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February 19, 2019

Amy Baker
Chief Economist
Office of Economic and Demographic Research
111 West Madison Street, Suite 574
Tallahassee, FL 32399-6588

Re: Florida Chamber of Commerce Financial Analysis Regarding Proposed Amendment - Right to Competitive Energy Market for Customers of Investor-Owned Utilities; Allowing Energy Choice

Dear Mrs. Baker,

The Florida Chamber of Commerce respectfully submits the attached financial impact analysis regarding the proposed ballot initiative to restructure the Florida's electricity market. As an interested party, the Florida Chamber of Commerce retained Charles River Associates to conduct an independent analysis to estimate the potential changes in revenues and costs to state and local governments that would result from the implementation of the proposed ballot initiative. **This analysis concluded electricity market restructuring would have an adverse financial impact, in terms of lower tax revenues and increased costs, of $1.2 to $1.5 Billion or more per year to the Florida state and local governments – and ultimately, to taxpayers**.

Negative Financial Impact by Major Category		**Range Estimate** ($ millions)	
		Low	High
Revenue Losses	Franchise Fees	650	650
	Gross Receipt Tax	270	320
	Municipal Public Service Tax	200	300
	Property Tax	60	140
Higher Costs	Administrative Costs	30	80
	RTO or ISO – impact of higher rates	20	25
Total Potential Impact		**1,230**	**1,515**
Incremental impact from higher electricity rates – net impact of revenue and costs for every 10% rate increase		90 *(GRT and government electricity bills)*	

We hope this financial impact report provides beneficial support and additional information to the Financial Impact Estimating Conference. If you or any of the other principals have any questions regarding the research or analysis conducted therein, please do not hesitate to contact me at 850.270.5525 or fbrown@deanmead.com.

Sincerely,

French Brown

Enclosure

Prepared for:

Florida Chamber of Commerce

136 S. Bronough Street

Tallahassee, FL 32301

Florida Electricity Markets Restructuring Ballot Initiative

Potential Financial Impact to Florida State and Local Governments

Prepared by:

Charles River Associates

200 Clarendon Street

Boston, Massachusetts 02116

Date: February 19, 2019

CRA Project No. D27183

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1. Executive Summary

Citizens for Energy Choices is seeking, through a proposed ballot initiative, a constitutional amendment to restructure the electricity market in the State of Florida.

More specifically, the proposed amendment would require the Florida legislature to adopt laws by 2025 that would limit the activity of the IOUs to only the construction, operation, and repair of transmission and distribution (T&D) systems (forcing IOUs to divest all generation, and possibly T&D assets), and establish competitive wholesale and retail electricity generation and supply markets.

Florida law requires that the Financial Impact Estimating Conference (FIEC) review any proposed ballot initiative and prepare a financial impact analysis.

As one of the stakeholders, the Florida Chamber of Commerce retained Charles River Associates (CRA) to conduct an independent analysis to estimate the potential changes in revenues and costs to state and local governments that would result from the implementation of the proposed ballot initiative.

Electricity market restructuring would have an adverse financial impact, in terms of lower tax revenues and increased costs, of $1.2 to $1.5 Billion or more per year to the Florida state and local governments – and ultimately, to taxpayers.

Table 1: Summary of Potential Annual Financial Impacts from Market Restructuring

Negative Financial Impact by Major Category		**Range Estimate** ($ millions)	
		Low	High
Revenue Losses	4.3.2. Franchise Fees	650	650
	4.3.4. Gross Receipt Tax	270	320
	4.3.3. Municipal Public Service Tax	200	300
	4.3.1. Property Tax	60	140
Higher Costs	4.3.5. Administrative Costs	30	80
	2.3.2. RTO or ISO[1] – impact of higher rates	20	25
Total Potential Impact		**1,230**	**1,515**
4.3.5. Incremental impact from higher electricity rates – net impact of revenue and costs for every 10% rate increase		90 *(GRT and government electricity bills)*	

CRA reviewed the impact of a transition to a restructured electricity market across other jurisdictions over the last 20 years. Then, CRA analyzed the potential financial impact of restructuring the Florida electricity market, as prescribed by the ballot language, to state and

[1] Total RTO or ISO ongoing costs would run between $200 and $250 million annually would be recovered via higher rates – state and local governments account for 10% of demand and thus would see $20-$25M in the form of higher bills.

local governments including lower revenues (e.g., franchise fees, property taxes, MPST, and GRT) and higher costs (e.g., administrative, litigation, regulatory, etc.)

Given time constraints, CRA did not conduct an expansive bottom-up plant level production cost modeling analysis. Instead, a top-down approach was utilized to develop potential future outcomes under different scenarios – based on historical precedents of restructuring in other jurisdictions, recent industry trends, and the current status of the Florida electric system. CRA's analyses assume fundamental energy constraints are met such as resource adequacy requirements within Florida and existing infrastructure (i.e. based on current interstate electric transmission and natural gas pipeline capacities).

A literature review by CRA indicates that electricity market restructuring in other jurisdictions has not only resulted in higher electric rates for consumers overall but also significantly higher costs for states to develop new institutions to manage wholesale markets, educate consumers, ensure adequate supply and reliability, handle increased litigation, provide public assistance to low income ratepayers, and manage the overall higher regulatory complexity.

In addition, given the language of the ballot petition, Florida governments would likely experience a severe loss of tax revenues from Franchise Fees, Property Taxes, Municipal Public Service Taxes, and Gross Receipt Tax. Additionally, based on the experience from other jurisdictions, Florida would also likely incur significantly higher costs across state and local governments.

Finally, our analysis indicated negative financial implications across all scenarios and sensitivities – any potential increases in sales tax driven by higher rates are relatively insignificant compared to the other combined negative impacts of tax revenue losses and higher costs.

New state taxes would need to be implemented by the legislature (but would require a supermajority in both chambers to pass) to offset losses or result in a reduction of state government services across the state. Offsetting local government tax losses and increased costs and/or preventing service reductions would also present a major challenge – requiring regulatory and contractual changes for each affected local jurisdiction across the state.

The ranges quantified above in Table 1 are not meant to be a comprehensive evaluation and represent a conservative view of the overall potential impact of restructuring the Florida electric market. There are several other potentially adverse impacts that have not been included given the availability of information, time constraints, and degree of uncertainty. Below is a non-exhaustive list of additional challenges identified, but not quantified at this time, all of these would drive further negative financial impacts to the state and local governments in Florida.

- Public assistance for low income, elderly and fixed-income ratepayers
- Litigation, regulatory, and consumer advocacy cost for unfair practices
- Recovery of stranded costs for IOU generation assets
- Grid reliability investments and ancillary services
- Natural gas supply availability constraints and price risk
- Job loss impact of closures and lower government spend (driven by revenue losses)
- Economic impact of higher electric rates – e.g. job losses or slower economic growth
- Incentives required to attract sufficient Provider of Last Resort ('POLR') suppliers

In conclusion, the findings from our analyses indicate that restructuring the Florida electricity market would have a substantial detrimental financial impact to the state and local governments – in the range of $1.2 to $1.5 Billion annually. Furthermore, this impact could be considerably worse based on additional challenges not yet quantifiable due to the high degree of uncertainty and risk associated with the proposed petition ballot.

2. Review of Electricity Restructuring in the United States

2.1. Historical Overview of Restructuring

From the mid 1990's to 2002, the US experienced a wave of electric market restructuring as state legislators across the US attempted to transform electricity markets in the wake of deregulation precedents in other industries (e.g. airlines, telecommunications, etc.) to reverse rising electricity rates. However, this wave effectively ended in 2002 with Texas (the last state to implement restructuring and remain restructured) and with additional states (e.g. Montana, Virginia, etc.) over the subsequent years suspending or repealing previous attempts at restructuring.

There were many reasons behind the end of the wave of electric market restructuring. One of the most impactful was the 2000-2001 California energy crisis, which highlighted how market failures can arise from unforeseen circumstances related to electricity market restructuring. California became the first state to deregulate its electricity market in 1996. In 2000, prices in wholesale markets became deregulated while retail prices remained regulated. This enabled widespread market manipulation that created supply & demand shortages, rolling blackouts, and extensive financial losses (estimated to have cost CA between $40 and $45 Billion)[2].

Just as critical, however, were the significantly rising electricity prices experienced across all the recently restructured markets – the opposite of what was intended by legislators and regulators.

While the comparison between regulated and restructured markets is complex, the core difference is how pricing is determined in each construct. In general, regulated market prices are based on average generation costs (i.e. cost of service) – which at the time was driven by coal and nuclear baseload generation. In contrast, prices in restructured markets are generally set by the marginal cost of generation, which was mostly gas at that time (i.e. market prices).

Between 2001 and 2009, there was a clear disadvantage for restructured markets (with significant gas-fired generation) as the cost of natural gas increased faster than other fuels. However, since 2009, gas prices have significantly declined, driven by improvements in shale extraction technologies (see Figure 1 below). Lower gas prices have decreased the marginal generation cost of electricity – this trend has benefited restructured markets.

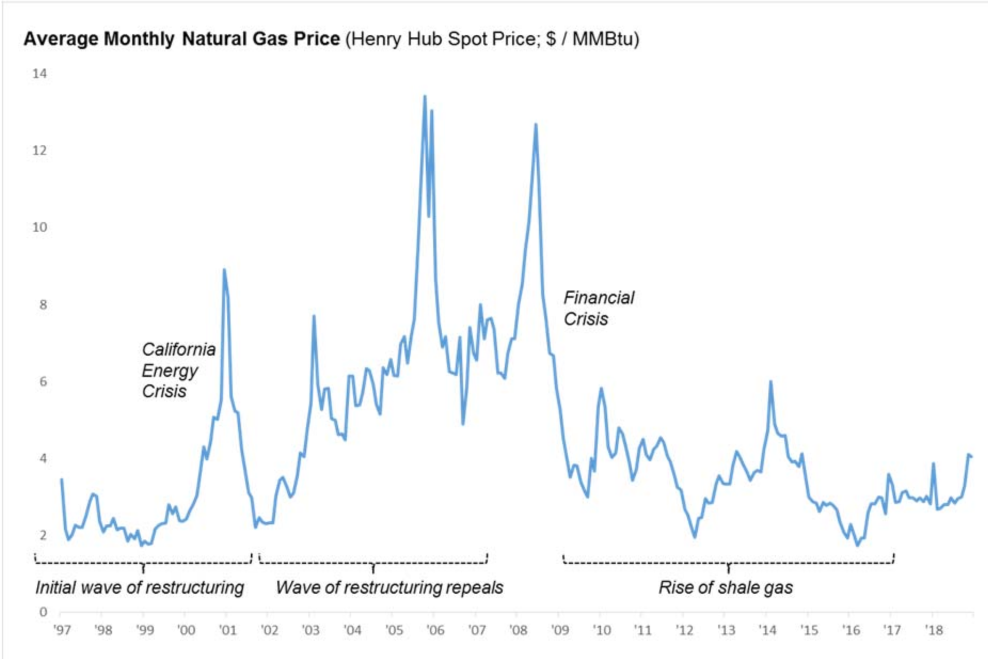
But, this has also reduced rates in regulated markets as more and more regulated utilities are displacing higher priced generation with lower cost natural gas generation. In Florida, for context, natural gas accounted for ~68% of the total generation in 2017 compared with ~44% in 2007. In the same time period, coal generation has decreased by ~50% and currently accounts for ~15% of generation – thus leaving little room for further improvement[3].

