

# I. Meeting Packet



**State of Florida**  
**Public Service Commission**  
**INTERNAL AFFAIRS AGENDA**  
Tuesday – February 19, 2019  
9:30 AM  
Room 105 - Gerald L. Gunter Building

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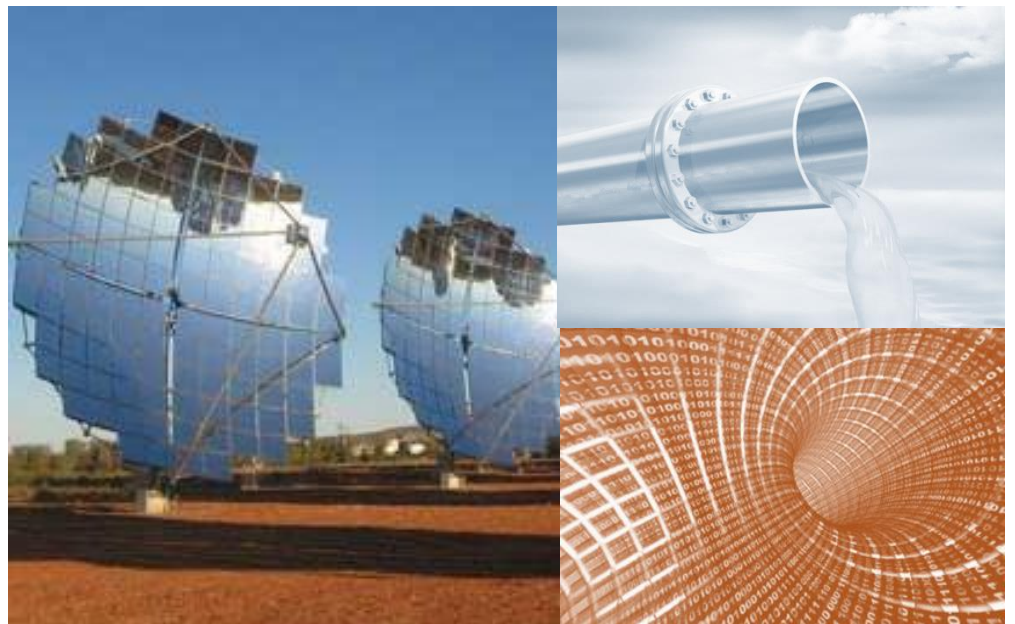
1. Public Utility Research Center 2018 Annual Report to the Florida Public Service Commission – Dr. Mark Jamison (Attachment 1)
2. Legislative Update
3. General Counsel’s Report
4. Executive Director’s Report
5. Other Matters

BB/aml

OUTSIDE PERSONS WISHING TO ADDRESS THE COMMISSION ON  
ANY OF THE AGENDAED ITEMS SHOULD CONTACT THE  
OFFICE OF THE EXECUTIVE DIRECTOR AT (850) 413-6463.



# PURC 2018 Annual Report to the Florida Public Service Commission



2018

## Update on PURC Research and Outreach

This update on PURC research and outreach is intended to serve as an overview for FPSC commissioners and professional staff. At the end of this summary is a list of recent research papers that are also available through the research papers search engine on the PURC website at [www.purc.ufl.edu](http://www.purc.ufl.edu). We truly appreciate the support of the FPSC and welcome opportunities for continued collaboration.

# PURC 2018 Annual Report to the Florida Public Service Commission

## UPDATE ON PURC RESEARCH AND OUTREACH

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# PURC 2018 Annual Report to the Florida Public Service Commission

## UPDATE ON PURC RESEARCH AND OUTREACH

### STATISTICS AND HIGHLIGHTS

#### Statistics

- 33 blog posts
- 17 working papers and journal articles
- 7 video blogs
- 3 opinion editorials
- 2 Comments filed with federal regulatory agencies
- 1 US Senate testimony
- 1 book

#### 46<sup>th</sup> Annual PURC Conference (2019)

The 46<sup>th</sup> Annual PURC Conference, *“Digitalization, Disruption, Dogma: The Amazon-Uber-fication of Utilities?”* will examine disruptive technology, changing business models, adaptive leadership challenges, and how policy is or isn’t keeping up.

#### 45<sup>th</sup> Annual PURC Conference (2018)

More than 80 key leaders in industry and government attended the 45<sup>th</sup> Annual PURC Conference, *“Securing the Future of Florida’s Utility Infrastructure,”* held February 21 – 22, 2018. It examined the American Society of Civil Engineers infrastructure report card, emerging inter-dependencies for telecoms, power, and water, and cyber security challenges faced by industry and government.

#### Report: Valuing Municipal Utilities – The Case of the Potential Sale of JEA in Jacksonville

PURC examined valuation and other issues related to the potential sale of JEA. The study gave decision makers alternative views of valuation, value estimates under the different scenarios, and descriptions of issues that would arise with a sale.

### **Courses on Executive Leadership, Electricity Pricing, and Regulatory Principles**

PURC provided courses in multiple countries. Topics included developing key strategies for regulatory leaders, regulatory challenges faced by multi-sector regulators, and how a regulatory board can best prepare itself for effectiveness.

### **Online Course: Regulatory Impact Analysis**

PURC continues to offer its Comprehensive Regulatory Impact Analysis Online Course. In spring 2018, 12 professionals participated in the course in an effort to learn how to avoid the pitfalls that stifle utility regulatory decisions and gain support for difficult issues.

### **Research Initiatives on Distributed Energy Resources, Incentive Regulation, and Competition**

PURC faculty and affiliates are engaged in research on behavioral changes of solar customers, demand charges, price cap regulation in energy, technology innovation, demand response, deregulation, anticompetitive conduct, and mergers.

### **PURC/World Bank International Training Program on Utility Regulation and Strategy**

One hundred forty-two people attended this two-week program in 2018. Since its inception in 1997, this program has educated more than 3500 professionals representing 156 nations.

### **PURC Advanced International Practices Program**

Twenty-one infrastructure professionals from around the world participated in this year's courses on energy pricing, benchmarking, and public-private partnerships.

## PRIMARY RESEARCH PROJECTS

### ENERGY

#### **Valuing Municipal Utilities – The Case of the Potential Sale of JEA in Jacksonville**

PURC examined valuation and other issues related to the potential sale of JEA. According to the assessment, the utility's current value is \$7.5 billion, which is not inconsistent with earlier valuations promulgated by JEA. The report addresses considerations when evaluating a possible sale of the JEA, including history, effects on the city's welfare, possible advantages and disadvantages of being a municipal utility, regulatory treatment of investor-owned utilities vs. municipal utilities, and factors, such as timing, that could significantly impact the potential seller and buyer.

#### **Designing Compensation for Distributed Solar Generation: Is Net Metering Ever Optimal?**

Electricity customers who install solar panels often are paid the prevailing retail price for the electricity they generate. This paper demonstrates that this rate of compensation typically is not optimal. A payment for distributed generation that is below the retail price of electricity often will induce the efficient level of distributed generation when the fixed costs of centralized electricity production and the network management costs of accommodating intermittent solar are large, and when centralized generation and distributed generation produce similar (pollution) externalities. The payment for distributed generation can optimally exceed the retail price under alternative conditions. The optimal compensation policy varies considerably as industry conditions change.

#### **Solar Impacts: Does Distributed Production Affect Consumption Choices?**

As the role of distributed generation grows in the electricity industry, this growth is accompanied by questions regarding its impact on the rest of the system, chiefly the impact on finances, environmental footprint and reliability. Unfortunately, analyses of these impacts assume, a priori, that generation from distributed resources displaces generation from "somewhere else", usually centralized resources and a 1:1 basis. We examine the behavior of customers who install solar arrays on their homes and find that these customers increase consumption by 8-14%. That is, every 100 kWh generated by residential distributed solar displaces only 86-92 kWh from other sources. This result has profound impacts on the financial compensation of these resources, their role in reducing emissions, and their impact on system reliability.

#### **Self-Sabotage in the Procurement of Distributed Energy Resources**

This paper examined conditions under which a regulated monopoly supplier can benefit from intentionally raising its own costs. Such self-sabotage is beneficial when it induces the regulator to implement a more accommodating procurement policy. The paper also demonstrates how the implementation of standard policies (e.g., cost reimbursement or a simple cost-sharing plan) can reduce procurement costs by deterring self-sabotage.



### **The Effect of Renewable Portfolio Standards on State-Level Employment: An Ex Post Analysis**

Renewable Portfolio Standards (RPS) programs which propose target levels of energy production or consumption that must come from renewable sources, have become a popular policy in state capitals across the United States. As of 2010, 29 states and the District of Columbia had adopted programs which fall under the RPS umbrella. RPS are often times seen as a tool to foster economic development through job growth. This paper analyzes the effects of RPSs on state level employment in the whole economy. The paper finds RPS adoption does not lead to a statistically significant effect on overall employment.

### **The Economic and Political Realities of Regulation: Lessons for the Future**

As competition emerges for electricity utilities, it is important to keep in mind lessons from the past. One lesson is that actual data, rather than conjecture, is needed for anchoring decisions in reality. Another lesson is that economic incentives are powerful. For example, electric utilities in the UK revealed that they were able to make significant improvements in efficiency once they were allowed to profit from the improvements. Finally successful transitions require that regulators carefully pace the changes so that the system does not derail. Because so many stakeholders have to give up something during times of change, the work of regulation is often about disappointing people at a rate that they can endure.

### **Five Things Regulators Should Know About Blockchain (and Three Myths to Forget)**

With all the excitement about blockchain, it is important that utility regulators separate truth from myth. What should they know? The basic benefits of blockchain technology, its potential regulatory applications, the roles of smart contracts, and the implications for artificial intelligence. What are the myths? That blockchain removes the need for trust, that it uses too much electricity, and that smart contracts are actually smart and contracts.

### **Employing Simple Cost-Sharing Policies to Motivate the Efficient Implementation of Distributed Energy Resources**

This paper considers the optimal design of simple cost-sharing policies to motivate electricity distribution utilities to manage the costs of distributed energy resource projects. The optimal share of realized cost savings that is awarded to the utility takes a particularly simple form in certain settings. More generally, the savings can vary with the prevailing environment in subtle and sometimes counterintuitive ways. For instance, the savings may increase as cost savings become less onerous for the utility to secure and as the utility becomes more averse to risk. Gains from affording the utility a choice among cost-sharing policies typically are minimal.

### **Energy Blogs**

Dr. Kury blogs on energy issues for The Conversation. He addresses issues of storm hardening, taxes, and grid security. In 2018, his posts were read 101, 897 times. His blogs are available at <https://theconversation.com/profiles/theodore-j-kury-406888/articles>.

## TELECOM

### **Regulating Regulators in Transitionally Competitive Markets**

Over the past 30 years of transformations in telecommunications, the US has gained considerable insights about how to design regulatory policy in the presence of developing competition. The insight to date has focused on how to harness competitive forces to motivate incumbent suppliers to serve the best interests of consumers. This paper stresses the importance of considering the incentives of regulators and explores the associated changes in standard recommendations for regulatory policy design in the presence of developing competition.

### **Economic Scholars' Summary of Economic Literature Regarding Title II Regulation of the Internet**

Much has been claimed about the economics of the FCC's 2014 decision to classify internet service as a Title II common carrier service, but little of what is said seems to relate to actual economic research. A group of scholars, led by PURC, summarized the economic research and provided this summary to the FCC in its Restoring Internet Freedom proceeding. In general the research shows that some of the activities prohibited by the FCC's decisions can actually be beneficial to customers, but not always.

### **Three Things Economists Wish the FCC Knew about Broadband Markets**

Three well-known lessons from economics are largely missing from recent FCC decisions. One is that technology competition drives the deployment of high-speed broadband more than any other incentive. The second lesson is that a high market share is generally not a market failure, but an indicator that the company is satisfying customers more than are its competitors. Lastly subsidies created to improve universal service rarely do so.

