



POLICY AND PROGRAM REPORT

Public Utilities and Energy

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PUBLIC UTILITY REGULATION

American business in general is operated by private enterprise. However, in some instances, a product or service is of such fundamental importance to the welfare of citizens that it is deemed to be “affected with a public interest” and, therefore, subjected to pervasive governmental regulation to ensure availability at reasonable prices. The hallmark of this type of regulation is generally the granting of an exclusive geographical franchise to a single provider, coupled with a duty to serve all customers within the assigned territory. In exchange, the provider, normally referred to as a “utility,” is allowed the opportunity to earn a reasonable rate of return on “prudent” operations, the return being set by the regulators after administrative hearings. Usually, public utilities include energy, water, waste disposal, and transportation industries.

Since the 1970s, there has been a movement to “deregulate” segments of certain utility industries. The motivating idea has been a belief among some public policymakers that market forces are more efficient than governmental regulation in securing lower prices and fostering innovative new technologies. While results have varied from industry to industry, some critics have pointed to instances of increased price volatility and manipulation as well as a tendency towards consolidation rather than competition as reasons to retain governmental regulation.

The nature and extent of regulation varies from industry to industry. Generally, there is a certain amount of shared jurisdiction over public utilities by federal and state (and sometimes local) governmental bodies.

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The authority of these entities may overlap, and lines of demarcation between them may become blurred. Electric utilities are one of the most important types of public utility. They traditionally have been highly regulated but, in recent decades, have experienced varying degrees of deregulation.

Federal Regulation of Energy Companies

Federal Power Act of 1935

In the energy industry, regulation is largely divided along wholesale and retail lines. The federal government primarily regulates wholesale transactions while states generally oversee retail operations. Until 1927, state utility commissions regulated most aspects of electric utilities, including establishment of rates for interstate sales of electricity. In that year, the United States Supreme Court handed down a decision prohibiting state regulation of interstate electric rates on the grounds that such regulation created a burden on interstate commerce. However, no federal authority over interstate electric sales existed and, therefore, the ruling resulted in a regulatory gap. The Federal Power Act (FPA) of 1935 was enacted to address this situation. The FPA gave the federal government jurisdiction over transmission of electric energy in interstate commerce and the sale of electric energy at wholesale in interstate commerce.

In the 1970s, recessionary and inflationary pressures reduced electricity demand, and the resultant excess capacity in existing generation plants contributed to price increases to cover fixed operating costs. Additionally, foreign oil embargoes drove up the price of oil, the principal fuel used by many electrical utilities. Finally, environmental concerns, the prohibition of new natural gas usage for power generation, and nuclear power plant costs all led to increasing electricity prices for the first time in the industry's history.

In addition, alternative sources such as geothermal, solar, and wind were encouraged. Some state commissions began mandating that specific percentages of new power come from these renewable sources, even though the cost per kilowatt hour was higher. States also began implementing integrated resource planning programs to coordinate demand side management (DSM) and supply side management techniques with environmental projects and renewable energy initiatives.

Public Utility Regulatory Policies Act of 1978

In 1978, Congress passed the Public Utility Regulatory Policies Act (PURPA) in response to an ongoing energy crisis. Its goal was to reduce dependence on expensive foreign oil and to avoid repetition of the 1977 natural gas shortage by encouraging utilities to conserve gas and oil. This enactment created a new category of electric business: independent, unregulated companies known as qualifying facilities (QFs). These entities are permitted to build cogeneration plants that produce electricity and use otherwise wasted heat to generate steam. Facilities may also qualify by meeting specific energy requirements such as using prescribed types of renewable energy; for example, biomass, geothermal, solar, or wind. These QFs were granted the legal right to sell electricity to utilities at avoided cost. "Avoided cost" is the cost for the utility to self-generate or purchase power elsewhere.

About the time PURPA was enacted, traditional utilities were becoming reluctant to build new power plants due to declining demand, environmental concerns, and nuclear power problems. Concurrently, technological advances that utilize combined cycle natural gas turbines and circulating fluidized bed boilers allowed newer, smaller generating plants to be established more economically and with shorter lead times. Such conditions led to the rise of independent power producers (IPPs). These entities, also referred to as merchant power companies, build power plants for a fee and then sell the electricity to utilities at wholesale.

