

***The Regulatory Framework for Utilities:  
Canada vs. the United States  
October 2013***



Industry Study

# *The Regulatory Framework for Utilities: Canada vs. the United States*

*A Rating Agency Perspective*

OCTOBER 2013



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# The Regulatory Framework for Utilities: Canada vs. the United States

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## Executive Summary

### THE REGULATORY FRAMEWORK FOR UTILITIES: CANADA VS. THE UNITED STATES

The following study is a thorough review of the complex regulatory environment that exists for utilities throughout North America. For companies in this sector, the regulatory framework is typically the primary driver of business risk. However, this framework is all but uniform, and can differ vastly from one jurisdiction to the next. Each state and province has its own regulatory regime, thereby exposing utilities to varying degrees of risk. In addition, there are pronounced differences between Canada and the United States. As a result, when assessing regulatory risk, one must consider a myriad of determinants and considerations.

### TEN KEY CONSIDERATIONS

DBRS has identified the following ten considerations to assess the regulatory environment in a state or province: (1) deemed equity; (2) allowed return on equity (ROE); (3) energy cost recovery; (4) cost of service vs. incentive regulation mechanism; (5) capital cost recovery; (6) political interference; (7) retail rate; (8) stranded cost recovery; (9) rate freeze; and (10) market structure. Adverse changes in any one or more of these factors can have negative credit implications and potentially trigger rating actions.

### CANADA VS. THE UNITED STATES

#### *A Marked Contrast in Regulatory Structure*

Even though each state and province has its own regulatory regime, there are still notable differences in overall regulatory trends. DBRS finds that regulation north of the border has evolved and developed at a much slower pace than that in the United States, due to Canada's unique geographic, demographic, and social circumstances.

#### *Higher Allowed ROE and Deemed Equity Base in the United States*

The allowed ROE and deemed equity base have typically been higher in the United States than in Canada. However, when comparing the actual returns generated by non-provincially owned utilities in the United States and Canada, actual ROEs have been relatively comparable between the two nations.

#### *Greater Regulatory Independence in the United States*

The extent of a regulator's independence varies dramatically from one jurisdiction to the next. In the United States, a handful of states have been exemplars in protecting regulators against government encroachment by entrenching its authority in the Constitution. On the other hand, many key utilities in Canada are wholly owned by their respective provincial governments, which often face challenges in striking a balance between commercial interest and political passions. DBRS views less government involvement as providing greater regulatory independence and is therefore less risky.

#### *Similar Levels of Transparency in the Regulatory Process*

Rate case proceedings are similar in both Canada and the United States. Access to information legislation generally provides public disclosure on non-proprietary matters, including rate orders, investigations, and transcripts of hearings. In addition, the rise of consumer advocacy in both countries has introduced a new level of complexity in the rate making process.



## **FIVE KEY HIGHLIGHTS**

### **(1) Growing Prevalence of Alternative Regulation**

The traditional cost of service model is subject to considerable regulatory lag, the use of tools such as revenue true-ups and trackers/riders have pronounced the time to recover costs. As a result, utilities and regulators are increasingly turning to alternative regulation to recover costs.

### **(2) Interrelationship Among Considerations**

Since the ten considerations are interrelated in certain respects, it is informative to consider some of them together rather than in isolation. More specifically, deemed equity and allowed ROE go hand-in-hand in determining the overall returns for a utility. The use of cost of service or incentive regulation mechanism is associated with cost recovery, as is the use of various capital cost recovery and energy cost recovery mechanisms. Finally, market structure, stranded costs, and rate freezes are often linked together when a state pursues market deregulation.

### **(3) Fully Regulated States Generally Have Higher Rankings**

The lowest risk is associated with states and provinces that are fully regulated. From a credit perspective, fully regulated utilities face lower credit risk than those with exposure to non-regulated activities, since returns to debtholders are accounted for in regulator-approved rates. In addition, utilities in these states are more likely to be vertically integrated, thereby lowering the risk profile of the company by creating a natural hedge against volatile electricity prices.

### **(4) Growth of Renewable Energy**

A majority of the jurisdictions in North America have renewable portfolio standards in place. Each state and province sets its own target level of renewable generation and determines which sources of energy qualify. In the United States, wind is poised to become the leading source of renewables by the year 2040, followed by hydroelectric power, and solar energy. In Canada, hydroelectricity is used extensively and dominates production in several provinces.

### **(5) Energy Security and the Emergence of Cyber Terrorism**

With an increasing number of cyber attacks on utilities and their power grids, security has become an issue. Weaknesses in the current power grid expose the power supply of Canada and the United States to a large scale cyber attack, which could cause widespread service disruption. Not surprisingly, defensive measures are being implemented at a rapid pace. The United States Department of Homeland Security and the North American Electric Reliability Corporation (NERC) are jointly working together to maintain power reliability to preempt future assaults.



## Introduction and Approach

### FOCUS ON ELECTRIC UTILITIES

This study focuses exclusively on the electric utilities sector. DBRS assessed the regulatory risk in 61 jurisdictions in North America (50 states and Washington, D.C. in the United States, as well as ten provinces in Canada). The data is based on information collected from state public utility commissions, provincial energy boards, and over 150 investor-owned utility companies.



### THE TEN CONSIDERATIONS

DBRS evaluates regulatory risk based on the ten key considerations detailed below. The states and provinces are ranked on a five point scale (excellent, very good, satisfactory, below average and poor) for each of the considerations defined.

**(1) Deemed Equity:** Deemed equity is the percentage of equity investment in the rate base on which a utility can earn a return. In general, the higher the deemed equity portion, the higher the earnings. In general, utilities tend to maintain their actual capital structure in line with the regulatory capital structure. As such, the higher the deemed equity set by the regulator, the more financial flexibility a utility can have.

**(2) Allowed ROE:** Allowed ROE is a measurement of regulated returns on the deemed equity portion of the rate base. The regulator sets an allowed ROE based on a utility's business risk level (which is assessed by the regulator) relative to a benchmark utility within the jurisdiction. In a supportive regulatory environment, utilities tend to achieve their actual ROE in line with the allowed ROE. In an unsupportive regulatory regime, utilities often generate lower actual ROE than the allowed ROE.

**(3) Energy Cost Recovery:** The timeliness and extent to which fuel and purchased energy costs (F&PE) are recovered from ratepayers is important when assessing the regulatory system in a jurisdiction. DBRS considers the following factors: (i) whether F&PE costs are fully passed through to the customers; (ii) how often a utility is allowed to adjust the F&PE costs in retail rates charged to customers; and (iii) if there is a mechanism within a jurisdiction to allow utilities to make F&PE cost adjustments with little or no regulatory review. In addition, DBRS reviews the generation mix within a certain market. A high power cost market could have an impact on the utility's ability to recover the purchased power costs in a timely manner.

**(4) Cost of Service (COS) vs. Incentive Regulation Mechanism (IRM):** In general, under COS, regulated utilities are allowed to recover prudently incurred operating costs and earn a reasonable return on their investment. Under IRM, revenue requirements for the years are based on a COS base year, adjusted for inflation (CPI), and a productivity factor, which is set by the regulator. This forces a utility to maintain its operational efficiency in order to achieve allowed ROE. In addition, DBRS considers the length of an IRM period between the COS years. A higher score is given for a shorter IRM period.

**(5) Capital Cost Recovery (CCR):** In assessing CCR, DBRS focuses on the likelihood of a utility's capital expenditures to be added to its rate base and the timing of such addition. In particular, the following factors are considered: (i) whether the capital expenditure is pre-approved by the regulator; (ii) whether the spending is allowed to be added to the rate base during the construction or only after the project is completed; (iii) the level of upfront capital spending required without regulatory approval; (iv) the degree of regulatory lag and uncertainty with respect to CCR; (v) whether there is a mechanism in place that allows a utility to recover capex spending between rate cases; and (vi) whether or not there is a reasonable mechanism to deal with cost overruns.



(6) **Political Interference:** Political interference refers to political risk that could occur within a jurisdiction. Political interference could be in the following forms: (i) influence on the regulator's ability to independently and impartially arrive at a decision; (ii) passing legislation to override a decision made by the regulator; and (iii) the regulator being elected instead of being appointed.

(7) **Retail Rate:** Retail rate refers to the rates (energy cost, transmission cost and distribution charges) a utility can charge its residential customers. A key function of a regulator is to assess rate increase requests by utilities. By law, the regulator must allow a utility to earn a "just and reasonable return," but also balance the interests of both a utility and its consumers. During periods of relatively high rates or a weak economic environment, the regulator may be reluctant to allow the utility to raise rates in order to recover its full costs.

(8) **Stranded Costs:** Stranded costs occur when a utility has already incurred costs (F&PE, operating cost, or capital spending) and faces uncertainties as to when it can recover these costs. In some cases, stranded costs are written off when it becomes certain that these costs cannot be recovered. DBRS looks at the following factors: (i) the existence of stranded costs and their magnitude; (ii) the possibility of recovery of these stranded costs; (iii) the frequency of write-downs; and (iv) the time it takes to recover these costs.

(9) **Rate Freeze:** A rate freeze refers to a period of time when utilities are prevented from changing rates. During the rate freeze period, utilities may not pass through increases in operating and energy costs. The longer or more frequent the rate freezes, the higher the risk for the utility.

(10) **Market Structure (Deregulation):** Market structure refers to how the electricity market functions within the regulatory regime. DBRS particularly focuses on whether the market is deregulated and the degree to which the market has been deregulated. The lowest-risk utilities will have fully-integrated operations (generation, transmission, and distribution), which are highly regulated.



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## Canada vs. the United States

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### A MARKED CONTRAST IN REGULATORY STRUCTURE

#### *Canada – the United States: The Market Structure is Considerably Different*

Compared to the states in the United States, the regulatory framework of the Canadian provinces has evolved and developed at a much slower pace. Many entities in Canada remain provincially-owned versus investor owned. In addition, several jurisdictions in the United States are deregulated with services entirely unbundled (generation, distribution, and transmission). Furthermore, the wholesale generation market in several regions in the United States is much more advanced than Canada. The Canadian provinces are much more isolated and self-reliant for power needs.

#### *Allowed ROE and Deemed Equity Base*

The allowed ROE and deemed equity base have typically been higher in the United States than Canada. However, when comparing the actual returns generated by utilities in the United States and Canada, actual ROEs have been relatively comparable between the two nations. This difference in the United States arises from regulatory lag which is far less prevalent in Canada.

#### *Generation Drives Policy*

The generation market is determined by a number of fundamental drivers that ultimately impact the landscape in which utilities operate. For instance, provinces such as Newfoundland and Labrador, Manitoba, British Columbia, and Québec have been geographically endowed with a wealth of naturally occurring waterways, enabling them to generate over 95% of their power from hydroelectricity. As a result of this geographic advantage, there is little need to rely on other sources such as fossil fuels. The extensive use of hydroelectricity virtually eliminates risks associated with rising fuel cost and retail rates, so there is no need for extensive regulation on this front. In contrast, utilities in the south are pressed to develop regulatory policies to match their fossil fuel-dependent capacity and cost recovery needs.

#### *Regulation as a Function of Market Structure*

In Canada, the market structure is tightly controlled by a single provincial regulator with a fully integrated approach. In contrast, in the United States, the regulatory regime is more fragmented with wholesale generation, and interstate generation falls within the jurisdiction of the Federal Energy Regulatory Commission (FERC). Furthermore, the distribution and retail rates are controlled by the state regulator. In addition, capex on transmission is planned by regional independent operators in the United States, whereas in Canada, the province is in charge of all key planning decisions.

### REGULATORY INDEPENDENCE

#### *Canadian Provincial Energy Boards Have Less Independence*

Across Canada, there is considerably more government influence in the sector. Decisions of the regulators can be appealed to the Cabinet, providing the government of the day with more sway over policy decisions. In addition, the majority of the utilities are government owned, making it harder to strike a balance between commercial interest and political passions. In contrast, decisions of the regulator in the states can only be appealed to a federal court, leaving fewer options for the state government to interfere.

#### *United States Constitutional Protection and Appointment May Improve Political Independence*

DBRS notes that political independence of the regulatory body can be improved if (i) the body is constitutionally protected; (ii) commissioners are appointed; and (iii) term of office for commissioners is longer. Embedding the authority of the regulator in State Constitution makes it less likely for legislative encroachment due to the stigma associated with such actions. Appointing commissioners instead of electing them makes those in office less attuned to public opinion and more in line with their mandate to balance both utility and consumer interests. Finally, a longer term of office also enhances a commissioner's impartiality for reasons similar to the second point.



## TRANSPARENCY IN THE REGULATORY PROCESS

### *Consumer Advocacy on the Rise*

Growth of consumer advocacy in the utilities regulation space has introduced a new level of complexity in the rate making process. To ensure ratepayers are satisfied with the quality of service provided, numerous states have introduced public participation and have put more weight on the testimonies made on behalf of these parties.

### *United States Sunshine Laws and Access to Information*

Access to information legislation, also known as “sunshine laws”, makes state commissions more accessible to the public by empowering citizens to request non-proprietary information from the office. Disclosed information includes tariff formulas used in price determination, rate orders, ongoing investigations, and transcripts of hearings. In Canada, citizens can also gain open access to all information under the *Access to Information Act*.

### *Disclosure of Rate Proceedings is Similar*

Disclosure with respect to the rate setting process is very similar in both Canada and the United States. Regulatory information is often made available through the utilities or public commissions.



## PERSPECTIVE ANALYSIS

The table below outlines some of the key similarities and differences between the regulatory framework in Canada and in the United States from multiple perspectives.

Perspective	Canada	United States
Generation	<ul style="list-style-type: none"> <li>Higher dependence on hydroelectricity</li> <li>Movement in Atlantic to clean energy</li> </ul>	<ul style="list-style-type: none"> <li>Higher dependence on fossil fuels</li> <li>Movement toward renewable wind energy</li> <li>More independent power producers</li> </ul>
Transmission	<ul style="list-style-type: none"> <li>Regulation on provincial basis</li> <li>Most interconnections flow south to states</li> </ul>	<ul style="list-style-type: none"> <li>Regulation on federal basis</li> <li>Significant interconnectivity between states</li> </ul>
Distribution	<ul style="list-style-type: none"> <li>Regulated on a provincial basis</li> <li>Generally lower deemed equity figures and allowed ROEs</li> <li>Limited number of companies; most are restricted to one province</li> </ul>	<ul style="list-style-type: none"> <li>Regulated on a state basis</li> <li>Generally higher deemed equity figures and allowed ROEs</li> <li>Multiple distribution companies; companies extend across borders</li> </ul>
Wholesale Markets	<ul style="list-style-type: none"> <li>Fewer hubs; limited to two markets, AESO (Alberta) and IESO (Ontario)</li> <li>Regulated on a provincial basis</li> </ul>	<ul style="list-style-type: none"> <li>Regulation on federal basis</li> <li>Coordinated by RTO (Regional Transmission Organization) and ISO (Independent Systems Operator) electricity trading hubs</li> <li>Greater liquidity driven by more hubs</li> </ul>
Reliability	<ul style="list-style-type: none"> <li>Oversight by NERC</li> <li>Regions generally encompass only single provinces (except the Maritimes region)</li> </ul>	<ul style="list-style-type: none"> <li>Oversight by NERC</li> <li>Regions span across several states</li> </ul>
Ratepayers	<ul style="list-style-type: none"> <li>Lower rates in general</li> <li>No retail choice (except in Alberta and Ontario)</li> </ul>	<ul style="list-style-type: none"> <li>Higher rates in general</li> <li>Retail choice available in a number of deregulated states</li> </ul>
State/Provincial Regulator	<ul style="list-style-type: none"> <li>Most oversee generation, transmission and distribution</li> <li>Regulatory board members are appointed</li> </ul>	<ul style="list-style-type: none"> <li>Oversee distribution</li> <li>Commissioners may be elected or appointed, depending on state</li> </ul>
Equity Investors	<ul style="list-style-type: none"> <li>Lower cost of equity capital</li> <li>Government may be sole investor in the case of crown corporations</li> </ul>	<ul style="list-style-type: none"> <li>More investor-owned utilities</li> </ul>
Debt Investors	<ul style="list-style-type: none"> <li>Strength of credit highly influenced by the province</li> </ul>	<ul style="list-style-type: none"> <li>Many privately owned utilities with ratings dependent on structure of regulatory regime and structure of the corporation</li> </ul>



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## Trends in the Industry

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### GROWING PREVALENCE OF ALTERNATIVE REGULATION

#### *Limitations in Traditional Cost of Service Model*

Although the traditional cost of service model is central to the regulatory process, it does not always provide utilities with the ideal timeliness in cost recovery. A combination of declining revenue growth, energy efficiency requirements, escalating energy costs, and other factors have caused pronounced deficiencies between actual and allowed ROE. The regulatory lag associated with the traditional cycle of filing a general rate case can cause large scale deviations from the allowed ROE. At the same time, delays in recovering these additional costs raise the risk level for utilities.

#### *Alternative Regulation Alleviates Risk*

In response, many utilities and regulators are experimenting with alternative regulation to help improve timeliness. Each state and province has its own alternative regulatory mechanisms to mitigate the extent of regulatory lag. In addition to providing utilities with relief for costs, certain types of alternative regulation may also reduce the frequency of general rate cases.

#### *Benefits Accrue to All Parties Involved*

These mechanisms benefit not only the utility and its investors, but also benefit the regulator and taxpayers in the form of reduced public hearing costs. It is therefore not surprising that alternative regulation is becoming increasingly prevalent in North America.

### THE DECLINE OF COAL

#### *Coal as a Member of the Fuel Mix*

With coal accounting for roughly 48% of the United States electricity generation in 2012, it continues to serve as the largest portion of the United States fuel mix. In contrast, coal plays a less significant role in Canada; given the plethora of hydroelectric capacity in place, coal accounts for only 15% of Canada's electricity production.<sup>1</sup> Coal faces a secular decline as an electricity source in the face of (i) pressure toward more environmentally friendly renewable sources; and (ii) the rise of natural gas caused by the abundant supply and low price.

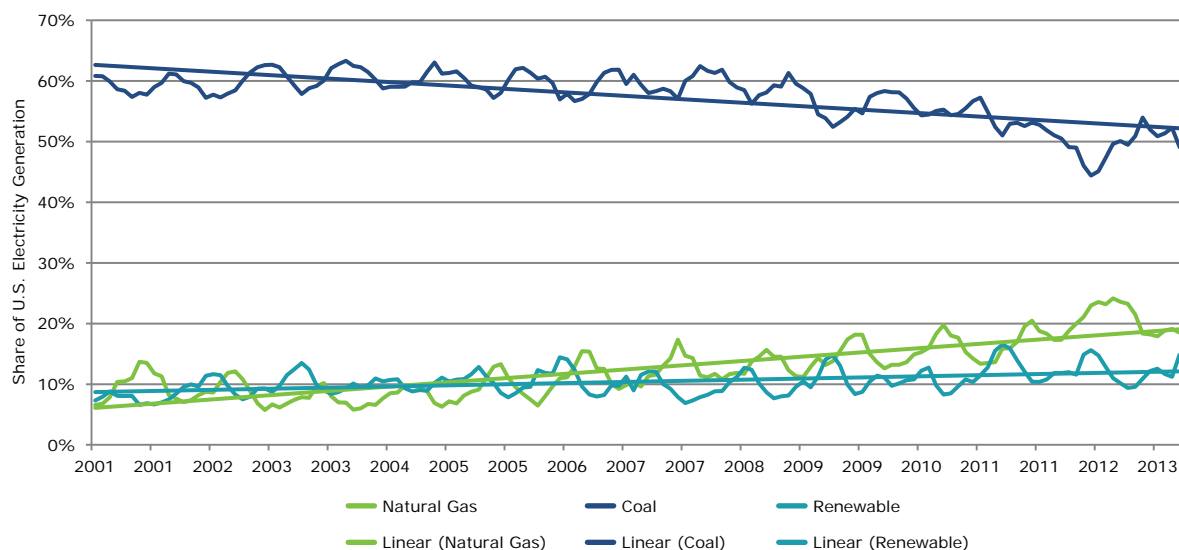
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1. Source: *Greenhouse Gas Emission Regulations*, Environment Canada, 2013  
(<http://ec.gc.ca/cc/default.asp?lang=En&n=E907D4D5-1>).





### United States Electricity Generation (% of Total)



Source: EIA.

### *Coal Remains Out of Favour in the United States*

Coal, as a percentage of the United States electricity generation output, has been in long term decline since 2000. Natural gas has taken the majority of this share from coal. Natural gas is viewed as the cleaner source of power with a reduced carbon footprint. In addition, given coal's high carbon footprint, it has faced considerable opposition from numerous groups, making it increasingly difficult to build new greenfield facilities and/or upgrade existing facilities.

### *Threat of EPA Regulation in the United States*

Potential action by the United States Environmental Protection Agency (EPA) remains a major area of concern for the future of coal. In June 2013, legislation passed requiring the EPA to work with states and relevant agencies to develop carbon emission regulations for new and existing power plants by 2016.<sup>2</sup> While this legislation has a relatively long time span, the implications on coal power plants could be significant. The potential for adverse regulation has left utilities contemplating whether to shut down coal power plants or retrofit existing plants.

### *The Future of Coal*

Due to the high costs associated with the replacement of coal generation, coal will remain a major part of the fuel mix in the United States for the foreseeable future. Furthermore, advancements in clean coal technology could enable coal to retain its dominant position indefinitely. Clean coal refers to various technologies that assist in mitigating the emissions from burning coal for electricity generation such as (1) carbon capture and storage and (2) conversion of coal to a synthetic gas. Both methods reduce the carbon footprint to a level that is competitive with other technologies.

2. Source: *Power Sector Carbon Pollution Standards* (Office of the Press Secretary), The White House, 2013  
(<http://www.whitehouse.gov/the-press-office/2013/06/25/presidential-memorandum-power-sector-carbon-pollution-standards>)



## GROWTH OF RENEWABLE ENERGY

### *A Majority of States and Provinces Have a Mandate to Grow Renewable Resources*

Thirty states and Washington, D.C. have renewable portfolio standards (RPS) in force. In Canada, British Columbia, Alberta, Ontario, Nova Scotia, and Québec all have mandatory targets. Each state or province sets its target level of renewable generation and determines which sources of energy qualify, such as wind, solar, geothermal, and others. For example, California has a target of 33 percent by 2020, comprised of solar, wind, biomass, geothermal, landfill gas, municipal solid waste, small hydro, biodiesel, anaerobic digestion, and marine. In addition, California's compliance mechanisms permit credit trading under certain restrictions.

### *Renewable Energy Sources Will Account for 20% of Total Capacity in the United States*

In the United States, almost all renewable capacity additions will come from sources other than hydroelectric power. Wind will be the leading source of renewables, surpassing hydropower (second place) by 2040. Solar energy is third, and is expected to lead all sources in growth. Other less significant sources of capacity include biomass, geothermal, and municipal solid waste/landfill gas. Nuclear is unlikely to see considerable growth as the process of approving new facilities is lengthy and complex. Furthermore, existing facilities will be decommissioned largely offsetting the impact of new capacity.

### *Hydroelectricity is a Major Source of Power in Canada*

Canada is one of the world's largest producers of hydroelectricity, with a vast network of dams generating over half the electricity in the country. Specifically, the provinces of British Columbia, Manitoba, Québec, and Newfoundland and Labrador produce over 90% of their power from hydroelectricity. The extensive use of renewable hydroelectric power in Canada is a stark contrast from the United States, where coal continues to dominate as the principal fuel source and the use of hydroelectric power is insignificant.

### *Growth in Wind Generation in Canada*

Wind power remains a popular technology for politicians and regulators with respect to achieving long term goals to increase renewables. Wind power is expected to lead all other renewable sources in absolute growth over the next decade. This technology has seen its costs fall considerably over the last decade, but remains uncompetitive with traditional forms of power generation. Furthermore, this technology requires significant subsidies to remain competitive.

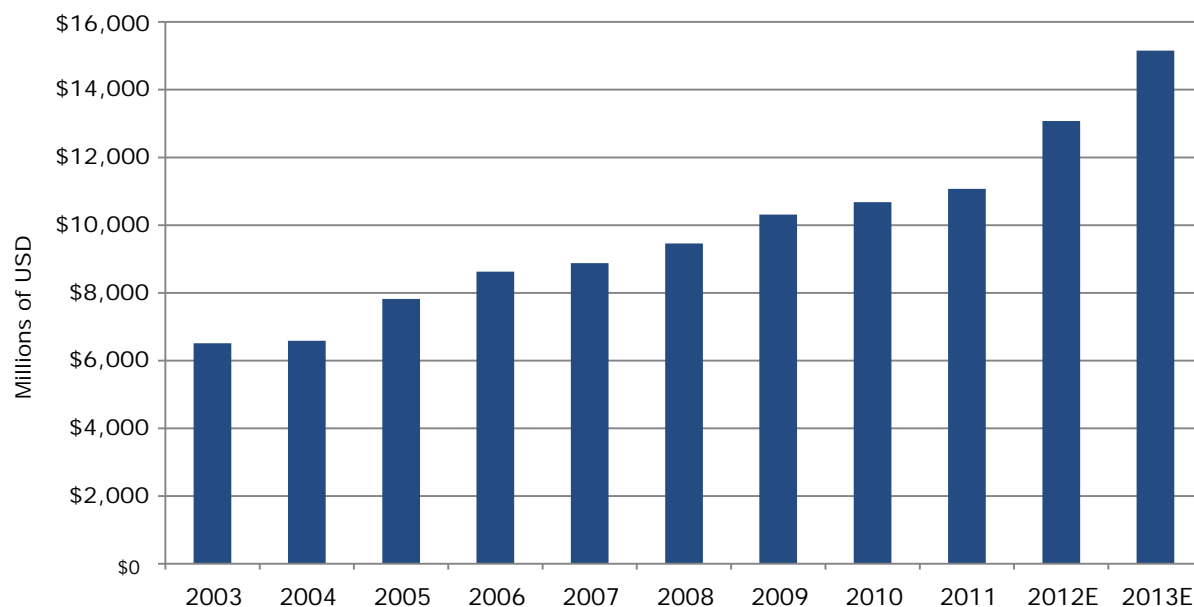
## RIISING CAPITAL EXPENDITURE ON TRANSMISSION

### *Massive Investments in the Transmission Grid Expected*

DBRS expects considerable investments in the transmission grids throughout North America for the foreseeable future. This growth will be attributable to (1) refurbishment and replacement of existing infrastructure, which has received significant underinvestment over the past 40 years, and will add over 5% per year; (2) population growth, which will require an annual increase of transmission capacity of approximately 1% per year; and (3) upgrades and new technology, such as smart grid technology, which will also add to the size of future investments in transmission grids.



#### United States Investment in Transmission Infrastructure



Source: EEI.

### CANADIAN EXPORTS FLOW SOUTH

In Canada, there are three major power export markets: (1) the British Columbia Hydro and Power Authority to the United States Pacific Northwest, (2) the Manitoba Hydro-Electric Board to the United States Midwest and (3) Hydro-Québec to the United States Northeast. In each instance, Canada has exported considerable power via its vast resources of excess hydroelectric capacity.

#### *California is the Largest Net Importer of Electricity*

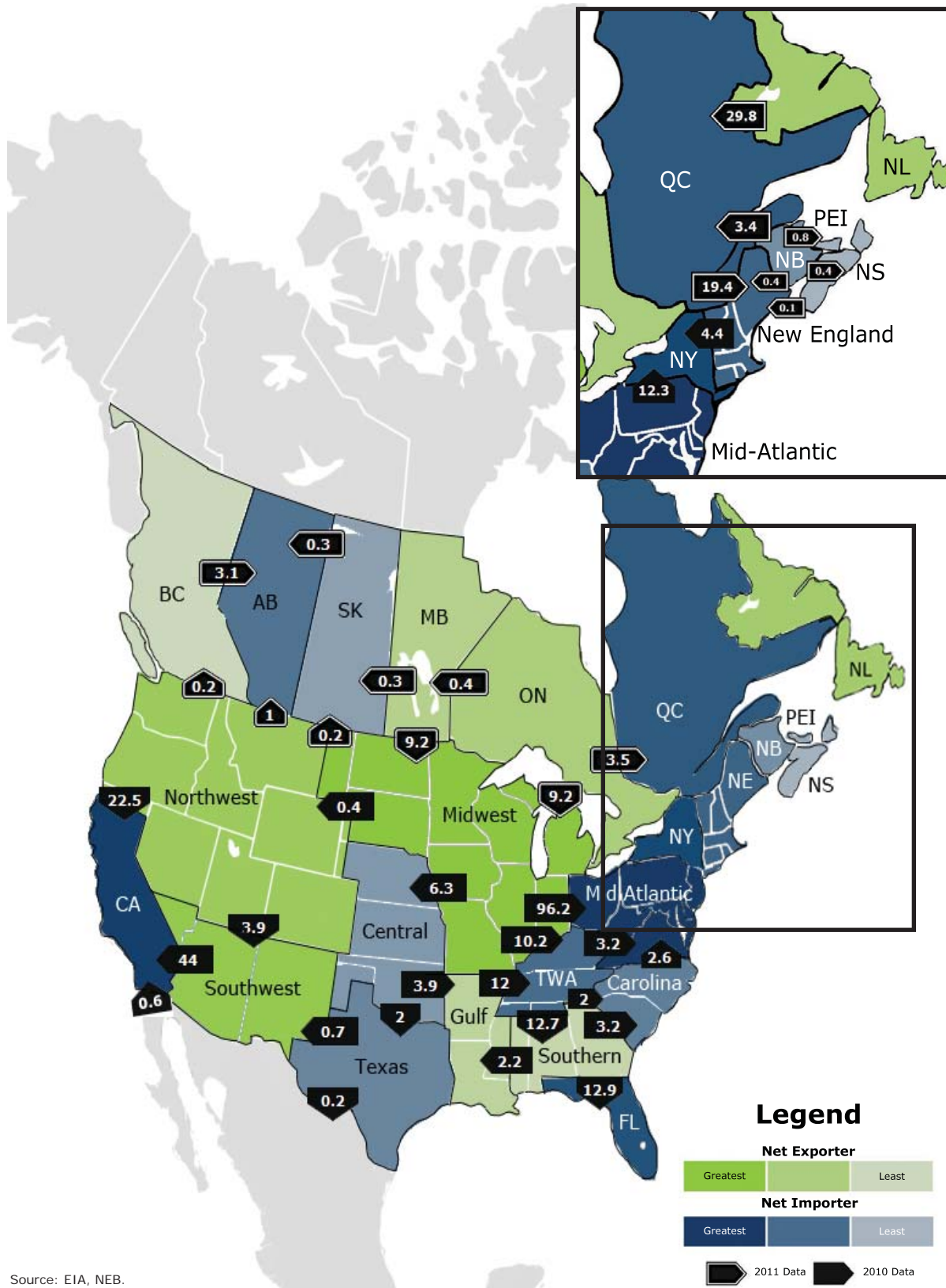
The state of California relies on the Northwest and Southwest regions to provide close to 25% of the electrical supply needed.

#### *Québec Exports Electricity to Northeastern States*

Low-cost hydroelectric power from the province of Québec helps supply over 15 million megawatt hours annually to the states of New York and New England.



## Net Electricity Flows in North America 2010-2011 (TWh)



Source: EIA, NEB.



## The Ten Considerations

### CREDIT IMPLICATIONS OF THE CONSIDERATIONS

DBRS has used ten considerations in assessing the regulatory risk associated with the region in which a utility operates.

#### *COS vs. IRM, Capital Cost Recovery, Market Structure and Rate Freeze Are the Most Important Considerations*

The following four considerations are regarded as most important due to their direct impact on a utility's cash flow. (1) **COS vs. IRM:** DBRS reviews the timeliness and flexibility in which a utility can recover operating costs. Within each framework, DBRS considers the degree of regulatory lags and the associated impact on the credit profile. (2) **Capital Cost Recovery:** DBRS considers whether the capital investment is based on historical data or forward looking data, and the mechanisms in place for the recovery of capex spent between rate cases. (3) **Market Structure:** In general, in a fully regulated and integrated market, there is greater stability with respect to cash flow. (4) **Rate Freezes:** Finally, rate freezes can permanently reduce cash flows or defer recovery indefinitely if they are legislated.

#### *Energy Cost Recovery, Political Interference, Stranded Cost Are Also Key Considerations*

These three considerations are also of key importance. (1) **Energy Cost Recovery:** In general, utilities are allowed to pass through fuel and purchased power costs to ratepayers. However, during periods of intense price escalation in fuel and purchased energy, a utility's bottom line and cash flow can be substantially weakened if they are not completely passed through or recovered in a timely fashion. (2) **Political Interference:** Adverse legislation stemming from political interference can significantly delay cost recovery in the form of stranded costs or rate freezes. (3) **Stranded Cost:** Stranded costs arising from deregulation or an extraordinary event such as storm restoration can reach billions of dollars and may take decades for a utility to recover these costs.

#### *Deemed Equity, Allowed ROE, and Retail Rates Are Also Relevant Considerations*

From a bondholder's perspective, deemed equity, allowed ROE, and retail rates are more of a representation on shareholders' investment. These three factors drive a utility's revenue, but not the cost. There is minimal revenue risk once approved by the regulator. In contrast, cash flow is materially impacted when operating or capital costs deviate from expectations, creating pronounced gaps between the actual ROE and the allowed ROE. In the event that a utility has large capex beyond its control, but a fixed revenue requirement in the interim, this would have a significant impact on the utility's liquidity.

### INTERRELATIONSHIP BETWEEN CONSIDERATIONS

#### *Certain Considerations Are Interrelated*

The ten considerations interrelate in certain ways to create a comprehensive representation of the regulatory risk in each state. In particular, it is informative to consider the following groups of considerations cohesively.

#### **Deemed Equity and Allowed ROE**

The deemed equity figure dictates the percentage of the rate base on which the utility may earn a return, and the allowed ROE determines the percentage return to be applied on the deemed equity. Therefore, these two considerations together give an overall description of the permitted return a utility company may earn. In some cases, a regulatory body may compensate for a low ROE with a higher deemed equity figure, or vice versa.

#### **COS vs. IRM, CCR, and ECR**

While CCR and ECR outline the recovery method of two specific costs, the COS vs. IRM consideration determines the management of operating and other prudently-incurred costs. When taken together, these three considerations describe the overall regulatory environment with regards to cost recovery as a whole.



### **Market Structure, Stranded Costs and Rate Freezes**

Most fully regulated markets have minimal stranded costs and rarely have state-wide or provincial-wide rate freezes. On the other hand, deregulation initially caused a significant amount of stranded costs and is generally accompanied by rate freezes.

## **FULLY INTEGRATED UTILITIES HAVE HIGHER RANKINGS**

### ***Fully Regulated and Integrated Utilities Benefit from Lower Regulatory Risk***

In DBRS' aggregate assessment of all states and provinces, utilities in fully regulated regions generally face lower regulatory risk from a credit perspective.

### ***Vertical Integration in Regulated States***

A main advantage of a fully regulated environment for utilities is the possibility for vertical integration. In states where utilities are responsible both for the distribution and the supply of energy to their service areas, regulators are more likely to support capital expenditures on projects.

### ***Monopolistic Effects in Canada***

In several provinces, a sole crown corporation is responsible for energy supply and distribution. Under such a monopolistic market structure, the support of the province is the key driver of the credit risk.



## Consideration 1: Deemed Equity

### DEFINITION

Deemed equity is the percentage of equity investment in the rate base on which a utility may earn a return. Naturally, a greater equity portion in the capital structure enables greater returns to the investment made by the utility. In most cases, rate bases are set using a comparable industry benchmark. While multiple utilities may be awarded varying deemed equity figures, DBRS uses a composite of these values to assess the state grade.

Score	Item	Definition
Excellent	50%+	<ul style="list-style-type: none"> <li>Equity represents 50% or more of utility's rate base</li> <li>The treatment of deemed equity is consistent historically</li> </ul>
Very Good	45-49.99%	<ul style="list-style-type: none"> <li>Equity represents 45-49.99% of utility's capital structure</li> <li>The treatment of deemed equity is consistent historically</li> </ul>
Satisfactory	40-44.99%	<ul style="list-style-type: none"> <li>Equity represents 40-44.99% of utility's capital structure</li> <li>The treatment of deemed equity has not been consistent historically</li> </ul>
Below Average	35-39.99%	<ul style="list-style-type: none"> <li>Equity represents 35-39.99% of utility's capital structure</li> <li>The treatment of deemed equity has not been consistent historically</li> </ul>
Poor	Below 35%	<ul style="list-style-type: none"> <li>Equity represents less than 35% of utility's capital structure</li> <li>The treatment of deemed equity has not been consistent historically</li> </ul>

### TRENDS IN DEEMED EQUITY

#### *Variance in Regulatory Balance Sheet and Capital Structure*

Utilities tend to maintain their actual capital structure in line with the regulatory capital structure. However, depending on the nature of the utility's operations, the ratio can differ as some utilities are involved with business activities outside of conventional practice.

Contrasting accounting standards have also been another driving factor behind the difference. Goodwill was excluded from the regulatory balance sheet of certain utilities that consolidated during the industry reform in the 1990s. In addition, regulatory assets and liabilities are often recognized on the regulatory balance sheet but not under IFRS or GAAP standards. Such difference leads to a potential variance between total equity on the regulatory balance sheet and the reported balance sheet.

#### *Regulatory Capital Structure in response to ROE*

While certain states possess deemed equity figures outside of the conventional range, the factors by which utilities are able to earn their return on is generally the same. Regulatory capital structure seems to be sensitive to changes in the commission mandated cost of debt and return on equity figures. The resulting product is a weighted cost of capital that is not far off from the national average.

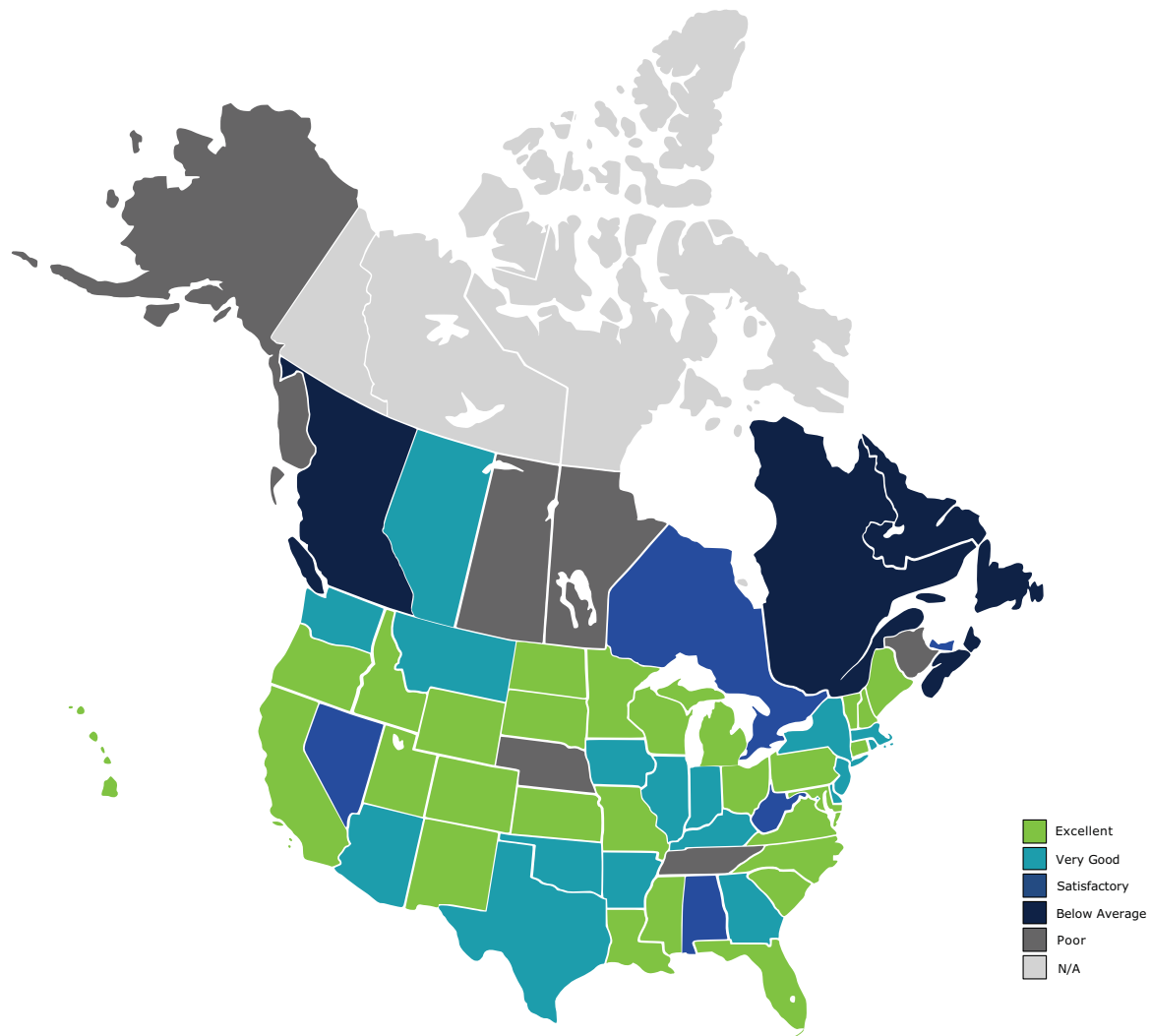
#### *Deemed Equity Bandwidth Scenarios*

For some utilities, returns are based on the actual capital structure which is set within a range determined by the state regulator. Pennsylvania is an example, where the commission intervenes only if quarterly disclosed equity ratios fall outside a reasonable range.





## Consideration 1 – Deemed Equity







## Consideration 2: Allowed ROE

### DEFINITION

Allowed return on equity (ROE) is a measurement of returns on the deemed equity portion of the rate base. The regulator sets an allowed ROE based on a utility's business risk level (which is assessed by the regulator) relative to a benchmark utility within the jurisdiction.

Score	Item	Definition
Excellent	10%+	• Allowed ROE set at 10% and above
Very Good	9-9.99%	• Allowed ROE set at 9-9.99%
Satisfactory	8-8.99%	• Allowed ROE set at 8-8.99%
Below Average	7-7.99%	• Allowed ROE set at 7-7.99%
Poor	Below 7%	• Allowed ROE set below 7%

### TRENDS IN ALLOWED ROE

#### *Actual ROE vs. Allowed ROE*

DBRS notes that actual ROE for a utility may differ from the allowed ROE approved by the regulator, and sometimes this difference can be material. The extent to which actual and allowed revenue correlate depends on a number of factors, including but not limited to: (i) use of historical vs. forward test year, (ii) use of true-up plans, (iii) use of trackers/riders, and (iv) other recovery mechanisms. In a less supportive regulatory regime, a utility may have to file rate cases based on historical costs with no true-up plan in place, and have minimal trackers approved. As a result, utilities will earn a lower ROE than what is allowed during a period of escalating costs. In a supportive regulatory environment, a utility will benefit from either the use of true-up plans, forward test years, and/or other mechanisms to mitigate the extent of regulatory lag. In these circumstances, actual ROE is more in line with the allowed ROE.

#### *More Than Half the States Ranked Excellent*

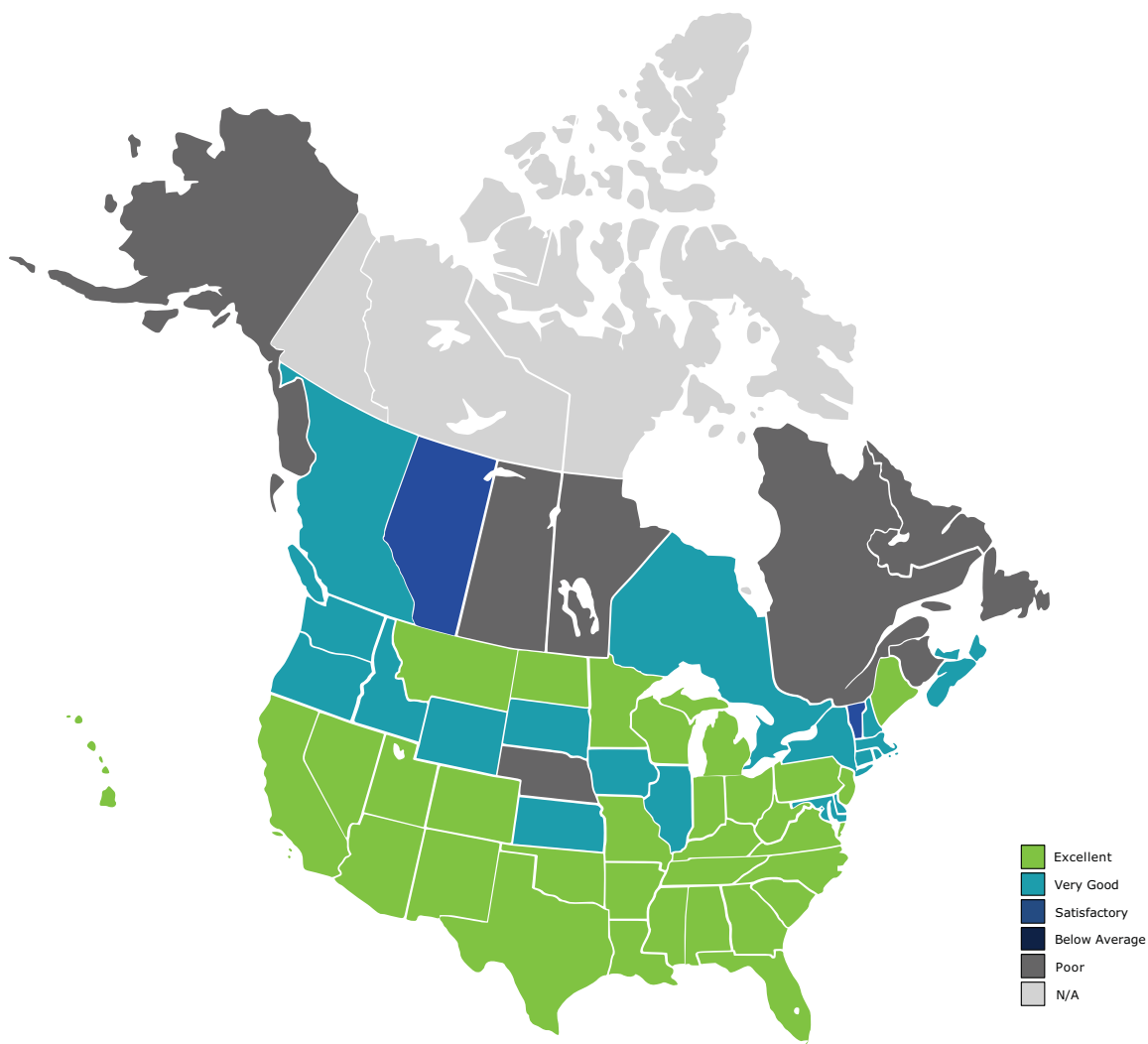
Thirty-two states ranked excellent in terms of allowed ROE, including virtually all states in the Midwest, Southeast and Southwest. Utilities in these jurisdictions on average have an allowed ROE of at least 10%. The top three states are Alabama, Tennessee, and Georgia. Alabama leads all states by a sizeable margin with an allowed ROE of 13.75%. This is followed by Tennessee and Georgia at 12% and 11.5% respectively. Note there is no range in the case of the previously mentioned three states, as only one investor-owned utility is analyzed. Also, allowed ROE is not necessarily indicative of actual ROE.

#### *Northeastern States Generally Ranked Very Good*

With the exception of Maine and Vermont, the cluster of states in New England all ranked very good. Utilities in these states on average obtained an allowed ROE between 9% and 9.99%. Maine, which was the only state with excellent in the region, had the highest returns among New England states with an allowed ROE range of 10.2% to 11%. Vermont had the lowest returns in the United States with an allowed ROE of 8.84%.

Five of the ten provinces ranked poor with an allowed ROE below 7%. The lower ROE reflects the reduced risk under which these utilities operate, since most of the provinces are fully regulated and vertically integrated. In addition, many of these utilities are owned by the government and operate under a monopolistic market.

### Consideration 2 – Allowed ROE





## Consideration 3: Energy Cost Recovery

### DEFINITION

DBRS looks at the following factors: (i) whether fuel and purchased energy (F&PE) costs are fully passed through to the customers; (ii) how often a utility is allowed to adjust the F&PE costs in retail rates charged to customers; and (iii) if there is a mechanism within a jurisdiction that allows utilities to make F&PE cost adjustments with no or minimal regulatory review. In addition, DBRS also focuses on the generation mix within a certain market. A high power cost market could have an impact on the utility's ability to recover the purchased power costs in a timely manner.

Score	Item	Definition
Excellent	Monthly	<ul style="list-style-type: none"> <li>F&amp;PE costs are fully passed through</li> <li>Adjustments are made on a monthly basis</li> <li>There is an automatic adjustment mechanism</li> <li>The jurisdiction is in a favourable generation mix market resulting in low power cost</li> </ul>
Very Good	Quarterly	<ul style="list-style-type: none"> <li>F&amp;PE costs are fully passed through</li> <li>Adjustments are made on a quarterly basis</li> <li>There is an automatic adjustment mechanism</li> <li>The jurisdiction is in a favourable generation mix market resulting in low power cost</li> </ul>
Satisfactory	Quarterly with regulatory review	<ul style="list-style-type: none"> <li>F&amp;PE costs are fully passed through</li> <li>Adjustments are made on a quarterly basis</li> <li>F&amp;PE cost deferrals are subject to some regulatory review</li> <li>The jurisdiction is in a good generation mix market</li> </ul>
Below Average	Annually with automatic adjustment	<ul style="list-style-type: none"> <li>F&amp;PE costs are fully passed through or utilities have minimal exposure to energy price volatility</li> <li>Adjustments are made on an annual basis and are subject to minimal regulatory review</li> <li>The jurisdiction is in an above-average power cost market</li> </ul>
Poor	Annually with no automatic adjustment mechanism	<ul style="list-style-type: none"> <li>F&amp;PE costs are fully passed through or utilities have minimal exposure to energy price volatility</li> <li>Adjustments are made on an annual basis</li> <li>F&amp;PE cost deferrals are subject to regulatory review</li> <li>The jurisdiction is in an above-average power cost market</li> </ul>

### TRENDS IN ENERGY COST RECOVERY

#### *Energy Cost Recovery to Measure Sensitivity*

Despite long-term energy contracts and extensive hedging strategies, many utilities are still exposed to commodity price volatility risks. To combat this issue, regulators have structured various mechanisms that allow a utility to reassess market prices, and apply them to rates without the need to file a general rate case. The purpose of such policy is two-fold: it provides rapid adjustment to dynamic market conditions, and mitigates the need for drastic changes on the bills of ratepayers in the region.

Deregulated utility markets naturally allow for complete pass-through of purchased power costs, as generation prices are set competitively, rather than by the state commission. However, the varying conduits by which regulated companies are permitted to recover increasing power supply costs differ in structure, adjustment period and degree of regulatory oversight. While the former grants assurance of recoverability, regulated utilities can also minimize exposure to the same extent depending on the conditions of their adjustment scheme.