### **Beyond Net Neutrality: Policies for Leadership in the Information, Computing, and Network Industries**

This paper analyzes the FCC's struggles in developing coherent policies for net neutrality and concludes that the current regulations are counterproductive. It explains a multistakeholder approach that can be used to resolve intra-industry conflicts, which largely drive net neutrality issues, without imposing explicit regulatory constraints on a rapidly evolving technology ecosystem.

### **Identifying Market Power in Times of Constant Change**

This paper explains that traditional approaches to defining markets to investigate market power fail in times of constant change because demand and supply are in constant flux. The analyses rely upon historical data, the value of which degrades over time, possibly resulting in harmful regulatory decisions. This points to a need for a different approach to determining when regulation is an appropriate response to market power. The paper presents an approach that relies upon essential factors leading to monopoly (EFMs), such as control of essential facilities, which persist across generations of products. Market power analyses should be a search for EFMs and policy responses should focus on diffusing the market power without destroying value.

## **Revealing Transactions Data to Third Parties: Implications of Privacy Regimes for Welfare in Online Markets**

This paper examines the effects of privacy policies regarding transactions (e.g., price/quantity) data on online shopping platforms. Disclosure of transactions data induces consumer behavior that affects merchant pricing decisions and the welfare of platform participants. A profit-maximizing platform prefers the disclosure policy that maximizes social benefit. Although this policy benefits sophisticated consumers, it harms those who do not understand the implications of their behavior. Consequently, the welfare effects of alternative privacy policies, data breaches, willful violations of stated privacy policies, and opt-in/opt-out requirements differ sharply, depending on the level of consumer sophistication and on other factors such as the prevailing status quo.

## **Net Neutrality Policies and Regulation in the United States**

This paper examines the history of net neutrality in the United States, beginning with Federal Communications Commission decisions the 1960s and 1970s that laid the groundwork for neutrality policies. The paper also summarizes the economics literature on net neutrality to assess the implications of alternative regulatory approaches.

## **Technology Blogs**

Dr. Jamison blogs on technology issues for the American Enterprise Institute. He addresses issues of net neutrality, universal service, privacy, innovation, competition, and regulatory institutions. His blogs are available on the PURC website at <http://warrington.ufl.edu/centers/purc/research/directorsTake.asp> or at the American Enterprise Institute website at <http://www.aei.org/scholar/mark-jamison-2/>.

## **WATER**

### **Data Transparency as a Key Tool for Regulating Government-Owned Water Utilities**

Data collection and information incentives are key for regulating the water sector where government ownership and operation is often the case. The problems are compounded for fragile, conflict-affected, and low income states. Issues, potential actions, and supporting examples that arise when monitoring and evaluating infrastructure utility performance are offered by this paper.

### **Technical Inefficiency Effects in a Stochastic Production Function for Managerial Incentives in Public Water Utilities**

Performance of state-owned water utilities in developing countries is often weak. This study estimates the impact of managerial incentives upon efficiency using a stochastic frontier production function with revenue water as the output. The empirical analysis utilizes an unbalanced paneled data consisting of revenue water, connections, operating expenditure, water delivered and staff, from Uganda's nineteen NWSC sub-utilities for a nine-year

period, 2002-2010. The inefficiency effects are modelled as a function of utility-specific variables: service coverage, level of financial incentives, target difficulty, and year of observation. While financial incentives and increased service coverage improve efficiency, targets (such as the reduction of non-revenue water) that are perceived as excessive by employees may reduce it. The findings suggest some policy implications: utility managers in the public water sector need to incorporate monetary incentives and increase service coverage to reduce non-revenue water. However, targets need to be set with great care and with transparency.

## MULTISECTOR

### Blockchain

Dr. Jamison has written several blogs on applying blockchain for regulatory issues. He has also launched a Florida Blockchain group that provides educational services, helps people form businesses using the technology, and advises businesses and governments on the application of blockchain.

### Stakeholders and Power Relations in Regulation

Stakeholders play at least two roles in utility regulation: Some receive benefits, such as customers protected from monopoly power. Stakeholders also influence regulation by, for instance, commenting in proceedings. Most studies on stakeholder relations focus on engagement, such as through advisory groups and public hearings. Largely missing are analyses of power relationships. Some stakeholders, such as lawmakers, have formal authority over regulatory bodies. Others have little formal authority. Stakeholders also vary in how and the degrees to which regulators affect them. This paper examines these relationships and illustrates them with a survey of regulatory agencies in the Caribbean.

## OUTREACH

### **Puerto Rico Blue Ribbon Task Force**

PURC has provided assistance to the Blue Ribbon Task Force regarding regulatory reform of energy in Puerto Rico. PURC faculty attended meetings in Puerto Rico and provided advice on reports and meeting agendas.

### **Plans for the 46<sup>th</sup> Annual PURC Conference - Digitalization, Disruption, Dogma: The Amazon-Uber-fication of Utilities?**

Every few years we hear another prediction about the eminent death of utility businesses. Someday this prediction will be right – nothing lasts forever – but is this that day? Will the new disrupters send power utilities, water utilities, or traditional broadband providers packing?

Some utilities are getting in front of today's changes. Some regulators and policy makers want to choose the path forward. But what is that right way? Will it be Amazonification, where squeezing margins and creating high customer expectations dominate the future? Or will it be Uberfication, where anyone can be a utility, or not, whenever the urge strikes them? How can companies, regulators and policy makers stay adaptable and thrive with whatever directions the disruptions take us?

Conference details are available online at <http://www.purc.ufl.edu>.

### **How Can Regulators and Policy Makers Best Enable Blockchain to Benefit Customers?**

By letting go of industry decision making. That was the message that PURC director Mark Jamison delivered to the Power Blockchain conference. Dr. Jamison explained that decisions about blockchain's role in the power sector should be made by those who bear the risks of bad decisions and rewards of good ones. This means letting go of many of the traditional regulatory mechanisms that have evaluated and directed utility business decisions. He explained that too often regulators make decisions that favor one type of industry player over others during times of transition, and that customers suffer as a result. The meeting was held in Orlando, Florida, in November 2018.

### **Practicing Leadership in Utility Data Analytics**

Data analytics is sometimes hard to implement in traditional industries. PURC director of leadership studies Araceli Castaneda led two workshops for the Utility Analytics Institute in 2018 on how to make the work more effective. One session examined how to identify and change behaviors that inhibit effective use of data analytics. The second explained how to develop strategies for cultural change by engaging allies, softening opposition, nurturing disruptors, and changing personal behaviors.

## **How Can Regulators and Policy Makers Navigate When So Many Disruptive Technologies Are Making the Future Uncertain?**

By letting go of the deregulatory process and hanging onto first principles. That was the message that PURC director Mark Jamison delivered to the Energy Bar Association at its annual meeting. Dr. Jamison borrowed from the work of Professor Alfred Kahn, who emphasized during the telecommunications' industry's transition to competition that market regulation and market competition do not work well together. Either customers will be in charge of future industry directions, or regulators will, not both. Dr. Jamison suggested focusing on the core purposes of regulation - protecting the customers who have no options and protecting the industry from political interference - and letting go of everything else so that the industry can evolve according to its underlying economics. He explained that too often regulators make decisions that favor one type of industry player over others during times of transition, and that customers suffer as a result. The meeting was held in Washington, D.C., in October 2018.

## **What Truly Holds Individuals and Organizations Back from Implementing Necessary Change?**

This is the topic of study and work that Ms. Araceli Castaneda, PURC director of leadership studies conducted October 18th, 2018 with the Advanced Leadership for Academics and Professionals as part of their Leadership Development Program at the University of Florida. During the Immunity to Change session, Ms. Castaneda guided the group through an exercise to help them surface the values that keep the status quo in place, acknowledge the individual contributions to the very problem they are trying to solve, and understand what it takes to achieve meaning and lasting change.

## **What Do Regulators Need to Know About Blockchain?**

That was one of the questions PURC director Mark Jamison addressed at the 2018 annual conference of the Organisation of Caribbean Utility Regulators (OOCUR). Dr. Jamison told the story of how blockchain developed and how it works. He also talked about applications - such as managing licensing and permitting processes - how smart contracts work, how it opens opportunities for artificial intelligence, and how it can reshape the utility business and regulation. He explained that blockchain can be a game changer, but its impacts are uncertain: On the one hand, it creates opportunities for new startups in the energy sector. But on the other hand, it creates opportunities for incumbents to grow their relationships with customers. A key for regulators is to be open to either development. The conference was held in October 2018 in Belize City.

## **How Can Regulators Create Regulatory Impact Assessments That Have Impact?**

That was one of the questions PURC director Mark Jamison addressed at the 2018 OOCUR annual conference. Dr. Jamison explained that one key is to conduct an objective analysis, giving all sides of an issue fair, fact-based analyses. This makes it important to deemphasize thinking in terms of pros and cons, and thinking instead in terms of alternative actions and the consequences of the actions, leaving stakeholders to use their own preferences to evaluate the consequences. This approach places a heavy emphasis on carefully defining the problem in objective terms. It also means that analyses need to be complete and clear, and that stakeholder voices need to be heard. Dr. Jamison used as a case study work by PURC's director of energy studies, Ted Kury, who had conducted a controversial study for the Governor of Florida several years ago. The study's findings were not what the Governor wanted to hear, but the study was accepted and respected because the work had

been transparent and emphasized evidence into which all stakeholders had given input. The conference was held in October 2018 in Belize City.

### **What Does a Regulator Need to Know to Practice Leadership in the Complicated Environment of Utility Regulation?**

To be successful, a regulator needs to lead into the political environment (lead up), among stakeholders (lead laterally) and in the regulator's own organization (lead within). These are the topics introduced by Araceli Castaneda, PURC director of leadership studies at the 16th Annual Conference of the Organisation of Caribbean Utility Regulators held in Belize City, Belize October 10th - 12th, 2018. Ms. Castaneda's presentation was followed by a panel discussion with Mr. Ansord Hewitt, director general of the Office of Utilities Regulation of Jamaica, and Dr. Marsha Atherly-Ikechi, director of utility regulation at the Fair Trading Commission of Barbados who shared their experiences and knowledge in this complex subject.

### **What is the Future of Work?**

That was the subject of PURC director Mark Jamison's presentation at Stand Up Republic. Dr. Jamison explained that work is always changing, and that it should. If people had expressed today's worries about innovation 125 years ago, the farm tractor might have been delayed and 43% of Americans would be farmers, as was the case in 1890. And the country would not have benefitted from all of the innovations in medicine, care for the environment, housing and the like that were made possible because people left farms and created new kinds of work. He also explained that people should not be worried about artificial intelligence replacing human decision makers. Artificial intelligence functions in sequential steps – if this, then that. Only a small portion of human mental work is sequential. Our minds' actual work is much more complex and poorly understood. Dr. Jamison spoke on October 1, 2018, in Washington, D.C.

### **What Do Policy Makers Need to Know About the Information Technology Industries (i.e., Tech)?**

That is what PURC director Mark Jamison talked about with senior staff of the US House of Representatives. He first explained that market power in tech is illusory because the large companies have found their successes by satisfying users and customers. And even though companies appear to have unique markets -- Facebook has impressive market share in social media and Google has impressive market share in search, for example – in reality they all compete quite aggressively for the most important resource: People's time and attention. His second topic was election meddling. He explained that social media companies are indeed politically biased, but that is human nature. The question is whether they are meddling in violation of current laws. He said there is some evidence of this, but it would take a specific investigation to determine whether there is anything to worry about. Finally he discussed online privacy. He explained his concern with the European approach to privacy, which gives individuals authority over what others are allowed to remember. He indicated that the most effective government action would be to enforce existing laws related to consumer fraud so that internet users can make decisions about what is right for them. Dr. Jamison spoke with the staff on September 20, 2018, in Washington, D.C.

