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*Did you hear the one About  
The Economist and the Commissioner?  
Thoughts of a Commissioner  
At a Meeting of Economists*

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## **Introduction**

Good evening. And thank you for inviting me. I am honored to be here with you at this gathering of the high priests of economics profession! I especially wish to thank Professor Michael Crew, who invited me to participate in this event.

So, an economist and a commissioner walked into a bar. The economist sat down at an available table next to the kitchen. The commissioner looked around and said, *“Why don’t we take that table over by the dance floor!? It’s close to the bar, and there is a table of interesting ladies next to it.”* The economist responded, *“Don’t be*

*ridiculous – If there were really a table by the dance floor, someone would have taken it already!”*

In preparation for this evening, I read over the syllabus for the program and can only say that I am suitably intimidated. In trying to figure out what I might say to such a distinguished and thoughtful group, I thought I might spend my time with you tonight explaining what a Commissioner actually does, how he or she does it, and how that relates to what you all in this room do.

Let me introduce myself to you: I am a commissioner at the California Public Utilities Commission. Our task is to listen a lot, read a lot, discuss endlessly, suffer public abuse with dignity, appraise political realities, and produce something called “regulation.” Regulation is a series of laws, rules, customs, practices and agency decisions that direct utilities and others to do and not do certain things in a certain way. Commissioners balance the interests of ratepayers (read customers), utilities, and the public in the course of facilitating the delivery a series of service offerings. In the course of these deliberations we consider various assertions, perceived consequences of alternatives, and policy principles in an attempt to fabricate intelligible guidelines that people can follow. Sometimes we are more successful than others but in every discussion we utilize the work of economists and public policy professionals, and rely on the application of economic principles to develop public policy.

Before I get in any deeper, I must state my usual disclaimer:

- I am only one of five independent commissioners who regulate the investor-owned utilities of California, the companies where many of you are employed, and others practice.
- As a Commissioner, I get only one vote.
- So you should not take anything I say here today to be the official opinion of the Public Utilities Commission. The Commission speaks through its decisions.
- Finally, I will not be discussing how I intend to vote on any proceedings that are before me at the Public Utilities Commission.

I should mention that before I became a commissioner, I was an attorney, a banker, an ambassador, the head of a large corporation, and an entrepreneur. In all of these professions I have worked closely with economists and other public policy professionals. I am told by many of them that indeed there is life after being a Commissioner—something called an “Emeritus,” which means people don’t take your calls anymore.

## **Economics, Policy and Regulation**

Once upon a time, the staff of the CPUC was composed largely of Accountants and Engineers. Although they relied on economic principles in their work, there was little need for economists on staff. The economics of the CPUC’s work was considered settled science, and the tasks were largely related to compliance with established rules.

Until the 1970s, electric service, gas service, water service, and telecommunications service, were all considered to be natural monopolies, the kinds of industries that are best organized as a government monopoly or as a regulated corporate monopoly.

Their increasing scale, increasing efficiency, and declining costs provided evidence of the benefits of classic rate regulation. Monopoly service by a regulated provider was the best choice. All that was required was the services of accountants, engineers, and attorneys to watch over the participants and prevent overreaching. Orderly process was the mantra.

Today, the place is crawling with economists, and I may add, things are a lot less clear and certain! I think that two things happened.

First, the factual underpinnings of the system were directly contradicted by new evidence. For example, expectation that new power plants would continue to be larger, and that larger plants would be the least costly (on a unit-of-output basis), was contradicted by the cost overruns at nuclear plants and by new developments in small-turbine technology.

Second, and more important, policymakers became less sure of themselves as cracks began to appear in the tidy regulatory structure, and they began to ask different kinds of questions. Economists seem to be the people best able to provide answers to questions such as:

- What costs can be avoided by a utility if it purchases the output of a cogeneration power plant associated with an industrial factory?
- What are the likely future costs of resources, not only fuel, but also of cleaner air, or the land where future power plants might need to be located? Indeed, what should be counted as “costs” and how should they be measured?
- What is the optimal level of reliability of the electric system? Who should pay for that reliability: ratepayers or taxpayers?
- What would a market for power and power plant services look like, and how should one be organized? Would it provide greater reliability at lower cost?
- What signals do consumers see in the rates charged for utility services? Are those signals appropriate for them to make good consumption decisions? Is a decision that is “best” for the individual consumer the real test, or are there broader social values that should go into the equation?
- When the average cost of service is different from the marginal cost, how should rates be set?
- If it is state policy to reduce dependence on fossil fuels, and doing so will cost the consumers more, how far should the CPUC go to facilitate that result?

