Fiscal 2021 Management Goals through December 31, 2020

| Goal | | Status | Actual | YTD Actual | YTD Target | FY'21 Target | Comment | |
|---|---------------------|--------|-----------|---------------|---------------|-----------------|---|--|
| 1.Safety | Lost-time Accidents | | 0 | 1 | 0 | 0 | No lost timos posidonte for Dec | |
| | OSHA Recordables | | 0 | 1 | 0 | 0 | NO IOST TIME accidents for Dec. | |
| 2.Compliance | Environmental | | 0 | 0 | 0 | 0 | Staff awaiting submittal of a self- | |
| | Financial | | 0 | 0 | 0 | 0 | report for a NERC CIP violation related to a GE monitoring network | |
| | Regulatory | | 0 | 0 | 0 | 0 | connection | |
| 3.Low Cost (\$/MWh) | Under \$70/MWh | | \$70.18 * | \$69.48 * | \$74.77 | < \$70.00 | * Estimates. YTD December 2020 MWh sales 5.6%> budget. All-in Costs \$5/MWh (~8%) < YTD target due to O&M (10%), assigned Project Costs (10%) and Admin & General | |
| | Fuel | | \$21.70 * | \$20.37 * | \$20.99 | \$22.19 | | |
| | Non-Fuel | | \$48.48 * | \$49.11 * | \$53.78 | \$47.81 | (17%) < target, but TXMS Expenses (4%) above target. | |
| 4.Stanton I and Stanton II Decision from OUC to reduce power costs and emissions | | | | | | | Staff working with OUC to obtain conversion capital estimates and work with FGU and FGT on natural gas supply requirements | |

FY 2021 NYMEX Contract \$0.00/MMBtu Deviation from Budget

NYMEX Natural Gas FY21 October Settlement (01/08/21)



| Goal | | Status | Actual | YTD Actual | YTD Target | FY'21 Target | Comment |
|--------------------------|----------------------------------|--------|--------|---------------|---------------|-----------------|---|
| - 5.Cyber Security | Breaches | | 0 | 0 | 0 | 0 | |
| | Phishing tests | | 2.7% | 4.6% | 5% or < | 5% or < | 2 people clicked in Dec. Holiday Gift Exchange Invitation link. |
| | Member assessments | | 1 | 1 | 1 | 5 | 3 assessments - in progress |
| - 6.Reliability | CC EAF | | 97.5% | 89.0% | 85.9% | 90% | TCEC was in outage. |
| | SI black start and trans. backup | | 0 | 1 | 1 | 100% | |
| | SAIDI Reduction | | 3 | 3 | 3.3 | 10 | Williston coordination review, Bartow TripSavers, Blountstown coordination review |
| 7.Member - Services | Leadership member visits | | 6 | 22 | 18.75 | 75 | 6 member cities visited by senior leadership team |
| | Projects managed for members | | 0 | 6 | 5 | 20 | |
| 8.Value of Muni | Member info updates | | 0 | 0 | 4 | 16 | Report development in progress |
| | Presentations Social media | | 2 | 5 | 2.5 | 10 | Newberry, Starke, Leesburge Lakes Worth Beach, Chattahoochee |

| Goal | | Status | Actual | YTD Actual | YTD Target | FY'21 Target | Comment |
|----------------------|--|--------|--------|---------------|---------------|-----------------|--|
| 9.Load Management | Dev. opportunities for 5 MW | | 0 | 0 | | 5 | Workshop scheduled in March, Staff continuing understanding of Members' capabilities |
| 10.Financing | Restructure debt | | 0 | 0 | 0 | 1 | RFPs received in December |
| | Extend debt to include R&R funding | | 0 | 0 | 0 | 1 | Info item to EC in January |
| | Prepd gas min. svgs. Of \$0.20/mmBtu | | 0 | 0 | 0 | 1 | |
| 11.Transmission | Neg. service upgrade for LWB & Homestead | | | | | | Ongoing design meetings on schedule |
| 12.People | 360 training for Leadership & mgmt. | | 5 | 5 | 1.84 | 11 | 5 Completed. Next 6 will begin in March. |
| | Mgmt. outreach to diverse prof. groups | | 1 | 2 | .5 | 3 | Jacob - AABE membership Linda – NABA membership; contact at NSBE |
| | Individual development plans | | 9 | 9 | 12.5 | 50 | 6 developed first week of January (not included in this number) |
| | FMPA Fleet Team Sharing – Days | | 24 | 58 | 17 | 100 | FMPA to Stock Island 24 days. Page 13 of 56 |