As a result, electricity rates have been consistently lower in regulated markets than in restructured markets – remaining to the current day.

[2] *The California Electricity Crisis: Causes and Policy Options*. Weare, Christopher (2003); Public Policy Institute of California.

[3] Energy Information Administration (EIA). Florida Electricity Profile. https://www.eia.gov/electricity/state/florida/

Figure 1: US Natural Gas Prices[4]



However, there is nothing to suggest that this current trend will continue indefinitely. There is considerable risk associated with natural gas pricing in the longer term, including the ability of producers to keep up with growing demand (e.g., LNG exports, Mexico pipeline exports, continued coal to gas switching, etc.) and ability of midstream players to build new transmission capacity due to environmental litigation, FERC uncertainties, local siting, etc.

This is especially true in Florida where there is no local natural gas production. Gas fueled electric generation is dependent on only three major interstate gas pipelines – any new natural gas electricity generation would require additional pipeline expansion projects. Gas pipeline developers require long-term firm contracts to finance these projects. This is an important point to note. One of the central intentions of restructuring would be to incentivize new natural gas generation capacity. However, restructured markets are not compatible with long term contracts, given that merchant generators operate on short term and real time purchases. This would severely limit the potential for natural gas capacity increase in a restructured Florida market.

Furthermore, as natural gas combined cycle plants are increasingly becoming the default baseload generation across the country and renewables such as wind and solar continue to see dramatic cost declines and greater share of generation, it is unclear that the current marginal to average cost relationship will continue along the recent trend or reverse itself in the near future. Over 68% of Florida generation is already fueled by natural gas, so the price differential between average cost and marginal cost impact would be lower than what was experienced in other jurisdictions.

Finally, there are many additional factors that have been shown to result in higher prices associated with restructured markets. We will address the most relevant to the current ballot initiative impact in later sections of this report. Some of the factors that have been shown to cause higher electricity prices include transmission congestion charges, stranded cost recovery of previously regulated generation assets, capacity and ancillary service charges,

4 EIA – Natural Gas Prices Data

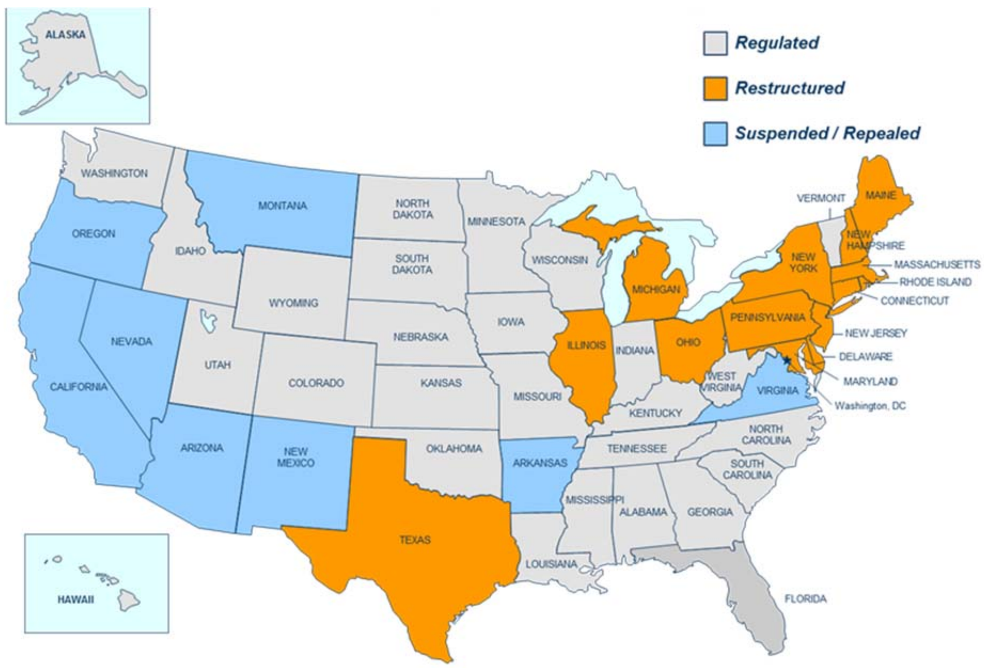
ISO or RTO fees, risk management costs, rents from additional market intermediaries, customer marketing and switching costs, regulatory, legal and administrative costs, counterparty risks, etc.

2.2. Comparison of Regulated and Restructured States

Restructuring in the US – Background

Currently, there are fifteen jurisdictions (fourteen states and Washington, D.C.) with restructured electricity markets and eight states that have suspended or repealed formerly enacted restructuring (four of these retained partial retail choice – CA, NV, OR, and VA)[5], as seen in Figure 2. Of all the states, Texas has attained the most widespread restructuring, with over 85% of consumers participating in the deregulated market. We will discuss Texas in more detail later in this report.

Figure 2: Status of Electricity Market Restructuring in the United States



Evaluating the success or failure of restructuring efforts is challenging. There are many potential outcomes (e.g. rates by customer type, generation cost savings, customer satisfaction, etc.) that can be measured and these vary significantly across markets and time. Additionally, electricity markets are large and complex systems with multiple factors affecting each of these outcomes.

Given that complexity, we have focused our analysis on a few selected outcomes. We start with a direct comparison of average rates for all consumer types between traditional regulated markets and restructured markets over time. We have chosen two points in time for

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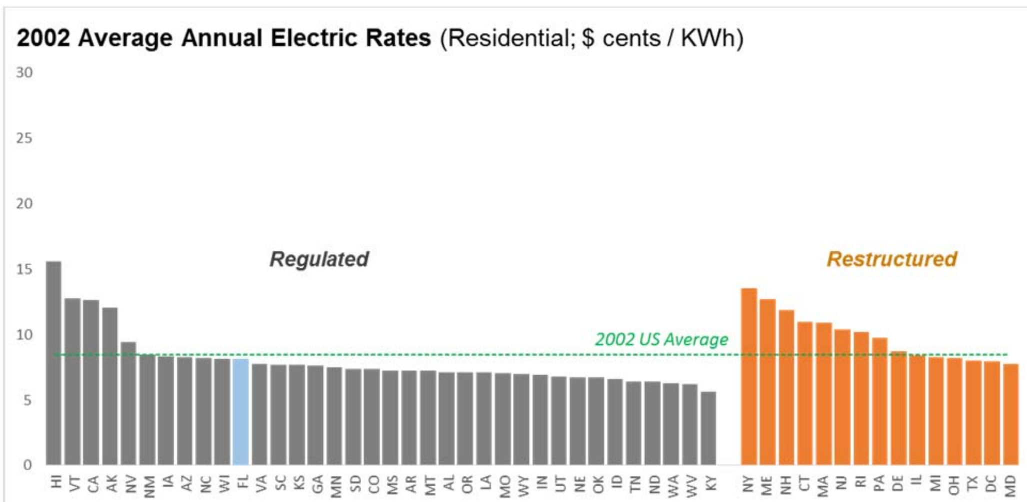
5 *Retail Choice in Electricity: What we have learned in 20 years*; Christensen Associates Energy Consulting report prepared for Electric Markets Research Foundation; 2016

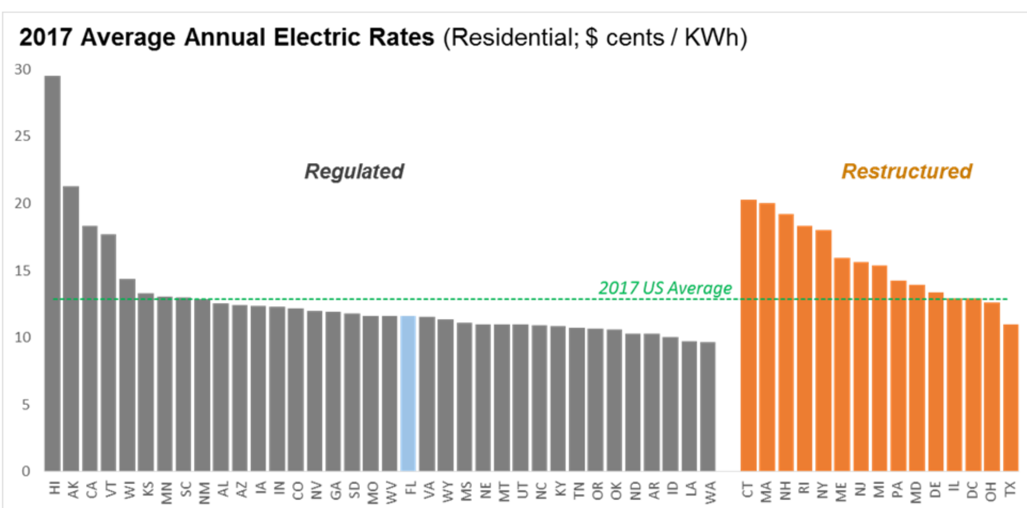
comparison: 2002, the last year of the initial wave of restructuring, and 2017, the latest year with full data available.

In 2002, just after the initial wave of restructuring, 5 out of 36 regulated states (or ~14%) and 8 out of 15 restructured states (or ~53%) had rates above the overall national average. Over the following 15 years, the average overall national rate increased from 7.2 cents/KWh to 10.48 cents/KWh (an increase of ~46%). Accordingly, rates increased in both groups.

However, by 2017, the number of regulated states with above average rates declined to 4 out of 36 (or ~11%) while the number of restructured states with above average rates increased to 11 out of 15 (or ~73%)[6]. We see similar results when examining all consumer classes. For example, in terms of residential rates, in 2002 nearly half of the restructured jurisdiction had rates below the national average. However, by 2017 nearly all restructured markets had residential rates higher than the national average. By contrast, in the same timeframe, Florida significantly improved its electricity rates position relative to the national residential average: from 29th lowest rate in 2002 to 18th in 2017(see figures below).