Energy Policy Act of 1992

Early in the 1990s, proponents of the competitive market approach initiated steps to extend it to the electric industry. Congress responded by establishing a new national energy policy embodied in the Energy Policy Act (EPAct). The intent was for the electric industry to move toward a fully competitive market system, with the Federal Energy Regulatory Commission (FERC) being responsible for most of the implementation. The EPAct granted exemptions from certain federal requirements for a corporation whose exclusive business is ownership and operation of a generating plant that sells its power at wholesale. Such an entity is known as an exempt wholesale generator. Thus, EPAct created the potential for significant deviations from the traditional, vertically integrated pattern that had characterized the electric utility industry for many decades. The evolution beyond the traditional, vertically integrated industry structure has also fostered the growth of wholesale power marketers and brokers. Marketers purchase electricity from generators and then resell it to a utility; brokers do not actually take title to power but instead match wholesale buyers and sellers for a fee.

However, for all these new entities, generators, and intermediaries alike to compete effectively in the wholesale market, they need access to the nationwide transmission grid, which generally is owned by the vertically integrated utilities. Therefore, EPAct authorized FERC to order transmission-owning utilities to open their lines to parties who desire to buy or sell electricity at wholesale. Thus, EPAct greatly expands FERC's jurisdiction over wholesale transactions. At the same time, EPAct provides that, "Nothing in this subsection shall affect any authority of any State or local government under State law concerning the transmission of electric energy directly to an ultimate consumer."

This array of federal actions prompted debate at the state level on how to promote greater wholesale and retail competition among power producers and led to steps in many states to authorize retail electric competition. Nevertheless, in the aftermath of the problems experienced in California in 1999 and 2000, a number of states, including Nevada, largely abandoned deregulation at the retail level.

Energy Policy Act of 2005

In the early 2000s, facing renewed political instability in the Middle East that affected energy fuel supplies, Congress again began attempting to craft an updated national energy policy. Efforts to produce a comprehensive bill were hampered, in part due to competing regional demands and concerns that some segments of the energy sector were seeking subsidies that were too generous. The 109th Congress finally passed the Energy Policy Act of 2005, which was signed by the President. Some critics maintained the legislation did little to decrease the demand for foreign fuels while supporters pointed to increased incentives for domestic energy production and tax credits to encourage development of renewable energy. Clearly, however, most parties felt more remained to be done if the U.S. was to have a modern, comprehensive energy policy.

Energy Independence and Security Act of 2007

With oil prices nearing \$100 per barrel and increasing concern about the impacts of global warming, Congress again devoted a great deal of attention to energy issues in 2007. The House of Representatives and the Senate passed energy bills with differing provisions. The final reconciled bill contained provisions increasing motor vehicle fuel efficiency standards and required use of biofuels such as corn ethanol and cellulosic ethanol. Increased appliance efficiency standards also were included. However, a key provision in the House bill to require 15 percent of all energy to come from renewable sources by 2020, along with an extension of tax credits for various renewables such as wind and solar, was deleted from the Senate bill in the face of a threatened presidential veto.

American Recovery and Reinvestment Act of 2009

A severe recession during 2008 and 2009 caused Congress to shift its consideration from crafting a sustainable national energy policy to seeing energy as an economic recovery tool. Massive federal stimulus packages were enacted that included large amounts for research, development, and deployment of a wide variety of renewable energy technologies and domestic transportation fuel resources. Judgments on the success of these programs have been mixed. A lingering weak economy has shifted concern to longer term impacts of a growing national debt, leading to debate about continuing subsidies for renewable energy projects. Concomitantly, greatly increased domestic production of natural gas due to technological developments such as “fracking” have kept energy prices low, further reducing political support for alternative domestic energy sources. Despite continuing instability in foreign oil-producing regions and the accompanying volatility in commodity prices, these relatively low energy costs and concern about the fiscal impacts of government subsidies will likely reduce pressure on Congress to develop an updated comprehensive national energy policy.

