

# GRU Generation Transition Plan: 2020 to 2022

Item #190804

January 9, 2020 - UAB

January 16, 2020 - City Commission

# GRU Generation Transition Plan: 2020 to 2022

The following presentation details a new approach to paying down debt, reducing upward rate pressure and lessening reliance on fossil fuels by optimizing our electric generation.

# Challenge: Transitioning GRU's Aging Generation Fleet

GRU has five generating plants over 38 years old that produce 446 MWs of GRU's available 634 MWs:

- JR Kelly Natural Gas Plant: 1965
- Combustion Turbine 1: 1976
- Combustion Turbine 2: 1976
- Deerhaven Coal Plant: 1981
- Deerhaven Gas plant: 1982

# Challenge: Transitioning GRU's Aging Generation Fleet

These plants could continue to operate indefinitely but realistically their generation capacity will need to be replaced over the next 20 years, due to:

- Technical obsolescence (Kelly plant's combined cycle generation was down for six months due to the challenges of older equipment, parts and knowledge).
- Uneconomical operation (Currently costing \$35 to \$45 a MW, as compared to market of \$20 to \$30.)
- Reaching 100% renewable generation goal by 2045.

# Envisioning a Solution

- GRU commissioned The Energy Authority (TEA) to conduct a study that would determine the replacement cost of its aging assets.
- This study, called an Integrated Resource Plan (IRP), shows a capital expenditure (CAPEX) of between \$895 million and \$1.954 billion in today's dollars to replace aging units and move toward our 100% renewable goal.
- GRU has continued its business/industry discussions/analysis surrounding expanding its ability to import additional power off the Grid.
- Estimates reflect a CAPEX of between \$200 to \$400 million to gain Transmission Capacity of system load up to 450 MWs.

# What are our Options?

- GRU could maintain status quo operations.
- GRU could proactively retire/replace its generating fleet.
- GRU could exit the generation business.
- GRU could create a hybrid solution combining some elements of all three and adding a strategic partnership.

# Option 1: Maintain Status Quo

- Continue to incur higher fuel costs, more outage work, higher O&M costs as well as increasing personnel costs.
- Expect increased frequency of unplanned outages, such as in 2019 when the Kelly gas plant (GRU's most efficient plant) was unable to operate in combined-cycle mode for six months.
- Replacement of the aging generation fleet would be restricted by lowered financial metrics.
- Base rates and the Fuel Adjustment will necessarily increase.

# Option 2: Proactively Replace Aging Plants

- Based on the IRP, GRU would be incurring up to \$2 billion in CAPEX thru 2045 to replace these plants, including adding another biomass plant.
- This level of CAPEX is challenging for a utility that's already highly leveraged.
- The General Fund Transfer, other CAPEX and ability to maintain current levels of service would be impacted.
- GRU electric rates will necessarily increase.



# Option 3: Exit the Generation Business

- Retiring all of GRU's units over 38 years of age would come with substantial decommissioning costs.
- Upgrading GRU's tie lines to accept up to 450 MWs from the grid was estimated to cost between \$200 and \$400 million a few years ago.
- GRU would lose the remaining useful economic life of a portion of its generating assets, resulting in significant asset impairment.
- During the transition, electric rates will necessarily increase.