- If utility service customers do not realize that in some cases they could cost-effectively reduce their consumption levels, should we help them to achieve that result? How should we do that?
- If the cost of new water will be much higher than the cost of delivering current water resources, what is the appropriate policy?
- How do you allocate water and other resources in times of shortage? Does the answer change if the shortage is permanent?
- How much should the general body of customers pay specific customers to let the utility take limited control of their energy-using appliances?
- Against what standard should the cost of renewable energy be compared? How much should utility customers be assessed over and above the lowest cost of producing electricity to facilitate public policy goals, like green energy?
- What are the benefits of a “smarter” grid? And what is the alternative to a smarter grid? Is it a “dumb” grid that is more robust, and hence expensive?
- Can customers understand and respond to more complex price signals in rates? Are “smart” meters really in the best interest of consumers, or are customers better served by administrative programs that do not display a strong price signal?

There are many such questions now at the center of CPUC policymaking, and what group of social scientists most loves these types of questions? Economists. Regulators need the input of economists and public policy experts on these issues more than ever.

So, here we are, at the Western Conference of the Center for Research in Regulated Industries. It is a meeting of economists and public policy experts. Some of you have a background in engineering or accounting. Some of you may have a legal background, as I do. But all of you have a professional interest and deep knowledge about these types of questions.

### **How Can Your Research Best Help Policymakers?**

Now, let me turn from the topic of your interesting research to the topic of making policy based on your research. I will offer some observations on how you can be of most value to regulators.

The California Public Utilities Commission meets about 20 times each year. At each meeting there are 50 or more agenda items. That means my colleagues and I vote on one thousand or more matters each year. What can you do to help make sure the Commission understands your results and makes good decisions?

First, I assume you would like your findings to be read not just by division staff, not just by the judge, but by the final decision makers. As you know, commissioners seldom are able to review the entire record of a case, which may run to thousands of pages. Moreover, the subject

matter under consideration varies widely from case to case and field to field, and commissioners cannot be knowledgeable on all of them, nor in all probability, knowledgeable in depth about any of them. So, how can you get your ideas to be recognized as an important element of the case?

First, write well. So much of the testimony and other materials I review is written in a dry passive tone, and for other experts, and it is difficult for the generalist, however literate, to understand. Clear writing is more likely to be remembered, quoted, or attached to a decision or an opinion.

Second, provide context, so the meaning is clear. Your analysis is meant to contribute to a larger debate. The better you show how your work fits into the larger puzzle and into the understanding of the problem under consideration, the more likely it is that the reader will appreciate and benefit from it.

Finally, you should state your main point in a few words that are sufficient to convey meaning and cause the reader to want to look up the whole report. This is the most difficult part of all, for you have to be careful not to distort your result in an effort to make it simple. But you should be able to make a pithy, understandable statement. Think in terms of a funnel: the wide end is the materials, facts, data, which are for your debates among yourselves. The narrow end goes into the commissioner's ear.

Or, think of your main point as elevator speech. Imagine you are walking into the elevator on your way to a meeting, and suddenly you find yourself with a commissioner who says, “*Say, I understand you are doing some work for the Energy Division. What is it?*”

You could say, “*I am following a cohort of 5,000 residential energy consumers. We put in a series of special price functions, and we also assigned a group of customers to programs where the utility can control their large appliances, such as pool pumps and air conditioners. We are monitoring their energy use and their responses to the price signals and special programs. The base cases against which we will compare the results are customers with standard tariffs and manual shut-offs for large appliances.*” This is big-end-of-the-funnel stuff! It may be a great description of your research, and it may be interesting to others in your field, but it does not help to get good policy out the door.

A better elevator speech might be, “*I am testing whether residential energy consumers really do respond to higher energy price signals on hot days. They also may respond to special discounts for letting the utility control their appliances. Both options may be effective to relieve system stress. The results may help in setting policies to cut peak demand.*”

Now I get it! Setting those policies is my problem. Maybe your work can help me. You should try to put something like that right in the front of your report. Your words are more likely to be quoted by the judge if your

report and testimony are clear and direct statements of your results and how those results are connected to the problem. Decision makers are suckers for a well-turned phrase.

Now, you already know all of this, and I simply confirming from experience what your English teachers have already told you.

## **Some Thoughts about Regulatory Policy in California**

Finally, tonight, I think you would all be disappointed if I didn't give you some thoughts about where the policy process has gotten us in California and what's ahead. Again, I must declare that I am not saying that my mind is made up on any issue or how I intend to vote on matters before me. I am in fact asking for help!

### ***High Aspirations for California!***

Let me start out with a general statement that I would wager nearly all of you will agree with: *California's people, her legislators and governors, her regulators, and her voters, all are very good at declaring wonderful aspirational goals for public policy. The follow-up and the actual attainment of those goals may be more difficult and may be very costly.*

We have many such aspirational goals which we have imposed on ourselves. The most comprehensive is embodied in the California Global Warming Solutions Act, AB-32, which sets us on a path towards a reduction in greenhouse gas emissions back to our 1990 level by 2020.

We have a renewable portfolio standard for electric generation which requires 20-percent renewable generation this year and, by executive order, 33-percent renewable generation by 2020.