Elements of President Biden's Plan for Clean Energy Future *Very Aggressive Reduction in CO*₂ *Emissions*

- **Power Sector**: Achieve a carbon-free power sector by 2035
- Innovation: Invest in clean energy technologies, including battery storage, negative emissions technologies, next generation building materials, renewable hydrogen, and advanced nuclear
- Auto Industry: Incentives for consumers and manufacturers to invest in zero-emission vehicles; public investment in EV infrastructure
- Transit: Invest in zero-emission public transportation



CO₂ from China & India Offset Declines from U.S. & EU U.S. Emissions Declined ~17% Since 2000, Back to 1990 Level

CO₂ Emissions by Territory





SOURCES: Global CO₂ Atlas, worldpopulationreview.com, European Environment Agency. 2020 reflects preliminary projection and is uncertain due to worldwide COVID-19 impacts.

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U.S. Transportation Sector Now Largest U.S. CO₂ Source U.S. Electric Sector Reduced CO₂ Emissions by ~35% Since 2005*





source: 2020 EIA Annual Energy Outlook and EIA historical data. Includes AEO projected 2020 emissions, which are uncertain due to worldwide Plage at 306 for COVID-19. "Other" includes industrial, residential, and commercial sectors.

FL CO₂ Declined ~33% Over Last 15 Years, Prices Up 25% U.S. CO₂ Declined 33% as U.S. Power Prices Rise 38% since 2005

CO₂ Emissions (lbs./MWh)







SOURCES: EIA and EPA's Acid Rain Program database. Reflects emissions relative to total estimated generation w/renewables.

SOURCE: EIA

Florida's Residential Electric Cost 16th Lowest in U.S.

Very Competitive in Southeast, Which Must Import Most Fuel





SOURCE: U.S. Energy Information Administration, 2020 year-to-date average

Income in Most FMPA Cities Below U.S., State Averages

Electric Bill a Big Expense in Florida Because We Use More

2020 Personal Income per Capita

Thousands Omitted, Current Dollars

Residential Electric Usage

Kilowatt hours per customer, 2019







SOURCE: U.S. Energy Information Administration

Utilities Must Balance Cost, Reliability and Emissions *How Much Can Customers Pay for More CO*₂ *Reductions?*



LOW-COST POWER

Customers Need It



RELIABLE POWER

Customers Expect It



CLEAN POWER

Customers Want It



FMPA CO₂ Declined 35% from 2005

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





U.S. Has ~30% Energy CO₂ Free, But 24% Coal FMPA Growing to 18% CO₂ Free by 2027, No Coal/More Gas





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

70% CO₂ Reduction by 2035 Requires Large Solar Build



Florida Energy at 70% CO₂ Reduction





Electric Reliability Challenges with Significant Solar Solar Output Peaks at a Different Time than Electric Demand





FL 100% CO₂ Reduction Requires Extensive Overbuild Solar & Batteries Additions of 11x Entire Current FL Capacity





Increasing CO₂ Reductions Comes at a Cost

Power Costs Increases Could Range from Inflationary to 250%





Reliable Power Critical for Customers and Economy *Thought of Removing All Fossil Generation by 2035 a Tall Task*

- Customers and our economy need utilities to provide adequate electricity during all types of weather, not just when the sun shines
- Ensuring reliability requires backup capacity that is available 24/7
- To remove all fossil generation by 2035 would be a tall task and extremely costly for consumers
- In the future, some fossil capacity more than likely necessary as backup rather than primary generation





In Conclusion

FMPA Working on a Clean Energy Transition

Our Goal: 50% Reduction in CO₂ from 2005 Levels by 2027

- FMPA aiming for a 50% reduction in CO₂ from 2005 levels by 2027 in a manner that balances electricity cost and reliability
 - In 2027, FMPA will be ~80% clean burning natural gas and ~20% carbon-free generation
- Increasing CO₂ reductions beyond 50% requires much more solar, along with notable investment in electric transmission
- Moving beyond 70% CO₂ reduction requires even more solar and introduction of meaningful but costly battery storage to retain reliable grid power supply
 - Solar additions have significant land-use impacts in several interior counties in Florida
- Step-function improvement in batteries necessary to make additional CO₂ reductions affordable



As Congress Contemplates a Clean Energy Future:

How Much Can Consumers Afford for More CO₂ Reductions?