## **Revitalizing American Industries**

Innovation and competition are the keys to growing the American economy, according to PURC director Mark Jamison. Speaking at RealClearPolitics event “Revitalizing American industries,” Dr. Jamison explained the country is poised for a breakout innovation, like the iPhone. He explained that about every 10 years there is such a breakthrough. These have included cellular phones, the personal computer, and the world wide web. These innovations always combine existing technologies in uniquely and unexpectedly valuable ways. He predicted that the next innovation will make use of blockchain, artificial intelligence, and 5G wireless. Dr. Jamison spoke on September 12, 2018, in Washington, D.C.

## **GRU Governance: Get the Facts**

How should a municipal utility be regulated? PURC's Ted Kury served on this panel discussion, along with David Arreola of the Gainesville City Commission, Ed Bielarski of GRU, and Barry Jacobsen of the Utility Advisory Board on the upcoming local referendum, hosted by the League of Women Voters of Alachua County/Gainesville. GRU is a publicly owned local utility, providing electricity, natural gas, water, wastewater, and telecommunications services. Currently, it is governed by the Gainesville City Commission, guided by the Utility Advisory Board (UAB), and managed by GRU's General Manager. If the referendum measure passes, GRU will be governed and managed by an autonomous board called the Authority, whose five members would be appointed by the Gainesville City Commission. What would this Authority do? How would it accomplish its goals? These questions from the public and others were addressed by the panelists at this interactive forum.

## **Immunity to Change**

The status quo is potent: As leaders we often see people fail to make changes that they know would improve their success. And we see ourselves fail in the same way. How can we make changes that we know we want, but never seem to make? This workshop engaged 30 participants from the University of Florida Leadership Network in an exercise to reveal the hidden stories we tell ourselves - and that people in their organization tell themselves - to create a natural but powerful immunity to change. Participants used this mechanism to understand what holds them back and identify strategies for unlocking their potential to finally move forward. By experiencing this in themselves, they learned to see the mechanism at work in their organization and how to bring it forward as well.

## **Reforming Troubled Utilities – an USAID Workshop**

How are utilities regulated around the world? What are the principles for commercialization of electric utilities? How can we incentivize utilities to improve performance? PURC Director of Energy Studies Ted Kury discussed these questions and more with 35 field staff at USAID during the agency's workshop on Reforming Troubled Utilities in Washington, DC. Kury presented two sessions at the workshop. The first, Utilities' Organizational Structure and Commercialization Principles focused on the idea of the revenue requirement, its components, and the role of each component in delivering a sustainable electricity system. The second, Regulatory Incentives for Improving Performance, focused on the types of program utilized by regulators around the world to incentive performance, along with the advantages and disadvantages of each.



### **Range of the Future (ROTF) Task Force**

Members of the ROTF Task Force met with the PURC faculty on May 18, 2018. The ROTF Task Force was chartered by the Air Force Space Command to develop an action plan to transform today's national space launch ranges at Cape Canaveral and Vandenberg Air Force Base. The Task Force is investigating ways to promote commercial investment in the federal ranges and encourage business to business relations and reduce the dominant role of the federal government. The Task Force is in the early stage of fact finding and engaging with our stakeholders on options for public-private partnerships, port authority management structures, private investment, and/or government-approved commercial range service providers.

### **Why Do Some Companies Adapt to Shock, Such as Technology Changes, While Others Do Not?**

It is costly for firms to change systems and ways that people think, and sometimes these costs are too high. That is the conclusion that PURC director, Mark Jamison, presented at the International Industrial Organization Conference in April 2018. Dr. Jamison explained that people's decision making is constrained by limitations of time, attention, mental energy, and mental capacity. To function with these constraints, people develop biases, heuristics, mental frameworks, and norms. Changing these ways of thinking consumes people's energy, time and attention, which makes it costly for a firm to make changes while also competing in a changing market. Dr. Jamison's coauthors for the paper are Dr. Janice Hauge of the University of North Texas and Laura Jamison of Outmatch. The conference was held in Indianapolis, Indiana.

### **What Are the Challenges in Regulating Environmental Outcomes with a Tax?**

This was the subject of PURC Director of Energy Studies Ted Kury's talk at the 2018 Public Interest Environmental Conference at UF's Levin College of Law. He discussed the role of regulation by price (taxation) and volume (cap and trade) in the market for carbon and explained the complications inherent in the choice of regulation method. Carbon taxation, while ensuring that everyone knows the price, may not achieve the desired volumetric reductions in emission. And cap and trade, while allowing for a defined volumetric reduction, may experience volatile pricing of allowances.

### **Annual PURC Award for Best Paper in Regulatory Economics**

This year's award went to Matthew Grennan, University of Pennsylvania, Wharton School and Robert Town, University of Texas for their paper "Regulating Innovation with Uncertain Quality: Information, Risk, and Access in Medical Devices."

### **Results of the 45<sup>th</sup> Annual PURC Conference, Securing the Future of Florida's Utility Infrastructure**

More than 80 key leaders in industry and government attended the 45<sup>th</sup> Annual PURC Conference, held February 21 – 22, 2018. This year's conference examined the American Society of Civil Engineers (ASCE) infrastructure report card, emerging inter-dependencies for telecoms, power, and water, and cyber security challenges faced by industry and government.

### **Body of Knowledge on Infrastructure Regulation (BoKIR) Web site**

PURC continues to update this valuable online resource to include more recent information in its sections. Currently, the web site provides tutorials, literature surveys, self-paced tests, and more than 500 downloadable references on utility regulation, as well as a regulatory glossary translated into several different languages. As of 2018, the glossary of terms is available in 11 languages including Bulgarian and Arabic.

## TRAINING AND DEVELOPMENT

### **43<sup>rd</sup> and 44<sup>th</sup> PURC/World Bank International Training Programs on Utility Regulation and Strategy**

One hundred and forty-two infrastructure managers learned from each other and from leading experts during the January and June deliveries of this biannual, two-week program in Gainesville. The program is designed to enhance the economic, technical, and policy skills required to design and manage sustainable regulatory systems for infrastructure sectors. The participants studied ongoing infrastructure reform programs, networked with international speakers, and offered their own insights into regulatory policies.

### **2018 PURC Advanced International Practices Program**

PURC delivered three courses under its Advanced International Practices Program: Energy Pricing, Benchmarking Infrastructure Operations, and Public-Private Partnerships (P3) Certification. In attendance were 21 participants from 10 nations. Participants of the energy course performed price reviews and analyzed financial statements for rate setting. Benchmarking participants assessed how information on trends in key performance indicators helps decision-makers. PPP participants completed the Foundation level of the Certified PPP Professional program, promoted by the World Bank and other multilateral development banks. Dr. Jamison, Dr. Berg, Dr. Kury, and Ms. Castaneda designed and delivered the courses during the 10-day program.

### **Practicing Leadership in a Political Environment: A One-Day Intensive Training Workshop for Emerging Leaders in Utility Policy**

In January and June, Dr. Jamison and Ms. Castaneda delivered leadership workshops for regulatory professionals, who examined the activities, behaviors, mindsets, and skills of a successful leader during this training workshop designed by PURC for emerging leaders in utility policy.

### **Comprehensive Regulation Impact Analysis**

PURC's online course provides tools and approaches for regulatory impact analysis (RIA), a systematic appraisal of the potential impacts of a regulatory decision to assess whether the decision is likely to achieve the desired objectives and at what cost. Through case studies, exercises, and lectures, course participants learn how to identify key questions, identify stakeholders and engage them in the analysis, use appropriate analytical techniques, and communicate their findings. In the spring of 2018, this online course was led by PURC director of energy studies, Ted Kury, and PURC director of water studies, Sanford Berg.

## **Fundamentals of Telecommunications Regulation**

PURC provided with National Broadcasting and Telecommunications Commission of Thailand with a 4-day course on the basics of telecommunications regulation. The course examined technologies and technology trends, goals and purposes of regulation, net neutrality, over the top services, evolving business models, interconnection arrangements, the internet of things, and radio spectrum management.

## **Training on Utility Regulation for EWURA Staff**

What are the regulatory challenges faced by multi-sector regulators? How do pricing challenges differ when regulators oversee different sectors? These were just a few of the questions addressed when PURC delivered a two week training program for the staff of EWURA in Dar es Salaam, Tanzania. Throughout the first week of the course, PURC Director of Energy Studies Ted Kury and PURC Director Mark Jamison worked with the staff of EWURA on utility and industry structure, regulatory models, and incentives and strategies for improving utility performance. During the second week, Kury and PURC Senior Fellow Raj Barua detailed each step of the utility pricing process for both the energy and water sectors and participants implemented this process with PURC's hands-on computer models.

## **Public-Private Partnerships (P3) Certification Training Program**

As the first academic institution in the US to become an Accredited Training Organization (ATO) of the APMG's PPP Certification Program, PURC offered its inaugural P3 Foundation level training program in April 2018. The Foundation level is the first level of the Certified PPP Professional (CP3P) program, promoted by the World Bank and other multilateral development banks, and managed by APMG International. The Foundation level aims to standardize knowledge of the PPP process and terminology. We are happy to note that all 6 of our participants obtained passing scores for APMG's Foundation Level credential!

## **Regulatory Training Course for OfReg**

What are the key strategies for regulatory leaders? This was the question addressed in a PURC course for the Cayman Islands Office of Regulation, OfReg. On the first day of the two-day course, the regulatory board studied the fundamentals of regulatory systems, governance models and relationships in regulatory systems, the importance of agency rules and systems, and how to assess health of the regulatory system. The board was joined by senior staff for the second day and studied utility finance, regulatory impact analysis, ratemaking, renewable energy, and adapting to changing technologies and economic situations. The second day included a case analysis of how the agency could assess the potential impact expanding renewable energy. The course was taught by PURC director, Mark Jamison, and PURC senior fellow, Raj Barua. It was held on Grand Cayman in April 2018.

## **Follow-up Part II Regulatory Training Course for the Members of the Office and Senior Managers at the OUR**

How can a regulatory board prepare itself for effectiveness? This was the question addressed in a PURC leadership course provided for the Jamaican Office of Utilities Regulation. The board members studied analyzing their political context, defining their roles relative to their relationships with the agency staff and with outside stakeholders, leadership frameworks and styles, and thinking strategically about regulatory challenges. PURC's director of leadership studies, Araceli Castaneda, led the program. PURC director Mark Jamison assisted. The two-day course was held in March 2018 in Kingston, Jamaica.

### **Your First 90 Days in Regulation**

PURC offers an online course for new commissioners on their leadership and strategic challenges in regulation. The course examines the roles of regulators, political context, identifying situations and imperatives, public narrative, and understanding utility finance.

## FACULTY RESEARCH FOCUS



**Mark A. Jamison, Director**

Dr. Jamison conducts studies on leadership in regulation, regulation and strategy in telecommunications, and regulatory institutions. In recent years, his research has been presented at meetings of the American Economic Association, Industrial Organization Society, Western Economic Association, Australian Competition and Consumer Commission, Telecommunications Policy Research Conference, the Caribbean Electric Utility Services Corporation, the Organisation of Caribbean Utility Regulators, and the National Association of Regulatory Utility Commissioners. He was the principal investigator on a National Science Foundation grant to examine barriers to adoption of solar technologies in developing countries. His current research examines market competition, adaptive regulation, and institutional change. He has conducted training programs for regulatory organizations in Africa, Asia, Australia, the Caribbean, Central America, Europe, North America, and South America.



