Oklahoma Journal of Law and Technology

Volume 11 | Number 1

January 2015

Stonewalling the Oklahoman Clean Energy Movement: Oklahoma Gas and Electric's 2014 Integrated Resource Plan Update

Rustin Brent Khavari
rustin.khavari@ou.edu

11 Okla. J.L. & Tech. 75 (2015)
www.okjolt.org

STONEWALLING THE OKLAHOMAN CLEAN ENERGY MOVEMENT: OKLAHOMA GAS AND ELECTRIC'S 2014 INTEGRATED RESOURCE PLAN UPDATE

Oklahoma Corporation Commission, Cause No. PUD 201400229, 2014

I. Introduction

In hopes of attaining a sustainable, energy efficient earth, the United States federal and state governments have imposed environmental regulations, like the Clean Air Act, in order to attain this goal. The purpose of these environmental regulations is to protect public health and public welfare and to regulate emissions of hazardous pollutants. Historically, many utilities relied on portfolios that were less concerned about environmental concerns, but more about efficiency and the bottom line dollar. However, with the advancement of technology, America's dedication to environmental sustainability has strengthened, ushering a change by many utilities in shifting their portfolios to comply with these various regulations. Under traditional utility regulation, the standard protocol of utilities has been to submit load forecast proposals to state utility regulating authorities for purposes of meeting the needs of gas or electric users during that forecasted period. Generally, these proposals were geared towards supply-side requirements (i.e., options to supply more power). However, as states begin trending towards sustainability and clean energy development, state utility regulators have begun urging utilities to incorporate demand-side requirements (i.e., options to reduce electricity demand).

To objectively prepare a proposal detailing a particular forecast, the most successful solution to date has been for each utility to prepare an Integrated Resource Plan ("IRP"). The IRP has been adopted by numerous states and has proven successful in providing load and resource forecasts for a specified period at a least-cost resource mix. The State of Oklahoma, specifically the Oklahoma Corporation Commission ("OCC"), has instituted a series of IRP requirements pursuant to its Electric Utility Rules. One of these rules is that utilities be required to provide a regular triennial IRP in accordance with the OCC's rules. However, "material changes" in planning assumptions necessitate a new IRP in periods sooner than three years. Oklahoma Gas and Electric Company ("OG&E") submitted its regular triennial IRP in 2012, but with "material changes" in planning assumptions since the date of its 2012 filing, OG&E was required to submit an updated IRP for purposes of satisfying the specific planning assumptions, which involved specific environmental rules with which OG&E had to comply.

The Environmental Protection Agency ("EPA") has promulgated two sets of regulations under the Clean Air Act ("CAA") in which OG&E must now comply. These regulations include the Mercury and Air Toxics Standards rule ("MATS") and the Regional Haze rule ("RHR"). Though OG&E's 2014 IRP Update alleges to satisfy the aforementioned environmental regulations, the IRP creates a problem that remains unaddressed. Not only do the recommendations of OG&E impose a greater fiscal burden on OG&E customers, but it also fails to support the ongoing clean energy movement in Oklahoma.

II. The Integrated Resource Plan

A. What Is an Integrated Resource Plan?

According to the Oklahoma Administrative Code, an IRP is "a utility's plan . . . to ensure that sufficient supply and demand-side resources are available to meet its obligation to serve and

to achieve public policy objectives, including those prescribed by law, rule, or Commission order."[1] "The proposed resource plan shall include, among other things, a fuel procurement plan, purchased-power procurement plans, a risk management plan, an environmental compliance plan, and other elements . . . ."[2] "As the integrated resource plan changes from year to year, the utility shall submit updates to the Commission."[3] "The Commission may require the utility to submit an interim, updated integrated resource plan to reflect material change(s) in planning assumptions."[4] However, as detailed before, IRPs are required to be routinely submitted to the OCC every three years.[5]

According to the American Council for an Energy-Efficient Economy ("ACEEE"), traditional resource planning has focused on planners taking into consideration

> the demand to be met, the reliability to be achieved, costs of available options, and applicable government policies and regulations . . . . The planners then select the type of fuels, power plants, distribution systems and patterns, and power purchases that will meet these objectives within acceptable reliability and cost parameters.[6]

Furthermore, an IRP strives to: (1) evaluate all options, from both supply and demand sides, in a fair, consistent, and comparable manner; (2) minimize total costs, and (3) create a flexible plan that allows for uncertainty and permits adjustment in response to changed circumstances.[7]

---

[1] OKLA. ADMIN. CODE § 165:35-1-2 (2014).
[2] *Id.* § 165:35-37-4.
[3] *Id.*
[4] *Id.*
[5] *Id.*
[6] Marty Kushler & Dan York, *Utility Initiatives: Integrated Resource Planning*, AM. COUNCIL FOR AN ENERGY-EFFICIENT ECON. (July 3, 2014), http://www.aceee.org/policy-brief/utility-initiatives-integrated-resource-planning.
[7] *Id.*