### *Fuel Capacity Mix to Set Context for Adjustment Policy*

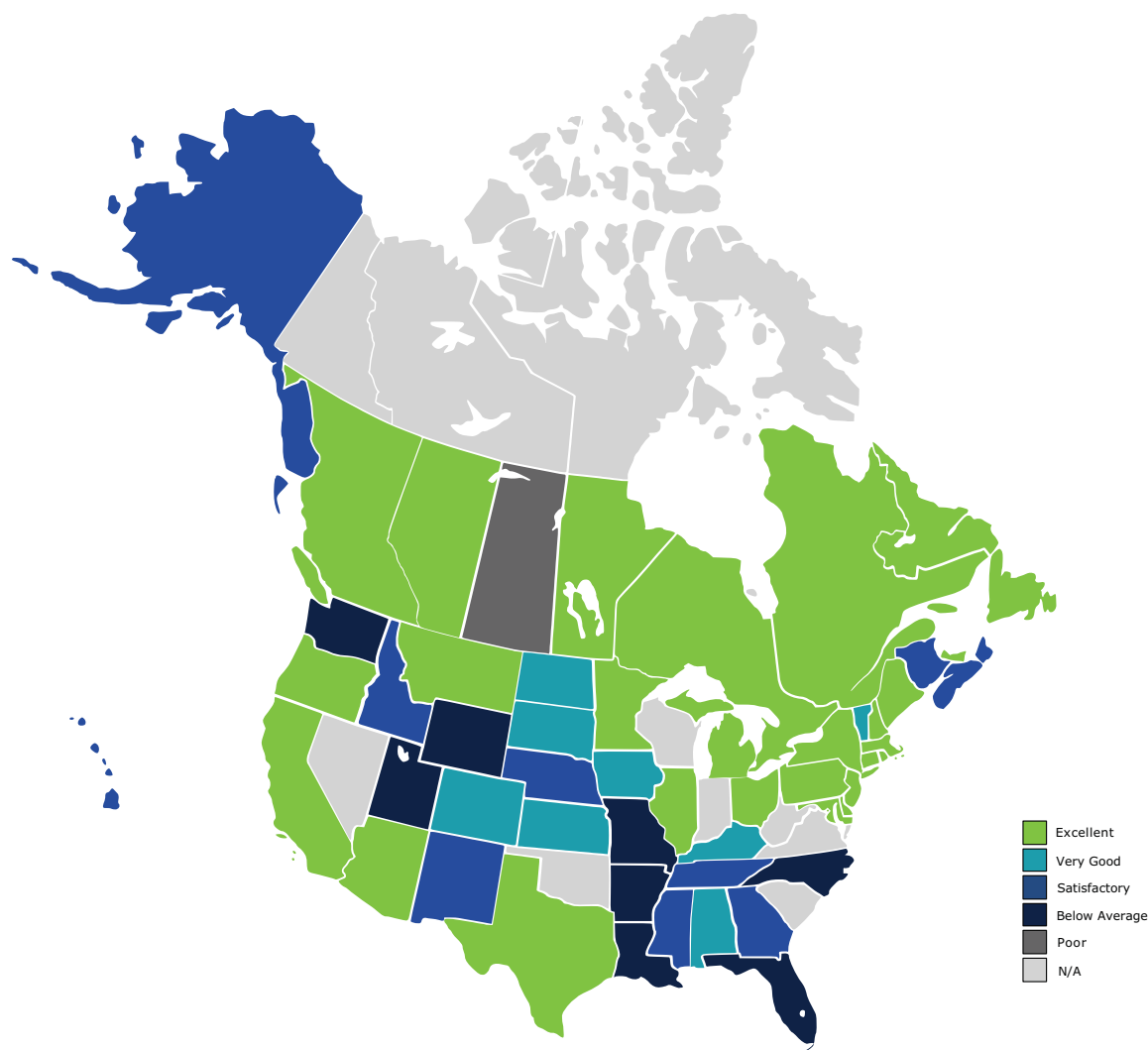
While capacity data does not explicitly indicate the nature of a regulatory environment, it reveals critical information regarding the need for certain regional policy. Capacity diversification and reserve margins allow a state to change its production mix based on the state of the commodities market, serving as a buffer against dynamic prices. While its relevance to transmission and distribution utilities is diminished greatly in deregulated markets, it still serves as a key component of risk to consider in regulated states.

Implications on policy seem to arise when a state with limited protection from commodity price fluctuation is granted more frequent adjustments due to its precarious situation. Such is the case with Hawaii: since over 78% of generation is fueled by petroleum, utilities adjust fuel surcharge amounts on a monthly basis. In stark contrast, Québec disregards such risks altogether since its predominantly low-cost hydroelectric source shields against market volatility. Overall, states with favourable generation conditions generally did not possess extensive policy on recoverability.

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### Consideration 3 – Energy Cost Recovery

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## Consideration 4: Cost of Service vs. Incentive Regulation Mechanism

### DEFINITION

In general, under cost of service (COS), regulated utilities are allowed to recover prudently incurred operating costs (subject to regulatory review and regulatory lags) and earn a reasonable return on their investment. Under incentive regulation mechanism (IRM), revenue requirements for the year are based on a COS base year, adjusted for inflation as well as a productivity factor, which is set by the regulator. IRM forces utilities to maintain their operational efficiency to achieve allowed ROE. As such, DBRS views COS regimes as lower risk than IRM. In addition, DBRS considers the length of an IRM period between COS base years. DBRS's scoring system gives a higher score for a shorter IRM period.

Score	Item	Definition
Excellent	COS	<ul style="list-style-type: none"> <li>COS regime allows utilities to recover prudently and reasonably incurred operating costs</li> <li>Capital expenditures are reviewed and approved by the regulator through an annual COS filing</li> </ul>
Very Good	IRM (three years or shorter)	<ul style="list-style-type: none"> <li>IRM regime with maximum three years between the COS years</li> <li>Regulator sets a reasonable productivity factor</li> </ul>
Satisfactory	IRM (four-to-five-year framework)	<ul style="list-style-type: none"> <li>The IRM period is four to five years</li> <li>Regulator sets a reasonable productivity factor</li> </ul>
Below Average	IRM (six-to-ten-year framework)	<ul style="list-style-type: none"> <li>The IRM period is six to ten years</li> <li>Regulator sets a reasonable productivity factor</li> </ul>
Poor	IRM (ten+ years)	<ul style="list-style-type: none"> <li>The IRM period is over ten years</li> <li>Regulator sets a reasonable productivity factor</li> </ul>

### TRENDS IN COS VS. IRM

#### *A Majority of States Ranked Excellent*

Forty states ranked excellent, representing a vast majority of the United States. These states are characterized by the use of a COS regime which allows utilities to recover prudently incurred operating costs. In addition, mechanisms exist to enable recovery of extraordinary operating costs in the event of such occurrence. From a credit perspective, DBRS views COS regimes more favourably because of the lower risk associated with recovering operating costs.

#### *Lowest Ranking Was Satisfactory*

Maine was the only state that ranked satisfactory. The state uses an IRM regime with an automatic adjustment for inflation and productivity between COS base years. However, the period of five years between base years is considerably longer than other states. As a result, it is considered higher risk. One factor that helps mitigate the potential risk is that the state allows fully forecasted, rather than historical, test years.

***Almost All Canadian Cost Recovery Mechanism Ranked Excellent***

Seven of the ten provinces ranked excellent, with these provinces all using a cost of service model. Alberta and Ontario ranked satisfactory and very good respectively, with IRM cycles no longer than three years. In addition, the use of forward test years is the norm in Canada, which helps mitigate the risk level for utilities.

***Different Test Year Approaches Can Mitigate or Exacerbate Risk***

Although test year approaches are not considered in the consideration above, they do have the potential to mitigate or exacerbate the risk factor for a utility with respect to recovering operating costs. Historical test years typically use the 12-month period before the rate case is filed to determine revenue requirements and rates. Unfortunately, the use of historical test years can lead to major deviations in a period of escalating costs. As a result, a utility may earn substantially less in actual revenues. In the absence of other recovery mechanisms, this increases the risk level of a utility. In contrast, forward test years consider the 12-month period after the rate case is filed and are pro forma in nature. It better compensates a utility for expected increases in costs, and thus helps mitigate the level of risk.

***Wide Variation in Approaches Among States***

There is a diverse range of approaches in the United States with respect to use of test years. As of early 2013, 17 states are using some form of forward test year, and another 14 states employ it on either an ad-hoc basis or in some hybrid fashion. The remaining 20 states continue to use historical test years. DBRS notes that historical test years are not necessarily riskier if other recovery mechanisms exist, as will be discussed below.

***True-Up Plans and Riders Are Considered the Best Option***

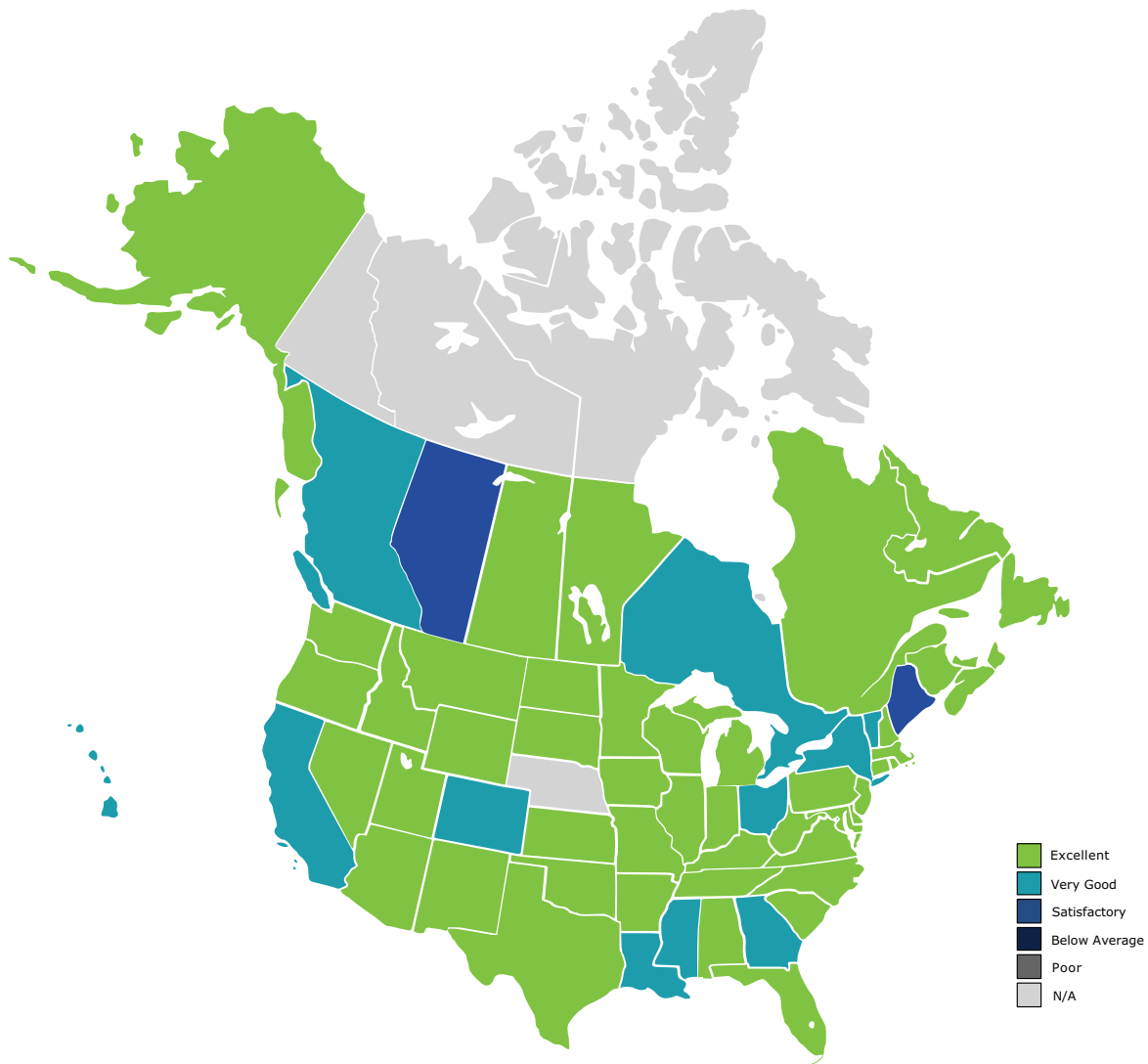
DBRS considers the allowance of true-ups and riders as the best option, and one that substantially reduces revenue risk for a utility. True-ups adjust rates periodically to keep actual revenues in line with allowed revenues, helping to significantly reduce or eliminate deviations from target. In addition, riders can significantly reduce regulatory lags in between rate cases. As a result, the use of historical test years, if combined with true-up plans, will be less risky overall than the use of forward test years on a stand-alone basis.



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**Consideration 4 – COS-IRM**

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## Consideration 5: Capital Cost Recovery

### DEFINITION

In assessing capital cost recovery (CCR), DBRS focuses on the likelihood and timing of a utility's capital expenditures to be added to its rate base. In particular, DBRS looks at the following factors: (i) whether the capital expenditure is pre-approved by the regulator; (ii) whether the spending is allowed to be added to the rate base during the construction, or will only be added when the project is completed; (iii) the level of upfront capital spending required without regulatory approval; (iv) the degree of regulatory lag and uncertainty with respect to CCR; and (v) whether or not there is a reasonable mechanism to deal with cost overruns.

Score	Item	Definition
Excellent	Pre-Approved (Construction Work-in-Progress into Rate Base)	<ul style="list-style-type: none"> <li>• Pre-approved by regulator</li> <li>• Work-in-progress costs can be added to the rate base</li> <li>• There is a reasonable mechanism to deal with overrun costs</li> </ul>
Very Good	Pre-Approved (Adding to Rate Base Upon Completion)	<ul style="list-style-type: none"> <li>• Pre-approved by regulator</li> <li>• Capital costs are added to the rate base after completion of work</li> <li>• There is a reasonable mechanism to deal with cost overruns</li> </ul>
Satisfactory	Modest upfront capital spending with minimal regulatory lag	<ul style="list-style-type: none"> <li>• Capital expenditures are generally pre-approved by regulator, but there is some modest upfront capital spending before regulatory approval</li> <li>• Capital costs are added to the rate base after completion of work</li> <li>• There is a reasonable mechanism to deal with cost overruns</li> </ul>
Below Average	Significant upfront capital spending with some regulatory lag	<ul style="list-style-type: none"> <li>• There is significant upfront capital spending before regulatory approval</li> <li>• Capital costs are added to the rate base after completion of work</li> <li>• The recovery of capital expenditures is subject to some regulatory lag</li> </ul>
Poor	Significant recovery lag, and some risk of cost overruns	<ul style="list-style-type: none"> <li>• Capital expenditures are generally not pre-approved by regulator</li> <li>• Capital costs are added to the rate base after completion of work</li> <li>• Significant regulatory lag with respect to the recovery of project capital expenditures</li> <li>• Risk of cost overruns being disallowed</li> </ul>

### TRENDS IN CAPITAL COST RECOVERY

#### *The Advent of CWIP*

Traditionally, regulators did not allow utilities to recover the costs expended on capital projects until the asset was operational. The conventional practice was deemed fair since consumers would only pay for the additional investment when it provided value to them. However, this traditional model broke down in the late 1960s amid escalating construction costs, and caused considerable cash flow issues for utilities throughout the United States. In response, many state commissions began to permit construction work in progress (CWIP) for utilities. Under CWIP, utilities are able to recover construction-related financing costs as they occur as opposed to awaiting completion of the project. Additionally, the capital costs are all or partly included in the rate base, thereby enabling the utility to earn a return even during construction.

#### *CWIP is Advantageous for Utilities*

DBRS views CWIP much more favourably from a credit perspective, as it improves the certainty and timeliness of cost recovery. Although several states currently have CWIP regulations in place, most states still adhere to the traditional model.





### *Canada vs. the United States*

States that are ranked excellent all have CWIP regulations in place. States with very good, satisfactory or below average generally do not have CWIP in place, exhibit less certainty in regards to cost recovery, and have a longer period of regulatory lag. As Canada's regulatory environment is less developed, there has been less innovation in regulation (such as CWIP), and therefore utilities in the provinces tend to rank lower in this respect. At the same time, DBRS notes that cost recovery uncertainty for Canadian utilities is often mitigated by their deep connection to the provincial government.

### *Capital Cost Trackers and Pre-Approval*

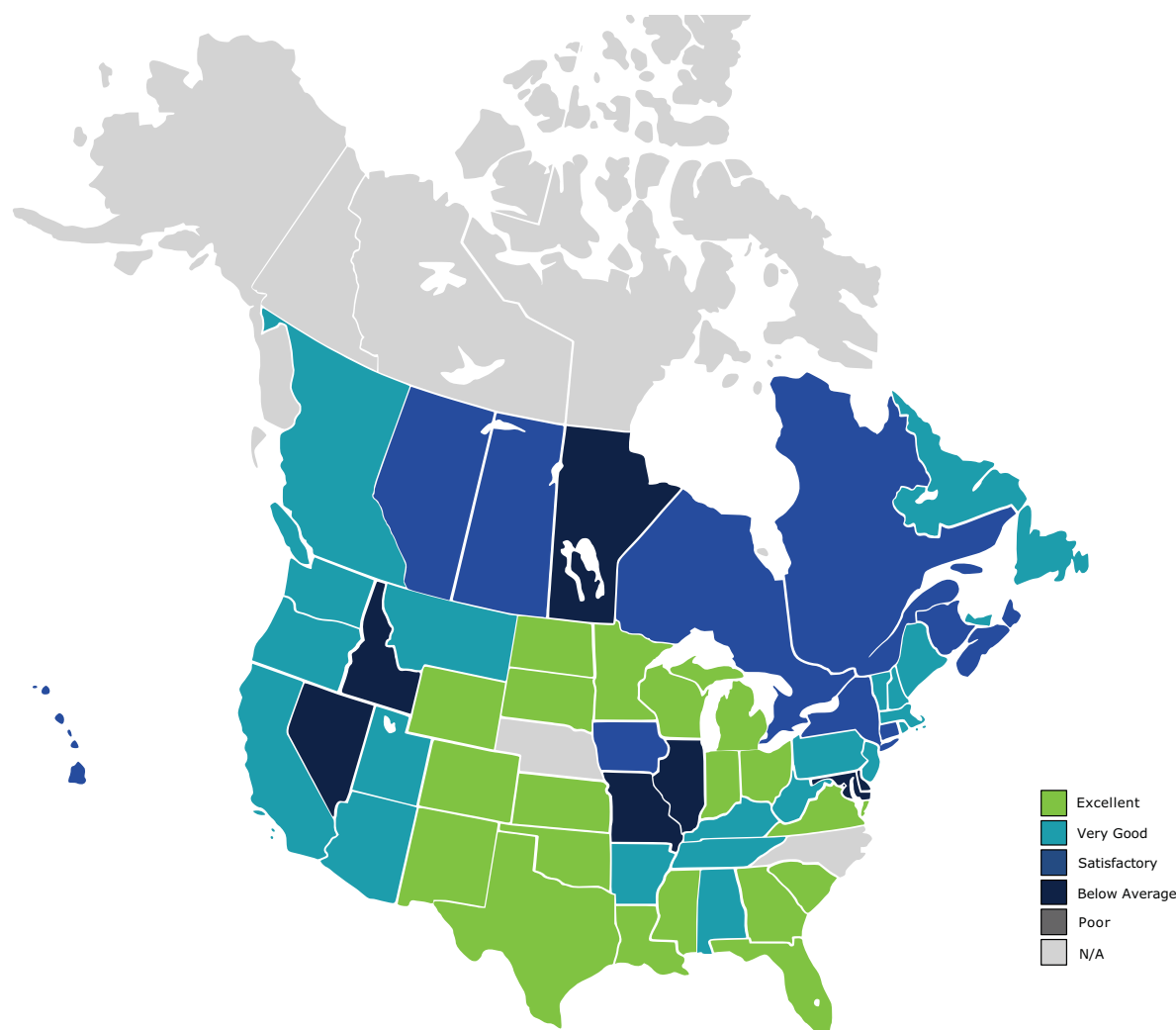
The use of capital cost trackers, also known as riders, is another common approach to cost recovery. Capital trackers are similar to those used to keep track of fuel and purchased power costs. They are more commonly used than CWIP, and they enable utilities to recover costs such as depreciation and taxes without going through the process of a rate case. The increased timeliness thereby reduces risk. DBRS found that a majority of states ranked above satisfactory as a result of some use of capital cost trackers.

An additional aspect of capital cost recovery is the use of pre-approval, whereby the regulator reviews and approves the prudence of costs before they are incurred. Pre-approval is regarded highly, as it virtually eliminates the risk of non-recovery. The adoption of capital cost pre-approval varies greatly across states and provinces.

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### **Consideration 5 – Capital Cost Recovery**

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## Consideration 6: Political Interference

### DEFINITION

Political interference refers to political risk that could occur within a jurisdiction. Political interference could be in the following forms: (i) influence on the regulator's ability to independently and impartially arrive at a decision; (ii) passing legislation to override a decision made by the regulator; and (iii) the regulator being elected instead of being appointed.

Score	Item	Definition
Excellent	Constitutionally Independent and No Government Influence	<ul style="list-style-type: none"> <li>• Low degree of government influence on the regulatory decision-making process</li> <li>• Regulatory independence is protected under state/provincial constitution</li> <li>• The regulator is non-partisan and appointed</li> <li>• No adverse legislation in the regulated utility sector</li> </ul>
Very Good	Constitutionally Independent and Low Government Influence	<ul style="list-style-type: none"> <li>• Low degree of government influence on the regulatory decision-making process</li> <li>• Regulatory independence is protected under state/provincial constitution</li> <li>• The regulator is appointed or elected</li> <li>• No adverse legislation in the regulated utility sector</li> </ul>
Satisfactory	Legally Independent and Low Government Influence	<ul style="list-style-type: none"> <li>• Low degree of government influence on the regulatory decision-making process</li> <li>• Regulatory independence is authorized under state/provincial statute</li> <li>• The regulator is appointed or elected</li> <li>• No adverse legislation in the regulated utility sector</li> </ul>
Below Average	Legally Independent and Moderate Government Influence	<ul style="list-style-type: none"> <li>• High degree of government influence on the regulatory decision-making process</li> <li>• Regulatory independence is authorized under state/provincial statute</li> <li>• The regulator is appointed or elected</li> <li>• Some adverse legislation in the regulated utility sector</li> </ul>
Poor	Not Independent and High Government Influence	<ul style="list-style-type: none"> <li>• High degree of government influence on the regulatory decision-making process</li> <li>• Regulator is not an independent body, and only advises legislature</li> <li>• The regulator is appointed or elected</li> <li>• Some adverse legislation in the regulated utility sector</li> </ul>

### TRENDS IN POLITICAL INTERFERENCE

#### *An Overwhelming Majority of States Rank Satisfactory*

Thirty-eight states ranked satisfactory, representing an overwhelming majority of the jurisdictions in North America. In each of these states, DBRS has found that the government does not play a significant role in the electricity sector. A low degree of government influence is generally facilitated by several factors: (i) the regulator acting as an independent body with clear powers defined under relevant statute; (ii) the regulator making decisions in quasi-judicial fashion free of interference from the government; (iii) the regulator is appointed and non-partisan; and (iv) the government does not usually implement legislation to override decisions made by the regulatory body.

#### *High-Ranking States Are Differentiated by Constitutional Protection*

California ranked very good and several other states ranked satisfactory. The main differentiating factor was the addition of a fifth consideration (v) regulatory body is enshrined in the state constitution. Whereas regulatory commissions that are established by simple state legislation can be easily amended or repealed, constitutional protection is considerably more onerous to change. As a result, it is more difficult for a state government to override the regulator's decisions. DBRS notes that the satisfactory states with constitutional protection did not rank very good as there were offsetting factors such as elected commissioners or the presence of adverse legislation that resulted in a lower ranking.



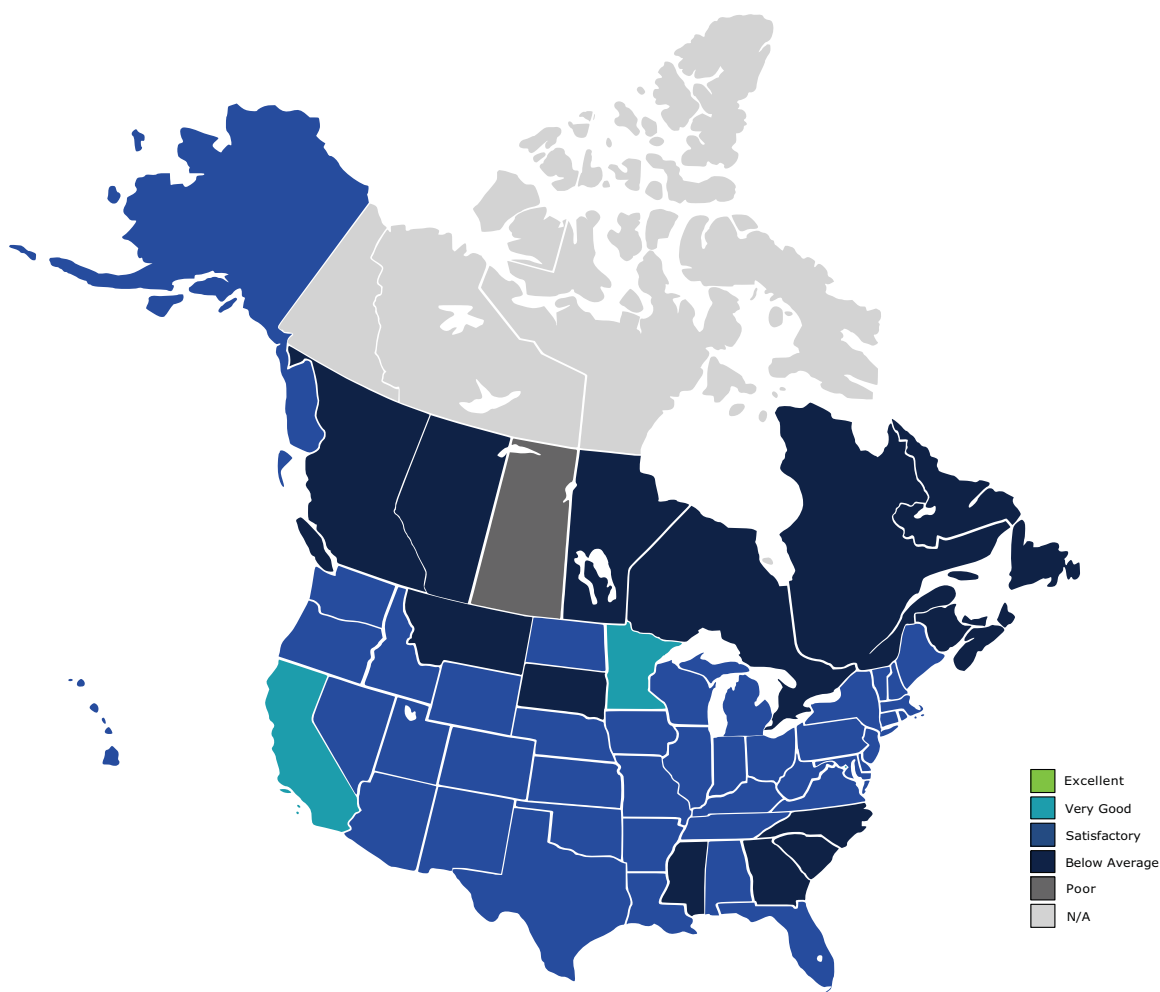
### *Canadian Provinces and Territories Generally Rank Lower*

All Canadian jurisdictions ranked either below average or poor. The primary reason for the lower score is the high degree of influence provincial governments have on the regulatory body. Governments in Canada often play a significant role in the electricity sector, usually owning the fully integrated crown corporations that provide the majority of power. In addition, the regulators in Canada do not have the same degree of independence as their counterparts in the United States as decisions are subject to appeal to the Cabinet. Moreover, there are some regulatory bodies that leave the decision making to the government.

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### **Consideration 6 – Political Interference**

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## Consideration 7: Retail Rates

### DEFINITION

Retail rates refer to the rates (energy cost, transmission cost and distribution charges) a utility can charge its residential customers. One of the key functions for a regulator is to assess rate increase requests by utilities. By law, the regulator must allow a utility to have an opportunity to earn a “just and reasonable return,” but it also has to balance the interests of both a utility and its consumers. There are circumstances (i.e., weak economic environment) in which the regulator may be reluctant to allow the utility to fully recover its full costs within a short period of time. In addition, the regulator may not share the same opinion on whether certain costs incurred are prudent. Costs that are deemed to be imprudent are not subject to earning a return through retail rates.

Score	Item	Definition
Excellent	Below 8 cents	<ul style="list-style-type: none"> <li>• Rates are consistently below 8 cents</li> <li>• Strong economic environment</li> </ul>
Very Good	8-10.99 cents	<ul style="list-style-type: none"> <li>• Rates are consistently in the 8-10.99 cents range</li> <li>• Strong economic environment</li> </ul>
Satisfactory	11-13.99 cents	<ul style="list-style-type: none"> <li>• Rates are consistently in the 11-13.99 cents range</li> <li>• Very good economic environment</li> </ul>
Below Average	14-16.99 cents	<ul style="list-style-type: none"> <li>• Rates are consistently in the 14-16.99 cents range</li> <li>• Good economic environment</li> </ul>
Poor	17+ cents	<ul style="list-style-type: none"> <li>• Consistently higher than 17 cents</li> <li>• Good economic environment</li> </ul>

### TRENDS IN RETAIL RATES

#### *Retail Rates as an Indicator of Flexibility*

DBRS uses retail electricity rates to determine the aggregate result of economic, political, and industrial conditions that a specific state faces. Though explicit reference to retail rates is limited in the context of utility regulation, an undeniable relationship exists between a commission’s ability to raise rates, and the absolute level of the rates themselves. The United States national average for retail rates was 10.32 cents in 2012.

#### *Economic Environment as a Context for Regulation*

To complement the perspective on retail rates, DBRS also considers the economic climate in each state to provide context for the analysis. As a measure of the ratepayers’ ability to match prices set by the utility, this component is critical to understanding the constraints under which utilities and their respective state commissions operate. At the time of this study, the national average real GDP growth rate was 2.5%.<sup>3</sup>

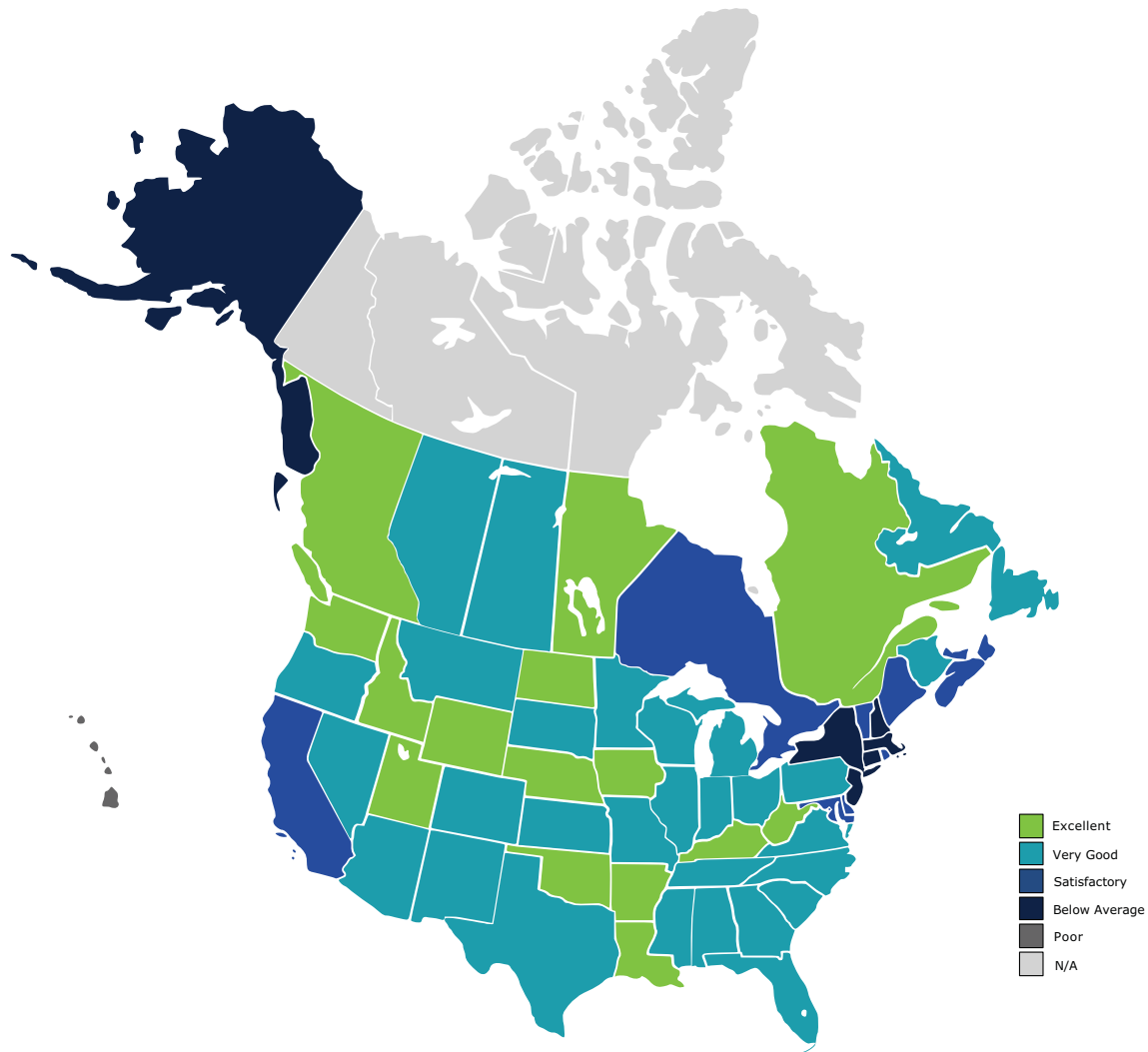
3. Source: U.S. Bureau of Economic Analysis



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## Consideration 7 – Retail Rate

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## Consideration 8: Stranded Cost Recovery

### DEFINITION

Stranded costs occur when a utility has already incurred costs (F&PE, operating cost or capital spending), and there is uncertainty as to when it can recover these costs. If it is certain these costs cannot be recovered, stranded costs are written off. DBRS looks at the following factors: (i) whether stranded costs exist and their magnitude; (ii) the likelihood of recovery of stranded costs; (iii) the frequency of writedowns; and (iv) the time it takes to recover these costs.

Score	Item	Definition
Excellent	Minimal Stranded Costs	<ul style="list-style-type: none"> <li>No significant stranded costs associated with legitimate or reasonable costs incurred by utilities</li> </ul>
Very Good	Full Recovery	<ul style="list-style-type: none"> <li>Stranded costs are fully recovered in a timely manner with minimal regulatory lag</li> <li>No recent writedowns</li> </ul>
Satisfactory	Full Recovery (Regulatory Lag)	<ul style="list-style-type: none"> <li>Stranded costs are recovered but subject to a longer period of regulatory lag</li> <li>Full recovery is expected but over an extended period of time</li> <li>No recent writedowns</li> </ul>
Below Average	Recent Writedowns	<ul style="list-style-type: none"> <li>Stranded costs are sometimes recovered, but not to the full extent</li> <li>Takes considerable time to recover costs</li> <li>Recent writedowns</li> </ul>
Poor	Frequent Writedowns	<ul style="list-style-type: none"> <li>Stranded costs are not fully recovered</li> <li>Significant regulatory lag associated with the recovery</li> <li>Recent and frequent writedowns</li> </ul>

### TRENDS IN STRANDED COSTS

#### *Close to Half the States Ranked Very Good*

Twenty four states ranked very good, many of which are located in the Midwest and Southeastern part of the United States. Utilities in these states were generally able to fully recover stranded costs that arise in a timely manner and with minimal regulatory lag. Recovery mechanisms that were approved by the regulator were clearly defined with respect to the amount and duration, and they were not subject to deferrals or uncertainty. In addition, utilities in these states did not carry out material writedowns over the past year. Should a longer period of regulatory lag exist or if recovery mechanisms carry over an extended period of time, DBRS lowers the final score for the state by at least one notch.

#### *Very Good States Are All Regulated*

DBRS found that all very good ranked states were also fully regulated. This is not surprising, as substantial amounts of stranded costs usually arise when states move toward deregulation. For states that have always been fully regulated, utilities are not expected to incur substantial stranded costs. There may be minimal examples of costs in relation to storm restoration, energy efficiency, smart grids and environmental remediation. However, these costs are unlikely to accumulate in the billions as was the case for states that transitioned to retail electric competition.

#### *Deregulated States Have the Highest Stranded Costs*

The late 1990s and early 2000s marked a wave of deregulation that only a handful of states followed through on. Other states studied the merits and benefits of deregulation but ultimately decided against pursuing further action. Naturally, the states which introduced competition gave rise to significant stranded costs as certain invested assets and debt could no longer be recovered in a market driven environment. In California, stranded costs reached as high as \$27 billion. Many utilities in deregulated Northeastern states have incurred billions of dollars in costs.



### *Stranded Cost Recovery Mechanisms*

Depending on the state, regulators allowed recovery of stranded costs through a series of mechanisms. Competition transition charges (CTC) are designed to enable utilities to recover the stranded costs over time by imposing a surcharge on consumers. In addition, some regulators allowed utilities to securitize these recovery surcharges, which provided the utility with an option to expedite recovery of the costs. Overall, states which allowed utilities full recovery of the substantial stranded costs caused by deregulation are generally ranked very good, and those wherein only a limited extent of costs were deemed recoverable are ranked a notch lower.

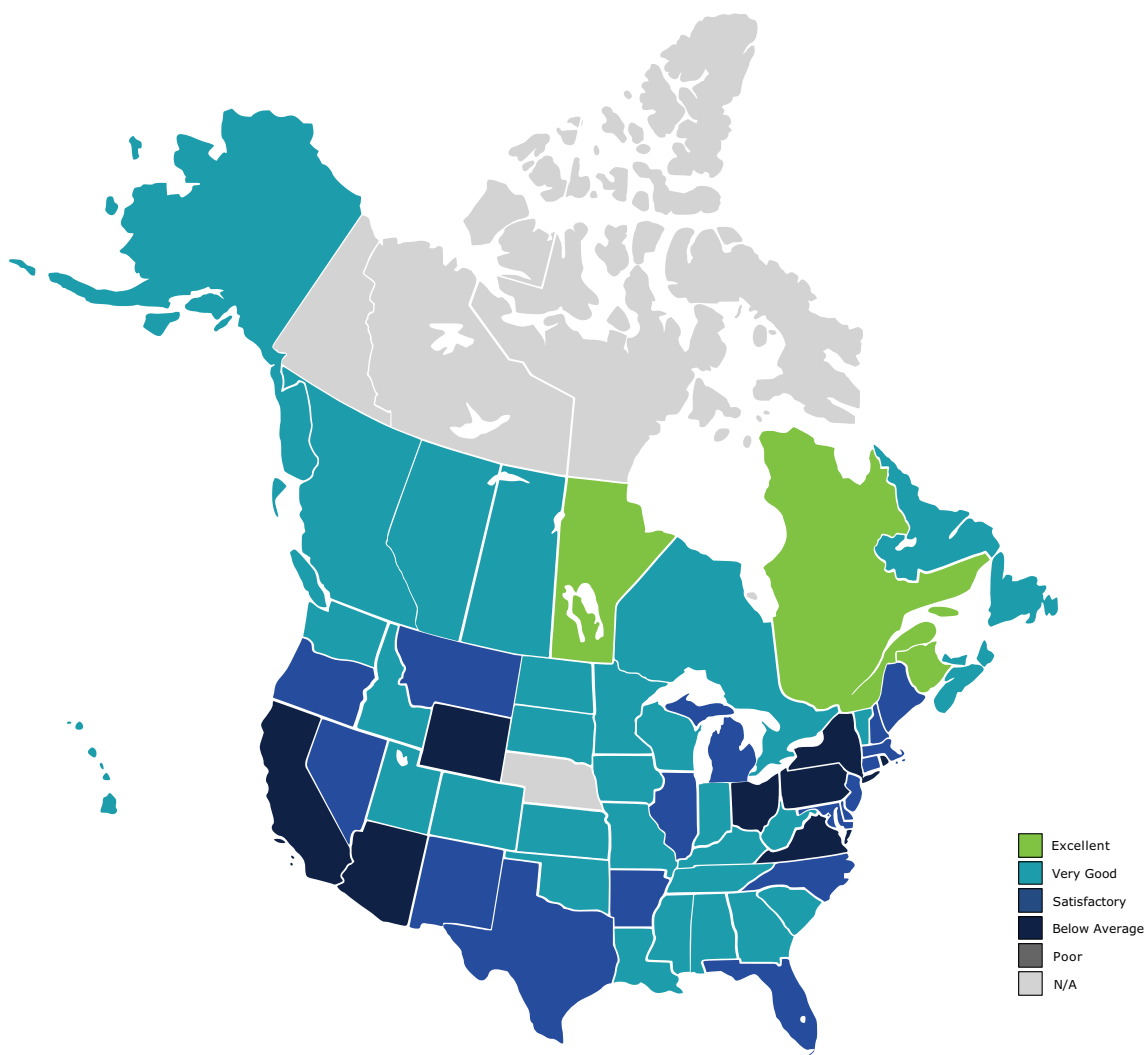
### *Canadian Provinces All Ranked Excellent or Very Good*

The majority of provinces ranked excellent with the remainder still scoring very good. This can be attributed to the significant influence that provincial governments have on the utilities sector. In many of the provinces, utilities are fully regulated and owned by the government. In such cases, stranded costs are less likely to exist. Even in Ontario and Alberta, where deregulation has occurred, local distribution companies have largely been successful in recovering stranded costs associated with the process.

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### Consideration 8 – Stranded Costs

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## Consideration 9: Rate Freezes

### DEFINITION

Regulators may impose a rate freeze on utility companies, which prevents them from adjusting rates charged to customers. Under normal circumstances, utilities will modify rates upwards in order to compensate for prudently incurred costs, or downwards to pass through excess revenues. During a rate freeze, however, utilities are not able to recover costs via rate changes and are thus more vulnerable to fluctuations in costs.

Score	Definition
Excellent	<ul style="list-style-type: none"> <li>• Rates have not been frozen within the past decade</li> </ul>
Very Good	<ul style="list-style-type: none"> <li>• Rates have been frozen for a short period of time (up to four years)</li> </ul>
Satisfactory	<ul style="list-style-type: none"> <li>• Rates have been frozen for a medium period of time (up to six years)</li> </ul>
Below Average	<ul style="list-style-type: none"> <li>• Rates have been frozen for a long period of time (up to ten years)</li> </ul>
Poor	<ul style="list-style-type: none"> <li>• Rates have been frozen for an extended period of time (over ten years)</li> </ul>

### TRENDS IN RATE FREEZES

#### *Most States Ranked Excellent*

Of the 51 states and districts reviewed, 41 of them have not recently had statewide rate freezes. Within the remaining states, Michigan, Delaware and New Jersey have had relatively short freezes, lasting at most four years. Arizona, California, North Carolina, and Texas have had freezes of medium lengths, from five to six years. Meanwhile, Connecticut, Illinois and Maryland saw freezes that lasted up to ten years long.

#### *Rate Freezes Generally Accompany Deregulation Efforts*

With the exception of North Carolina, statewide rate freezes have been a direct result of the state moving towards deregulation. The freezes are usually put in place in tandem with deregulation legislation, and have lasted from two to nine years. States typically enacted these freezes to control dramatic increases that may have otherwise occurred once generation rates were set without the supervision of a regulator.

#### *Non-Deregulation Related Freezes*

North Carolina was the only case where its statewide rate freeze was not caused by deregulation. Instead, the state passed a *Clean Smokestacks Act*, which froze rates for five years. Additionally, individual companies may be subject to rate freezes under circumstances such as mergers, acquisitions or other company-specific agreements with the state regulator.







## Consideration 10: Market Structure (Deregulation)

### DEFINITION

Market structure refers to how the electricity market functions within the regulatory regime. DBRS focuses on whether the market is deregulated and to what extent. From a credit perspective, a regulated environment is considered more favourable as interest costs on debt are included in the revenue requirement. Also, with respect to regulated utilities, DBRS notes that the strongest ones will generally have fully integrated operations (generation, transmission and distribution).

Score	Item	Definition
Excellent	Fully Regulated and Integrated	<ul style="list-style-type: none"> <li>The market is fully regulated</li> <li>All or most utilities are fully integrated</li> </ul>
Very Good	Fully Regulated	<ul style="list-style-type: none"> <li>The market is fully regulated</li> <li>Most utilities are not necessarily integrated</li> </ul>
Satisfactory	Partially Deregulated Generation	<ul style="list-style-type: none"> <li>The generation sector is partially deregulated such that a portion of consumers may choose the electric supplier</li> <li>There is still regulation on electricity distribution rates</li> <li>Utilities will not necessarily have a generation segment; if they do, this segment operates independently of the other segments in the company</li> </ul>
Below Average	Deregulated Generation	<ul style="list-style-type: none"> <li>The generation sector is partially deregulated such that all consumers may choose the electric supplier</li> <li>There is still regulation on electricity distribution rates</li> <li>Rates for distribution and generation are unbundled</li> <li>Utilities will not necessarily have a generation segment; if they do, this segment operates independently of the other segments in the company</li> </ul>
Poor	Deregulated Generation and Distribution	<ul style="list-style-type: none"> <li>There is no regulatory oversight of generation or distribution rates</li> <li>Utilities will not necessarily have a generation segment; if they do, this segment operates independently of the other segments in the company</li> </ul>

### TRENDS IN MARKET STRUCTURE

#### *Deregulation Does Not Entail Choice for All*

Although a number of states have deregulated power generation, it does not necessarily mean that all consumers have a choice of supplier and that rates are entirely market based. In some cases, there is insufficient competition and only certain consumers (i.e., office, industrial or residential) are provided a choice. The state retains regulation and oversight in cases where competition does not exist or where supplier choice is not extended to that class of consumer.

#### *More Than Half the States Ranked Excellent*

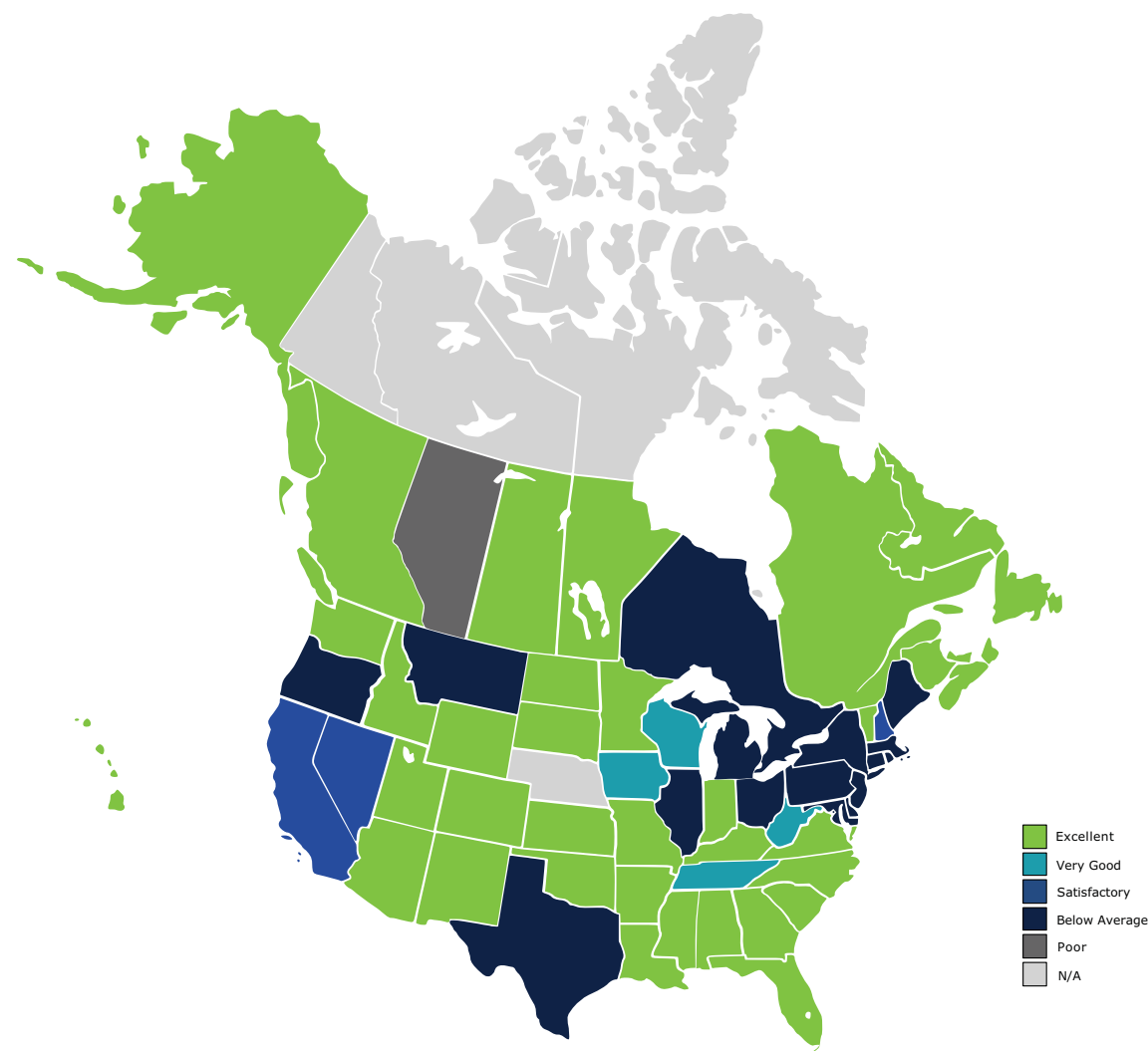
Twenty seven states ranked excellent, with most of them in the Midwest, Southern and Western parts of the United States. These states are characterized by an electricity market that is fully regulated in generation, distribution, and transmission. In addition, all or most of the utilities are fully integrated, meaning that the same utility offers bundled services.

#### *Deregulated States Ranked Satisfactory or Lower*

None of the states with deregulation ranked above satisfactory. California, Nevada and New Hampshire scored the highest among deregulated states with satisfactory rankings. All three states are partially deregulated and supplier choice has not been extended to all classes of consumers. The 16 other states that have deregulated generation entirely all rank below average. In these states, distribution and generation rates are unbundled.

With the exception of Alberta and Ontario, all provinces and territories ranked excellent. This is not surprising given the fully regulated nature of the electricity sector in Canada. Utilities are mostly government-owned and are fully integrated operations. Ontario and Alberta are the only provinces with a deregulated market in generation.

## Consideration 10 – Market Structure





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## Ring-Fencing: A Potential Consideration

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### WHAT IS RING-FENCING?

Ring fencing is a legal measure used to separate a regulated entity from the non-regulated businesses of the parent in a holding company structure. It is used to protect the regulated subsidiary, which provides consumers an essential service such as power, from financial instability or bankruptcy in the parent's non-regulated businesses. From a credit perspective, ring-fencing insulates the risk of the issuer (i.e., regulated utility) from the risks of the parent or affiliated issuers in a holding company structure.

#### *Methods to Institute Ring-Fencing*

There are numerous ways in which a regulated entity can be protected from the non-regulated businesses in a holding company structure. One method is to create a barrier between the subsidiary and the parent by drafting covenants that restrict intercompany asset transfers, making it difficult for the parent to extract assets from the subsidiary. A second method is to collateralize substantially all of the assets of the subsidiary. A third method is for structural separation through multiple owners. With joint control from multiple parents, it is less likely that a regulated subsidiary can be adversely affected by one parent's financial troubles.

Allowing regulators or legislators to step in and mandate ring-fencing can be an external method to insulate a subsidiary from the rest of the holding company. Public Utility Commissions may prohibit the use of debt for non-utility purposes and impose other restrictive covenants that are accompanied by effective oversight and enforcement. In addition to regulation from the state commission, lawmakers can enshrine certain protections in legislation which can afford the greatest extent of separation.<sup>4</sup>

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## Regulatory and Legislative Framework

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### THE NEED FOR REGULATION

#### *Balancing Consumer and Investor Interests*

Utilities regulation endeavors to balance both the interests of the consumer and the utility company (investors and creditors). On one hand, the regulator must protect the public interest by ensuring that the price and quality of electric service remains fair and reasonable. A regulator's mandate often includes establishing service standards and imposing requirements on the utility companies. At the same time, utilities must remain a financially viable business. Regulation ensures that investors can earn a reasonable return to recoup the cost of investment required to supply and deliver energy to customers.<sup>5</sup> As such, utilities must be assured by regulators that all prudently incurred costs are recovered in a timely manner.