**Ted Kury, Director of Energy Studies**

Dr. Ted Kury's research has focused on three current issues confronting energy markets: the efficacy of relocating power lines, the complexity in determining optimal levels of carbon dioxide abatement, and the effects of restructured electricity markets. The relocation of power lines is a complicated question because relocation is very expensive and does not necessarily reduce the damage associated with storm events. In areas more susceptible to storm surge and flooding, the relocation may even increase damages, leading to a waste of valuable consumer and utility resources. Understanding how the efficacy of undergrounding changes with location is critical to ensuring that customers are receiving safe, reliable electricity service at just and reasonable rates. In addition to his academic work, Dr. Kury has published a number of essays in the popular press on the topic. His work on carbon abatement includes insight into the marginal cost curves for abatement. Theoretically, we can equate the marginal cost with the marginal benefits of abatement to determine optimal levels of emissions. Economic theory provides clear guidelines on what constitutes optimal levels of production for any good – the point at which the marginal cost is equal to the marginal benefit. However, in practice, these curves are not always well-behaved, and this can lead to different characterizations of the optimum. So while an understanding of these costs and benefits is necessary to determine optimal levels, it is not sufficient, and public policy should take this into account. In addition, the sensitivity of these marginal abatement curves to the price of natural gas means that consumers suffer twice as natural gas prices increase. This question is critical as states decide how to comply with the EPA's Clean Power Plant Rule. Restructured electricity markets have led to more opportunities, but it is not clear how these opportunities are distributed. Dr. Kury's research has shown that the benefits of increased trade in transparent wholesale markets are not uniformly distributed, with larger and privately-owned utilities more apt to participate. He is also studying whether growth in distributed generation resources have an effect on consumption for consumers, impacting system planning and reliability. Finally, in 2018 he led the PURC team that performed a study for the Jessie Ball duPont Fund on the Value of Municipal Utilities, utilizing JEA in Jacksonville as a case study.



**Araceli Castaneda, Director of Leadership Studies**

Ms. Araceli Castaneda's leadership work in 2018 has mostly focused on the topic of change and the difficulties of its implementation. The same values that have made individuals and organizations effective over time may be holding them back from moving into a successful future. Surfacing those values and exploring the loss to be experienced will be key to accept and implement change. In 2018, she presented at the Organisation of Caribbean Utility Regulators, the Utility Analytics Institute, the Advanced Leadership for Academics and Professionals Program at the University of Florida, and the Jamaican Office of Utilities Regulation.



**Sanford V. Berg, Senior Fellow**

Dr. Sanford (Sandy) Berg, PURC Senior Fellow, continues to examine internal and external governance mechanisms in the context of infrastructure reform. As part of a World Bank project, he developed a two-day training course (with PowerPoints) on regulation when there are significant institutional and informational constraints. In Manila this December, he served as a Facilitator and Session Leader at the Advancing City Wide Inclusive Sanitation Workshop sponsored by the Bill and Melinda Gates Foundation. PURC is exploring a possible project with the Gates Foundation. In addition, Berg continues to assist in the delivery of PURC eLearning and training programs for international participants.



**David Sappington, Lanzillotti-McKethan Eminent Scholar**

Professor Sappington's ongoing research focuses on the design of regulatory policies to: (i) limit peak electricity consumption by providing incentives for demand response; and (ii) promote efficient distributed generation of electricity via net metering and related policies.

## APPENDIX

### Public Utility Research Center

#### Recent Publications and Working Papers

**Alvarado de Córdoba, Sylvia, and Juan A.B. Belt.** 2018. "Central American Power Markets: Lessons Learned and Policy Recommendations with Particular Emphasis on Competitive Procurement" University of Florida, Warrington College of Business, PURC Working Paper.

**Baye, Michael R., and David E. M. Sappington.** 2018. "Revealing Transactions Data to Third Parties: Implications of Privacy Regimes for Welfare in Online Markets." University of Florida, Department of Economics, PURC Working Paper.

**Belt, Juan, and Nicolas Allien, Jay Mackinnon, and Bahman Kashi.** 2017. "Cost Benefit Analysis of Power Sector Reform in Haiti" University of Florida, Warrington College of Business, PURC Working Paper.

**Berg, Sanford V.** 2016. "Seven Elements Affecting Governance and Performance in the Water Sector" *Utilities Policy*, 43(A): 4-13.

**Berg, Sanford V.** 2017. "Three Lessons for Improving Infrastructure Performance" University of Florida, Warrington College of Business, PURC Working Paper.

**Berg, Sanford V., and Michelle Phillips.** 2016. "Data Availability as a Key Tool for Regulating Government-Owned Water Utilities" *Utilities Policy*, forthcoming.

**Berg, Sanford V., and Michelle Phillips.** 2018. "Networks in Infrastructure with Applications to Latin America and the Caribbean" *Competition and Regulation in Network Industries Journal*, forthcoming.

**Berg, Sanford V., and Robert N. Gakubia.** 2016. "Performance Based Contracts (PBC) and Regulatory issues" University of Florida, Warrington College of Business, PURC Working Paper.

**Bet, Germán, Roger D. Blair, and David E. M. Sappington.** 2018. "The Impact of Vertical Integration on Losses from Collusion." University of Florida, Department of Economics, PURC Working Paper.



**Boampong, Richard.** 2016. "Residential Energy Consumers Response to Energy Efficiency Rebates, Incentives, and Prices" University of Florida, Warrington College of Business, PURC Working Paper.

**Boampong, Richard, and Michelle Phillips.** 2016. "Renewable energy incentives in Kenya: Feed-in-tariffs and Rural Expansion" University of Florida, Warrington College of Business, PURC Working Paper.

**Boampong, Richard, Colin A. Knapp, and Michelle Phillips.** 2016. "The Effect of Renewable Portfolio Standards on State-Level Employment: An Ex Post Analysis" University of Florida, Warrington College of Business, PURC Working Paper.

**Bose, Arup, Debashis Pal, and David E. M. Sappington.** 2016. "Pricing to Preclude Sabotage in Regulated Industries" University of Florida, Department of Economics, PURC Working Paper.

**Brown, David P., and David E. M. Sappington.** 2016. "Designing Compensation for Distributed Solar Generation: Is Net Metering Ever Optimal?" University of Florida, Warrington College of Business, PURC Working Paper.

**Brown, David P., and David E. M. Sappington.** 2016. "On the optimal design of demand response policies" *Journal of Regulatory Economics*, 49(3):265-291.

**Brown, David P., and David E. M. Sappington.** 2016. "On the Role of Maximum Demand Charges in the Presence of Distributed Generation Resources" University of Florida, Department of Economics, PURC Working Paper.

**Brown, David P., and David E. M. Sappington.** 2018. "Employing Simple Cost-Sharing Policies to Motivate the Efficient Implementation of Distributed Energy Resources." University of Florida, Department of Economics, PURC Working Paper.

**Brown, David P., and David E. M. Sappington.** 2018. "Optimal Procurement of Distributed Energy Resources," *The Energy Journal*, Vol. 39(5), September 2018, pp. 131-155.

**Brown, David P., and David E. M. Sappington.** 2018. "Optimal Policies to Promote Efficient Distributed Generation of Electricity," *The Journal of Regulatory Economics*, forthcoming.

**Brown, David P., and David E. M. Sappington.** 2018. "Self-Sabotage in the Procurement of Distributed Energy Resources," University of Florida, Department of Economics, PURC Working Paper.

**Castaneda, Araceli, and Mark A. Jamison.** 2017. "Stakeholders and Power Relations in Regulation" University of Florida, Warrington College of Business, PURC Working Paper.

**Castaneda, Araceli, Mark A. Jamison, and Michelle Phillips.** 2015. "The Essential DNA of Electricity Regulation" University of Florida, Warrington College of Business, PURC Working Paper.

**Fikru, Mahelet, and Michelle Phillips.** 2016. "Consolidation of Municipality-owned Water Suppliers in Japan" Water Science and Technology, 695-702.

**Hauge, Janice A., and Mark A. Jamison.** 2016. "Identifying Market Power in Times of Constant Change" University of Florida, Warrington College of Business, PURC Working Paper.

**Hauge, Janice A., Mark A. Jamison, and Laura Jamison.** 2018. "X-efficiency vs Adaptive Efficiency: An Analysis of Firm Survival" University of Florida, Warrington College of Business, PURC Working Paper.

**Hauge, Janice A., Mark A. Jamison, James E. Prieger, Michelle P. Connolly, and Gerald Faulhaber.** 2017. "Economic Scholars' Summary of Economic Literature Regarding Title II Regulation of the Internet" University of Florida, Warrington College of Business, PURC Working Paper.

**Holt, Lynne.** 2015. "Political Implications of the Clean Power Plan for the 2016 Presidential Election." University of Florida, Warrington College of Business, PURC Working Paper.

**Holt, Lynne.** 2016. "U.S. Electric Utility Creditworthiness--Why the Regulatory Framework Matters" University of Florida, Warrington College of Business, PURC Working Paper.

**Holt, Lynne, and Mary Galligan.** 2015. "Florida's Proposed Constitutional Amendment on Local Solar Electricity Supply" The Electricity Journal, 28(4):66-77.

**Holt, Lynne, and Mary Galligan.** 2017. "Utility-Led Community Solar – A “Win-Win” for Customers & Electric Utilities?" University of Florida, Warrington College of Business, PURC Working Paper.

**Holt, Lynne, and Mary Galligan.** 2017. "State Public Utility Commissions' Role in Cybersecurity and Physical Security Issues: Trade-Offs and Challenges" University of Florida, Warrington College of Business, PURC Working Paper.

**Jamison, Mark A.** 2015. "The Economic and Political Realities of Regulation: Lessons for the Future." *Energy Regulation Quarterly*, 3:17-20.

**Jamison, Mark A.** 2016. "Co-evolution of Business, Government, Technology, and Economics: Lessons from U.S. Telecommunications" University of Florida, Warrington College of Business, PURC Working Paper.

**Jamison, Mark A.** 2016. "Emerging Institutional Weaknesses in US Regulation?" University of Florida, Warrington College of Business, PURC Working Paper.

**Jamison, Mark A.** 2016. "Three Things Economists Wish the FCC Knew about Broadband Markets" Georgetown University, Center for Business & Public Policy, PURC Working Paper.

**Jamison, Mark A.** 2018. "Politics and Business in Social Media Regulatory Responses to the Cambridge Analytica Revelations" University of Florida, Warrington College of Business, PURC Working Paper.

**Jamison, Mark A.** 2018. "Responses for the Record from Dr. Mark Jamison, Responding to Questions from Sen. Charles E. Grassley (R-IA) US Senate Committee on the Judiciary "Cambridge Analytica and the Future of Data Privacy"" University of Florida, Warrington College of Business, PURC Working Paper.

**Jamison, Mark A.** 2018. "Comments of Mark Jamison to the Federal Trade Commission on Competition and Consumer Protection in the 21<sup>st</sup> Century" University of Florida, Warrington College of Business, PURC Working Paper.

**Jamison, Mark A.** 2018. "Net Neutrality Policies and Regulation in the United States" University of Florida, Warrington College of Business, PURC Working Paper.

**Jamison, Mark A.** 2018. "Comments Filed with the FTC: Competition and Consumer Protection Issues in Communication, Information and Media Technology Networks" University of Florida, Warrington College of Business, PURC Working Paper.

**Jamison, Mark A., and Araceli Castaneda.** 2017. "Stakeholders and Power Relations in Regulation" University of Florida, Warrington College of Business, PURC Working Paper.

**Jamison, Mark A., and Janice A. Hauge.** 2016. "Adding Dimension to Merger Analysis" Journal for Competition Law and Economics.

**Jamison, Mark A., and Roslyn Layton.** 2016. "Beyond Net Neutrality: Policies for Leadership in the Information, Computing, and Network Industries" University of Florida, Warrington College of Business, PURC Working Paper.

**Jamison, Mark A., and Palveshey Tariq.** 2018. "Five Things Regulators Should Know About Blockchain (and Three Myths to Forget)," Electricity Journal.

**Kury, Theodore, Cindy Miller, David Richardson, and Mark A. Jamison.** 2018. "Valuing Municipal Utilities – The Case of the Potential Sale of JEA in Jacksonville" University of Florida, Warrington College of Business, PURC Working Paper.