Clean Power Plan

In August 2015, President Barack H. Obama and the U.S. Environmental Protection Agency (EPA) announced the Clean Power Plan, which created the first-ever national standards to address carbon pollution from power plants. The EPA reported in 2009 that greenhouse gas pollution negatively affects Americans’ health and welfare. The EPA noted carbon dioxide (CO₂) is the most prevalent greenhouse gas pollutant, accounting for nearly three-quarters of global greenhouse gas emissions and, in 2013, 82 percent of U.S. greenhouse gas emissions. Fossil fuel-fired plants, such as coal, oil, and natural gas, made up 31 percent of U.S. total greenhouse gas emissions in 2013. Currently, fossil fuels continue to be key components of America’s energy future, even with the transition to clean energy.

The goal of the Clean Power Plan is to reduce carbon emissions from the U.S. power sector to 32 percent below 2005 levels by 2030. Section 111 of the Clean Air Act provides the EPA with the authority to set new performance standards using a “best system of emission reduction.” Under this authority, the EPA sets national emission performance rates for fossil fuel fired power plants.

The Clean Power Plan provides guidelines for the development, submittal, and implementation of state plans that establish standards for performance in order to implement the interim and final CO₂ emission performance rates. States have flexibility in developing their plans and can tailor them to meet their respective energy, environmental, and economic needs and goals. States must submit a

final plan, or an initial submittal with an extension request, by September 6, 2016. Final complete plans must be submitted no later than September 6, 2018.

On February 9, 2016, the U.S. Supreme Court stayed implementation of the Clean Power Plan pending the resolution of legal challenges to the program in court. Five different stay applications were filed by 29 states and state agencies and numerous industry groups.

State Regulation of Energy Companies

In Nevada, public utilities are under the jurisdiction of the Public Utilities Commission of Nevada (PUCN). The Commission consists of three commissioners appointed to four-year terms by the Governor. The commissioners are assisted by professional staff consisting of attorneys, engineers, analysts, and economists. The PUCN sets retail rates for natural gas and electricity, and decisions of the PUCN are appealable to the courts. The Consumer's Advocate of the Bureau of Consumer Protection within the Office of the Attorney General represents consumer interests before the PUCN.

The PUCN is charged with regulating public utilities in order to:

- Provide for fair and impartial regulation of public utilities;
- Provide for the safe, economic, efficient, prudent, and reliable operation and service of public utilities; and
- Balance the interests of customers and shareholders of public utilities by providing public utilities with the opportunity to earn a fair return on their investments while providing customers with just and reasonable rates.

The Commission is funded by a charge called the “mill assessment” on the gross operating revenues derived from intrastate operations of each public utility. A mill is one-tenth of one cent. The maximum mill assessment for the Commission is 3.50 mills; an additional assessment of 0.75 mills for the Consumer's Advocate also is authorized.

STATE ENERGY POLICY

Nevada has a statutorily enacted energy policy statement in *Nevada Revised Statutes* 701.010, which is set forth below:

Energy Policy
<ol style="list-style-type: none"> 1. The Legislature finds that: <ol style="list-style-type: none"> (a) Energy is essential to the economy of the State and to the health, safety and welfare of the people of the State. (b) The State has a responsibility to encourage the maintenance of a reliable and economical supply of energy at a level which is consistent with the protection of environmental quality. (c) The State has a responsibility to encourage the utilization of a wide range of measures which reduce wasteful uses of energy resources. (d) The State and the public have an interest in encouraging public utilities to promote and take actions toward energy conservation.

Energy Policy (*continued*)

- (e) Planning for energy conservation and future energy requirements should include consideration of state, regional and local plans for land use, urban expansion, transportation systems, environmental protection and economic development.
 - (f) Government and private enterprise need to accelerate research and development of sources of renewable energy and to improve technology related to the research and development of existing sources of energy.
 - (g) While government and private enterprise are seeking to accelerate research and development of sources of renewable energy, they must also prepare for and respond to the advent of competition within the electrical energy industry and are, therefore, encouraged to maximize the use of indigenous energy resources to the extent competitively and economically feasible.
 - (h) Prevention of delays and interruptions in providing energy, protecting environmental values and conserving energy require expanded authority and capability within State Government.
2. It is the policy of this State to encourage participation with all levels of government and private enterprise in cooperative state, regional and national programs to assure adequate supplies of energy resources and markets for such energy resources.
 3. It is the policy of this State to assign the responsibility for managing and conserving energy and its sources to agencies whose other programs are similar, to avoid duplication of effort in developing policies and programs for energy.