#### *Experience in the United States Demonstrates that Regulation can Improve Efficiency*

In addition to balancing consumer and utility interests, regulation also serves to streamline planning and coordination to prevent redundancy in the infrastructure. The experience in the United States is a case in point. The dearth of regulation in the early years for investor-owned utilities created intense competition in urban areas and duplication in the distribution system. The lack of integrated planning put many utilities on the verge of bankruptcy when over building made it impossible to recover all costs. As a result, utilities frequently requested significant rate increases, which ultimately impacted consumers. In a bid to maintain retail rates, regulators began to take an increased role in the planning process and to impose more requirements upon investor-owned utilities.

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4. Source: *Ring Fencing Mechanisms for Insulating a Utility in a Holding Company System*, (Timothy Devlin, Rebecca Phillips, and Thomas Ferris) NARUC Staff Subcommittee on Account and Finance, 2003 ([http://regulationbodyofknowledge.org/wp-content/uploads/2013/03/Devlin\\_Ring\\_Fencing\\_Mechanisms.pdf](http://regulationbodyofknowledge.org/wp-content/uploads/2013/03/Devlin_Ring_Fencing_Mechanisms.pdf))

5. Source: *Energy Sector Regulation – A Brief Overview*, Ontario Energy Board, 2013 ([http://www.ontarioenergyboard.ca/OEB/\\_Documents/Documents/Energy\\_Sector\\_Regulation-Overview.pdf](http://www.ontarioenergyboard.ca/OEB/_Documents/Documents/Energy_Sector_Regulation-Overview.pdf))



### ***Contrasting Regulatory Frameworks***

As aforementioned, the regulatory framework is markedly different in Canada and the United States. The following section details the regulatory regime which prevails among the states and provinces.<sup>6</sup>

## **THE UNITED STATES REGULATORY REGIME**

Electric utilities in the United States are regulated at both the federal and state level, depending on which agency has jurisdictional responsibility over the matter. Regulatory bodies are usually independent from other legislative functions of government.

### ***Federal Energy Regulatory Commission***

The Federal Energy Regulatory Commission (FERC) is the federal agency responsible for overseeing interstate transmissions and wholesale electric rates, reviewing mergers and acquisitions, administering licensing and inspection and imposing regulatory enforcement. Pursuant to *The Department of Energy Organization Act of 1977*, FERC is an independent agency that is self-funded through industry levies and charges. Decisions made by FERC cannot be amended by the President or Congress, although they are reviewable by federal courts. The five commission members on FERC are appointed to five-year terms by the President with the consent of the Senate.

### ***Energy Policy Act Further Expanded FERC's Powers***

The introduction of the *Energy Policy Act of 2005* enhanced FERC's authority to establish reliability standards on bulk transmission systems and impose penalties on entities engaged in market manipulation. Other top initiatives of the regulatory agency pursuant to the legislation include smart grid, demand response, integration of renewables, transmission planning and cost allocation.<sup>7</sup>

### ***State Public Utility Commissions***

Each state has its own public utilities commission responsible for overseeing many of the areas that are outside the jurisdiction of the federal government. Matters include, but are not limited to, the regulation of retail electric rates to consumers, reviewing rate cases for electricity distribution, approval of physical generation facilities, and the regulation of municipal power systems and rural cooperatives. The plethora of state commissions across the United States means that regulations will vary between states, and can dramatically differ at times.

### ***Nuclear Regulatory Commission***

The United States Nuclear Regulatory Commission (NRC) is an independent federal agency responsible for regulating the industrial use of nuclear materials, including power generation. The NRC regulates commercial nuclear reactors, issues licensing and provides certification on reactor designs. In addition, there are signed agreements with certain states to transfer regulatory responsibility over the use of radioactive materials to the state regulatory agency.<sup>8</sup>

### ***Public Utility Regulatory Policies Act***

The *Public Utility Regulatory Policies Act* (PURPA) was passed in Congress as part of the *National Energy Act of 1978*. It required regulated electric utilities to purchase power from independent power producers at "avoided cost" (the utility's own cost to generate) and provide any "qualifying facility" the benefit of selling its produced power to the utility. PURPA had the effect of creating a new market for power from independent power producers, as regulated utilities were compelled to buy from more efficient producers. In addition, the law was effective in encouraging the use of renewable energy. Although the electric market has since further deregulated and opened up, the legislation remains in force and continues to be relevant.<sup>9</sup>

6. Source: *Electric Utilities, Deregulation and Restructuring of U.S. Electricity Markets*, Purdue University, 2013 (<http://www.purdue.edu/discoverypark/energy/assets/pdfs/History.pdf>)

7. Source: *Top Initiatives*, FERC Federal Energy Regulatory Commission, 2013 (<https://www.ferc.gov/about/top-initiatives.asp>)

8. Source: *Strategic Plan Fiscal Years 2008-2013*, U.S.NRC United States Nuclear Regulatory Commission, 2012 (<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1614/v5/sr1614v5.pdf>)

9. Source: *Qualifying Facilities Under PURPA: What Qualifies?*, (Beth Dunlop) Environs UC Davis School of Law, (<http://environs.law.ucdavis.edu/issues/15/1/articles/dunlop.pdf>)



### ***Repeal of Public Utility Holding Company Act***

The *Public Utility Holding Company Act of 1935* (PUHCA) was a federal law passed by Congress to facilitate regulation of utility holding companies through the Securities and Exchange Commission (SEC). For 70 years, PUHCA empowered the SEC to eliminate large interstate holding companies by requiring divestiture of holdings until they were sufficiently limited to a single state and subject to that State's utility commission. In 2005, Congress repealed the PUHCA as part of the *Energy Policy Act of 2005*, allowing the possibility of increased merger and acquisition activity. At the same time, the authority of FERC was enhanced, providing the agency with access to the books and records of holding companies and to determine cost allocations for affiliate transactions.<sup>10</sup>

## **CANADIAN REGULATORY REGIME**

Electric utilities in Canada are regulated at both the federal and provincial level, with their mandates promulgated under relevant statute. Many of the agencies operate and make decisions in quasi-judicial fashion, but are usually subject to appeal to the cabinet of government. As a result, they are not completely independent of the legislative branch of government.<sup>11</sup>

### ***National Energy Board***

The National Energy Board (NEB) is an independent federal agency established in 1959 by an act of Parliament. The organization is accountable to the Minister of Natural Resources Canada, and in addition to its role as a regulator, provides energy advice to the Minister from time to time. The board comprises seven permanent members that are appointed to seven-year terms, and several temporary members that are typically selected for three-year terms.<sup>12</sup> Appointments are made by the Governor General on the recommendation of the responsible Minister to the Governor in Council.

### ***Mandate of the NEB***

In the context of electric utilities, the NEB is responsible for regulating the construction and operation of international and interprovincial power lines. It also works with provincial counterparts and other federal agencies to improve the regulatory process. Under the *National Energy Board Act*, the NEB is empowered with quasi-judicial powers that give it the rights and privileges of a superior court. The NEB holds public hearings and decisions are made based on evidence submitted by the relevant parties. All decisions rendered by the NEB are enforceable in law.

### ***Environmental Considerations for NEB Regulated Projects***

The environmental responsibilities of the NEB extend to planning, construction, operation and abandonment of facilities. Since 1995, the NEB has conducted environmental assessments on projects under its jurisdiction pursuant to the *Canadian Environmental Assessment Act, 1995*.<sup>13</sup>

### ***Provincial Regulators***

Provinces all have their own board or commission to oversee and regulate the energy sector in accordance with the objectives set forth under provincial statute. They may include, but are not limited to, rate setting for transmission and distribution services, licensing of market participants, monitoring compliance, granting approval for construction, facilitating implementation of a smart grid and the promotion of renewable energy.

10. Sources: *Public Utility Holding Company Act of 1935: 1935-1992*, (Office of the Administrator) U.S. Energy Information Administration, 1993 (<http://www.eia.gov/FTP/ROOT/electricity/0563.pdf>); PUHCA Repeal and the Challenges Ahead, Harvard Electricity Policy Group, 2005 ([http://www.hks.harvard.edu/hepg/Papers/Melnyk\\_PUHCA\\_12.0805.pdf](http://www.hks.harvard.edu/hepg/Papers/Melnyk_PUHCA_12.0805.pdf))

11. Source: *Utilities*, (J.T. Bernard) The Canadian Encyclopedia, 2012 (<http://www.thecanadianencyclopedia.com/articles/utilities#SEC829557>)

12. Source: *Developing and Disclosing an Effective Governance Manual*, (Sheila Leggett) National Energy Board, 2010 (<http://www.neb-one.gc.ca/clf-nsi/archives/rpblctn/spchsndprsntrn/2010/dvlpngffctvgvrnncmnl/dvlpngffctvgvrnncmnl-eng.html>)

13. Source: *Canada's National Energy Regulator*, National Energy Board, (<http://www.neb-one.gc.ca/clf-nsi/rthnb/whwrrndrgvrnnc/cndntnlrgrgtr-eng.html>)



### ***Vertical Integration Is Common in Many Provinces***

Many provinces have a vertically integrated crown corporation that operates as a regulated monopoly in the jurisdiction that it serves. As such, the state-owned utility plays a leading role in electricity generation, transmission and distribution.

### ***Ten Quasi-Judicial Bodies***

The ten provincial regulators serve as an independent quasi-judicial body regulating provincial utilities in their respective provinces.

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## **North American Power Reliability**

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### **BACKGROUND**

#### ***Northeastern Blackout of 1965***

The Northeast Blackout of 1965 significantly disrupted the supply of electricity to over 30 million people in Ontario and the northeastern part of the United States. The incident was triggered by a minor disturbance that quickly spread to impact the rest of the region. It exemplified the vulnerability caused by having interconnected power systems with varying operating standards and protocols. The event was a warning to the industry to improve oversight and reliability in order to prevent another major blackout from reoccurring.

#### ***Creation of North American Electric Reliability Corporation***

The electric utility industry responded to the incident by creating the National Electric Reliability Council in 1968, the predecessor to the North American Electric Reliability Corporation (NERC). NERC was initially a voluntary, not-for-profit entity established to ensure the reliability of the bulk power system in North America. NERC is subject to oversight by the Federal Energy Regulatory Commission in the United States and respective governmental authorities in Canada.<sup>14</sup>

#### ***Northeastern Blackout of 2003***

On August 14, 2003, Ontario and eight northeastern states were confronted with a massive power failure. The event caused billions of dollars in lost productivity and left 50 million people without power. The successive collapse of power transmission networks was triggered by limited reserve margins and overloaded transmission systems, which strained the ability of the cables to effectively transport the energy. The problem spread when failed power lines placed greater strain on regions that were otherwise operational. Although power was returned to most regions within 24 hours, the perfect storm has been used as a classic case for reliability planning. Since the incident, North American reliability standards have developed drastically along with enforcement to accompany these changes.

#### ***Electric Reliability Organization Designate for the United States***

In 2006, NERC was certified as the Electric Reliability Organization (ERO) for the United States, transitioning to an independent authority with expanded responsibilities. NERC reliability standards were made mandatory throughout the United States and several provinces in Canada. The organization's prerogatives include, but are not limited to, the development and enforcement of reliability standards, conducting annual assessments, monitoring the bulk power system and educating industry personnel.

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14. Source: *About NERC*, North American Reliability Corporation, (<http://www.nerc.com/AboutNERC/Pages/default.aspx>)





### ***NERC Reliability Regions***

The North American continent is divided into eight reliability regions. Each council is responsible for system planning and operating criteria within their region. The largest council is the Western Electricity Coordinating Council (WECC), which was formed by the merger of three former regional councils in the southwest. The diagram below showcases NERC's different reliability regions and interconnections.<sup>15</sup>



### **ENERGY SECURITY AND THE EMERGENCE OF CYBER-TERRORISM**

The increasing number of attacks on utilities and their power grids has elicited concerns on energy security, particularly with regard to a large-scale cyber attack from enemy countries. While the responsibility over national defense in the United States is traditionally vested with the Department of Homeland Security, the growing prevalence of attacks has called for joint cooperation with NERC to maintain power reliability in the event of future assaults.

15. Source: *Ensuring Reliability in the Bulk Power System*, North American Power Reliability Corporation, 2012 (<http://www.nerc.com/AboutNERC/Documents/NERC%20One%20Pager%20DEC12.pdf>)





The introduction of smart grid technology in recent years has also created challenges associated with an increase in the number of cyber-attacks on power networks. In some cases, a lack of adequate security measures exposes the power grid to widespread service disruption and the potential for considerable damage to infrastructure. Hence, lawmakers are increasingly concerned about the vulnerability of the power grid to an enemy attack.

Fortunately, defense against enemy threats are also growing at a rapid pace. Although disclosure on cyber security measures is limited, NERC has established mandatory standards under the Critical Infrastructure Protection (CIP) plan. The CIP plan is intended to respond to any growing hostilities and develop new strategies to combat the situation going forward. Furthermore, United States utilities have been given access to new frameworks developed in part by the Department of Homeland Security, the Department of Energy and Carnegie Mellon University. While a Canadian equivalent does not exist at the moment, the model is said to have profound implications on the cross-border flow of power.



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## Appendix Tables

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# State of Alabama

**Regulating Body:** Alabama Public Service Commission (APC)  
**RTO/ISO:** Southeast  
**Primary NERC Region:** SERC Reliability Corporation

## GEOGRAPHIC INFORMATION

Population: 4.82 Million  
GDP: \$174.4 Billion

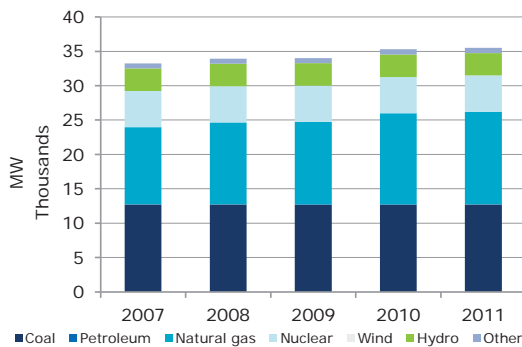
## MAIN INVESTOR-OWNED UTILITIES

Alabama Power Company



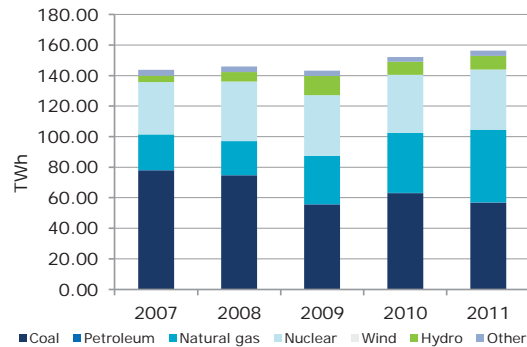
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

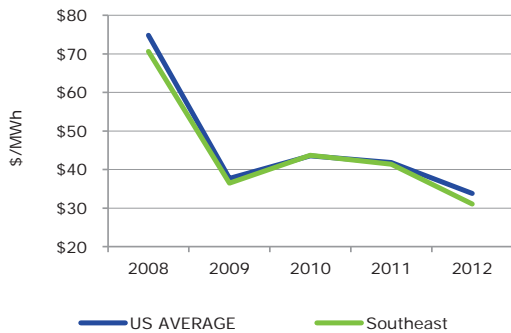
### Production by Fuel Type



Source: EIA.

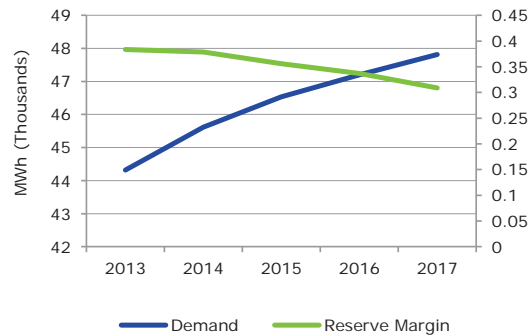
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—SERC Reliability Corporation



Source: EIA, NERC.



## Alabama

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The regulatory equity ratio is not reported by Alabama Power (the largest utility in the state). However, Alabama Power tends to keep its equity ratio in the capital structure at or below 45% since it argues that it is not compensated for any increase of its ratio above 45%. In 2012, the actual equity ratio was 44.0%.
(2) Allowed ROE	<b>Excellent</b> Very Good Satisfactory Below Average Poor	In accordance with a rate stabilization and equalization plan approved by the APSC, APC is authorized to have an ROE between 13.75% and 14.5% (for Alabama Power) and 13.15% to 13.65 % (for Alabama Gas). If APC's ROE is in excess of 14.5%, customer refunds are required; however, there is no relief in the case of actual ROE falling below this threshold.
(3) Energy Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Alabama incurs fuel and purchased power costs, but fully passes on these costs to ratepayers. APC's Energy Cost Recovery is based on a three-month forecast, submitted by the utility each quarter. The rider also includes a component to adjust for differences between forecasts and actual fuel costs.
(4) COS versus IRM	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The APSC handles rate making on an alternative regulation framework called RSE. Any annual increase is limited to 5% and any rate increase for any two consecutive years is limited to 4%. Test years are either historical, with adjustment for known and measurable forecast changes. If earnings are above 14.5%, Alabama Power will have to refund to customers. If earnings are below 13.75%, an increase in rates is allowed, subject to the above limitation.
(5) Capital Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Some capital costs are pre-approved at the time of the cost of service application. Utilities are generally not allowed to include construction work in progress in the rate base. Utilities do not need approval for capital expenditures. There are rate adjustment mechanisms whereby utilities can adjust for capital investments that come into service. Unless reviewed by the regulator, rate adjustments are passed through automatically.
(6) Political Interference	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The state government does not play a significant role in the electricity sector. Investor-owned electric utilities are regulated by the APSC, which operates as a quasi-judicial body. However, commissioners are partisan and elected to a four-year term, which increases political risk to some extent.
(7) Retail Rate	Excellent <b>Very Good</b> Satisfactory Below Average Poor	At 9.1¢/KWh, Alabama's retail rate ranks 23rd in the United States. Alabama's retail rate is 11.82% lower than the national average.  Real GDP growth rate in Alabama was 1.2% in 2012, which was below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Alabama. APSC closed the formal inquiry into restructuring in 2000 and the state decided against deregulation. Although stranded costs have been recovered in the past, assets could potentially be written down if the APSC does not approve the recovery of all costs.
(9) Rate Freeze	<b>Excellent</b> Very Good Satisfactory Below Average Poor	Alabama has not experienced a statewide rate freeze in the past six years.
(10) Market Structure (Deregulation)	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. APC is vertically integrated.



## State of Alaska

**Regulating Body:** Regulatory Commission of Alaska (RCA)

**RTO/ISO:** None

**Primary NERC Region:** N/A

### GEOGRAPHIC INFORMATION

Population: 0.73 Million

GDP: \$45.6 Billion

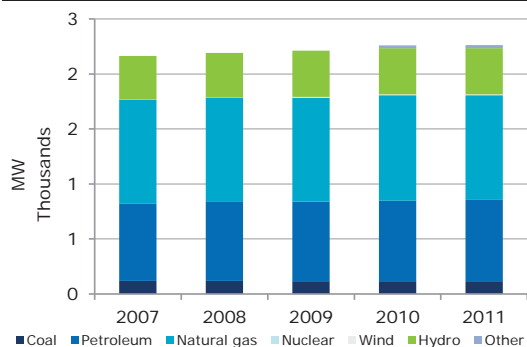
### MAIN INVESTOR-OWNED UTILITIES

Alaska Electric Light & Power



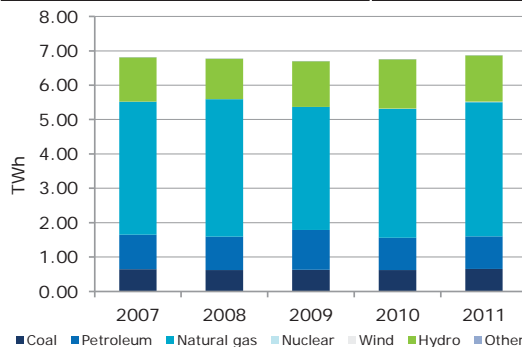
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

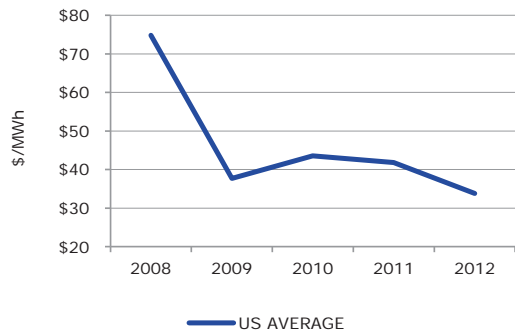
### Production by Fuel Type



Source: EIA.

## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections - Not Available



## Alaska

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average <b>Poor</b>	The regulatory equity in the rate base is set in the low 50% range. ENSTAR Natural Gas's equity ratio was set at 51.4% in 2012.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average <b>Poor</b>	ROE in the state is relatively higher compared with the national average. Alaska Electric Light & Power is allowed to earn an ROE of 12.875% whereas ENSTAR's authorized ROE is 12.55%.
(3) Energy Cost Recovery	Excellent Very Good <b>Satisfactory</b> Below Average Poor	Power costs are recovered through mechanisms, which allow for a pass through of costs to customers. Adjustments for electricity are annually for gas supply costs are quarterly.
(4) COS versus IRM	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The RCA handles rate making on a cost-of-service basis. Test years are historical and an average rate base is used in the rate proceedings. The Commission can delay the decision for 450 days, which is very lengthy. There are no alternative regulation plans to recover non-energy costs.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities are generally not allowed to include construction work in progress in the rate base. However, non-major capex can be added to the rate base when the project is in service, subject to regulatory review.
(6) Political Interference	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The state government does not play a significant role in the electricity sector. Qualified providers of public electric utilities are regulated by the RCA, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory <b>Below Average</b> Poor	Alaska's retail rate falls at 16.08¢/KWh, making it the state with the third highest retail rate in the United States. Alaska's rate is 55.81% higher than the national average.  Real GDP growth rate in Alaska was 1.1% in 2012, which was below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Alaska. The RCA closed the docket investigating electric utility restructuring in 2001. A recent example of stranded costs relate to the deferral of certain costs associated with fuel supply.
(9) Rate Freeze	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The state has not experienced any rate freeze period.
(10) Market Structure (Deregulation)	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The electricity section remains regulated. In 1999, a study was conducted to consider possible retail competition. However, the conclusion was that due to low population density and fragmentation of the transmission and distribution grids, retail competition was not recommended.



## Province of Alberta

**Regulating Body:** Alberta Utilities Commission (AUC)  
**Primary NERC Region:** Western Electricity Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 3.65 Million  
GDP: \$295.28 Billion

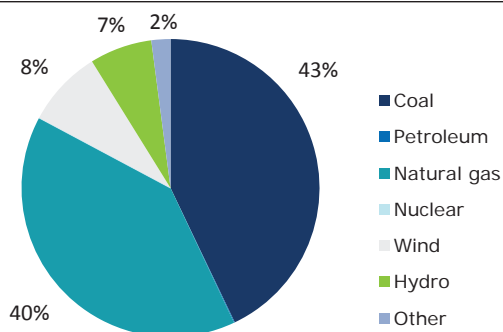
### MAIN INDUSTRY PLAYERS

ATCO Electric  
FortisAlberta Inc.  
ENMAX Energy  
TransAlta Corp.  
EPCOR Utilities Inc.  
Capital Power Corp.  
AltaLink LP



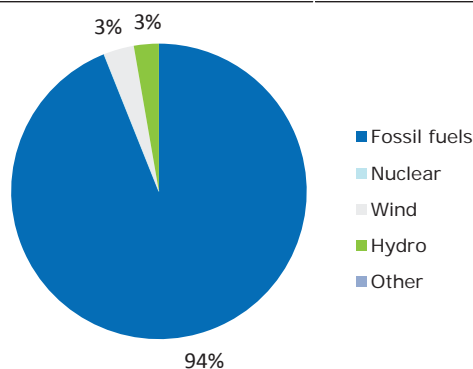
### PRODUCTION

#### Capacity & Fuel Type (2012)



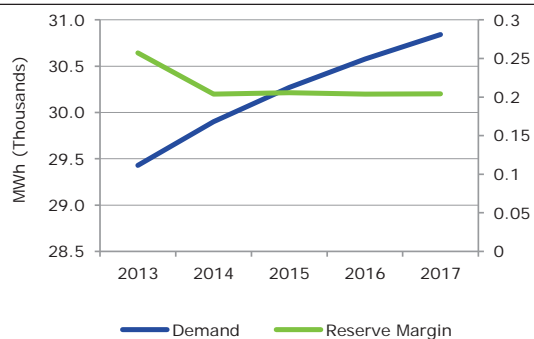
Source: Canadian Centre for Energy Information.

#### Production by Fuel Type (2012)



Source: Canadian Centre for Energy Information.

#### Projections—Western Electricity Coordinating Council



Source: EIA, NERC.



## Alberta

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good <b>Satisfactory</b> Below Average Poor	AUC allows regulated distribution companies (LDC) to have a deemed equity of 39% to 41%, which has historically been consistent. As LDCs tend to maintain their actual capital structure in line with the regulatory capital structure, their leverage is often in line with the "A" rating range.
(2) Allowed ROE	Excellent Very Good <b>Satisfactory</b> Below Average Poor	LDCs have an allowed ROE of 8.75%. However, actual ROE could differ significantly from the approved ROE, depending on the rate base and the LDC's performance.
(3) Energy Cost Recovery	<b>Excellent</b> Very Good Satisfactory Below Average Poor	There is no power price risk for distribution companies, as they are not responsible for purchasing power from generation facilities or the wholesale market. Regulated rate providers and competitive retail providers are responsible for procuring power and ensuring costs are passed on to end users at the rate set by the AUC (for regulated rate providers) or by a contract with a retailer. Cost recovery occurs on a monthly basis through the billing system.
(4) COS versus IRM	Excellent Very Good <b>Satisfactory</b> Below Average Poor	Alberta distribution companies are regulated under a PBR framework for a period of five years. Efficiency targets and the inflation factor are viewed by DBRS as reasonable; however, uncertainty about the implementation and eligibility of the capital tracker remains a key concern going forward.
(5) Capital Cost Recovery	Excellent Very Good <b>Satisfactory</b> Below Average Poor	Some capital costs are pre-approved at the time of the cost of service application. Subsequent capital spending after the base year can be applied for each year through the capital trackers, if (a) capex is not part of the ongoing operations of the utility, (b) spending is for replacement of capital assets or required by a third party and (c) it has a material impact on finances. It is uncertain as to which items will qualify for the capital trackers and how they will be implemented.
(6) Political Interference	Excellent Very Good Satisfactory <b>Below Average</b> Poor	The provincial government plays a significant role in the electricity sector. As a result, the government has direct and indirect influence in Alberta's electricity industry.
(7) Retail Rate	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Ratepayers situated in major cities in Alberta paid 14.95¢/KWh in 2013.  Real GDP growth rate in Alberta was 3.9% in 2012, which was above the national average of 1.7%.
(8) Stranded Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	There have been minimal examples of stranded costs in the Alberta electricity market. However, with Decision 2011-474, the AUC concluded that any stranded costs associated with transmission assets should not remain in rate base, and that LDCs, rather than ratepayers, should bear the risk of stranded costs. The utilities appealed this decision and the AUC is expected to initiate a new proceeding regarding the matter.
(9) Rate Freeze	Excellent Very Good <b>Satisfactory</b> Below Average Poor	Distribution charges have been frozen, effective March 2012. The AUC will not issue decisions that result in rate increases until the Province reviews the independent committee's recommendations. The rate freeze is not expected to have a material impact on LDC's financial profile.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average <b>Poor</b>	The Alberta electricity market was restructured in 1996 to separate generation, transmission and distribution operations. The generation industry is a deregulated market, while distribution and transmission remains fully regulated under the AUC. As a result of the deregulated power market, retailers and GenCos are subject to power price and counterparty risk.





## State of Arizona

**Regulating Body:** Arizona Corporation Commission (ACC)  
**RTO/ISO:** Southwest  
**Primary NERC Region:** Western Electricity Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 6.55 Million  
GDP: \$261.3 Billion

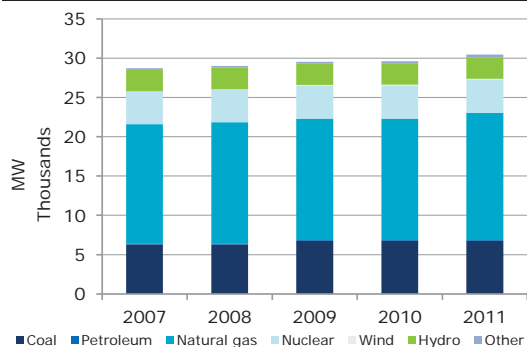
### MAIN INVESTOR-OWNED UTILITIES

Arizona Public Service Company  
Tucson Electric Power Company



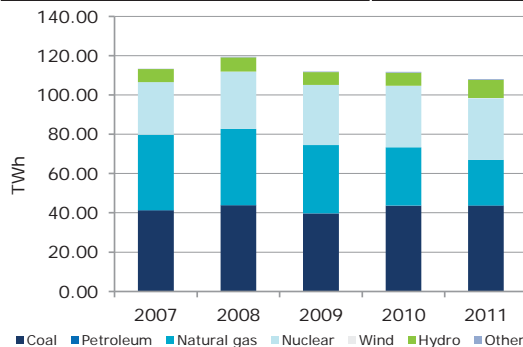
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

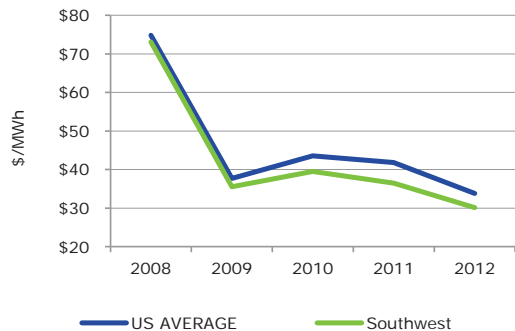
### Production by Fuel Type



Source: EIA.

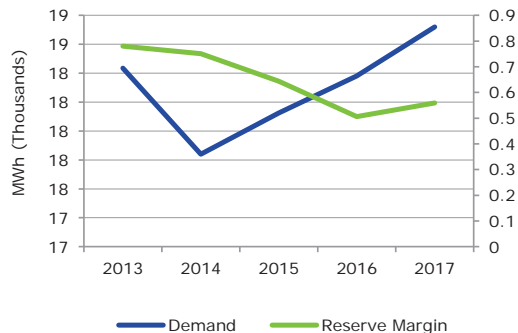
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—Western Electricity Coordinating Council



Source: EIA, NERC.



## Arizona

Criteria	Score	Analysis
(1) Deemed Equity	Excellent <b>Very Good</b> Satisfactory Below Average Poor	The deemed equity set by the Arizona Corporation Commission (ACC) ranges from 43.5% (for Tucson Electric Power - TEP) to 53.9% (Arizona Public Service Company - APSC).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The authorized ROE is in line with the national average and is either set by the Commission or by way of settlement. Tucson's ROE in 2012 was settled at 10% whereas Southwest Gas's ROE was set at 9.5%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities recover energy costs through a Power Supply Adjustor (PSA). Under the PSA, fuel and purchased power costs can be deferred outside of the rate case to be recovered. The difference between the estimated costs (using forward-looking method) and actual costs is deferred. The PSA imposes a cap of \$4 million on the annual increase. Utilities are no longer allowed to have a cost sharing of 90% customers and 10% for the utility.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The rate making in the state is based on a cost-of-service basis. However, in some cases, utilities may not file their new rate cases for several years. In these cases, rates can be adjusted using interim filings and riders. Test years are historical with some premium returns on fair-value bases.
(5) Capital Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Utilities are generally not allowed to include construction work in progress in the rate base. Capital expenditure trackers are used to mitigate regulatory lag in between general rate cases.
(6) Political Interference	Excellent <b>Very Good</b> Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Public electric utilities are regulated by the Utilities Division of the ACC. The Commission operates as an independent body under Arizona's constitution, which reduces the likelihood of state interference. However, the office of the Commission is partisan and commissioners are elected to a four-year term, which increases political risk to some extent.
(7) Retail Rate	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Arizona ranks 19th highest in the States with a retail rate of 9.71¢/KWh. Arizona's retail rate is 5.9% lower than the national average.  Real GDP growth rate in Arizona was 2.6% in 2012, which was slightly above the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory <b>Below Average</b> Poor	Utilities have recovered their stranded costs from deregulation in the late 1990s through a series of state initiatives including the competition transition cost.
(9) Rate Freeze	Excellent Very Good <b>Satisfactory</b> Below Average Poor	TEP reached a settlement in 1999, which provided for the recovery of \$450 million of stranded cost through a fixed competitive transition charge and a capped rates for TEP retail customer through 2008. There have been no statewide rate freezes.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	Arizona began deregulation processes in the late 1990s. However, the movement was put on hold and utilities were instructed to reintegrate. The state commission sets bundled retail rates. Most companies are vertically integrated.



## State of Arkansas

**Regulating Body:** Arkansas Public Service Commission (APSC)

**RTO/ISO:** Southeast, SPP

**Primary NERC Region:** Southwest Power Pool, RE

### GEOGRAPHIC INFORMATION

Population: 2.95 Million

GDP: \$105.8 Billion

### MAIN INVESTOR-OWNED UTILITIES

Entergy Arkansas Inc.

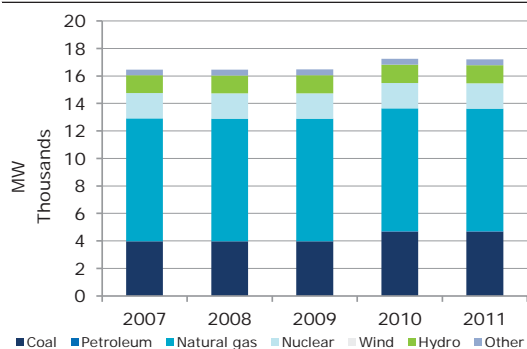
Southwestern Electric Power Company

Oklahoma Gas & Electric Company



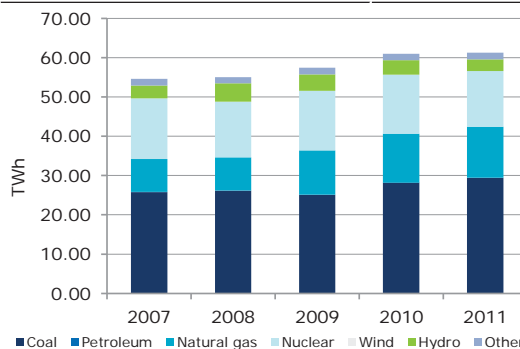
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

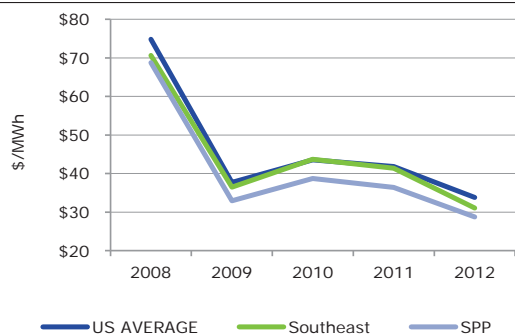
### Production by Fuel Type



Source: EIA.

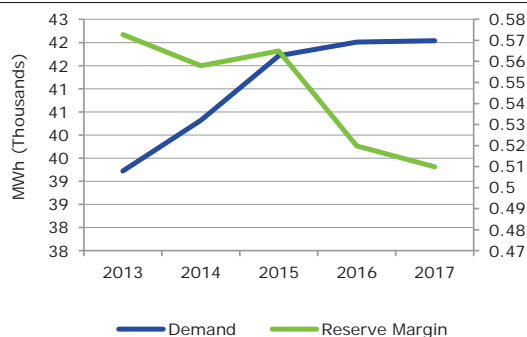
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections-Southwest Power Pool, RE



Source: EIA, NERC.



## Arkansas

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity set by the Arkansas Public Service Commission (APSC), ranging from 45.3% (for Entergy Arkansas) to 50% (for Southern Electric Power Company) to 53% (for Oklahoma Gas & Electric Company - OG&E).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE for major investor owned utilities in the state ranges from 10.2% to 10.4%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	The state allows utilities to recover energy costs through mechanisms such as Energy Cost Rider (ECR) and Energy Efficiency (EE). The ECR forecasts are submitted to the commission on an annual basis, and include a true-up for any discrepancies. If the difference is greater than 10%, there may be interim adjustments. The ECR provides for OG&E to recover 100% of its energy costs.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The APSC handles rate making on a cost-of-service basis. Test years are partially forecasted - six months actual and six months forecast, using historical test year, adjusting for known and measurable changes.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in the state are allowed to request to earn returns on construction work in progress (CWIP). However, the Commission normally disallows CWIP. Rider applications are allowed to recover capex spent in between rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Twenty two electric utilities are regulated by the APSC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Arkansas had a 7.43¢/KWh retail rate in 2011, ranking sixth least expensive. Arkansas' retail rate is 28% lower than the national average.  Real GDP growth rate in Arkansas was 1.3% in 2012, which was below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded costs were expected to be much higher in Arkansas before the state repealed suspended deregulation efforts in 2003. Utilities were to recover stranded costs through competition transition cost and securitization. Recent examples of stranded costs relate to storm recovery and decommissioning costs. Although stranded costs have been recovered in the past, assets could potentially be written down if the APSC does not approve the recovery of all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Arkansas has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. After a brief period of deregulation, the state returned to regulation in 2003. The state commission sets bundled retail rates. Most companies are vertically integrated.



## Province of British Columbia

**Regulating Body:** BC Utilities Commission (BCUC)  
**Primary NERC Region:** Western Electricity Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 4.4 Million  
GDP: \$217.75 Billion

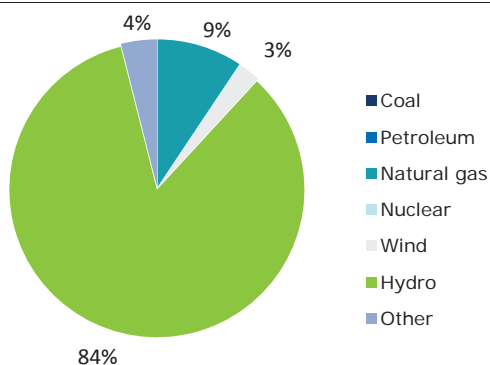
### MAIN INDUSTRY PLAYERS

FortisBC Inc.  
BC Hydro and Power Authority



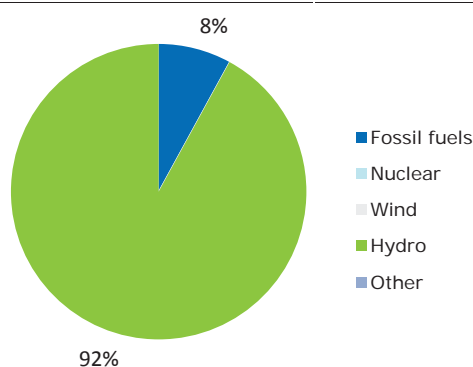
### PRODUCTION

#### Capacity & Fuel Type (2012)



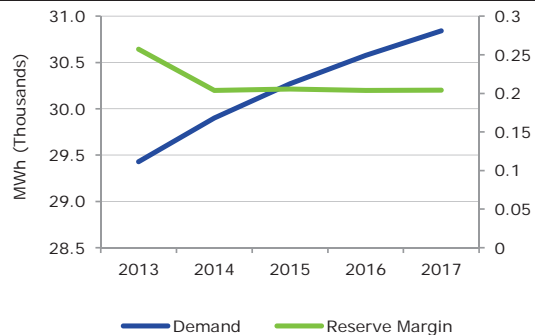
Source: Canadian Centre for Energy Information.

#### Production by Fuel Type (2012)



Source: Canadian Centre for Energy Information.

#### Projections—Western Electricity Coordinating Council



Source: EIA, NERC.



## British Columbia

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity set by the British Columbia Utilities Commission (BCUC) ranges from 30% to 40%.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE in the province ranges from 8.75% to 11.73%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Energy costs are fully passed through to the rate payers. Since the majority of the energy is generated through hydroelectric facilities, power costs are relatively lower compared to other jurisdictions.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The BCUC handles rate making primarily on a COS basis. Gas utilities in BC have previously operated under an IRM framework. The prudence test in the province is rather rigid, resulting in some regulatory lags and disallowances of costs incurred by utilities.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Capital expenditures are generally pre-approved by the BCUC prior to build-out. Capital costs are added to the rate base after it comes into service.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The provincial government plays a significant role in the electricity sector. The government owns BC Hydro, which is the primary provider of power and electricity services in the province. Electric utilities are regulated by the BCUC, which operates as a quasi-judicial body.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Ratepayers in BC pay an average electricity rate of 7.6¢/KWh in 2013.  Real GDP growth rate in British Columbia was 1.7% in 2012, which was slightly below the national average of 1.7%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Minimal stranded costs exist in BC. Recent examples of stranded cost relates to demand side management, environmental compliance, and smart metering. Although costs have been recovered in the past, assets could potentially be written down if the BCUC does not approve the recovery of all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	BC has not experienced a province-wide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	Utilities in BC are fully regulated. BC Hydro, the largest utility in BC, is a government-owned, fully integrated utility that serves the majority of the customers in the province. Retail rates are set by the BCUC.



## State of California

**Regulating Body:** California Public Utilities Commission (CPUC)  
**RTO/ISO:** California (CAISO), Northwest  
**Primary NERC Region:** Western Electricity Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 38.04 Million  
GDP: \$1936.4 Billion

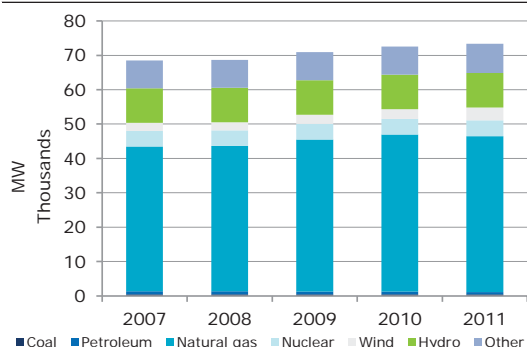
### MAIN INVESTOR-OWNED UTILITIES

Pacific Gas and Electric Company  
Southern California Edison Company  
San Diego Gas & Electric Company



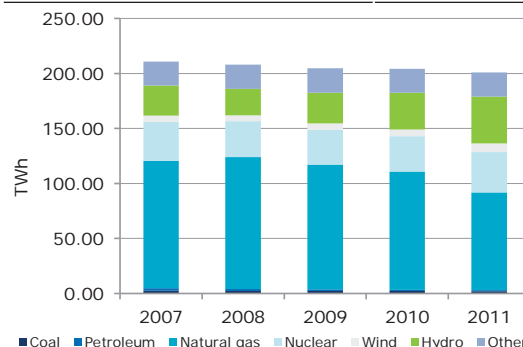
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

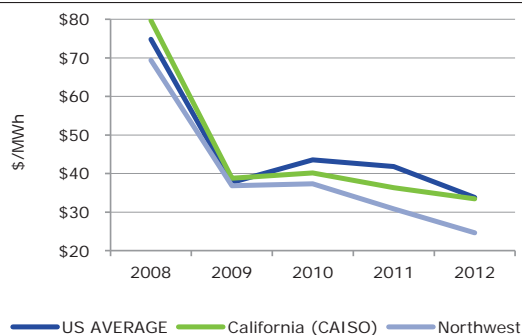
### Production by Fuel Type



Source: EIA.

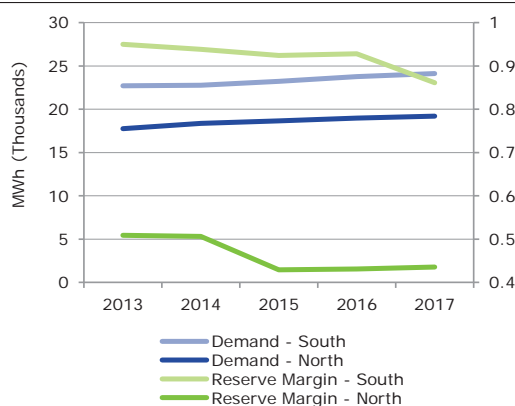
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—Western Electricity Coordinating Council



Source: EIA, NERC.



## California

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The common equity ratio in California is set within a wide band for different utilities. The ratio is set at 48% for Southern California Edison Company (SCE), at 52% for San Diego Gas and Electric Company (SG&E), Southern California Gas Company (SCG), and Pacific Gas and Electric Company (PG&E). This ratio reflects favourable treatments for gas distributions by the Commission.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	Cost of capital is determined separately from the general rate cases. For the big three utilities in the states, the authorized ROE ranges from 10.10% to 10.45%. In the Cost of Capital Order issued by the Commission in December 2012, ROE is 10.45% for SCE, 10.30% for SG&E, 10.10% for SCG, and 10.40% for PG&E. Cost of capital adjustments is based on a autonomic mechanism to be reviewed annually and ROE will be adjusted should changes in utility bond yields exceed 100 basis points.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Each year, utilities in California submit Energy Resource Recovery Account (ERRA) forecast applications with the Commission to outline their fuel and purchased power costs for the subsequent year. The following year, utilities recover the energy costs in excess of amounts projected in their initial application. However, if actual costs exceed (or below) projected costs by more than 5% of the prior year revenue that is classified as generation for retail rates, the ERRA would be triggered to make an adjustment. The Commission could disallow recovery if it find energy cost incurred (or outages) as non-compliant or unreasonable.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The CPUC employs general rate case model similar to an incentive regulation model. The cycles are typically three years long with one base year and two subsequent years. The base year is based on a cost-of-service basis. The two subsequent years, revenue requirements are based on a methodology, which includes annual allowance for escalation in operation and maintenance costs, additional revenues for capital-related investments and the recovery for expected nuclear outages.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	CPUC periodically pre-approves base rates based on authorized capital expenditures. Utilities are generally not allowed to include construction work in progress in the rate base. An exception is SCEC, which was granted approval by the federal regulator (FERC) as part of the agreement to join CAISO, to recover costs related to construction work in progress.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. The three major investor-owned utilities and four smaller electric utilities are all regulated by the CPUC. The Commission operates as a constitutional agency with broad powers, which reduces the likelihood of state interference. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which further decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	At 13.05¢/KWh, California's 2011 retail rate ranks ninth most expensive in the country. California's retail rate is 26.45% higher than the national average.  Real GDP growth rate in California was 3.5% in 2012, which was slightly above the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded costs in California reached as high as \$27 billion in the late 1990s. Since then, utilities have largely recovered their stranded costs through a series of initiatives including the competition transition cost, rate reduction bond and securitization.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	With attempts of market deregulation starting in 1996, rates were frozen from 1996 until March 2002. There have been no subsequent statewide rate freezes.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The electricity sector in the state is deregulated. rate making for retail sales is under the state commission. However, customer choice is gradually being rolled out for Californian customers. The three major investor-owned utilities are vertically integrated.





## State of Colorado

**Regulating Body:** Colorado Public Utilities Commission (CPUC)  
**RTO/ISO:** Southwest  
**Primary NERC Region:** Western Electricity Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 5.19 Million  
GDP: \$259.7 Billion

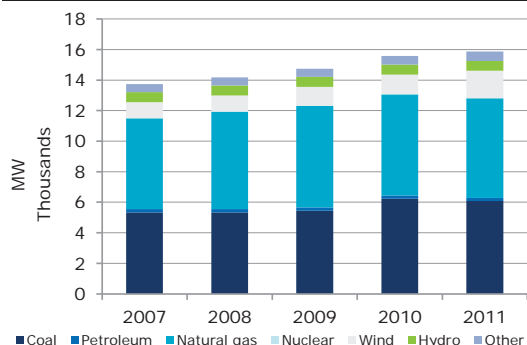
### MAIN INVESTOR-OWNED UTILITIES

Public Service Company of Colorado  
Black Hills Colorado Electric Utility Company LP



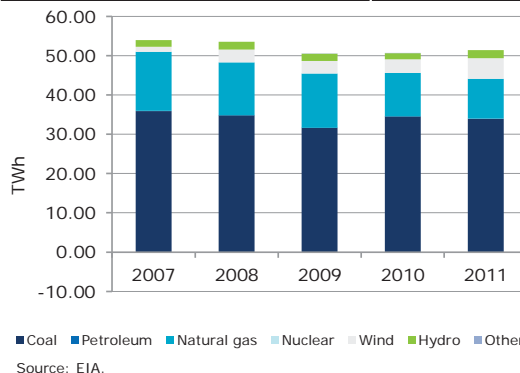
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

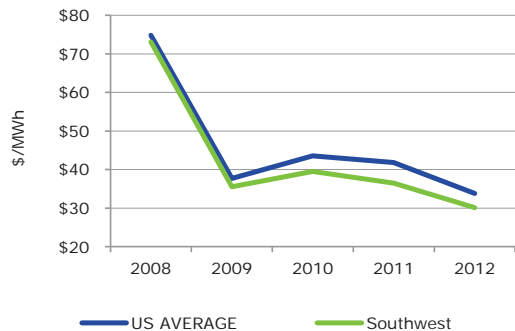
### Production by Fuel Type



Source: EIA.

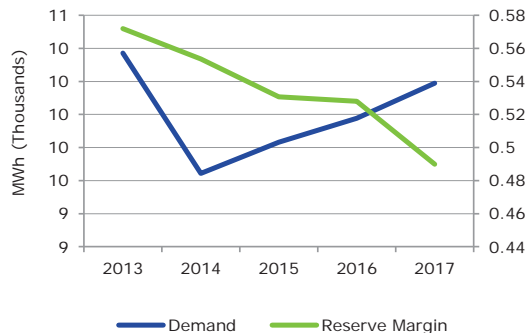
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—Western Electricity Coordinating Council



Source: EIA, NERC.



## Colorado

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity is set by the Colorado Public Utilities Commission (CPUC), ranging from 49.1% to 56%. In 2012, the ratio was 49.1% for Back Hills Colorado Electric (BHCE), 50% for Black Hills Colorado Gas (BHCG) and 56% for Public Service Company of Colorado (PSCO).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	ROE in the state is either set by the Commission or by way of settlement (approved by the Commission). ROE in the 2012 settlement for PSCO was 10%. BHCG was authorized 9.6% whereas authorized ROE for BHCE was in the 9.8% to 10.0% range.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	For PSCO, fuel and purchased power costs are recovered through a formula called an incentive electric commodity adjustment (ECA). Under the ECA, PSCO is allowed to recover 90% of the costs that exceed the forecast costs. It also allows sharing mechanisms with customers in cost savings. The ECA is adjusted semi-annually. BHCE is allowed to pass through 100% of energy costs to customers. However, for off-system sales, BHCE cost/benefit sharing with customers is 75% customers/25% shareholders (will be 90%/10% beginning January 2014).
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	rate making in Colorado is on a cost-of-service basis. The cycles are typically three years long with one test year and two subsequent years. Test years are typically historical, using year-end original cost rate bases. Subsequent year revenues are adjusted based on the original settlement. The Commission allows for sharing called earnings sharing mechanism (ESM) until the next rate case. The ESM specifies that earnings between a 10.2% ROE and a 10.5% ROE will be equally shared with customers. Earnings exceeding 10.5% will be returned to customers.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in Colorado are permitted to add construction work in progress to the rate base for transmission and generation projects. Capital expenditure trackers are used to mitigate regulatory lag in between general rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Investor-owned electric utilities are regulated by the CPUC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a four-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Colorado had the 21st highest retail rate, with a statewide average of 9.39¢/KWh. Colorado's retail rate is 9% lower than the national average.  Real GDP growth rate in Colorado was 2.1% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Colorado. The state's Electricity Advisory Panel voted against deregulation in 1999, concluding it would not be in the state's best interest. A recent example of stranded costs is the SmartGridCity investment, for which a portion has been recovered.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Colorado has not experienced a statewide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Most companies are vertically integrated.