Set Realistic CO₂ Reduction Targets

- CO₂ reductions from electric sector on a path for significant reductions by 2027 without dramatic power cost increases that create hardships for customers
- Florida has limited CO₂ reduction options other than solar and battery storage
- Further CO₂ reduction targets must consider impacts on power costs to consumers
- Goal of a carbon-free power sector by 2035 extremely aggressive

• Provide Federal Incentives for Innovation

- National R&D investment in lower-cost, more-efficient batteries
- Federal funding for modular nuclear reactors, lower-cost solar and hydrogen
- Advances in air conditioning efficiency and controls to enhance energy conservation



FMPA Will Hold Strategic Planning Workshop Feb. 17 *We've Made Good Progress Since 2019, and More Work to Do*

- Driven down FMPA's wholesale power costs to members
- Supported reliability enhancement projects for members
- Supported financial planning and solar subscriptions for members
- Expanded engineering services to members
- Expanded services in NERC compliance, cybersecurity and IT
- Mitigated transmission rate increases from other utilities, secured commitments for new transmission connections for members
- Expanded services in AMI implementation for members



FMPA's Power Costs Lowest Since 2004

First Time Below \$70 Per MWh in 16 Years

All-Requirements Project Power Costs



Average cost per 1,000 kWh billed by fiscal year



Overview: Muni Challenges Increasing

More to Achieve with Limited Resources

- Working to lower cost on retail front while...
- Continuing to improve reliability of power system and managing staffing retention challenges (e.g. linemen)
- Increasing new workload (e.g., IT, compliance, new technology, communications)
- Responding to increased customer expectations (service options, rate structures, day-to-day communications, and new technologies like EVs)
- Continued improvement in emissions reductions while keeping prices affordable
- Goal of increasing the member electric utilities' value to each of their communities and proactively communicating business model benefits



FMPA's Stretch Goals for the Coming Years

Our Targets for Low-Cost, Reliable and Clean Wholesale Power





ARP Rates Competitive With Joint Action Agencies

Most Recent Rate in Lower Quarter of Benchmarks

Annual Average Power Supply Costs by JAA (2019*)

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





*WPPI serves portions of MI, IA. AMEA data reflects 2020. MEAG reflects bulk power cost to Participants from MEAG's Annual Report.

Retail Rates Competitive, Could Improve

There's More We Can Do ... We're Not Satisfied

Residential Bill Comparison Cost per 1,200 kWh, Calendar Year 2013 vs 2019 Average Rate





Municipal Reliability Performance Varies Widely

Significant Effort Needed to Meet the Goal

Average Outage Duration (SAIDI) for Municipals That Provide Data to FMPA In minutes for fiscal 2020



As Costs Come Down, Will Reliability Be a Focus Area

Is There a Joint-Action Advantage to Expand Reliability Services

- FMPA works to supply reliable wholesale power, and retail-level reliability important, too
- Some municipals challenged for various reasons to apply best practices
- If members seek assistance to the level of the opportunity, additional FMPA resources could be necessary to support reliability efforts
- Is reliability a top strategic issue for members?
- Do members see a joint-action advantage for FMPA to expand reliability services?

Reliability Best Practices

- Circuit inspection
- Substation maintenance
- Tree trimming
- Fuse coordination
- Pole inspection & replacement
- Targeted hardening
- Lateral reclosers
- SCADA
- GIS
- AMI



We Have a Lot to Feel Good About on Environment *Key Question: How Much Further and at What Price?*

- Florida and FMPA emissions down significantly since 2005
- Biggest near-term opportunity to reduce emissions further is conversion of Stanton 1 and 2 from coal to gas set for not later than 2025 and 2027
- FMPA on track for 50% reduction in emissions vs. 2005 by 2027 with small amount of additional solar and eliminating coal generation
- Choosing the path of continual CO₂ reduction will require a careful balance between performance and cost, with solar and storage only current viable options