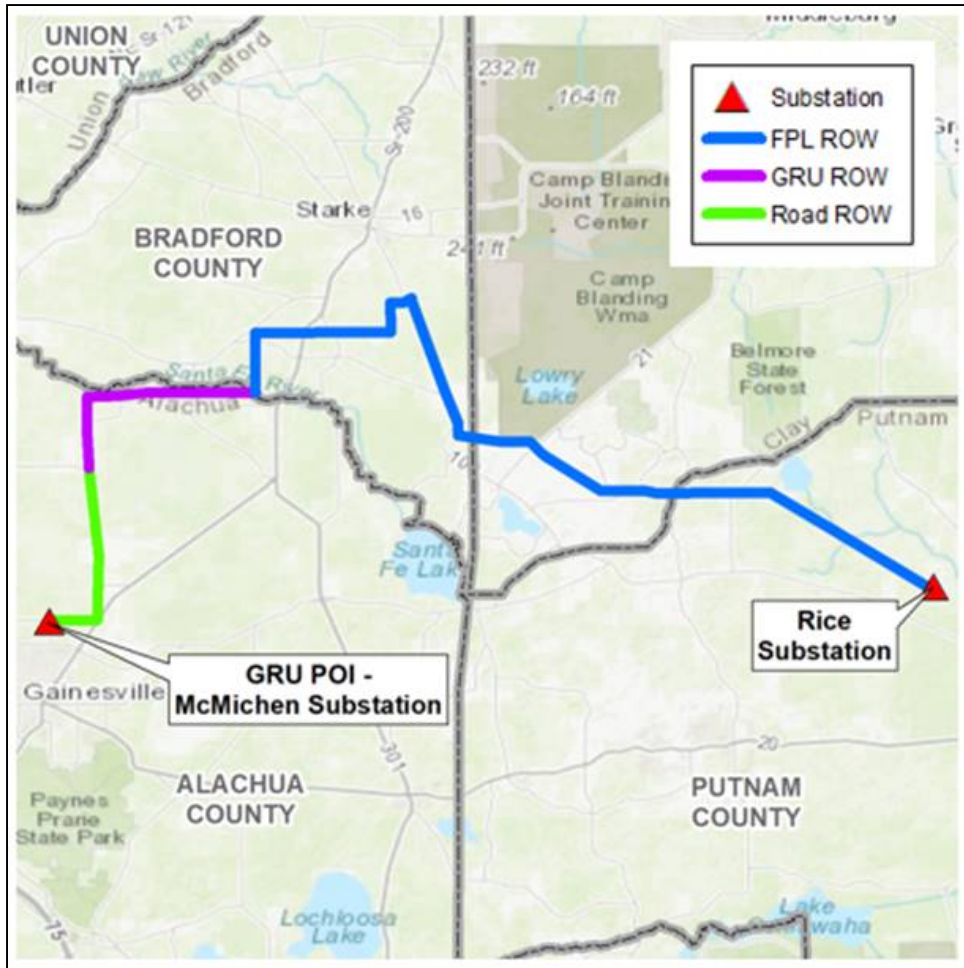
# Option 4: The Hybrid Solution

- Partner with FPL to upgrade GRU's tie line to create transmission capacity of 450 MWs, projected to be available in 2022 as a result of FPL's expansion to feed Gulf Power.
- In exchange, GRU will execute a Network Services Agreement (NSA) allowing us access to generation throughout FPL's territory.
- The NSA would be for 30 years at an initial cost of <\$9 million a year escalating by the cost of transmission service.

# Option 4: The Hybrid Solution (Continued)

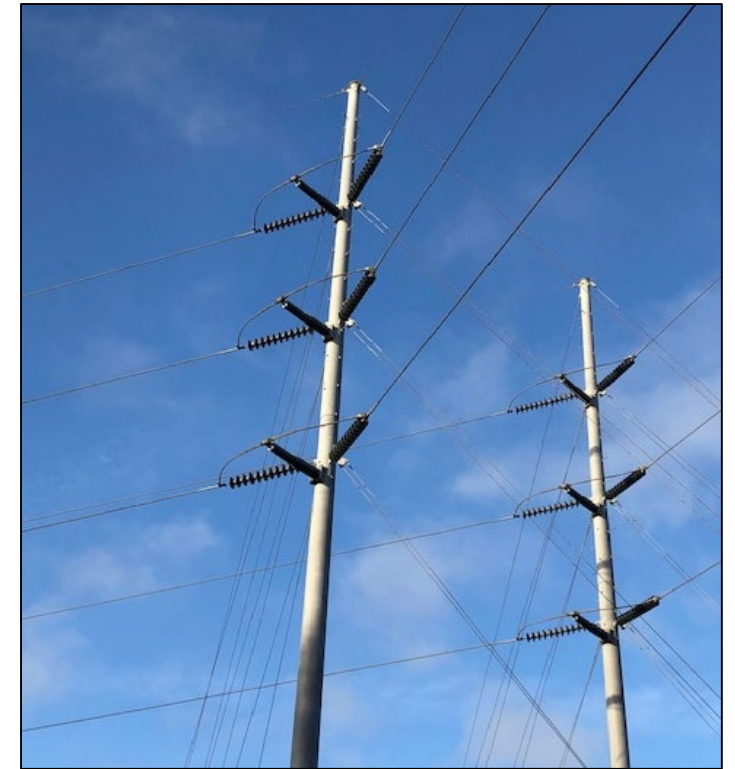
- Develop the final plan to convert Deerhaven coal plant to natural gas.
- Expand the scope of previous IRP to consider FPL generation and territory as options with which to replace GRU generation.
- Develop a timeline and analysis through which GRU will mothball/retire fossil fuel generation and recognize savings, called the ***GRU Generation Transition Plan: 2020-2022.***

# Option 4: The Hybrid Solution (Continued)



A second electric transmission line along the route already served by FPL would be constructed based on the terms of the NSA.