Balancing the goals of utility planning, along with customer and investor interests, IRPs provide a solid basis for evaluating all supply and demand options and selecting the least-cost solution that will fulfill the forecasted needs.[8] Supplementing the traditional approach to resource planning with the inclusion of demand-side options provides even greater opportunity to support conservation movements. Opportunities to conserve are found in fuel savings and a reduction in negative environmental impacts that typically result from adherence to strictly supply-side options.[9] With respect to energy sourcing, an IRP should consider all existing resource options, including traditional and non-traditional energy sources, such as power purchases, independent power plants, cogeneration, demand-side management (i.e., energy efficiency and load management), and renewable energy sources.[10]

As previously mentioned, more states have begun requiring utilities to provide IRPs. Some of these states include: California, Connecticut, Delaware, Iowa, Maine, Massachusetts, Minnesota, Oklahoma, Rhode Island, Vermont, and Washington[11] Objectively analyzing the potential of all available resources and identifying the least-cost mix of resources that creates a reliable IRP will provide a utility with both maximum energy efficiency and benefits to its long-term resource portfolio.[12]

B. Why Is OG&E Submitting a 2014 Integrated Resource Plan Update?

Federal CAA rules (i.e., the RHR and MATS) require OG&E to take steps to meet new emission limits for nitrogen oxide, sulfur dioxide and mercury. OG&E has developed technological options to satisfy the regulations under the Federal CAA. Public Utility

[8] *Id.*
[9] *Id.*
[10] *Id.*
[11] *Id.*
[12] *Id.*

Commissions, like the OCC, are beginning to demand IRPs of utilities for purposes of verifying compliance with federal and state environmental regulations. As stated, the OCC has discretion in requiring a utility to submit an updated resource plan within the three-year interim, unless there is any material change or changes in planning assumptions.[13]

In OG&E's pending case at the OCC, the preceding circumstance presents itself via the material changes caused to OG&E's 2012 IRP by the implementation of the environmental rules in which OG&E must now comply with. Again, these include the EPA's MATS rule and RHR.

Prior to succumbing to the demands of the federal and state governments, OG&E appealed the EPA's Federal Implementation Plan ("FIP") in federal court.[14] A FIP is "a federally implemented plan to achieve attainment of air quality standards and is used when a state is unable to develop an adequate plan."[15] "The 10th Circuit decision upheld the EPA's rejection of the sulfur dioxide emission provisions of the Oklahoma Regional Haze SIP [State Implementation Plan] and the implementation of the EPA FIP related to SO_2 emissions instead."[16] According to the Center for Climate and Energy Solutions, a SIP is "a state plan for the establishment, regulation, and enforcement of air pollutant standards established and

[13] OKLA. ADMIN. CODE § 165:35-37-4 (2014).
[14] Okla. Gas & Elec. Co., Integrated Resource Plan – Update at ii (2014) (first page of Executive Summary) [hereinafter OG&E Plan Update]. This document is available online as the first attachment to Direct Testimony of Leon Howell on Behalf of Oklahoma Gas & Electric Company, *In re* Application of Oklahoma Gas and Electric Company for Commission Authorization of a Plan to Comply with the Federal Clean Air Act and Cost Recovery; and for Approval of the Mustang Modernization and Cost Recovery, Cause No. PUD 201400229 (Okla. Corp. Comm'n Aug. 6, 2014) [hereinafter Testimony of Leon Howell], *available at* http://imaging.occeweb.com/AP/CaseFiles/030857D3.pdf.
[15] *EPA Terminology Glossary*, CTR. FOR CLIMATE & ENERGY SOLUTIONS, http://www.c2es.org/federal/executive/epa/terminology-glossary (last visited Apr. 23, 2015).
[16] OG&E Plan Update, *supra* note 14, at ii.

approved by the EPA.[17] Furthermore, the U.S. Supreme Court denied OG&E's Writ of Certiorari to review the July 2013 Tenth Circuit decision.[18] The Supreme Court order means that OG&E has exhausted all its legal avenues, forcing them to prepare an IRP Update that is costlier to the consumer than the company's 2012 compliance plan.[19] During OG&E's legal appeal process, the compliance deadline with respect to the RHR had been placed on hold.[20] However, the issuance of the Supreme Court decision reestablished Oklahoma and OG&E's compliance deadline of January 2019.[21]

According to the Direct Testimony of Donald Rowlett, the Managing Director of Regulatory Affairs at OG&E, "OG&E believed that there were more cost effective ways to comply with the requirements of Regional Haze than to install costly retrofits on its coal-fired generating units or to convert those units to natural gas."[22] Furthermore, comparing the 2012 plan and 2014 Update, OG&E believes the 2012 plan was more superior in balancing the intended costs and benefits with respect to RHR compliance.[23] Denial of OG&E's Writ of Certiorari requires OG&E to comply fully with the FIP.