To implement this policy, the Legislature has created a number of programs and entities, including:

- The requirement of a comprehensive State energy plan developed by the Director of the Office of Energy in the Office of the Governor that promotes energy projects to enhance economic development in the State, encourages use of renewable energy, and fosters conservation of energy;
- Triennial integrated resource planning requirements designed to increase supply and decrease demand based on forecasts of future power usage while providing for the best combination of sources to meet those projected needs;
- A renewable portfolio standard (RPS) that requires power suppliers to gradually increase the percentage of electricity derived from renewable sources and energy efficiency measures from 20 percent in 2016 (the current level) to 25 percent in 2025;
- Incentive programs for installation of solar, wind, and small-scale waterpower generation systems; and
- A net metering program that allows customers to use renewable energy systems to generate up to 1 megawatt (MW) of power for which the customer receives credit from the utility.

In 1997, the Legislature authorized a transition to a competitive retail environment, which was refined in 1999. In the aftermath of the western energy crisis in 1999 and 2000, that process was first delayed and then largely reversed in 2001. However, large customers who use more than 1 MW of power can secure their own power sources if they meet certain conditions.

Several mining companies built their own power plants under these provisions. Newmont Mining Corporation built a 200-MW coal-fired facility near Battle Mountain, while Barrick Gold constructed a 115-MW combined cycle natural gas plant ten miles east of Reno.

In the first decade of the new century, the Legislature continued to refine policies fostering the growth of renewable energy and energy efficiency by enhancing existing programs and incentives and adopting new ones designed to encourage more use of clean, domestic energy sources.

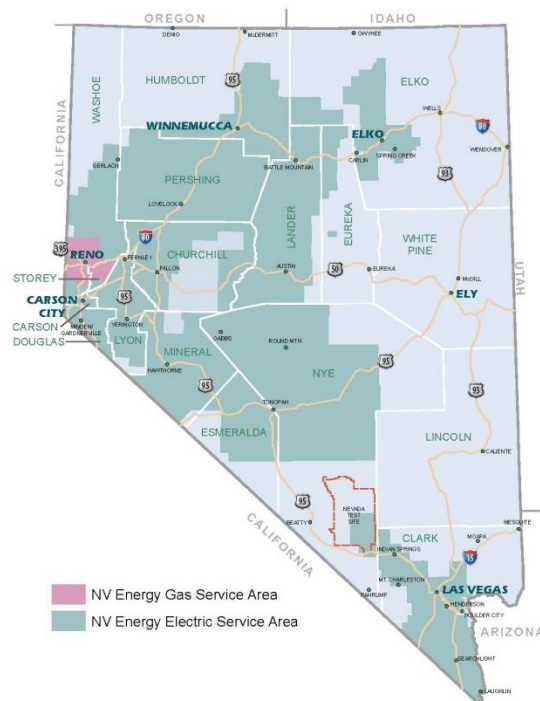
Responding to the severe economic crisis, the 2009 Legislature focused policy directives on stimulating “green energy” jobs and on increasing the amount of renewable energy generated in Nevada, both for domestic consumption and for export, as part of long-term efforts to diversify the State’s economy.

STATE ENERGY UTILITIES

Formerly there were two major electric utilities in the State: Nevada Power Company in the southern portion of the State and Sierra Pacific Power Company in the north. These companies merged in 1999 and now both operate under the name of NV Energy. In May 2013, NV Energy was acquired by MidAmerican Energy Holdings Company. Southwest Gas Corporation supplies natural gas in the south, as does NV Energy in the north. Additionally, there are several rural electrical cooperatives and power districts. Formation of cooperatives and power districts must be approved by the PUCN but, thereafter, the Commission has little authority over these entities; instead, they are answerable to their members through an election process.

