Power Drain:

PUC Regulations Could Dim Colorado's Lights

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Executive Summary

Three main regulations unnecessarily restrict the supply of electricity in Colorado.

First, regulations from the Colorado Public Utilities Commission force utilities to create an inflexible plan for building power plants in Colorado, using forecasts based on unreliable and changeable data.

Second, Colorado's electrical future is subject to bureaucratic whim through the "Public Convenience" doctrine. The future of Parker, Colorado has been put at severe risk because of this law. Without immediate regulatory change, Parker may soon face rolling blackouts and a severe power strain.

Finally, the PUC requires Xcel Energy to collect a tax from all ratepayers and then gives that money to large corporations, so that the corporations have money to buy energy-efficient products that have no benefit to the common electricity consumer.

These regulations are unfairly making electricity more costly.

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I. Power Purchasing Regulations

A. Power Purchasing

"Power purchasing" includes all acts of building power plants and buying power. The Public Utilities Commission (PUC) regulates the utilities' power purchasing with an Integrated Resource Plan (IRP). The IRP regulation was put in place in 1990 by a PUC decision, and it requires the PUC to create an inflexible plan every three years for the electrical future of Colorado based on forecasts of prices of and resource availability.

The IRP gives the government the authority to choose which types of power generation are best for the state, and at what levels that power should be used. In short, the IRP is similar to the five-year economic plans used by the former Soviet Union.

Las Animas, Colorado

Those looking for evidence that the IRPs restrict smart business decisions on the part of utilities need look no further than Las Animas, Colorado.

Xcel Energy, which serves 95% of all electrical customers in the state, was considering helping Tri-State Generation and Transmission Association build a power plant in Las Animas. The Las Animas plant would burn clean coal and would generate approximately 1,200 megawatts of power, similar to a plant in Craig, Colorado built by Tri-State.[1] Clean coal technology involves such improvements as better scrubbers, coal burners that generate lower nitric oxide (NOx) levels, and modification of coal stacks so that less pollution in the form of flue gasses escape from them.

[1] Tri-State Website, <http://www.tristategt.org>.

The need for the Las Animas plant is new, as Xcel and the PUC did not project the need for the plant in the last IRP submitted in 1999. Unfortunately, Xcel cannot build the Las Animas plant despite the evident need, because coal plants are impossible to build in Colorado under the current plan structure.[2]

IRPs Have No Flexibility

Even if future IRPs are changed to allow for coal plants, the larger point is that it is difficult, if not impossible, to project future electricity needs accurately. A grocery store chain may design plans that outline its ideas for the locations of new stores, but if the grocery store management insisted that a plan formed in 1999 couldn't be modified to reflect new conditions in 2001, the stockholders would, quite justifiably, fire the management. IRPs foolishly force the electricity industry to stick with plans that have become obsolete. Government-mandated three-year plans for electricity production cannot forecast the future any better than government-mandated five-year plans for steel production could in the former Soviet Union.

B. Public Convenience Laws

Another problem is the statute making utilities subject to the nearly unlimited discretion of government officials' interpretation of "public convenience." Colorado Revised Statutes state:

> No public utility shall begin the construction of a new facility, plant, or system or of any extension of its facility, plant, or system without first having obtained from the commission a certificate that the present or future *public convenience* and necessity require or will require such construction.[3] [emphasis added]

This statute is vague and the decision of granting a certificate based on public convenience is left to the PUC or to a wide array of other government entities, all of which have laws similar to the above statute. There is no fixed definition of "public convenience," and the interpretation changes from one government agency to the next. Every government entity can therefore define public convenience differently, or change the definition at any time. This extreme uncertainty makes building power plants very difficult. If the electric utility does not know the specifics of how any particular government entity will judge them, the company cannot be certain of how to proceed with design plans.

[2] Jeff Smith, "Power Plant Discussed South of Las Animas," *Rocky Mountain News*, 3 March 2001, p. 3B.
[3] Colorado Revised Statutes, Title 40, Article 5, Section 101, "New Construction – Extension." (emphasis added).