Though forced to comply, OG&E claims several benefits by pursuing the appellate review of the EPA FIP. The appeal gave OG&E an opportunity to freeze the RHR compliance

---

[17] *EPA Terminology Glossary*, *supra* note 15.
[18] OG&E Plan Update, *supra* note 14, at ii.
[19] *Id*.
[20] *Id*.
[21] *Id*.
[22] Direct Testimony of Donald R. Rowlett on Behalf of Oklahoma Gas & Electric Company at 5, *In re* Application of Oklahoma Gas and Electric Company for Commission Authorization of a Plan to Comply with the Federal Clean Air Act and Cost Recovery; and for Approval of the Mustang Modernization and Cost Recovery, Cause No. PUD 201400229 (Okla. Corp. Comm'n Aug. 6, 2014) [hereinafter Testimony of Donald Rowlett], *available at* http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9NTUyMzY5fENoaWxkSUQ9MjQ3NDg1fFR5cGU9MQ==&t=1.
[23] *Id*.

clock for nearly two years.[24] Without the stay, OG&E would have had to incur large expenditures resulting from the procurement of contracts for purposes of meeting the compliance deadline.[25] The stay also allowed for technology to advance and for OG&E to install Smart Grid technology, a cutting-edge tool for customers to mitigate the impacts of EPA cost increases.[26] Though OG&E was charged with costs of going to trial, they believe the costs were worth it if it meant deferring any cost impact on customer bills, even if only for two years.[27]

III. Environmental Issues Requiring the 2014 Integrated Resource Plan Update

OG&E's 2014 IRP Update has been promulgated by two primary regulations under the CAA, the RHR and MATS. The RHR and MATS regulations have direct impacts on several of OG&E's coal and natural gas powered electric generation facilities. For purposes of satisfying the new emission limits established under the CAA for nitrogen dioxide ("NO_2"), sulfur dioxide ("SO_2") and mercury, it is crucial to review the relevant RHR and MATS regulations in order to understand their importance in OG&E's existing legal proceeding.

A. The Regional Haze Rule

Respectfully, the RHR refers to the haze that impairs visibility in all directions over a large area.[28] The core requirements of the implementation plan for the RHR are specifically addressed to each mandatory Class I Federal area located both within and outside the State, which may be affected by emissions from within the State.[29] Under the RHR, in satisfying the core requirements for implementation, the reasonable progress goals demand the following:

---

[24] *Id*. at 6.
[25] *Id*.
[26] *Id*.
[27] *Id*.
[28] 40 C.F.R. § 51.308 (2014).
[29] *Id.* § 51.308(d).

> For each mandatory Class I Federal area located within the State, the State must establish goals (expressed in deciviews) that provide for reasonable progress towards achieving natural visibility conditions. The reasonable progress goals must provide for an improvement in visibility for the most impaired days over the period of the implementation plan and ensure no degradation in visibility for the least impaired days over the same period.[30]

The reasonable progress goals have been established for the purpose of improving visibility in the distance across Class I Federal areas that are impaired by tiny particles in the air absorbing and scattering sunlight.[31] The EPA announced the final version of the RHR in 1999.[32] As indicated by the language of the rule, all States are required to develop long-term plans to reduce emissions contributing to haze, but particularly in Class I Federal areas.[33] Class I Federal areas specifically refer to a certain type of national and international park and wilderness area.[34] The United States is home to 156 Mandatory Class I Federal areas, with the majority located in California.[35] Of these 156 areas, Oklahoma is home to a Class I Federal area, the Wichita Mountains Wilderness, which is just shy of 9000 acres and located in southwest Oklahoma.[36]

Understanding the purpose of the RHR further, it is important to note the science behind the rule. As stated, the rule exists for purposes of reducing the amount of haze pollution that is depreciating the views of Class I Federal areas. The particulate causing the haze pollution may be produced via countless sources, whether manmade or naturally occurring.[37] Naturally occurring sources of haze pollution are near impossible to control and include windblown dust,

---

[30] *Id.* § 51.308(d)(1).
[31] *Alaska Regional Haze Fact Sheet*, ALASKA DEPARTMENT ENVTL. CONSERVATION, 1, https://dec.alaska.gov/air/anpms/doc-anpms/RHfacts.pdf (last visited Apr. 23, 2015).
[32] *Id*.
[33] *Id*.
[34] *Id*.
[35] *List of 156 Mandatory Class 1 Federal Areas*, EPA, http://www.epa.gov/visibility/class1.html (last visited Apr. 23, 2015).
[36] *Id*.
[37] *Alaska Regional Haze Fact Sheet*, *supra* note 31, at 1.

wildfires, "bioorganic" emissions from trees and coastal emissions from the ocean.[38] The RHR strives to reduce emissions from manmade sources like: emissions from gas and diesel engines, electric utility and industrial fuel burning, manufacturing operations, prescribed burns and dust from unpaved roads, construction and agriculture.[39] Many of the aforementioned manmade sources include means used by utilities in electricity generation, as is present in the OG&E case.