NV Energy

NV Energy covers a service territory of 45,592 square miles. The company supplies electricity to 2.4 million citizens, as well as some 40 million tourists each year. In 2007, Nevada reached its all-time peak in electric usage of 1,743 MW in northern Nevada and 5,866 MW in southern Nevada.



Source: NV Energy, http://www.nvenergy.com/brochures_arch/NVEnergy_Service_area_map.pdf.

Southwest Gas Corporation

Southwest Gas Corporation is an investor-owned natural gas enterprise headquartered in Las Vegas, serving over 1.9 million customers in Arizona, Nevada, and parts of northeastern and southeastern California. The company has been one of the fastest growing natural gas suppliers for more than ten consecutive years, adding as many as 81,000 new customers per year at times. As of December 2014, 37 percent of Southwest Gas customers were located in Nevada. As with the electric utilities, recent economic conditions have slowed the growth rate.

POTENTIAL ENERGY ISSUES FOR THE FUTURE

Generation Facilities

While Nevada and the rest of the western states presently enjoy adequate power supplies, concerns exist about the need for additional generation in the region. Until the recent development of economic problems, Nevada was one of the fastest growing states in the country. As conditions improve, pressure on existing generation resources will increase. Concerns about the impacts of global warming have led to the cancelation of a number of proposed coal-fired power plants in the region, including several major projects in eastern Nevada, causing planners to stress the need for development of new sources of electric power. Responding to these challenges, Nevada has made significant progress with solar installations and new geothermal plants. Because of legislative policy initiatives, Nevada has also made significant strides with energy efficiency measures, helping to lessen the need for more electricity.

In compliance with Senate Bill 123 (Chapter 490, *Statutes of Nevada 2013*), NV Energy must retire or eliminate at least 800 MW of coal-fired generating facilities on or before December 31, 2019. In order to meet this requirement, NV Energy retired Units 1 through 3 of the Reid Gardner Station (330 MW) near Moapa in 2014. Unit 4 (255 MW) of the Reid Gardner Station is planned for retirement by December 31, 2017, and the Navajo Generating Station (2,250 MW) is planned for elimination in December 2019. NV Energy also must construct or acquire and own 550 MW of replacement planning capacity to replace retired coal generation. To meet this requirement, the company purchased Las Vegas Cogeneration Unit 2 (224 MW) in 2015 and will acquire Sun-Peak Generating Unit (222 MW) in mid-2016.

Under the provisions of S.B. 123, NV Energy also must acquire or construct 50 MW of renewable resources and issue three 100 MW request for proposals for renewable energy. The PUCN approved NV Energy's request to build a 15 MW photovoltaic generating facility at Nellis Air Force Base. This project broke ground in March 2015. NV Energy is in the process of identifying opportunities for another 35 MW.

Net Metering

Nevada has abundant solar energy potential. Installation of rooftop solar and other distributed generation (DG) systems continues to increase in Nevada. The Solar Energy Industries Association reported Nevada ranks fifth in the country in installed solar capacity. There is enough solar energy

(1,240 MW) installed to power 191,000 homes. The Legislature addressed rooftop solar and DG systems in 1997 when they first came to market by creating a billing system, known as “net metering,” to encourage the installation of larger DG systems on farms and ranches. Net metering allows residential and commercial customers who generate their own electricity with rooftop solar or other DG systems to receive credit at the full retail electric rate for any excess electricity they generate and sell to their local electric company via the grid. Over the years, the Legislature has made significant changes to net metering. Most recently, the 2015 Legislature passed S.B. 374 (Chapter 379, *Statutes of Nevada*), which changed the aggregate capacity limit for net metering from 3 percent of the total peak capacity for all utilities to a flat cap of 235 MW. The measure also required the development of a new net metering tariff to replace the existing net metering tariff after the 235 MW cap was met, which occurred in Fall 2015.

As directed under the provisions of S.B. 374, the PUCN established new net metering rules and rates on December 23, 2015. The PUCN’s order created new classes of residential and small commercial general service. On February 17, 2016, the PUCN issued a modified order that changed the structured transition to cost-based rates for net metering customers from the 5 years in the original order to 12 years.