**Mandy, David M., John W. Mayo, and David E. M. Sappington.** 2016. "Targeting Efforts to Raise Rivals' Costs: Moving from 'Whether' to 'Whom'" International Journal of Industrial Organization, 46:1-15.

**Mayo, John W., and David E. M. Sappington.** 2016. "Regulation in a 'Deregulated' Industry: Railroads in the Post-Staggers Era" Review of Industrial Organization, 49(2):203-227.

**Mayo, John W., and David E. M. Sappington.** 2016. "When Do Auctions Ensure the Welfare-Maximizing Allocation of Scarce Inputs?" RAND Journal of Economics, 47(1):186-206.

**McNealy, Jasmine.** 2018. "Twitter Reactions to Hurricane Irma: Mining Social Media for Inferences" University of Florida, Warrington College of Business, PURC Working Paper.

**Mugisha, Silver, and Sanford V. Berg.** 2016. "Adaptive Leadership in Water Utility Operations: The Case of Uganda" Sustainable Water Resources Management.

**Sappington, David E. M., and Dennis L. Weisman.** 2016. "The disparate adoption of price cap regulation in the U.S. telecommunications and electricity sectors" Journal of Regulatory Economics, 49(2):250-264.

**Sappington, David E. M., and Dennis L. Weisman.** 2016. "The price cap regulation paradox in the electricity sector" *The Electricity Journal*, 29(3):1-5.

**Sappington, David E. M., K. Viscusi and J. Harrington.** 2018. *Economics of Regulation and Antitrust*, Fifth Edition, Cambridge, MA: The MIT Press, forthcoming.

## II. Outside Persons Who Wish to Address the Commission at Internal Affairs

Note: The records reflect that no outside persons addressed the Commission at this Internal Affairs meeting.

# III. Supplemental Materials for Internal Affairs

Note: The records reflect that there were no supplemental materials provided to the Commission during this Internal Affairs meeting.

# IV. Transcript



BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION

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PROCEEDINGS: INTERNAL AFFAIRS

COMMISSIONERS  
PARTICIPATING: CHAIRMAN ART GRAHAM  
COMMISSIONER JULIE I. BROWN  
COMMISSIONER DONALD J. POLMANN  
COMMISSIONER GARY F. CLARK  
COMMISSIONER ANDREW GILES FAY

DATE: Tuesday, February 19, 2019

TIME: Commenced: 9:30 a.m.  
Concluded: 10:07 a.m.

PLACE: Gerald L. Gunter Building  
Room 105  
2540 Shumard Oak Boulevard  
Tallahassee, Florida

REPORTED BY: ANDREA KOMARIDIS  
Court Reporter and  
Notary Public in and for  
the State of Florida at Large

PREMIER REPORTING  
114 W. 5TH AVENUE  
TALLAHASSEE, FLORIDA  
(850) 894-0828

1 P R O C E E D I N G S

2 CHAIRMAN GRAHAM: Good morning, everyone.

3 THE AUDIENCE: Good morning.

4 CHAIRMAN GRAHAM: Let the record show it is  
5 Tuesday, February the 19th, and this is the  
6 internal affairs meeting. So, we will call this  
7 meeting to order. I'm glad to see you all here  
8 with your smiling faces.

9 First item on our agenda is -- ah,  
10 Dr. Jamison, come on down.

11 DR. JAMISON: Thank you. Good morning.

12 CHAIRMAN GRAHAM: Welcome. How has life been  
13 treating you this year?

14 DR. JAMISON: Life has been good. It's  
15 keeping us busy, keeping us challenged, and if  
16 you're in academia, that's what you want. So,  
17 that's -- that's why we exist.

18 So, let me just -- you've all seen the report.  
19 And I hope you've had some time to take a look at  
20 it. I will just kind of hit some highlights. Let  
21 me start by first thanking you for your support.

22 Our relationship with the PSC goes way back,  
23 almost to the founding of PURC in the early 1970s.  
24 And it's always been an important relationship for  
25 us because our mission is to help you and your

1 colleagues and your counterparts be really  
2 successful in the work that you do. So, we  
3 appreciate the relationship and the being able to  
4 listen and understand the -- the concerns that you  
5 have, the interests that you have.

6 I'll just hit a few highlights and, at any  
7 point, please feel free to interrupt, or ask  
8 questions at the end. Either one works fine for  
9 me.

10 Just simply by the numbers of things that  
11 we've done over the past -- past year, we've done  
12 33 different blog posts. That's primarily Ted  
13 Curry, our director of Energy Studies, and me. Ted  
14 writes in a place called The Conversation, which is  
15 a place for academics to put information out so  
16 that journalists can use them. He does very, very  
17 well there. They seek him out quite a bit.

18 He's had over 102- -- about 102,000 reads of  
19 his blog posts on things from hurricane hardening,  
20 energy taxation, some other issues as well. And  
21 those do -- do quite well.

22 I write for the American Enterprise Institute,  
23 a think tank in D.C. And so, mine focus primarily  
24 on innovation and technology issues.

25 We've had a number of working papers with --

1           on a nu- -- on a -- quite a diversity of topics.  
2           The primary ones would be on, like, distributed  
3           energy resources, technology change, and such as  
4           that.

5                     We've had some op-eds printed. Once came from  
6           our annual conference last year where we focused on  
7           infrastructure investment. And myself and one of  
8           the speakers, Jeff Lawrence -- if you were there,  
9           you might remember him. He was one of our -- our  
10          leading speakers -- wrote on the difficulties of  
11          why it is -- I guess, it should say -- why it is,  
12          politically, we can't get infrastructure  
13          investments made. And so, that's what that  
14          editorial was about.

15                    And we had a book come out this year. One of  
16          the leading academic textbooks on regulation,  
17          antitrust. One of our faculty is now co-author of  
18          that. And the new edition just came out in 20- --  
19          2018.

20                    Probably our largest report of the year was on  
21          JEA, the Jacksonville electric and water utility.  
22          The city council had pondered for a bit potential  
23          sale of that to a private entity. And we were  
24          asked by the DuPont Foundation to analyze what that  
25          might look like -- not to give an answer, thumbs up

1 or thumbs down, on whether or not it's a good idea,  
2 but just to kind of lay out the facts as best we  
3 could see them.

4 So, we focused on kind of making sure that  
5 everyone understood what they would be getting  
6 into; the complexity of those kinds of sales, the  
7 different types of relationships that would need to  
8 be unwound to be able to do that, and thinking  
9 about what are the different ways of -- of the  
10 valuation of the assets, trying to always keep in  
11 mind that whether or not that's a good idea for the  
12 citizens of Jacksonville or for the City of  
13 Jacksonville depends very much on two important  
14 things: one is, what is somebody willing to pay for  
15 it; and secondly, how would the Florida Public  
16 Service Commission treat it because there would be  
17 a lot of decisions that would come your way. And  
18 so, that's -- those are things that are highlighted  
19 in that particular report.

20 We had our annual conference last year. Some  
21 of you were able to attend that. It's focused  
22 on -- on security issues for infrastructure.  
23 Financial security is getting the infrastructure  
24 investments made. We had a report from the  
25 American Society of Civil Engineers, grading our

1 infrastructure, and then also dealing with the --  
2 the leadership and the political challenges.

3 And also, then, the cybersecurity -- we ran a  
4 simulation with the audience on a cyber attack on  
5 infrastructure. The audience had to make decisions  
6 about what they would do at different stages of the  
7 attack.

8 This year, we're going to be focusing on  
9 technology change and how it is or is not changing  
10 the utility industries. We'll be looking at things  
11 like block change, artificial intelligence, and the  
12 like.

13 And we're not running a simulation this time,  
14 but the -- the audience will have to take quizzes  
15 throughout on how the disruptions are working or  
16 not working and what the consequences might be.  
17 So, I think we have a -- a good -- good agenda for  
18 that. And we'll be anchored part way through by  
19 Commissioner Clark. And we're glad that he's  
20 willing to be able to do that.

21 You also notice in the report we have a number  
22 of courses that we offer. One on regulatory impact  
23 analysis is available for the staff, if they're  
24 interested in that. It's an online course; seems  
25 to be fairly popular around the world, that

1 particular method of analysis.

2 We have our two-week course we do twice a year  
3 on utility regulation, and people from the staff  
4 have -- have sat in on some of the sessions for  
5 that.

6 There are leadership workshops as well.  
7 Something we discovered a long time ago when we  
8 started doing education programs and regulation is  
9 that it's actually not that hard to get the  
10 economics and get the finance and get the  
11 accounting and get the legal aspects of regulation  
12 done correctly; the hardest thing is getting the  
13 people right and -- just because of the -- the type  
14 of environment that you are in and that your --  
15 your staff is in.

16 And so, we started offering, a number of years  
17 ago, courses on that. And they're -- they're  
18 really successful in helping people understand the  
19 unique aspects of trying to provide leadership  
20 where you're -- you're trying to provide  
21 continuity, you're trying to provide some  
22 stability, let -- yet, allow change to happen; all  
23 of that in a -- a political context that pays a lot  
24 of attention to everything that you do.

25 So, that's kind of the -- the summary of what

1 we've been up to and where we've been. Be glad to  
2 answer any questions, and then certainly would love  
3 to hear what's on your minds so we can be sure to  
4 start addressing the issues that are we are not.

5 CHAIRMAN GRAHAM: I have a couple of things.  
6 JEA report -- how do I go about getting a copy of  
7 that?

8 DR. JAMISON: It's on our website, but we'll  
9 e-mail you a copy.

10 CHAIRMAN GRAHAM: Okay. Net metering?

11 DR. JAMISON: The paper on it?

12 CHAIRMAN GRAHAM: Yes.

13 DR. JAMISON: Yes, we can send that to you as  
14 well.

15 CHAIRMAN GRAHAM: And the 90-days-to-new-  
16 Commissioner course -- how would -- how -- how do  
17 you guys reach out to get people into that,  
18 enrolled into that? I saw it's an online course.

19 DR. JAMISON: Yes. That was never very  
20 successful. We had had an understanding with --  
21 with NARUC that when new Commissioners started up  
22 and -- started, that we would be notified. We  
23 would offer them to allow in the course.

24 The kind of handoff of that never happened.

25 And so, we had a few people go through it, but not



1 very many. So, we're actually going to be taking  
2 that course down and trying to repackage it as  
3 something that can be marketed more effectively  
4 because the marketing just didn't work for it.

5 CHAIRMAN GRAHAM: Yeah. So, NARUC just  
6 didn't -- just didn't engage?

7 DR. JAMISON: They had their own -- own things  
8 they were -- were focusing on at that time. And I  
9 think it just fell through the cracks.

10 CHAIRMAN GRAHAM: Okay. Commissioners? Any  
11 questions? Concerns? Comments?

12 COMMISSIONER FAY: Do you guys -- so, when I  
13 was looking at the structure of what you do and --  
14 and the university's involvement, business school,  
15 do you work -- I know there's kind of these  
16 national and -- and separate state issues. Do you  
17 work with other state universities at all or do you  
18 pair with different groups to do your research?

19 DR. JAMISON: Yes, on -- and it's on an ad hoc  
20 basis. We don't have a systematic relationship  
21 with the other universities, but we'll collaborate  
22 with -- with universities all over the world for  
23 different kinds of work, all the way from Asia,  
24 Canada, around the U.S. as well.

25 COMMISSIONER FAY: And you do do a lot of work

1 for international work?

2 DR. JAMISON: Yes, we do. Probably about  
3 90 percent of our work is international.

4 COMMISSIONER FAY: Okay. And part of that is  
5 through NARUC.

6 DR. JAMISON: No, we don't engage with NARUC  
7 on any of the international work.

8 COMMISSIONER FAY: It's your own engagement --

9 DR. JAMISON: Yeah.

10 COMMISSIONER FAY: -- through the  
11 organizations. Okay.

12 DR. JAMISON: Yeah.

13 COMMISSIONER FAY: Okay.

14 DR. JAMISON: Yeah. So, we -- we do our  
15 international courses two ways: One is, we have  
16 what we call open enrollment courses. They are  
17 offered every year and people sign up for those.  
18 And 99 percent of the people who attend those are  
19 from outside of the U.S.