RHR is important in that it provides a guideline for states to follow in developing long-term goals of improving visibility and air quality in Class I Federal areas and to prevent any further tarnishing of air quality. The haze pollution not only diminishes air visibility, but also may have a potential impact on the health of humans, wildlife, lakes and rivers.[40] The RHR reduces risks to public health and creates a safer, cleaner environment for generations to come.

In order to meet the goals established by the RHR, there are several major requirements that each state must satisfy.[41] The RHR requires the development of a long-term strategy plan that will serve as a means for a state to attain "natural conditions" in Class I Federal areas within sixty years.[42] Furthermore, emissions limits for large stationary sources, such as power plants and refineries, must be controlled via the installation of Best Available Retrofit Technology ("BART") within five years after a state's IRP has been approved.[43] The root of the pressures currently challenging utilities today, particularly in Oklahoma, is the fiscal burden that has arisen due to the requirements of BART installations, ultimately translating to price increases for producers and consumers. However, though fiscal pressures may exist, conversely, public

---

[38] *Id*.
[39] *Id*.
[40] *Id*.
[41] 40 C.F.R. § 51.308(d)(1) (2014).
[42] *Alaska Regional Haze Fact Sheet, supra* note 31, at 2.
[43] *Id*.

benefits to compliance arise in the form of health and societal economic benefits from locally sourced clean energy solutions.

B. The Mercury Air and Toxics Standard

On December 16, 2011, the EPA signed MATS into law, intending to reduce emissions of toxic air pollutants from power plants.[44] MATS, serves to push power plants to reduce emissions from new and existing coal and oil-fired electric utility generating units.[45] MATS will reduce emissions of many heavy metals, such as mercury, arsenic, chromium and nickel, in addition to acid gases such as hydrochloric acid and hydrofluoric acid.[46] Again, as observed within the RHR, these pollutants may impose negative health effects and have been suspected of causing cancer and other serious health problems.[47] Thus, implementation of MATS strongly supports the public interest by protecting public health.

Power plants are the largest American source of many harmful pollutants, responsible for nearly fifty percent of domestic mercury emissions and seventy-seven percent of acid gas emissions.[48] In fact, once mercury from the air travels into the water, it is there where a mercury build-up occurs in fish, transforming into the methylmercury, which many people who consume fish are poisoned by.[49] Methylmercury poisoning is of particular concern for unborn babies, young children and women of childbearing age, posing risks of potential damage to the nervous system.[50]

---

[44] *Fact Sheet: Mercury and Air Toxics Standards for Power Plants*, EPA, 1, http://www.epa.gov/mats/pdfs/20111221MATSsummaryfs.pdf (last visited Apr. 23, 2015).
[45] 40 C.F.R. § 63 (2014).
[46] *Fact Sheet: Mercury and Air Toxics Standards for Power Plants*, *supra* note 44.
[47] *Id*.
[48] *Id*. at 2.
[49] *Id*. at 1.
[50] *Id*.

As it impacts utilities, existing producers of electricity with emissions in violations of MATS will have up to four years to comply.[51] The compliance term is broken down as follows. The CAA will automatically provide all utilities with three years to comply.[52] Furthermore, under the CAA, state permitting authorities have discretion to grant an additional year as needed for purposes of technology installation.[53]

Reviewing the costs and benefits of MATS, utilities and electricity consumers are both effected with its implementation. Though MATS creates countless environmental and health benefits, both consumers and utilities will face very high costs with IRPs incorporating MATS. Looking at the benefits, MATS will cut emissions of toxic pollutants, many of which are of grave concern for women and children.[54] Furthermore, the EPA estimates health benefits associated with meeting air toxics standards between $37 billion and $90 billion, which calculates for 540,000 days that people will not miss work as a result of being ill and 5700 hospital and emergency room visits.[55] As it relates to Oklahoma, the EPA estimates that the new MATS standards are projected to prevent up to 300 premature deaths in the State, while concurrently creating $2.5 billion in health benefits in 2015.[56] Though there appears to be many benefits to MATS, its implementation does come with a total national annual cost of nearly $9.6 billion.[57] Aside from the countless health benefits that arise from its implementation, legislators are further appreciative that MATS

---

[51] *Id*. at 2.
[52] *Id*.
[53] *Id*.
[54] *Id*. at 4.
[55] *Id*.
[56] *Mercury and Air Toxics Standards in Oklahoma*, EPA, http://www.epa.gov/mats/whereyoulive/ok.html (last visited Apr. 23, 2015).
[57] *Fact Sheet: Mercury and Air Toxics Standards for Power Plants*, *supra* note 44, at 4.