Parker, Colorado

An example of this unbounded government discretion can be seen in Parker, Colorado. The Intermountain Rural Electrical Agency (IREA)[4] wants to serve future and current residents of Parker by building a new 40,000-kilowatt substation.[5] There has been tremendous growth in Parker, which is expected to continue, and the substation is designed to prevent power shortages. The current substation is strained and no new residential developments, as yet unplanned, will get power unless the new substation is built.

Power poles would be needed in order to connect the new substation to the existing power plant, and to connect the substation to homes and schools. However, the Douglas County Commissioners decided that the power plant was not in the public convenience because the power poles would be too close to homes and schools and would zigzag across the county property.[6] The Douglas County Commissioners did not seem to realize that the poles have to be close to homes and schools so that the power can be delivered to those same homes and schools.[7] In other words, the Douglas County Commissioners decided that the poles would not look good, which halted the erection of poles and, in effect, put Parker at risk.

Because of this decision, the IREA decided that it was best not to risk rolling blackouts in Parker, and therefore put a moratorium on all new hookups until the issue was resolved.[8] Current plans can be met; however, any future growth past these current plans will be without guarantees of power.[9]

Reform

As detailed in the Independence Institute's 1999 paper *Electricity Reform in Colorado*,[10] Colorado law does *not* directly forbid new companies to supply electricity. Xcel does *not* have a legal monopoly in Colorado. However, the burdensome regulations of the IRP and the ambiguous public convenience laws discourage alternative electricity producers from entering the electricity marketplace.

[4] The IREA is regulated in the sense that the PUC can step in if the IREA does something the PUC considers in violation of the public convenience, such as raising rates or cutting supply. In addition, the PUC enforces the laws that prevent the IREA from competing and that control the IREA's borders. However, the PUC does not directly oversee power plant purchasing for the IREA.
[5] Robert Sanchez, "Parker Enters Power Purgatory," *Rocky Mountain News*, 9 August 2001, p. 28A.
[6] Ibid.
[7] Eminent domain and easement rights are not a factor in considering the building of power plants according to the IREA Distribution Manager Drew Long.
[8] Drew Long (IREA, Distribution Manager), interview by author, 23 August 2001.
[9] Ibid.
[10] Wayne Crews Jr. "Electricity Reform in Colorado", Independence Institute Issue Paper 7-99, July 22, 1999, <http://www.i2i.org/Publications/IP/Other/ElectricityDeregulation.htm> (24 October 2001).

The requirement to base new energy construction on a bureaucratic determination of "public convenience" was created for highly regulated monopolies. Yet in practice, the "public convenience" rule harms the public by discouraging competition.

Even in the context of government-regulated monopolies, the vagueness of "public convenience" amounts to no standard at all. Like other companies which sell goods to the public, Colorado energy companies ought to be able to make their own decisions about how many and what kind of facilities will best satisfy consumer demand.

C. Mandated Wind Farms: A Bunch of Hot Air

A wind farm is a power generation source that depends on multiple high-speed windmills to generate electrical power. In the most recent IRP submitted to the PUC, Xcel Energy called for new natural gas plants and warned against being forced to construct a wind farm; Xcel's projections showed that the farm would be very costly and would raise the price to consumers.[11] A Cato Institute study explains why wind farm power is economically unfeasible and environmentally unsafe in its current government-controlled form. [12]

Wind farms have numerous economic and environmental problems:

- They require high up-front costs;
- The windmills do not generate a consistent amount of electricity due to variations in wind speed and are not guaranteed to work during peak demand hours;
- They attract rodents seeking shelter from adverse weather conditions. The rodents attract rodent-eating birds – but the birds are often killed by the massive high-speed spinning blades;
- The neighbors of a wind farm suffer from severe noise pollution: one tower alone generates half the sound volume of one lawn mower,
- Wind farms take up vast amounts of land, requiring between 10 and 80 acres per megawatt generated, which is from 30 to 200 times more space than needed for gas plants that produce more electricity;
- Wind is worse for the environment, if one factors in the environmental costs of constructing a wind farm, such as the tons of energy-intensive materials needed to build it and the exhaust output from the machines used in the building process.[13]