20 And then, a lot of times, countries invite us  
21 to go and do courses there. So, so far, this year,  
22 we are doing courses in -- in the Bahamas, Uganda,  
23 Thailand -- I've forgotten another one. Yeah.

24 COMMISSIONER FAY: Yeah. I saw -- the  
25 locations is very interesting. And then, of

1 course, Commissioner Brown is working on the storm  
2 stuff for the Puerto Rico, about the island's  
3 impact --

4 DR. JAMISON: Oh, yeah. Yeah.

5 COMMISSIONER FAY: -- that they -- they're  
6 having.

7 DR. JAMISON: We -- we met in Puerto Rico.

8 COMMISSIONER BROWN: We did.

9 COMMISSIONER FAY: Yeah, it's a challenge.  
10 Okay. Well, that's -- that's all I had. I

11 was curious, has anyone ever asked you what your --  
12 what -- what the biggest perk of the job is?

13 DR. JAMISON: Biggest perk of the job -- I'm  
14 an economist. Puns are just lost on me.

15 But if you --

16 COMMISSIONER FAY: Fair enough.

17 COMMISSIONER BROWN: Thanks.

18 (Laughter.)

19 (Simultaneous speakers.)

20 DR. JAMISON: -- calculus problem, I could  
21 probably do it.

22 COMMISSIONER FAY: Thanks.

23 CHAIRMAN GRAHAM: Commissioner Brown.

24 COMMISSIONER BROWN: Thank you. Just a  
25 follow-up to Commissioner Fay. And you have been

1 very busy over the past few years.

2 DR. JAMISON: Yeah.

3 COMMISSIONER BROWN: Definitely engaged on a  
4 multitude of issues nationally. So, I just wanted  
5 to highlight some of those. Last year, you came  
6 and you were involved with the president's FCC  
7 telecom committee.

8 DR. JAMISON: Yeah, the transition team for --

9 COMMISSIONER BROWN: Transition team.

10 DR. JAMISON: -- FCC, yes.

11 COMMISSIONER BROWN: Could -- could you talk  
12 about what came out of that transition team?

13 DR. JAMISON: Vaguely. I signed a non-  
14 disclosure agreement.

15 COMMISSIONER BROWN: Okay.

16 DR. JAMISON: So, under penalty of whatever  
17 might happen next -- yeah.

18 COMMISSIONER BROWN: Well, then we'll just  
19 move on to Puerto Rico.

20 (Laughter.)

21 DR. JAMISON: No, it -- it was a -- it was a  
22 great experience to do, to kind of be in up to  
23 my -- my neck in the politics of regulation and how  
24 that whole transition would work. Our job was  
25 actually fairly easy because there were two really

1 solid Commissioners ready that had prepared  
2 themselves to be ready to run the FCC. O'Riley  
3 and -- and Ajit Pai --

4 COMMISSIONER BROWN: Right.

5 DR. JAMISON: -- were both ready to go. And  
6 their Democrat counterparts, Clyburn and -- I can't  
7 remember -- Jessica -- both very solid as well.  
8 So, I -- our job wasn't that hard.

9 COMMISSIONER BROWN: That's good to hear.  
10 Thank you.

11 Well, I do want to talk about Puerto Rico  
12 because I got to see you explain and -- and kind of  
13 teach, in a way, to a different group of  
14 stakeholders on the task force.

15 And just, if you could, highlight your  
16 experience -- I had missed one of our meetings --  
17 but where we are. Help educate the Commissioners  
18 here.

19 DR. JAMISON: Yeah, Puerto Rico is a tough  
20 case and -- and it's because the electric system  
21 was in very bad shape. It was -- it was on its  
22 last legs before it was hit by two category five  
23 hurricanes. It -- it was -- it was going to fall  
24 apart anyway. And this -- this just destroyed it  
25 and made it very, very hard to recover.

1           So, what we've tried to emphasize from -- from  
2           how we understand things is to help the political  
3           apparatus in Puerto Rico appreciate the -- the  
4           importance of an independent regulatory agency.

5           The -- the metaphor I use wherever I go in the  
6           world is that politics wants to keep its nose in  
7           utilities' business because you want to fully  
8           understand it; you're writing policy for it, but  
9           you have to get your fingers out.

10           And the best way to keep your fingers out is  
11           to have a very strong, independent regulatory  
12           agency. That is something that Puerto Rico has  
13           lacked and that's -- as you can tell from --

14           COMMISSIONER BROWN: Yeah.

15           DR. JAMISON: -- from the work there -- the  
16           politics is deeply involved in the operations of  
17           the utilities, and that does not go well.

18           So, we've tried to convey that message as best  
19           we can. The -- the blue-ribbon task force really  
20           picked up that theme. Whether it will be  
21           successful or not is another matter. We'll see how  
22           it goes.

23           COMMISSIONER BROWN: And the current, now,  
24           regulatory paradigm they've put in place from the  
25           bill that was passed is -- kind of follows that

1 independent regulatory idea that we've pushed for.

2 DR. JAMISON: Yes. Yes. And -- and  
3 there's -- what I think will be hard -- and this is  
4 hard for any country -- Puerto Rico is not a  
5 country -- any place I go -- so, I'll say it that  
6 way -- is that, once you get the laws written  
7 correctly, then you have to get the people lined up  
8 to do it that way. And a lot of countries falter,  
9 a lot of jurisdictions falter in that. And that --  
10 that's -- that will be the biggest challenge. You  
11 have to change peoples' habits.

12 COMMISSIONER BROWN: So, I think what -- from  
13 what I understand it is right now, that they're  
14 looking to solicit potential buyers of the  
15 generation.

16 DR. JAMISON: Uh-huh.

17 COMMISSIONER BROWN: And there's been RP or  
18 something -- RQ or -- or something to solicit the  
19 bids.

20 DR. JAMISON: I think that is right. I've not  
21 followed the details, now for a while, but I think  
22 that is correct.

23 COMMISSIONER BROWN: All right. Thank you so  
24 much for being here.

25 DR. JAMISON: Oh, my pleasure. Thank you.

1 CHAIRMAN GRAHAM: Commissioner Polmann.

2 COMMISSIONER POLMANN: Thank you.

3 A couple of these items I -- I found of  
4 interest.

5 DR. JAMISON: Just two?

6 COMMISSIONER POLMANN: Well, actually, no. A  
7 couple is kind of -- it's just a word, so -- I  
8 mean, all of them are interesting. So, I don't --  
9 I don't --

10 DR. JAMISON: Thank you.

11 COMMISSIONER POLMANN: I'll be talking to you  
12 tomorrow more.

13 DR. JAMISON: All right.

14 COMMISSIONER POLMANN: The issue of  
15 compensation on the distributed solar generation  
16 and net metering, given that you're an economist --

17 DR. JAMISON: Uh-huh.

18 COMMISSIONER POLMANN: -- I -- I take the  
19 words in here like "optimal" and "efficient" and  
20 "externalities" to be really economic terms.

21 DR. JAMISON: Yes, those -- those are highly-  
22 technical pages.

23 COMMISSIONER POLMANN: Yeah.

24 DR. JAMISON: The math is intense.

25 COMMISSIONER POLMANN: And that's the way I



1 read it. And it's not something that --  
2 particularly "externalities" --

3 DR. JAMISON: Uh-huh.

4 COMMISSIONER POLMANN: -- looking in the  
5 regulatory context --

6 DR. JAMISON: Yeah.

7 COMMISSIONER POLMANN: -- and -- and utilities  
8 coming in, and it's one of the things that a lot of  
9 the interest groups come in and say, well,  
10 you're -- you're not accounting for that.

11 DR. JAMISON: Sure.

12 COMMISSIONER POLMANN: You're not -- you're  
13 not really dealing with that.

14 DR. JAMISON: Uh-huh.

15 COMMISSIONER POLMANN: Utilities don't --  
16 don't really want to deal with that. The customers  
17 aren't -- aren't carrying the full cost and so  
18 forth.

19 Is that the type of thing, when -- when you're  
20 talking about optimal, you know, the compensation  
21 really is not optimal and it's not really dealing  
22 with efficiency -- is that what this study is about  
23 and --

24 DR. JAMISON: Well -- yeah.

25 COMMISSIONER POLMANN: -- and -- and is that

1 the kind of thing that you're trying to point to;  
2 that it's not full cost? I'm -- I just want to --  
3 can you elaborate a little bit --

4 DR. JAMISON: Sure.

5 COMMISSIONER POLMANN: -- on what that study  
6 was about?

7 DR. JAMISON: So, those -- there's -- there's  
8 a set of papers done by David Brown and David  
9 Sappington, who are both superb economists.  
10 They're quite good. And like I said, it's  
11 mathematically intense.

12 So, what they will look at is -- they won't  
13 argue that the regulator or the utility or someone  
14 doesn't care, doesn't interest them, or whatever;  
15 they will simply look at what are the economic  
16 incentives that are set up and how do people  
17 respond to those.

18 So, in those particular papers, they would be  
19 looking at, we have these type of pricing systems  
20 in place and here is the information that is in the  
21 price; here is the information that is not and,  
22 when there's information that's omitted from the  
23 pricing system, what kinds of suboptimal decisions  
24 get made.

25 So -- and from the -- the economic

1 perspective, if all the information is in the price  
2 that should be there, the people can react to it,  
3 then you've made the right decision. But it's  
4 really hard to get all that information packaged in  
5 the price.

6 COMMISSIONER POLMANN: Okay. Are there  
7 examples where -- where pricing in the utility  
8 market, from the economic sense, really is optimal?  
9 Or is that just not a reality?

10 DR. JAMISON: Real-time pricing has -- has  
11 been pretty successful in that regard. That's  
12 probably been one of the -- the best in terms of  
13 how these papers would look at -- at things.

14 What we've not yet incorporated sufficiently  
15 is the cost that consumers incur in order to be  
16 able to make these decisions because that takes  
17 time and attention. And that we've not yet  
18 factored in very well in our regulatory research.

19 COMMISSIONER POLMANN: And do you see that  
20 carrying over into -- into the net-metering  
21 concept?

22 DR. JAMISON: Yes.

23 COMMISSIONER POLMANN: And -- and that's --  
24 you know, what -- what -- what net metering brings  
25 up, in our mind is, you know, what -- what's the

1 price that the customer should be compensated back  
2 from the utility --

3 DR. JAMISON: Uh-huh.

4 COMMISSIONER POLMANN: -- that trade-off. Is  
5 that an example --

6 DR. JAMISON: Right.

7 COMMISSIONER POLMANN: -- where the optimal  
8 cost really should be more examined more -- more  
9 fully?

10 DR. JAMISON: Yes, and that's how -- how  
11 this -- this particular paper on net metering  
12 looked at it. It said, okay, here -- here is what  
13 net-metering policies are. Sometimes that number  
14 is correct; a lot of times it's not. And -- and  
15 so, they -- they just simply do the analysis: under  
16 these conditions, yes, you nailed it; under all  
17 these other conditions, you did not.

18 COMMISSIONER POLMANN: So, the challenge is  
19 what -- what's the optimal price versus what's the  
20 policy price --

21 DR. JAMISON: That's right.

22 COMMISSIONER POLMANN: -- kind of thing.  
23 Yeah.

24 DR. JAMISON: Yeah. Yeah. Because there's --  
25 economists don't have to be practical and that --

1 so, we --

2 COMMISSIONER POLMANN: Yeah.

3 DR. JAMISON: -- can do optimal things.

4 COMMISSIONER POLMANN: Yeah, a lot of theory.

5 (Laughter.)

6 DR. JAMISON: The rest of the world doesn't

7 get that.