> will put an end to 20 years of industry uncertainty and level the playing field for power plants across the country - over half of which are already using widely available pollution control technology and are forced to compete with facilities that have taken advantage of loopholes, or with aging plants, often 40 years old or older, that have never been updated with modern pollution controls.[58]

C. The Mustang Modernization Plan

In addition to attempting to determine reasonable, cost-effective solutions to comply with the requirements of MATS and RHR, OG&E's 2014 IRP Update also addresses the resources and means necessary to satisfy load obligations as is specified by the twelve percent Southwest Power Pool ("SPP") capacity margin requirements.[59] The Mustang modernization plan requires OG&E to retire and replace the existing Mustang generating units, which have been in operation since the 1950s, by the end of 2017.[60] OG&E has decided to replace the existing steam units with approximately 400 megawatts ("MW") of new, natural gas-fired combustion turbines at the existing plant site.[61] According to the direct testimony of Leon Howell, Director of Resource Planning at OG&E, OG&E will retire all the existing Mustang units by the end of 2017 and replace at least 280 MW of this capacity by the summer of 2018 and the balance of the 400 MW by the Summer of 2019 in order to remain in compliance with its SPP capacity margin requirements.[62] According to Donald Rowlett, Managing Director of Regulatory Affairs at OG&E, this allows the system to better respond to dispatch signals and the nature of intermittent renewable generation, such as wind and solar.[63] However, pursuant to the responsive testimony of Daniel Peaco, on behalf of Oklahoma Cogeneration, "OG&E has inappropriately bypassed the

[58] *Mercury and Air Toxics Standards in Oklahoma*, *supra* note 56.
[59] Testimony of Leon Howell, *supra* note 14, at 14.
[60] Testimony of Donald Rowlett, *supra* note 22, at 15.
[61] *Id*. at 13.
[62] Testimony of Leon Howell, *supra* note 14, at 10-11.
[63] Testimony of Donald Rowlett, *supra* note 22, at 8.

competitive bidding requirements in the Commission's rule in its plan to construct the 400 MW of CTs at the Mustang site."[64]

OG&E claims that the new Mustang units will provide prospective economic benefits to customers. Furthermore, OG&E states these benefits should arise because of the units having the ability to respond quicker than other units in the SPP Integrated Market, resulting in increased sales, which are credited back to customers through the Fuel Adjustment Clause ("FAC").[65]

According to OG&E's Testimony, currently, four of the electricity generation units at the Mustang plant are in need of retirement.[66] In fact, these units are approaching the sixty-five-year mark, whereas the median retirement age of gas fired units across the U.S. is forty-five to forty-nine years old.[67] Because of concerns of unit reliability, potentially increased levels of investment to maintain the current units and sheer technological obsolescence, it is in the best interest of OG&E to replace these units.[68] Once these units are retired, OG&E will replace the generation at the Mustang plant with new gas fired combustion turbines.[69] The new combustion turbines will provide benefits to both OG&E and its customers because they will deliver better

---

[64] Responsive Testimony of Daniel Peaco on Behalf of Oklahoma Cogeneration at 23, *In re* Application of Oklahoma Gas and Electric Company for Commission Authorization of a Plan to Comply with the Federal Clean Air Act and Cost Recovery; and for Approval of the Mustang Modernization and Cost Recovery, Cause No. PUD 201400229 (Okla. Corp. Comm'n Dec. 16, 2014), *available at* http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9NTY1MDU0fENoaWxkSUQ9MjY0NzI0fFR5cGU9MQ==&t=1.

[65] Testimony of Donald Rowlett, *supra* note 22, at 13.

[66] *Id*. at 20.

[67] Direct Testimony of Robert J. Burch on Behalf of Oklahoma Gas and Electric Company at 18, *In re Application of OG&E*, Cause No. PUD 201400229 (Aug. 6, 2014), *available at* http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9NTUyMzc0fENoaWxkSUQ9MjQ3NDk1fFR5cGU9MQ==&t=1.

[68] *Id*. at 21.

[69] *Id*.

reliability, improved efficiency, better load response, improved operational flexibility and lower emission rates.[70]

When it comes to real estate, most buyers are familiar with the phrase, "location, location, location." Location is crucial when it comes to choosing the right site for the construction of a utility's electric generation units. Pursuant to OG&E's executive summary regarding its 2014 IRP Update,

> OG&E chose the existing Mustang site as the location for the new CTs for several reasons. Since it is close to OG&E's largest load center, the site provides valuable reliability support and voltage control functions. The site is also beneficial because of existing infrastructure such as secure property, electric transmission and interconnection facilities, a gas pipeline connection, roads, buildings, water lines, water rights to support operation and maintenance of the plant, an existing workforce and community support. In addition, retiring and replacing the capacity of the Mustang steam units on the aforementioned schedule allows OG&E to take advantage of existing site-specific environmental permits. Delaying replacement of these units will limit or eliminate OG&E's ability to permit the capacity that OG&E needs to meet SPP planning capacity margin requirements at the Mustang site. The addition of new CTs at Mustang will also enhance the development of additional wind in Oklahoma.[71]

The Mustang Plant Modernization plan is crucial to the continued success of OG&E, but more importantly, satisfying the capacity requirements of the grid and of the SPP. Though OG&E claims that its modernization plan provides a cost-effective solution, satisfying the necessary requirements, the plan is a short-term fix because the natural gas relied upon to fuel the electric generation is not an unlimited supply. Thus, unless OG&E switches to a technology relying strictly on alternative energy to generate its electricity in the Mustang plant, along with other plants, the combustion turbines will likely require replacement at least once every fifty to sixty years. Until replaced with alternative energy developing units, these combustion turbines

[70] *Id*. at 24.
[71] OG&E Plan Update, *supra* note 14, at iv (third page of Executive Summary).

will continuously bear costs on both OG&E and its customers, a cost that could be completely avoided with an investment in alternative energy generation technologies at each plant.