LOW-INCOME ENERGY ASSISTANCE PROGRAMS

In 2001, the Legislature established the Universal Energy Charge (UEC) to provide assistance with rising power bills to low-income consumers. The UEC is a charge of 3.30 mills on each therm of natural gas sold at retail for consumption within Nevada, and 0.39 mills on each kilowatt-hour of electricity that the retail customer purchases for consumption within Nevada. The UEC does not apply to natural gas sold as a source of energy to generate electricity, or to any kilowatt of electricity used in electrolytic-manufacturing processes. Furthermore, the charges do not apply to public and municipal utilities, rural cooperatives, or general improvement districts. A quarterly cap of \$25,000 is placed on the charges for each single retail customer or customers under common ownership and control. This cap affects commercial and industrial retail customers, not smaller residential customers.

The proceeds are remitted to the PUCN each quarter. The Commission is authorized to retain up to 3 percent of the amount collected as an administrative charge. Utilities may pass the charge through to ratepayers, provided it is set forth as a separate item on the utility bill. The average monthly UEC incurred by a typical residential customer is approximately \$0.60 to \$1.00.

DISTRIBUTION OF UNIVERSAL ENERGY CHARGE REVENUES

Seventy-five percent of the amount collected from the UEC is distributed to the Division of Welfare and Supportive Services (DWSS), Department of Health and Human Services, to assist eligible households in paying for electricity and natural gas. The Division is authorized to use not more than 5 percent of the funds distributed to it for administrative expenses. The remaining 25 percent of the money is distributed to the Housing Division, Department of Business and Industry, for programs of energy conservation, weatherization, and energy efficiency. The Housing Division may use not more than 6 percent of the money distributed to it for administrative expenses. Additionally, 30 percent of

any unspent and unencumbered DWSS UEC funds must be transferred to the Housing Division at the end of a fiscal year for further energy conservation and efficiency aid to qualifying residential customers. Both the DWSS and the Housing Division limit eligibility for assistance to households with incomes less than 110 percent of the federally designated poverty level.

RELATED PROGRAMS

The DWSS also administers the federally funded Low Income Home Energy Assistance Program (LIHEAP). This program is available to households with incomes less than 150 percent of the federally designated poverty level. The program year begins July 1, and applications are accepted through June 30 or until funds are exhausted, whichever comes first. Eligible households are awarded assistance once each program year. Additionally, the utilities have established funds composed of voluntary contributions from customers and matching company donations for the assistance of low-income consumers.

WEBSITE REFERENCES

- Public Utilities Commission of Nevada: <http://puc.nv.gov>.
- Nevada's Office of Energy: <http://energy.nv.gov/>.
- Federal Energy Regulatory Commission: <http://www.ferc.gov/>.
- U.S. Energy Information Administration: <http://www.eia.gov/>.

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GLOSSARY OF ACRONYMS

Acronyms are a convenient shorthand developed in many subject areas. The following glossary contains some of the most common acronyms encountered in the energy field.

BCP	Bureau of Consumer Protection
Btu.....	British thermal unit
CRC.....	Colorado River Commission
DG	distributed generation (system)
DOE.....	United States Department of Energy
DSM	demand side management
EPA	U.S. Environmental Protection Agency
EPAct.....	Energy Policy Act of 1992
F&PP	fuel and purchase power
FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act of 1935
IOU	investor-owned utility
IPP	independent power producer
ISO	independent system operator
kW.....	kilowatt
kWh.....	kilowatt hour
LIHEAP	Low Income Home Energy Assistance Program
MW	megawatt
MWh.....	megawatt hour
NERC.....	North American Electric Reliability Corporation
NOPR.....	Notice of Proposed Rulemaking
OASIS	Open Access Same-Time Information System
PEC	Portfolio Energy Credit
PUCN.....	Public Utilities Commission of Nevada
PUHCA	Public Utility Holding Company Act of 1935
PURPA	Public Utility Regulatory Policies Act of 1978
QF	qualifying facility
RPS.....	Renewable Portfolio Standard
RTO.....	Regional Transmission Organization
SNWA	Southern Nevada Water Authority
TMWA	Truckee Meadows Water Authority
TRED	Temporary Renewable Energy Development Program
UEC.....	Universal Energy Charge
WSCC	Western Systems Coordinating Council