Figure 3: Comparison of Average Electricity Rates by State in 2002 and 2017

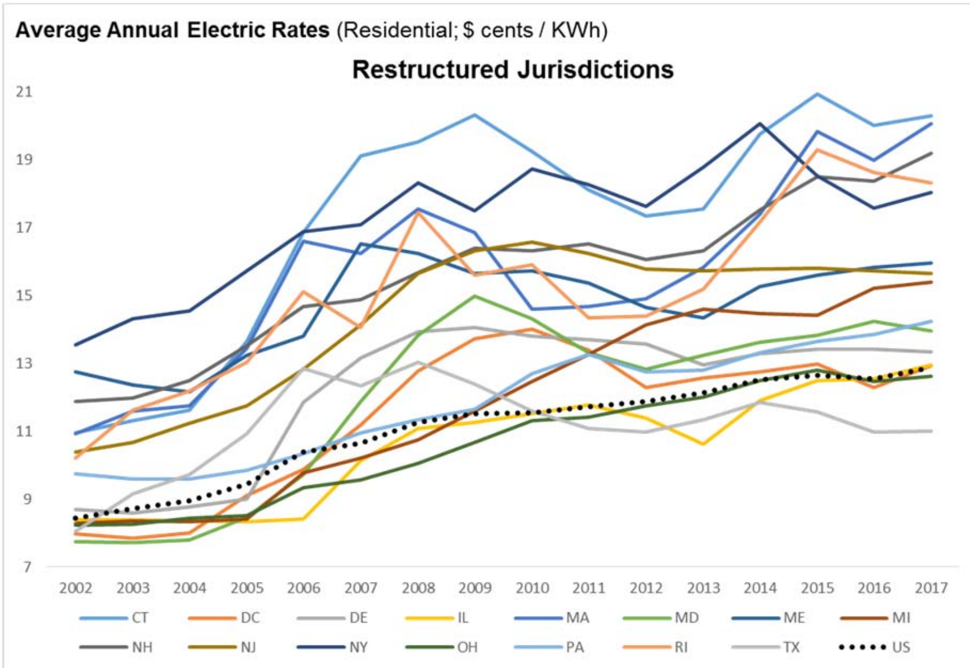




6 EIA State Electricity Profiles

Focusing closer on the restructured states over the same time period, we can see that all restructured markets experienced rate increases in the 2000's significantly faster than the national average. Since 2010, restructured state rates have tended to follow the overall national average but at new higher levels (on average 22% higher as of 2017). **No jurisdiction, including Texas, was able to reduce residential rates consistently after restructuring its electricity markets**, as seen in Figure 4.

Figure 4: Average Electric Rates for Restructured Jurisdictions between 2002 and 2017[7]



Rate changes are the most visible and commonly cited impact associated with restructuring. However, there are other important impacts resulting from a restructuring process. The focus of this report is to address the potential impact to state and local governments. To that end, we will shift the discussion to some of these other impacts.

Restructuring Impact at the State Level

Reviewing the previous restructuring events across jurisdictions, we can see that there have been a range of institutional, regulatory, and legislative challenges in the regions where restructuring has occurred. These challenges can be broadly categorized as follows.

- Establishment of overall market rules and oversight bodies for new Independent Power Producers (IPPs), incumbent Investor Owned Utilities (IOUs), utility affiliates (unregulated subsidiaries of IOU parent companies with generation assets), and other new market players (e.g. energy brokers, marketing organizations, etc.)
- Creation of new ISOs or RTOs and independent oversight and control of transmission networks
- Development and enforcement of market definitions and controls – timing of retail choice, retail rate controls, incentive pricing to foster competition, provider of last resort rules, etc.

[7] EIA State Electricity Profiles

- Oversight of generation asset divestiture and stranded asset implications (including utility recovery mechanisms and associated rate impacts)
- Protection for vulnerable (e.g., low income) customers – including education, new policies, rebates and utility bill assistance, etc.
- Increased licensing, permitting, and litigation from various market entities (e.g. consumer group, project developers, energy suppliers, environmental protection groups, etc.)

In all cases, these challenges triggered significant one-time costs for these states in the period just prior to restructuring and, in most cases there was a significant increase in ongoing regulatory related costs after restructuring, as compared with costs 1-3 years prior to restructuring. We will discuss cost increases in selected states in more detail in a later section.

In order to better illuminate the relative differences in costs that are directly related to electricity restructuring borne by each state, we examined recent Public Service Commission (PSC) expenditures across regulated and restructured markets. Note that not all states publish detailed costs at the PSC level and oversight responsibilities vary greatly across states (i.e. many have oversight of industries in addition to electricity).

For our analyses, we focused on a sample of 21 states that had a narrow set of public utility responsibilities (generally electric, gas, water and sewer) and that publish detailed budget and expense figures. An analysis of before and after restructuring was only possible for a select number of states as PSC responsibilities, cost structure, and reporting tended to change over time in many states over the last 20 years, which is the timeframe before and after most restructuring events.

Additionally, since state size was the main factor associated with level of costs, we utilized a unit cost approach to enable a comparison among states. In this case, we used overall PSC 2017 costs divided by the total population residing in each state in 2017.

The result of the analysis concluded that restructured states have a significantly higher relative PSC administration cost than regulated states**,** partially driven by the challenges highlighted above and in the previous section.

On average, state administrative costs in restructured states are more than double similar costs in regulated states ($1.5 / person vs. $3.5 / person, or 2.3x higher)[8]. **Applying the above cost differential of 2.3x to Florida's current PSC costs, would reflect a cost impact of well over $50 million per year.**

2.3. Electric Market Restructuring – State Level Impact

Electricity market restructuring paths have varied significantly across the US. We have chosen Texas as the main example to describe in further detail issues that may arise in a restructuring scenario in Florida due to similarities with Florida in terms of size and regulatory framework (single state ISO or RTO). When considering the language of the Florida ballot petition, the state that seems to mirror most closely the structure and is thus most relevant is Texas. In fact, the proponents of the ballot initiative have stated that it was authored with the intent of replicating the Texas model in Florida.

[8] Population data from US Census Bureau and PSC costs from individual state budget office reports (ME, PA, NY, AL, OH, NV, CA, MI, IL, MD, UT, AR, MS, LA, IN, TN, FL, GA, TX, SC, and NC)

As part of our research, we also considered New York, given that it also has a single state ISO. We uncovered very similar findings to our analyses of Texas. We did not include these additional findings to avoid duplication of information, but can provide this data if requested.

2.3.1. Texas

Comparison of Texas to Florida – Before and After Restructuring

Overall, historically, there have been many similarities between the Texas and Florida electricity markets. However, as we will detail in this section, some of these similarities have become points of contrast due to the diverging paths taken by the two states since 2002 (i.e. driven by the impact in Texas from the market restructuring).

- Both are large states in terms of geographic size and population (28 million in Texas and 21 million in Florida – numbers 2 and 3 in the U.S. respectively, behind CA)
- Good economic growth with positive electricity demand growth, partially driven by population growth well above the national average (1.8% and 1.5% since 2002 for Texas and Florida respectively)
- Similar climate with electricity summer demand peaks and electricity rates below the national average for all consumer classes
- Similar electricity generation mix – with a majority natural gas generation followed by coal (both also have ~10% nuclear and future growth potential for solar)
- Similar reserve margin – Texas had reserve margins well above 20% prior to 2002 (which declined over time as a result of restructuring – details in section below)
- Relatively contained grid with limited inter-connection to other states or systems and a single state ISO / RTO (likely to be the case in a Florida restructuring scenario)

However, there are also some key differences worth noting between the two markets.

- Texas is a major natural gas producer and Florida depends exclusively on interstate pipelines for its natural gas supply
- While both states generate most of their electricity from natural gas, Florida has significant gas transportation costs (Texas has much lower cost gas available)
- Texas also has a large renewable wind resource with low cost wind generation that now accounts for ~17% of the state's generation mix, while Florida does not have viable wind resources. Texas also has stronger solar resources than Florida.
- Florida interconnects with other states and therefore subject to FERC jurisdiction while ERCOT is isolated and is not regulated by FERC
- Although, as stated by the proponents, the ballot initiative's intent is to replicate the Texas market restructuring in Florida, the actual language goes far beyond the requirements in Texas (e.g., constitutional amendment approach, forced divestiture of all IOU generation assets, lack of 'ownership' of T&D system, etc.)

Given the availability of large low cost energy resources (wind and natural gas) within the state, one would expect Texas to have significantly lower electricity rates than Florida. However, from 2013 to 2017, residential rates in TX & FL have been nearly equal. Residential customers in restructured parts of Texas have actually paid higher prices as described below.

Texas Restructuring Background and Overall Impact

Starting in 1999, Texas began drafting legislation and putting in mechanisms to allow for a deregulated market – through amendments made to the state's Public Utility Code. The market started fully in 2002 with the approval of Texas Senate Bill 7.

One of the key elements of the bill was the ‘Price to Beat’ clause – which established a price floor for incumbent utilities while allowing new entrants to charge higher rates for the first five years. This mechanism was intended to improve competition and eventually lower rates.

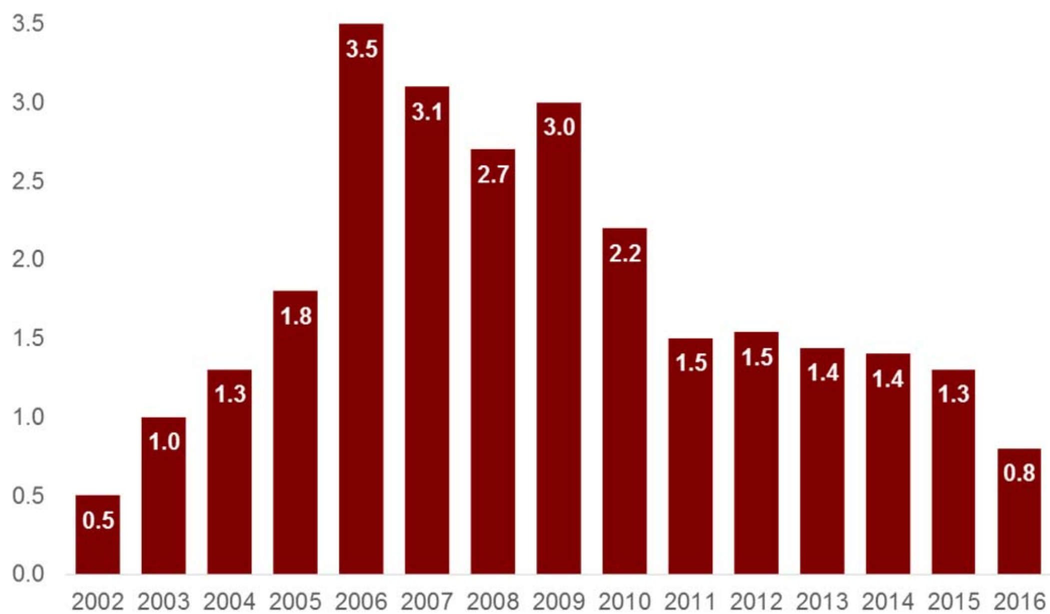
However, it actually has resulted in significantly higher overall rates in restructured areas of the state relative to areas not subject to restructuring. Several parts of Texas remain regulated which include western (e.g., El Paso), northern (e.g., Amarillo), central (e.g., Austin), and eastern (e.g., Jasper) portions of the state[9].