## State of Connecticut

**Regulating Body:** Connecticut Department of Public Utility Control (CPURA)

**RTO/ISO:** New England (ISO-NE)

**Primary NERC Region:** ReliabilityFirst Corporation

### GEOGRAPHIC INFORMATION

Population: 3.59 Million

GDP: \$233.4 Billion

### MAIN INVESTOR-OWNED UTILITIES

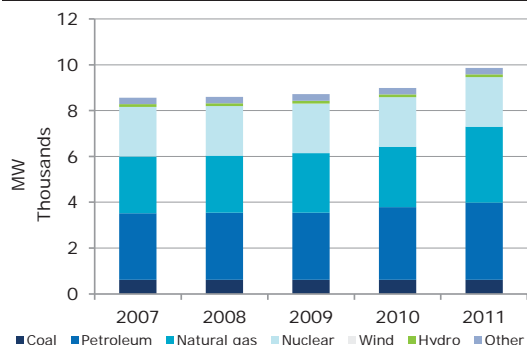
The Connecticut Light & Power Company

United Illuminating Company



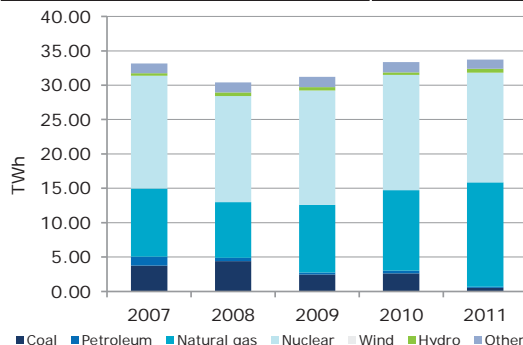
### PRODUCTION

#### Capacity & Fuel Type



Source: EIA.

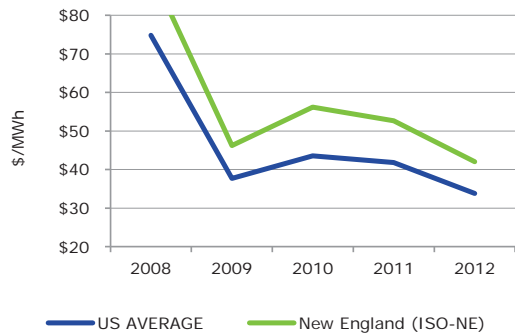
#### Production by Fuel Type



Source: EIA.

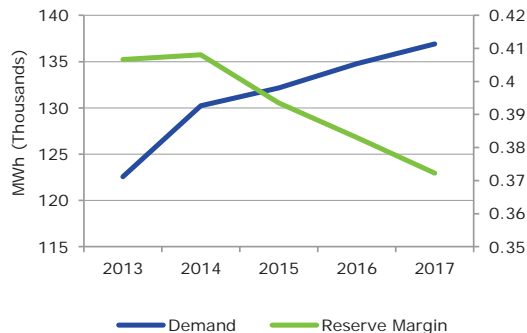
### DEMAND

#### Wholesale Price



Source: EIA, FERC.

#### Projections—ReliabilityFirst Corporation



Source: EIA, NERC.



## Connecticut

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The regulatory equity ratio is set by the Connecticut Department of Public Utility Control (CPURA), ranging from 50% (for Connecticut Light and Power - CL&P) to 50.2% (Yankee Gas).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	In the most recent rate case, ROE is set at 8.75 for CL&P (9.4% in the 2010 rate case) and 8.83% for Yankee Gas, which is significantly below the national average. Southern Connecticut Gas is authorized an ROE of 9.36%
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Connecticut's purchased power costs are not bundled with its transmission and distribution services. Utilities in the state are allowed to fully recovered their purchased power costs from those who do not choose an alternative supplier. A tracking mechanism is in place to monitor the purchased power and gas supply costs. The gas adjustment mechanism is revised monthly, with over-under recovery to be refunded to/recovered from the customers over the subsequent 12-month period.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The CPURA handles rate making on a cost-of-service basis. Test years are historical but adjusted for rate base, revenues, expenses and capex. The Commission reviews the performance very four years (at least). The Commission could allow performance base regulation (PBR) for utilities. However, the PBR plan has not been implemented in the state.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities are generally not allowed to include construction work in progress in the rate base. Capital expenditure trackers are used to mitigate regulatory lag in between general rate cases. Rider applications are allowed to recovered projects between rates cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric distribution utilities are regulated by the CPURA, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a four-year term.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Connecticut's 16.35¢/KWh retail rates the second highest in the country. Connecticut's retail rate is 58.43% higher than the national average.  Real GDP growth rate in Connecticut was -0.1% in 2012, which was far below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded costs in Connecticut reached as high as \$3.5 billion in 1999 amid deregulation. Since then, utilities have largely recovered their stranded costs through a series of initiatives including the competition transition adjustment and rate reduction bond.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Connecticut deregulated its electricity market in 1998, with rates frozen until 2007.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is deregulated. Following deregulation, distribution and transmission rates are regulated by the state commission. The state no longer oversees generation rates and consumers are able to choose their supplier. Utility companies are not vertically integrated in general.



## State of Delaware

**Regulating Body:** Delaware Public Service Commission (DPSC)

**RTO/ISO:** PJM

**Primary NERC Region:** ReliabilityFirst Corporation

### GEOGRAPHIC INFORMATION

Population: 0.92 Million

GDP: \$62.7 Billion

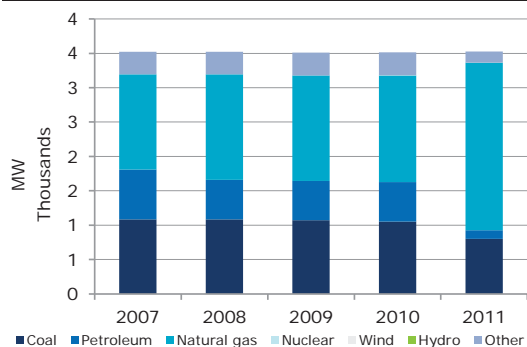
### MAIN INVESTOR-OWNED UTILITIES

Delmarva Power & Light Company



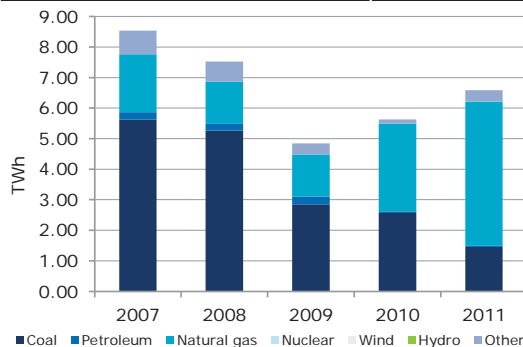
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

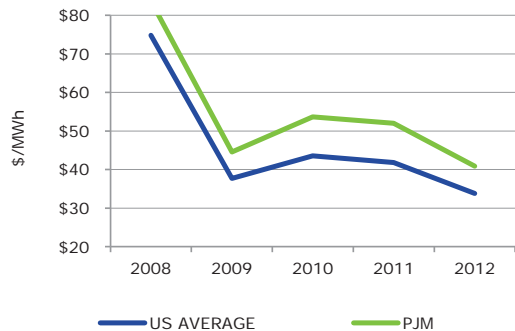
### Production by Fuel Type



Source: EIA.

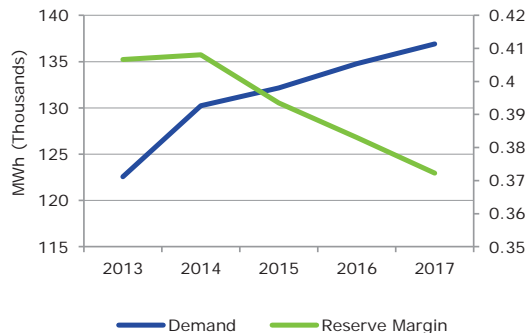
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections-ReliabilityFirst Corporation



Source: EIA, NERC.



## Delaware

Criteria	Score	Analysis
(1) Deemed Equity	Excellent <b>Very Good</b> Satisfactory Below Average Poor	The regulatory equity ratio in the capital structure for the major utility in the state, Delmarva Power & Light Company (DPL), is set at 49.61%, which is around the national average. The equity ratio for gas distribution is slightly lower.
(2) Allowed ROE	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Return on equity (ROE) is authorized at 9.75% for DPL. ROE is set by the Commission or by way of settlement that is approved by the Commission.
(3) Energy Cost Recovery	<b>Excellent</b> Very Good Satisfactory Below Average Poor	DPL procures power from a competitive market to meet standard offer service (SOS) customers. The state allows the utilities to file an annual application to update prices and to recover the differences. Adjustment clauses are eliminated for electric DPL but remain available for gas distributions through Gas Cost Adjustment Clauses (GCA). GCA is adjusted annually, with the true up of over-recovery or under-recovery.
(4) COS versus IRM	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The Commission handles rate making on a cost-of-service basis, based on historical with adjustments for known and measurable changes. Regulatory lag is an issue in the state, normally from 7 months and longer. Recent settlement in the state provides an opportunity for all utilities to pursue a multi-year plan.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory <b>Below Average</b> Poor	Currently, utilities are not permitted to self-adjust rates for prudent investments prior to regulatory approval. Utilities are generally not allowed to include construction work in progress in the rate base. Consequently, there is a delay in capital expenditure recovery due to the regulatory review process. While recent agreements encourage discussion of alternate regulatory methodologies to reduce regulatory lag, no recovery mechanism has been approved to date.
(6) Political Interference	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The state government does not play a significant role in the electricity sector. Power distribution is regulated by the DPSC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a five-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good <b>Satisfactory</b> Below Average Poor	With a retail rate of 11.48¢/KWh, Delaware has the 14th highest statewide average rate. Delaware's retail rate is 11.24% higher than the national average.  Real GDP growth rate in Delaware was 0.2% in 2012, which was far below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good <b>Satisfactory</b> Below Average Poor	There have been minimal examples of stranded costs in Delaware following deregulation in 1999. A recent example of stranded costs is related to smart grid investments.
(9) Rate Freeze	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Following the Electric Utility Restructuring Act of 1999, rates were frozen from the beginning of October 1999 to at least the end of September 2002. The freeze was extended for some companies due to circumstances such as mergers. There have been no subsequent statewide rate freezes.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory <b>Below Average</b> Poor	The state is deregulated. Restructuring occurred in 1999. The commission now only regulates distribution rates, and no longer oversees generation rates. Utilities are largely not vertically integrated.



## State of District of Columbia

**Regulating Body:** District of Columbia Public Service Commission (DCPS)

**RTO/ISO:** PJM

**Primary NERC Region:** ReliabilityFirst Corporation

### GEOGRAPHIC INFORMATION

Population: 0.63 Million

GDP: \$104.7 Billion

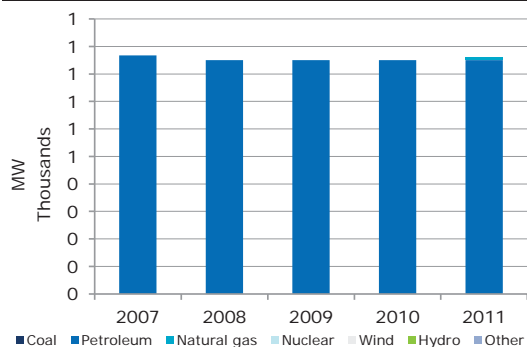
### MAIN INVESTOR-OWNED UTILITIES

Potomac Electric Power Company



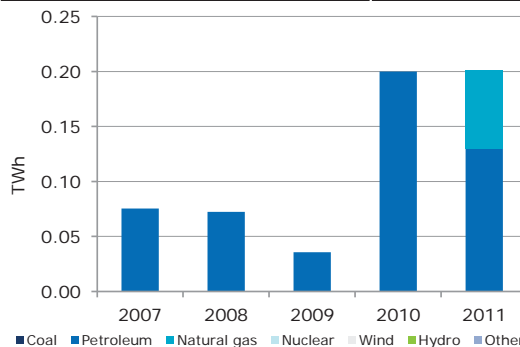
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

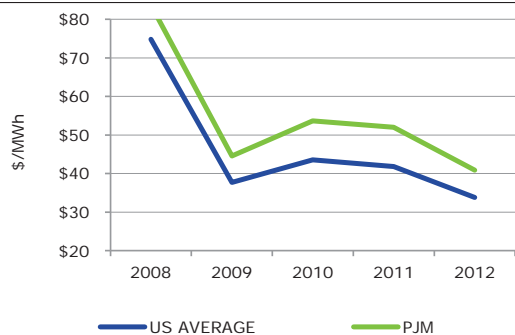
### Production by Fuel Type



Source: EIA.

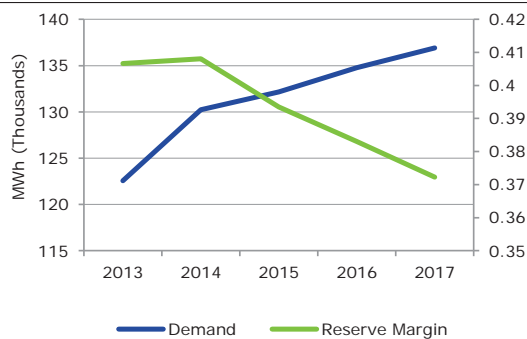
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—ReliabilityFirst Corporation



Source: EIA, NERC.



## District of Columbia

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The major utility in District of Columbia (DC) is Potomac Electric Power Company (PEPCO). PEPCO's regulatory equity ratio is set at 47.31%. The approach of the Commission is that as long as the proposed ratio is reasonable and no parties present evidence suggesting PEPCO's proposed ratio is unreasonable, the Commission would accept the proposed ratio.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	Return on equity (ROE) in the state varies between gas distribution and electricity distribution. PEPCO is allowed to earn a authorized ROE of 9.75% for its electricity distribution operations and 10% for its gas distribution operations. Lower ROE for electricity operation reflects the Commission's view that the business risk of PEPCO reduced in light of the unbundling of energy costs from base rates.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Fuel and purchased gas costs are recovered through adjustment clauses. Utilities would do quarterly forecast of annual gas costs and is allowed to have a annual reconciliation of the variances. On the electricity front, PEPCO incurs costs of power procurement from the competitive bidding process. The Company is allowed to recover these costs.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The DCPSC handles rate making on a cost-of-service basis. Test years determination varies. Utilities must file general rate cases to recover costs.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities are generally not allowed to include construction work in progress in the rate base, except capex is spent on pollution controlled facilities. Rider applications are allowed to recover on major capex spent outside of the rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The District government does not play a significant role in the electricity sector. Electric utilities are regulated by the DCPSC, which operates as an independent agency and was established by the U.S. Congress. The office of the Commission is non-partisan and commissioners are appointed to a four-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	The District of Columbia's average retail rate of 12.81¢/KWh is the 11th highest in the nation. The District of Columbia's retail rate is 24.13% higher than the national average.  Real GDP growth rate in District of Columbia was 0.7% in 2012, which was below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in the District of Columbia. The district passed legislation allowing competition in 2000, and utilities have largely recouped their stranded costs by selling generation assets. A recent example of stranded costs is related to smart metering. Although stranded costs have been recovered in the past, assets could potentially be written down if the DCPSC does not approve recovery of all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	The District of Columbia deregulated in 2000, but did not implement a statewide rate freeze, except for distribution rates for low income customers that were capped from 2001 through August 2007. There have been no subsequent statewide rate freezes.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is deregulated. The electricity sector was opened to competition in 2001. The state commission now regulates distribution rates and has stopped regulating generation rates. Utilities on the whole are not vertically integrated. PEPCO continues to provide standard offer service to customers who have not chosen an alternative retailer.





## State of Florida

**Regulating Body:** Florida Public Service Commission (FPSC)  
**RTO/ISO:** Southeast  
**Primary NERC Region:** Florida Reliability Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 19.32 Million  
GDP: \$754 Billion

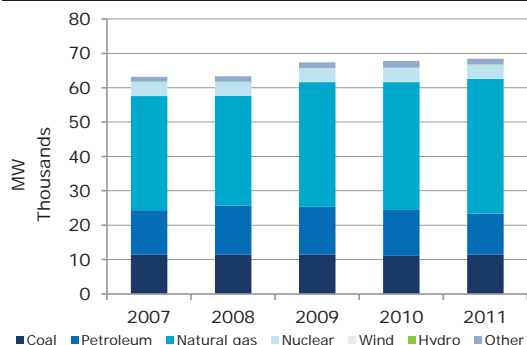
### MAIN INVESTOR-OWNED UTILITIES

Florida Power & Light Company  
Gulf Power Company  
Florida Power Corp.  
Tampa Electric Company



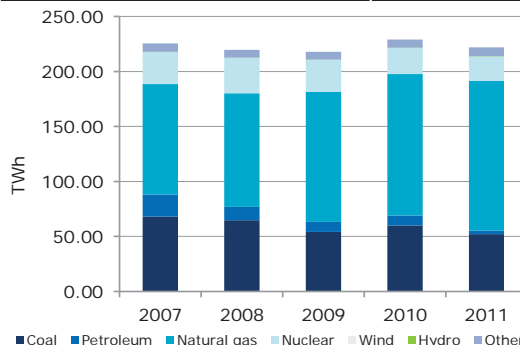
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

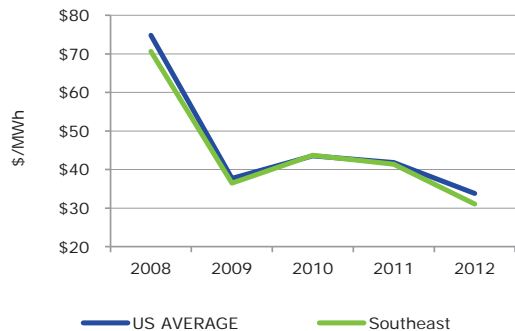
### Production by Fuel Type



Source: EIA.

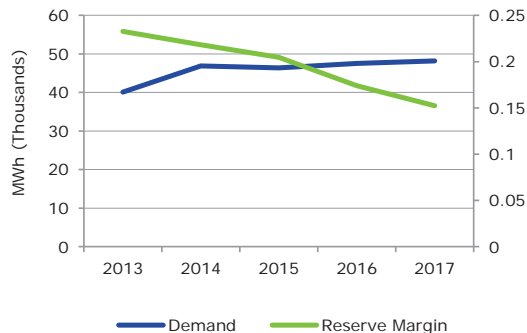
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections-Florida Reliability Coordinating Council



Source: EIA, NERC.



## Florida

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The regulatory equity is either set, or by way of settlement, approved by the Florida Public Service Commission (FPSC). The equity ratio is set at 46%.38% for Progress Florida (a Duke company) and at 54% for Tampa Electric. The highest ratio of 59.1% was allowed for Florida Power & Light (FPL), effective March 2010. This range is rather wide.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	Authorized ROE for major investor owned utilities in the state ranges from 10.25% to 11.25%. ROE for Progress Florida is set at 10.50%. Tampa Electric's ROE is higher at 11.25%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	As a regulated state, utilities operating in Florida incur fuel and purchased power costs; however, these costs can be recovered in rates through annual adjustments, though under "extreme" circumstances this may be more frequent. These adjustments require regulatory approval.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The FPSC handles rate making largely on a cost-of-service basis. Utilities must file general rate cases to recover costs. However, some settlements restrict the timing of the next filing. For these settlements, an annual step adjustment and other various cost recovery mechanisms may be included. Test years are fully or partially forecasted. Alternative regulation plan may be allowed on a case-by-case basis. Duke Energy reached a settlement for the period 2013-2016 in which base rates are frozen through 2016, with certain exceptions.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in Florida are permitted to add construction work in progress to the rate base for nuclear or other generation projects. Capital expenditure trackers (through the use of rider applications) are used to mitigate regulatory lag in between general rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Five investor-owned electric utilities are regulated by the FPSC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a four-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Florida averaged a 10.61¢/KWh retail rate – the 15th highest rate in the country. Florida's retail rate is 2.81% higher than the national average.  Real GDP growth rate in Florida was 2.4% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded cost exposure for some utilities in Florida are in the several billion dollar range as a result of purchase power agreements for qualified facilities required under the public utilities regulatory policies act. The FPSC has allowed the recovery of the retail portion of these costs. Recent examples of stranded costs include those related to storm restoration, environmental compliance, and nuclear decommissioning. Although stranded costs have been recovered in the past, assets could potentially be written down if the FPSC does not approve the recovery of all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Florida has not experienced a statewide rate freeze. However, rate caps are negotiated between the utilities and other stakeholders. Duke Energy Florida agreed to have base rates frozen from 2013 through 2016 in settlement approved by the Commission.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Most companies are vertically integrated.



## State of Georgia

**Regulating Body:** Georgia Public Service Commission (GPSC)

**RTO/ISO:** Southeast

**Primary NERC Region:** SERC Reliability Corporation

### GEOGRAPHIC INFORMATION

Population: 9.92 Million

GDP: \$403.1 Billion

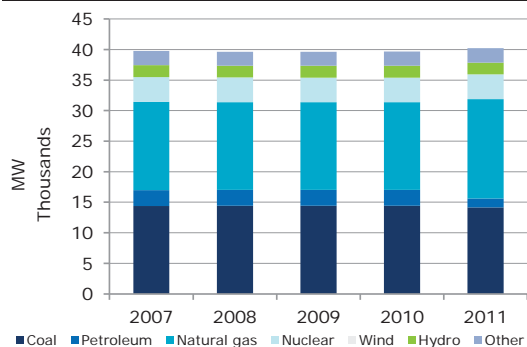
### MAIN INVESTOR-OWNED UTILITIES

Georgia Power Company



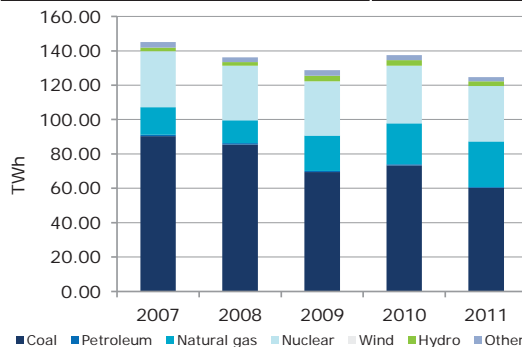
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

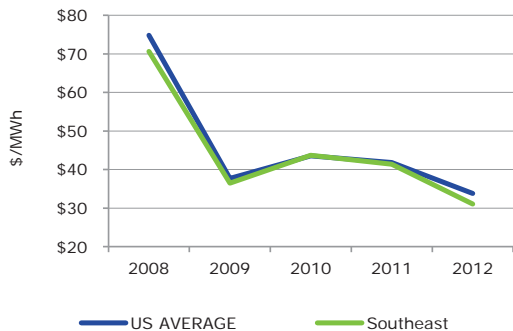
### Production by Fuel Type



Source: EIA.

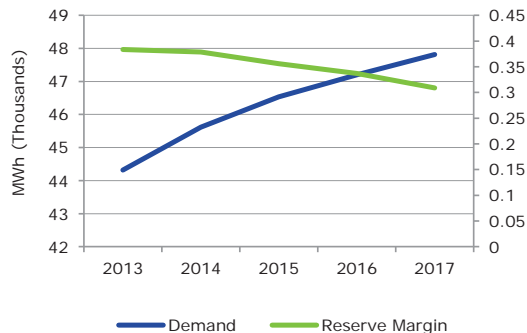
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—SERC Reliability Corporation



Source: EIA, NERC.



## Georgia

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The regulatory equity was not specified in the 2010 Alternative Retail Plan (ARP) approved by the Georgia Public Service Commission (GPSC or the Commission) for Georgia Power (GP). However, GP targets intend to maintain its equity ratio of 48.3%.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed ROE for GP in the 2010 ARP is 11.15%, with a band of 10.25% to 12.25% to be used for evaluation of earnings sharing. Two-thirds of earnings above 12.25% will be directly refunded to customers. GP is allowed to recover ROE below 10.25%. The state made efforts in the past to allow GP to recover its earnings below 9.75% (2009) and 10.15% (2010).
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in the state can recover their energy costs through a fuel cost recovery clause. Utilities would charge customers the estimated costs of fuel costs and purchased power and the balance of the previous period (true up). Capacity costs are recovered through base rates. The fuel recovery clause is adjusted annually. However, if actual costs exceed the estimated costs in the rates by a certain amount (\$200 million for GP), utilities could adjust its fuel costs recovery rates prior to the next fuel case.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The Georgia rate making is on cost-of-service basis, with GP currently having its 2010 ARP. In the ARP, GP's revenues for 2011, 2012, and 2013 are set, with adjustments each year to reflect updated costs and other capex spending. Test years are fully forecasted. The company is required to file a general rate case in the last year advising whether or not to continue the current rate plan.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	On a triennial basis, Georgian utilities project capital expenditure needs based on supply and demand factors. The lesser of certified construction costs from these filings or actual construction costs incurred are recoverable through rates. Utilities in Georgia are permitted to add construction work in progress to the rate base for nuclear generation projects. rider applications are also permitted for utilities to recover capex outside of a rate plan or rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the GPSC, which operates as a quasi-judicial body. The Commission operates as an independent body under Georgia's constitution, which reduces the likelihood of state interference. However, commissioners are partisan and are elected to a six-year term, which increases political risk to some extent.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Georgia's average retail rate of 9.61¢/KWh puts it at 20th highest in the country. Georgia's retail rate is 6.88% higher than the national average.  Real GDP growth rate in Georgia was 2.1% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Georgia. Utilities estimated back in 1998 that stranded costs could amount to as much as \$3 billion if deregulated, but it was ultimately not pursued. Recent examples of stranded costs include storm recovery and environmental remediation. Although stranded costs have been recovered in the past, assets could potentially be written down if the GPSC does not approve the recovery of all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Georgia has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Most companies are vertically integrated.



## State of Hawaii

**Regulating Body:** Hawaii Public Utilities Commission (HPUC)

**RTO/ISO:** None

**Primary NERC Region:** N/A

### GEOGRAPHIC INFORMATION

Population: 1.39 Million

GDP: \$68.9 Billion

### MAIN INVESTOR-OWNED UTILITIES

Hawaiian Electric Company Inc.

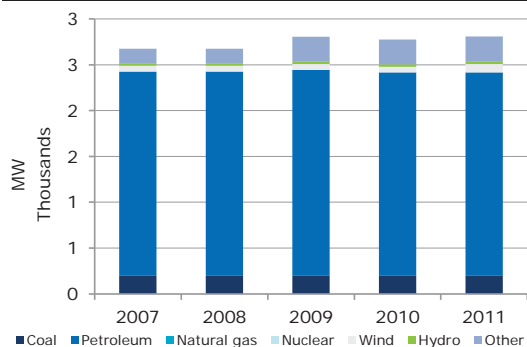
Hawaii Electric Light Company Inc.

Maui Electric Company Ltd.



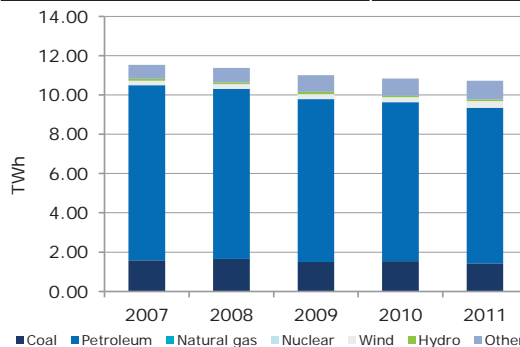
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

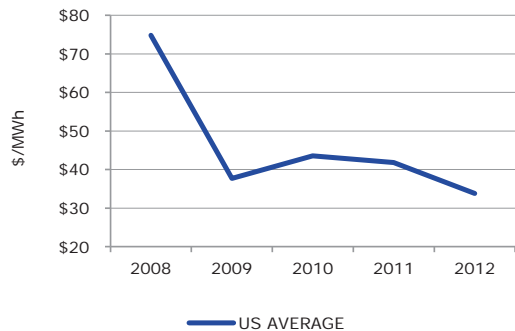
### Production by Fuel Type



Source: EIA.

## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections - Not Available



## Hawaii

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The regulatory equity is set by the Hawaii Public Utilities Commission (HPUC or the Commission). In 2012, this ratio was set at 55.91% for Hawaiian Electric Light Company Inc. (HELCO), 56.29% for Hawaiian Electric Company Inc. (HECO), and 56.86% for Maui Electric Company Ltd. (MEC). This equity ratio is of the highest on the U.S.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed ROE in the state for all three major utilities was set at 10% (slightly lower than previous years) for 2012. ROE for MEC in the May 2013 case was set at 9%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities operating in Hawaii are permitted to recover fuel and purchased power costs through fuel adjustment clauses (on fuel and generation costs), which are adjusted on a monthly basis, though no regulatory approval is required. All three utilities are using Purchased Power Adjustment Clause (PPAC) to recover purchased power costs. Rates under the PPACs are adjusted quarterly.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	All three utilities are currently under an alternative regulation framework (ARF). Under the ARF, there are separate mechanisms: (1) A cost-of service recovery mechanism for rate base consideration and additions as well as changes in operating expenses between rate cases; (2) An earnings-sharing mechanism whereby earnings exceed authorized ROE by up to 100 basis points (bps) to be shared with customers (25%); (3) earnings between 100 bps and 300 bps above authorized ROE to be 50%/50% shared with customers; and (4) above 300 bps to be 90% shared with customers.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utility capital investments are engaged upon remittance by the regulator. Costs incurred are deferred until approved recovery period or expensed when recovery is denied. Utilities generally are not allowed to recover costs through construction work in progress. Contributions from customers in aid of construction are amortized against depreciation expense over 30-55 years, regulatory lags appear to be modest.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Four electric utilities are regulated by the HPUC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Hawaii has the highest retail rate in the country, at 31.59¢/KWh. Hawaii's retail rate is 206.1% higher than the national average.  Real GDP growth rate in Hawaii was 1.6% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Hawaii. The HPUC opened up a docket to investigate deregulation in 1999 but has taken no further action. Although stranded costs have been recovered in the past, assets could potentially be written down if the PUC does not approve the recovery of all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Hawaii has not experienced a statewide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. The main utility of the state is vertically integrated.



## State of Idaho

**Regulating Body:** Idaho Public Utilities Commission (IPUC)  
**RTO/ISO:** Northwest  
**Primary NERC Region:** Western Electricity Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 1.6 Million  
GDP: \$54.8 Billion

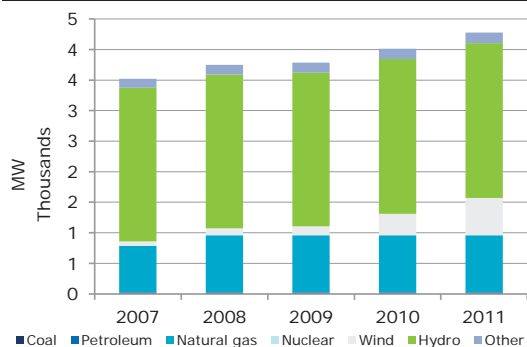
### MAIN INVESTOR-OWNED UTILITIES

Idaho Power Company  
Avista Utilities  
Rocky Mountain Power



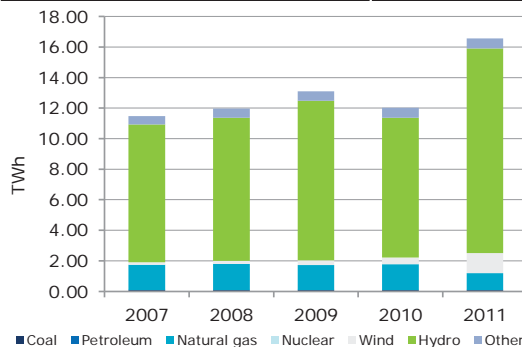
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

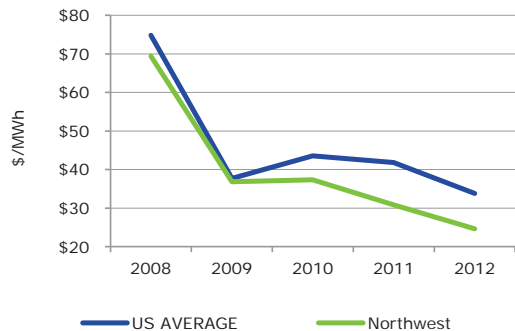
### Production by Fuel Type



Source: EIA.

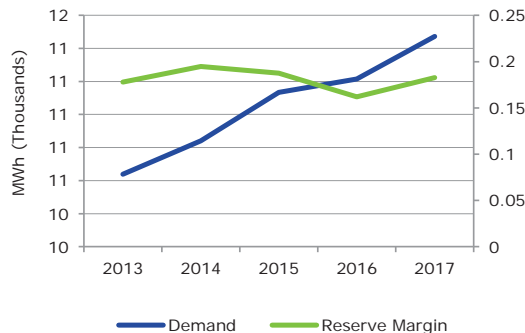
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections-Western Electricity Coordinating Council



Source: EIA, NERC.



## Idaho

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The regulatory equity is set through a settlement, approved by the Commission, for Avista Utilities (Avista) is 50%. For Idaho Power, the equity ratio is 51%.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed ROE for major investor owned utilities in the state ranges from 9.5% (for Idaho Power) to 9.8% (for Avista). If the actual ROE is less than 9.5%, Idaho Power amortizes additional regulatory liabilities to earn a minimal ROE of 9.5%. If the ROE for Idaho Power exceeds 10% to up to 10.5% will share equally with customers. If ROE for Idaho exceeds 10.5%, the sharing will be 75% customers and 25% shareholders.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Fuel and purchased power costs can be recovered in rates through annual adjustments (ECAM). Utilities can recover 90% of the difference between the actual power costs and the base power costs set in a rate case in the future rates. Utilities can seek securitization bonds to finance the deferred amount. PacifiCorp is allowed to recover 90% of the difference between the actual costs and those in base rates.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The IPUC handles rate making on a cost-of-service basis. Test years are based on historical, with adjustments for known and measurable changes. Utilities must file general rate cases to recover costs. However, an alternative regulation plan is also considered and provides for earnings sharing mechanisms between the ratepayers and the shareholders.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities capital expenditures typically commence upon meeting regulatory requirements and approval. Utilities are generally not allowed to recover costs related to construction work in progress. AFUDC and prescribed return is recovered when a capital asset is placed in to service, barring special approved cases where recovery is permitted during construction. Consequently, a regulatory lag exists due to IPUC's capital expenditure regulatory practises.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Investor-owned electric utilities are regulated by the IPUC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Idaho's average retail rate was the lowest in the country at 6.44¢/KWh. Idaho's retail rate is 37.6% lower than the national average.  Real GDP growth rate in Idaho was 0.4% in 2012, which was far below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Idaho. The state decided against deregulation in 1999. A recent example of stranded costs relate to the deferral of certain costs associated with generation plant operations and maintenance. Although stranded costs have been recovered in the past, assets could potentially be written down if the IPUC does not approve the recovery of all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Idaho has not experienced a statewide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Most companies are vertically integrated.





## State of Illinois

**Regulating Body:** Illinois Commerce Commission (ICC)

**RTO/ISO:** Midwest (MISO), PJM

**Primary NERC Region:** ReliabilityFirst Corporation

### GEOGRAPHIC INFORMATION

Population: 12.88 Million

GDP: \$644.2 Billion

### MAIN INVESTOR-OWNED UTILITIES

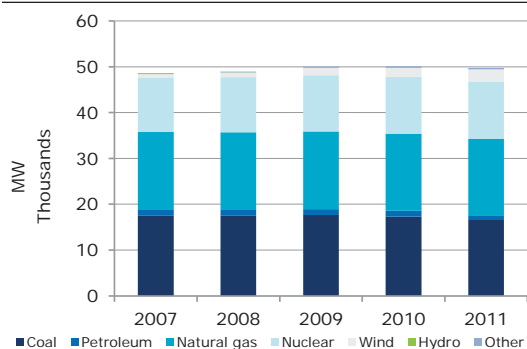
Ameren Illinois Company

Commonwealth Edison Company



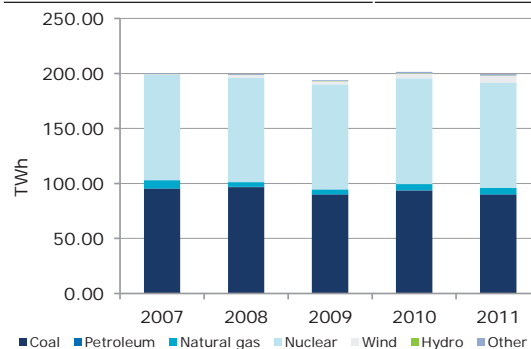
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

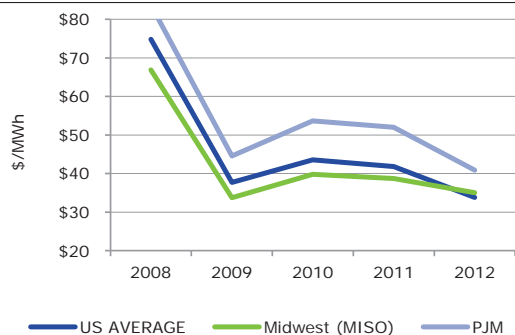
### Production by Fuel Type



Source: EIA.

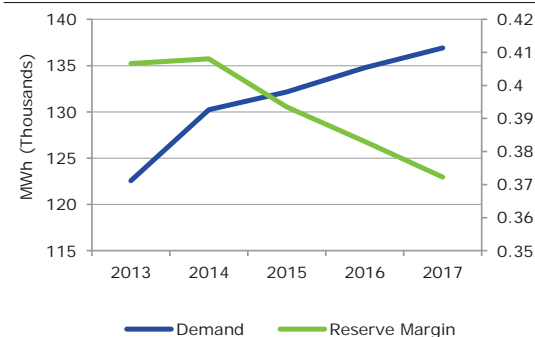
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—ReliabilityFirst Corporation



Source: EIA, NERC.



## Illinois

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity is set by the Illinois Commerce Commission (ICC), ranging from 42.55% (for Commonwealth Edison - ComEd) and 53.3% (for Ameren Illinois). In January 2013, Ameren Illinois file a rate application, requesting the regulatory equity of 51.8%. The decision is pending.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed ROE for major investor owned utilities in the state ranges from 9.06% (for Ameren Illinois) to 9.81% (ComEd). In determining ROE, the Commission incorporates a formula rate plan (FRP), which applies 580 basis points (bps) to the 12-month average 30- year T-Bonds yield. If the actual ROE in a period is more than 50 bps above or below its authorized ROE, the utility will be required to refund to (or collected from) customers. In the event that a utility does not meet certain performance criteria. In 2012, ComEd elected to participate in Illinois Infrastructure Modernization Act (IEMA), which set ROE according to a formula, based on 30 year T bonds.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Purchased power costs were recovered through a monthly automatic fuel adjustment clause (FAC). FAC was discontinued due to restructuring (except MidAmerican Energy). Purchased power to meet standard offer service (SOS) obligations is procured from a competitive process. The recovery of power costs is based on an annual true up mechanism.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	Typically, the ICC handles rate making on a cost-of-service basis, based on either historical or future test years. Following the recent enactment of the IEMA, companies may select an IRM rate making model. Cycles are five years. The IEMA is based on performance-based formula rates and provides for the recovery of actual costs of delivery service that are prudently incurred and to reflect the utility's actual regulated capital structure.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	The Commission may allow (by law) returns on construction work in progress in the rate base if the project will be completed within 12 months of the end of the test year. Rider applications are allowed to recover capex spent outside of the rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the ICC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a five-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Illinois ranks 27th highest with an average retail rate of 8.97¢/KWh. Illinois' retail rate is 13.08% lower than the national average.  Real GDP growth rate in Illinois was 1.9% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded costs in Illinois exceeded \$15 billion in the late 1990s. Since then, utilities have largely recovered their stranded costs through a series of initiatives including the competition transition cost. A more recent example of stranded costs relates to smart metering.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	The Electric Service Customer Choice and Rate Relief Law of 1997 deregulated the electric market in Illinois. The resulting rate freeze lifted at the end of 2006. The Illinois electric settlement agreement of 2007 was subsequently designed in an effort to prevent future rate freezes. There have been no subsequent statewide rate freezes.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The electricity in the state is deregulated. Whole generation and transmission are under the FERC's jurisdiction. The state oversees distributions. Utilities purchase power for their customers either through a procurement process conducted by the Illinois Power Agency or through the MISO.



## State of Indiana

**Regulating Body:** Indiana Utility Regulatory Commission (IURC)  
**RTO/ISO:** Midwest (MISO), PJM  
**Primary NERC Region:** ReliabilityFirst Corporation

### GEOGRAPHIC INFORMATION

Population: 6.54 Million  
GDP: \$267.6 Billion

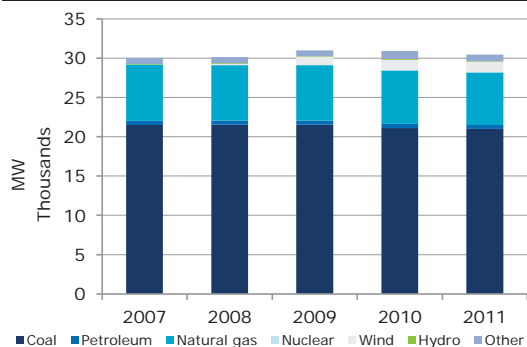
### MAIN INVESTOR-OWNED UTILITIES

Duke Energy Indiana Inc.  
Indiana Michigan Power Company  
Indianapolis Power & Light Company  
Northern Indiana Public Service Company  
Southern Indiana Gas & Electric Company



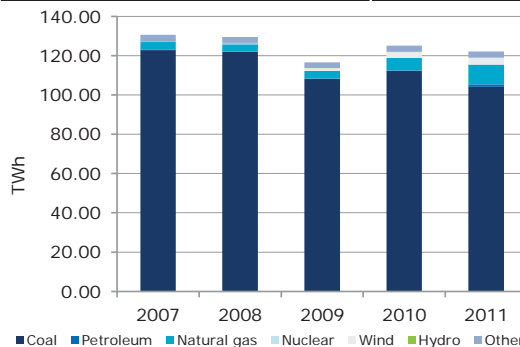
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

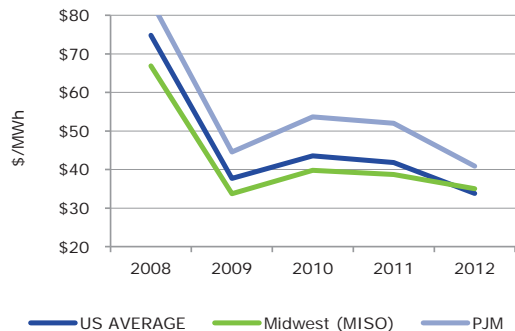
### Production by Fuel Type



Source: EIA.

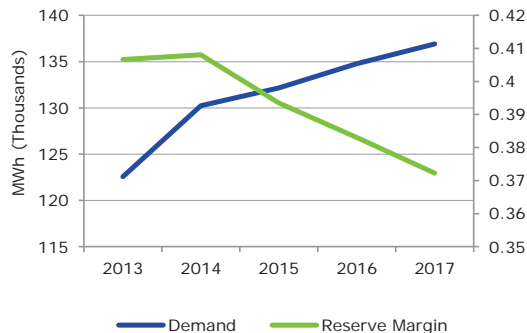
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—ReliabilityFirst Corporation



Source: EIA, NERC.



## Indiana

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The common equity in the regulatory capital is set by the Indiana Utility Regulatory Commission (IURC) ranges. This ratio is modestly below average for major utilities in the state. The ratio is: 46.53% for Northern Indiana Public Service Company (NIPS), 43.60% for Indianapolis Power & Light Company (IP&L), and 44.44% for Duke Energy Indiana (DEI). The only major utility that has a regulatory equity ratio above the average is Southern Indiana Gas & Electric Company (SIG&E), which authorized 54.85%.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed ROE (excluding ROE for riders) for major investor owned utilities in the state ranges from 10.2% to 10.5%. These ROEs are either set by the Commission or through settlement. ROE for a ride could be 12.1% (as in the case of IP&L). Under the Indiana legislation, utilities are subject to a net operating income test (NOI), if the actual NOI exceeds the allowed NOI, utilities would have to refund to the customers.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Fuel and purchased power costs are recovered through fuel adjustment clauses (FAC). FAC is based on a forward-looking estimate of fuel and purchased power costs for the next three months plus the true up of the previous period. The energy component of fuel and purchased power costs can be adjusted every three months. Regulatory hearing is required before adjustments are allowed. Adjustment may be allowed before the three month period under emergency situation. Gas cost adjustment filing is allowed. NIPS shares equally with customers the amount above a benchmark.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The IURC handles rate making on a cost-of-service basis. Test years are historical. Utilities must file general rate cases to recover costs. The rate base is a test-year-end basis. Adjustments are known and measurable changes are allowed if such changes are expected to occur within a 12 month period from the date of the rate case. Sharing mechanism is also in place for most utilities. DEI equally shares with customers any earnings above \$14.7 million associated with off-system sales. In the case of NIPS, Gas supply costs below or above a benchmark will be equally shared with customers.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in Indiana are permitted to add construction work in progress to the rate base for environmental projects. Capital expenditure trackers are used to mitigate regulatory lag in between general rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the IURC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a four-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Indiana's 8.01¢/KWh retail rate is the 39th highest in the States. Indiana's retail rate is 22.38% lower than the national average.  Real GDP growth rate in Indiana was 3.3% in 2012, which was slightly above the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Indiana. Recent examples of stranded cost include environmental compliance and decommissioning costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Indiana has not experienced a statewide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Most companies are vertically integrated.



**Regulating Body:** Iowa Utilities Board (IUB)  
**RTO/ISO:** Midwest (MISO)  
**Primary NERC Region:** Midwest Reliability Organization

#### GEOGRAPHIC INFORMATION

Population: 3.07 Million  
GDP: \$147.2 Billion

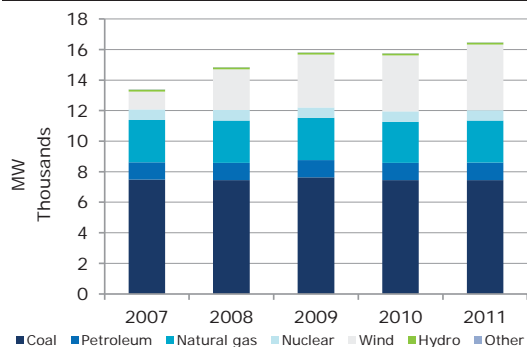
#### MAIN INVESTOR-OWNED UTILITIES

Interstate Power & Light Company



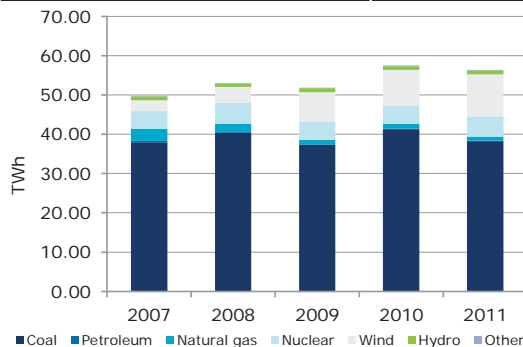
### PRODUCTION

#### Capacity & Fuel Type



Source: EIA.

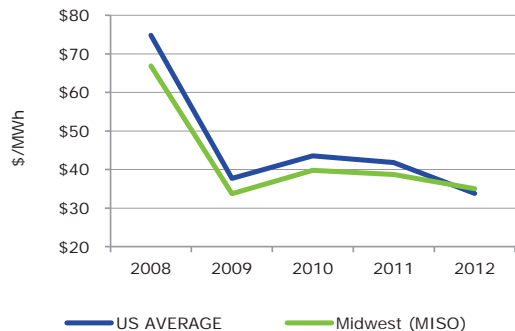
#### Production by Fuel Type



Source: EIA.

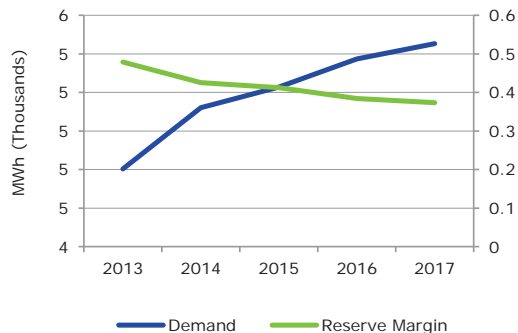
### DEMAND

#### Wholesale Price



Source: EIA, FERC.

#### Projections—Midwest Reliability Organization



Source: EIA, NERC.



## Iowa

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity set by the Iowa Utilities Board (IUB) for the primary investor-owned utility is set at 48.2%.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE in the state for the primary investor-owned utility is 9.6% (Interstate Power & Light Company - IPL).
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Fuel and purchased power costs can be recovered in rates through an energy adjustment clause, which is adjusted monthly based on forecast energy costs. Non-energy costs are recovered through base rates. Under-recovery or over-recovery will be adjusted in the subsequent months.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The IUB handles rate making on a 13-month-average cost-of-service basis, based on historical test years, with adjustments for known and measurable changes that occur any time within 12 months after the date of the commencement of the proceeding. Utilities must file general rate cases to recover costs. The IUB may authorize a rate of return on a new investment that is different than the return a utility is allowed to earn on existing generation assets. The IUB may award ROE premiums (or impose penalties) on a case-by-case basis related to management efficiency.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities do not include capital expenditure cost in rates prior to approval due to uncertain recovery conditions. Utilities are generally not allowed to include construction work in progress in the rate base. Rider applications are allowed to mitigate regulatory lag in between general rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Two investor-owned electric utilities are regulated by the IUB, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Iowa's 7.56¢/KWh average retail rate ranks 44th highest. Iowa's retail rate is 26.74% lower than the national average.  Real GDP growth rate in Iowa was 2.4% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Iowa. A recent example of stranded cost relates to energy efficiency costs. Although stranded costs have been recovered in the past, assets could potentially be written down if the IUB does not approve the recovery of all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Iowa has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Utility companies are not necessarily vertically integrated.



## State of Kansas

**Regulating Body:** Kansas Corporation Commission (KCC)

**RTO/ISO:** SPP

**Primary NERC Region:** Southwest Power Pool, RE

### GEOGRAPHIC INFORMATION

Population: 2.89 Million

GDP: \$128.5 Billion

### MAIN INVESTOR-OWNED UTILITIES

Empire District Electric Company

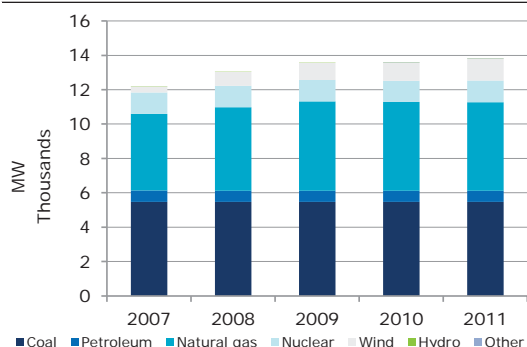
Kansas City Power & Light Company

Kansas Gas & Electric Company



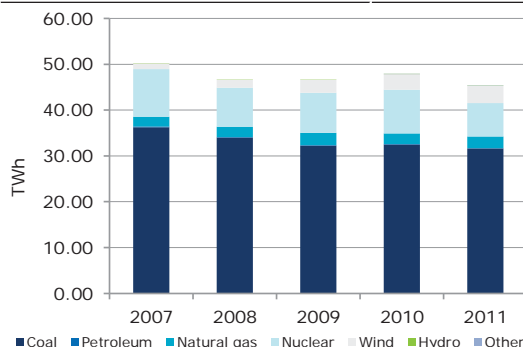
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

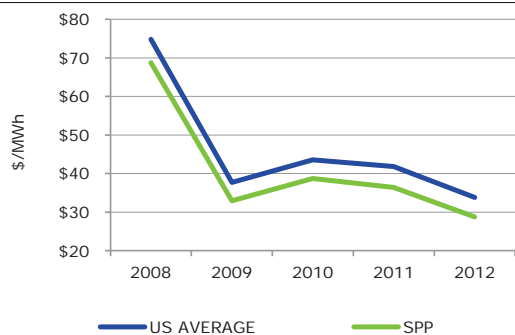
### Production by Fuel Type



Source: EIA.