IV. Approaches of Other States' Integrated Resource Plans

State IRP rules and policies have been established in many jurisdictions detailing the technical and substantive requirements of a utilities' IRP. Some states have developed legislation, requiring utilities to participate in resource planning, while others have codified IRP rules into their administrative codes or through docketed proceedings.[72] With no mandatory federal planning requirements, each state is entitled to develop its own planning rules and regulations, many of which appear to follow a combination of the aforementioned processes.

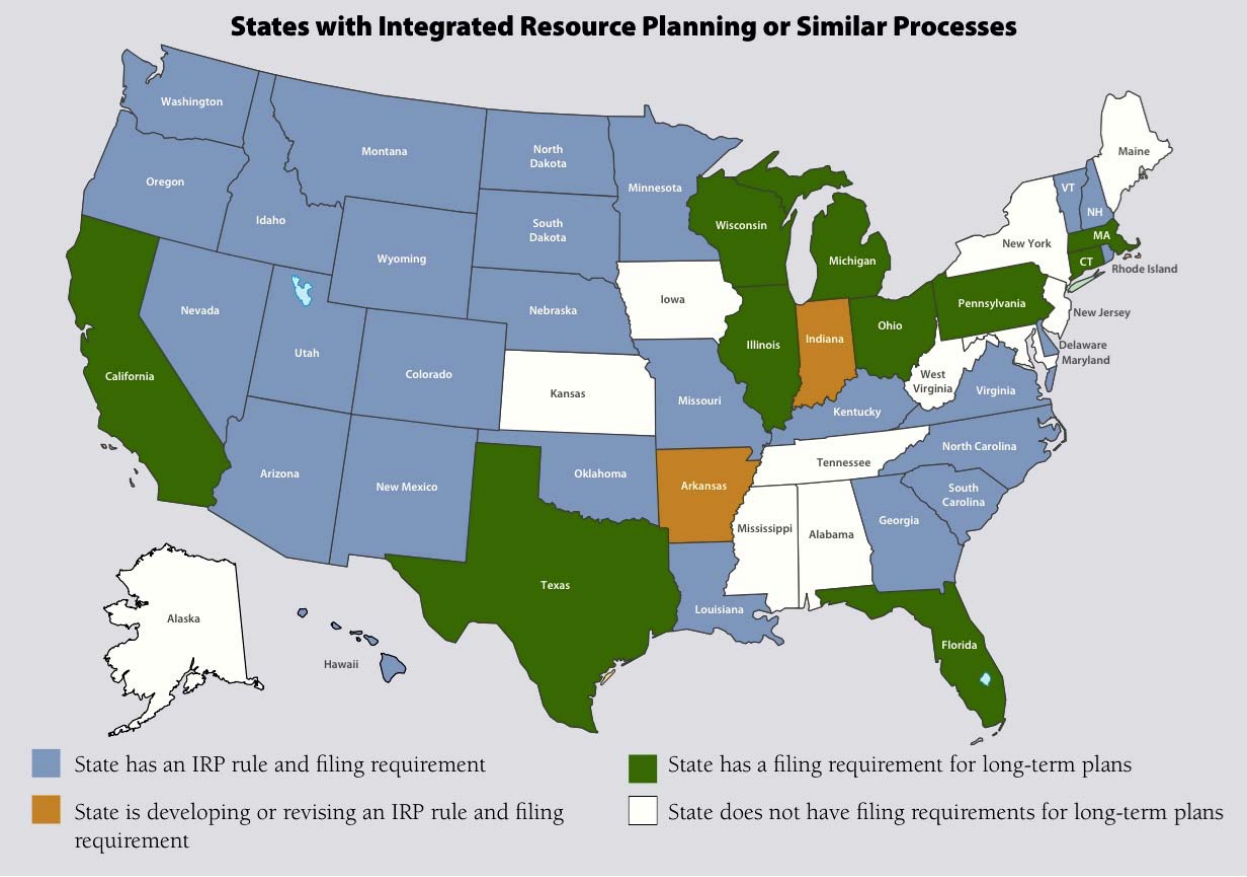
A. Do Other States Require Integrated Resource Plans for Purposes of Complying with State and Federal Environmental Regulations?

