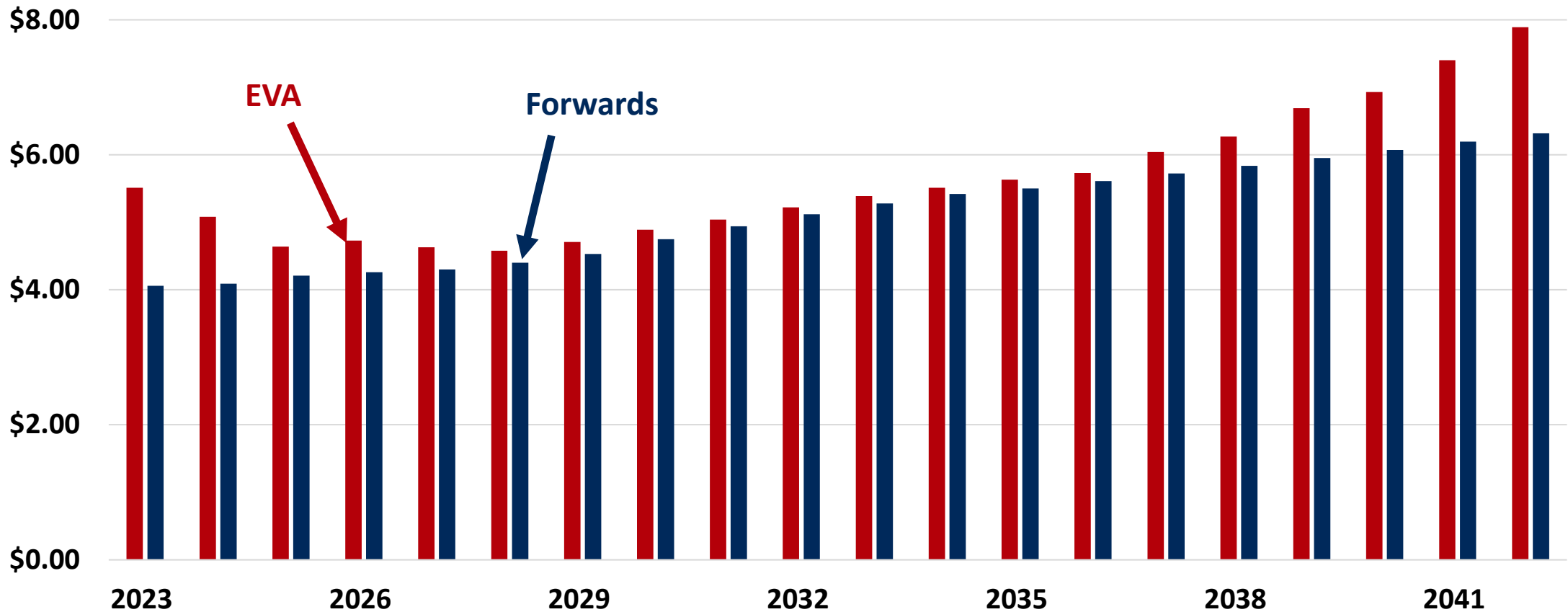
Projected Natural Gas Prices (\$/MMBtu)



EVA Projects Steady Gas Price Growth

Power + LNG Demand Outpaces Supply Gains

Projected Natural Gas Prices EVA (Henry Hub) and Forwards (\$/MMBtu)





Strategic Planning Session