FPL building the transmission line would save GRU up to \$400 million.



# Impact of Transition Plan: Dollars and Cents

- Avoid future CAPEX of between \$200 and \$400 million, required to upgrade the interconnection ourselves.
- Avoid future CAPEX of between \$895 million and \$1.954 billion to replace aging units.
- Funding the \$9 million annual payment would come through \$10-\$14 million reduction in fuel costs by purchasing market-priced power from FPL.
- \$5-\$8 million reduction in fixed costs at fossil fuel plants.

# Impact of Transition Plan: Dollars and Cents

- Potential to shed “balancing authority,” thus reducing almost \$2 million a year in costs and substantial non-compliance risks.
- Anticipated savings of \$17-\$24 million a year before \$9 million payment to FPL. Annual payment to FPL should not grow faster than savings.
- Net Savings of \$8-\$15 million a year would be used to pay down debt and/or reduce the fuel adjustment.
- Economically sustainable plan to transition GRU generation fleet.

# Impact of Transition Plan: Anticipated Annual Savings

The NSA effectively grants GRU access to FPL's electric grid, which is anticipated to result in the following cost reductions:

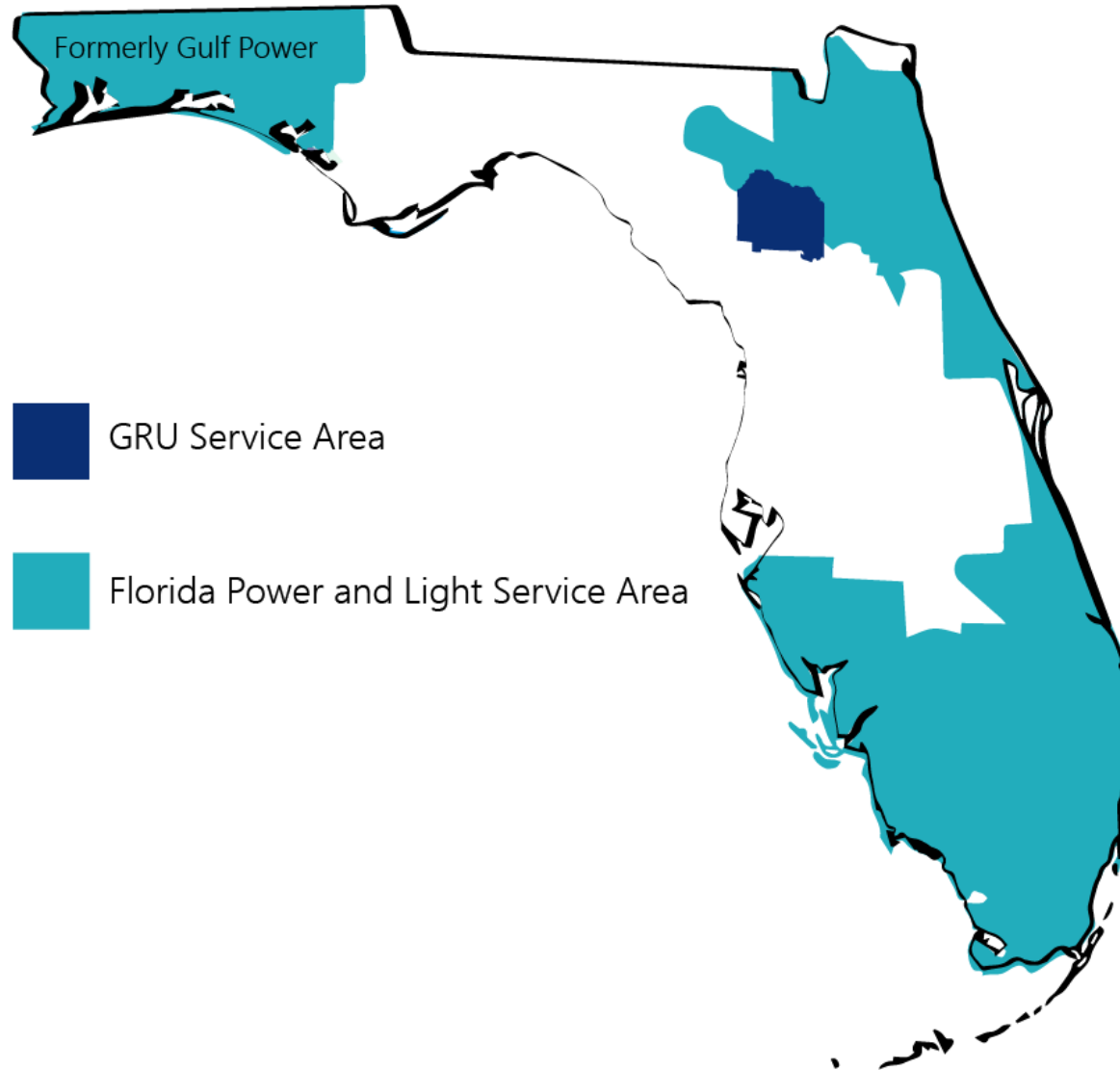
<b>Annual Costs</b>	<b>Annual Savings</b>
Variable fuel	\$10-\$14 million
Fixed plant	\$5-\$8 million
Balancing Authority	\$2 million
<b>Gross Savings</b>	<b>\$17-\$24 million</b>
Less: NSA payment	(\$9 million)
<b>Net savings</b>	<b>\$8-\$15 million</b>