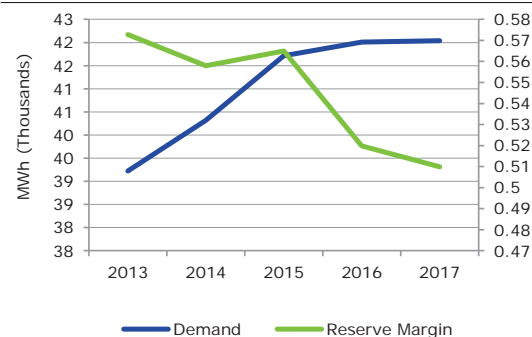
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections-Southwest Power Pool, RE



Source: EIA, NERC.



## Kansas

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The common equity ratio of 52.6% for Kansas City Power & Light (KCP&L, a Westar company) was agreed through a settlement and was approved by the Commission in 2012. Another Westar company, Kansas Gas & Electric (KGE) is allowed the same equity ratio.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed ROE for Westar companies in the state is set at 10% in April 2012 through a settlement. This ratio was lower (9.5% for a subsidiary of KCP&L). The ROE for transmission is set by the FERC, which is typically higher than the state-authorized ROE at 11.3%. The FERC also provides incentives for utilities to make investment in the central Kansas line, with an authorized ROE of 12.3%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There are several cost recovery mechanisms in the state. Fuel and purchased power costs are recovered through an adjustment clause that is adjusted quarterly based on forecast cost (with annual true-up). Gas supply costs are also adjusted through purchased gas adjustment (PGA) mechanism, which allows utilities to recover the difference between actual costs and forecast costs. The PGA is also adjusted quarterly, with an annual true-up on the deferred account.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The KCC handles rate making on a cost-of-service basis. Test years are historical, with the rate base calculated at the end of the year. Utilities are allowed to request for adjustments with certain changes to the test period. The Commission could allow an utility to keep earnings in excess of the authorized ROE up to 200 basis points (bps) on investments associated with energy efficiency and renewable resources.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities can include capex on construction work in progress (CWIP) in the rate cases. Utilities can also obtain order from the Commission establishing rate making principles that will apply over the life of the assets before committing its investment. Riders are allowed to recover environmental capex. Pension costs can be tracked using "pension Tracker".
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the KCC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a four-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Kansas ranks 28th highest for retail rates at 8.89¢/KWh. Kansas' retail rate is 13.86% lower than the national average.  Real GDP growth rate in Kansas was 1.4% in 2012, which was below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Kansas.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Kansas has not experienced a statewide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Utilities are fully integrated.





## State of Kentucky

**Regulating Body:** Kentucky Public Service Commission (KPSC)  
**RTO/ISO:** Southeast, Midwest (MISO), PJM  
**Primary NERC Region:** SERC Reliability Corporation

### GEOGRAPHIC INFORMATION

Population: 4.38 Million  
GDP: \$161.4 Billion

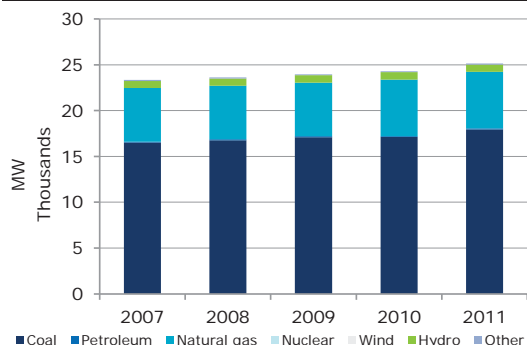
### MAIN INVESTOR-OWNED UTILITIES

Duke Energy Kentucky Inc.  
Louisville Gas & Electric Company  
Kentucky Power Company  
Kentucky Utilities Company



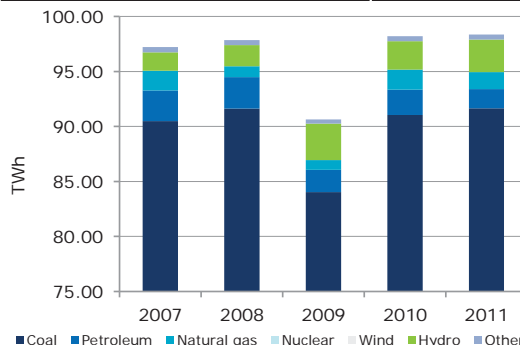
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

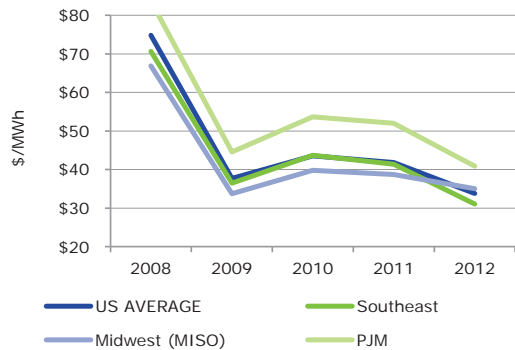
### Production by Fuel Type



Source: EIA.

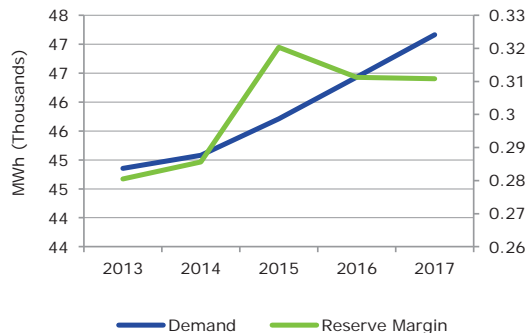
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—SERC Reliability Corporation



Source: EIA, NERC.



## Kentucky

Criteria	Score	Analysis
(1) Deemed Equity	Excellent <b>Very Good</b> Satisfactory Below Average Poor	The deemed equity set by the Kentucky Public Service Commission (KPSC) ranges from 43% to 51%. Kentucky Power Company (KPC - a AEP company) was authorized a equity ratio of 43% (established in 2010). Duke Energy Kentucky (DEK) is allowed to have a ratio of 51%.
(2) Allowed ROE	Excellent <b>Very Good</b> Satisfactory Below Average Poor	In June 2012, DEK can earn a ROE of 10.2% (10.375% for gas distributions). The ratio for AEP KPC is 10.5%. ROE is either set by the Commission or by way of settlement. In the most recent rate case, ROE for Louisville Gas and Electric (LG&E) is set at 10.4%. The level of ROE provided in the state is within a very narrow band and is in line with the national average.
(3) Energy Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Fuel and purchased power costs are recovered, using an Electric Fuel Adjustment Clause (EFAC). The EFAC is adjusted every month, based on actual costs for the second proceeding month plus a true-up for any difference between actual costs and the forecast. Costs associated with replacement of power outages are not recovered through the EFAC. Gas supply costs are recovered through a mechanism called Gas Cost Adjustment Clauses (GCA). The GCA is revised quarterly (monthly for DEK), based on the forecast for the next quarter and the true-up.
(4) COS versus IRM	Excellent <b>Very Good</b> Satisfactory Below Average Poor	The KPSC handles rate making on a cost-of-service basis. Test years are based on historical, with adjustments for known and measurable changes. By law, utilities could use forecast test periods in their rate cases. Atmos Energy operates under incentive regulation through May 2016 that provides for sharing of gas supply costs (associated with demand-side management can be shared on the basis of 85% ratepayers) and gas transportation costs. LG&E also operates under incentive regulation through October 2015. The plan allows for the sharing of variances of up to 4.5% on the basis of 75% ratepayers and 25% shareholders.
(5) Capital Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Utilities are generally allowed to include construction work in progress in the rate base. Riders are also permitted to recover investments incurred between rate cases.
(6) Political Interference	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The state government does not play a significant role in the electricity sector. Investor-owned electric utilities are regulated by the KPSC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a four-year term.
(7) Retail Rate	Excellent <b>Very Good</b> Satisfactory Below Average Poor	The fifth least expensive state in the nation, Kentucky, has an average retail rate of 7.17¢/KWh. Kentucky's retail rate is 30.52% lower than the national average.  Real GDP growth rate in Kentucky was 1.4% in 2012, which was below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Kentucky. The state task force released its final report on deregulation in 2000 and found "no compelling" reason to move quickly. Recent examples of stranded cost include storm restoration, plant transfers and construction.
(9) Rate Freeze	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Kentucky has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent <b>Very Good</b> Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Utilities are fully integrated.



## State of Louisiana

**Regulating Body:** Louisiana Public Service Commission (LPSC)  
**RTO/ISO:** Southeast, SPP  
**Primary NERC Region:** SERC Reliability Corporation

### GEOGRAPHIC INFORMATION

Population: 4.6 Million  
GDP: \$213.6 Billion

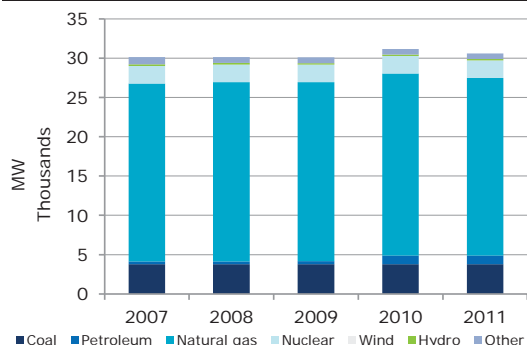
### MAIN INVESTOR-OWNED UTILITIES

Cleco Power LLC  
Southwestern Electric Power Company  
Entergy New Orleans Inc.  
Entergy Gulf States Louisiana LLC  
Entergy Louisiana LLC



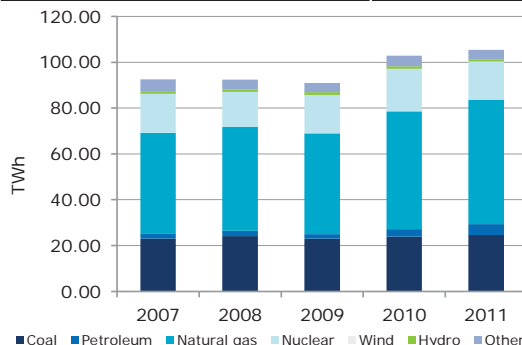
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

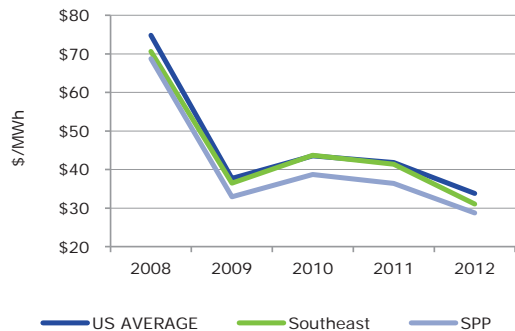
### Production by Fuel Type



Source: EIA.

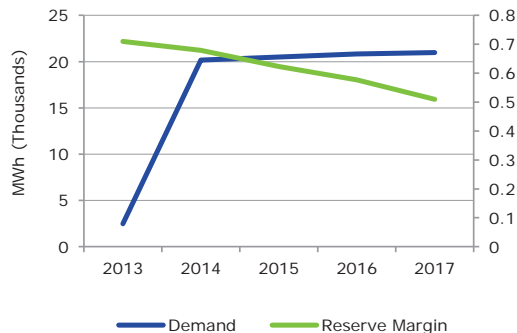
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—SERC Reliability Corporation



Source: EIA, NERC.



## Louisiana

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The regulatory equity component in the capital structure is set at 51% for Cleco Power (Cleco) and AEP Southern Electric Power Company (AEP). In the latest rate case, Energy Gulf State Louisiana (Entergy Gulf) and Entergy Louisiana requested the ratio of 51.72% and 52.8%, respectively.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	ROE is typically set through a rate case settlement, approved by the regulator or is set directly by the Commission. Over the past few years, ROE for Entergy Gulf is in the range of 9.39% to 11.4% (with midpoint of 10.25%). Cleco is authorized ROE of 10.75% and AEP's ROE is set at 10%. Gas distributions operate under a gas rate stabilization plan (RSP) that allows for adjustment of ROE in the band of 9.45%-10.45%, with midpoint ROE of 9.95. If there is a difference of 200 basis points between actual ROE and midpoint ROE, adjustment is required to bring the ROE into the band.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	A fuel and purchased power adjustment clause is used to recover costs. Fuel and purchased power costs for the billing month based on the level of such cost incurred two months prior to the billing month, plus the surcharges or credit that arises from the annual true-up, including carrying charges. Frequently, the Commission could initiate a review could order a refund to customer should it conclude that the cost charge to the customers was not reasonable. Gas cost recovery is also through a recovery clause, and utilities could file a request monthly for a change in gas supply rates.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	Companies typically file cost-of-service rate cases to establish allowed base rate bands for the following two to three years. During this period, companies submit an annual review for LPSC approval. The LPSC may approve revenues that fall beyond the allowed band if they offset prudently-incurred costs. Test years are historical, with some adjustments for known and measurable changes. A decision on a rate case is expected within 6-12 months from the filing date. Interim rates are allowed.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in Louisiana are permitted to add construction work in progress to the rate base for nuclear generation and generation projects. Capital expenditure trackers are used to mitigate regulatory lag in between general rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the LPSC, which operates as a quasi-judicial body. The Commission operates as an independent body under the state constitution, which reduces the likelihood of state interference. However, the office of the Commission is partisan and commissioners are elected to a six-year term.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Louisiana averaged a retail rate of 7.68¢/KWh - the 43rd highest in the nation. Louisiana's retail rate is 25.58% higher than the national average.  Real GDP growth rate in Louisiana was 1.5% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Louisiana. Storm costs are allowed to recover through securitization bonds.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Louisiana has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Utilities are fully integrated.



## State of Maine

**Regulating Body:** Maine Public Utilities Commission (MPUC)  
**RTO/ISO:** New England (ISO-NE)  
**Primary NERC Region:** Northeast Power Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 1.33 Million  
GDP: \$53.2 Billion

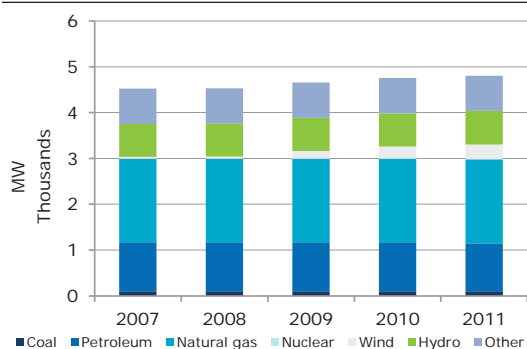
### MAIN INVESTOR-OWNED UTILITIES

Bangor Hydro Electric Company  
Maine Public Service  
Central Maine Power Company



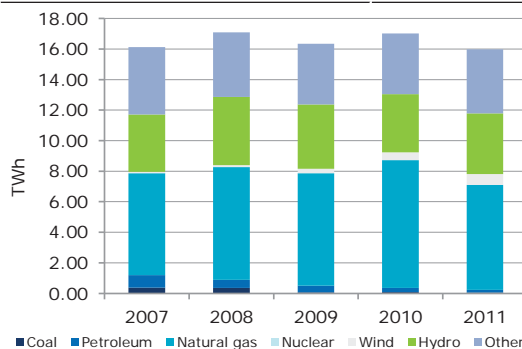
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

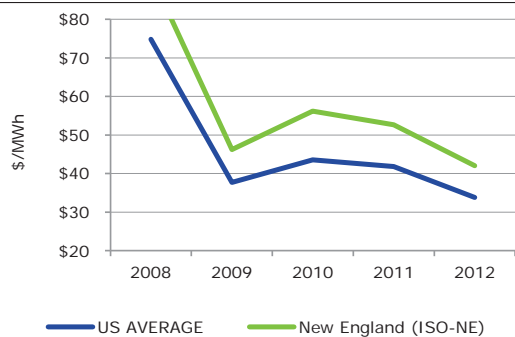
### Production by Fuel Type



Source: EIA.

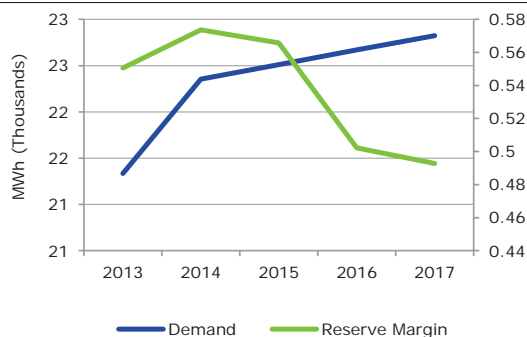
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections-Northeast Power Coordinating Council



Source: EIA, NERC.



## Maine

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The regulatory equity ratio for Bangor Hydro Electric Company (Bangor) and Maine Public Service Company (MPS) is set by the Maine Public Utilities Commission (MPUC) at 50% for their distribution operations. The equity ratio for transmission investments is set by the Federal Energy Regulatory Commission (FERC).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed ROE for Bangor and MPS is set at 10.2%, following a settlement. The ratio for Central Maine Power (CMP - an Iberdrola company) is allowed in the alternative regulation plan (ARP), which provides for a 10.9% pre-tax cost of capital to calculate returns on its distribution rate base. The equity ratio on transmission investments is based on the actual average common equity balance in the previous year.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Maine's purchased power costs are not bundled with its transmission and distribution services. Electric utilities are no longer allowed to provide SOS but may be required to provide POLR. All purchased power costs are passed on to customers. SOS power providers are selected through a bidding process administered by the MPUC. All SOS costs are recovered.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The MPUC sets rates with a standard IRM model. The rate plan is typically five years long, with rates adjusted annually based on an inflation index and productivity factor. Test years are fully forecasted. Rates may also change during the plan to offset prudently-incurred costs.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities are generally not allowed to include construction work in progress in the rate base. Capital expenditure trackers are used to mitigate regulatory lag in between general rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the MPUC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Ranking 12th most expensive, Maine's retail rate was 12.58¢/KWh. Maine's retail rate is 21.9% higher than the national average.  Real GDP growth rate in Maine was 0.5% in 2012, which was below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Maine's three investor-owned utilities faced restructuring related stranded costs in 2000 when generation was deregulated. Since then, utilities have recovered a significant portion of their stranded costs through MPUC determined recovery rates. Generally, regulatory rates to recover stranded costs are set every three years, on a levelized basis, and are determined under a cost-of-service approach.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	A deregulation law was passed in 1997. Retail competition began in 2000. The deregulation was not accompanied by a blanket statewide rate freeze; however, a freeze did take place for some individual companies until the end of 2011 (as in the case of MPS). There have been no subsequent statewide rate freezes.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	Maine's electricity sector began retail competition in 2000. The state no longer oversees wholesale generation. Most utilities divested their generation assets. Transmission investments are planned by the regional network operator. Distribution rates are still determined via a traditional cost-of-service regulatory structure. Standard offer service (SOS) is available to all customers. Utilities may be designated as the provider of last resort (POLR) and are permitted to recover the purchased power costs.



## Province of Manitoba

**Regulating Body:** Manitoba Public Utilities Board (MPUC)

**Primary NERC Region:** Midwest Reliability Organization

### GEOGRAPHIC INFORMATION

Population: 1.21 Million

GDP: \$55.89 Billion

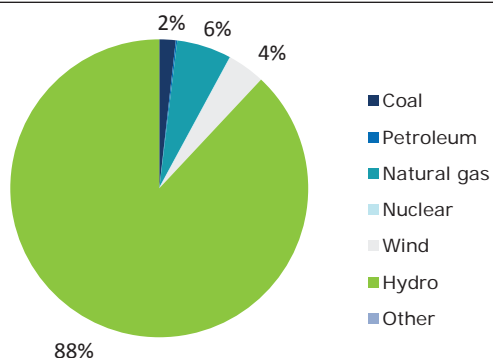
### MAIN INDUSTRY PLAYERS

Manitoba Hydro



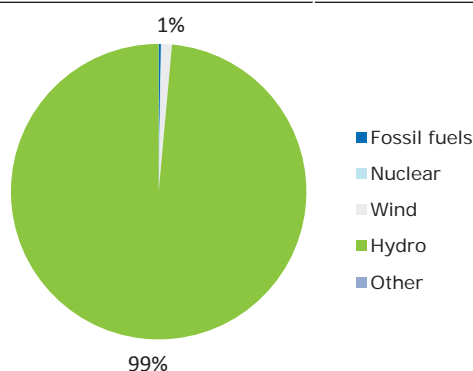
### PRODUCTION

#### Capacity & Fuel Type (2012)



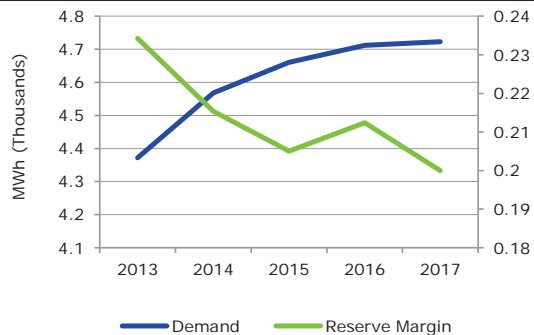
Source: Canadian Centre for Energy Information.

#### Production by Fuel Type (2012)



Source: Canadian Centre for Energy Information.

#### Projections—Midwest Reliability Organization



Source: EIA, NERC.



## Manitoba

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The Manitoba Public Utilities Board (MPUB) does not set a deemed equity for Manitoba Hydro, the primary utility in the province. Manitoba Hydro aims to achieve an equity thickness of 25% over the long-run.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	Manitoba Hydro does not have an allowed ROE. Any rate changes must be approved by the MBPUB prior to implementation.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Manitoba produces 99% of its electricity from hydroelectric sources. Hydroelectric power possesses minimal costs, and virtually eliminates the need for variable fuel cost adjustment. All energy costs are passed through to the rate payers.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The MPUB regulates the rates in Manitoba. The utility is regulated under a cost-of-service framework.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	The MPUB does not have the mandate to pre-approve capital expenditures. The capital expenditure planning responsibility lies with Manitoba Hydro and the provincial government. All adjustments to rates due to capital expenditures will need to be reviewed by the PUB.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The provincial government plays a significant role in the electricity sector. The government owns Manitoba Hydro, a monopoly which oversees generation, transmission, and distribution of electricity for the entire province. Manitoba Hydro is regulated by the MPUC, which operates as a quasi-judicial body.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Ratepayers in Manitoba generally pay 6.01¢/KWh in 2013.  Real GDP growth rate in Manitoba was 2.7% in 2012, which was slightly above the national average of 1.7%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Minimal stranded costs exist in Manitoba. Manitoba Hydro is able to recover substantially all costs incurred through the rate setting process.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Manitoba has not experienced a province-wide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The power market in Manitoba is fully regulated. Manitoba Hydro is a government-owned, fully regulated and fully integrated utility.





## State of Maryland

**Regulating Body:** Maryland Public Service Commission (MPSC)  
**RTO/ISO:** PJM  
**Primary NERC Region:** ReliabilityFirst Corporation

### GEOGRAPHIC INFORMATION

Population: 5.88 Million  
GDP: \$300 Billion

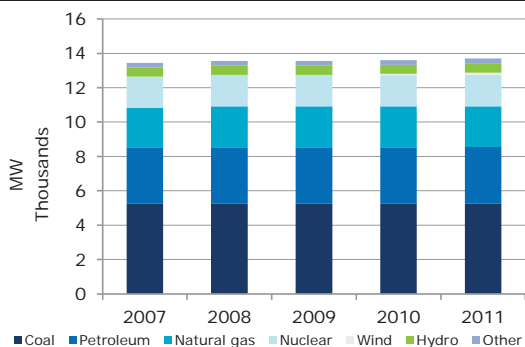
### MAIN INVESTOR-OWNED UTILITIES

Delmarva Power & Light Company  
Potomac Electric Power Company  
Baltimore Gas & Electric Company



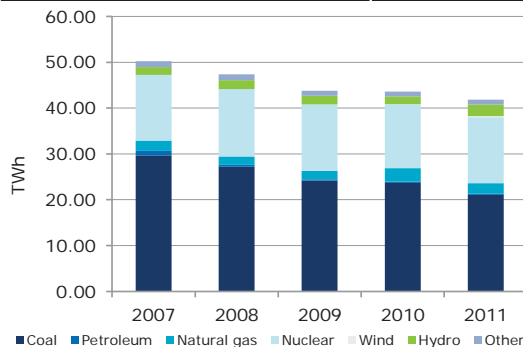
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

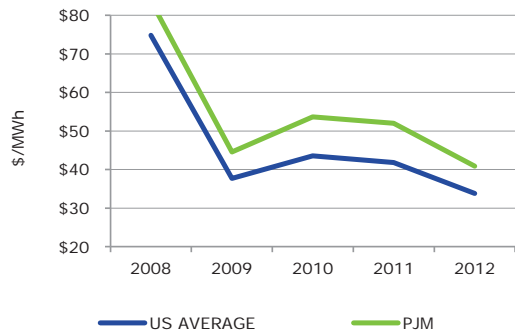
### Production by Fuel Type



Source: EIA.

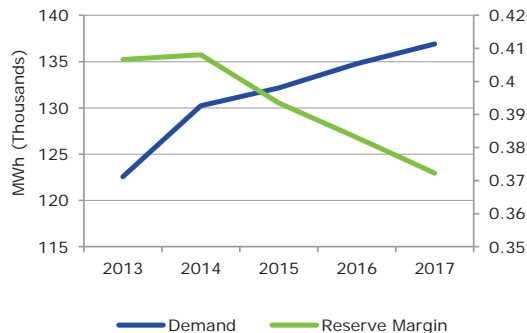
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections-ReliabilityFirst Corporation



Source: EIA, NERC.



## Maryland

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The equity component in the regulatory capital structure is set at 48.49% for Potomac Electric Power Company (Pepco), 48.4% for Baltimore Gas & Electric Company (BG&E), and 50.06% for Delmarva Power & Light Company (DPL).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	ROE in the state is set at 9.36% (for Pepco) and 9.81% for DPL for the year 2013. These rates are similar to those of the previous years. These rates can be used for the purposes of calculating AFUDC and regulatory asset carrying costs. ROE for PEPCO was set by the Commission but ROE for Delmarva was established by way of settlement. ROE for BG&E is set at 9.75%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	In general, Maryland's purchased power costs are fully recovered. Under or over recovery is recorded in regulatory assets or liabilities to be recovered in rates. The historical fuel and purchased power adjustment clause was eliminated with the implementation of competition of power supply. Utilities still provide services to customers who do not chose an alternative retailer. Power procurement for these customers is obtained through a competitive bidding process.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	rate making for utilities is based on cost of services and is based on historical test years. Utilities are allowed to recover prudently incurred costs, but the recovery is subject to rigid regulatory review through rate case filings. Costs of storm restoration are fully recovered but are amortized over five years, with the unamortized balance included in the rate base. Regulatory lags are manageable (7-month average) and interim rates are normally allowed. BG&E and Columbus Gas of Maryland operate under gas cost incentive mechanisms, which provide for sharing of gas costs above or below a benchmark.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	In general, capex needs approval by the Commission to be recovered. Capex spending without prior regulatory approval is subject to regulatory review through either rider application or the next rate case and could be delayed or rejected. In the case of PEPCO, the cost recovery for advanced metering infrastructure deployment is delayed until the company demonstrates that the system is cost effective. The Commission did not allow reliability investment recovery mechanism (RIM) to recover investment between rate cases, but allow PEPCO and DPL to make adjustment to the rate base the reflect the actual costs of reliability investments.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the MDPSC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a five-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Maryland's 11.93¢/KWh statewide average retail rate ranks 13th highest. Maryland's retail rate is 15.6% higher than the national average.  Real GDP growth rate in Maryland was 2.4% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded costs in Maryland for the four investor-owned utilities amounted to the billions when the electricity sector was allowed full retail access in July 2000. Since then, utilities have recovered some of the stranded costs through transition charges and divestitures of assets. More recent examples of stranded cost include storm restoration, smart grid, and advanced metering.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Maryland restructured utility regulation with the passage of the Electric Customer Choice and Competition Act in 1999. Rates were subsequently frozen. These rate freezes expired at different dates for varying companies, ranging from June 2004 to late 2008. There have been no subsequent statewide rate freezes.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is deregulated. Restructuring was initiated in 1999 with full retail access in July 2000. The state no longer oversees wholesale generation prices but still regulates distribution rates. Utilities are generally not integrated.



## State of Massachusetts

**Regulating Body:** Massachusetts Department of Public Utilities (MDPU)  
**RTO/ISO:** New England (ISO-NE)  
**Primary NERC Region:** ReliabilityFirst Corporation

### GEOGRAPHIC INFORMATION

Population: 6.65 Million  
GDP: \$377.7 Billion

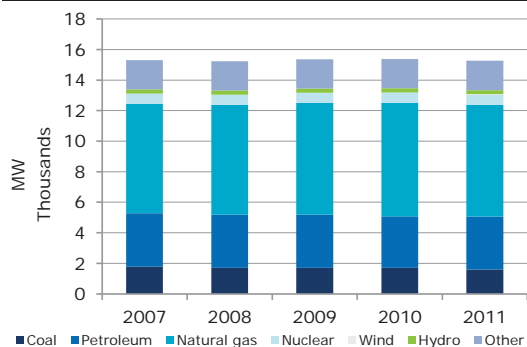
### MAIN INVESTOR-OWNED UTILITIES

Massachusetts Electric  
Fitchburg Gas & Electric Light Company  
Western Massachusetts Electric Company  
NSTAR Electric Company



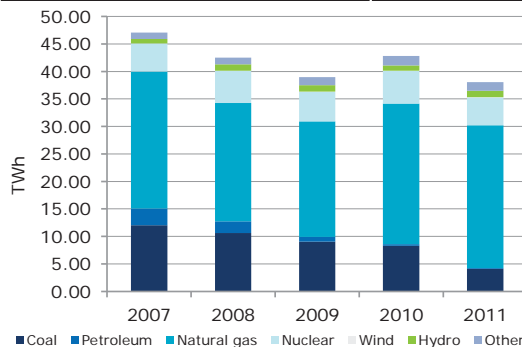
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

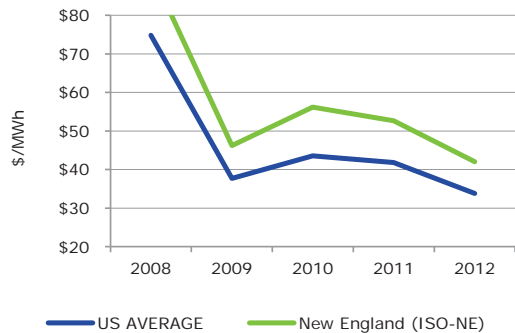
### Production by Fuel Type



Source: EIA.

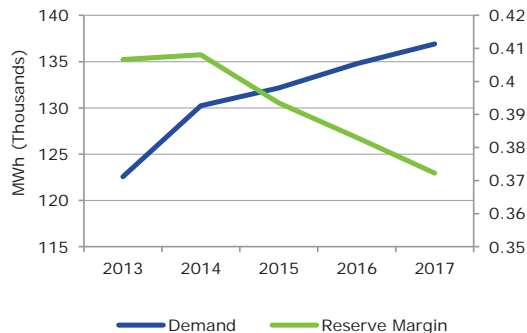
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections-ReliabilityFirst Corporation



Source: EIA, NERC.



## Massachusetts

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity is set at 50% for both Massachusetts Electric and Massachusetts Gas.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE for major investor-owned utilities in the state ranges from 9.40% (for Massachusetts Electric and Massachusetts Gas) and 9.6% for Western Massachusetts Electric Company (WMEC) before the 2012 merger of Northeast Utilities and NSTAR.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Purchased power costs are passed through to customers and are included in a basic service charge. Basic service rates are reset every six months (every three months for large commercial and industrial customers). Gas supply costs are also passed through and are adjusted through a seasonal cost of gas adjustment clause (CGAC), which is reset every six months. Utilities could file interim changes to its CGAC factor when the actual costs of natural gas supply vary from projections by more than 5%.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	Major utilities in the state operate under the cost-of-service framework. However currently, NSTAR Electric and WMEC are operating under a distribution rate freeze through 2015 due to their merger. Cost recovery is allowed under a rate plan, which could be more than a year.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities are generally not allowed to include construction work in progress in the rate base. Capital expenditure trackers are used to mitigate regulatory lag in between general rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Investor-owned electric utilities are regulated by the MDPU, which operates as a quasi-judicial body. The department is non-partisan and members are appointed to a four-year term.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Massachusetts ranks 7th highest with an average retail rate of 14.11¢/KWh. Massachusetts' retail rate are 36.73% higher than the national average.  Real GDP growth rate in Massachusetts was 2.2% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded costs in Massachusetts reached as high as \$16 billion when the state deregulated in the late 1990s. Since then, utilities have recovered most of the stranded costs through transition charges and securitization. A more recent example of stranded cost is related to storm restoration.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	The Massachusetts deregulation of 1997. In connection with the restructuring, a rate reduction of at least 10% was effective in 1998 for standard offer service (SOS) customers. The reduction of rates increased to 19% as of September 1999. The transition period for rate deductions ended March 2005. A rate freeze period for NSTAR Electric and WMEC is in effect through 2015 as a result of the merger between Northeast Utilities and NSTAR.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	Massachusetts passed restructuring legislation in 1997. Retail competition began in 1998. Customers are entitled to choose their energy supplies, and generation rates are no longer regulated. Distribution rates remain under the jurisdiction of the state commission. Utility companies are generally not integrated.



## State of Michigan

**Regulating Body:** Michigan Public Service Commission (MPSC)  
**RTO/ISO:** Midwest (MISO), PJM  
**Primary NERC Region:** ReliabilityFirst Corporation

### GEOGRAPHIC INFORMATION

Population: 9.88 Million  
GDP: \$372.4 Billion

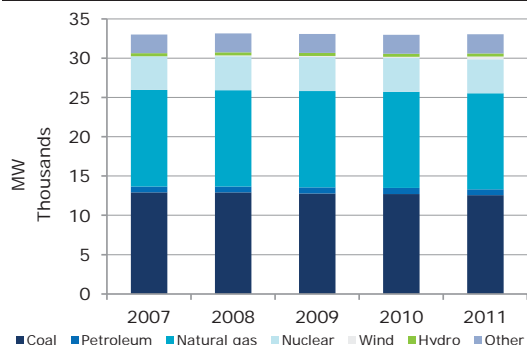
### MAIN INVESTOR-OWNED UTILITIES

Consumers Energy Company  
DTE Electric Company  
Upper Peninsula Power Company  
Indiana Michigan Power Company  
Wisconsin Electric Power Company



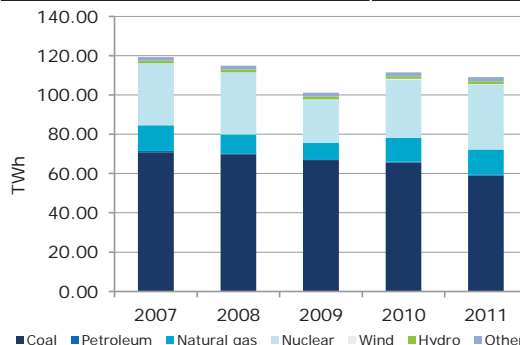
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

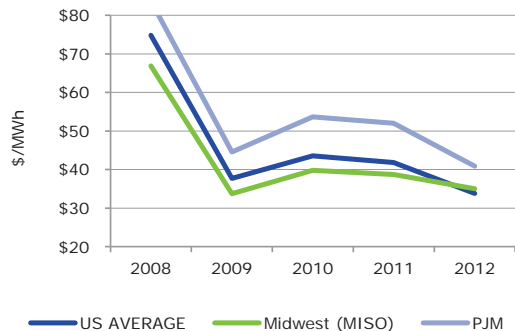
### Production by Fuel Type



Source: EIA.

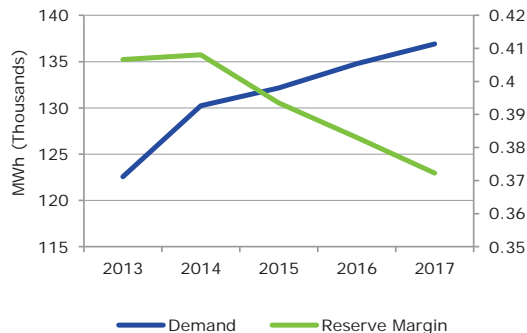
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—ReliabilityFirst Corporation



Source: EIA, NERC.



## Michigan

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity is set by the Michigan Public Service Commission (MPSC), ranging from 49.21% to 56%. Consumer Energy Company (CE) was authorized 48.11% in 2012. Detroit Edison Company's ROE was set at 49.21%. Upper Peninsula Power Company (UUP) has one of the highest ROEs among utilities in the state with an ROE of 54.9% in 2012. Wisconsin Electric Power Company (WEP) has an equity ratio of 56% (June 2012 Order).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	ROE for CE is 10.3% (based on the 2013 settlement). ROE for Wisconsin Electric is 10.1%. ROE for DTE (Electric and Gas) is 10.5%. UUP is authorized ROE of 10.2%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities are allowed to recover all of their power supply (PSCR) and purchased natural gas costs (GCR) if prudently incurred. Utilities can adjust their PSCR and GCR factors monthly in order to minimize the over-recovery or under-recovery amount in the annual reconciliation.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The MPUC handles rate making on a cost-of-service basis. Test years are forecasted. Utilities must file general rate cases to recover costs. Interim rates are allowed. An alternative plan (incentive mechanism) was available for DTE and CE but was cancelled. Under this plan, utilities shared with customers non-fuel revenues associated with sales levels outside of the band range.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in Michigan are permitted to add construction work in progress to the rate base for significant capital projects. Michigan law allows utilities to self-implement rate changes between general rate cases. Interim rate adjustments are subject to reconciliation by the MPSC at the next review. In addition, the MPSC may impose certain restrictions, including caps on maximum increases and an effective date on when utilities can begin to make adjustments.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Investor-owned and Cooperative electric utilities are regulated by the MPSC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Michigan has the 17th highest average retail rate at 10.40¢/KWh. Michigan's retail rate is 0.78% higher than the national average.  Real GDP growth rate in Michigan was 2.2% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded costs arose out of state deregulation in the early 2000s. Utilities were allowed to recover all of their stranded costs through cost recovery surcharges. All stranded costs related to restructuring have been recovered.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	The Customer Choice Act, passed in December 2000, in connection with restructuring, retail rates were reduced by 5% for residential and small commercial customers of CE and DTE and were frozen through 2003. There was a cap on residential customer rates until January 2006 or until it was determined by the Commission that these two utilities meet a market power test and has completed certain transmission expansion requirements (which were met in 2002). Retail rates for commercial customers were capped through 2004.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is deregulated. Michigan restructured in 2000 and full retail access was available in 2002. Distribution rates are regulated by the state commission while generation competition is allowed. However, generation rates are still capped and cannot exceed 10% of the retail sales of the previous year. Utility companies are generally not integrated.



## State of Minnesota

**Regulating Body:** Minnesota Public Utilities Commission (MPUC)

**RTO/ISO:** Midwest (MISO)

**Primary NERC Region:** Midwest Reliability Organization

### GEOGRAPHIC INFORMATION

Population: 5.38 Million

GDP: \$267.1 Billion

### MAIN INVESTOR-OWNED UTILITIES

Interstate Power & Light Company

Otter Tail Power Company

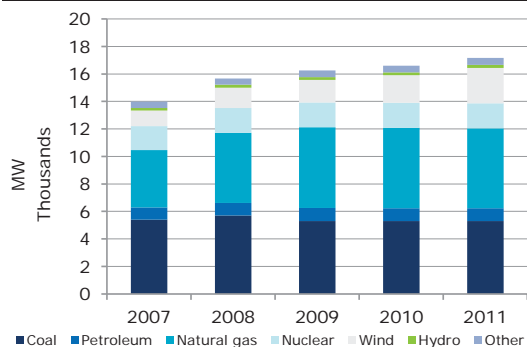
Northern States Power Company

Minnesota Power



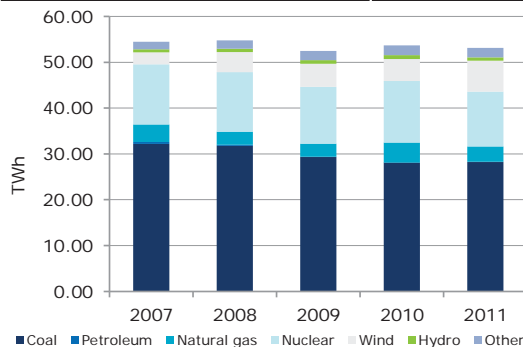
### PRODUCTION

#### Capacity & Fuel Type



Source: EIA.

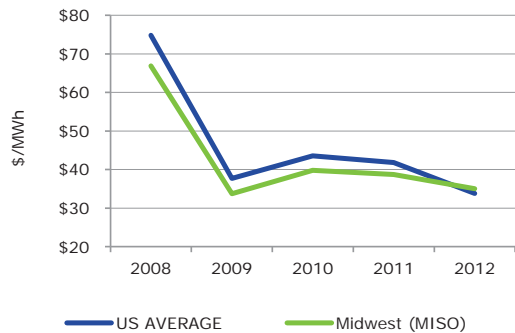
#### Production by Fuel Type



Source: EIA.

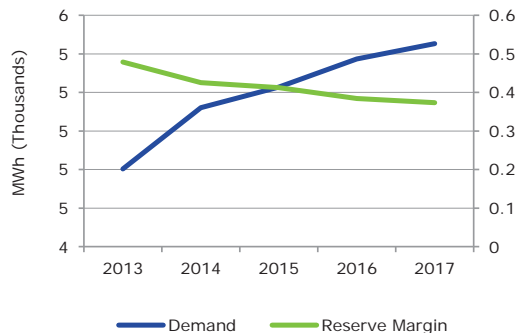
### DEMAND

#### Wholesale Price



Source: EIA, FERC.

#### Projections—Midwest Reliability Organization



Source: EIA, NERC.



## Minnesota

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity in the state ranges from 47.7% to 54.29%. The rates can be set by the Commission or by way of settlement. Northern State Power Company's (NSP-M) regulatory equity is 52.56%. The ratio was 47.7% for Interstate Power & Light Company (IPL) and 54.29% for Minnesota Power (MP, an ALLETE company).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	ROE in the state is in line with the national average. ROE is in the range of 9.83% (for NSP-M in 2013, 10.37% in 2011) to 10.38% (For MP in 2011). ROE for IPL is 10.35%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Fuel and purchased power costs are included in base rates. Actual costs are in excess of those included in base rate are recovered by utilities. Minnesota Power is allowed to recover through Resource Adjustment (fuel and purchased energy adjustment and conservation program adjustment). Most of the costs are recovered through Resource Adjustment (monthly adjusted, with two months lag). Northern State Power recovers its fuel costs and through a Fuel Clause Rider, which is also adjusted monthly.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The MPUC handles rate making on a cost-of-service basis. Test years are partially forecasted. Utilities must file general rate cases to recover costs. NSP-M files its rate case every two years. Alternative regulation plans are only for demand-side management.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in Minnesota are permitted to add construction work in progress to the rate base for environmental, and transmission projects. Capital expenditure riders are used to mitigate regulatory lags between general rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the MPUC, which operates as a quasi-judicial body. The Commission is deliberately structured to make independent decisions that avoid partisan interests. The office of the Commission is non-partisan and commissioners are appointed to a six-year term.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Minnesota's 8.65¢/KWh retail rate ranks 33rd highest. Minnesota's retail rate is 16.18% lower than the national average.  Real GDP growth rate in Minnesota was 3.5% in 2012, which was slightly above the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Minnesota. The state's energy task force recommended against deregulation in 1998.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Minnesota has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Most companies are vertically integrated.





## State of Mississippi

**Regulating Body:** Mississippi Public Service Commission (MPSC)  
**RTO/ISO:** Southeast, SPP  
**Primary NERC Region:** SERC Reliability Corporation

### GEOGRAPHIC INFORMATION

Population: 2.98 Million  
GDP: \$98.9 Billion

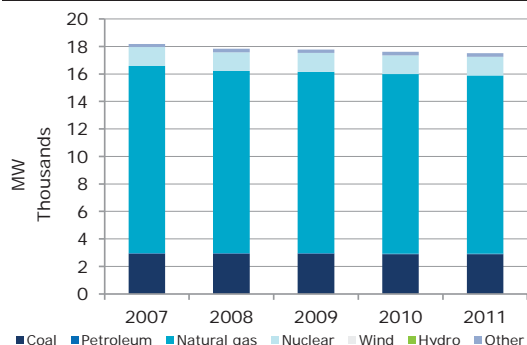
### MAIN INVESTOR-OWNED UTILITIES

Entergy Mississippi Inc.  
Mississippi Power Company



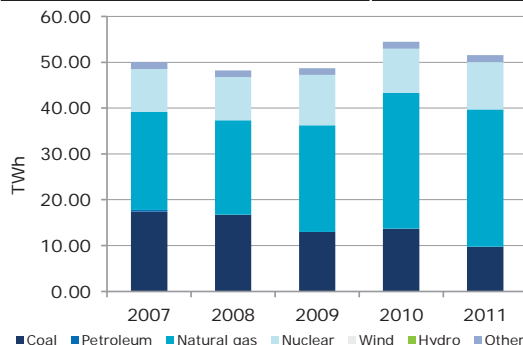
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

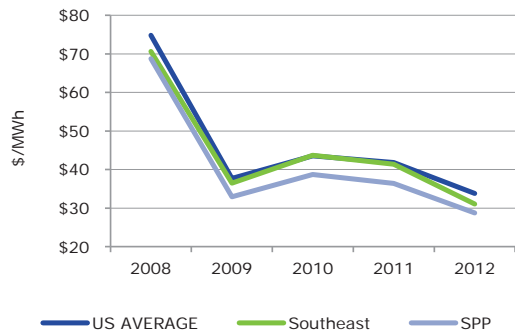
### Production by Fuel Type



Source: EIA.

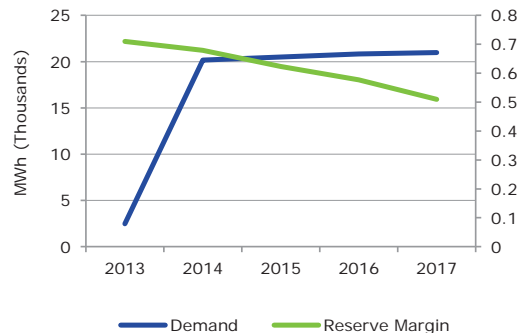
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—SERC Reliability Corporation



Source: EIA, NERC.



## Mississippi

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity set by the Mississippi Public Service Commission (MPSC) for the primary investor-owned utility is set at 50%. Two major utilities are Entergy Mississippi (Entergy) and Mississippi Power Company (MPC, a Southern Company's subsidiary).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE for major investor owned utilities in the state is based on a formula rate plan bandwidth of 9.88% and 12.01%. The sharing 50/50 in earnings over the threshold was eliminated in 2010 for Energy Mississippi. There have been no changes in rates for Entergy Mississippi in 2012 from 2011 and 2010. Entergy's ROE for 2011 test year (to be used for 2012) was 10.92%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Fuel and purchased power costs are fully recovered through a fuel cost recovery clause. An annual adjustment of the retail fuel cost recovery factor is established by the regulator and is subject to annual audits conducted pursuant to the authority of MPSC. Fuel adjustments for MPC are based on annual whereas adjustments for Entergy are based on quarterly. Atmos Energy, a gas distribution company, could have its adjustment rider done monthly. Emissions allowance expenses can also be recovered through adjustment clauses.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	Entergy Mississippi operates under a formula rate plan rider that allows for a 2% change in revenues per year, which is subject to a \$14.5 million revenue adjustment cap. Utilities in the state continue to use a historical test year for its annual evaluation report under the plan. Costs associated with extraordinary will be recovered through a separate ride. MPC operates under a performance Evaluation Plan (PEP) since 2007. The PEP was revised in 2009, which resulted in lower incentive and smaller and less frequent rate changes in the future. This PEP pressures on cost savings.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in Mississippi are permitted to add construction work in progress to the rate base for all projects within one year of completion. Riders are allowed to mitigate regulatory lags in between general rate cases. The Commission issued an order in 2012 to limit the amount for CWIP to be \$2.4 billion certificated cost estimate for the Kemper IGCC (Integrated Coal Gasification Combined Cycle, 580 MW).
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Two major investor-owned electric utilities are regulated by the MPSC which operates as a quasi-judicial body. However, the office of the Commission is partisan and commissioners are elected to a four year term, which increases political risk to some extent.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Mississippi ranks 31st highest with an 8.78¢/KWh average retail rate. Mississippi's retail rate is 14.92% lower than the national average.  Real GDP growth rate in Mississippi was 2.4% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Mississippi. The state concluded that deregulation would not be beneficial at the time and closed the docket in 2000.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Mississippi has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Most major companies such as Mississippi Power and Entergy Mississippi Inc. are vertically integrated.



## State of Missouri

**Regulating Body:** Missouri Public Service Commission (MPSC)  
**RTO/ISO:** Midwest (MISO), Southeast, SPP  
**Primary NERC Region:** SERC Reliability Corporation

### GEOGRAPHIC INFORMATION

Population: 6.02 Million  
GDP: \$246.7 Billion

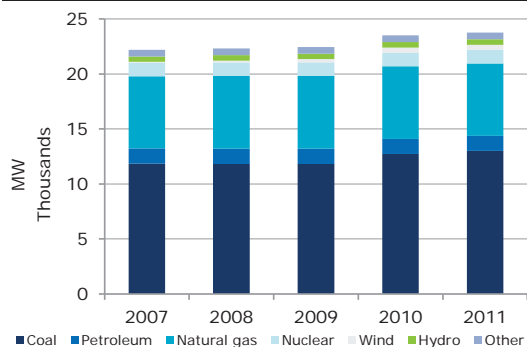
### MAIN INVESTOR-OWNED UTILITIES

The Empire District Electric Company  
Kansas City Power & Light Company  
Union Electric Company



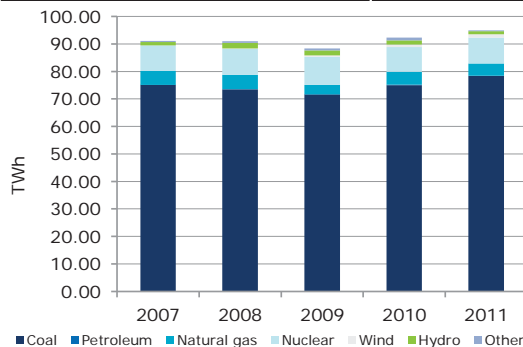
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

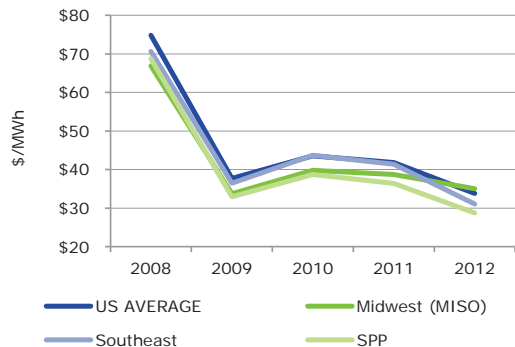
### Production by Fuel Type



Source: EIA.

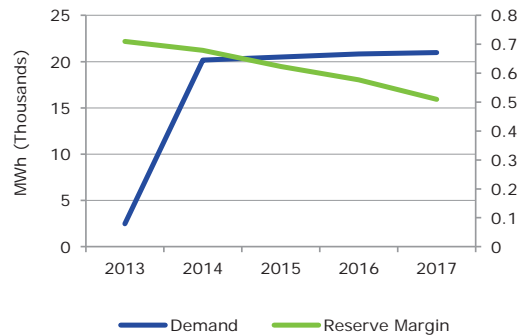
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—SERC Reliability Corporation



Source: EIA, NERC.