Texas consumers have consistently paid higher residential electric prices in restructured areas, as compared to prices in areas exempt from deregulation. This annual trend began during the very first year of deregulation, in 2002, and has continued through 2017. A similar outcome was seen in New York – a recent NYPSC report showed that consumers who signed up with competitive suppliers paid ~$820 million more for electricity and gas than they would have with their local IOU (over a 30 month period ending in June 2016)[10].

These consistently higher rates have had a major adverse impact on consumers’ bills over the period. To illustrate this point, we can examine the aggregated bill value differential between the higher deregulated rates vs. the lower regulated rates.

The overall consumer ‘lost savings’ for the state reached as high as $3.5 Billion per year (in 2006) and has cost consumers in restructured areas of Texas over $27 Billion in total between 2002 and 2017. The graph below shows the annual impact of ‘lost savings’ in Texas[11].

Figure 5: Consumer ‘Lost Savings’ Driven by Restructuring in Texas ($ Billions)



9 https://quickelectricity.com/texas-energy-deregulation-map/

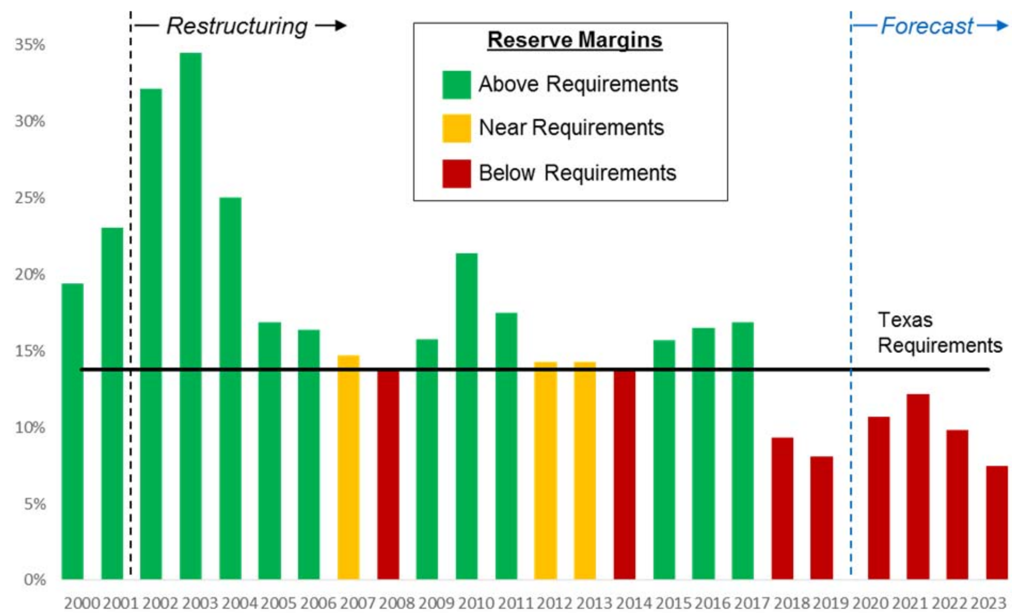
10 *AT RISK: NY reviews electric, gas free-choice program.* Jeff Platsky; Gannett; Feb 2018.

11 Electricity Prices in Texas Snapshot Report – 2018; Texas Coalition for Affordable Power

Restructuring Impact to Generation Reliability in Texas

The transition to a restructured regime has affected reliability tremendously. The resource adequacy reserve margin[12] that describes the amount – in percentage points over the estimated peak – of resources needed to maintain NERC's resource adequacy reliability standards has deteriorated significantly since the transition in Texas. The exhibit below provides the reserve margin on an annual basis since the implementation of the market reforms. The target depicts NERC's 14%.[13]

Figure 6: Impact of Restructuring on Reliability in Texas (Reserve Margin %)



Notably, the margin has been consistently low or well below the minimum level required by NERC since 2005. More troubling is that is also expected to remain at below required levels in the foreseeable future. The market based reforms (scarcity pricing model) implemented during the transition have failed to incentivize enough capital for the construction of excess generation capacity to maintain NERC's planning reserve margin standards negatively affecting reliability in the region (Texas is an energy-only market without a capacity market).

As wind and solar resources continue to grow, the reserve margin issue is only expected to worsen (since are intermittent and do not add to the reserve margin). The reserve margin for Texas has been forecasted to be 7.4% in the summer of 2019 – well below the 14% requirement. This has resulted in the PUC having the unenviable choice between significantly higher costs or increased outages and blackouts. One recent proposal to increase incentives has been assessed at an additional cost of $2 Billion per year to close the reserve gap – that will, in turn, likely increase electricity rates in Texas.[14]

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12 Per NERC "Planning reserve margin is designed to measure the amount of generation capacity available to meet expected demand in planning horizon. Coupled with probabilistic analysis, calculated planning reserve margins have been an industry standard used by planners for decades as a relative indication of adequacy."

13 https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_SRA_05252018_Final.pdf page 27

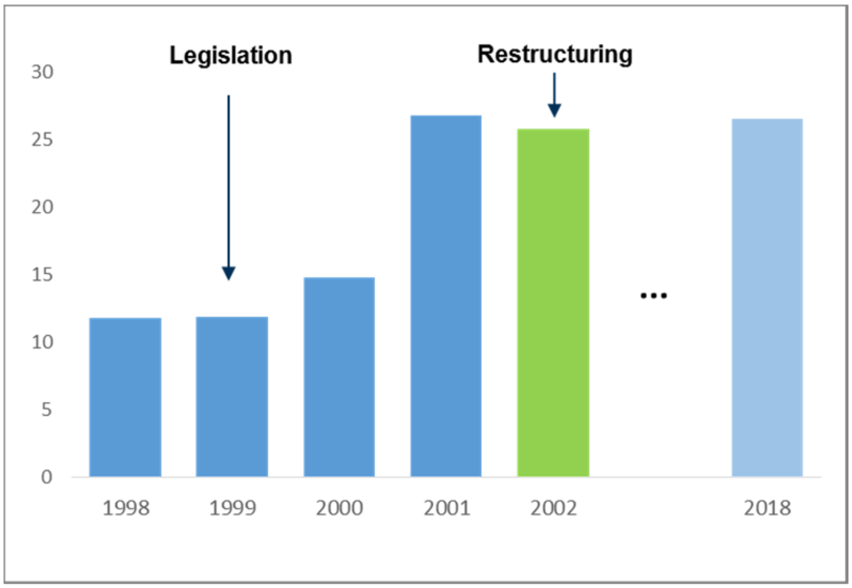
14 *Texas regulators, power industry representatives mull ERCOT resource adequacy*; S&P Global Market Intelligence; 2/7/19

Texas Public Utilities Commission Costs

In order to establish the restructured market, the Texas PUC had to significantly expand resources in order to prepare for a new market, ensure execution, and oversee the new market structure. Although there were some oversight costs shifted to the RTO (ERCOT), the new PUC responsibilities more than offset the cost reductions associated with this shift – as can be seen in Figure 7 below[15].

There was a significant ramp-up in costs in the years preceding deregulation and PUC costs have remained considerably higher ever since. There was an 81% increase in costs between 2000 and 2001 alone[16]. Some of the additional costs included professional fees to contractors and consultants to address the various challenges, as highlighted in the previous section. One program worth noting that contributed to the large increase in costs seen in 2001, was to develop, implement, and manage consumer education.

Figure 7: Texas Public Utility Commission Costs ($ millions)



Texas Public Assistance Programs

In addition to administration fees, the resulting residential rate hikes and accompanying higher bills had an especially severe negative financial impact on low income families. In response, Texas put in place several support programs with costs in the hundreds of millions of dollars. The costs of these programs were generally excluded from the PUC budgets.

Our research of Texas appropriation budgets showed that the state expenses of PUC related costs for financial assistance to low income consumers increased from $29 million in 2002[17] to $326 million in 2016[18]. We also did not find any PUC cost line items related to low income assistance published prior to 2002.

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[15] *Legislative Appropriations Request for Fiscal Years 2018 and 2019*; Governor's Office of Budget, Planning and Policy

[16] *Legislative Summary Document Regarding PUC Texas – January 2003*; State Auditor's Office (SAO 03-377)

[17] *Legislative Summary Document Regarding PUC of Texas*. January 2003. State Auditor's Office (SAO 03-377). Page 3

[18] *Legislative Appropriation Request submitted to the Governor's Office of Budget*. Texas PUC, August 12, 2016. Page 11

There were also other assistance programs in place over the period with various funding sources. One such program, 'Lite Up Texas', which was funded by a combination of state general funds, fuel surcharges, and federal subsidies, reached a peak total fund value of $800 million in 2013 before being depleted by 2017.[19]

2.3.2. Impact of Formation and Upkeep of ISO or RTO

A transition to a restructured will require the formation of an Independent System Operator (ISO) or Regional Transmission Organization (RTO) which would manage the transmission system and the newly implemented competitive electricity markets. FERC Order 2000 and 888[20] specify detailed functions that need to be in place before and shortly after the new entity is formed. The figure below depicts the minimum functions of an ISO or RTO for two different timeframes. Per the FERC's guidance, the Implementation functions should be in place shortly after the formation of the system operator while Ongoing includes the functions that should be performed over the long term.

Table 2: Description of the Minimum Functions of an ISO/RTO

	Implementation	Ongoing
Tariff Administration and Design	X	X
Congestion Management	X	X
Parallel Path Flow	X	X
Ancillary Services	X	X
OASIS – software costs	X	X
Market Monitoring	X	X
Transmission Planning	X	X
Interregional Coordination	X	X
Day-Ahead Energy Market		X
Same - Day Energy Market		X
Ancillary Services Market		X
Capacity Market		X

Since Florida has currently no ISO or RTO, the state would incur both Implementation and Ongoing costs associated with the new entity. The Implementation costs include new software, communications, buildings etc. while the Ongoing or administrative costs are related to staffing, software upgrades due to new market designs, operations and maintenance etc.

Since there have not been any new ISO or RTOs formed in the past 20 years, it is difficult to accurately estimate the start-up costs for Implementation functions. A FERC staff report produced in 2004 provides indicates these costs to be between $38 million and $117 million – depending on market size and RTO or ISO mandate. In today's terms, that would amount to a range **between $50 and $155 million for Implementation**[21].