# Impact of Transition Plan: Organizationally

- Reduce dependence on fossil fuels, with the ability to hasten the retirement of specific fossil plants.
- Gain greater access to green generation outside GRU's territory.
- Utilize strength of FPL and others to assist GRU's transition to 100% renewable.
- Multi-year window allows time to work on an effective and equitable plan to reduce workforce at fossil fuel plants.



# GRU Territory vs. FPL Territory



# Questions

## **Why is GRU asking for a quick approval of such an important agreement?**

The approval period may seem quick but the research has been ongoing for years, as the GM and his staff have met with numerous parties to evaluate expanding GRU's input transmission capacity. With FPL's recent purchase of Gulf Power, all of the necessary pieces are now in place.

## **Isn't \$9 million a lot to spend on 450 megawatts of transmission capacity?**

Not when you consider the cost savings derived from the ability to import power from FPL. Our models reflect annual savings in fuel costs that far exceed the \$9 million annual payment; we also avoid billions in CAPEX.

## **Why is GRU asking for an NSA obligating the utility for 30 years?**

The utility is obligated to provide its customers power in perpetuity. Part of that plan includes building long-lived assets (up to 50 years) that will serve that obligation. This NSA is a contract that will grant GRU access to a considerable asset: FPL's low cost generation fleet.

# Questions

## **Isn't the NSA providing FPL a first step in buying the utility?**

This NSA creates an economic partnership with FPL, which reduces FPL's incentive to buy the utility.

## **Won't GRU be devalued by giving up generation assets?**

Recognizing what strategic advantage your organization has and doesn't have is a strength, not a weakness. Using the market to our advantage will increase GRU's value to the city.

## **What if language is in the NSA that places GRU in a bad spot, just like the biomass PPA?**

The NSA is a fully transparent agreement available for all to review and its term is an industry standard to recover costs. The rates charged are tariff rates and are governed by the Federal Energy Regulatory Commission (FERC).

# Questions

## **Won't this action diminish GRU's exemplary storm response?**

GRU will only be adding generation transmission capability, not reducing its crews of line-workers and emergency personnel.

## **Will the NSA slow GRU's ability to reach its renewable goal?**

The NSA actually expands GRU's ability to reach its renewable goal through a larger territory to build plants, as well as having access to FPL's solar plants and system balancing authority.

## **What if GRU doesn't see the savings that they estimate?**

The savings are the difference between GRU's internal cost of power generation as compared to FPL's anticipated price of wholesale power generation. The inherent risk in recognizing these savings would be if GRU's costs fall below those of FPL's prices, which is highly unlikely.