We have a requirement to reduce household water consumption by 20-percent by 2020.

We have a commitment to eliminate the environmental harm resulting from once-through cooling at California power plants, with a goal to be finished except for the nuclear plants by 2020. And the nuclear plants should be taken care of by 2025. That represents a more than 20-percent of current generating capacity.

There are many more, but I think I have made my point: We are strong on aspiration here in California. All this, notwithstanding a \$20-billion budget deficit, an unemployment rate above 12-percent, a generally unfriendly business environment, and a dysfunctional legislature.

The people of our state have voted over and over in favor of candidates with strong environmental records. This is not something that has been put over on the people of California by some cabal of environmental extremists. We Californians have made a fundamental pact that we wish to live in an environmentally clean state, and we are willing to pay more for the privilege of doing so.

How much more? Well, that is not very clear. And when the bills come due, as they are now beginning to, we may not be as happy as we are now.

Let me be very clear. I love California. I was born here and I am glad to be a citizen of this beautiful place. But I think that many of us have no idea of the cost of these mandates, either individually, or more important, cumulatively. Consequently, we should be especially vigilant to make sure that when we point out the benefits of a proposed policy, we should also point out its costs. We should not try to hide the costs or provide some minimalist-sounding result like “a few cents on each monthly bill.” A few cents here and a few cents there, pretty soon pennies have a way of adding up. Moreover, in spite of the claim – and you have all heard the claim that “*People do not pay rates, they pay bills*” – people actually do see rates. You economists and other public policy experts, of all people, should know that prices matter. And we are facing high and increasing prices.

### ***Finding the Way Forward***

There is another aspect to this aspirational problem. Up to now, we in California have been very resourceful in finding untapped efficiencies in our energy and water systems. Californians pioneered energy efficiency as a way to avoid system additions and upgrades beginning in the 1970s. Up to now it has worked out very well. While Americans in general have increased their electric energy usage by about 50-percent since the 1970s, our usage has remained roughly flat. That is a great success.

But it is only a partial success, for while our total electric energy use has not increased, our peak demand has continued to increase on a par with the rest of the nation.

So, we must maintain a system capable of meeting our ever increasing demand for power. Of course, we are being very resourceful about dealing with that problem as well. And I salute you who have been working on economic systems that can help customers to voluntarily limit their peak-time demands. More power to you! (If you will pardon the bad pun!)

### ***Diminishing Returns and Higher Costs***

I can't help but wonder if we may be reaching the point of diminishing returns. Is it possible that we will be able to spend a billion dollars on energy efficiency every year going forward, and continue to get beneficial results? I am dubious about it. And even if we can as a matter of energy engineering, will the people of California continue to be willing to dedicate such large sums of money in the knowledge that their utility rates are higher because of those programs? It is a question worth pondering.

### ***How much can California Do by Itself?***

Finally, I leave you with this question: How much more can California do by itself? California has always had a big imagination and a willingness to push the limits. But have we reached the limits? Can one state maintain and sustain an environmental and energy policy that is so much more restrictive than the other 49 states without chasing away the people and the resources it needs to remain competitive?

It is not only a question of the other states, what about other countries? I am concerned about how much further

we can step out ahead of the rest of the world without severe economic dislocations. In fact, I occasionally have a sense that others are watching California and hoping to pick up the pieces when we fall. Not only that, but sometimes California seems to act as though costs do not matter.

Our state budget is tapped out. We can see the result: According to our governor, whole programs will have to be zeroed out because there just is not enough money in the state treasury to pay for them. This is not a matter of a little bit of trimming at the edges, or a matter of political posturing. California cannot go on the way it has in the past, passing out benefits now with the costs to be paid later. What is true for taxes and government services may also be true at some point for energy efficiency programs. This may be the case not only for California, but also for our nation.

## **Conclusion**

Let me return to my original theme. Once regulation was mostly a matter of engineering and accounting. Once the costs were easily measured, and the benefits were clear and obvious. Once the economic implications seemed so clear that we did not need economists to think about them.

Those days are long gone, and you, the economists and public policy experts, are now a vital part of our system. We need you to measure and evaluate. We need you to help set reasonable goals and run reasonable

programs at reasonable cost and to provide tools to evaluate the impacts of increasingly complex decisions.

For your part, you will be most effective if your work is clear and your reporting even more clear. To the extent that you can include in your reports and testimony a clear summary of your results and the implications of those results, others will understand your work, and it will become part of the thinking of the decision makers.

Finally, we Californians have been on quite a ride, and we have set out some difficult goals. You can be helpful to us all by being clear about what those goals are, keeping us focused, and pointing out what they will cost to achieve.

The good economist will see an empty table by the dance floor as an opportunity, and will think about how to take advantage of the possible upsides and downsides of that opportunity. The good commissioner will listen to the concerns and relative risks in taking the table by the dance floor.

Ladies and Gentlemen, thank you for your time tonight.