Based on a 2016 FERC Staff report, the administrative costs vary widely across the RTOs and ISOs, with the five-year average administrative costs ranging from $0.27 per megawatt-

[19] *Texas stops helping poor families pay their electric bills*; Texas Tribune / Star-Telegram September 03 2016

[20] Federal Energy Regulatory Commission

[21] https://www.ferc.gov/legal/staff-reports/2016/08-09-common-metrics.pdf?csrt=10019579922585194549

hour for SPP to $1.10 per megawatt-hour for ISO-NE. The variance is due to many drivers such as maturity of the market, location and others.

Single state RTOs like CAISO and NYISO have an average of ~$1 per MWh. If this rate is applied to the annual Florida retail sales of 233 TWh, the estimated annual administrative cost would be close to $230 million. In conclusion it is expected that a new ISO or RTO in Florida would cost **over $150 million for implementation** and **between $200 and $250 million per year for ongoing costs**. These costs would be recovered through higher rates and since government make up approximately 10% of state demand, **state and local governments would see an impact of $20 to $25 million annually in the form of higher electric bills.**

3. Overview of the Florida Electricity Market

This section provides background on the Florida electricity market including current market structure, a snapshot of transmission and generation infrastructure, some high-level commentary of the evolution of electric sales and rates, and a summary of the state's most recent integrated resource planning outcomes.

3.1. Current Electricity Market

Overall Structure

Florida's electricity market is one of the largest markets in the U.S., second to Texas on a net generation basis and third behind Texas and California on a total retail sales basis. In 2017, Florida's net generation and total retail sales were 238 TWh and 233 TWh, respectively, accounting for approximately 6% of generation and sales in the country.[22] Investor-owned utilities (IOUs) make up 75% of generation in the state, with the remainder owned by cooperatives and municipal utilities.

Florida operates under a regulatory authority from the Federal Energy Regulatory Commission (FERC) and the Florida Public Service Commission (FPSC). Under the Federal Power Act (FPA), FERC has regulatory authority of wholesale transmission and power (i.e. transmission and sales for resale in interstate commerce). In addition, FERC oversees corporate activities and transactions of public utilities (e.g. mergers and acquisitions), enforces prohibition of energy market manipulation, and ensures the reliability of the bulk-power system through the development of mandatory standards and compliance mechanisms. FERC delegates authority over system reliability to the North American Electric Reliability Corporation (NERC). A majority of the state of Florida, the peninsular area east of the Apalachicola River, is part of the Florida Reliability Coordinating Council (FRCC) NERC region, and the remainder of the State is a part of the Southeast Reliability Corporation (SERC). Over 95% of electricity sales in Florida take place in the FRCC region.

The FPSC oversees, to varying degrees the operations of IOUs, municipally-owned electric utilities, and rural electric cooperatives.[23] It regulates all aspects of the state's IOUs operations, and has jurisdiction over rate structure, territorial boundaries, bulk power supply operations and planning for municipals and cooperatives. In addition, the FPSC requires preparation and conducts an annual review of utility TYSP to ensure that the plans are suitable to the state's expected electricity needs. Through its regulatory oversight, the FPSC

[22] TWh = 1,000 GWh. "State Electricity Profiles," EIA, January 8, 2019. Available at: https://www.eia.gov/electricity/state/

[23] "Facts and Figures of the Florida Utility Industry," FPSC, May 2018. Available at : http://www.psc.state.fl.us/Files/PDF/Publications/Reports/General/Factsandfigures/May%202018.pdf

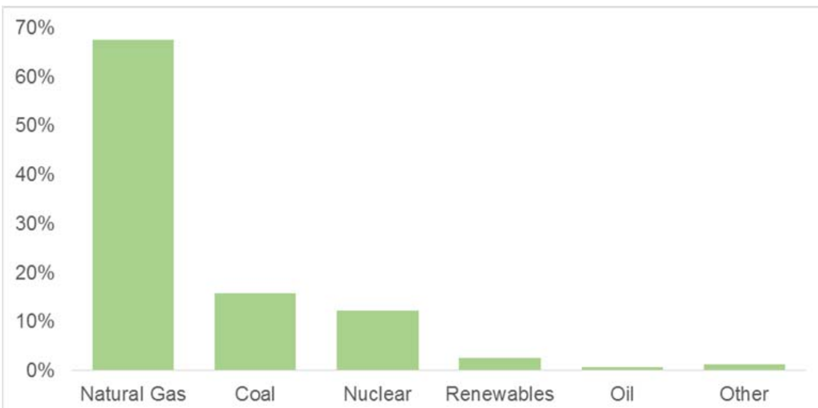
ensures that generation investments made by the Florida IOUs are prudent and cost-effective for all customers.

3.2. Generation and Transmission Infrastructure

Generation, Load, and Rates

Nearly all sales of electricity in Florida take place in the FRCC region. This section focuses on the overall Florida market, its load and generation profile, and its transmission system. Overall, retail sales of electricity in Florida have grown 1.1% annually from 2012 (220 TWh) to 2017 (233 TWh).[24] Florida grew capacity grew to meet increasing demand – mostly driven by additions of low-cost natural gas generation, which now comprises 68% of the total generation in Florida (see Figure 8).

Figure 8: State of Florida Electricity Generation by Primary Energy Source - 2017 [25]



Investments made by Florida's IOUs in generation have supported a stable electricity market with enough reserve capacity to meet the standards required by the FPSC (20%) and producing flat to declining electricity rates over the last 10 years (see Figure 9) – contrasting to the decline in reserve margins experienced in Texas as described in section 2.3.1. above.

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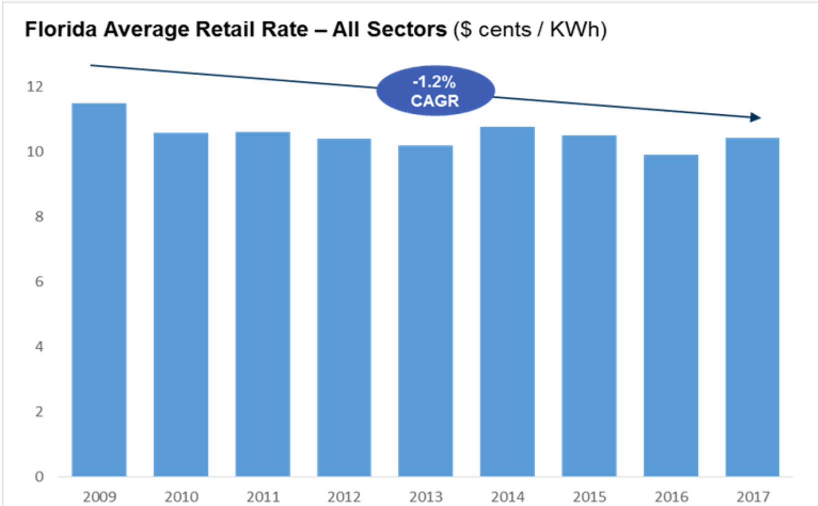
[24] EIA – Florida State Energy Profile

[25] EIA – Florida State Electricity Profile

Figure 9: Florida Average Retail Rates – 2009 to 2017



Electric Transmission

Florida has a high voltage network of transmission lines up to 500kV AC. In 2012, NERC reported[26] that the FRCC region had 12,031 circuit miles of transmission lines rated 100kV and above. The FPSC review of Ten-Year Site Plans (TYSP) also noted that 220 miles of additional mileage has been approved and are expected to enter service between 2018 and 2019[27]. The Florida peninsula maintains 3,400 MW of summer import capacity and 800 MW of summer export capacity[28].

The FRCC has not identified any specific short-term reliability-related need for additional major transmission capacity for the next ten years. Planned transmission projects by the utilities are primarily purposed towards system expansion for demand growth, resource integration and long-term reliability. There have been no identified transmission constrained areas within FRCC. FRCC is expected to meet all NERC requirements for transmission planning in both the near and long term[29].

Natural Gas Transmission Infrastructure

Florida is supplied with natural gas through three major interstate pipelines: Florida Gas Transmission (FGT), Gulfstream, and Sabal Trail. Additional gas is also supplied by two minor pipelines: Gulf South Pipeline (western panhandle) and Southern Natural Gas (portions of north Florida).

FGT pipeline is a 5,325 mile pipeline that originates in Texas and follows the Gulf Coast delivering natural gas to both the panhandle and the peninsula of Florida (where it

[26] 2012 Long-Term Reliability Assessment, North American Electric Reliability Corporation. November 2012

[27] REVIEW OF THE 2018 TEN-YEAR SITE PLANS OF FLORIDA'S ELECTRIC UTILITIES, Florida Public Service Commission. November 2018

[28] The winter import capacity is 3,400 MW and the winter import capacity is 400 MW; 2018 Facts & Figures of the Florida Utility Industry, Florida Public Service Commission.

[29] 2018 Long-Term Reliability Assessment, North American Electric Reliability Corporation. December 2018

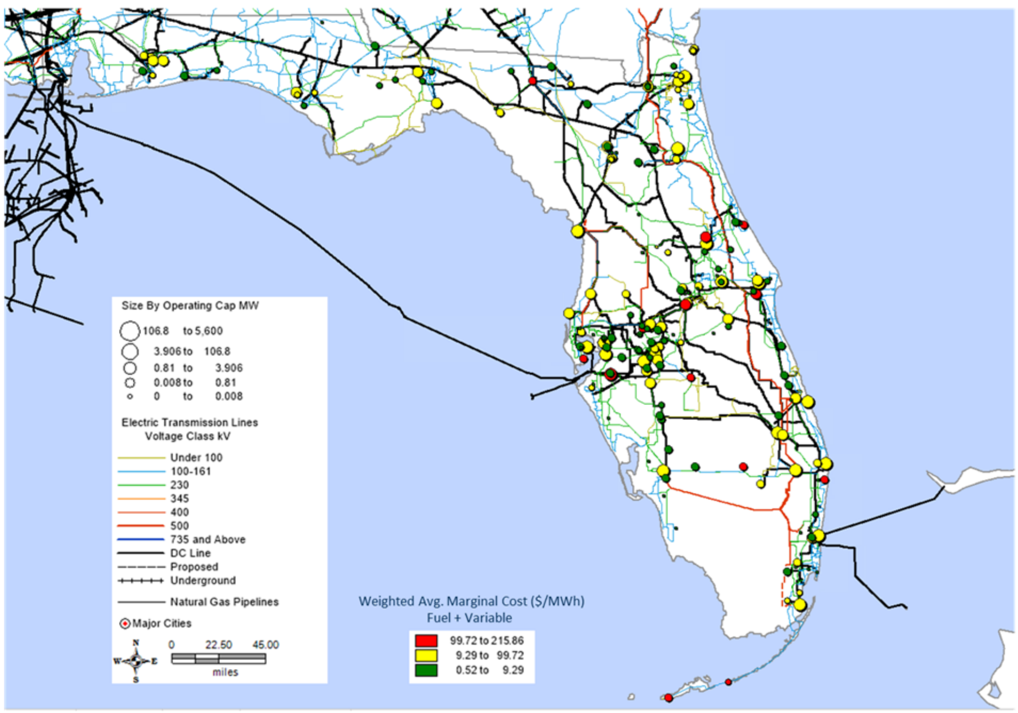
terminates). It has a capacity of 3.1 Bcf/d. It transports 66% of the natural gas consumed in Florida[30].