## Missouri

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity set at 52.3% (for Ameren Missouri) and 52.6% for Kansas City Power & Light Co (KCP).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE for major investor owned utilities in the state ranges from 9.7% (for Ameren Missouri) to 10.8% (for Empire District Electric).
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Fuel and purchased power costs are recovered through a mechanism, which allows for utilities to recover 95% of changes in net energy costs greater or less than the amount set in base rates without a traditional rate case. The adjustment is subject to regulatory prudent reviews, which take place at least every 18 months.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The rate making system is based on a cost-of-service framework. Test years are historical and partially forecasted data. Adjustments are allowed for known and measurable changes beyond the utility's control. If the Commission does not issue a decision within 11 months from the date of the filing, the proposed rate would become effective as filed and would not be subject to refund.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities are generally not allowed to include construction work in progress in the rate base. Major capex spending needs approval from the Commission. However, there is update and cost tracking mechanisms in place to allow the utilities to timely add their costs to the rate base. Storm restoration cost tracking mechanism is also approved. However, some capex recovery delays were reported by Ameren Missouri.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Investor-owned electric utilities are regulated by the MPSC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Missouri's average retail rate of 8.32¢/KWh ranks 35th highest in the country. Missouri's retail rate is 19.38% lower than the national average.  Real GDP growth rate in Missouri was 2% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Missouri. The state established a task force to study deregulation in the late 1990s, but has not pursued the matter further. Recent examples of stranded costs include plant construction, tornado recovery and energy efficiency initiatives.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Missouri has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Utilities are fully integrated.



## **State of Montana**

**Regulating Body:** Montana Public Service Commission (MPSC)  
**RTO/ISO:** Northwest, Midwest (MISO)  
**Primary NERC Region:** Western Electricity Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 1.01 Million  
 GDP: \$37.2 Billion

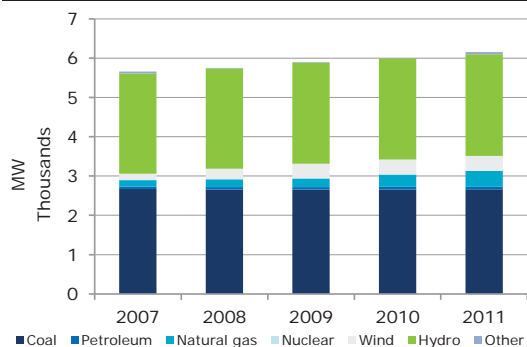
### MAIN INVESTOR-OWNED UTILITIES

Montana-Dakota Utilities Company  
 NorthWestern Corp.



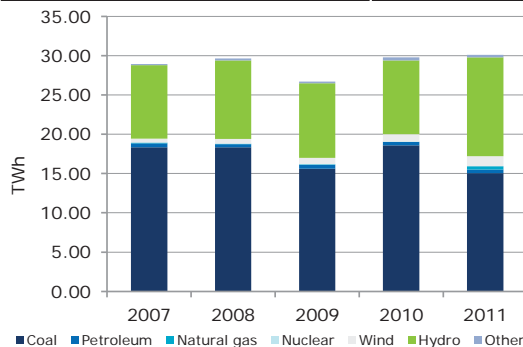
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

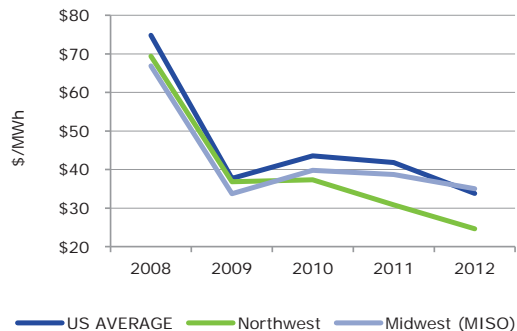
### Production by Fuel Type



Source: EIA.

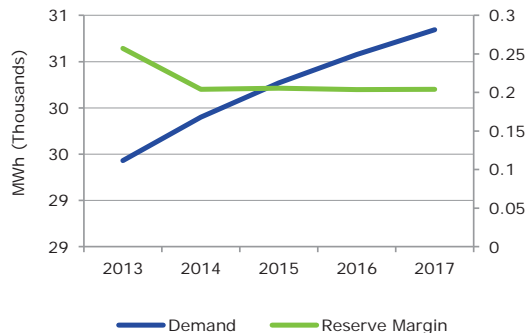
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—Western Electricity Coordinating Council



Source: EIA, NERC.



## Montana

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity set by the Montana Public Service Commission (MPSC) ranges from 48% (for Northwestern Energy – NWE) to 50.67% (for Montana-Dakota Utilities Co – MDU).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE in the state for the primary investor-owned utility is 10.25% for both (MDU and NWE).
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Fuel and purchased power costs are passed through to customers, with a tracking adjustment as follows: (1) the monthly fuel and power costs are calculated reflecting 90% of changes between actual costs and costs set in the rate; (2) the cost adjustment will be amortized over the next 12-month period from the date of the adjustment.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	Utilities in Montana operate under the cost of service system, with forecast based on a historical text plus a true-up. Regulatory review appears to be reasonable with respect to the application of the test to allow cost recovery.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	CWIP is not allowed but utilities are allowed to charge AFUDC during the construction. Securitization bonds are allowed in the transition period on gas retail competition.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Investor-owned electric utilities are regulated by the MPSC, which operates as a quasi-judicial body. However, the office of the Commission is partisan and commissioners are elected to a four-year term.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Montana's 8.23¢/KWh retail rate ranks 36th highest in the country. Montana's retail rate is 20.25% below the national average.  Real GDP growth rate in Montana was 2.1% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded costs arising from the restructuring. Stranded assets are amortized over 15 years. Securitization is allowed.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Montana began deregulation experiments in 1997, but they were not accompanied by rate freezes. There have been no subsequent statewide rate freezes.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The electricity and gas sectors are deregulated. The state commission regulates distribution rates. Customer choice for small commercial and residential began 2002. Gas retail competition began in 1997.



## State of Nebraska

**Regulating Body:** Nebraska Public Service Commission (NPSC)

**RTO/ISO:** SPP, Midwest (MISO)

**Primary NERC Region:** Midwest Reliability Organization

### GEOGRAPHIC INFORMATION

Population: 1.86 Million

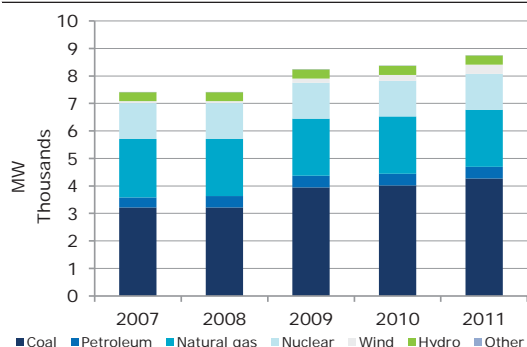
GDP: \$89.6 Billion

### MAIN INVESTOR-OWNED UTILITIES



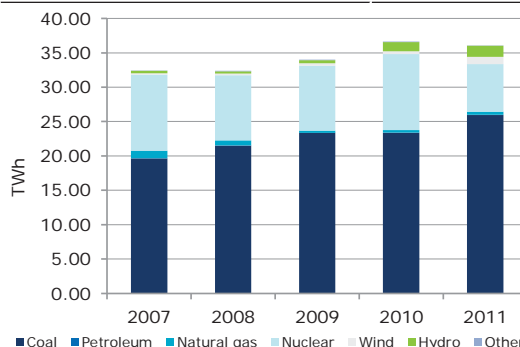
### PRODUCTION

#### Capacity & Fuel Type



Source: EIA.

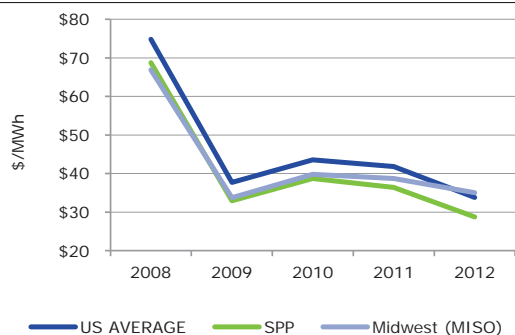
#### Production by Fuel Type



Source: EIA.

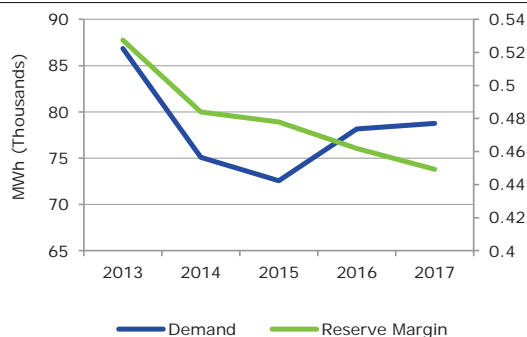
### DEMAND

#### Wholesale Price



Source: EIA, FERC.

#### Projections—Midwest Reliability Organization



Source: EIA, NERC.



## Nebraska

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average <b>Poor</b>	The deemed equity is set by the Nebraska Public Service Commission (NPSC) for the primary investor-owned utility at 52% (Black Hill Energy – BHE).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average <b>Poor</b>	ROE for BHE is 10.1% and ROE for SourceGas Distribution (SG) is set at 9.6%.
(3) Energy Cost Recovery	Excellent Very Good <b>Satisfactory</b> Below Average Poor	Energy cost recovery is based on adjustment clauses, which are semi-annually adjusted.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	Cost-of-service framework is the basis for rate making in the state. Alternative regulation plan has not been initiated although the Commission has the power to implement such plan.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities are generally not allowed to include construction work in progress in the rate base. Utilities are allowed to apply for the Commission approval to implement an infrastructure system replacement cost recovery rider, which mitigate regulatory lags by allowing the utility to recover costs on investments made outside the rate case.
(6) Political Interference	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the NPRB, which operates as a quasi-judicial body. The Board is non-partisan and members are appointed to a four-year term.
(7) Retail Rate	<b>Excellent</b> Very Good Satisfactory Below Average Poor	Nebraska averages a 7.88¢/KWh retail rate, placing it at 41st highest in the country. Nebraska's retail rate is 23.64% lower than the national average.  Real GDP growth rate in Nebraska was 1.5% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have not been reports of material stranded costs in the state.
(9) Rate Freeze	<b>Excellent</b> Very Good Satisfactory Below Average Poor	Nebraska has not experienced a statewide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	Nebraska's power is provided entirely by public utilities. The state board does not set or regulate rates, but instead determines the service areas of each provider. Consumers may not choose their service provider.





## State of Nevada

**Regulating Body:** Nevada Public Utilities Commission (NPUC)  
**RTO/ISO:** Northwest, Southwest  
**Primary NERC Region:** Western Electricity Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 2.76 Million  
GDP: \$127.5 Billion

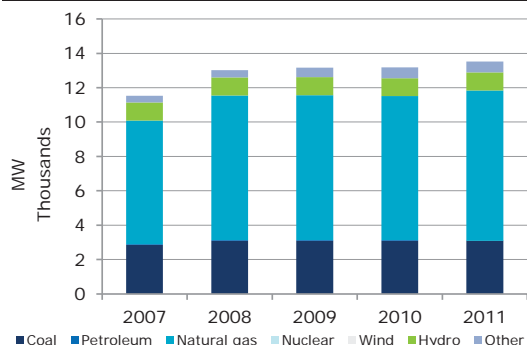
### MAIN INVESTOR-OWNED UTILITIES

Nevada Power Company  
Sierra Pacific Power Company



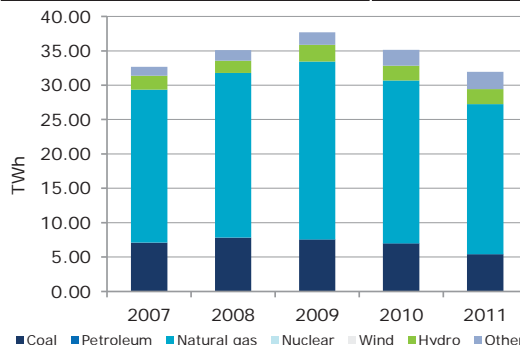
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

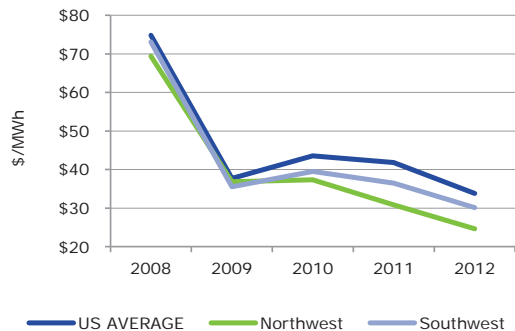
### Production by Fuel Type



Source: EIA.

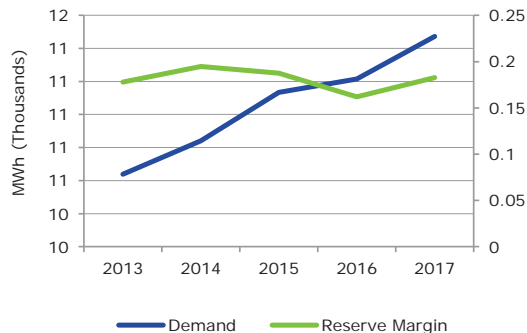
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—Western Electricity Coordinating Council



Source: EIA, NERC.



## Nevada

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The deemed equity requirement set by the Nevada Public Utilities Commission (PUCN) for the primary investor-owned utility is set at 44.3%.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE for major investor-owned utilities in the state ranges from 10% to 10.1%. Nevada Power Company (NPC) is authorized an ROE of 10.19%. Higher ROE is allowed for demand-side management programs in the case of Sierra Pacific Power (SPP), which is authorized a ROE of 10.6%.
(3) Energy Cost Recovery	Excellent Very Good <b>Satisfactory</b> Below Average Poor	Utilities operating in Nevada incur fuel and purchased power costs, however these costs can be recovered in rates through quarterly adjustments. These adjustments come into effect 45 days after submission, but are reviewed by the regulatory body.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	By law, utilities in the state have to file a rate case every three years to adjust rates, based primarily on cost of service and a return on investment. Annual applications are required to review costs for prudence and reasonableness. In the event costs are disallowed, such amount will be incorporated into the next subsequent rate case change. Incentive mechanism is available for renewable resource projects. In this case, utilities may earn ROE of up to 500 basis points on the designated project and a cash return on construction work in progress (CWIP).
(5) Capital Cost Recovery	Excellent Very Good Satisfactory <b>Below Average</b> Poor	Utilities are generally not allowed to include CWIP in the rate base, unless the investment is in the designated project as mentioned above. There is a delay in capital expenditure recovery as it requires regulatory review and approval from PUCN, which occurs at least once every three years for a rate case as required under state legislation. Riders are permitted to recover investments made outside of the rate case.
(6) Political Interference	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The state government does not play a significant role in the electricity sector. Investor-owned electric utilities are regulated by the PUCN, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a four-year term.
(7) Retail Rate	Excellent <b>Very Good</b> Satisfactory Below Average Poor	With an average retail rate of 8.97¢/KWh, Nevada ranks 26th highest. Nevada's retail rate is 13.08% lower than the national average.  Real GDP growth rate in Nevada was 1.5% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good <b>Satisfactory</b> Below Average Poor	There have been minimal examples of stranded costs in Nevada. The state moved towards deregulation but delayed it amid uncertainty, and ultimately repealed it in 2001. Recent examples of stranded costs include energy efficiency initiatives, purchased power, and decommissioning costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Nevada has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The state is partially deregulated. Nevada began restructuring in 2000 but the process was delayed in light of the California crisis. Currently, the state commission regulates retail rates of the vertically integrated utilities. Customers wishing to switch providers must first obtain approval from the state commission. Retail choice was available in 2002 for non-governmental commercial or industrial users with average load of 1 MW or more, and certain government entities that use at least 1MW annually.



## Province of New Brunswick

**Regulating Body:** New Brunswick Energy and Utilities Board (NBEUB)

**Primary NERC Region:** Northeast Power Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 0.75 Million

GDP: \$32.18 Billion

### MAIN INDUSTRY PLAYERS

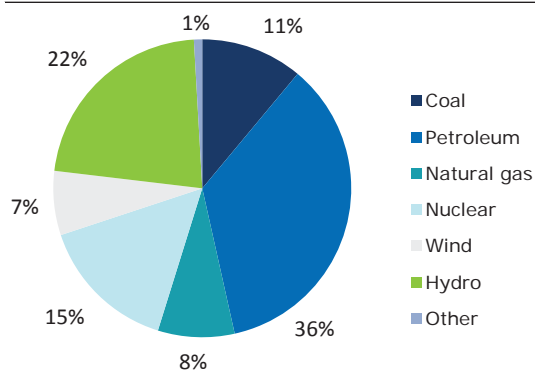
NB Power Distribution and Customer Service

NB Power Nuclear



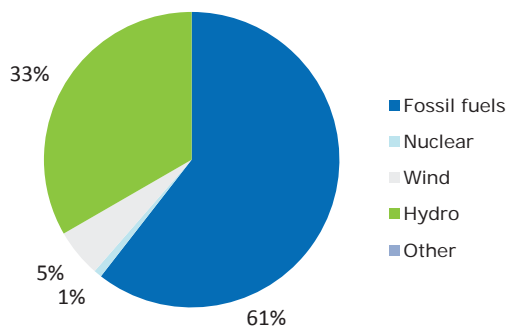
### PRODUCTION

#### Capacity & Fuel Type (2012)



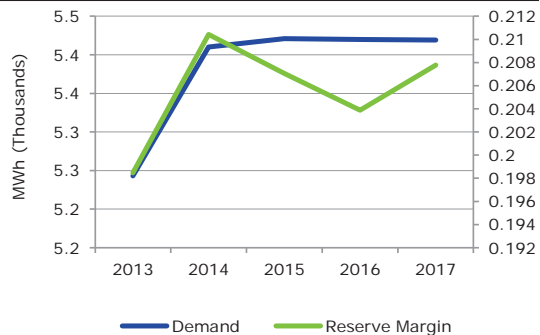
Source: Canadian Centre for Energy Information.

#### Production by Fuel Type (2012)



Source: Canadian Centre for Energy Information.

#### Projections—Northeast Power Coordinating Council



Source: EIA, NERC.



## New Brunswick

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average <b>Poor</b>	The deemed equity requirement set by the New Brunswick Energy and Utilities Board (NBEUB) for the primary investor-owned utility is set at 0%.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average <b>Poor</b>	The NBEUB does not have an established ROE requirement for electricity distribution activities in the province. Rather, the regulation is based on a framework where the average annual rate the distribution company may charge increases by either the percentage change in the Consumer Price Index or 3%, whichever figure is higher. If the company wishes to increase rates higher than the aforementioned limit, they must file an application with the NBEUB.
(3) Energy Cost Recovery	Excellent Very Good <b>Satisfactory</b> Below Average Poor	Before 2011, New Brunswick Power was permitted to adjust their rates within a 3% bandwidth without regulatory approval, however any greater change would require an application to the commission.  New Brunswick's generation capacity is well diversified, with 28% of its capacity originating from wind.
(4) COS versus IRM	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The EUB handles rate making on a cost-of-service basis, but only when rate increases exceed the greater of three percent or the percentage change in CPI. Below the threshold, NB Power may set its own rate increase without regulatory oversight.
(5) Capital Cost Recovery	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The Electricity Act allows NB Power to increase rates up to 3% without going to the NEB. There may be delays in capital expenditure recovery if further increases or if account deferrals are necessary in order to offset prudent costs as they require regulatory review and approval from the NEB.
(6) Political Interference	Excellent Very Good Satisfactory <b>Below Average</b> Poor	The provincial government plays a significant role in the electricity sector. The government owns NB Power, which is a vertically integrated company providing generation, transmission, and distribution services. Although generation is deregulated in the province, NB Power maintains a monopoly in transmission and distribution. The company is regulated by the NBEUB, which operates as an independent quasi-judicial body. The board members are appointed by Cabinet to serve terms of up to five years.
(7) Retail Rate	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Ratepayers situated in major cities in New Brunswick paid 9.51¢/KWh in 2013.  Real GDP growth rate in New Brunswick was -0.6% in 2012, which was far below the national average of 1.7%.
(8) Stranded Cost Recovery	<b>Excellent</b> Very Good Satisfactory Below Average Poor	Minimal stranded costs exist in New Brunswick. NB Power Holdings is able to recover substantially all costs incurred through the rate setting process.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average <b>Poor</b>	New Brunswick utilities will be emerging from a province-wide three year freeze on October 1, 2013. There have been no subsequent province-wide rate freezes.
(10) Market Structure (Deregulation)	<b>Excellent</b> Very Good Satisfactory Below Average Poor	NB Power is the government-owned integrated utility company of the province. The provincial Energy and Utilities Board sets retail rates.



## State of New Hampshire

**Regulating Body:** New Hampshire Public Utilities Commission (NHPUC)

**RTO/ISO:** New England (ISO-NE)

**Primary NERC Region:** Northeast Power Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 1.32 Million

GDP: \$61.6 Billion

### MAIN INVESTOR-OWNED UTILITIES

Granite State Electric Utility

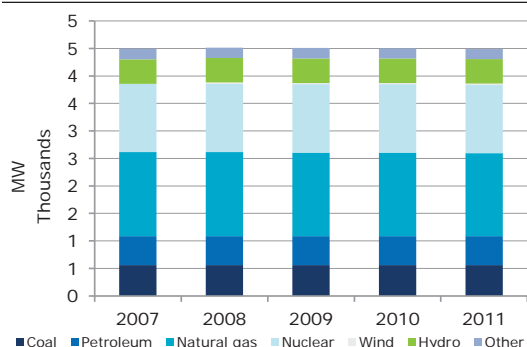
Public Service Company of New Hampshire

Unitil Energy Systems Inc.



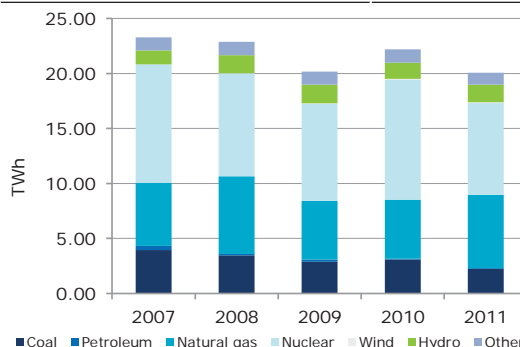
### PRODUCTION

#### Capacity & Fuel Type



Source: EIA.

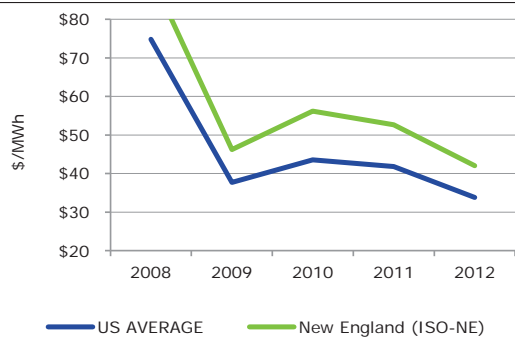
#### Production by Fuel Type



Source: EIA.

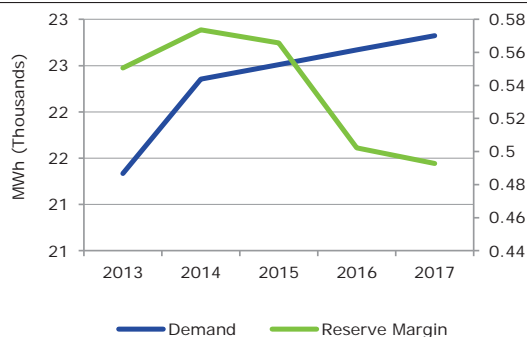
### DEMAND

#### Wholesale Price



Source: EIA, FERC.

#### Projections-Northeast Power Coordinating Council



Source: EIA, NERC.



## New Hampshire

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity requirement set by the New Hampshire Public Utilities Commission (NHPUC) for the primary investor-owned utility is set at 50% (Granite State Utility – GSU).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE for major investor-owned utilities in the state is at 9.67%. Unitil Energy System (UES) was allowed to earn ROE of 9.7% in 2011 whereas Public Service Company of New Hampshire (PSNH) was also allowed an ROE of 9.67% in the 2010 settlement. For PSNH, if earnings are above 10%, 75% will have to return to ratepayers. PSNH is authorized ROE of 9.84% to recover its generation and purchased power costs.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	New Hampshire's purchased power costs are not bundled with its transmission and distribution services due to its deregulated status. Purchased power costs are recovered through adjustment clauses (FPAC). PSNH provide standard service (default services) and is allowed to recover its power costs through a periodical adjustment plus the true-up. Cost of gas supply could be adjusted for up to 25% without regulatory approval. there is adjustment mechanism in place for gas cost recovery.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The NHPUC generally sets rate plans (or via a settlement) for several subsequent years. Test years are historical. Rates are reviewed and adjusted annually. Utility can file application to recover costs incurred beyond their control such as storm costs.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	In accordance with RSA 378:30-a, utilities rates are prohibited from being based on the cost of construction work in progress. Costs can only be recovered upon the completion of the project. Capital expenditure trackers are used to mitigate regulatory lag in between general rate cases. Securitization bonds were allowed to finance stranded costs associated with restructuring.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the NHPUC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	New Hampshire's 14.74¢/KWh average retail rate is the fifth highest in the country. New Hampshire's retail rate is 42.83% higher than the national average.  Real GDP growth rate in New Hampshire was 0.5% in 2012, which was below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded costs in New Hampshire reached several billion in the late 1990s. Since then, utilities have largely recovered their stranded costs through a series of initiatives including the competition transition cost and rate reduction bond. A more recent example of stranded cost relates to storm restoration.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	New Hampshire has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is deregulated. New Hampshire introduced deregulation in 1998. Retail competition was not available statewide until 2001.



## State of New Jersey

**Regulating Body:** New Jersey Board of Public Utilities (NJBP)

**RTO/ISO:** PJM

**Primary NERC Region:** Northeast Power Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 8.86 Million

GDP: \$497 Billion

### MAIN INVESTOR-OWNED UTILITIES

Atlanta City Electric Company

Rockland Electric Company

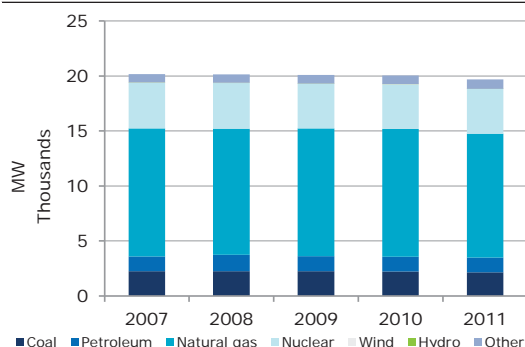
Jersey Central Power & Light Company

Public Service Electric & Gas Company



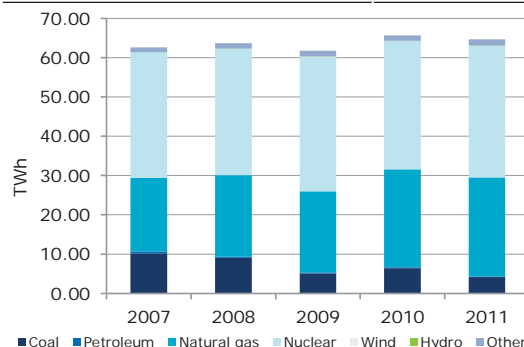
### PRODUCTION

#### Capacity & Fuel Type



Source: EIA.

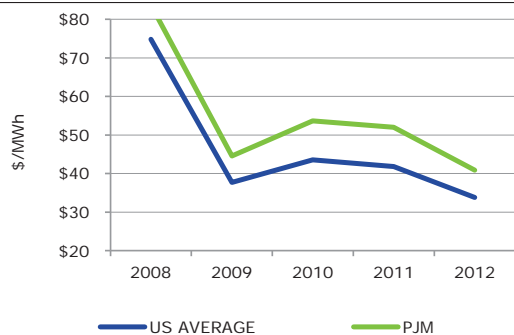
#### Production by Fuel Type



Source: EIA.

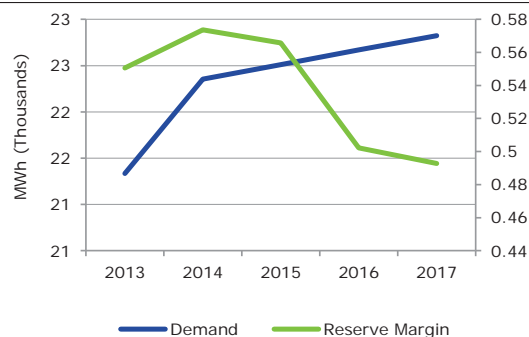
### DEMAND

#### Wholesale Price



Source: EIA, FERC.

#### Projections-Northeast Power Coordinating Council



Source: EIA, NERC.



## New Jersey

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	Distribution utilities are regulated by the New Jersey Board of Public Utilities (NJBPU or the Commission). The regulatory equity is either set by the Commission or by settlements that are approved by the Commission. In New Jersey, the equity ratio ranges from 48.7% to 51.2%
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed ROE for major investor owned utilities in the state ranges from 9.075% (for New Jersey Central Power & Light – NCPL and Atlantic City Electric – ACE) to 10.3% (for Public Service Electric & Gas – PSEG)
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	New Jersey's purchased power costs are not bundled with its transmission and distribution services due to its deregulated status
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The Commission handles rate making with a cost-of-service model based on historical test years. However, projected data is taken into consideration. Adjustments can be made for known and measurable changes. Some incentive regulations are implemented but have not reached a full scale as seen in Ontario, Canada. It has been seen in the case of New Jersey Natural Gas and South Jersey Gas, which are allowed to retain a portion of their margins associated with off-system sales.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities are generally not allowed to include construction work in progress in the rate base. Capital expenditure trackers are used to mitigate regulatory lag in between general rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the NJBPU, which operates as a quasi-judicial body. The office of the Board is non-partisan and commissioners are appointed to a six-year term.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	At 14.30¢/KWh, New Jersey's retail rate is the sixth highest in the country. When compared to the rest of the nation, rate payers in the state pay 38.57% more than the national average.  Real GDP growth rate in New Jersey was 1.3% in 2012, which was below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded costs in New Jersey reached as high as \$8 billion when the state deregulated in the late 1990s. Since then, utilities have recovered most of the stranded costs through specially set up transition charges and securitization. More recent examples of stranded cost is related to storm restoration and advanced metering. Securitization was allowed to finance up to 75% of generation-related stranded costs and 100% of non-utility generator contract buyout costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	New Jersey deregulated was implemented in 1999, with the rate cap period expiring August 2003. There have been no subsequent statewide rate freezes.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is deregulated. New Jersey deregulated in 1999 from retail access perspective. The state no longer oversees wholesale generation rates, but still regulates distribution and retail rates.





## State of New Mexico

**Regulating Body:** New Mexico Public Regulation Commission (NMPRC)  
**RTO/ISO:** Southwest, SPP  
**Primary NERC Region:** Western Electricity Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 2.09 Million  
GDP: \$75.5 Billion

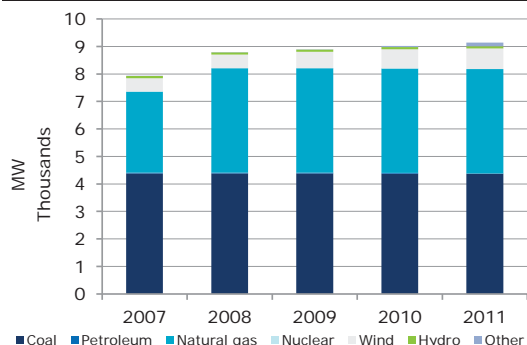
### MAIN INVESTOR-OWNED UTILITIES

El Paso Electric Company  
Public Service Company of New Mexico  
Southwestern Public Service Company



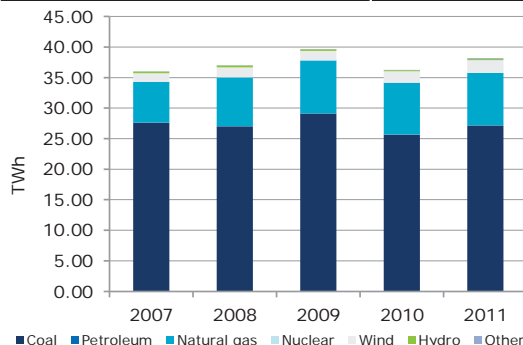
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

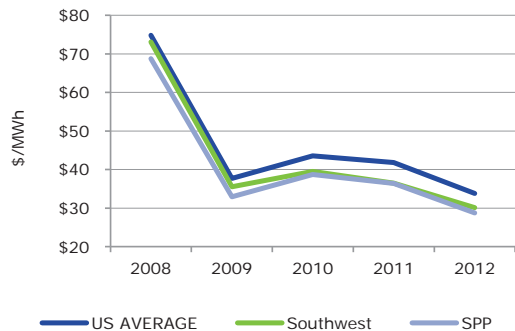
### Production by Fuel Type



Source: EIA.

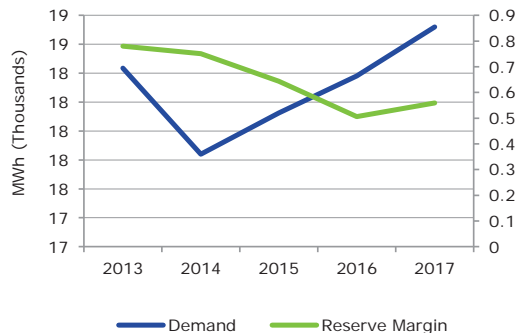
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—Western Electricity Coordinating Council



Source: EIA, NERC.



## New Mexico

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity set by the New Mexico Public Regulation Commission (NMPRC) for the primary investor-owned utility is set at 45% (in the case of Southwestern Public Service Company (SWPSC) in 2010. Recently, SWPSC requested a ratio of 53.89%.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE for major investor owned utilities in the state ranges from 10.5% to 11.25%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Fuel and purchased power costs are recovered in rates through a fuel and purchased power adjustment clause (FPAC). These adjustments do not require regulatory approval, however a two month lag exists to recovery. For SWPSC, the FPAC is subject to prudent review. The fuel factor is adjusted annually but could be changed more frequently if over-under-recovery exceeds \$5 million.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The NMPRC handles rate making on a cost-of-service basis. Test years are historical with adjustment for known and measurable changes. Utilities must file general rate cases to recover costs. In some cases, settlements may restrict the timing of the next filing.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in New Mexico are permitted to add construction work in progress to the rate base for all renewable projects. Passed in 2009, Senate Bill 477 mitigates regulatory lag by allowing utilities to use a future test year rather than a historical year.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the NMPRC, which operates as a quasi-judicial body. The Commission operates as an independent body under New Mexico's constitution, which reduces the likelihood of state interference. However, the office of the Commission is partisan and commissioners are elected to a four-year term.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	New Mexico has the 32nd highest average retail rate of 8.74¢/KWh. New Mexico's retail rate is 15.31% below the national average.  Real GDP growth rate in New Mexico was 0.2% in 2012, which was far below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded costs in New Mexico arose when the state deregulated in 1999. Since then, utilities have recovered most of the stranded costs through transition charges. A more recent example of stranded cost is related to renewable energy procurement.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	New Mexico has not experienced a statewide rate freeze. In the case of El Paso Electric, rate freeze was applied in a settlement when El Paso emerged from bankruptcy in 1995.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The electricity sector is fully regulated. The state experimented with deregulation in 1999, but abandoned the project in 2003. The state commission sets bundled retail rates. Utilities are fully integrated.



## State of New York

**Regulating Body:** New York Public Service Commission (NYPSC)

**RTO/ISO:** New York (NYISO)

**Primary NERC Region:** Northeast Power Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 19.57 Million

GDP: \$1156.5 Billion

### MAIN INVESTOR-OWNED UTILITIES

Consolidated Edison Company of New York Inc.

Orange & Rockland Utilities Inc.

Rochester Gas & Electric Corp.

New York State Electric & Gas Corp.

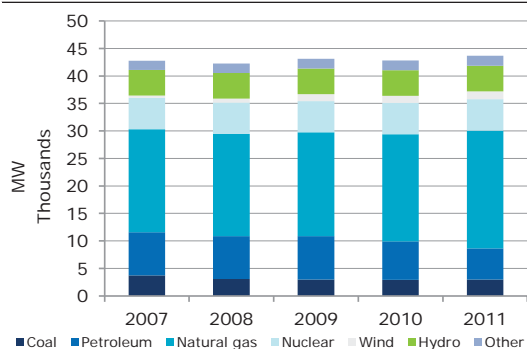
Central Hudson Gas & Electric Corp.

Niagara Mohawk Power Corp.



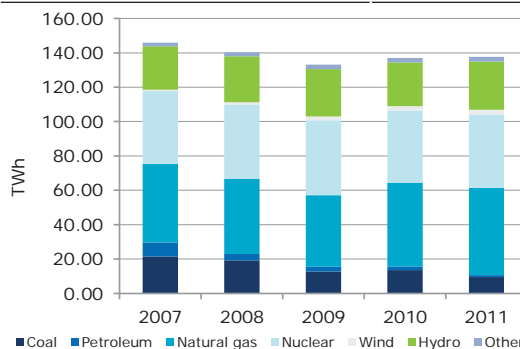
### PRODUCTION

#### Capacity & Fuel Type



Source: EIA.

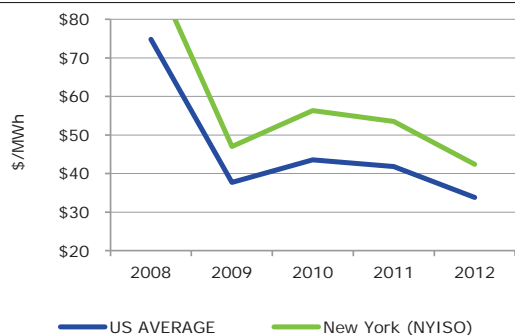
#### Production by Fuel Type



Source: EIA.

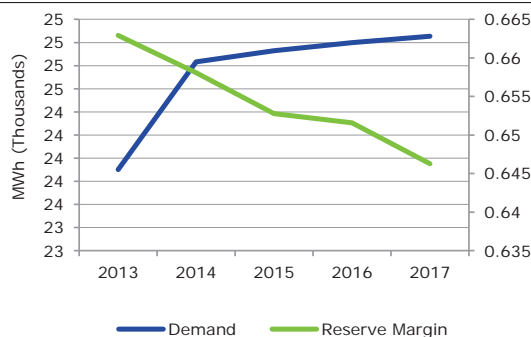
### DEMAND

#### Wholesale Price



Source: EIA, FERC.

#### Projections-Northeast Power Coordinating Council



Source: EIA, NERC.



## New York

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity ratio set by the New York Public Service Commission (NYPSC). The ratio of 48% is set for all major utilities in the state, including Consolidated Edison (ConEd), Central Hudson, and National Grid's owned utilities.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE for the six major investor-owned utilities in the state ranges from 9.3% (for Niagara Mohawk) to 10.15% (for ConEd).
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Purchased power costs are recovered through a market power adjustment clause or a commodity adjustment clause. All energy costs are passed through to customers who do not choose their own supplier. Adjustment clauses are adjusted either monthly or bi-monthly.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The rate making is based on a three-year rate plan, which forecasts operating expenses and capital expenditures. The plan also includes results for a 12-month period ending not more than 150 days before the filing date. Various adjustments are also included in the rate plan to account for pension deficits and performance trackers.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities are generally only allowed to include construction work in progress in the rate base if a utility's cash flow ratios were below a certain level. Riders are allowed to mitigate regulatory lags between general rate cases. A Capital Expenditure Review is conducted by the NYSPSC and utilities are potentially subject to provide a refund to customers following the Commission's review.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the NYPSC, which operates as a quasi-judicial body. The office of the Board is non-partisan and members are appointed to a six-year term.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	With a state average of 15.89¢/kwh, New York's retail rates are the fourth highest in the country, which may reduce the level of flexibility in regulatory policy. New York's retail rate is 53.97% greater than the national average retail rate.  Real GDP growth rate in New York was 1.3% in 2012, which was below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded costs in New York reached as high as \$20 billion in 1994 amid deregulation. Since then, utilities have largely recovered their stranded costs through a series of initiatives including the recovery charge. In recent years, various storms have also created significant discrepancies between rate case forecasts that have yet to be recovered by many of the companies operating throughout the state. While it is likely that these costs will be recovered, agreements with the Public Service Commission have not yet been arranged.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	The deregulation of 1997 in New York did not result in a rate freeze. There have been no subsequent statewide rate freezes. However, rate freeze did occur as result of merger or acquisition. For example, Niagara Mohawk had a 10 year rate freeze following the acquisition by National Grid in 2002.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	Retail access was allowed in 1998. Generation assets were divested by utilities. Incumbent utilities still serve as providers-of-last-resort. Wholesale generation and transmission are under the federal oversight while the state oversees distribution operations.



## Province of Newfoundland and Labrador

**Regulating Body:** Newfoundland and Labrador Board of Commissioners of Public Utilities (NLBPCU)

**Primary NERC Region:** N/A

### GEOGRAPHIC INFORMATION

Population: 0.51 Million

GDP: \$33.62 Billion

### MAIN INDUSTRY PLAYERS

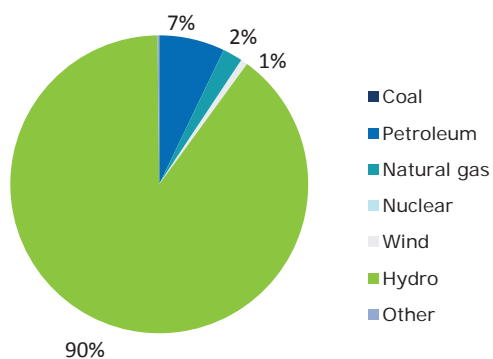
Newfoundland and Labrador Hydro

Newfoundland Power Inc.



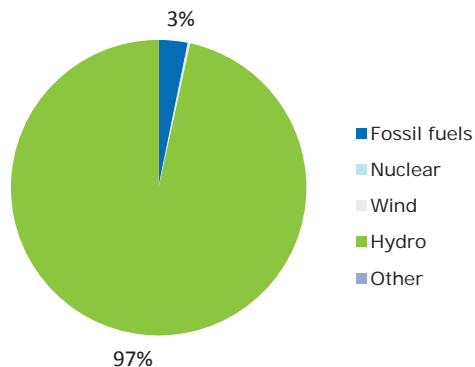
### PRODUCTION

#### Capacity & Fuel Type (2012)



Source: Canadian Centre for Energy Information.

#### Production by Fuel Type (2012)



Source: Canadian Centre for Energy Information.

#### Projections - Not Available



## Newfoundland and Labrador

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity set by the Newfoundland and Labrador Board of Commissioners of Public Utilities (NLBCPU) ranges from 25% to 45%.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE in the province ranges from 4.47% to 8.8%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Under the current framework, distributors are allowed to pass through the cost of purchasing power and have rate stabilization accounts in place to absorb fluctuations in fuel cost used to generate electricity, with adjustments made on an annual basis.  Newfoundland's main source of generation is hydroelectricity, which has a consistently low cost. There has been a growing trend for the Atlantic provinces to shift their energy policies toward clean energy, which is typically more costly than coal-fired generation.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The PUB handles rate making on a cost-of-service basis. Utilities must file general rate cases to recover costs. In addition, there is an automatic adjustment formula that sets customer rates in between rate cases.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Capital costs are approved by the NLBCPU prior to execution reducing the risk of capital cost recovery. The NLBCPU allows the use of a forecasted rate base for each of the future years the General Rate Case application is intended to cover.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The provincial government plays a significant role in the electricity sector. The government owns Newfoundland and Labrador Hydro, which is the primary provider of electricity in the province. The company is vertically integrated with generation, transmission, and distribution capacity. Electric utilities are regulated by the Newfoundland and Labrador Board of Commissioners of Public Utilities, which operates as a quasi-judicial body.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Ratepayers situated in major cities in Newfoundland and Labrador generally pay 10.75¢/KWh in 2013.  Real GDP growth rate in Newfoundland and Labrador was -4.8% in 2012, which was far below the national average of 1.7%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Minimal stranded costs exist in Newfoundland and Labrador. A recent example of stranded costs relate to fuel variance cost deferrals. Although costs have been recovered in the past, assets could potentially be written down if the PUB does not approve the recovery of all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Newfoundland and Labrador has not experienced a province-wide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The province is fully regulated. The Newfoundland and Labrador Board of Commissioners of Public Utilities regulates retail rates. Utilities are largely integrated.



## State of North Carolina

**Regulating Body:** North Carolina Utilities Commission (NCUC)

**RTO/ISO:** Southeast, PJM

**Primary NERC Region:** SERC Reliability Corporation

### GEOGRAPHIC INFORMATION

Population: 9.75 Million

GDP: \$407.4 Billion

### MAIN INVESTOR-OWNED UTILITIES

Duke Energy Carolinas LLC

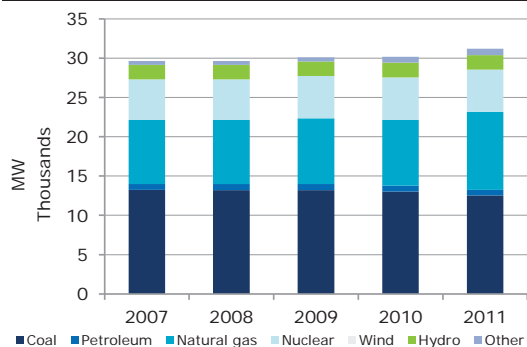
Carolina Power & Light Company

Virginia Electric & Power Company



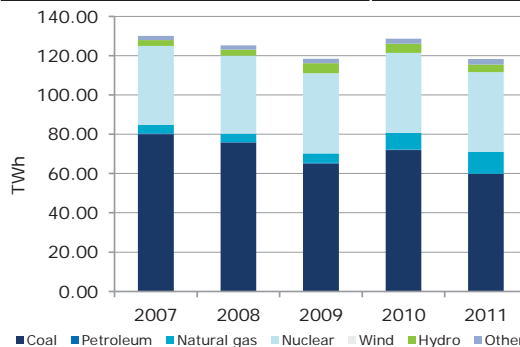
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

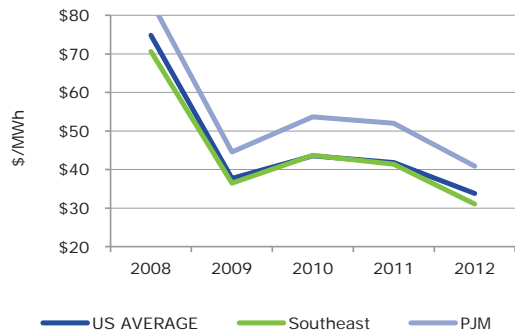
### Production by Fuel Type



Source: EIA.

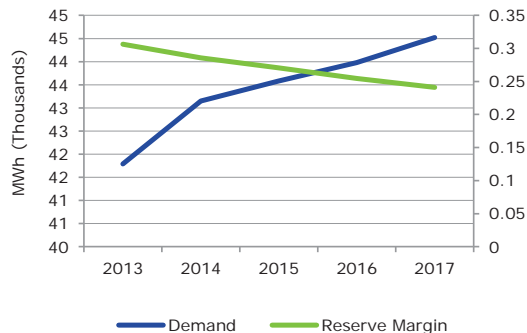
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—SERC Reliability Corporation



Source: EIA, NERC.



## North Carolina

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The regulatory equity is either set by the North Carolina Utilities Commission (NCUC or the Commission) or by way of settlement, approved by the Commission. The equity ratio ranges from 51% (for Virginia Electric and Power Company – VEPCO) to 53% (for Progress Energy Carolinas – a Duke Energy company).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	This allowed distribution ROE for major investor owned utilities in the state ranges from 10.2% to 10.5%. Progress Energy Carolinas earn a ROE of 10.2% through a settlement in early 2013 (1.5% in 2011). ROE for VEPCO is also set at 10.2%
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Fuel and purchased power costs are recovered through a fuel adjustments clause (FAC), which is adjusted annually. These adjustments require regulatory approval. The regulatory review also provides for a true-up of any over-collections or under-collections from the previous year. However, by law, the limit in annual increase in recoverable costs associated with certain purchased power costs is 2% of a utility's total revenues.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The NCUC handles rate making on a cost-of-service basis. Test years are historical. However, the Commission takes into account changes that are known and quantifiable prior to the close of the hearing. Utilities must file general rate cases to recover costs. Alternative regulation was applied to North Carolina Power, which operated under a five-year rate freeze through April 2010.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	In accordance with North Carolina General Statute, unless otherwise permitted by the NCUC through prudence reviews. North Carolina law allows the NCUC to conduct prudence reviews of annual construction costs and for utilities to include prudent costs into the base rate during construction. By law, utilities are generally allowed to include construction work in progress in the rate base.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	Electric utilities are regulated by the NCUC, which operates as a quasi-judicial body. The office of the Board is non-partisan and commissioners are appointed to an eight-year term, which decreases political risk. However, North Carolina is the only U.S. jurisdiction to date that legislated a rate freeze not in relation to deregulation.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	North Carolina's 8.64¢/KWh retail rate ranks 34th highest. North Carolina's retail rate is 16.28% lower than the national average.  Real GDP growth rate in North Carolina was 2.7% in 2012, which was slightly above the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded costs in North Carolina reached an estimated \$5.1 billion in 2001. Since then, utilities have largely recovered their stranded costs through a surcharge. Securitization has not been used to much extent.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	All utilities in North Carolina had rates frozen from June 2002 to December 2007 as a result of the state's Clean Smokestacks Act. In the case of North Carolina Power, this company operated under a five-year rate freeze through April 2010. There have been no subsequent statewide rate freezes.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	This state is fully regulated. The state commission sets bundled retail rates. Most companies are vertically integrated.





## State of North Dakota

**Regulating Body:** North Dakota Public Service Commission (NDPSC)

**RTO/ISO:** Midwest (MISO)

**Primary NERC Region:** Midwest Reliability Organization

### GEOGRAPHIC INFORMATION

Population: 0.7 Million

GDP: \$33.4 Billion

### MAIN INVESTOR-OWNED UTILITIES

Montana-Dakota Utilities Company

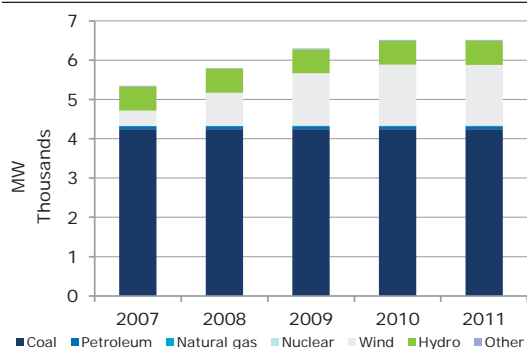
Northern States Power

Otter Tail Power Company



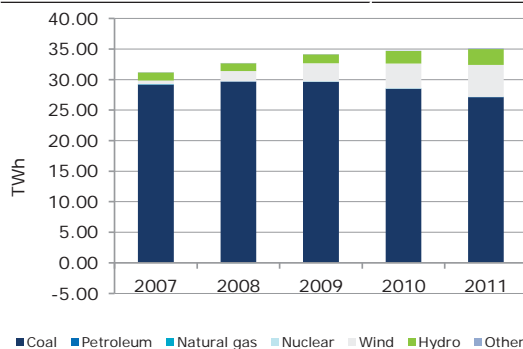
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

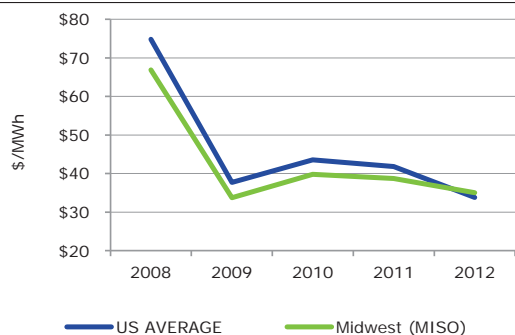
### Production by Fuel Type



Source: EIA.