Despite all these problems, the PUC recently required Xcel to extend their wind farm near the Colorado-Wyoming border. In July 2001, Xcel complied and added 25 turbines to the existing 44 turbines at the wind farm.[14] In addition, Xcel paid $26 million to buy power from another wind farm in Colorado.[15]

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[11] Xcel Energy Communications Department, interview by author, 15 August 2001.
[12] All items: Robert L. Bradley, Jr. "Renewable Energy Not Cheap, Not 'Green'", Cato Policy Analysis, 27 August 1997, <http://www.cato.org//pubs/pas/pa-280.html> (22 August 2001).
[13] Ibid.
[14] Xcel Energy Windsource Department, interview by author, 24 August 2001.
[15] Ibid.

Many consumers are willing to pay a premium for inefficient wind power, and already do so under a voluntary program created by Xcel and the PUC. But the PUC should not force other consumers to pay higher prices by mandating the construction of inefficient, environmentally harmful wind farms above the level necessary to meet specific consumer demand.

Despite these objections to wind power, some policy makers encourage changing the IRP to require a renewable energy quota, so that the PUC has to approve a certain percentage of renewable energy development, specifically wind. The IRP thus gives the policy makers the opportunity to put politics, rather than reason, into Colorado's energy policies.

D. Foolish Production Regulations Strain Colorado Power

As demonstrated at Las Animas and Parker, the government has the regulatory authority to halt the building of any power plant. The California government had similar power 12 years ago and decided that the state could and should predict the future electrical needs of California, on the assumption that it could and should plan, structure and control the electricity industry. As result of this conceit of government, California has suffered rolling blackouts and power strains.[16] As proven in California (and the Soviet Union), government control over electricity does not work.

We should eliminate the inflexible Soviet-style planning mandates known as IRPs. PUC Chairman Ray Gifford best described the IRP when he said that the IRP is "public enemy number one."[17]

We should not give government agencies the unbounded power, through public convenience laws, to prohibit new electrical power construction, as long as the construction complies with all appropriate environmental, safety, and other laws.

II. Pricing Problems with Regulation

Having examined regulatory problems regarding the production of new electricity in Colorado, we now turn to the consumer side to look at regulations that drive up prices paid by users of electricity in Colorado.

With electricity regulation, all additional costs are ultimately borne by consumers. Because the PUC controls electricity prices, producers are allowed to pass the cost of PUC mandates on to consumers. Besides the direct costs of any particular regulations, the indirect costs associated with the massive paperwork required by the regulatory process is

[16] Karl Rabago, "Why Not Ask Customers What They Want?", Rocky Mountain Institute, <http://www.rmi.org/sitepages/pid507.php>
[17] Chairman Ray Gifford (PUC Commissioner), interview by author, 24 August 2001.

also passed on to the consumer, although the precise costs are nearly impossible to determine.[18]

A. Customers Have No Choice But To Pay

Xcel does not determine the price they charge their customers. Instead, the price Xcel is allowed to charge for electricity is regulated by the PUC at a set rate. This is supposed to prevent the price from becoming too high. The regulated electricity utilities can lobby the PUC to have the rate changed. Below is a chart of all rate hikes grated to Xcel, which serves 95% of all Coloradans, from July 2000 to August 2001:

Date	Individual Rate Hike $	Cumulative Rate Hike $
7/1/2000	$117 million	
10/1/2000	$126 million	$243 million
1/6/2001	$361.60 million	$604.60 million
2/9/2001	$14.2 million	$618.80 million

The total of the increases is $618.8 million. Because that cost is factored into the rate charged to customers, Xcel customers have no choice but to pay these increases, because regulations dissuade potential electricity producers from entering the Colorado energy market.

If the regulations that deter potential Xcel competitors were not in place, Coloradans would have the ability to choose the electricity company that provided the lowest prices, instead of being unable to escape price increases caused by regulation. With choice, customers can choose the company with the fewest price increases, instead of being forced to purchase from a monopoly-like provider.