Gulfstream is a 745 mile under-water pipeline transporting gas from Louisiana via the Gulf of Mexico to the Tampa Bay region with a capacity of 1.3Bcf/d[31].

Sabal Trail Transmission is a 517 mile pipeline that originates from Alabama and cuts through Georgia. It serves the northern peninsula and terminates at the Central Florida Hub. It has a capacity of 0.83Bcf/d. Since any additional expansions of FGT and Gulfstream would likely be cost prohibitive, further capacity expansions would likely have to be based on Sabal Trail.

However, any pipeline expansion under a restructured market scenario would be significantly more challenging. Pipeline owner and developers require long term 'take or pay' contracts on firm demand – which is not typically feasible in restructured markets as wholesale markets are driven by short term sales. Moreover, transitioning to a restructured markets will likely have a major impact on current natural gas supply contracts with potential for large litigation costs and/or additional stranded cost impacts.

Figure 10: Summary of Florida Energy Infrastructure - Gas and Electric



3.3. Summary of FPSC Ten-Year Site Plans

Ten-Year Site Plans (TYSP) are the ultimate product of the Integrated Resource Plan (IRP) process where utilities illustrate how they will serve their customers over the long-term. They offer a window into a utility's estimates for future growth and their investment plans to meet

30 Florida Gas Transmission. https://fgttransfer.energytransfer.com/ipost/FGT/turnpike-palmetto/company-profile?active=companyProfile

31 http://gulfstreamgas.com/

load for the next ten years. These plans are made with risk and cost minimization in mind with the best possible information available at the time. They include scheduled retirements and planned additions in generation that will affect the generation mix.

The most recent TYSP does not reflect any electricity market restructuring. But, uncertainty created by the proposed ballot initiative would impact future utility investment in new generation. If restructuring takes place, the new TYSP would require significant changes.

Overall, the filed TYSP of 11 reporting utilities in Florida project consistent load growth, both in terms of number of customers and retail energy sales, over the study horizon. To meet this growth, utilities expect to expand renewable generation resources by an estimated 7 GW with solar photovoltaics being the primary expanded resource. Furthermore, non-renewable resources are expected to add 8.2 GW of capacity, primarily made up of natural gas-fired generation. 5.7 GW of natural gas fired generation has already been approved and will be in service by 2022. As a result, the electrical grid is expected to rely on natural gas plants for around 65% of generation consistently for the planning period. About 6 GW of existing generation is currently expected to be retired over the study horizon, primarily consisting of coal plants and natural gas combustion units.[32]

Table 3: Expected Net Capacity Additions 2018-2027 per Filed 2018 Ten Year Site Plans

Company	Solar PV*	Natural Gas Com-bined Cycle	Coal	Natural Gas Steam	Natural Gas Com-bustion Turbine	Oil / Gas Turbine	Total
FPL	3,803	2,941	(254)	(884)	(1,626)	-	**3,980**
DEF	2,300	2,318	(766)	-	(131)	(24)	**3,697**
TECO	598	1,118	(385)	-	-	-	**1,331**
GPC	-	595	(150)	-	(12)	-	**433**
FMPA	149	-	-	-	-	-	**149**
GRU	-	-	-	(75)	(35)	-	**(110)**
JEA	84	-	(1,002)	-	-	-	**(918)**
LAK	-	-	-	-	-	-	**-**
OUC	56	-	-	-	-	-	**56**
SEC	40	1,108	(630)	-	-	-	**518**
TAL	40	-	-	(76)	100	-	**64**
RCI**	50	-	-	-	-	-	**50**
FRCC	**7,120**	**8,080**	**(3,187)**	**(1,035)**	**(1,704)**	**(24)**	**9,250**

*Solar PV additions include planned PPAs in addition to utility-owned capacity. Solar PV capacity represented in this table is net capacity, not firm capacity.
**Reedy Creek Improvement District did not submit a Ten-Year-Site Plan (nor is it required to).

32 REVIEW OF THE 2018 TEN-YEAR SITE PLANS OF FLORIDA'S ELECTRIC UTILITIES, *Florida Public Service Commission*. November 2018

3.4. State and Local Government Revenues and Costs

In Florida, a large portion of state and local government revenues are collected from electric utility taxes and fees. Utilities pay taxes to state and local governments based on the gross receipts accumulated through electricity sales, taxes based on the value of their physical property, and, in many cases, franchise fees for using the public right-of-way occupied by their facilities and exclusivity rights.

Restructuring would significantly alter both tax structures and utility business revenues, which will, in turn, would result in tax revenue losses for state and local governments. Although the overall impact to tax revenues will depend on how much retail electric rates change,

Florida state and local revenues are primarily expected to decrease regardless of rate changes due to the elimination of franchise fees, reductions in public service taxes, and reduced property taxes from lower valuations of IOU generation assets (current combined net taxable book value of ~$20 Billion).

Restructuring will also require policymakers to rethink fundamental tax system issues, including how to provide fairness among different types of electricity suppliers, how to educate consumers on tax system changes, how to minimize unanticipated losses in tax revenue, and how to prevent concentrated property tax losses in municipalities that host IOU generating facilities. The potential impacts of restructuring on franchise fees and property tax revenues are discussed in more detail in Section 4.3.

<u>Summary of taxes paid by IOUs impacting state and local revenues – 2017</u>

- Property Tax: ~$1,000 million
- Municipal Public Service Tax: ~$880 million
- Franchise Fees: ~$650 million
- Gross Receipt Tax: ~$450 million

4. Potential Impact of Electricity Restructuring in Florida

In the previous sections, we provided context and background about electricity market restructuring across the U.S. and the current situation in the Florida electric market. For the remainder of the report, we will focus specifically on the potential impact of restructuring the Florida electricity market on the state and local governments according to the language in the ballot petition.

4.1. Proposed Ballot Initiative

Unlike market restructuring in other states, the Florida Ballot Petition proposes a constitutional amendment. This would require a more stringent process than required by ordinary legislation.

If subsequent changes need to be made to the energy market design, it would need to go through the same stringent process. For example, if the restructured market fails to attract robust competition or to achieve the desired outcomes on issues such as reliability and environmental concerns, it would take a change to the constitution to remedy the situation.

As stated in the Ballot Summary below, the proposal would limit IOUs to construction, operation and repair of T&D systems only. There is no mention of 'owning' the T&D assets in the current language.

Grants customers of investor-owned utilities the right to choose their electricity provider and to generate and sell electricity. Requires the Legislature to adopt laws providing for competitive wholesale and retail markets for electricity generation and supply, and consumer protections, by June 1, 2025, and repeals inconsistent statutes, regulations, and orders. Limits investor-owned utilities to construction, operation, and repair of electrical transmission and distribution systems. Municipal and cooperative utilities may opt into competitive markets.

As we will discuss later in this section, this amendment will likely cause a significant net decrease in tax revenues for the state. Since the state of Florida has a supermajority requirement for raising new taxes or fees, any effort to enact new tax laws to compensate for the tax revenue losses would require two-thirds approval in both chambers (House and Senate).

Our analysis does not consider the impact of also divesting the T&D systems as stated above. If that is indeed the case, the impact would be considerably more negative than the estimates described below.

4.2. Approach for Impact Quantification

The following sections analyze the potential impact to Florida's tax revenues and costs (state and local) that could arise from restructuring the electricity market. The impact to tax revenues is multi-faceted and is characterized by significant uncertainty in regards to changes in the tax structure after the restructuring. CRA's analysis is focused on the existing tax structure and assesses the impacts of the proposed new restructured regime.

We have divided the potential impact assessment into four sections to provide a more detailed review of the proposed change. The first three sections focus on potential revenue losses associated with the three main tax schemes in Florida affected by restructuring: (i) franchise fees, (ii) Municipal Service Tax and (iii) property tax, while the fourth provides a wider review of potential cost impacts to functions related to the state and local government. We will also discuss the risk to the Gross Receipt Tax revenues and the potential impact of higher electricity rates on tax revenues and government costs (i.e. impact on electricity bills).

Since the potential tax impact relies on valuation of generating plants currently owned by the utilities, it is important to understand how the value of these assets would be affected by restructuring.

Overview of Approaches to Asset Valuation

The impact of restructuring on property taxes is focused on the change in the Fair Market Value of the generation resources after the state moves to the restructured regime. An appraisal of utility assets is performed each year to estimate the Fair Market Value for the utility's tangible property. Valuations may be performed through a cost approach, an income approach, or a market-based approach (sometimes called a comparables approach, or unit approach) to valuation. CRA considered all three of these approaches to estimating the Fair Market Value for generation assets in Florida under restructuring. This section provides a brief overview of these valuation methods.

The income approach to valuation estimates the Fair Market Value of an asset based on market participant expectations of the cash flows that the asset would generate over its remaining useful life. An essential component of the income approach is the estimation of future cash flow a market participant would expect to generate from operating the asset.

The estimated cash flows for each of the years in the discrete projection period are then converted to their present value equivalent using a rate of return appropriate for the risk of achieving the projected cash flows. The present value of the estimated cash flows are then added to the present value equivalent of any residual value of the asset at the end of the projection period to arrive at a Fair Market Value estimate.

The cost approach estimates the Fair Market Value of an asset by using the economic principle that a buyer will pay no more for an asset than the cost to obtain an asset of equal utility. This approach provides an indication of value by calculating the current replacement or reproduction cost of an asset and making deductions for physical deterioration and all other relevant forms of obsolescence.

The last major valuation approach is the market based, or comparables, approach. Under the comparables approach, a Fair Market Value is estimated based on how similar assets were valued in the past through sales or other market related operations. The comparables approach includes the multiples method, which uses an applicable financial metric that can be measured for both the asset in question and the asset for which the information is known. This metric is then applied on the unknown asset to estimate its value.

Although more robust, the income and cost based approaches could not be utilized in CRA's analysis. Ideally, this analysis would be done on a plant-by-plant basis, taking into consideration locational impacts and common use facilities. Due to a lack of data and production cost modeling capability, CRA estimated the post-restructuring Fair Market Value of generation assets in Florida using the multiples comparables method.