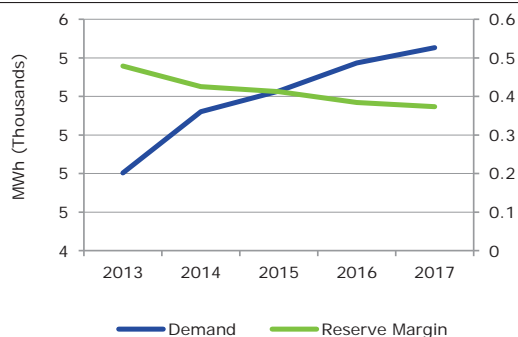
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—Midwest Reliability Organization



Source: EIA, NERC.



## North Dakota

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The common equity ratio is either set by the Commission or by way of settlement, ranging from 52.56% (for NSP-Minnesota) to 53.337% (for Montana-Dakota).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE for major investor-owned utilities in the state ranges from 10.4% to 10.75%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Energy cost recovery is based on a fuel adjustment clause that allows for 90% of the difference between the actual costs and the costs imbedded in base rates. The adjustment is made monthly. In the event that energy costs (including demand charges) are greater than 90%, they are deferred to be reviewed by the Commission and could be recovered through the next rate application.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	Utilities in the state operate under a cost-of-service regime. In general, utilities are allowed to recover prudently incurred costs and to earn a reasonable return on their investment. Undercover of operating costs is subject to regulatory review. The rate application is based on a historical test year.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in North Dakota are permitted to add construction work in progress to the rate base for transmission, and federally mandated environmental projects. Utilities could also file a rider application to recover costs associated with wind power projects, transmission and environment.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Investor-owned electric utilities are regulated by the NDPSC, which operates as a quasi-judicial body. The Commission operates as an independent body under North Dakota's constitution, which reduces the likelihood of state interference. However, the office of the Commission is partisan and commissioners are elected to a six-year term, which increases political risk to some extent.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	North Dakota ranks seventh lowest with an average retail rate of 7.50¢/KWh. North Dakota's retail rate is 27.33% lower than the national average.  Real GDP growth rate in North Dakota was 13.4% in 2012, which was above the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in North Dakota. Formal inquiry into restructuring has not progressed since 1999.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	North Dakota has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Utilities are fully integrated.



## Province of Nova Scotia

**Regulating Body:** Nova Scotia Utility and Review Board (NSURB)

**Primary NERC Region:** Northeast Power Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 0.92 Million

GDP: \$37.02 Billion

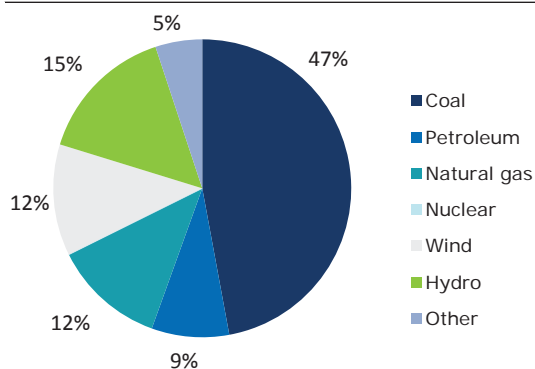
### MAIN INDUSTRY PLAYERS

Nova Scotia Power Inc.



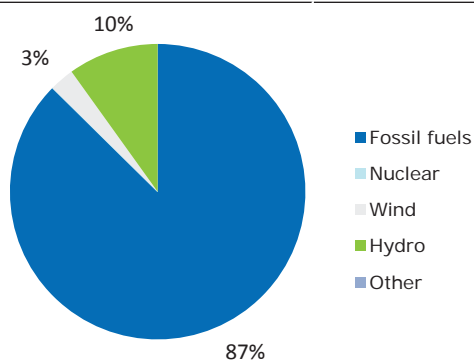
### PRODUCTION

#### Capacity & Fuel Type (2012)



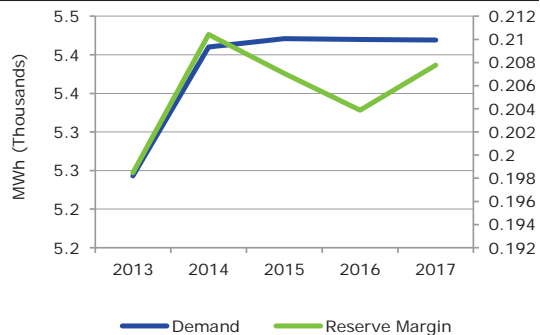
Source: Canadian Centre for Energy Information.

#### Production by Fuel Type (2012)



Source: Canadian Centre for Energy Information.

#### Projections—Northeast Power Coordinating Council



Source: EIA, NERC.



## Nova Scotia

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity requirement set by the Nova Scotia Utility and Review Board (NSURB) for the primary investor-owned utility is set at 37.5%.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed ROE for the principal utility operating in the province ranges from 8.75% to 9.25%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in Nova Scotia incur fuel and purchased power costs, but these costs are fully passed on to ratepayers. The fuel adjustment mechanism is adjusted semi-annually for differences between forecasts and actual fuel costs.  Nova Scotia has a moderately diversified fuel mix, and has invested a significant amount of resources in renewable energy. Regardless, it remains exposed to commodity price risk due to its reliance on coal.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The UARB handles rate making on a cost-of-service. Utilities must file general rate cases to recover most costs.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There is a delay in capital expenditure recovery as it requires regulatory review and approval from UARB. The UARB has allowed a Fixed Cost Recovery Deferral mechanism in order to help stabilize rate increases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The provincial government plays a significant role in the electricity sector. The province's major electric utility, Nova Scotia Power Inc. is an investor-owned electric utility that was privatized in 1992. It is fully integrated, providing generation, transmission, and distribution throughout the province. The company is regulated by the NSURB, which operates as a quasi-judicial body and reduces political risk to some extent.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Ratepayers situated in major cities in Nova Scotia paid 12.39¢/KWh in 2013.  Real GDP growth rate in Nova Scotia was 0.2% in 2012, which was far below the national average of 1.7%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Minimal stranded costs exist in Nova Scotia. A recent example of stranded cost relates to fixed cost recovery. Although costs have been recovered in the past, assets could potentially be written down if the NURB does not approve the recovery of all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Nova Scotia has not experienced a province-wide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The province is fully regulated. The Nova Scotia Utility and Review Board sets bundled retail rates. The main utility of the province is vertically integrated.



**Regulating Body:** Public Utilities Commission of Ohio (PUCO)  
**RTO/ISO:** PJM, Midwest (MISO)  
**Primary NERC Region:** ReliabilityFirst Corporation

#### GEOGRAPHIC INFORMATION

Population: 11.54 Million  
GDP: \$483.4 Billion

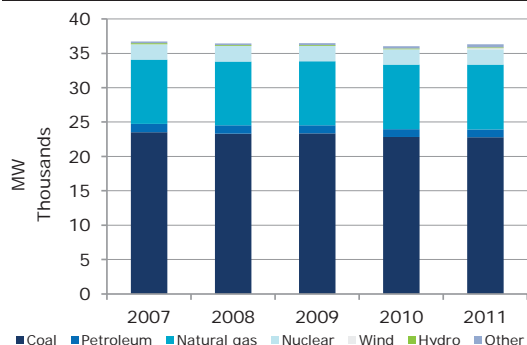
#### MAIN INVESTOR-OWNED UTILITIES

Ohio Power Company  
Toledo Edison Company  
Duke Energy Ohio Inc.  
Ohio Edison Company  
Dayton Power & Light Company  
Cleveland Electric Illuminating Company



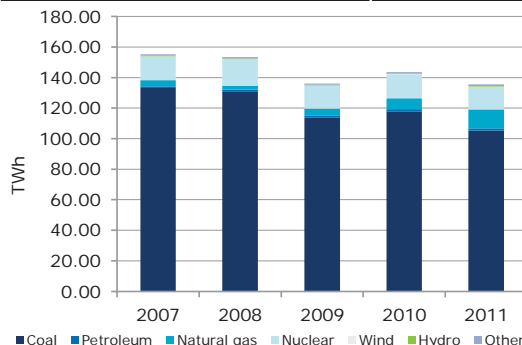
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

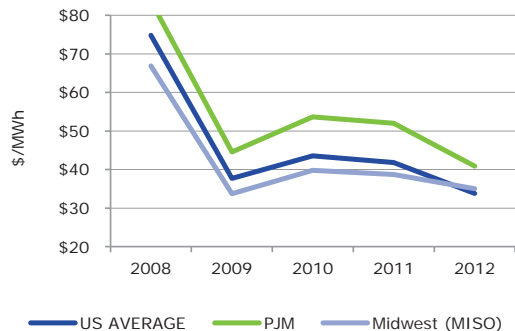
### Production by Fuel Type



Source: EIA.

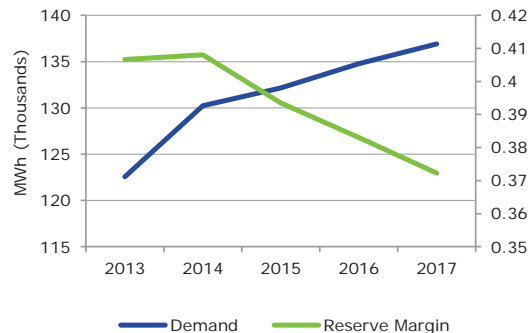
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections-ReliabilityFirst Corporation



Source: EIA, NERC.



## Ohio

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The regulatory equity ratio is set within a wide band, ranging from 49% (for FirstEnergy) to 53.3% (for Duke Energy Ohio).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed ROE for major investor-owned utilities varies. ROE for Duke Energy Ohio was set at 9.84%. Columbus Southern Power is allowed to earn an ROE of 10.0%. ROE for Ohio Power is 10.3%. Other utilities could earn as high as 10.05% (Ohio Edison and Toledo Edison). In the case Dayton Power and Light, the ROE was set at 13%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Customers in Ohio pay the lower of either the cost of generation or the market rate. Utilities could use a cost-tracking mechanism (or adjustment clause) to recover the retail portion of fuel and purchased power. Any under-recovery or over-recovery resulting from the difference between the estimated and actual costs is recorded as regulatory assets or liabilities and will be adjusted through revenues.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	Transmission and distribution are based on cost-based rates approved either by the FERC or the state Commission. The test year is partially historical and partially forward-looking, which includes nine months after the filing of the rate application. All adjustments outside of the test period are denied.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in Ohio are permitted to add construction work in progress to the rate base for if 75% of a project is completed. The state also allows utilities to file a rider application to recover investments between the two rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the PUCO, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a five-year term.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Ohio's 9.03¢/KWh retail rate averages 24th highest. Ohio's retail rate is 12.5% below the national average.  Real GDP growth rate in Ohio was 2.2% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Ohio's investor-owned utilities faced an estimated \$10 billion dollars in stranded costs related to restructuring in 2000 when generation became deregulated. Since then, utilities have recovered a significant portion of their stranded costs through a transition surcharge, however no provision for securitization has been confirmed.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	In connection with deregulation, Ohio had a market development period through 2005. During this period, generation rates were reduced by 5% and a rate freeze was imposed on other services (distribution). Since then, there have been no rate freezes reported in the state.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	Deregulation was introduced in 1999, with retail competition taking effect in 2001. Generation rates are determined both through cost components and market conditions.



## State of Oklahoma

**Regulating Body:** Oklahoma Corporation Commission (OCC)  
**RTO/ISO:** SPP  
**Primary NERC Region:** Southwest Power Pool, RE

### GEOGRAPHIC INFORMATION

Population: 3.81 Million  
GDP: \$160.5 Billion

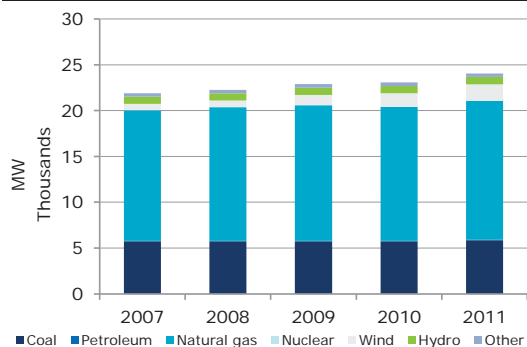
### MAIN INVESTOR-OWNED UTILITIES

Oklahoma Gas & Electric Company  
Public Service Company of Oklahoma



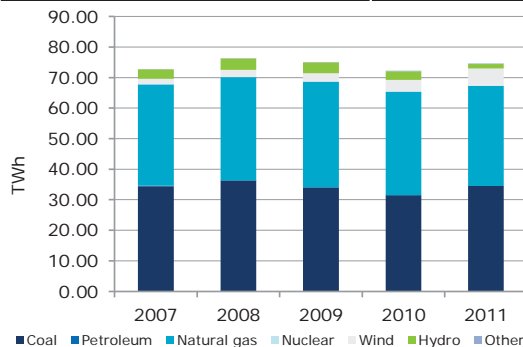
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

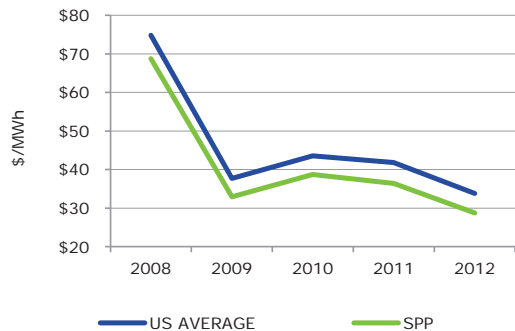
### Production by Fuel Type



Source: EIA.

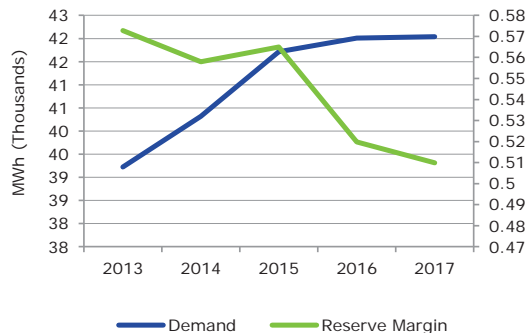
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections-Southwest Power Pool, RE



Source: EIA, NERC.



## Oklahoma

Criteria	Score	Analysis
(1) Deemed Equity	Excellent <b>Very Good</b> Satisfactory Below Average Poor	The regulatory equity ratio was set at 53% for Oklahoma Gas & Electric (OG&E) through a settlement agreement. The Commission approved this settlement in July 2012.
(2) Allowed ROE	<b>Excellent</b> Very Good Satisfactory Below Average Poor	ROE in the state for utilities ranges from 10.2% to 10.5%, which is reasonable. In the case of OG&E, the most recent case (July 2012), ROE was 10.2% and was set through settlement.
(3) Energy Cost Recovery	Excellent Very Good <b>Satisfactory</b> Below Average Poor	Variances in the actual cost of fuel and purchased power as compared to the estimated costs embed in the cost-of-service rating making are passed through customers through fuel adjustment clauses. As a result, fuel and purchased power costs have a minimal impact on earnings. The adjustment clause is subject to regulatory reviews. Adjustments can be made annually, subject to a cap. The annual factor can be adjusted semi-annually or quarterly if under-recovery or over-recovery costs exceed 5%.
(4) COS versus IRM	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The OCC handles rate making on a cost-of-service basis. Test years are historical. Utilities must file general rate cases to recover costs. However, utilities are allowed to seek adjustments for unknown changes occurred within the six months of the end of the test year. This helps to minimize regulatory delays.
(5) Capital Cost Recovery	<b>Excellent</b> Very Good Satisfactory Below Average Poor	Utilities in Oklahoma are permitted to add construction work in progress to the rate base for environmental and transmission projects and the replacement and or improvement of existing plants. Rider applications are also allowed to recover capital expenditure associated with wind farm, demand programs and transmission projects.
(6) Political Interference	Excellent <b>Very Good</b> Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the OCC, which operates as a quasi-judicial body. The Commission operates as an independent body under Oklahoma's constitution, which reduces the likelihood of state interference. However, the office of the Commission is partisan and commissioners are elected to a six year term, which increases political risk to some extent.
(7) Retail Rate	<b>Excellent</b> Very Good Satisfactory Below Average Poor	Oklahoma ranks 42nd highest with a 7.80¢/KWh retail rate. Oklahoma's retail rate is 24.42% below the national average.  Real GDP growth rate in Oklahoma was 2.1% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Oklahoma. Formal inquiry into restructuring has not progressed since 2001. Although stranded costs have been recovered in the past, assets could potentially be written down if the OCC does not approve the recovery of the all costs.
(9) Rate Freeze	<b>Excellent</b> Very Good Satisfactory Below Average Poor	Oklahoma has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Utilities are fully integrated.





## Province of Ontario

**Regulating Body:** Ontario Energy Board (OEB)  
**Primary NERC Region:** Northeast Power Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 12.85 Million  
GDP: \$654.56 Billion

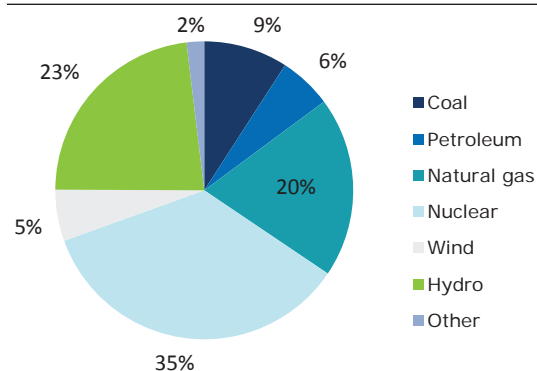
### MAIN INDUSTRY PLAYERS

Hydro Ottawa Ltd.  
Toronto Hydro-Electric System Ltd.  
PowerStream Inc.  
Enersource Hydro Mississauga  
Hydro One Networks Inc.  
Hydro One Brampton Networks Inc.  
Hydro One Remote Communities Inc.  
Verdian Connections Inc.



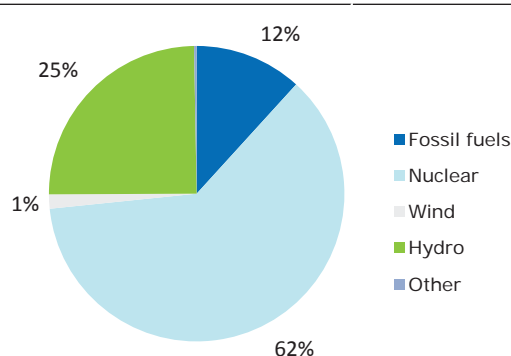
### PRODUCTION

#### Capacity & Fuel Type (2012)



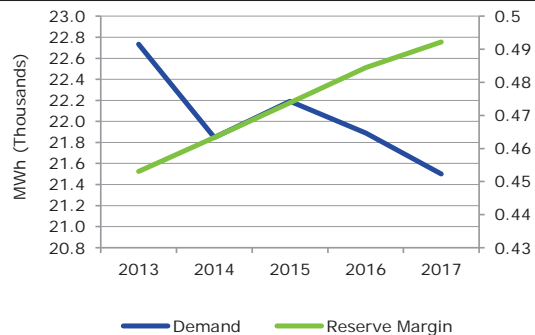
Source: Canadian Centre for Energy Information.

#### Production by Fuel Type (2012)



Source: Canadian Centre for Energy Information.

#### Projections—Northeast Power Coordinating Council



Source: EIA, NERC.



## Ontario

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The deemed equity requirement set by the Ontario Energy Board (OEB) for the primary investor-owned utility is set at 40%.
(2) Allowed ROE	Excellent <b>Very Good</b> Satisfactory Below Average Poor	The allowed distribution ROE in the province ranges from 8.93% to 9.85%.
(3) Energy Cost Recovery	<b>Excellent</b> Very Good Satisfactory Below Average Poor	There is no power price risk for distribution companies as they are not responsible for purchasing power from generation facilities or wholesale market. Power costs are passed on to the end users at rates set by the OEB and are collected from the customers on a monthly/bimonthly basis through the billing system.  Ontario's capacity fuel mix is well diversified, with a great deal placed in nuclear and hydroelectric generation—both of which have limited volatility.
(4) COS versus IRM	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Ontario utilities are regulated under an IRM framework, with three years in between the COS rebasing year. Utilities can also file under ICM during the IRM period if there are significant, non-discretionary and prudent incremental capital needs between rebasing years. The rebasing year can potentially be deferred by companies if requested.
(5) Capital Cost Recovery	Excellent Very Good <b>Satisfactory</b> Below Average Poor	Some capital costs are pre-approved at the time of the cost of service application. Subsequent capital expenditure spending after the base year will not be approved until the next rate application and approval of the base rate. If incremental capital costs are significant, non-discretionary, and prudent, utilities can file under an incremental capital module (ICM) to recover costs. However, the requirements to qualify for ICM are restricted.
(6) Political Interference	Excellent Very Good Satisfactory <b>Below Average</b> Poor	The provincial government plays a significant role in the electricity sector. The government wholly owns Ontario Power Generation, which produces more than half of the province's power. Transmission and distribution of electricity are regulated by the OEB, which operates as a quasi-judicial body. The members of the Board are non-partisan and are appointed to a term of two to five years.
(7) Retail Rate	Excellent Very Good <b>Satisfactory</b> Below Average Poor	Ratepayers situated in major cities in Ontario paid 11.47¢/KWh in 2013.  Real GDP growth rate in Ontario was 1.4% in 2012, which was below the national average of 1.7%.
(8) Stranded Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Minimal stranded costs exist in the Ontario market. Over the past few years, LDCs have been able to fully recover their stranded costs. Examples of stranded cost recovery include the costs related to the installation of Smart Meters and the residual debt left from the restructuring of certain utilities. In addition, nuclear retirement costs in Ontario are passed through to the customers through a Global Adjustment account. DBRS notes that the recovery of the costs is also subject to some regulatory lag.
(9) Rate Freeze	Excellent Very Good <b>Satisfactory</b> Below Average Poor	Due to mounting rates during Ontario's experimental utility deregulation phase, a distribution rate freeze was imposed province-wide from November 2002 to 2005. There have been no subsequent province-wide rate freezes.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory <b>Below Average</b> Poor	Ontario's electrical system operates under a public monopoly system. The Ontario Energy Board sets transmission and distribution rates. Wholesale prices are a mix of regulated, contract, and market prices. No utilities in Ontario are fully integrated.



## State of Oregon

**Regulating Body:** Oregon Public Utility Commission (OPUC)  
**RTO/ISO:** Northwest  
**Primary NERC Region:** Western Electricity Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 3.9 Million  
GDP: \$168.9 Billion

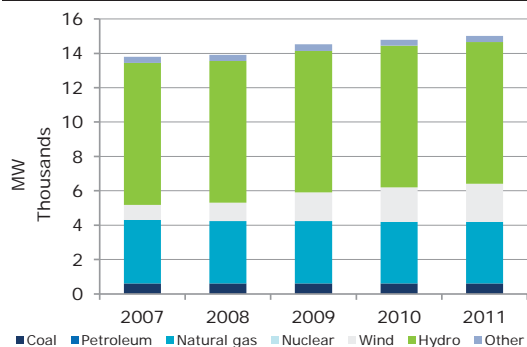
### MAIN INVESTOR-OWNED UTILITIES

Idaho Power Company  
Portland General Electric Company  
Pacific Power



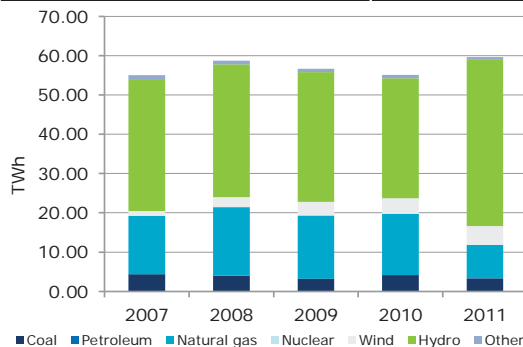
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

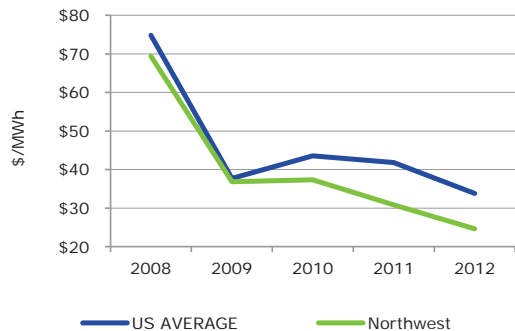
### Production by Fuel Type



Source: EIA.

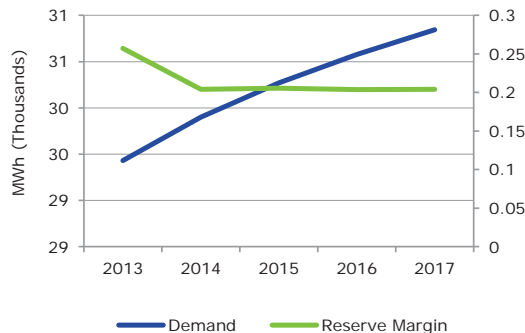
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—Western Electricity Coordinating Council



Source: EIA, NERC.



## Oregon

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity set by the Oregon Public Utility Commission (OPUC) ranges from 50% to 51%.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE for major investor owned utilities in the state ranges from 9.8% (for PacifiCorp) to 9.9% (for Idaho Power) to 10% (for Portland General Electric).
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	The state started to allow utilities to utilize the power cost adjustment mechanism clauses (CAM) to recover energy costs. Most companies are permitted to adjust energy costs annually. The state also has renewable resources adjustment clause for utilities to recover prudently-incurred costs associated with renewable energy program to meet the state requirements.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The OPUC handles rate making on a cost-of-service basis. Test years are fully forecasted. Utilities use general rate cases, power cost adjustments (PCA) mechanisms, a fixed cost adjustment (FCA), balancing accounts and riders to recover their costs and to earn a return on investment. Under-recovered costs are deferred to be recovered in the next rate case, subject to regulatory review. The rate making is based on either partially or fully future year periods. Regulatory lag has been evident in the state, with the Commission having the power to suspend a rate case for six months.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	In accordance with Oregon statute ORS 757.355, utilities are not permitted to add construction work in progress to the rate base. Capital expenditure trackers are used to mitigate regulatory lag in between general rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the OPUC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a four-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Oregon averages an 8.02¢/KWh retail rate, making it 38th highest. Oregon's retail rate is 22.29% lower than the national average.  Real GDP growth rate in Oregon was 3.9% in 2012, which was above the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Oregon's investor-owned utilities faced stranded costs related to restructuring in 2000 when generation became deregulated. Since then, utilities have recovered a significant portion of their stranded costs through a constant per-kWh rate, similar to a competitive transition charge.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Oregon has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is deregulated. Restructuring was introduced in 1999. Retail competition was allowed in 2002 for non-residential customers. The state commission regulates retail rates of the vertically integrated utilities. Only commercial and industrial customers may choose to switch electric suppliers.



## State of Pennsylvania

**Regulating Body:** Pennsylvania Public Utility Commission (PPUC)  
**RTO/ISO:** PJM  
**Primary NERC Region:** ReliabilityFirst Corporation

### GEOGRAPHIC INFORMATION

Population: 12.76 Million  
GDP: \$575.6 Billion

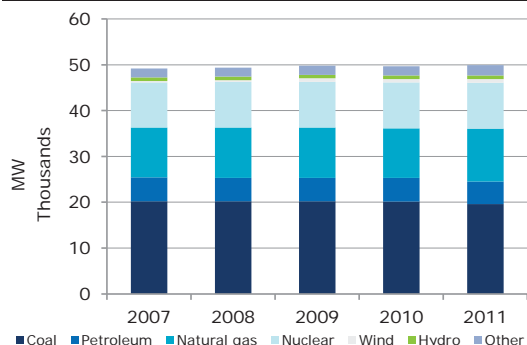
### MAIN INVESTOR-OWNED UTILITIES

PECO Energy Company  
PPL Electric Utilities Corp.  
Pennsylvania Power Company  
West Penn Power Company  
Metropolitan Edison Company



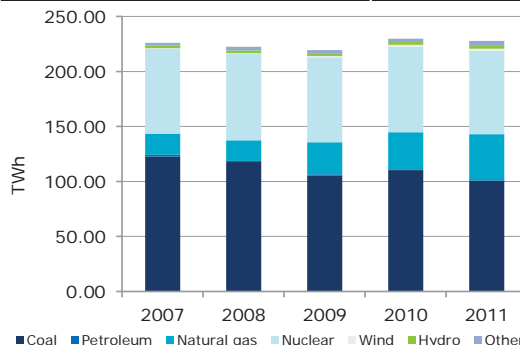
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

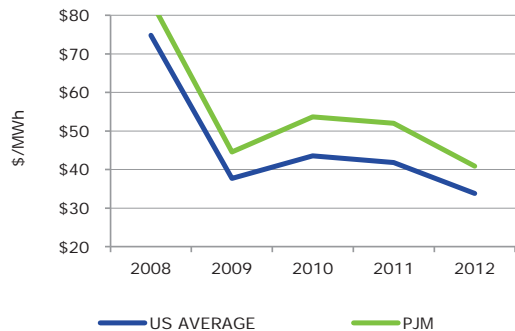
### Production by Fuel Type



Source: EIA.

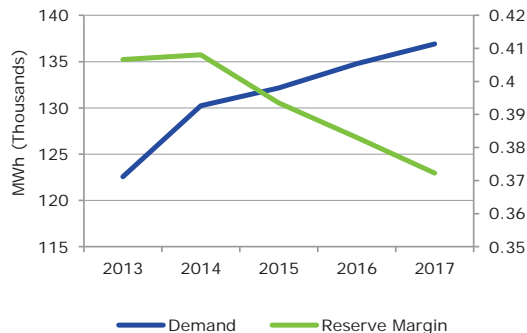
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—ReliabilityFirst Corporation



Source: EIA, NERC.



## Pennsylvania

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	There is no a specific level of regulatory equity in the capital being set by the Commission. However, at the time of the rate case, utilities tend to construct their capital structure in the band between 45% to 53%. Equity thickness was set at 59% on transmission assets by the FERC.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed ROE for major investor-owned utilities in the state generally ranges from 10% to 11.5%. ROE is 10.1% for Pelelec (FirstEnergy Company) and Med-Ed
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	The state's default service plan (DSP) expired May 31, 2013. The competitive procurement of generation supply (through auction process) is in place for customers that do not choose an alternative electric generation supplier (EGS). This competitive process, known as provider as the last resort (POLR) VI either significantly reduces or eliminates utilities' exposure to commodity risk and for the case of Duquesne Light, volume risk. Energy costs are passed through to customers. However, the state does not have a fuel and purchased power cost.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The PPUC regulated utilities under on a cost-of-service framework where utilities are allowed to recover prudently incurred costs and earn a reasonable return on investments. In between general rate case filings, utilities can adjust rates through distribution system improvement charges (DSIC) filings to recover and earn a return on investments in infrastructure during this period. The rate case is no longer based on a historical test year, but a future test year, significantly reducing forecast errors.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Since January 1, 2013, rates can be adjusted through a DSIC filing, which reduces the regulatory lag for infrastructure investments. However, automatic rate changes implemented under an approved DSIC will be subject to a cap of 5% of distribution rates billed and subject to annual audits to identify and reconcile any over- or under-recoveries.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The State government does not play a significant role in the electricity sector. The PPUC operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a four-year term.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Pennsylvania's average retail rate of 10.45¢/KWh ranks 16th highest in the country. Pennsylvania's retail rate is 1.26% higher than the national average.  Real GDP growth rate in Pennsylvania was 1.7% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Currently, utilities do not have any stranded costs. However, stranded costs were a major issue during the late 1990s to early 2000s after deregulation. Utilities had to write off one third of their stranded costs and the other two thirds was recovered through securitization.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Distribution rates were frozen since deregulation in 1998 to as late as 2007. Since then, there has not been any statewide rate freezes.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The Pennsylvania electricity market is partially deregulated with a separation between generation, transmission, distribution and retail service providers. Transmission and distribution services are regulated by the FERC and PPUC, respectively, while generation and retail service providers are unregulated. However, for distribution companies who are also the POLR, their retail service plans are regulated by the PPUC.



## Province of Prince Edward Island

**Regulating Body:** Island Regulatory and Appeals Commission (IRAC)

**Primary NERC Region:** Northeast Power Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 0.14 Million

GDP: \$5.35 Billion

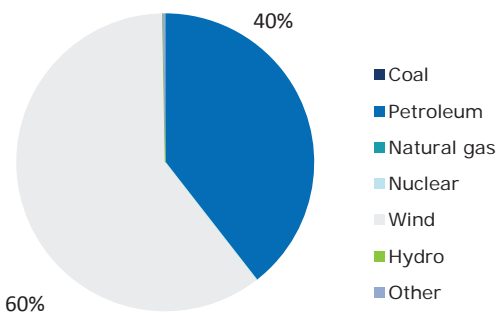
### MAIN INDUSTRY PLAYERS

Martime Electric Company Limited



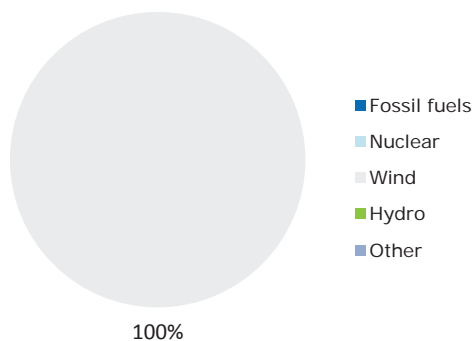
### PRODUCTION

#### Capacity & Fuel Type (2012)



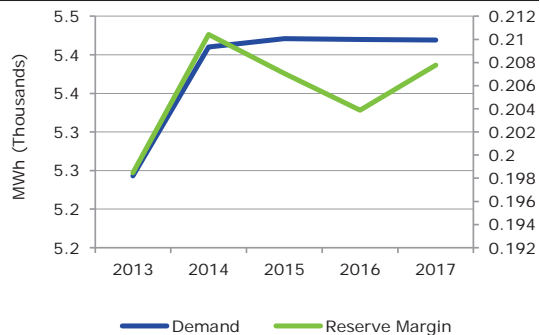
Source: Canadian Centre for Energy Information.

#### Production by Fuel Type (2012)



Source: Canadian Centre for Energy Information.

#### Projections—Northeast Power Coordinating Council



Source: EIA, NERC.



## Prince Edward Island

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good <b>Satisfactory</b> Below Average Poor	In accordance with PEI's Electric Power Act along with rulings made by Island Regulatory and Appeals Commission (IRAC), Maritime Electric Company Limited (MECL) must maintain an equity ratio of 40% on capital invested in utility infrastructure.
(2) Allowed ROE	Excellent <b>Very Good</b> Satisfactory Below Average Poor	The allowed distribution ROE in the province is 9.75%.
(3) Energy Cost Recovery	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The PEI Energy Accord between PEI and Maritime Electric is a five-year agreement with the aim of lowering and stabilizing electricity rates, and to increase renewable energy in PEI's generation mix. The 14% decline in electricity prices for Maritime Electric customers, which was effective March 1, 2011, is frozen for a two-year period. Commencing March 1, 2013, rates will increase annually by 2.2% for the typical customer in each rate class for the remaining three years of the accord.
(4) COS versus IRM	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The PEI Commission handles rate making on a cost-of-service basis. Rates are set using a future test year.
(5) Capital Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	In accordance with Section 17 of the Electric Power Act, utilities are required to submit and gain approval on an annual budget outlining proposed capital costs for the upcoming year. Due to the regulatory review and approval from IRRA, there is a delay in capital expenditure recovery of typically one year.
(6) Political Interference	Excellent Very Good Satisfactory <b>Below Average</b> Poor	The provincial government plays a significant role in the electricity sector. Power is supplied from both Maritime Electric and NB Power. Electric utilities are regulated by the IRAC, which operates as a quasi-judicial body.
(7) Retail Rate	Excellent Very Good <b>Satisfactory</b> Below Average Poor	Ratepayers situated in major cities in Prince Edward Island paid 11.7¢/KWh in 2013.  Real GDP growth rate in Prince Edward Island was 1.2% in 2012, which was below the national average of 1.7%.
(8) Stranded Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Minimal stranded costs exist in Prince Edward island. A recent example of stranded costs relate to incremental energy costs. Although costs have been recovered in the past, assets could potentially be written down if the IRAC does not approve the recovery of all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory <b>Below Average</b> Poor	Under the PEI Energy Accord, Maritime Electric had its customer rates frozen for two years starting at the beginning of March 2011. There have been no subsequent province-wide rate freezes.
(10) Market Structure (Deregulation)	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The province is fully regulated. The PEI Regulatory and Appeals Commission regulates retail rates. Most utilities are fully integrated.





## Province of Québec

**Regulating Body:** Régie de l'énergie (the Régie)  
**Primary NERC Region:** Northeast Power Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 7.9 Million  
GDP: \$345.84 Billion

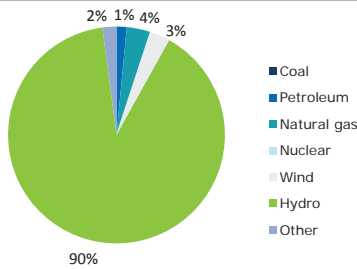
### MAIN INDUSTRY PLAYERS

Hydro-Québec



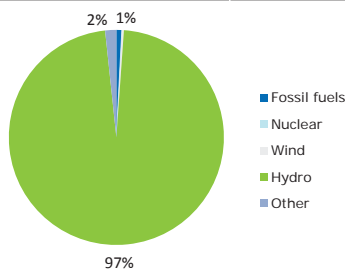
### PRODUCTION

#### Capacity & Fuel Type (2012)



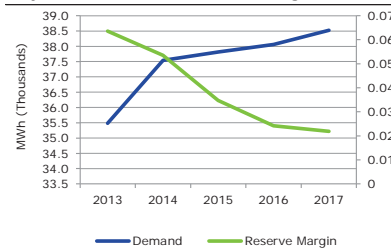
Source: Canadian Centre for Energy Information.

#### Production by Fuel Type (2012)



Source: Canadian Centre for Energy Information.

### Projections—Northeast Power Coordinating Council



Source: EIA, NERC.



## Québec

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity requirement set by the Régie de l'énergie (the Régie) for the primary electric utility is set at 35%.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE in the province is 6.19%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	A total of 90% of Québec's installed capacity originates from hydroelectricity. Through its 26 large reservoirs, the Company benefits from significant water storage capacity (175 TWh or more than one year's total generation). While generation is not officially regulated, a 165 TWh "heritage pool" exists that supplies the native load at a low, fixed price, virtually eliminating the need for variable fuel cost adjustment.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The Régie determines prices for Hydro-Québec on a cost-of-service basis.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There is a delay in capital expenditure recovery as it requires regulatory review and approval from the Régie.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The provincial government plays a significant role in the electricity sector. The government owns Hydro-Québec, which oversees generation, transmission, and distribution of electricity for the entire province. Transmission and distribution are regulated by the Régie de l'énergie, which operates as a quasi-judicial body.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Ratepayers situated in major cities in Quebec paid 5.88¢/KWh in 2013.  Real GDP growth rate in Québec was 1% in 2012, which was below the national average of 1.7%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Minimal stranded costs exist in the Québec market. Hydro-Québec is able to recover substantially all costs incurred through the rate setting process.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Québec has not experienced a province-wide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The power market is fully regulated. Hydro-Québec is the government-owned, fully regulated, and fully integrated utility company of the province. Generation is not regulated while transmission, distribution, and retail rates are regulated by the Régie.



## State of Rhode Island

**Regulating Body:** Rhode Island Public Utilities Commission (RIPUC)

**RTO/ISO:** New England (ISO-NE)

**Primary NERC Region:** Northeast Power Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 1.05 Million

GDP: \$49.5 Billion

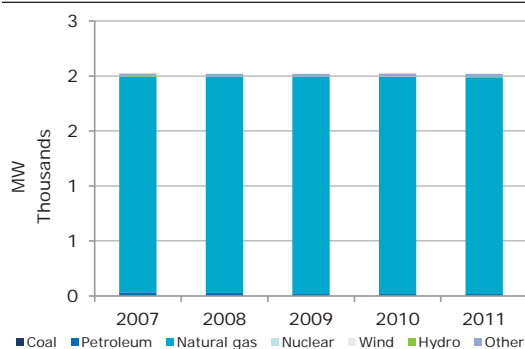
### MAIN INVESTOR-OWNED UTILITIES

Narragansett Electric Company



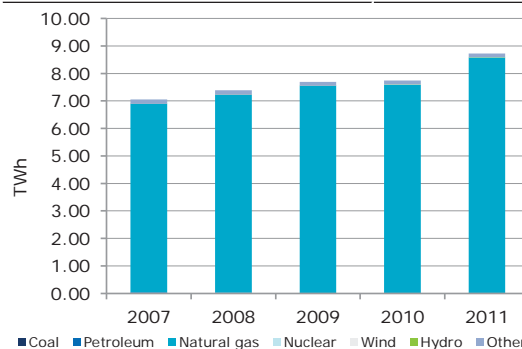
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

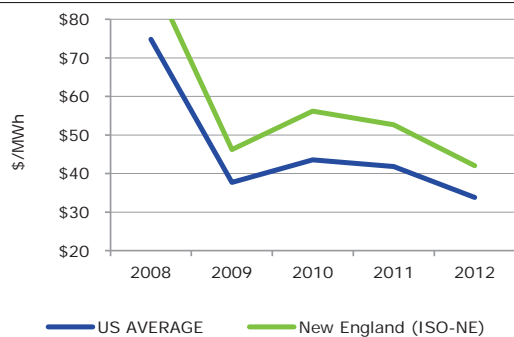
### Production by Fuel Type



Source: EIA.

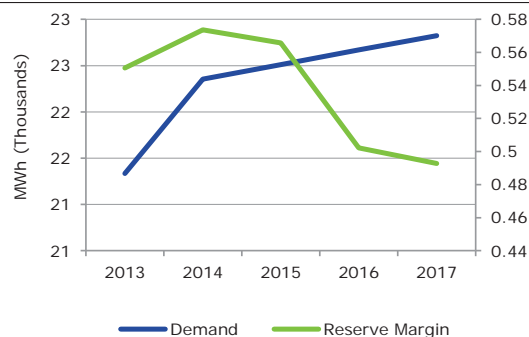
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections-Northeast Power Coordinating Council



Source: EIA, NERC.



## Rhode Island

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity ratio of 49.1% is set by the Rhode Island Public Utilities Commission (RIPUC) for the primary investor-owned utility Narragansett Electric Company, (Narragansett, a National Grid company). This ratio is modestly below the national average.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed ROE in the state for the primary investor-owned utility is 9.5%, which is below the national average. The Commission allows an earnings sharing mechanism (ESM). Under the ESM, Narragansett will share with the customers 50% of the earnings between 9.5% (ROE) and 10.5% (ROE). Above 10.5% the sharing is 75% for customers and 25% for the utility. All non-firm gas margins earned in excess of (or below) \$2.8 million will be refunded (collect) to customers.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Rhode Island's fuel and purchased power costs are recovered, using a fuel adjustment clause. The adjustment can be made every six months. The costs are fully recovered. Gas supply costs are adjusted semi-annually, with an annual true up. Commodity bad debt is deferred to be true up, using approved write off rate.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The RIPUC handles rate making on a cost-of-service basis. Test years are historical but adjusted for known and measurable factors. These factors are based on a future test period. Utilities must file general rate cases to recover costs.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities are generally not allowed to include construction work in progress in the rate base. Capital expenditure trackers are based on a full net utility plant balance and depreciation expense tracker and can only be down-ward adjustments. Environmental expenses are deferred to be true up.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the RIPUC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Rhode Island's 13.04¢/KWh retail rate ranks tenth highest. Rhode Island's retail rate is 26.36% higher than the national average.  Real GDP growth rate in Rhode Island was 1.4% in 2012, which was below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	When Rhode Island deregulated its utility industry in 1997, numerous stranded costs arose amidst restructuring policy. Though utilities have steadily been recovering their stranded costs through surcharges based on kWh usage, they were required to divest their generation assets.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Rhode Island has not experienced a statewide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	Retail competition began in 1998. Utilities obtain power from wholesale suppliers through contracts to serve standard offer services (SOS). Distribution rates are regulated by the state commission. Under the deregulation legislation, investor-owned utilities would have to spin off or sell 15% of their generation assets.



## Province of Saskatchewan

**Regulating Body:** Saskatchewan Rate Review Panel (SRRP)

**Primary NERC Region:** Midwest Reliability Organization

### GEOGRAPHIC INFORMATION

Population: 1.03 Million

GDP: \$74.74 Billion

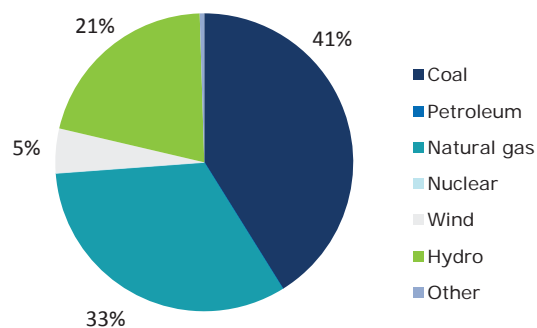
### MAIN INDUSTRY PLAYERS

SaskPower



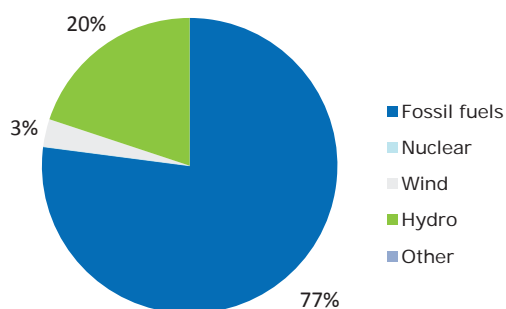
### PRODUCTION

#### Capacity & Fuel Type (2012)



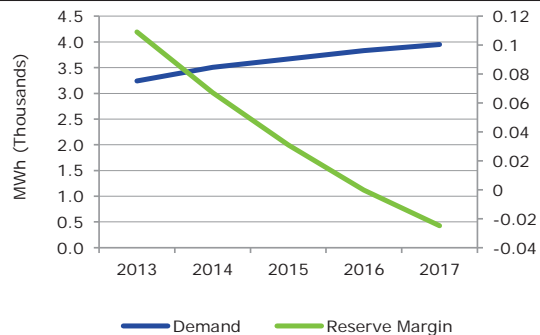
Source: Canadian Centre for Energy Information.

#### Production by Fuel Type (2012)



Source: Canadian Centre for Energy Information.

#### Projections—Midwest Reliability Organization



Source: EIA, NERC.



## Saskatchewan

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average <b>Poor</b>	SaskPower, the principal electric utility in the province, has a long term equity ratio target of 25% to 40% as per guidance by the the Saskatchewan Rate Review Panel (SRRP).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average <b>Poor</b>	The allowed distribution ROE in the province is 6.4%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average <b>Poor</b>	Saskatchewan has recently faced volatility in earnings, as rising fuel costs are not adjusted through interim rate cases. This risk is amplified by the heavy reliance on commodity-based generation, as timely recoverability is compromised.
(4) COS versus IRM	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The SRRP reviews rate making on a cost-of-service basis. Utilities must file general rate cases to recover costs. The final decision on any rate changes vests with Cabinet.
(5) Capital Cost Recovery	Excellent Very Good <b>Satisfactory</b> Below Average Poor	There is a delay in capital expenditure recovery as it takes time before the asset is operational and reflected in higher rates.
(6) Political Interference	Excellent Very Good Satisfactory Below Average <b>Poor</b>	The provincial government plays a significant role in the electricity sector. The government owns SaskPower, which is the primary provider of electricity in the province. The company is vertically integrated with generation, transmission, and distribution capacity. Electric utilities are regulated by the SRRP, which operates as a quasi-judicial body. The final decision on rates rest with the Cabinet.
(7) Retail Rate	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Ratepayers situated in major cities in Saskatchewan paid 10.08¢/KWh in 2013.  Real GDP growth rate in Saskatchewan was 2.2% in 2012, which was slightly below the national average of 1.7%.
(8) Stranded Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Minimal examples of stranded costs exist in Saskatchewan. Nonetheless, assets could potentially be written down if the SRRP does not approve recovery of all costs. For example, SaskPower warns that unexpected capital costs are potentially strandable costs if not approved and recoverable from the SRRP.
(9) Rate Freeze	<b>Excellent</b> Very Good Satisfactory Below Average Poor	Saskatchewan has not experienced a province-wide rate freeze in the past six years.
(10) Market Structure (Deregulation)	<b>Excellent</b> Very Good Satisfactory Below Average Poor	SaskPower is the government-owned integrated utility company of the province. Retail rates are set by the provincial government.



## State of South Carolina

**Regulating Body:** Public Service Commission of South Carolina (SCPSC)

**RTO/ISO:** Southeast

**Primary NERC Region:** SERC Reliability Corporation

### GEOGRAPHIC INFORMATION

Population: 4.72 Million

GDP: \$164.3 Billion

### MAIN INVESTOR-OWNED UTILITIES

Duke Energy Carolinas LLC

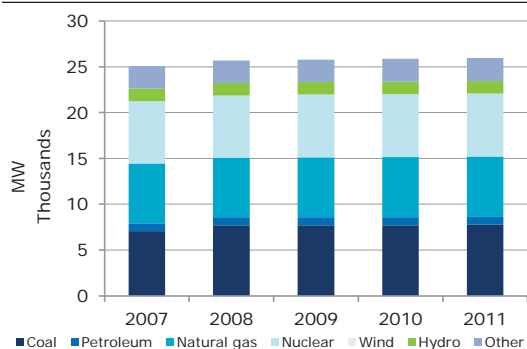
South Carolina Electric & Gas Company

Carolina Power & Light Company



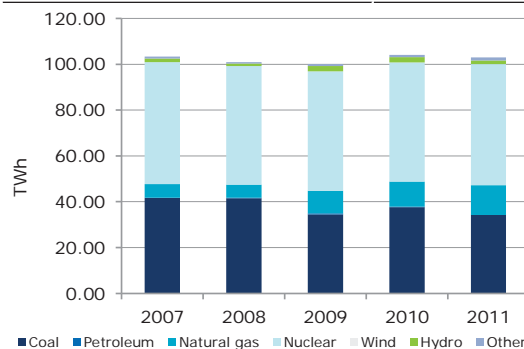
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

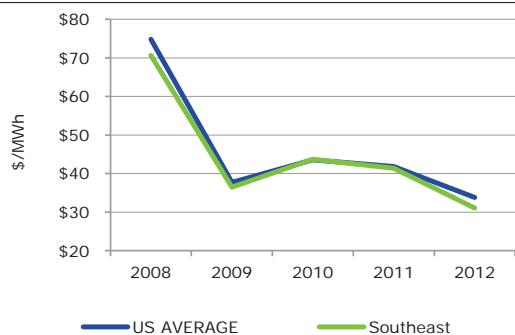
### Production by Fuel Type



Source: EIA.

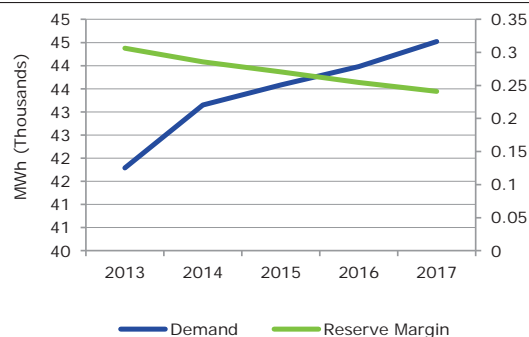
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—SERC Reliability Corporation



Source: EIA, NERC.