Though there are no federal mandates requiring the use of IRPs, nearly every state has developed some form of an IRP requirement of its utilities, especially when significant adjustments are needed to a Utility's generation portfolio. Utilities have tended to comply with these requirements, finding great value in forecasting the annual peak and energy demands of its customers over a specified future period. As noted, integrated resource planning delivers many benefits to consumers, and if implemented correctly, will allow utilities to deliver reliable energy services to their customers at the lowest practical cost and typically in the most environmentally friendly way.[73] By expanding on the traditional approach to IRPs and including demand-side

[72] RACHEL WILSON & BRUCE BIEWALD, SYNAPSE ENERGY ECON., BEST PRACTICES IN ELECTRIC UTILITY INTEGRATED RESOURCE PLANNING 2 (June 2013), *available at* http://www.raponline.org/document/download/id/6608.
[73] *Id*. at 4.

options, utilities can provide more accurate load forecasts and cost projections.[74] IRP requirements exist in many states, but can differ from state-to-state.[75] Moreover, "[u]tilities that create more than one resource plan in the same state may have different processes for creating those plans and may arrive at significantly different conclusions, despite being governed by the same regulations."[76] Figure 1 represents the states that have IRP or similar long-term planning requirements.[77]

Figure 1



[74] *Id.*
[75] *Id.* at 5.
[76] *Id.*
[77] *Id.*

B. Frequency of Integrated Resource Plan Updates

In order to encourage commerce and competition amongst utility companies across the U.S., in addition to remaining up-to-date with environmental standards, it is crucial for utilities to periodically update their integrated resource plans.[78] Depending on the jurisdiction, IRP updates are mandatory nearly every two-to-three years.[79] Figure 2 is a table displaying the frequency of IRP updates based on state rules.[80] With respect to OG&E's IRP Update, and as stated before, it should be noted that Oklahoma's IRP guidelines require an IRP update every three years.

Figure 2

Frequency of IRP Updates, as Determined by State Rules

Planning Horizon	States with Specified Planning Horizon
Every two years	Arizona, Delaware, Idaho, Indiana, Minnesota, Montana, New Hampshire, North Carolina, North Dakota, Oregon, South Dakota, Utah, Virginia, Washington
Every three years	Arkansas, Georgia, Hawaii, Kentucky, Louisiana, Montana, Missouri, Nevada, New Mexico, Oklahoma, South Carolina, Vermont
Every four years	Colorado
Every five years	Nebraska
Not specified	Wyoming

C. Best Practices in Utility Integrated Resource Plans

As noted, every state has different procedures and requirements of its utilities for purposes of IRP development. The Oklahoma Corporation Commission had laid out its IRP

[78] *Id*. at 6.
[79] *Id*.
[80] *Id*.

rules for electric utilities within the Oklahoma Administrative Code at Title 165, Chapter 35, Section 37-1.[81] There are many ways in which utilities can improve their existing planning processes.[82] Practical IRP planning involves not only the creation of the IRP, but also the sharing of the IRP with interested parties for purposes of receiving feedback.[83]

When entering the planning stage of any IRP, the best practice begins with a general determination of the existing IRP guidelines and rules.[84] At this stage, state public utility commissions open proceedings to the public for purposes of allowing interested parties to offer input on any potential revisions to the existing rules.[85] Once the IRP rules have been amended and IRP plans have been drafted, the state utility hosts a public meeting open to all interested parties before submission of the IRP to the state public utility commission.[86] Hosting meetings of this nature are immensely beneficial to the utility, as it provides them an opportunity to receive stakeholder and public feedback prior to submission to the state public utility commission.[87] Upon a utility's submission of its IRP to the state public utility commission, the commission typically opens a public proceeding for purposes of allowing stakeholder and public feedback and comments regarding the utility's IRP.[88]

For the success of any proposed IRP, a good resource plan, at minimum, should include: (1) load forecast, (2) reserves and reliability, (3) demand-side management, (4) supply options, (5) fuel prices, (6) environmental costs and constraints, (7) existing resources, (8) integrated

---

[81] OKLA. ADMIN. CODE § 165:35-37-1 (2014).
[82] WILSON & BIEWALD, *supra* note 72, at 26.
[83] *Id*.
[84] *Id*.
[85] *Id*.
[86] *Id*. at 27.
[87] *Id*.
[88] *Id*.

analysis, (9) time frame, (10) uncertainty, (11) valuing and selecting plans, (12) action plan and (13) documentation.[89] Though some of these features may be more valuable than others, a holistic review of IRPs in a majority of states has led to the consensus that these features will provide for the most thorough, economical and eco-friendly resource plan.

V. OG&E'S Failure to Support Use of Alternative Energy to Fuel Power Generation in Its Integrated Resource Plan Update

In planning for the future and with intentions of remaining competitive within the global market for natural resources, alternative energy is a specific energy that many utilities are turning too. In order to maximize economic and environmental benefits to utility customers, utilities across the country have begun relying on alternative energy technologies, such as solar and wind power, as a means of fueling electric power generation and satisfying capacity requirements.