8 COMMISSIONER POLMANN: Lot of theory under it,

9 but what --

10 DR. JAMISON: Yeah.

11 COMMISSIONER POLMANN: -- what's the actual

12 practice.

13 DR. JAMISON: Yes.

14 COMMISSIONER POLMANN: Yeah. Okay.

15 The -- the new -- this is kind of a new term,

16 I've never seen before: The market power, the

17 essential factors leading to monopoly. What --

18 DR. JAMISON: Yes.

19 COMMISSIONER POLMANN: What was that all

20 about? I mean, I --

21 DR. JAMISON: Okay. So --

22 COMMISSIONER POLMANN: And can you just give

23 us a highlight of -- of that concept, market power,

24 and essential factors of monopoly.

25 DR. JAMISON: Yeah. It's one of those things

1           that we're starting to struggle with -- "we" being,  
2           broadly, those of us who think about regulation,  
3           antitrust -- that -- how fast the world is -- is  
4           changing.

5           If you -- if you look at -- if you had two  
6           utilities wanting to merge, one of the things  
7           that --

8           COMMISSIONER POLMANN: We never see that.

9           DR. JAMISON: Yeah, never see that. Well, one  
10          of the things that the Department of Justice,  
11          Federal Trade Commission, whoever gets involved --  
12          particularly those two -- would look at and say, is  
13          there going to be market power. And to -- to  
14          address that issue, you have to define the term  
15          "market," you have to define the term "power."

16          We, for the past 30 years, have had a fairly  
17          standard way of doing that, but it depends upon a  
18          stable world. And that was okay for a long time.  
19          It's just not stable anymore.

20          And so, now, what I'm encouraging people to  
21          do, and some others as well, is drill back and say,  
22          instead of saying, ah, I have found this, say,  
23          okay, if it's -- if you don't have enough time to  
24          identify what the market power is, can you identify  
25          where it might come from and let's deal with where

1 things would come from as opposed to trying to  
2 discover things after they've happened.

3 So, that -- that's what that paper is about.  
4 And we'll have some other research in that space as  
5 well.

6 COMMISSIONER POLMANN: So, again, is that --  
7 is that more of a theoretical analysis that you --

8 DR. JAMISON: Yeah, we're trying to change how  
9 people think.

10 COMMISSIONER POLMANN: Okay.

11 DR. JAMISON: Yeah.

12 COMMISSIONER POLMANN: So, trying to change,  
13 but is that something that's actually being  
14 practiced in your -- in your --

15 DR. JAMISON: Oh, not yet, no.

16 COMMISSIONER POLMANN: -- analysis?

17 DR. JAMISON: No, this --

18 COMMISSIONER POLMANN: No? Okay.

19 DR. JAMISON: Yeah, you -- you find maybe two  
20 papers out there on this.

21 COMMISSIONER POLMANN: Okay.

22 DR. JAMISON: And that's about it so far.

23 COMMISSIONER POLMANN: Okay.

24 DR. JAMISON: It will take a -- a while.

25 COMMISSIONER POLMANN: Yeah, maybe a long

1 while.

2 DR. JAMISON: Yes. May- -- maybe long after  
3 I'm gone.

4 COMMISSIONER POLMANN: The -- the one that I  
5 think is -- has a real current need for application  
6 is the solar impacts.

7 DR. JAMISON: Uh-huh.

8 COMMISSIONER POLMANN: A lot of that is of  
9 great concern here in Florida and the customers  
10 that are employing this, looking forward, wanting  
11 to use it --

12 DR. JAMISON: Yes.

13 COMMISSIONER POLMANN: -- at home.

14 DR. JAMISON: Uh-huh.

15 COMMISSIONER POLMANN: And the interesting  
16 thing that you've identified here is that, when a  
17 customer installs that at home, their consumption  
18 actually goes up.

19 DR. JAMISON: Yes.

20 COMMISSIONER POLMANN: So, I'm curious,  
21 what -- in your study, what types of customers --  
22 is that -- was that a res- -- a residential --  
23 predominantly residential --

24 DR. JAMISON: Yes, it was.

25 COMMISSIONER POLMANN: -- application? So,



1 folks are investing in solar for their home and  
2 then they use more electricity?

3 DR. JAMISON: Yes. And that -- so, we did not  
4 know what the answer would be. We -- we thought,  
5 well, if you install solar panels, you say, I'm now  
6 a green person and you might be more -- have more  
7 energy efficiency and other things that you do as  
8 well, or you might say, I'm now a provider, it  
9 doesn't cost me a dime to use that electricity and  
10 you can consume more. And, evidently, the latter  
11 attitude dominated because the consumption did  
12 increase.

13 COMMISSIONER POLMANN: And it's in the range  
14 of -- of 10 percent.

15 DR. JAMISON: I think that's the number.

16 COMMISSIONER POLMANN: 8 to 14 --

17 DR. JAMISON: Yeah.

18 COMMISSIONER POLMANN: -- but, any idea -- I  
19 mean, this -- this is a numbers analysis.

20 DR. JAMISON: Yes.

21 COMMISSIONER POLMANN: But is there a  
22 corresponding analysis of the attitude, the social  
23 aspect of this? Is there a --

24 DR. JAMISON: No, we didn't do a qualitative  
25 analysis --

1 COMMISSIONER POLMANN: Yeah.

2 DR. JAMISON: -- of what people -- what was in  
3 peoples' minds. We just studied the data.

4 COMMISSIONER POLMANN: And what was the  
5 demographic? Do you have data on that or -- or --

6 DR. JAMISON: I couldn't tell you -- no,  
7 because we -- we were using actual utility data and  
8 so everything about the customers was cloaked from  
9 us.

10 COMMISSIONER POLMANN: Yeah. Okay. Okay. As  
11 you may know, we're -- this is our five-year  
12 annual -- five-year update. And this year, we're  
13 looking at our FEECA programs --

14 DR. JAMISON: Uh-huh.

15 COMMISSIONER POLMANN: -- among utilities  
16 that -- that have their -- seven utilities in the  
17 state. So, the solar aspect is a big part of that.

18 DR. JAMISON: Yeah.

19 COMMISSIONER POLMANN: And so, the issue comes  
20 up of customers who are looking at solar, they --  
21 they would like consideration of incentives.

22 DR. JAMISON: Uh-huh.

23 COMMISSIONER POLMANN: Again, with this  
24 concept that, well, they're -- they're helping in  
25 conservation and going to reduce the utility needs

1           and -- and needs for a new plant and so forth,  
2           so -- does this have any implications for that? Do  
3           you see it?

4           DR. JAMISON: Yes, it would be hard to tease  
5           apart from that particular study. What we measured  
6           was a total consumption change. I couldn't tell  
7           you offhand. I didn't help write the study. I  
8           couldn't tell you offhand what that meant for the  
9           utilities' sales to the -- to the customers.

10          COMMISSIONER POLMANN: Okay.

11          DR. JAMISON: So, it gets complicated because  
12          you have the issue of -- of when does the -- the  
13          consumer actually get power from its own solar  
14          panels. You know, that's from just --

15          COMMISSIONER POLMANN: Yeah, that's --

16          DR. JAMISON: -- fairly random; that the price  
17          signals through net metering are really difficult  
18          to get -- get right as well. So, it's -- it's a  
19          complicated question. It can be resolved, but  
20          it's -- it's -- it's messy.

21          COMMISSIONER POLMANN: It could be a wash, you  
22          know.

23          DR. JAMISON: Could be.

24          COMMISSIONER POLMANN: If they install solar  
25          and it only provides 10 percent, hypothetically --

1 DR. JAMISON: Could be.

2 COMMISSIONER POLMANN: -- and -- and they're  
3 using 10 percent more, it doesn't impact the  
4 utility at all.

5 DR. JAMISON: Yeah.

6 COMMISSIONER POLMANN: I mean, that's --

7 DR. JAMISON: No, it's -- it's --

8 COMMISSIONER POLMANN: That's purely  
9 speculative.

10 DR. JAMISON: That's possible.

11 COMMISSIONER POLMANN: Yeah.

12 DR. JAMISON: But at -- at the timing of when  
13 the electricity is consumed --

14 COMMISSIONER POLMANN: Yeah --

15 DR. JAMISON: Even if the 10 percent is a  
16 wash, there is still the demand issue, when --  
17 when --

18 COMMISSIONER POLMANN: Right. Right. The  
19 average and the peak and --

20 DR. JAMISON: So --

21 COMMISSIONER POLMANN: -- different analysis.

22 DR. JAMISON: We -- we don't provide enough  
23 details to -- to answer that question.

24 COMMISSIONER POLMANN: I'm wondering if  
25 anybody is else is answering the question. This is

1 a fascinating conversation.

2 DR. JAMISON: We haven't found anyone.

3 COMMISSIONER POLMANN: That's scary.

4 DR. JAMISON: Yeah.

5 COMMISSIONER POLMANN: I'm glad you're looking  
6 at this. This is a very interesting market.

7 DR. JAMISON: Yeah. It's -- it's -- all we're  
8 waiting on now is the lawyers' permission to  
9 release the study. And as soon as we get that  
10 done, then everyone can read it.

11 COMMISSIONER FAY: Lawyers --

12 DR. JAMISON: You know how lawyers are, right?

13 COMMISSIONER FAY: The worst.

14 COMMISSIONER POLMANN: Well, they know how  
15 lawyers are. I don't know anything about  
16 lawyering.

17 CHAIRMAN GRAHAM: Well, Mark, thank you very  
18 much for --

19 COMMISSIONER POLMANN: Yes, sir. Thank you so  
20 much --

21 CHAIRMAN GRAHAM: -- for coming.

22 COMMISSIONER POLMANN: -- for being here.

23 CHAIRMAN GRAHAM: Also, you have PURC coming  
24 up --

25 DR. JAMISON: Yes.

1 CHAIRMAN GRAHAM: -- tomorrow --

2 DR. JAMISON: Tomorrow.

3 CHAIRMAN GRAHAM: -- and Thursday.

4 Any Commissioners who are going, you'll enjoy  
5 it. If you haven't been yet, it's an eye-opener.

6 DR. JAMISON: Yeah, I was -- we're -- we're  
7 looking forward to it. Our keynote speaker is an  
8 old friend of mine from Australia, who is now in  
9 Canada. And he's running a research lab with  
10 engineers, computer scientists, and economists on  
11 disruptions.

12 So, he's got a book out on artificial  
13 intelligence. He used to be a regulatory  
14 economist. So, he's going to kind of pull those  
15 two worlds together, and say, okay, what can we  
16 learn from -- from putting regulation -- putting  
17 all these technology changes in a regulatory  
18 environment. He's a great, great, smart guy. So  
19 I'm looking forward to that.

20 COMMISSIONER FAY: Sounds okay compared to the  
21 other keynote speaker.

22 COMMISSIONER CLARK: Who won't be that  
23 impressive.

24 (Laughter.)

25 CHAIRMAN GRAHAM: Well, thank you very much.

1 DR. JAMISON: All right. Thank you very much.

2 CHAIRMAN GRAHAM: Okay. Item 1, down.

3 Item 2, legislative update. Nothing big going  
4 on we should be concerned about, right?

5 MS. PENNINGTON: Not today. Not today.

6 Good morning.

7 COMMISSIONER BROWN: Good morning.

8 COMMISSIONER CLARK: Good morning.

9 MS. PENNINGTON: Adam -- Adam and I just  
10 wanted to let you know we're still here. Session  
11 begins in a couple of weeks. So, we will begin  
12 our -- our periodic updates to you during the  
13 session and immediately thereafter.

14 We are monitoring a number of bills. Nothing  
15 earth-shattering at this point. And it's -- we're  
16 in the -- this is the last week of committee  
17 meetings prior to the session beginning on the 5th.  
18 We will also, beginning with the first week of  
19 session, be in our weekly and as-needed meetings  
20 with your advisers to keep you guys informed as  
21 well. So, if you have any questions, or your  
22 advisers have any questions, we're available.