## South Carolina

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity ratio of 53% is set by the Public Service Commission of South Carolina (SCPSC) for major investor-owned utilities in the state.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	ROE can be set by the Commission or by way of settlement. Duke South Carolina's ROE was settled at 10.2%. The same ROE was applied to Duke Progress Energy, effective June 2013. ROE for South Carolina Electric & Gas Company was approved at 10.25% (for non-nuclear development) and 11% (including nuclear development).
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Fuel and purchased are fully passed through to the consumers. Fuel and purchased power costs are estimated for the prospective 12-month period to be included in base rates, using a monthly adjustment clause. The difference between actual costs and the estimated costs in base rates is subject to annual review by the Commission.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The SCPSC handles rate making on a cost-of-service basis. Test years are based on historical data. Adjustments are allowed for certain factors associated with known and measurable expenses. Utilities must file general rate cases to recover costs. In some cases, a weather normalization adjustment may also be approved to help mitigate the impact of weather on electric margins and to keep ROE within plus and minus 50 basis points.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in South Carolina are permitted to add construction work in progress to the rate base for generation projects. For Duke Energy Carolina, the costs of plant modernization and other capex in generation, distributions and transmission systems are recovered through rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the SCPSC, which operates as a quasi-judicial body. While the office of the Commission is non-partisan, the commissioners are elected by the South Carolina General Assembly to a four-year term.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	South Carolina ranks 30th with an 8.80¢/KWh average retail rate. South Carolina's retail rate is 14.73% below the national average.  Real GDP growth rate in South Carolina was 2.7% in 2012, which was slightly above the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in South Carolina. Formal inquiry into restructuring has not progressed since 2000. A study conducted in 1998 revealed that stranded cost estimates would have been as high as \$1.4 billion for investor-owned utilities.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	South Carolina has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Utilities are fully integrated.





## State of South Dakota

**Regulating Body:** South Dakota Public Utilities Commission (SDPUC)

**RTO/ISO:** Midwest (MISO), Southwest

**Primary NERC Region:** Midwest Reliability Organization

### GEOGRAPHIC INFORMATION

Population: 0.83 Million

GDP: \$39.9 Billion

### MAIN INVESTOR-OWNED UTILITIES

Black Hills Power Inc.

Montana-Dakota Utilities Company

NorthWestern Corp.

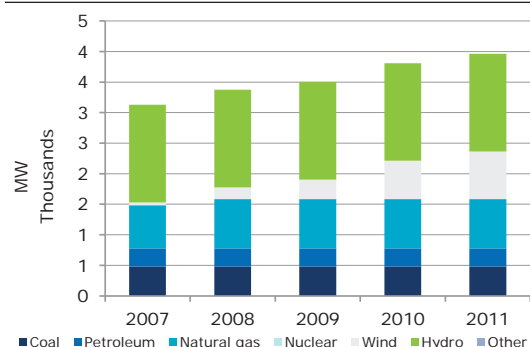
Northern States Power

Otter Tail Power Company



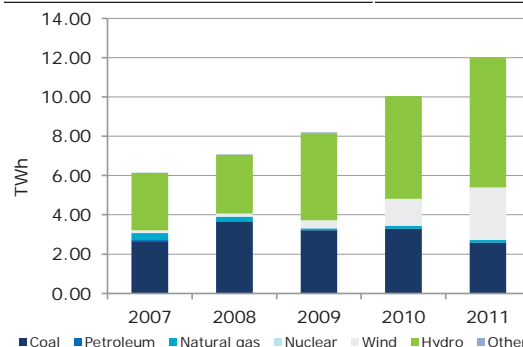
### PRODUCTION

#### Capacity & Fuel Type



Source: EIA.

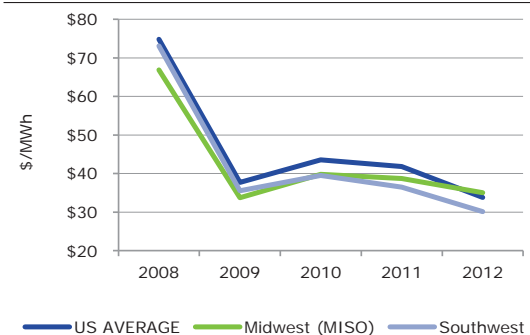
#### Production by Fuel Type



Source: EIA.

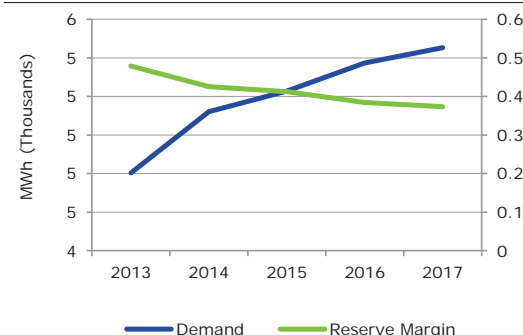
### DEMAND

#### Wholesale Price



Source: EIA, FERC.

#### Projections—Midwest Reliability Organization



Source: EIA, NERC.



## South Dakota

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity ratio set by the South Dakota Public Utilities Commission (SDPUC) for the primary investor-owned utility is set at 53%.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE was not specified in the rate case for South Dakota natural gas. However, ROE for Northern State Power (NSP) was set at 9.25%. ROE for Otter Tail Corporation was at 10%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Fuel and purchased power costs can be recovered in rates through automatic fuel adjustment clauses and can be adjusted quarterly (for electricity) and monthly (for gas supply costs).
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The SDPUC handles rate making on a cost-of-service basis. Test years are historical. Utilities must file general rate cases to recover costs.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	In general, utilities in South Dakota are not allowed to use earn return in construction work in progress (CWIP). However, capex and costs that are expected to have material impact is permitted to use CWIP in the rate cases and through separate mechanisms for environmental component project and transmission projects. Also, in December 21, 2011, small utilities could file a rider application to recover capex costs.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Investor-owned electric utilities are regulated by the SDPUC, which operates as a quasi-judicial body. However, the office of the Commission is partisan and commissioners are elected to a six-year term, which increases political risk to some extent.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	South Dakota averages an 8.05¢/KWh retail rate, making it the 37th highest in the States. South Dakota's retail rate is 22% below the national average.  Real GDP growth rate in South Dakota was 0.2% in 2012, which was far below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in South Dakota. Formal inquiry into restructuring has not progressed since 1998 and the state remains regulated. Although stranded costs have been recovered in the past, assets could potentially be written down if the PUC does not approve the recovery of all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	South Dakota has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates.



## State of Tennessee

**Regulating Body:** Tennessee Regulatory Authority (TRA)  
**RTO/ISO:** Southeast, PJM  
**Primary NERC Region:** SERC Reliability Corporation

### GEOGRAPHIC INFORMATION

Population: 6.46 Million  
GDP: \$250.3 Billion

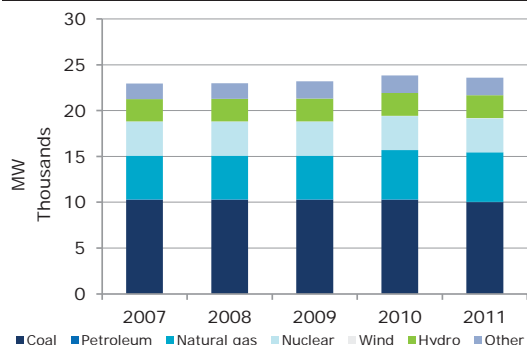
### MAIN INVESTOR-OWNED UTILITIES

Appalachian Power Company



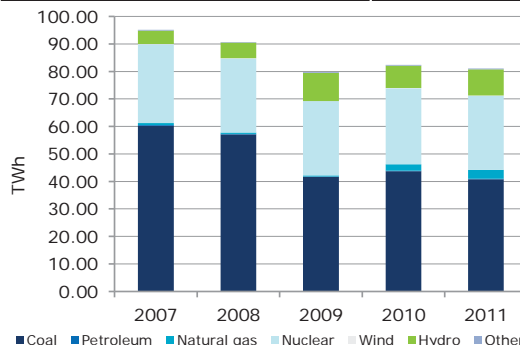
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

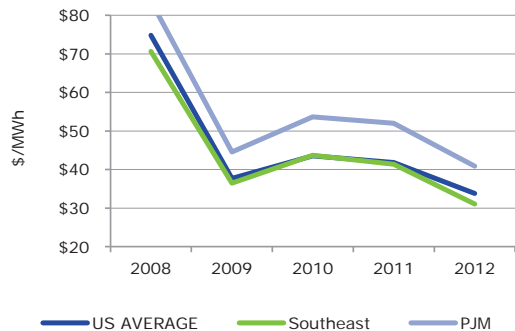
### Production by Fuel Type



Source: EIA.

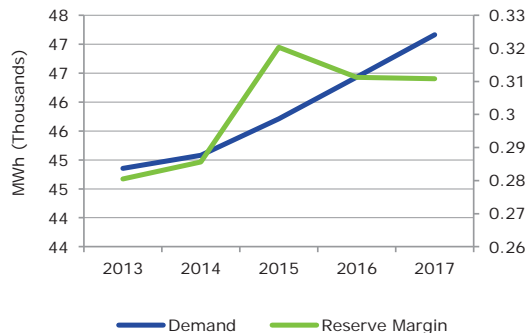
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—SERC Reliability Corporation



Source: EIA, NERC.



## Tennessee

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average <b>Poor</b>	The Tennessee Regulatory Authority (TRA) regulates the rates, terms and conditions of using the actual end-of-test period capital structure and cost of capital of such utility, unless the Commission finds that the debt to equity ratio of such capital structure is unreasonable for such utility, in which case the Commission may utilize a debt to equity ratio that it finds to be reasonable. There is no report on deemed equity.
(2) Allowed ROE	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The allowed ROE for AEP Appalachian Power is 12%, which is at the high end of the national range. Piedmont Natural Gas is allowed to earn a 10.2% ROE, which is at par with the national average.
(3) Energy Cost Recovery	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The state allows for an automatic purchased power and gas recovery clauses for most utilities. It also allow a purchased power adjustment rider for Kingsport Power to recover changes in the wholesale costs.
(4) COS versus IRM	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The TRA handles rate making on a cost-of-service basis. Test years are fully forecasted. Utilities must file general rate cases to recover costs. In some cases where the utility has a very small presence in Tennessee, the TRA follows actions taken by the respective state in which the company primarily operates.
(5) Capital Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Passed in 2013, House Bill 191 authorizes the TRA to approve rate adjustment mechanisms to allow utilities to recover capital costs in between general rate cases.
(6) Political Interference	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The state government does not play a significant role in the electricity sector. Four electric utilities are regulated by the TRA, which operates as a quasi-judicial body. The office of the Authority is non-partisan and members are appointed to a six year term, which decreases political risk.
(7) Retail Rate	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Tennessee's 9.28¢/KWh average retail rate is 22nd highest. Tennessee's retail rate is 10.08% below the national average.  Real GDP growth rate in Tennessee was 3.3% in 2012, which was slightly above the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Tennessee. Formal inquiry into restructuring has not progressed since 2000, after the regulatory authority investigated the high potential for stranded cost in the region. Although stranded costs have been recovered in the past, assets could potentially be written down if the TRA does not approve the recovery of all costs.
(9) Rate Freeze	<b>Excellent</b> Very Good Satisfactory Below Average Poor	Tennessee has not experienced a statewide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent <b>Very Good</b> Satisfactory Below Average Poor	The state is fully regulated. Most customers are served by the Tennessee Valley Authority and a smaller portion is served by a subsidiary of American Power Company (which does not own any generation).



## State of Texas

**Regulating Body:** Texas Public Utility Commission (PUCT)  
**RTO/ISO:** Texas (ERCOT), Southeast, SPP  
**Primary NERC Region:** Texas Reliability Entity

### GEOGRAPHIC INFORMATION

Population: 26.06 Million  
GDP: \$1307.43 Billion

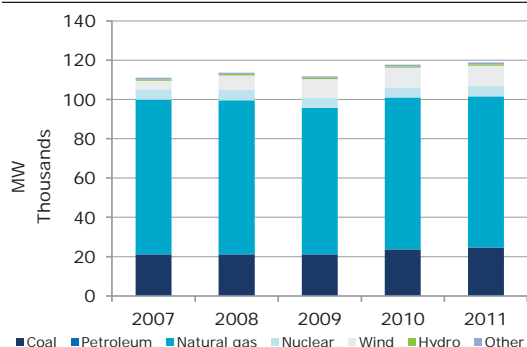
### MAIN INVESTOR-OWNED UTILITIES

AEP Texas Central  
AEP Northern  
CenterPoint Energy Houston Electric LLC  
El Paso Electric Company  
Entergy Texas Inc.  
Southwestern Electric Power Company  
Southwestern Public Service Company



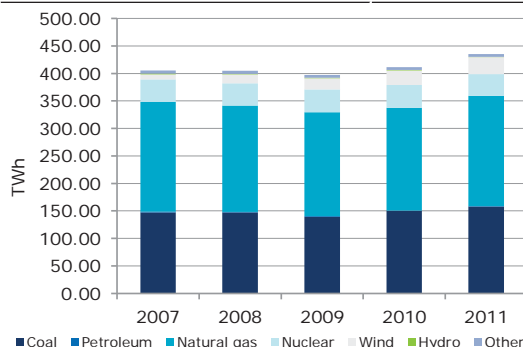
### PRODUCTION

#### Capacity & Fuel Type



Source: EIA.

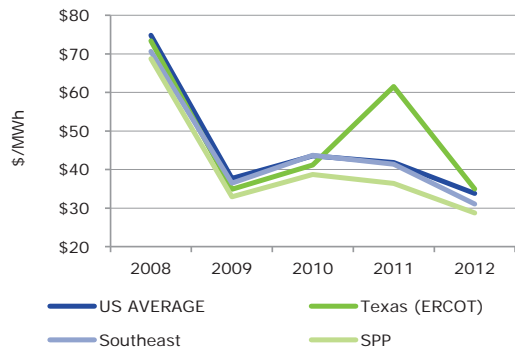
#### Production by Fuel Type



Source: EIA.

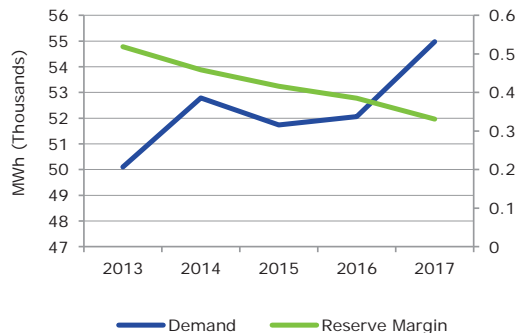
### DEMAND

#### Wholesale Price



Source: EIA, FERC.

#### Projections-Texas Reliability Entity



Source: EIA, NERC.



## Texas

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The regulatory equity ratio is set by the Texas Public Utility Commission (PUCT), ranging from 40% to 51%. The 40% range is similar to the capital structure in Ontario, Canada. This ratio is applied to AEP Texas Central Company (TCC) and AEP Texas North Company (TNC).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The recent PUCT decision on ROE was 10.2% for Atmos Energy, 10.125% for Energy Texas. Southwestern Public Service Co (an AEP company) was asking for 11.2% in the most recent case; however, its current ROE is 10.33%. ROPE for TCC and TNC is 9.96%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Texas's purchased power costs are not bundled with its transmission and distribution services. Adjustments are under Texas Fuel Rule, which allows for utilities to seek periodic adjustments to its fixed fuel factor. The fixed factor can be adjusted at least four months its last revision date, except in the month of December. The rule also allows utilities to seek surcharge fuel under-recoveries in any month the balance exceeds 4% (considered to be material) of the previous 12 months. All such fuel expenses are subject to regulatory review.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The PUCT handles rate making on a cost-of-service basis. Test years are historical. Utilities must file general rate cases to recover costs. In some cases, municipalities have original jurisdiction over rate setting, and municipal rate cases can be appealed to the PUCT. However, some adjustments are permitted for known and measurable changes. Efforts are made by utilities to seek future test years in their rate cases.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	In general, utilities in Texas are not permitted to add construction work in progress to the rate base for all transmission within ERCOT projects. However, rider applications are allowed to mitigate regulatory lag in between general rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Investor-owned electric utilities are regulated by the PUCT, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Texas' retail rate averages at 9.00¢/KWh, the 25th highest in the States. Texas' retail rate is 12.79% higher than the national average.  Real GDP growth rate in Texas was 4.8% in 2012, which was above the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Stranded cost estimates in Texas reached as high as \$6.5 billion in 2004, largely due to industry restructuring to allow retail competition, rate freezes, environmental regulation and asset impairment. Statutes have since been implemented to recover stranded costs through securitization and a competition transition cost.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Texas deregulation required rates to be frozen September 1999 until January 2005. In addition, providers affiliated with former monopoly companies were required to freeze rates until January 2007, unless they could demonstrate they had lost at least 40% of their customers. There have been no subsequent statewide rate freezes.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is deregulated. Deregulation was enacted in 2002, and the state no longer oversees generation rates. Transmission and distribution rates are still approved by the state commission. Utility companies are not vertically integrated in general. Most of Texas is in the ERCOT region. In general, transmission is not under FERC's jurisdiction.



## State of Utah

**Regulating Body:** Public Service Commission of Utah (UPSC)  
**RTO/ISO:** Northwest  
**Primary NERC Region:** Western Electricity Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 2.86 Million  
GDP: \$116.9 Billion

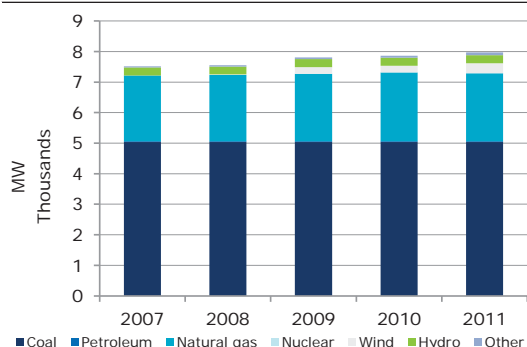
### MAIN INVESTOR-OWNED UTILITIES

Rocky Mountain Power



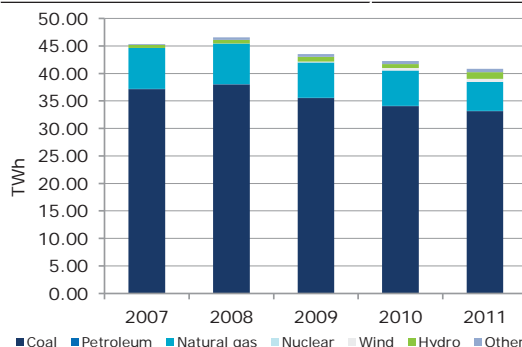
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

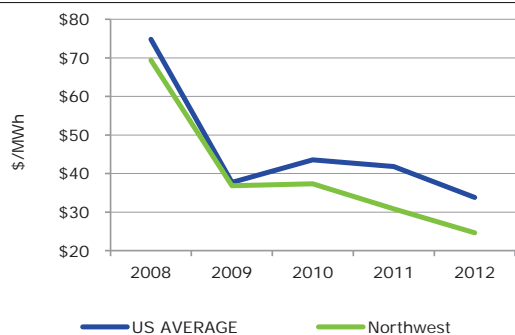
### Production by Fuel Type



Source: EIA.

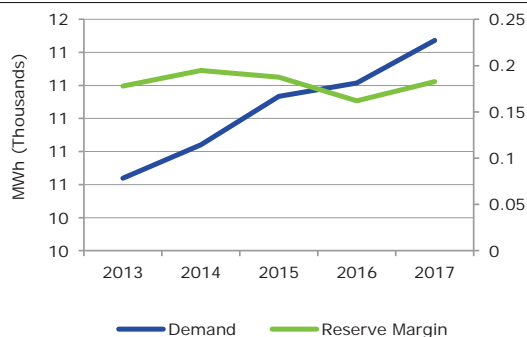
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—Western Electricity Coordinating Council



Source: EIA, NERC.



## Utah

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity ratio is set by the Public Service Commission of Utah (UPSC) for the primary investor-owned utility. In the most recent case, ROE is set at 52.1% (for Rocky Mountain Power).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE in the state for the primary investor-owned utility is 9.8% (for Pacific Corp). Incremental variations of 70% in actual power costs from the costs estimated in the base rates can be fully recovered. The remaining 30% is credited to the consumers.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	A four-year pilot energy cost recovery mechanism is allowed for PacifiCorp. Gas cost recovery can be adjusted semi-annually for actual or projected changes. All over recovery or under recovery amounts are amortized over the next 12 months.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The UPSC handles rate making largely on a cost-of-service basis. Test years determination varies. Utilities must file general rate cases to recover costs. However, some settlements may be multi-year in which a set future increase in price is agreed upon. It may also restrict the timing of the next filing.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities are generally not allowed to include construction work in progress in the rate base. Capital expenditure recovery mechanisms exist to mitigate regulatory lag in between general rate cases. However, it applies only if the single capital investment exceeds 1% of rate base and the latest general rate case occurred within preceding 18 months.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the UPSC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Utah averaged a statewide 7.13¢/KWh retail rate, ranking the fourth lowest in the country. Utah's retail rate is 30.91% below the national average.  Real GDP growth rate in Utah was 3.4% in 2012, which was slightly above the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Utah. Formal inquiry into restructuring has not progressed since 1998—the state remains regulated. Although stranded costs have been recovered in the past, assets could potentially be written down if the PSC does not approve the recovery of the all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Utah has not experienced a statewide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Utilities are fully integrated.





## State of Vermont

**Regulating Body:** Vermont Public Service Board (VPSB)  
**RTO/ISO:** New England (ISO-NE)  
**Primary NERC Region:** Northeast Power Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 0.63 Million  
GDP: \$26.4 Billion

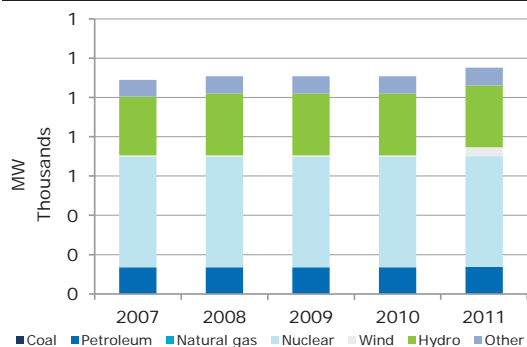
### MAIN INVESTOR-OWNED UTILITIES

Central Vermont Public Service Corp.  
Green Mountain Power Corp.



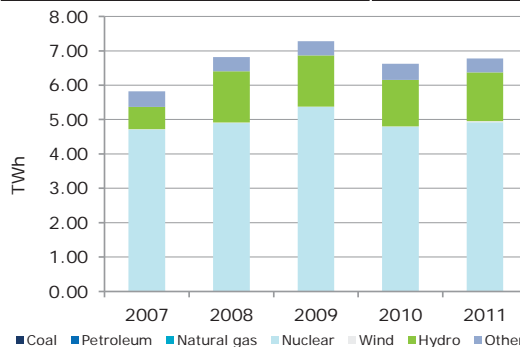
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

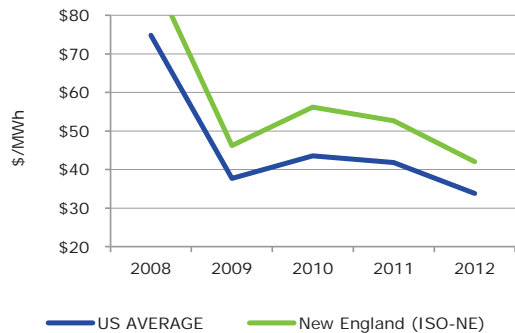
### Production by Fuel Type



Source: EIA.

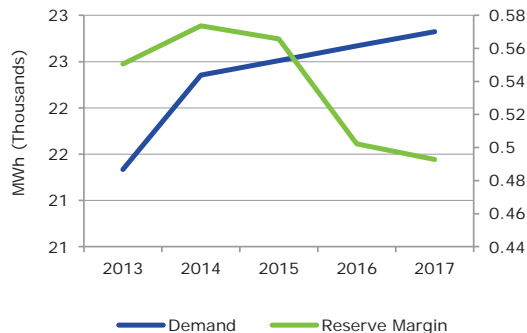
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections-Northeast Power Coordinating Council



Source: EIA, NERC.



## Vermont

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity of 51.58% is set by the Vermont Public Service Board (VPSB) for Green Mountain Power and Central Vermont Public Services following their merger in 2012.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The authorized ROE is calculated annually based on a formula, which is in turn based on Treasury yields. The allowed ROE in the state is 8.84% for Green Mountain Power (GMP) and Central Vermont Public Services (CVPS) following their merger. ROE for the gas distribution in the state (Vermont Gas System) is 9.75%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	The state allows utilities to recover energy costs through power cost adjustment (PCA) and purchased gas adjustment (PGA) mechanisms. These mechanisms are part of a alternative regulation plan (ARP). Rates are allowed to be adjusted quarterly for GMP to recover 90% of power cost variances that exceed \$0.615 million per quarter. Gas adjustments are also quarterly.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	In general, the state is based on cost of service. However, utilities are allowed to operate under the ARP. The ARP allows an earnings sharing mechanism that provides a 150-basis-point range on ROE. Earnings in the upper range will be refunded to the customers. The ARP allows GMP to recover 50% of the earnings losses if the losses fall between 75 and 125 basis points below the authorized ROE, and 100% of its earnings shortfalls in excess of 125 basis points. VGS also operates under ARP. Test years are based on historical with some adjustments for certain known and measurable post-test year adjustments.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities are generally not allowed to include construction work in progress in the rate base. Capital expenditure trackers are used to mitigate regulatory lag in between general rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the VPSB, which operates as a quasi-judicial body. The Board is non-partisan and members are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	With an average retail rate of 13.80¢/KWh, Vermont ranks eighth highest. Vermont's retail rate is 33.72% above the national average.  Real GDP growth rate in Vermont was 1.2% in 2012, which was below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Vermont. Formal inquiry into restructuring has not progressed since 2002 when the VPSB stated that uncertainties regarding the outcomes were too great. Although stranded costs related to power purchase buy-downs have been recovered in the past through mitigation charges, assets could potentially be written down if the PSB does not approve the recovery of the all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Vermont has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Utilities are fully integrated.



## State of Virginia

**Regulating Body:** Virginia State Corporation Commission (SCC)

**RTO/ISO:** PJM

**Primary NERC Region:** SERC Reliability Corporation

### GEOGRAPHIC INFORMATION

Population: 8.19 Million

GDP: \$427.7 Billion

### MAIN INVESTOR-OWNED UTILITIES

Appalachian Power Company

Kentucky Utilities Company

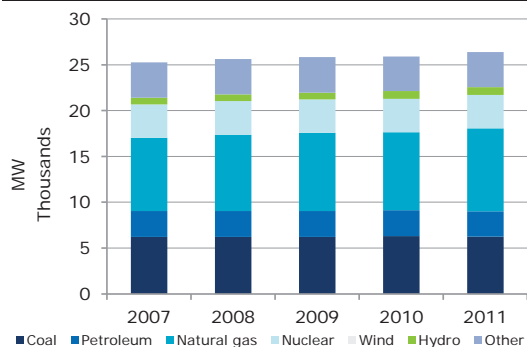
Virginia Electric & Power Company

Potomac Edison Company



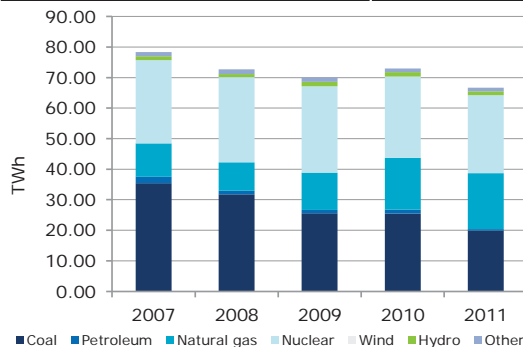
### PRODUCTION

#### Capacity & Fuel Type



Source: EIA.

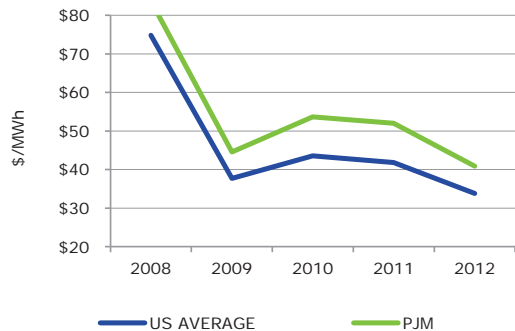
#### Production by Fuel Type



Source: EIA.

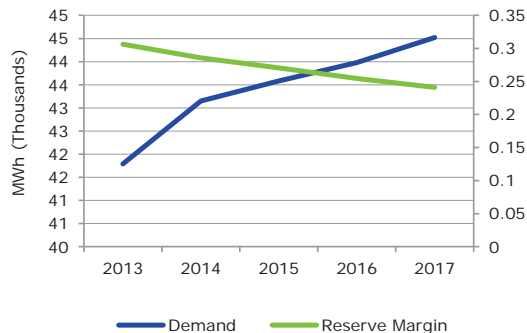
### DEMAND

#### Wholesale Price



Source: EIA, FERC.

#### Projections—SERC Reliability Corporation



Source: EIA, NERC.



## Virginia

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The regulatory equity ratio is set within a wide band, ranging from 43% (for Appalachian Power–APCo) to 55.6% (for Virginia Electric and Power Company–VEPCO).
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	ROE is set either by the Commission or by way of settlement. On average, ROE is set at 10.4% (VEPCO) and 10.9% (APCo). ROE on generation rider could be set at 10.4% plus a 100-basis-point premium (for VEPSO) or as high as 12.4% for certain renewable generation projects. ROE is unchanged during the biennial rate cases. A decrease could be ordered if utilities earn 50 basis points more than the authorized ROE for two consecutive biennial review periods. The authorized ROE cannot be set lower than the three-year average of actual ROE.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in the state are allowed to use rate adjustment clauses to recover fuel and purchased power costs (and gas supply costs for gas utilities). The adjustments clause also includes transmission and renewable generation projects. However, the Commission does not provide recovery of costs in a timely basis. Rather, fuel costs are subject to revision under annual cost adjustment proceedings.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	Every two years, the Virginia SCC handles rate making on a cost-of-service basis, with the test years are historical, with adjustments for known and measurable future test changes. The Commission could order a base rate decrease or increase during the biennial review. The state legislation provides for alternative regulations based on performance but such regulation has not been implemented.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in Virginia are permitted to add construction work in progress to the rate base for nuclear, renewables, new generation using Virginia coal projects. Capex on reviewable energy projects, nuke clear projects could be recovered by way of rider applications, which could have higher ROE than it is authorized in the rate case.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Investor-owned electric utilities are regulated by the VSCC, which operates as a quasi-judicial body. The Commission's power is entrenched under Virginia's constitution, which reduces the likelihood of state interference. While the office of the Commission is non-partisan, the commissioners are elected by the Virginia General Assembly to a four year term, which increases political risk to some extent.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Virginia's 8.84¢/KWh retail rate averages 29th highest. Virginia's retail rate is 14.34% lower than the national average.  Real GDP growth rate in Virginia was 1.1% in 2012, which was below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	In 1999, the VSCC enacted competitive energy supply policy, but returned to a regulated structure in 2007. According to a report prepared by the VSCC, exposure to stranded costs in Virginia was as high as \$2.5 billion in 2007. Statutes have since been implemented to allow recovery through securitization and a competition transition cost. In 2011, certain environmental stranded costs were written off as a result of an order from the VSCC.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Virginia has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state introduced deregulation in 1999, but returned to regulation in 2007. The state commission sets bundled retail rates. Most companies are vertically integrated.



## State of Washington

**Regulating Body:** Washington Utilities and Transportation Commission (WUTC)

**RTO/ISO:** Northwest

**Primary NERC Region:** Western Electricity Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 6.9 Million

GDP: \$351.1 Billion

### MAIN INVESTOR-OWNED UTILITIES

Avista Utilities

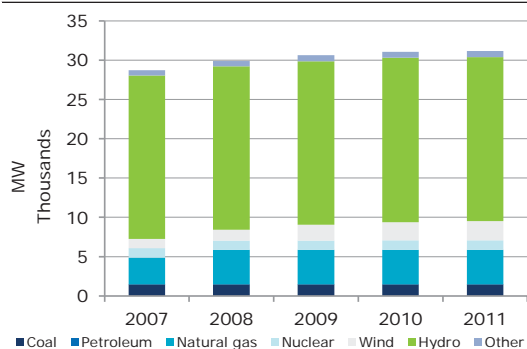
Pacific Power

Puget Sound Energy Inc.



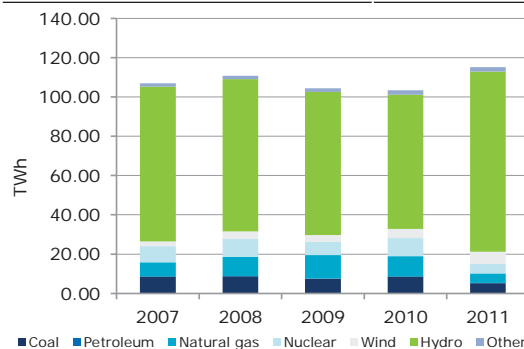
### PRODUCTION

#### Capacity & Fuel Type



Source: EIA.

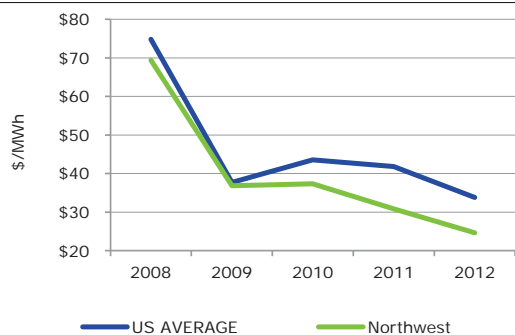
#### Production by Fuel Type



Source: EIA.

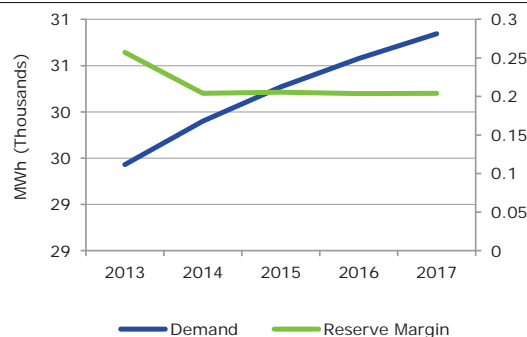
### DEMAND

#### Wholesale Price



Source: EIA, FERC.

#### Projections—Western Electricity Coordinating Council



Source: EIA, NERC.



## Washington

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity set by the Washington Utilities and Transportation Commission (WUTC) ranges from 47% to 48%.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed ROE in the state for the primary investor-owned utility is 9.8%, which applies to Avista Utilities and PacifiCorp. Power & Light.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	In general, power cost mechanism (PCM) is used to recover energy costs. For Puget Sound Energy: no recovery for the first \$20 million above estimated costs in based rate; 50% recovery of the amount in excess of \$40 million and 80% in excess of \$80 million; and 95% in excess of \$120 million. For Avista: Energy recovery mechanism (ERM) is allowed. If the annual power costs are in between \$4 million and \$10 million lower than the estimated costs in based rates, 75% of cost savings goes to customer. 50% of costs between \$4 million and \$10 million higher than estimated costs can be recovered from customers (90% if costs in excess).
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The state handles rate making on a cost-of-service basis. Test years are historical, with adjustments allowed for known and measurable factors. In June 2013, The state issued an alternative rate decision for Puget Sound Energy (PSE). This plan provides for annual increases of 3% for electric and 2.2% for gas. The plan is based on prospective revenue requirements and will last through March 2016 with one year extension. PSE will share 50% of earnings in excess of 7.77% (based on a return on rate base) and will file a general rate case between April 1, 2015 and April 1, 2016. However, application for power cost recovery is allowed during the plan.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities are generally not allowed to include construction work in progress in the rate base. The state permits planned capital expenditures to be included in the rate base at the time of the original filing. However, utilities must file routine expenditure progress reports so that state can monitor capital expenditures and ensure that they are in line with those contemplated initially.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the WUTC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	With a 6.78¢/KWh retail rate, Washington ranks third lowest. Washington's retail rate is 34.30% lower than the national average.  Real GDP growth rate in Washington was 3.6% in 2012, which was above the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Washington. Formal inquiry into restructuring has not progressed since it was first investigated in 1995. Although stranded costs have been recovered in the past, assets could potentially be written down if the PUC does not approve the recovery of the all costs.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Washington has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Utilities are fully integrated.



## State of West Virginia

**Regulating Body:** West Virginia Public Service Commission (WVPSC)

**RTO/ISO:** PJM

**Primary NERC Region:** ReliabilityFirst Corporation

### GEOGRAPHIC INFORMATION

Population: 1.86 Million

GDP: \$66.6 Billion

### MAIN INVESTOR-OWNED UTILITIES

Appalachian Power Company

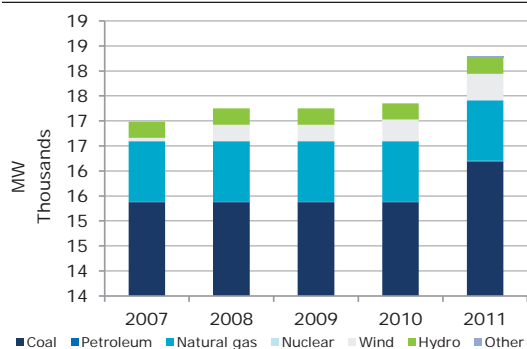
Monongahela Power Company

Potomac Edison Company



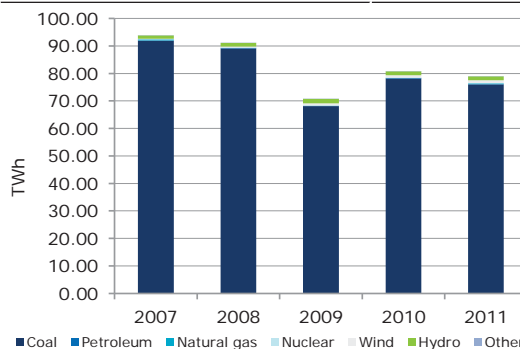
### PRODUCTION

#### Capacity & Fuel Type



Source: EIA.

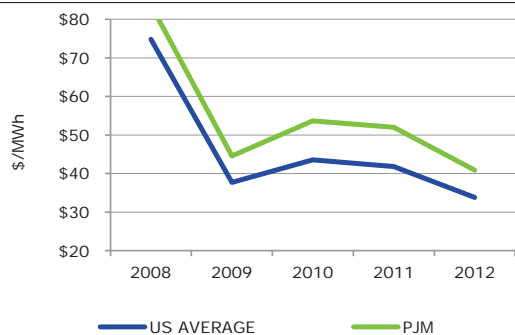
#### Production by Fuel Type



Source: EIA.

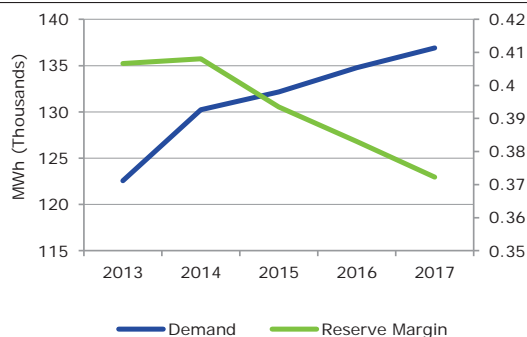
### DEMAND

#### Wholesale Price



Source: EIA, FERC.

#### Projections—ReliabilityFirst Corporation



Source: EIA, NERC.



## West Virginia

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The deemed equity requirement set by the West Virginia Public Service Commission (WVPSC) for the primary investor-owned utility is set at 43%.
(2) Allowed ROE	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The allowed ROE for major investor owned utilities in the state ranges from 10% (for APCo—an AEP company) to 10.5% (for Monongahela Power).
(3) Energy Cost Recovery	Excellent Very Good Satisfactory <b>Below Average</b> Poor	Fuel and purchased power costs are recovered through annual adjustments. These adjustments require regulatory approval, but the costs are normally trued up to actual expenses.
(4) COS versus IRM	<b>Excellent</b> Very Good Satisfactory Below Average Poor	The rates in the state are set on a cost-of-service basis, with the Commission providing electric service at bundled rates. The test years are based on historical, with adjustments for known and measurable changes. The Commission can suspend a rate application for nine months from the proposed effective date. If the order is not issued by the end of suspension period, the proposed rates can be implemented.
(5) Capital Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	Utilities are generally not allowed to include construction work in progress in the rate base. Rider applications are allowed to mitigate regulatory lag in between general rate cases. Securitization of regulatory assets are allowed by virtue of the Securitization Legislation passed in March 2012. The securitization is to finance environmental compliance investments.
(6) Political Interference	Excellent Very Good <b>Satisfactory</b> Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the WVPSC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	<b>Excellent</b> Very Good Satisfactory Below Average Poor	West Virginia ranks 40th highest in the country with a retail rate of 7.88¢/KWh. West Virginia's retail rate is 23.64% lower than the national average.  Real GDP growth rate in West Virginia was 3.3% in 2012, which was slightly above the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent <b>Very Good</b> Satisfactory Below Average Poor	There have been minimal examples of stranded costs in West Virginia. Formal inquiry into restructuring has not progressed since it was first investigated. Although stranded costs have been recovered in the past, assets could potentially be written down if the PSC does not approve the recovery of the all costs.
(9) Rate Freeze	<b>Excellent</b> Very Good Satisfactory Below Average Poor	West Virginia has not experienced a statewide rate freeze.
(10) Market Structure (Deregulation)	Excellent <b>Very Good</b> Satisfactory Below Average Poor	The state is fully regulated. Retail rates are determined by the state commission. Utility companies are not necessarily vertically integrated.





## WISCONSIN State of Wisconsin

**Regulating Body:** Wisconsin Public Service Commission (PSCW)  
**RTO/ISO:** Midwest (MISO)  
**Primary NERC Region:** Midwest Reliability Organization

### GEOGRAPHIC INFORMATION

Population: 5.73 Million  
GDP: \$251.4 Billion

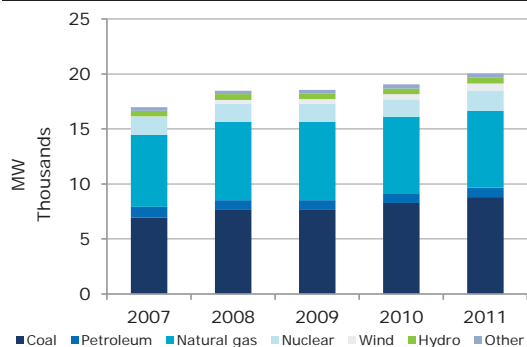
### MAIN INVESTOR-OWNED UTILITIES

Madison Gas & Electric Company  
Northern States Power Company  
Wisconsin Electric Power Company  
Wisconsin Public Service Corp.  
Wisconsin Power & Light Company



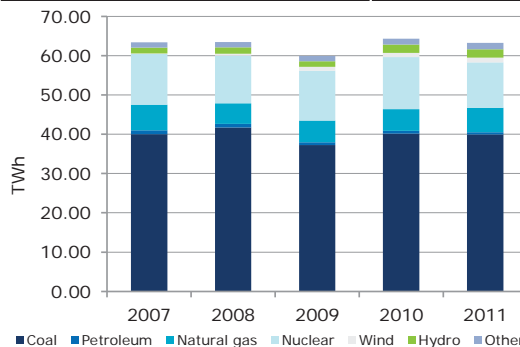
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

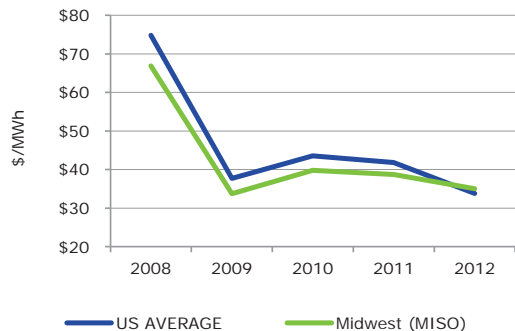
### Production by Fuel Type



Source: EIA.

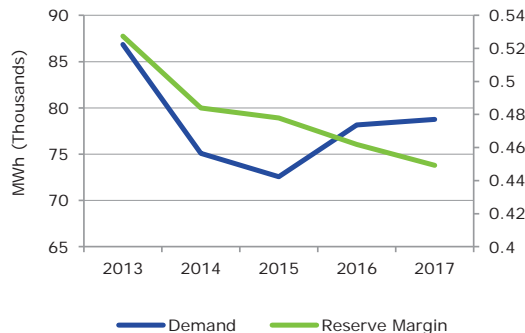
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections-Midwest Reliability Organization



Source: EIA, NERC.



## Wisconsin

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity set by the Wisconsin Public Service Commission (PSCW) ranges from 49.4% to 53.5%. The highest regulatory equity ratio was set at 58.1% in 2011 for Madison Gas.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed ROE is 10.4% for Northern State Power Wisconsin (NSPW) and Wisconsin Electric Power (WEP) and 10.5% for Wisconsin Gas (WG).
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Each utility forecasts energy cost on monthly and annually and on a prospective basis. If actual costs are outside of the forecast range for the month, the Commission could review the rates. If the variances are in excess of 2%, utility can recover these excessive costs in the subsequent period. However, if the Commission believes that the utility's ROE is in excess of allowed ROE, there is no recovery.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The PSCW handles rate making on a cost-of-service basis. Test years are fully forecasted. Utilities must file general rate cases to recover costs, with filings typically made on a biennial basis. In some cases, rate cases include stipulations for future adjustments to the rate in a subsequent year.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in Wisconsin are permitted to add construction work in progress to the rate base for generation, and transmission projects. Capital expenditure trackers are not commonly employed to mitigate regulatory lag in between general rate cases.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Electric utilities are regulated by the PSCW, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Wisconsin's 10.88¢/KWh retail rate ranks 18th highest. Wisconsin's retail rate is 5.43% above the national average.  Real GDP growth rate in Wisconsin was 1.5% in 2012, which was slightly below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	There have been minimal examples of stranded costs in Wisconsin. The PSC investigated the possibility of deregulation in 1999 but has taken no further action. Although stranded costs have been recovered in the past, assets could potentially be written down if the PUS does not approve the recovery of the all costs. In 2010, minimal short-term stranded costs may have arisen from orders related to environmental mandates.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	Wisconsin has not experienced a statewide rate freeze in the past six years.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. Retail rates are determined by the state commission. Utility companies are not necessarily vertically integrated.



## State of Wyoming

**Regulating Body:** Wyoming Public Service Commission (WPSC)  
**RTO/ISO:** Northwest, Southwest  
**Primary NERC Region:** Western Electricity Coordinating Council

### GEOGRAPHIC INFORMATION

Population: 0.58 Million  
GDP: \$38.2 Billion

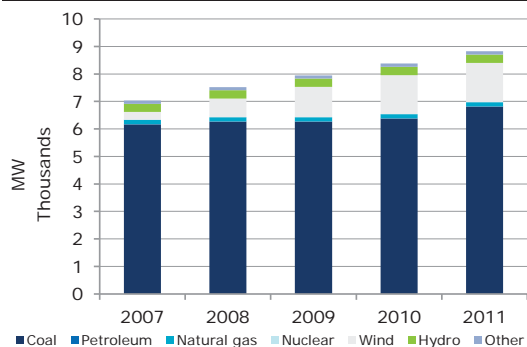
### MAIN INVESTOR-OWNED UTILITIES

Cheyenne Light, Fuel, & Power Company  
Rocky Mountain Power



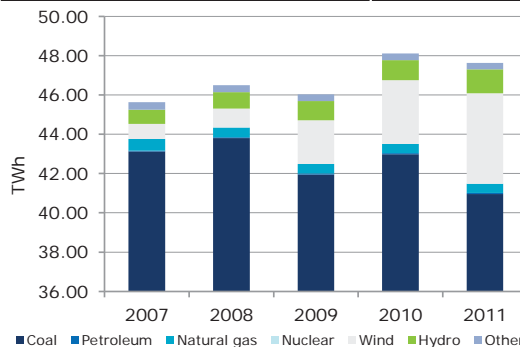
## PRODUCTION

### Capacity & Fuel Type



Source: EIA.

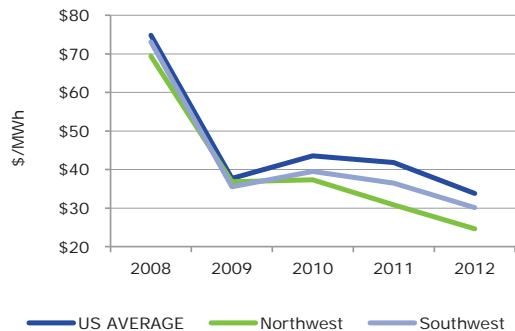
### Production by Fuel Type



Source: EIA.

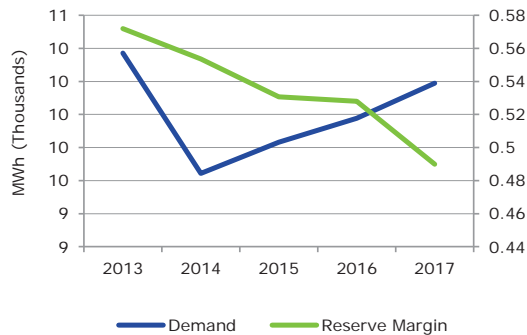
## DEMAND

### Wholesale Price



Source: EIA, FERC.

### Projections—Western Electricity Coordinating Council



Source: EIA, NERC.



## Wyoming

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Very Good Satisfactory Below Average Poor	The deemed equity ratio is set at 54% for Cheyenne Light–Electric and Cheyenne Light - Gas.
(2) Allowed ROE	Excellent Very Good Satisfactory Below Average Poor	The allowed distribution ROE in the state for the primary investor-owned utility is 9.6%.
(3) Energy Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	In Wyoming, utilities are allowed to use annual cost adjustment mechanisms to pass the prudently-incurred costs of fuel and purchased power through to customers. The adjustment is on an annual basis. In June 2012, Cheyenne Light, Fuel & Power (CLF&P) was allowed to recover 85% of its fuel and purchased power costs that are in excess of the costs that were allowed in base rates.
(4) COS versus IRM	Excellent Very Good Satisfactory Below Average Poor	The Wyoming PSC handles rate making on a cost-of-service basis. The test year is mostly historical base, with adjustments for known and measurable changes. Some future test years are allowed (PacifiCorp). The Commission must issue a rate case decision within ten months of the filing date. It also has the power to consider an alternative regulation plan.
(5) Capital Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Utilities in Wyoming are permitted to add construction work in progress to the rate base for generation projects. Rider applications are allowed to collect a rate of return during the construction period on an approximately 60% of the total project costs that relate to the customers. Transmission costs are also passed through to reflect a cost-adjustment mechanism, with 85% of the cost being collected from the customers for any under-recovery.
(6) Political Interference	Excellent Very Good Satisfactory Below Average Poor	The state government does not play a significant role in the electricity sector. Four investor-owned electric utilities are regulated by the WPSC, which operates as a quasi-judicial body. The office of the Commission is non-partisan and commissioners are appointed to a six-year term, which decreases political risk.
(7) Retail Rate	Excellent Very Good Satisfactory Below Average Poor	Wyoming's 6.58¢/KWh retail rate is the second least expensive in the States. Wyoming's retail rate is 36.24% below the national average.  Real GDP growth rate in Wyoming was 0.2% in 2012, which was far below the national average of 2.5%.
(8) Stranded Cost Recovery	Excellent Very Good Satisfactory Below Average Poor	Wyoming's electricity market remains regulated. However in an assessment conducted by the Commission, it was found that an estimated stranded costs would have modest if Wyoming were to be deregulated.
(9) Rate Freeze	Excellent Very Good Satisfactory Below Average Poor	It was reported that Cheyenne Light faced some a rate freeze period prior to 2004. However, the state has not experienced a statewide rate freeze since.
(10) Market Structure (Deregulation)	Excellent Very Good Satisfactory Below Average Poor	The state is fully regulated. The state commission sets bundled retail rates. Utilities are fully integrated.

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