# Questions

## **What happens to employees working at GRU's fossil fuel plants?**

The importance of this plan involves thinking forward through more than the annual budget process. With a projected completion of the tie line by 2022, GRU has over two years to work on equitable outcomes for these employees. Employment status may not change until 2023 or beyond depending on the scale of changes. We plan on taking advantage of all potential staffing options.

## **When would customers see any impact from this plan?**

Since the interconnection won't be constructed until 2022, changes are still years away. However, the projection of reduced costs and lower CAPEX are positive signs to rating agencies and will bolster our ratings, which will place downward pressure on rates. This is the beginning of long-term change, not overnight change.

# Summary

## *Current outlook*

- IRP capital expenditures: \$895 million-\$1.954 billion
- Second transmission interconnection: \$200-\$400 million
- More debt = lower bond ratings
- Lower bond ratings = higher interest costs
- Higher operating costs increase as assets age = higher base rates
- Increased outages = higher base rates
- Continued upward rate pressure on electric
- Unsustainable business model

## *Under GRU Transition Plan*

- 30 years @ <\$9 million per year, paid for with reduced variable operating and fuel costs of \$10 to \$14 million
- FPL absorbs cost of upgraded interconnection
- FPL creates 450 MW of capacity
- Reduced fixed operating costs on fossil fuel plants: \$5 to \$10 million a year
- Reduced rate pressure on electric
- Develop staffing plan for employees potentially impacted by changes

# Recommendation

The City Commission authorize the General Manager of the Utility to:

1. submit a request to FPL for transmission interconnection;
2. negotiate the terms of and execute the System Impact Study Agreement and Cost Reimbursement, subject to approval by the City Attorney as to form and legality
3. if required, negotiate the terms of and execute the Facilities Study Agreement, subject to approval by the City Attorney as to form and legality;

# Recommendation

4. negotiate the terms of a Network Services Agreement and Network Operating Agreement with FPL, provided that there are no increases in or additions to the costs or rates described in this agenda item and in the responses by FPL and GRU included in the back-up. If there are additional or increased costs, or if the General Manager cannot successfully negotiate the terms of the Network Agreements, the General Manager will bring the Network Agreements back to the Commission for consideration. The Network Agreements are, subject to approval by the City Attorney as to form and legality;



# Recommendation

5. Direct GRU to use the savings resulting from the Network Agreements to reduce GRU debt, which would be the basis for future base rate reductions, and/or reduce GRU's fuel adjustment depending on the classification of the Network Services agreement payment as a base cost or a fuel cost.

Questions?

 **GRU**<sup>SM</sup>  
More than Energy

# Appendix

## GRU Calculation of Network Transmission Services Obligation Based on FPL's latest filing

		\$ 2.10 Pt to Pt Rate	\$ 1.95 Pt to Pt Rate	\$2.10 Pt to Pt Rate W/O 2-6	\$1.95 Pt to Pt rate W/O 2-6
Schedule 1	Scheduling, System Control Dispatch	\$ 703,696	\$ 703,696	\$ 703,696	\$ 703,696
Schedule 2	Reactive Supply and Voltage Control	403,714	403,714	0	0
Schedule 3	Regulation and Frequency Response	260,504	260,504	0	0
Schedule 4	Energy Imbalance	4,819	4,819	0	0
Schedule 5	Operating Reserve (Spinning Reserve)	88,912	88,912	0	0
Schedule 6	Operating Reserve (Supplemental Res)	253,520	253,520	0	0
Schedule 7	Point to Point service	<u>8,410,711</u>	<u>7,809,946</u>	<u>8,410,711</u>	<u>7,809,946</u>
<b>Total Obligation</b>		<u><u>\$10,125,876</u></u>	<u><u>\$9,525,111</u></u>	<u><u>\$9,114,407</u></u>	<u><u>\$8,513,642</u></u>

Note:

- (1) FPL is in settlement discussions after suspending the hearing of the filing and Matt Pawlowski has stated that the Point to Point rate of \$ 2.10 per Megawatt load will be settled at a lower level. Mr. Pawlowski stated it was reasonable to use \$ 1.95 in GRU's analysis.
- (2) The Network Services Agreement requires that network services customers must take services in Schedule 1 and 7. GRU can elect to self supply those services in Schedules 2 through 6 (which Gru is capable of doing).