Market Based Valuation Approach

The comparables approach to estimate the Fair Market Value of assets after restructuring is comprised of two steps. The first step is to determine an appropriate financial metric that is measurable both for the regulated generation assets in Florida and for restructured assets. Because there are currently no restructured assets in Florida, we estimate the impact of restructuring by a comparison to assets that participate in established markets.

Specifically, we use a comparison of the values of publicly traded Independent Power Producers (IPPs). IPPs are most suitable to the comparables approach and to estimating the Fair Market Value of restructured generation assets because their business and assets base is primarily generation and they do not own other tangible assets such as transmission. Therefore, the relationship between IPP tangible[33] and book values[34] can provide a reasonable estimate of the impact of restructuring on the taxable values of generation assets.

Under a restructured market, the tangible book value metric provides a Fair Market Value estimate for all tangible assets, such as generation plants. To estimate the Fair Market Value under a restructured regime, CRA used the comparables method, using the ratio between book value and tangible book value of IPP merchant generators as a metric for comparison. By looking specifically at the tangible book values of IPP merchant generator companies, which operate only in generation, we are able to isolate the market value of generation plants in restructured markets.

Assuming a constant number of shares for both book value and tangible book value per share, CRA estimated the following ratios. The average of these ratios suggests that under a restructured market regime, the Fair Market Value of generation assets will be about 60% lower than their book value. Table 4 below depicts four major IPPs and their book to tangible book ratios.

[33] Tangible book value is what common shareholders can expect to receive if the firm is under impairment and all of its assets are liquidated at their book value. Intangible assets, such as goodwill or employee knowledge, are removed from this calculation since they cannot be sold during this process.

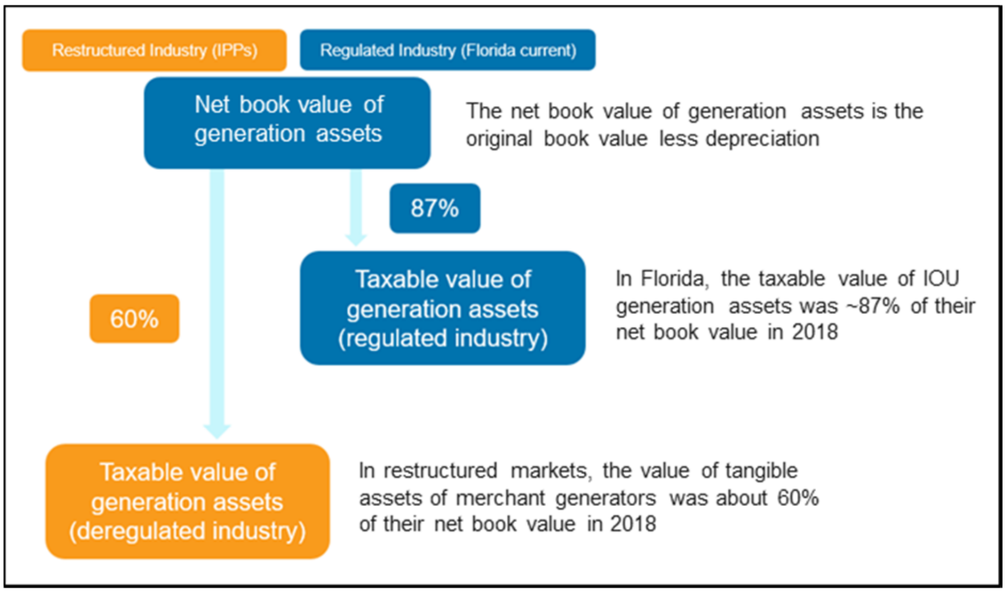
[34] The book value is a business or asset's value as recorded in the balance sheet. It reflects a business or asset's cost when it was acquired less depreciation, i.e. the value lost as the asset ages. Although depreciation as recorded on the balance sheet differs from the asset's actual depreciation, it provides a reasonable estimate.

Table 4: Tangible Book Value to Book Value Ratios of IPP Merchant Generators, 2018

Company	Ticker	Book Value per Share	Tangible Value per Share	Ratio
Vistra	VST	17.4	3.9	23%
AES	AES	5.0	1.6	31%
Calpine	CPN	8.3	9.1	109%
TransAlta	TAC	5.9	4.2	70%
Average	-	**9.2**	**4.7**	**~60%**

A review of generating assets in the current regulated market in Florida shows that in 2018, the taxable value for the IOU owned generating plants was, on average, 87 percent of the 2018 book value.[35] Using these comparables, we estimate a post-restructuring change in the Fair Market Value of generation assets in Florida of negative 27 percent. Figure 11 below summarizes these conclusions. The impact of this change in taxable values to municipal property tax revenues is further discussed in Section 4.3.

Figure 11: Book Value to Taxable Value in Regulated and Restructured Industries



4.3. Financial Impact Potential to Florida State and Local Governments

In this section of the report, CRA details the impacts to state and local governments under the most probable potential outcomes as described above after restructuring is implemented. The tax revenues will be affected when the state transitions to the new structure.

Moreover, municipalities and local jurisdictions are particularly vulnerable to restructuring due to a number of current, locally-imposed utility taxes that directly fund municipal activities. Most notably, impacts to the utility franchise fee, municipal public service tax, and property tax could result in significantly lower local tax revenues.

Decreases in these tax revenues could have a drastic negative effect on local jurisdictions because their budgets are based on projected revenues received from these taxes.

[35] Publicly available financial statements for Florida IOUs

Policymakers will be forced to rethink local tax structures in order to fill any gaps created in their municipal budget, which may take years.

4.3.1. Property Tax

At present, property taxes on residential and commercial real estate provide Florida county governments with one of their largest sources of revenue, and even the single largest one in some cases. In fiscal year 2017-18, for example, property tax was the largest component of annual revenue in Hillsborough County[36] with the franchised IOU in Tampa, Tampa Electric (TECO), being the largest property taxpayer in the county.

In general IOUs, which own the most personal property utility assets in the state, tend to contribute the highest amount of property tax revenues to municipalities. In FY 2017-18, Florida IOUs jointly paid $1.03 Billion in property taxes to local governments.[37] About 31 percent of FPL's $2.3 Billion in total FY 2018-19 taxes and fees was paid through property taxes, of which over a third was paid on generation-related properties.[38]

Utilities pay a significant amount of property taxes on their generating plants to the local jurisdictions in which they are located. As a result, under industry restructuring, the amount of personal property taxes collected by local governments will be affected by:

- Changes in property values as a result of sales of utility assets;
- Retirement of a power plant that is unable to compete in the deregulated market; and
- Differences in approaches to valuing and taxing utility and non-utility property.

In assessing the changes in property values, CRA constructed three different scenarios to provide a range of potential outcomes after restructuring. The first scenario identified as "industry restructuring only" maintains the current generating and transmission resources footprint and focuses primarily on the changes in the Fair Market Value of the generating plants using the market based valuation approach described in section 4.2.

The second scenario called "limited closure of units" assumes that some high cost units of the generation fleet would be closed as the new merchant generation owners attempt to improve profitability by removing unprofitable units while seeking to increase pricing.

The supply gap would be met by increasing electricity imports up to the existing inter-connection capacity limit. Based on our assessment of the Florida electric system, we expect that only a small portion of the fleet would be at risk of closure.

Lastly, the third potential outcome called "displacement of units by new generation" assumes the partial close of this generation gap by adding new low cost generation capacity consisting of either solar PV or new natural gas combined cycle plants, without expanding interstate gas pipeline capacity.

Since CRA did not conduct an expansive bottom-up plant level production cost modeling analysis, it relies on the application of industry trends that will most likely reflect future outcomes under the new deregulated environment.

Even though the analysis is not technical, CRA's decisions ensure fundamental energy constraints are met such as resource adequacy within Florida and infrastructure constraints

[36] https://www.hillsboroughcounty.org/library/hillsborough/media-center/documents/budget/fy-18-19/fy18--fy19-adopted-budget.pdf?la=en&hash=647991EDEE434F4D378B64A575F98540DCC0BFF5,p.65

[37] Florida Chamber of Commerce data

[38] Florida Chamber of Commerce data

(i.e. electric transmission and natural gas pipeline capacities). Also, the generating resources chosen for closure were based on extensive analysis using the following criteria:

- Location and potential impact on transmission congestion
- Impact on overall reserve margins for the state
- Focused on large units of more than 300 MW capacity
- Marginal cost position of the generating assets
- Industry trends such as coal retirements

The following table depicts an overview of the scenarios and their impact on the current property tax.

Table 5: Description of Scenarios and Assumptions Used in Analysis

Scenarios for consideration	Generation Capacity		New Gas / Electric Transmission Capacity	**Property Tax Loss Impact** ($ millions)
	Closures	New Capacity		
Industry restructuring only	None	None	None	**110**
Limited closure of units	3,300 MW	None	None	**140**
Displacement of units by new generation	5,000 MW	1,500 MW CC 3,500 MW PV	None	**60**

4.3.2. Franchise Fee

A franchise fee is a contracted fee charged to a private company for the privilege of using the city's rights-of-way. In general, the franchise fee is assessed to entities because of three main reasons[39]: *it is fair rent for the use of the city's rights-of-way to derive a private profit; it is consideration for the city to agree not to compete with the private party during the term of the franchise agreement;* ***and it is a fee paid the city to offset the costs incurred by the city as a result of the private party's disparate or exclusive use of public property*****.**

The estimation of the franchise taxes varies among towns and cities in Florida and it is uncertain how this tax will be affected after restructuring. However, the concept of the assessed entity to be conducting business within the town or city limits is applicable and is identified throughout the franchise related documentation we reviewed.

In most Franchise Fee contracts, there is specific language that allows for utilities to exit the contract if there is a loss of exclusivity, which clearly takes place in a market restructuring. Since there is no clear guidance on the ballot initiative or in the current law on how the franchise fees will remain after the restructuring, CRA assumes that they will be completely

[39] Town of Longboat Key – Fiscal year 2015 Adopted Budget

eliminated. **The elimination of the franchise fees will result in $650 million loss in tax revenues per year.**

4.3.3. Municipal Public Service Tax

Municipal Public Service Taxes (MPST) are locally imposed on retail customers for the purchase of electricity that is consumed within the municipality. The tax is collected by the utility based on payments received, then paid to the municipality or county. In effect, the MPST is a pass-through tax imposed on the customer, where utilities act as agents or collectors on behalf of the state. Though it may differ by municipality, the tax is typically levied at a rate of 10 percent of payments received from retail customers, with total tax revenues of ~$880 million in 2018.

In a restructuring scenario as proposed by the ballot initiative, each municipality would be likely to lose the revenue earned from the MPST imposed on generation. Under the provisions of the current statute terms, the conditions typically apply to utilities and not generation providers. As such, these statutes would no longer be applicable to the situation in a restructured market.