B. Demand Side Management

Another price increase foisted on consumers by the PUC is Demand Side Management (DSM). The 1.9% tax is charged to all customers of a regulated utility, including Xcel Energy.[19] The DSM tax is actually illegal under state constitutional and statutory law, and is wrong ethically.

Approximately $75 million per year in DSM revenue is collected from all electricity consumers, both rich and poor, by the PUC.[20] The money collected from the tax is distributed as corporate welfare to encourage large companies to become more energy efficient.[21] Because of the design of the program, only large companies and corporations are attracted to the energy efficiency incentive, not the average working individual or

[18] It is impossible to track down these numbers as they are scattered in a mammoth of regulatory paperwork, PUC decisions, and amongst PUC and regulated utility staff.
[19] Chairman Ray Gifford (PUC Commissioner), interview with author, 27 August 2001.
[20] Docket 00A-008E, July 13, 2000 Adopted, pg. 36, "Initial Commission Decision Regarding The Demand Side Management And Renewables Segments of Public Service Company of Colorado's 1999 Integrated Resource Plan"
[21] Chairman Ray Gifford (PUC Commissioner), interview with author, 24 August 2001.

small business.[22] Approximately 80% of all recipients of this tax benefit are corporations.[23] In other words, electricity utility customers are paying a tax that is then given to corporations who use that money to buy energy-efficient light bulbs, and other energy-efficient items.

Companies have a duty to their shareholders to minimize costs, so if a company can save money in the long run by installing certain kinds of light bulbs, the company will do so (or the management may find itself in trouble with the shareholders). Why should household users of electricity have to pay for businesses to improve their capital facilities?

Defenders of this corporate welfare program might argue that the new light bulbs actually will pay for themselves over the long run. The bulbs will reduce utilities' internal power consumption but not enough, even after years of savings, to pay for the high up-front cost of the bulbs. Without the DSM corporate welfare program, the corporation would never choose to purchase the expensive bulbs.

Corporate welfare to pay companies to do things that are economically inefficient is even worse than paying companies to do efficient things. If a $20 bulb will only save $10 of electricity over its useful life, that is a price signal that the bulb is a *wasteful* investment. Overall social utility would be higher if the money stayed in consumer hands, where consumers could choose for themselves how to spend $20 to obtain $20 worth of utility.

Colorado's constitution contains several clauses forbidding tax money to be distributed by the state to corporations. Colorado law specifically forbids preferential treatment to be given to one customer with funds collected from another customer. According to Colorado Revised Statutes § 40-3-106(1)(a):

> …no public utility, as to rates, charges, service, or facilities, or in any other respect, shall make or grant any preference or advantage to any corporation or person or subject any corporation or person to any prejudice or disadvantage. No public utility shall establish or maintain any unreasonable difference as to rates, charges, service, facilities, or in any respect, either between localities or as between any class of service.[24]

The statute forbids Xcel to raise prices for all customers, and then give the extra revenues to a select group of favored customers. Why should this scheme suddenly become legal simply because the PUC rather than Xcel gets to distribute the boodle?

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[22] Ibid.
[23] Docket 00A-008E, July 13, 2000 Adopted, pg. 55, "Initial Commission Decision Regarding The Demand Side Management And Renewables Segments of Public Service Company of Colorado's 1999 Integrated Resource Plan"
[24] Colorado Revised Statutes, Title 40 Article 3 Section 106(1)(a), "Advantages prohibited - graduated schedules."

Conclusions

"Public convenience" (a/k/a bureaucratic whim) laws make it possible for the PUC, city or county governments to halt the building of any power plant, for no good reason.

The Soviet-style IRPs, an outgrowth of the public convenience laws, allow the government to make inflexible plans for Colorado's electric future based on unreliable price and market data.

Finally, the "Demand Side Management" tax picks the household pockets of rich and poor alike so that bureaucrats can distribute corporate welfare. ■

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