However, in the case of OG&E and its IRP Update, OG&E has completely disregarded these technologies, rather proposing the use of natural gas to fuel its newest generators. According to the testimony of Donald Rowlett, in preparing a solution to RHR and MATS, OG&E did consider wind resources.[90] However, Rowlett claims that wind generation does not serve as an effective resource to address the replacement capacity needs in OG&E's environmental compliance plan.[91] Rowlett testifies that wind energy has a very low capacity under SPP rules.[92]

With respect to the Mustang modernization plan, Rowlett's testimony indicates the plan will complement wind energy and provide OG&E with a more flexible fleet that can handle

[89] *Id*. at 28.
[90] Testimony of Donald Rowlett, *supra* note 22, at 11.
[91] *Id*.
[92] *Id*.

additional wind generation in the future.[93] Ultimately, OG&E believes it should wait before considering adding more wind to its portfolio.[94] At the moment, OG&E is still trying to understand (1) how wind affects SPP market prices and vice versa; and (2) whether additional transmission will remedy congestion issues near wind energy-rich areas in the SPP that have been experiencing SPP market price volatility.[95]

Continued examination of the direct testimonies of interested parties regarding OG&E's IRP Update continue to highlight more excuses as to why implementation of alternative energy technologies for purposes of electricity generation fail to be the optimal solution. According to John Reed, Chairman and Chief Executive Officer of Concentric Energy Advisors and CE Capital Advisors, Inc., renewables can and should be incorporated into IRP modeling.[96] However, Reed recognizes that renewables do present challenges including how to value environmental attributes such as lower carbon emissions.[97] Furthermore, Reed states that wind energy can be accommodated by an IRP, but that it often requires transmission investments to deliver it to market areas.[98] With respect to meeting OG&E's capacity need, and because of the timing, Reed testifies that neither wind energy, distributed generation, energy efficiency nor

[93] *Id*. at 12.
[94] *Id*.
[95] *Id*.
[96] Direct Testimony of John J. Reed on Behalf of Oklahoma Gas and Electric Company at 11, *In re* Application of Oklahoma Gas and Electric Company for Commission Authorization of a Plan to Comply with the Federal Clean Air Act and Cost Recovery; and for Approval of the Mustang Modernization and Cost Recovery, Cause No. PUD 201400229 (Okla. Corp. Comm'n Aug. 6, 2014), *available at* http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9NTUyMzcwfENoaWxkSUQ9MjQ3NDg4fFR5cGU9MQ==&t=1.
[97] *Id*.
[98] *Id*.

incremental demand-side resources can meet OG&E's capacity needs.[99] Reed continues by stating that the decision to take a pause on OG&E's aggressive wind energy additions for a year or two is reasonable at this time.[100] Reed's theory is based on the uncertainties associated with the new SPP wholesale markets and impacts of transmission congestion on those prices, the considerable uncertainty regarding the future of tax credits and the small capacity credit that wind provides.

Though it is arguable by promoters of natural gas that natural gas burns much cleaner than coal, it is evident that natural gas will never surpass the cleanliness of wind and solar power. "The current trend in environmental regulation is to attempt to place more restrictions and limitations on coal generation . . . ."[101] "[T]he EPA [has] published a proposed rule for reducing [carbon dioxide] emissions from existing power plants. . . . [requiring] the State of Oklahoma to propose a plan to significantly reduce [carbon dioxide] emissions rate in the state by 2030 compared to 2012."[102] Once finalized, this rule may require the Oklahoma state plan to be submitted by June 2016.[103] With Oklahoma, along with many states sitting on a surplus of natural gas, it is challenging for many businessmen to adopt and promote clean energy in preparing for the future when the current natural resources market is focused on the "drill, baby drill" approach. Investment in clean energy may pose financial risks at the forefront; however,

---

[99] *Id*. at 22.
[100] *Id*. at 29.
[101] Direct Testimony of Usha-Maria Turner on Behalf of Oklahoma Gas and Electric Company at 11, *In re Application of OG&E*, Cause No. PUD 201400229 (Aug. 6, 2014), *available at* http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9NTUyMzc5fENoaWxkSUQ9MjQ3NTA0fFR5cGU9MQ==&t=1.
[102] *Id*.
[103] *Id*.

this investment in the future is necessary to the Millenial generations' preparation for when oil and gas are a thing of the past.

VI. Conclusion

The issues surrounding OG&E's 2014 IRP Update have been hotly litigated since February 2012. As it stands, interested parties are hopeful that the OCC will make a ruling by mid-2015 so as to ensure plenty of time for OG&E to comply. Historically, Oklahoma has notoriously been recognized as a state driven by oil and gas developers. However, if Oklahomans intend to put up a fight for Mother Nature, the OG&E IRP case is where it will happen. This case is the platform that environmentalists and clean energy supporters, whether consumer or developer, have been waiting for to highlight the importance of the CAA and Clean Water Act and how alternative energy technologies can be the guiding light to fuel electricity development in Oklahoma. Currently, though it is in the financial interests of Oklahoma to continue development and use of natural gas, as the state is sitting on a surplus of this resource, alternative energy technology must continue to receive investment and be implemented annually if Oklahoma's energy market intends to remain nationally and internationally competitive.