We estimate that approximately 30 to 40 percent of total taxes were related to generation (estimate based on property tax values). Using this approximation to estimate the generation portion of the MPST revenue, we estimate that the municipalities would lose between **$250 million and $350 million in MPST revenues in total. If IOUs are also forced to divest their T&D assets, the municipalities would likely lose the full $880 million.**

4.3.4. Gross Receipt Tax

Currently, Florida levies a 2.5% tax on the gross receipts of electricity sales. In 2017, the total Gross Receipt Tax (GRT) collections in Florida amounted to over $1.16 Billion for all utilities (including gas, water, and electricity), of which an estimated $450 million was collected from Florida IOUs.

Because GRTs are paid based on a fixed percentage of a firm's total revenue, any changes to prices or quantities sold of electricity will directly affect the GRT tax base, in turn impacting the amount of tax revenues collected from utilities. Restructuring is certain to reduce utility revenues collected from generation assets, which will be removed from utility ownership and, consequently, from the utility gross receipts tax base. For some IOUs, this effect alone could significantly reduce gross receipts tax payments. Florida Power & Light (FPL), for example, whose projections show 70% of its 2019 revenues to be generation-related, would cease to pay the corresponding proportion of GRT to the state of Florida under restructuring, representing a loss of over $173 million in annual revenue to the state government.[40]

Any reduction in GRT payments will have a direct negative impact in Florida public education funding. A 1974 constitutional amendment earmarked GRT collections for funding of capital outlay needs of public schools (PECO), community colleges, and state universities.[41] As a result, changes in utility GRTs feed directly into the funding available for PECO use.

Finally, any additional potential negative impacts to transmission, distribution, or customer-related revenues, such as possible decreases in retail electric rates, will further reduce tax revenue received by state governments, although the exact magnitude of this effect cannot be known in advance. GRT revenues are additionally threatened by the possibility that consumers will switch to out-of-state energy providers under retail choice. Because the GRT

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[40] Public record of FP&L financial statements

[41] http://edr.state.fl.us/content/revenues/reports/tax-handbook/taxhandbook2018.pdf

cannot be applied to out-of-state companies, these providers can offer consumers lower rates by excluding the tax electric rates. Out-of-state suppliers' energy charges would thus escape the GRT altogether, causing an additional reduction in revenues for Florida government.

Additionally, higher electricity rates resulting from restructuring could potentially increase GRT collections. However, any increase related to higher rates would be more than offset by higher government electric bills by a factor of 4 to 1. Given that state and local governments make up approximately 10% of the state's total electricity consumption, for every $100 of increase rates, we would see a $10 increase in government bills and an increase in GRT of $2.5. We conducted a sensitivity analysis that showed that **for every 10% increase in rates, the state would incur additional electricity costs of $120 million which would be partly offset by a higher GRT of $30 million – or a net loss of $90 million.**

Given the high degree of uncertainty, we are unable to precisely quantify the impact of restructuring to GRT collections. However, based on a range of 60% to 70% of GRT associated with generation, we can say that **$270 million to $320 million of annual GRT collections will be at risk.**

4.3.5. State and Local Government Costs

Based on our research as highlighted in sections 2.2 and 2.3, we estimate that if Florida undergoes a similar process to other restructured states (especially Texas), **the potential increase in PSC related costs for electric industry oversight, external consulting fees and others would range from $30 million to $80 million**. Some examples of the key potential drivers of higher cost to the PSC included in this range are listed below.

<u>Additional resources required to oversee ISO or RTO functions and new markets</u>

The new construct will require additional oversight by the state commission in regards to new market designs, policy initiatives and consumer advocacy. Inevitably, the state regulators will act as the consumers' representatives at the ISO or RTO functions and will actively participate in all FERC cases that apply to in-state efforts. Based on the review of other PSCs similar to Florida (i.e. Texas, New York) and applying the relative increase to current FPSC costs, **we expect this increase to be up to $5 million per year.**

<u>Consulting and contractor costs associated with the ramp-up period leading up to restructuring</u>

Current FPSC staff is not well versed into the intricacies of restructured market design. Therefore, they will require the assistance of external experts to navigate through and understand the new regime. The consulting fees will be initially high due to the active participation of the PSC staff in the formation of the ISO or RTO and the transition to a restructured regime. Based on the review of other PSCs similar to Florida (i.e. Texas, New York) and applying the relative increase to current FPSC costs, **we expect this to range from $5 to $10 million initially with over $5 million annually post implementation.**[42]

<u>Development and enforcement of market definitions and controls and increased participation in litigation</u>

One of the most critical functions of the FPSC staff after the implementation of the new construct will be the initiation and deployment of safeguards around fraud and market malfeasance. As evidenced by the number of litigation cases related to the electric industry significantly increased after restructuring in Texas.

This significant increase in cases necessitated a more active role for the Texas Commission and its staff. Based on the review of other PSCs similar to Florida (i.e. Texas, New York) and

[42] These estimations were based on information on comparable costs identified in Maine during the transition.

applying the relative increase to current FPSC costs. **Active participation in litigation by the PSC may result in more $5 million per year in added cost.**

Additional siting and permitting costs for transmission

The restructured regime will not remove the sitting and permitting costs oversight by the FPSC that is currently in place. As seen in other jurisdictions, the new construct will likely increase the amount of transmission investment required for Florida in a restructuring scenario. Thus, increasing the burden for oversight in regards to transmission planning and construction prudency.

States in PJM, ISO-NE and MISO have incorporated a Certificate of Public Convenience and Necessity (CPCN) process to ensure that any new transmission and generation investments benefits exceed costs. These cases under the new market structure are more involved since market related studies have to be conducted that were not necessary before, which in effect will increase the FPSC staff workload since incremental documents will need to be reviewed.

An increase of 10% in new costs due to these incremental functions and cases, will add close to $5 million per year.

New public assistance programs to offset higher rates for low income families

Lastly, CRA's research indicated that an increased amount of public assistance programs is typically needed under restructured regimes due to increased electricity costs and fraud. A recent study conducted by the National Consumer Law Center for Massachusetts showed that:

> *For the period of June 2016 through May 2017, Connecticut residential customers who purchased electricity through competitive supply companies paid $66,736,598.41 more that they would have paid their regulated public utility companies for the same electric service. In Illinois, residential customers who purchased electricity from competitive supply companies spent an additional $152,108,081 from June 2016 through May 2017 over the prices charged by regulated public utility companies. In New York, residential and some small commercial customers overpaid by $817 million between January 2014 and June 2016, and* ***low-income customers overpaid by almost $96,000,000*** *during the same period, compared to the prices charged by regulated public utility companies. Massachusetts customers paid $176,800,000 more than what they would have paid for electricity from their utility, during the period of July 2015 through June 2017* [43]

Since a large portion of costs are incurred by low income consumers, these higher bills may also cause a portion of state and federal low income assistance funds to be absorbed by for-profit competitive supply companies. States such as Connecticut, New York, and Illinois have taken steps to protect consumers from high prices and deceptive practices. However, these efforts are still in progress and the low income assistance programs are still negatively affected. A more careful investigation and a deployment of safeguard for low-income consumers will drive even higher the cost of the state regulatory commission. Implementing programs to safeguard and educate low income consumers and provide relief to those that participate in these programs can add a significant amount of cost to the state. Given the high degree of uncertainty since it depends on the extent of increased rates and number of low-income ratepayers impacted, we are not able to quantify the potential impact. However, **based on the example of other jurisdictions, the annual negative impact would likely be $100's of millions.**

Additionally, for the electricity rate sensitivities, we have assessed the potential higher costs impact to state and local government related to increased electricity bills. Currently, state and

[43] http://www.nclc.org/images/pdf/pr-reports/competitive-energy-supply-report.pdf

local governments collectively pay ~$1.2 Billion annually to the Florida IOUs for electric service. Increased electricity rates would directly impact government costs offsetting benefits from higher sales taxes. As noted above, a **10% increase in rates would have a negative impact of $120 million per year.**

Recovery of Generation Stranded Costs

A major unintended consequence of restructuring that will have a lasting impact on customers relates to stranded cost recovery. Stranded costs are based on investments and other commitments utilities have made pursuant to their obligation to serve their customer base throughout their existence. Costs associated with these commitments that may not be able to be recovered in a competitive electricity market are referred to as "stranded."

In Texas, estimates of stranded costs were considered during the transition to deregulation in order to provide for early mitigation and recovery, as applicable. The process of estimating and recovering of these costs was very convoluted and required multiple years to complete consuming significant amount of time and resources. Due to fluctuating market conditions over time and regulatory decisions, estimates of stranded costs ranged from negative $2 Billion - during periods of high natural gas prices making higher-cost plants more economical - to over $6.5 Billion. **By the time the issue was fully litigated in Texas, the total amount to be recovered from customers amounted to over $9.5 Billion.**

4.4. Impact of Restructuring – Summary of Findings

The table below provides a summary of the range of impacts to state and local governments.

Table 6: Summary of the Ranges of Annual Impacts to State and Local Governments

Negative Financial Impact by Major Category		**Range Estimate** ($ millions)	
		Low	High
Revenue Losses	4.3.2. Franchise Fees	650	650
	4.3.4. Gross Receipt Tax	270	320
	4.3.3. Municipal Public Service Tax	200	300
	4.3.1. Property Tax	60	140
Higher Costs	4.3.5. Administrative Costs	30	80
	2.3.2. RTO or ISO – impact of higher rates	20	25
Total Potential Impact		**1,230**	**1,515**
4.3.5. Incremental impact from higher electricity rates – net impact of revenue and costs for every 10% rate increase		90 *(GRT and government electricity bills)*	

The ranges quantified above are not meant to be a comprehensive evaluation and represent a conservative view of the overall potential impact of restructuring the Florida electric market. There are several other impacts that have not been included given the availability of information, time constraints, and degree of uncertainty.

Below is a non-exhaustive list of additional challenges identified but not quantified at this time. All of which would further impact local and state governments in Florida adversely.

- Public assistance for low income, elderly and fixed-income ratepayers
- Litigation, regulatory, and consumer advocacy cost for unfair practices
- Recovery of stranded costs for IOU generation assets
- Grid reliability investments and ancillary services
- Natural gas supply availability constraints and price risk
- Job loss impact of closures and lower government spend (driven by revenue losses)
- Economic impact of higher electric rates – e.g. job losses or slower economic growth
- Incentives required to attract sufficient Provider of Last Resort ('POLR') suppliers

Florida electricity market would have a negative financial impact of $1.2 to $1.5 Billion annually to Florida state and local governments. Furthermore, this impact could be considerably worse based on additional challenges not yet quantifiable due to the high degree of uncertainty and risk associated with the proposed petition ballot.