23 And if you have any questions now -- I just  
24 wanted to put kind of ourselves out here, let you  
25 know we're still here.

1           CHAIRMAN GRAHAM: Commissioner Brown?

2           COMMISSIONER BROWN: Thank you. And thanks  
3 for keeping us up to date. Obviously, a busy time  
4 coming for you all.

5           Could you talk a little bit about the bill  
6 that was filed by Senator Gruters, the Senate Bill  
7 796, and kind of elaborate?

8           MS. PENNINGTON: It's -- it -- it's part of a  
9 bill that Senator Simmons was interested in last  
10 year, re- -- requiring some periodic plans, much of  
11 what we were already doing. This bill goes a step  
12 further. And I'm going to -- I'm -- I'm looking  
13 for Cayce.

14           This -- this bill goes a little bit further in  
15 that it's going to require storm-protection plans  
16 and what we would evaluate every year. I'm going  
17 to turn to Cayce for a little more detail on that.  
18 We are still analyzing that bill. There's a lot of  
19 facets to it.

20           MR. HINTON: Hi. Good morning. Yeah, the --  
21 the bill requires utilities, as part of their  
22 storm-hardening plan that they file every three  
23 years, to file a -- a specific transmission and  
24 distribution protection plan.

25           And this would -- would basically lay out



1           their -- their plans to specifically focus on  
2           hardening overhead, undergrounding, and vegetation  
3           management, along with -- and I'm trying to  
4           remember everything. I wish I would have looked at  
5           the bill real quick before I came down here.

6           But along with that, it creates a storm-  
7           protection cost-recovery clause, which would allow  
8           them to seek cost recovery for the storm-protection  
9           plan -- not storm-hardening plans, but the storm-  
10          protection plan, annually through the cost-recovery  
11          clause.

12          COMMISSIONER BROWN: So, what is the  
13          difference between a storm protection and storm  
14          hardening? I'm just trying to understand. Is  
15          the -- what's the nuance?

16          MR. HINTON: Well, that's something that we're  
17          trying to flesh out. You know, we have storm-  
18          hardening plans that go beyond just T and D, and --  
19          but, you know, we're not really sure at this point  
20          how that's going to play out, but you know, we're  
21          looking at, you know, the cost-recovery as far  
22          as -- clause would be some form of incremental  
23          storm-protection activity.

24          COMMISSIONER BROWN: Do you know what -- what  
25          spurred this with Senator Simmons last year or is

1           it --

2           MR. HINTON: I don't know if it's associated  
3           with Senator Simmons or not, last year. I don't  
4           remember -- Katherine had mentioned to me --

5           MS. PENNINGTON: Yeah.

6           MR. HINTON: -- this was an amendment at some  
7           point last year.

8           COMMISSIONER BROWN: And what the need was,  
9           really, what -- that -- that we don't otherwise  
10          have right now in place.

11          MR. HINTON: Well, I -- most notably is the  
12          cost-recovery clause to allow them to recover costs  
13          on an annual basis.

14          COMMISSIONER BROWN: Could they recover that,  
15          though -- oh, got it.

16          MR. HINTON: As opposed --

17          COMMISSIONER BROWN: Got it. Got it.

18          MR. HINTON: -- to going to base rates.

19          MR. POTTS: It's a required annual --

20          COMMISSIONER BROWN: It's a required an- --  
21          that's the --

22          MR. HINTON: Yeah, that's --

23          COMMISSIONER BROWN: -- kicker -- got it. Now  
24          I understand.

25          MS. PENNINGTON: And there is a House

1           companion to that bill that Representative Fine has  
2           filed, that is similar, but has a couple of  
3           differences, I understand.

4           MR. HINTON: Yeah, the -- the House bill  
5           has -- the transmission distribution plan that they  
6           filed is a 30-year plan.

7           COMMISSIONER BROWN: But the -- so, the storm  
8           protection, though, could not -- those costs could  
9           not be recovered in base rates under any  
10          circumstance; it would have to be an annual --

11          MS. PENNINGTON: Technically.

12          MR. HINTON: Part of the provisions of the  
13          bill is they'd have to show that the -- the costs  
14          that are going through the cost-recovery clause are  
15          not being also recovered through base rates.  
16          They're going to -- there -- there's going to be  
17          some form of showing there that they're separate.

18          COMMISSIONER BROWN: So, it would be a  
19          separate proceeding annually.

20          MR. HINTON: Yes, we'll -- it will be just  
21          like we -- the Nuclear Cost Recovery Clause, the  
22          other cost recovery clause -- that there will be  
23          annual proceeding.

24          COMMISSIONER CLARK: Is this -- is the focus  
25          undergrounding? Is that the real, primary thing

1           they're trying to drive to here?

2           MR. HINTON: It seems to be a focus in the  
3           Senate bill. They do say that they -- there's a  
4           restriction that, in their plan, they can't  
5           underground more than 4 percent of their laterals  
6           per year.

7           We're not sure whether that's 4 percent of --  
8           you know, as of 2019, you have this many laterals.  
9           Let's do the math. 4 percent of that is 900 miles.  
10          You can't do more than 900 miles per year, or  
11          whether it's 4 percent of remaining overhead. So,  
12          it's a diminishing number that would go every year,  
13          but -- you know, that is -- that is a -- a focus.

14          COMMISSIONER BROWN: Have you been presented  
15          on this yet? Have you been asked to present yet?  
16          Just a --

17          MR. HINTON: We're -- we're working on a bill  
18          analysis right now.

19          MS. PENNINGTON: We're still working on the  
20          analysis.

21          COMMISSIONER BROWN: Oh, could you please keep  
22          us informed about what comes out of that?  
23          Obviously.

24          MS. PENNINGTON: Certainly.

25          COMMISSIONER BROWN: Just another question,

1 Mr. Chairman.

2 CHAIRMAN GRAHAM: Sure.

3 COMMISSIONER BROWN: Regarding -- are you  
4 aware of any proposal coming out regarding  
5 telecommunication companies for storm-hardening  
6 purposes?

7 MS. PENNINGTON: Not for storm-hardening  
8 purposes, I've not seen that yet.

9 COMMISSIONER BROWN: Is --

10 MS. PENNINGTON: I'm not aware of it.

11 COMMISSIONER BROWN: Okay.

12 MS. PENNINGTON: Doesn't mean it's not out  
13 there, but we have not seen or heard of it yet.

14 COMMISSIONER BROWN: Okay. Thank you.

15 CHAIRMAN GRAHAM: Is there any talk about  
16 including it?

17 MS. PENNINGTON: I've not heard.

18 COMMISSIONER BROWN: I had heard.

19 MS. PENNINGTON: There is a -- there is a  
20 telecommunications bill out there, which is the  
21 same bill that there was last year relating to ETCs  
22 and the authority for Florida that Florida has a  
23 ticking clock on, quite frankly.

24 So, there is a vehicle, but it very likely  
25 could be its own bill as well. We're -- we're

1 still a few weeks away from the bill deadline.

2 CHAIRMAN GRAHAM: Is there any talk about --  
3 we just had a -- a case came up recently, basically  
4 talking about the definition of what a water  
5 utility was. Is there any bill that's going to be  
6 addressing that?

7 MS. PENNINGTON: Not seen that, and I have  
8 been looking for that. I have not seen that one  
9 yet.

10 CHAIRMAN GRAHAM: Okay.

11 COMMISSIONER BROWN: We'll just fo- --

12 MS. PENNINGTON: I actually asked someone in  
13 the little hall area, and they were not aware of  
14 anything at this point.

15 COMMISSIONER BROWN: But that's in rulemaking,  
16 currently?

17 CHAIRMAN GRAHAM: It's in rulemaking, correct.

18 MR. POTTS: I think there's still time. It  
19 could be in draft.

20 COMMISSIONER BROWN: Yeah.

21 MR. POTTS: Nothing has been filed yet.

22 COMMISSIONER BROWN: Cayce, could you just  
23 summarize some -- you've been -- given a few  
24 presentations to the committees over the past few  
25 weeks. Anything that you want to highlight for us?

1           MR. HINTON: For the House, I initially just  
2           gave them an overview of the PSC and -- and what we  
3           do; and then, took part in a panel regarding  
4           telecommunications. And I -- I kind of teed off  
5           the panel, just giving the history of how we went  
6           from AT&T as the dominant world corporation to  
7           where we have competitive markets, particularly  
8           here in Florida.

9           And then, at that point, the panelists took  
10          over talking about things we don't have  
11          jurisdiction over, so --

12          COMMISSIONER BROWN: Tracy Hatch was on there,  
13          a few -- few others. Why was that group comprised?  
14          How did that originate?

15          MR. HINTON: It -- it may have -- when I was  
16          giving my overview, I mentioned things that we  
17          don't regulate, and that may have sparked that.  
18          So, it might have been my fault. I'm not really  
19          sure.

20          (Laughter.)

21          MR. BAEZ: There's a broad orientation process  
22          going on with the committee as well. So, it could  
23          have been as much as that.

24          COMMISSIONER BROWN: Thank you.

25          MS. PENNINGTON: Many new members on that

1 committee.

2 CHAIRMAN GRAHAM: Any other questions?

3 COMMISSIONER FAY: Bill-filing deadline?

4 MS. PENNINGTON: Generally the -- first  
5 Friday?

6 MR. POTTS: Right.

7 MS. PENNINGTON: First Friday of the first  
8 week of sess- -- session. So, that would put it at  
9 the 8th of March.

10 COMMISSIONER FAY: Okay.

11 MS. PENNINGTON: Now, the -- the deadline for  
12 the appropriation-bill-filing process in the House  
13 is sooner than that. It might be the first day of  
14 session, I think.

15 MR. POTTS: Right.

16 COMMISSIONER FAY: Yeah, I know there's  
17 drafting deadlines, too.

18 MS. PENNINGTON: Yeah.

19 MR. POTTS: Bill-drafting deadlines, yeah.

20 CHAIRMAN GRAHAM: Well, thank you very much  
21 for the update.

22 Okay. Number two is down.

23 Number three.

24 MS. HELTON: We don't have a report today.

25 CHAIRMAN GRAHAM: Number three is down.



1           Number four.

2           MR. BAEZ: Thank you, Mr. Chairman.

3           Commissioners, just a quick update. The -- the  
4           Governor's budget recommendations rolled out the  
5           first of February. We had -- we had filed our --  
6           our LBRs.

7           As -- as you recall, we had a couple of items:  
8           the -- the \$500,000 request from general revenue  
9           for the back-up generation, and then some technical  
10          adjustments that kind of happen every year as we  
11          move forward.

12          I'm -- we're pleased to say that the  
13          Governor's recommendations actually lined up  
14          with -- with our LBR. So, that's a good first  
15          step. More reports and more progress as -- as the  
16          session starts and the appropriations process moves  
17          forward, but we're actually quite -- I'm -- I'm  
18          delighted. I would, you know, be more effusive,  
19          but this is an internal affairs.

20          We'll keep you up to date. If you all have  
21          any questions on -- on how the things -- how the  
22          budget process is moving on, I'd be happy to answer  
23          any questions you have.

24          CHAIRMAN GRAHAM: Questions of the executive  
25          director? Looks like no questions.

1 MR. BAEZ: No questions.

2 CHAIRMAN GRAHAM: Okay.

3 Number four down.

4 Number five, other matters. Any other matters  
5 to come before us? I hear nothing but crickets.

6 That being the case, we are adjourned. Thank  
7 you very much. Travel safe.

8 (Whereupon, proceedings concluded at 10:07  
9 a.m.)

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CERTIFICATE OF REPORTER

STATE OF FLORIDA )  
COUNTY OF LEON )

I, ANDREA KOMARIDIS, Court Reporter, do hereby  
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ANDREA KOMARIDIS  
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